Vol: 58 , No: 30
1 August 2024

Australian Government

IP Australia

# AUSTRALIAN OFFICIAL JOURNAL

# OF

# PATENTS

(ISSN 0819-1794)



## Contents

(ISSN 0819-1794)

*General Information*

*For Information on the following please see our website www.ipaustralia.gov.au*
*or contact our Customer Service Network on 1300651010*

*Editorial enquiries*
*Contact information*
*Freedom of Information ACT*
*Professional Standards Board*
*Sales*
*Requests for Information under Section 194 (c)*
*Country Codes*
*Trade Mark and Designs Hearing Sessions*
*INID (Internationally agreed Numbers for the Indentification of Data)*

# GUIDE TO THE USE OF THIS JOURNAL

The Australian Official Journal of Patents (AOJP) reports all major events and actions which take place during the life cycle of an Australian patent and provides certain details of these actions as they relate to the patent or patent application involved. This guide sets out to teach the reader how to use the journal to access this information.

While there are many possible actions in the life of a patent, the majority of actions reported relate to the following events, which are the main stages in the progression of a patent application to a granted patent:

**(i) FILING -**

This is the act of making an application. When the application is first filed certain details are published.

**(ii) OPEN-TO-PUBLIC-INSPECTION (OPI) -**

Approximately 18 months after first filing of an Australian or a corresponding foreign application, certain application documents, including the complete specification, become available to the public (Open-to-Public-Inspection or "OPI"). Relevant application details are published.

**(iii) ACCEPTANCE –**

This is the Commissioner's acceptance of a patent application. Once the Commissioner has accepted a patent application, certain details of the application are published in the AOJP. Notice of opposition may be filed within three months of advertisement of acceptance.

**(iv) OPPOSITION –**

If an opposition action is commenced against the grant of the patent, the application number and the name of the opponent are published. If the opposition is to the Certification of an Innovation Patent, the patent number and the name of the opponent are published.

**(v) GRANTING –**

Most accepted applications are not opposed. These proceed to grant and become granted patents. Of the few that are opposed (less than 1%) most of these, after resolution of the opposition, proceed to grant and become granted patents. Granted patents are simply listed in order of their patent number.

**(vi) CERTIFICATION**

This is the Commissioner's Certification after passing examination of a previously granted unexamined Innovation Patent.

In addition to the actions related to these stages, other actions reported include: assignments, lapsing or withdrawal of applications and ceasing or expiry of patents, voluntary amendments, extensions of time for certain actions and registration of licences.

## How To Identify Information Using "INID" Numbers

Patents are published in many different countries and in many different languages. As a result, finding the information that you want ( eg the filing date) on a patent document or in a journal can be quite difficult. There is an international system operating, which codifies this information in an unambiguous way, by assigning a specific number to each piece of information about the history of a patent. These numbers are called the I**nternationally agreed Numbers for the Identification of Data** or INID numbers.

These numbers appear on all published patents and abstracts and are used throughout this journal to identify particular items of information. For example, the date on which a document is filed has the INID number (22), while the name of the applicant has the INID number of (71). These numbers are always expressed in parentheses and always immediately precede the information to which they relate. For example:

(22) 12.10.91

means that the filing date of the document which contains this reference is 12 October 1991. Learning the INID numbers for the information you want will help you find it quickly and easily. A complete list of the INID numbers and the items to which they relate is provided at the end of this Guide.

## How Australian Patent Documents are Numbered

When searching information or ordering documents it is vital that you understand the numbering system.

Document Numbering in the **Australian Official Journal of Patents from 10th March 2018** All

patents, patent applications and provisional applications are assigned a "10" digit number.

- The first 4 digits identify the year of filing; and
- The fifth digit identifies the type of patent. Numerals; “0”, “2”, or “3” are allocated to standard complete applications and patents (including petty patents); “1” is allocated to innovation applications and patents; and “9” is allocated to provisional applications.

**See Examples:**
2011236254 and 2000023658 (Standard Complete)
2011158589 (Innovation Complete)
2011902365 (Provisional)

**NOTE:** Please refer to previous journal publications for numbering formats used prior to 10th March 2018.

Different prefixes will be associated to the application/patent at different stages of its life. This prefix indicates whether the application has been accepted.

A document corresponding to an unaccepted application has the prefix, AU-A; eg AU-A-2002200234. A document corresponding to an accepted application carries the prefix AU-B; eg AU-B-2002200234.

Users need to be aware that an accepted document may differ from the corresponding unaccepted document. This is because amendment may occur between first publication (OPI) and second publication (acceptance).

**NOTE**: When ordering any patent document from us, whether accepted or not, please quote the application/patent number preceded by the appropriate prefix.

## Arrangement of Information in the Journal

For each of the categories

(i) Provisional Applications Filed, (ii)

Complete Applications Filed, iii)

Applications Open to Public Inspection

(iv) Applications Accepted, and (v)

Innovation Patent Certified.

The Journal lists the information published in that category in an alphabetical Name Index list based on the name of the applicant. These indices are useful if you wish to find information about applications made by a particular applicant.

In addition to the Name Index there is provided, for each of these categories, a Numerical Index This index lists the applications either in order of their Application Numbers, in the case of complete applications filed and applications OPI, or in order of their Document Number in the case of accepted applications. It provides, for each number, the name of the applicant. These indices are useful if you wish to track the progress of a particular patent application.

There are also IPC Indices provided for applications which are OPI and for applications which have been accepted. IPC stands for **I**nternational **P**atent **C**lassification. Each IPC "mark" is an alpha-numerical representation of a particular area of technology. These indices are in order of IPC mark, and within each mark provide either the application numbers of the application which are now OPI or the numbers of the cases now accepted. These indices are useful if you wish to check on patent activity in a particular technology.

## Using the Indices To Find Patent Information if You Know the Name of the Applicant.

Use the Name Indices. They will give you the following information identified by their INID number:

| ITEM | INID No. |
|---|---|
| **A) Provisional applications filed - Name Index** | |
| The name of the applicant | (71) |
| The Provisional application number | (21) |
| The date of filing | (22) |
| The title of the invention | (54) |

| ITEM | INID No. |
|---|---|
| **B) Complete application filed - Name Index** | |
| The name of the applicant | (71) |
| The number assigned to the application | (21) |
| The date of filing | (22) |
| Title of the invention | (54) |
| Number of priority document(s) if any | (31) |
| Date(s) of filing of priority documents | (32) |
| Country of which priority documents filed | (33) |
| PCT application number | (86) |

| ITEM | INID No. |
|---|---|
| **C) Applications open to public inspection Name Index** | |
| The name of the applicant | (71) |
| The number of the document | (11) |
| The number assigned to the application | (21) |
| The date of filing | (22) |
| The title | (54) |
| The classification marks | (51) |
| Priority document number(s) | (31) |
| Date of filing of priority document(s) | (32) |
| Country in which priority document filed | (33) |
| Publication date of unexamined document | (43) |
| Inventors names if known | (72) |
| Patent Attorneys | (74) |

| ITEM | INID No. |
|---|---|
| **D) Applications accepted - Name Index** | |
| The name of the applicant | (71) |
| The number of the document | (11) |
| The number of the accepted document | (10) |
| The number assigned to the application | (21) |
| The date of filing | (22) |
| The title | (54) |
| The classification marks | (51) |
| PCT publication number | (87) |
| Priority document number | (31) |
| Date of filing of priority document(s) | (32) |
| Country in which priority document filed | (33) |
| Publication date of unexamined document | (43) |

| ITEM | INID No. |
|---|---|
| E) Patents Certified – Name Index | |
| The name of the applicant | (71) |
| The number of the accepted document | (10) |
| The number assigned to the application | (21) |
| The date of filing | (22) |
| The title | (54) |
| The classification marks | (51) |
| Priority document number | (31) |
| Date of filing of priority document(s) | (32) |
| Country in which priority document filed | (33) |
| Publication date of granted patent | (45) |
| Inventors names | (72) |
| Patent Attorneys | (74) |
| Related by division | (62) |

You will notice at each stage of following application through that all applications are in alphabetical order of **Applicant**, not inventor.

**1. To Find Information About a Patent Application if You Know its Number.**

Use the appropriate numerical index. This will give you the name of the applicant from the number. You will then need to use the appropriate Name Index as above to find out other information about the Patent Application you are interested in.

The following Numerical Indices are available:

A) **Provisional** Applications filed.

B) **Complete** Applications filed.

C) Innovation Applications filed.

D) Applications **Open to Public Inspection.**

E) Applications **Accepted**.

F) Innovation Patent Certified

**3. To Find Information About Patent Documents in the Area of Technology in which You are Interested if You Know the International Patent Classification Mark for that Area.**

All patent applications are classified according to their subject matter using the International Patent Classification (IPC). Although the system is very detailed and covers all technologies, knowledge of the IPC marks of the technologies you are interested in will allow you to find patent documents in these technologies quite easily. To identify the IPC marks of technologies you are interested in, you can inspect relevant documentation in any of AIPO's state offices.

The indices to use are

A) Applications **OPI** - IPC Index

B) Applications **accepted** - IPC Index.

These indices give you the numbers of the applications which are either OPI or Accepted and are listed in order of their IPC marks.

Once you have the numbers of the documents that interest you, consult the relevant Number Index (see 2. above) to find the applicant's name, and then the Name Index (see 1. above) to find out the details of that application.

## 'INID' NUMBERS in use on Australian Patent Documents

'INID' is an acronym for '**I**nternationally agreed **N**umbers for the **I**dentification of **D**ata'.

**(10) Document identification**
- **(11)** Number of the document
- **(12)** Plain language designation of the kind of document
- **(19)** WIPO country code, or other identification, of the country publishing the document.

**(20) Document filing data**
- **(21)** Number(s) assigned to the application(s).
- **(22)** Date(s) of filing application(s)
- **(23)** Other date(s) of filing, including exhibition filing date and date of filing complete specification following provisional specification.
- **(24)** Date from which industrial property rights may have effect.

**(30) Priority data**
- **(31)** Number(s) assigned to priority application(s)
- **(32)** Date(s) of filing priority application(s)
- **(33)** Country (countries) in which the priority application(s) was (were) filed.

**(40) Date(s) of making available to the public**
- (43) Date of publication by printing or similar process of an unexamined document, on which no grant has taken place on or before the said date.

**(43)** Date of publication by printing or similar process of an examined document, on which no grant has taken place on or before the said date.
**(44)** Date of publication by printing or similar process of a document, on which grant, or certification has taken place on or before the said date.

**(50) Technical Information**
**(51)** International Patent Classification
**(52)** Domestic or national classification
**(54)** Title of invention
**(56)** List of prior art documents, if separate from descriptive text
**(57)** Abstract or claim

**(60) Reference(s) to other legally related domestic document(s)**
**(60)** Related by cognate(s).
**(61)** Related by addition(s).
**(62)** Related by division(s).

**(70) Identification of parties concerned with the document**
**(71)** Name(s) of applicant(s)
**(72)** Name(s) of inventor(s) if know to be such
**(74)** Name(s) of attorney(s) or agent(s)
**(75)** Name(s) of inventor(s) who is (are) also applicant(s)

**(80) Identification of data related to International Conventions other than the Paris Convention**
**(86)** PCT Application Number
**(87)** PCT Publication Number

**NOTE**

**(1)** Australian patent documents published on or after 26 October 1978 should be referred to by the application number preceded by the prefix AU-A or AU-B.

**AU-A** = Pre-examination **AU-B** = Post-examination

**(2)** The classification used is the International Patent Classification and is identified by the INID code (51). Further editions of the classification are identified as $(51)_2$, $(51)_3$, $(51)_4$ and $(51)_5$.

**(3)** INID code 74 provides for the name of the patent attorney, or firm of attorneys, prosecuting an application.

**(4)** There is a gap in volume numbering of the Australian Official Journal of Patents. The volumes are:

- 1987-2022 Volume 1 - 36
- 2023 - Volume 57 -

# Proceedings under the Patents Act 1990

## Provisional Applications Filed

**Name Index**

Applications listed below were processed through the Patent Office Canberra during the period ending 16 Jul 2024 .

**(71)** Aarons, J.; Ralph, G.L.T.
**(21)** 2024902287 **(22)** 23.07.2024
**(54)** REMOTE EYE GAZE CURSOR CONTROL TECHNOLOGY

**(71)** Advanced Agricultural Systems Pty Ltd
**(21)** 2024902215 **(22)** 17.07.2024
**(54)** System & Method for Autonomously Refilling Agricultural Robots

**(71)** Advanced Agricultural Systems Pty Ltd
**(21)** 2024902218 **(22)** 17.07.2024
**(54)** Agricultural Robot Refilling Apparatus & System

**(71)** Aus Aqua Airfresh Pty Ltd
**(21)** 2024902216 **(22)** 17.07.2024
**(54)** Toilet flush system

**(71)** Aus Aqua Airfresh Pty Ltd
**(21)** 2024902217 **(22)** 17.07.2024
**(54)** A toilet system

**(71)** Australian Pet Health Pty Ltd
**(21)** 2024902296 **(22)** 23.07.2024
**(54)** SCENTED ANIMAL TOY

**(71)** Axxin Pty Ltd
**(21)** 2024902236 **(22)** 18.07.2024
**(54)** Diagnostic Test Assemblies, Systems and Methods

**(71)** Bampton, C.
**(21)** 2024902297 **(22)** 23.07.2024
**(54)** Development and Application of Nanotechnology to enhance the volume of energy during the transmission and transformer process

**(71)** Bonorchis, A.
**(21)** 2024902277 **(22)** 22.07.2024
**(54)** A Block and Methods of Forming a Wall

**(71)** Boutique planners
**(21)** 2024902239 **(22)** 18.07.2024
**(54)** Boutique planting structures and items which help people grow various items at home, including herbs, vegetables and verities of beans. Using modern boutique planters which can also enclose the structure giving it more bench space as it can be used as such.

**(71)** Buchanans Group Pty Ltd
**(21)** 2024902273 **(22)** 22.07.2024
**(54)** COVER ARRANGEMENT

**(71)** Bucher Municipal Pty Ltd
**(21)** 2024902260 **(22)** 19.07.2024
**(54)** Bulk waste compaction apparatus

**(71)** Burgess, S.
**(21)** 2024902282 **(22)** 22.07.2024
**(54)** Parabolic Soccer Wall Training Device 2.

**(71)** CAMPBELL, T.
**(21)** 2024902267 **(22)** 21.07.2024
**(54)** SELF LEVELLING PLASTER COMPOUND APPLICATOR 2

**(71)** Card Armour Pty Ltd
**(21)** 2024902249 **(22)** 19.07.2024
**(54)** Flat memorabilia protector

**(71)** Carden, B.
**(21)** 2024902270 **(22)** 22.07.2024
**(54)** Massage Therapy Device

**(71)** Cole, D.
**(21)** 2024902207 **(22)** 17.07.2024
**(54)** Ceiling, wall recessed scent diffuser

**(71)** Corporaal Enterprises Pty Ltd
**(21)** 2024902230 **(22)** 18.07.2024
**(54)** BUILDING BLOCK

**(71)** Cummins, I.G.
**(21)** 2024902228 **(22)** 17.07.2024
**(54)** "Cold Fission" Water reactors producing green hydrogen (H2) by destroying oxygen O) electrons H20 technology

**(71)** Cutting Edges Equipment Parts Pty Ltd
**(21)** 2024902258 **(22)** 19.07.2024
**(54)** Pin system for securing ground engaging tools

**(71)** Cyber Security Research Centre Limited
**(21)** 2024902235 **(22)** 18.07.2024
**(54)** IOT Transport

**(71)** Edye, A.
**(21)** 2024902274 **(22)** 22.07.2024
**(54)** COMBINED DOG WASTE BAG DISPENSER AND CONTAINER

**(71)** Erskine Holdco Pty Ltd
**(21)** 2024902219 **(22)** 17.07.2024
**(54)** Interdental brush

**(71)** Eustralis Pharmaceuticals Limited (trading as PresSura Neuro)
**(21)** 2024902254 **(22)** 19.07.2024
**(54)** Administration Methods for Reducing Intracranial Pressure

## Provisional Applications Filed - Name Index cont'd

**(71)** Fastbrick IP Pty Ltd
**(21)** 2024902242 **(22)** 18.07.2024
**(54)** LOADER FOR HANDLING PALLETS AND CONTAINERS

---

**(71)** Four Guardians Pty Ltd
**(21)** 2024902279 **(22)** 22.07.2024
**(54)** A PROTEASE INHIBITOR AND THE PHARMACEUTICAL SALT THEREOF

---

**(71)** Future Battery Industries CRC Ltd
**(21)** 2024902243 **(22)** 18.07.2024
**(54)** Turbostratic carbon film

---

**(71)** Gearon, M.
**(21)** 2024902252 **(22)** 19.07.2024
**(54)** Wind Turbine blade improvements

---

**(71)** Glencore Technology Pty Limited
**(21)** 2024902259 **(22)** 19.07.2024
**(54)** Improved flotation apparatus and methods

---

**(71)** Golias, M.E.
**(21)** 2024902286 **(22)** 23.07.2024
**(54)** AN IMPROVED DRAIN GRATE ASSEMBLY

---

**(71)** Hopkins, T.
**(21)** 2024902253 **(22)** 19.07.2024
**(54)** Motorised Horizontal Outdoor Screening System

---

**(71)** Hotspot Cricket Pty Ltd
**(21)** 2024902232 **(22)** 18.07.2024
**(54)** System and Method for Analysing Batting Performance Using Colour Changing Pressure-Sensitive Coating and Image Processing Techniques

---

**(71)** Illinois Tool Works Inc.
**(21)** 2024902256 **(22)** 19.07.2024
**(54)** Anchor

---

**(71)** James, B.M.
**(21)** 2024902208 **(22)** 17.07.2024
**(54)** Plant extraction device

---

**(71)** Jonlo Engineering Pty Ltd
**(21)** 2024902265 **(22)** 21.07.2024
**(54)** CONTINUOUS TRACKING AND ACCOUNTABILITY IN A HYBRID VALIDATION FRAMEWORK FOR AI REASONING USING BLOCKCHAIN TECHNOLOGY

---

**(71)** KESA (AUST) PTY LTD
**(21)** 2024902210 **(22)** 17.07.2024
**(54)** Self Structuring Portable Hoist

---

**(71)** Lambert, D.
**(21)** 2024902211 **(22)** 17.07.2024
**(54)** DIGITAL REPRESENTATION OF A TRANSACTIVE MEMORY SYSTEM

---

**(71)** Mackenzie, B.
**(21)** 2024902226 **(22)** 17.07.2024
**(54)** E.A.R.S. - Emergency Awareness Receiver & Sender

---

**(71)** Madad Pty Ltd
**(21)** 2024902257 **(22)** 19.07.2024
**(54)** Mattress innerspring bladder system

---

**(71)** Margi, J.; Tan, J.
**(21)** 2024902261 **(22)** 19.07.2024
**(54)** Refrigerated Pet Bowl Apparatus

---

**(71)** Metlam Australia Pty Ltd
**(21)** 2024902212 **(22)** 17.07.2024
**(54)** Hinge

---

**(71)** Mineral Technologies Pty Ltd
**(21)** 2024902213 **(22)** 17.07.2024
**(54)** System and Method for Decoupling Process Water Circuits

---

**(71)** MonuBloc Pty Ltd
**(21)** 2024902229 **(22)** 18.07.2024
**(54)** A building device and wall system comprising the same

---

**(71)** MORSE MICRO PTY. LTD.
**(21)** 2024902285 **(22)** 23.07.2024
**(54)** Methods and devices of time-to-digital converter power saving mode

---

**(71)** Muddie's Holdings Pty Ltd
**(21)** 2024902237 **(22)** 18.07.2024
**(54)** Segment for a crushing and sizing drum

---

**(71)** Nelson, P.
**(21)** 2024902281 **(22)** 22.07.2024
**(54)** SYSTEM AND METHOD

---

**(71)** Nibbs, W.
**(21)** 2024902251 **(22)** 19.07.2024
**(54)** Towbar toolbox bracket/tray, fits inside the towbar connection on your car, and has a welded bracket the same size of a chequer plate toolbox or a similar style toolbox of your choice. It is a one piece connection for strength, fully welded by and authorised welder. The main bar is connected to the vehicle by your standard hinch pin as standard for a towbar hinch. The main sub frame is secured by another hinch pin system to enable the frame to move along the main bar connection, for accessibility to the boot of your vehicle. All of the frame is made from steel and powdercoated or painted black

---

**(71)** ONCOREVIVE HOLDINGS PTY LTD
**(21)** 2024902271 **(22)** 22.07.2024
**(54)** SURFACE-ENHANCED RAMAN SPECTROSCOPY (SERS) ASSAY-BASED DEVICE AND A PROCESS

---

**(71)** Oregon House Pty Ltd
**(21)** 2024902209 **(22)** 17.07.2024
**(54)** A wheel-track renovator

---

**(71)** Pablow API PTY LTD
**(21)** 2024902268 **(22)** 21.07.2024
**(54)** Micro-conflict Resolution Application

---

**(71)** Palmer, J.
**(21)** 2024902276 **(22)** 22.07.2024
**(54)** Passive Warm Water Saver

---

**(71)** Phillips Moore, G.
**(21)** 2024902250 **(22)** 19.07.2024
**(54)** Mechanical Assembly

---

**(71)** Power, R.
**(21)** 2024902224 **(22)** 17.07.2024
**(54)** Quickbrick rapid panel

---

**(71)** PWR IP Pty Ltd
**(21)** 2024902214 **(22)** 17.07.2024
**(54)** A METHOD OF MANUFACTURING AN ARTICLE

---

**(71)** PYC Therapeutics Limited
**(21)** 2024902223 **(22)** 17.07.2024
**(54)** Improved compositions and methods for treatment of monogenic neurodevelopmental disorders 7

---

**Ralph, G.L.T. see Aarons, J.**
**(21)** 2024902287

---

**(71)** Reisner, J.
**(21)** 2024902278 **(22)** 22.07.2024
**(54)** A New Method of Sales and Marketing

---

**(71)** Rose, M.
**(21)** 2024902272 **(22)** 22.07.2024
**(54)** Mobi Hoop

---

**(71)** Saad, D.
**(21)** 2024902284 **(22)** 23.07.2024
**(54)** Edible drinking straw composition

---

## Provisional Applications Filed - Name Index cont'd

**(71)** Second Peg Pty Ltd
**(21)** 2024902245 **(22)** 18.07.2024
**(54)** Fin Fastening System

---

**(71)** SENSE2 PTY LTD
**(21)** 2024902221 **(22)** 17.07.2024
**(54)** Advanced Boron-Doped Diamond Structures for High-Performance Semiconductor and Electronic Applications

---

**(71)** SENSE2 PTY LTD
**(21)** 2024902238 **(22)** 18.07.2024
**(54)** Advanced Boron-Doped Diamond Structures for High-Performance Semiconductor and Electronic Applications

---

**(71)** SENSE2 PTY LTD
**(21)** 2024902244 **(22)** 18.07.2024
**(54)** Advanced Boron-Doped Diamond Structures for High-Performance Semiconductor and Electronic Applications

---

**(71)** SENSE2 PTY LTD
**(21)** 2024902246 **(22)** 18.07.2024
**(54)** Advanced Boron-Doped Diamond Structures for High-Performance Semiconductor and Electronic Applications

---

**(71)** SENSE2 PTY LTD
**(21)** 2024902247 **(22)** 19.07.2024
**(54)** Advanced Boron-Doped Diamond Structures for High-Performance Semiconductor and Electronic Applications

---

**(71)** SENSE2 PTY LTD
**(21)** 2024902263 **(22)** 20.07.2024
**(54)** Advanced Boron-Doped Diamond Structures for High-Performance Semiconductor and Electronic Applications

---

**(71)** SENSE2 PTY LTD
**(21)** 2024902264 **(22)** 20.07.2024
**(54)** Advanced Boron-Doped Diamond Structures for High-Performance Semiconductor and Electronic Applications

---

**(71)** Sharp Initiatives Pty Ltd
**(21)** 2024902266 **(22)** 21.07.2024
**(54)** Supplement to methodology for transporting residential steel structured modular units that would otherwise be greater than the width allowable to be carried on roads or other modes of transport.

---

**(71)** Shulman, J.
**(21)** 2024902241 **(22)** 18.07.2024
**(54)** SEGMENTED SINGLE RECORD RETRIEVAL (SSRR) DATABASE ARCHITECTURE TO PREVENT MASS DATA LOSS

---

**(71)** Smaragdis, P.
**(21)** 2024902240 **(22)** 18.07.2024
**(54)** Data heat pump and system

---

**(71)** Sokolovic, F.
**(21)** 2024902234 **(22)** 18.07.2024
**(54)** SYSTEM AND METHOD OF SETTING AN ALARM OF A WIRELESS DEVICE

---

**(71)** STRESSLESS IP PTY LTD
**(21)** 2024902291 **(22)** 23.07.2024
**(54)** A LIVESTOCK LOADING RAMP AND LIVESTOCK BARRIER ASSEMBLY

---

**Tan, J. see Margi, J.**
**(21)** 2024902261

---

**(71)** THE RENEWABLE GROUP PTY. LTD.
**(21)** 2024902231 **(22)** 18.07.2024
**(54)** UNIVERSAL FENCING SYSTEM IMPROVED BS

---

**(71)** THE RENEWABLE GROUP PTY. LTD.
**(21)** 2024902233 **(22)** 18.07.2024
**(54)** PERIMETER DEFENSIVE SYSTEM BS

---

**(71)** The Trustee for The Systems Chall-Enger Unit Trust
**(21)** 2024902262 **(22)** 20.07.2024
**(54)** ONLINE SPORTING ARENA

---

**(71)** The University of Sydney
**(21)** 2024902255 **(22)** 19.07.2024
**(54)** Dental training system and method

---

**(71)** Tournicare Pty Ltd
**(21)** 2024902248 **(22)** 19.07.2024
**(54)** Clamping devices and methods for repeated measurement of changes in blood pressure

---

**(71)** Tractive Motion Technologies Pty Ltd
**(21)** 2024902220 **(22)** 17.07.2024
**(54)** Decoiler assembly

---

**(71)** Tractive Motion Technologies Pty Ltd
**(21)** 2024902222 **(22)** 17.07.2024
**(54)** Decoiler assembly

---

**(71)** Trochlear Pty Ltd
**(21)** 2024902269 **(22)** 22.07.2024
**(54)** Surgical System

---

**(71)** Vellani, Z.
**(21)** 2024902225 **(22)** 17.07.2024
**(54)** Infant Development Support System

---

**(71)** Vucic, P.
**(21)** 2024902280 **(22)** 22.07.2024
**(54)** Trigger and Push Rod Fastening Mechanism for Toilet Seats

---

**(71)** Watts Water Equipment Manufacturing (Ningbo) Co., Ltd.
**(21)** 2024902227 **(22)** 18.07.2024
**(54)** Strainer having Screen with Magnetic Rings

**Numerical Index**

## Complete Applications Filed

**Name Index**

Applications listed below were processed through the Patent Office Canberra during the period ending 16 Jul 2024 .

. (*) Title not in Roman characters
. (**) Title not given

---

**A.L.M Holding Company see Ergon Asphalt & Emulsions, Inc.**
**(21)** 2024205012

---

**AbbVie Deutschland GmbH & Co. KG see AbbVie Inc.**
**(21)** 2024205014

---

**(71)** AbbVie Inc.
**(21)** 2024205004 **(22)** 20.07.2024
**(54)** Anti-EGFR antibody drug conjugates

---

**(71)** AbbVie Inc.; AbbVie Deutschland GmbH & Co. KG
**(21)** 2024205014 **(22)** 22.07.2024
**(54)** Anti-repulsive guidance molecule a (RGMa) antagonistic antibodies for treating spinal cord injury and pain

---

**(71)** Acerta Pharma B.V.
**(21)** 2024204906 **(22)** 17.07.2024
**(54)** ACALABRUTINIB MALEATE DOSAGE FORMS

---

**(71)** Alcon, Inc.; The Regents of the University of Colorado, a body corporate
**(21)** 2024204907 **(22)** 17.07.2024
**(54)** Intraocular lens designs for improved stability

---

**(71)** Alexion Pharmaceuticals, Inc.
**(21)** 2024204884 **(22)** 16.07.2024
**(54)** ANTI-C5 ANTIBODIES HAVING IMPROVED PHARMACOKINETICS

---

**(71)** Altor BioScience Corporation
**(21)** 2024204957 **(22)** 18.07.2024
**(54)** IL-15-based molecules and methods of use thereof

---

**(71)** Amazentis SA
**(21)** 2024204908 **(22)** 17.07.2024
**(54)** Compositions and methods for improving mitochondrial function and treating neurodegenerative diseases and cognitive disorders

---

**(71)** Amgen Inc.
**(21)** 2024205016 **(22)** 22.07.2024
**(54)** Crystalline antibody formulations

---

**(71)** Angel Group Co., Ltd.
**(21)** 2024205009 **(22)** 22.07.2024
**(54)** FRAUD DETECTION SYSTEM IN CASINO

---

**(71)** Apple Inc.
**(21)** 2024204961 **(22)** 18.07.2024
**(54)** Method, device and medium for ranging

---

**(71)** AstraZeneca AB
**(21)** 2024204913 **(22)** 17.07.2024
**(54)** COMBINATION OF ZIBOTENTAN AND DAPAGLIFLOZIN FOR THE TREATMENT OF CHRONIC KIDNEY DISEASE

---

**(71)** Bambino Prezioso Switzerland AG
**(21)** 2024204937 **(22)** 18.07.2024
**(54)** Angle adjustment structure and child carrier

---

**(71)** Becton, Dickinson and Company
**(21)** 2024204935 **(22)** 18.07.2024
**(54)** Capillary collector with rotatable connection

---

**(71)** Big Dutchman International GmbH
**(21)** 2024204999 **(22)** 19.07.2024
**(54)** DEVICE AND METHOD FOR HANDLING POULTRY ANIMALS

---

**(71)** BioNTech SE
**(21)** 2024204890 **(22)** 16.07.2024
**(54)** DOSE DETERMINATION FOR IMMUNOTHERAPEUTIC AGENTS

---

**(71)** Boston Scientific Scimed, Inc.
**(21)** 2024204940 **(22)** 18.07.2024
**(54)** Stone identification methods and systems

---

**(71)** Bradley, C.
**(21)** 2024204903 **(22)** 17.07.2024
**(54)** MASSIVELY MULTIPLEXED HOMOLOGOUS TEMPLATE REPAIR FOR WHOLE-GENOME REPLACEMENT

---

**(71)** BruMate, Inc.
**(21)** 2024205031 **(22)** 23.07.2024
**(54)** NO SPILL STRAW

---

**(71)** CAAMTECH, INC.
**(21)** 2024204922 **(22)** 17.07.2024
**(54)** Quaternary tryptamines and their therapeutic uses

---

**(71)** Cantor Index LLC
**(21)** 2024205032 **(22)** 23.07.2024
**(54)** SYSTEM AND METHOD FOR CONDUCTING A JACKPOT RACE EVENT

---

**(71)** Canva Pty Ltd
**(21)** 2024204885 **(22)** 16.07.2024
**(54)** Processing of images with text

---

**(71)** Canva Pty Ltd
**(21)** 2024205023 **(22)** 22.07.2024
**(54)** Systems and methods for generating a design

---

**(71)** Canva Pty Ltd
**(21)** 2024205035 **(22)** 23.07.2024
**(54)** Systems and methods for identifying objects in an image

---

**(71)** CATERPILLAR GLOBAL MINING EQUIPMENT LLC
**(21)** 2024204933 **(22)** 18.07.2024
**(54)** System and method for supporting elevated power rails

---

**(71)** CATERPILLAR GLOBAL MINING EQUIPMENT LLC
**(21)** 2024204934 **(22)** 18.07.2024
**(54)** System and method for supporting elevated power rails

---

**(71)** CATERPILLAR INC.
**(21)** 2024204954 **(22)** 18.07.2024
**(54)** MOBILE EQUIPMENT OPTIMIZED FOR A SWAPPABLE BATTERY SOLUTION

---

**(71)** CHO Pharma, Inc.
**(21)** 2024204980 **(22)** 19.07.2024
**(54)** Fucosidase mutants and the use thereof

---

**(71)** Chugai Seiyaku Kabushiki Kaisha; F. Hoffmann-La Roche AG
**(21)** 2024204924 **(22)** 17.07.2024

## Complete Applications Filed - Name Index cont'd

**(54)** Methods of using a bispecific antibody that recognizes coagulation factor IX and/or activated coagulation factor IX and coagulation factor X and/or activated coagulation factor X

---

**CommScope Connectivity Belgium BVBA see CommScope Technologies LLC**
**(21)** 2024204894

---

**CommScope Connectivity UK Limited see CommScope Technologies LLC**
**(21)** 2024204894

---

**(71)** CommScope Technologies LLC; CommScope Connectivity Belgium BVBA; CommScope Connectivity UK Limited
**(21)** 2024204894 **(22)** 17.07.2024
**(54)** Optical Network Converter Module

---

**(71)** Coogee Minerals Pty Ltd
**(21)** 2024204987 **(22)** 19.07.2024
**(54)** METHOD FOR PRODUCTION OF HYDROMAGNESITE

---

**(71)** CUTSFORTH, INC.
**(21)** 2024204942 **(22)** 18.07.2024
**(54)** Brush assembly

---

**(71)** Deciphera Pharmaceuticals, LLC
**(21)** 2024205010 **(22)** 22.07.2024
**(54)** CSF1R inhibitors for use in treating cancer

---

**(71)** Deere & Company
**(21)** 2024204896 **(22)** 17.07.2024
**(54)** Cotton stripper air duct system

---

**(71)** Deere & Company
**(21)** 2024204973 **(22)** 19.07.2024
**(54)** Verify implement receiver physical mounting location by using the machine and implement receiver actual reported locations

---

**(71)** Delta Panels Pty Ltd
**(21)** 2024204930 **(22)** 18.07.2024
**(54)** METHOD OF MANUFACTURE

---

**(71)** Digital Diagnostics Inc.
**(21)** 2024204949 **(22)** 18.07.2024
**(54)** Diagnosing skin conditions using machine-learned models

---

**(71)** Dolby International AB
**(21)** 2024205020 **(22)** 22.07.2024
**(54)** Model based prediction in a critically sampled filterbank

---

**(71)** Dow AgroSciences, LLC
**(21)** 2024204960 **(22)** 18.07.2024
**(54)** Compounds derived from herbicidal carboxylic acids and tetraalkylammonium or (arylalkyl) trialkylammonium hydroxides

---

**(71)** eggXYt Ltd
**(21)** 2024204892 **(22)** 16.07.2024
**(54)** METHODS FOR GENDER DETERMINATION OF AVIAN EMBRYOS IN UNHATCHED EGGS AND MEANS THEREOF

---

**(71)** Elevation Spine, Inc.
**(21)** 2024205027 **(22)** 22.07.2024
**(54)** Interbody spacer and bone plate assembly, instrumentation, and methods

---

**(71)** Ergon Asphalt & Emulsions, Inc.; A.L.M Holding Company
**(21)** 2024205012 **(22)** 22.07.2024
**(54)** ASPHALT EMULSION SURFACE TREATMENT CONTAINING STEROL

---

**(71)** ExoAnalytic Solutions, Inc.
**(21)** 2024204956 **(22)** 18.07.2024
**(54)** Systems and visualization interfaces for orbital paths and path parameters of space objects

---

**(71)** F. & J. Attard & Sons Pty. Limited
**(21)** 2024204910 **(22)** 17.07.2024
**(54)** TRUCK CURTAIN AND CURTAIN SYSTEM

---

**F. Hoffmann-La Roche AG see Chugai Seiyaku Kabushiki Kaisha**
**(21)** 2024204924

---

**(71)** FAMETEC GmbH
**(21)** 2024204981 **(22)** 19.07.2024
**(54)** Furnace system for growing crystals

---

**(71)** Fasteners for Retail, Inc.
**(21)** 2024204918 **(22)** 17.07.2024
**(54)** PULL-OUT TRAY FOR SHELVING

---

**(71)** Filtrex Global Ltd
**(21)** 2024204938 **(22)** 18.07.2024
**(54)** Remote monitoring of an air filter

---

**(71)** Fred Hutchinson Cancer Center
**(21)** 2024204905 **(22)** 17.07.2024
**(54)** Combination therapies for treatment of BCMA-related cancers and autoimmune disorders

---

**(71)** FUJIFILM Irvine Scientific, Inc.
**(21)** 2024205036 **(22)** 23.07.2024
**(54)** Automated method and apparatus for preparing bioprocess solutions

---

**(71)** GENENTECH, INC.
**(21)** 2024204988 **(22)** 19.07.2024
**(54)** Combinations of an anti-HER2 antibody-drug conjugate and chemotherapeutic agents, and methods of use

---

**(71)** Genovie AB
**(21)** 2024205017 **(22)** 22.07.2024
**(54)** An engineered multi-component system for identification and characterisation of T-cell receptors and T-cell antigens

---

**(71)** GIGA-BYTE TECHNOLOGY CO., LTD.
**(21)** 2024205019 **(22)** 22.07.2024
**(54)** DISPLAY DEVICE AND FLEXIBLE FRAME

---

**(71)** Gilead Sciences, Inc.
**(21)** 2024204902 **(22)** 17.07.2024
**(54)** Cot modulators and methods of use thereof

---

**(71)** GOOGLE LLC
**(21)** 2024204939 **(22)** 18.07.2024
**(54)** OVERLAP JOINT FLEX CIRCUIT BOARD INTERCONNECTION

---

**(71)** Grip Holdings LLC
**(21)** 2024204899 **(22)** 17.07.2024
**(54)** Anti-Slippage Fastener

---

**(71)** Guangzhou Medical University
**(21)** 2024204967 **(22)** 18.07.2024
**(54)** APPLICATION OF TETRAHYDROQUINOLONE-AMIDE-THIAZOLE COMPOUNDS

---

**(71)** GW Research Limited
**(21)** 2024204928 **(22)** 18.07.2024
**(54)** Use of cannabidiols in the treatment of epilepsy

---

**(71)** Heineken Supply Chain B.V.
**(21)** 2024204929 **(22)** 18.07.2024
**(54)** Beverage dispensing assembly and beverage container

---

**(71)** H L Group Engineering Pty Ltd
**(21)** 2024204965 **(22)** 18.07.2024
**(54)** Support system for supporting a balustrade or fence panel

---

**(71)** Hollister Incorporated
**(21)** 2024204895 **(22)** 17.07.2024

## Complete Applications Filed - Name Index cont'd

**(54)** Package for medical device for ergonomic device removal

---

**(71)** HONEYWELL INTERNATIONAL INC.
**(21)** 2024204923 **(22)** 17.07.2024
**(54)** Apparatuses, computer-implemented methods, and computer program products for monitoring audio protector fit

---

**(71)** Igin Smart Hygiene Ltd
**(21)** 2024204901 **(22)** 17.07.2024
**(54)** Apparatus for Putting a Glove on a Palm Hand

---

**(71)** Ikaika Therapeutics, LLC
**(21)** 2024204925 **(22)** 17.07.2024
**(54)** Mitigating tissue damage and fibrosis via latent transforming growth factor beta binding protein (LTBP4)

---

**(71)** Illumina, Inc.
**(21)** 2024204952 **(22)** 18.07.2024
**(54)** Analysis system for orthogonal access to and tagging of biomolecules in cellular compartments

---

**(71)** Imperative Execution Inc.
**(21)** 2024204994 **(22)** 19.07.2024
**(54)** Systems and methods for optimizing trade execution

---

**(71)** Impossible Foods Inc.
**(21)** 2024205000 **(22)** 19.07.2024
**(54)** Methods and compositions for affecting the flavor and aroma profile of consumables

---

**(71)** Incyte Corporation
**(21)** 2024204891 **(22)** 16.07.2024
**(54)** JAK1 PATHWAY INHIBITORS FOR THE TREATMENT OF CYTOKINE-RELATED DISORDERS

---

**(71)** InfraBuild Australia Pty Ltd
**(21)** 2024205024 **(22)** 22.07.2024
**(54)** STEEL BAR

---

**(71)** Janssen Biotech, Inc.
**(21)** 2024205021 **(22)** 22.07.2024
**(54)** Anti- GPRC5D antibodies, bispecific antigen binding molecules that bind GPRC5D and CD3, and uses thereof

---

**(71)** Jhunjhunwala, S.
**(21)** 2024204966 **(22)** 18.07.2024
**(54)** A mattress cover

---

**(71)** john ross, t.; ross, s.
**(21)** 2024205005 **(22)** 20.07.2024
**(54)** Roof Recovery

---

**(71)** Keystone Tower Systems, Inc.
**(21)** 2024205018 **(22)** 22.07.2024
**(54)** TUBULAR STRUCTURE REINFORCEMENT

---

**Kim, Y. see Wang, Y.**
**(21)** 2024204986

---

**(71)** KWS SAAT SE & Co. KGaA
**(21)** 2024204941 **(22)** 18.07.2024
**(54)** Methods for improving genome engineering and regeneration in plant II

---

**(71)** Kyle, K.
**(21)** 2024204927 **(22)** 18.07.2024
**(54)** Shoe device with dual stadium arch bimodal structure for rapid entry and release

---

**(71)** LG Electronics Inc.
**(21)** 2024204950 **(22)** 18.07.2024
**(54)** INTRA BLOCK CODING-BASED VIDEO OR IMAGE CODING

---

**(71)** LG Electronics Inc.
**(21)** 2024204985 **(22)** 19.07.2024
**(54)** DOORS FOR HOME APPLIANCE AND HOME APPLIANCE INCLUDING SAME

---

**(71)** LifeCell Corporation
**(21)** 2024205015 **(22)** 22.07.2024
**(54)** Flowable acellular tissue matrix products and methods of production

---

**(71)** Lindsay Transportation Solutions, LLC
**(21)** 2024204989 **(22)** 19.07.2024
**(54)** ROADWAY BARRIER BICYCLE SAFETY APPARATUS

---

**(71)** LivePerson, Inc.
**(21)** 2024204915 **(22)** 17.07.2024
**(54)** Systems and methods for intent response solicitation and processing

---

**(71)** LuxCreo (Beijing) Inc.
**(21)** 2024204916 **(22)** 17.07.2024
**(54)** Additive manufacturing apparatus and method

---

**(71)** MacDon Industries Ltd
**(21)** 2024204911 **(22)** 17.07.2024
**(54)** SKID SHOE FOR AN AGRICULTURAL HEADER

---

**(71)** Maspro Engineering Trading Pty Ltd
**(21)** 2024204945 **(22)** 18.07.2024
**(54)** Drilling rig and components

---

**(71)** Mayborn (UK) Limited
**(21)** 2024204921 **(22)** 17.07.2024
**(54)** BOTTLE ASSEMBLY AND VALVE ASSEMBLY

---

**(71)** Maytronics Ltd.
**(21)** 2024204974 **(22)** 19.07.2024
**(54)** Navigation of dynamic pool equipment

---

**(71)** Muddie's Holdings Pty Ltd
**(21)** 2024204968 **(22)** 18.07.2024
**(54)** Segment for a crushing and sizing drum

---

**(71)** Multiturn Pty Ltd
**(21)** 2024205037 **(22)** 23.07.2024
**(54)** Improved single turn screw pile

---

**(71)** Naturex SA
**(21)** 2024204984 **(22)** 19.07.2024
**(54)** FOOD STABILISING COMPOSITION COMPRISING PLANT-DERIVED INHIBITORS OF FATTY ACID OXIDATION

---

**(71)** Nearmap US, Inc.
**(21)** 2024205033 **(22)** 23.07.2024
**(54)** Image analysis systems and methods for determining building roof age

---

**(71)** Novo Nordisk A/S
**(21)** 2024204972 **(22)** 19.07.2024
**(54)** Stable semaglutide compositions and uses thereof

---

**(71)** Novozymes A/S
**(21)** 2024204919 **(22)** 17.07.2024
**(54)** Polypeptides having lysozyme activity, polynucleotides encoding same and uses and compositions thereof

---

**(71)** NOWWW.US PTY LTD
**(21)** 2024205006 **(22)** 20.07.2024
**(54)** A METHOD FOR DISGUISING A COMPUTER SYSTEM'S LOGIN INTERFACE

---

**(71)** Nu Flow Technologies 2000 Inc.
**(21)** 2024204912 **(22)** 17.07.2024
**(54)** Liner assembly for pipelines and related method

---

**(71)** Nu Flow Technologies 2000 Inc.
**(21)** 2024204920 **(22)** 17.07.2024
**(54)** Liner assembly for pipelines and related method

---

## Complete Applications Filed - Name Index cont'd

**(71)** Oliver, J.
**(21)** 2024204914 **(22)** 16.07.2024
**(54)** OLIVER - Motion Power Generator

---

**(71)** Palairet, T.
**(21)** 2024204992 **(22)** 19.07.2024
**(54)** Golf tee

---

**(71)** QTEQ IQ Pty Ltd
**(21)** 2024204898 **(22)** 17.07.2024
**(54)** Improved systems, methods and apparatus for downhole monitoring of production conditions using EM telemetry

---

**(71)** Regeneron Pharmaceuticals, Inc.
**(21)** 2024204962 **(22)** 18.07.2024
**(54)** Methods for enhancing efficacy of a vaccine by administering an IL-4R antagonist

---

**(71)** Regeneron Pharmaceuticals, Inc.
**(21)** 2024205038 **(22)** 23.07.2024
**(54)** METHODS OF REDUCING PARTICLE FORMATION AND COMPOSITIONS FORMED THEREBY

---

**(71)** Relborgn Pty Ltd; Triomviri Pty Ltd
**(21)** 2024204944 **(22)** 18.07.2024
**(54)** Method, Apparatus and Composition for Sealing of Surfaces

---

**(71)** ResMed Sensor Technologies Limited
**(21)** 2024204900 **(22)** 17.07.2024
**(54)** METHOD AND APPARATUS FOR DETERMINING POTENTIAL ONSET OF AN ACUTE MEDICAL CONDITION

---

**ross, s. see john ross, t.**
**(21)** 2024205005

---

**(71)** Runweight Pty Ltd
**(21)** 2024204943 **(22)** 18.07.2024
**(54)** A system for real time determination of parameters of an aircraft

---

**(71)** Sany Renewable Energy Co., Ltd.
**(21)** 2024204926 **(22)** 17.07.2024
**(54)** BLADE TAIL EDGE STRUCTURE, WIND TURBINE BLADE, AND WIND TURBINE GENERATOR SYSTEM

---

**(71)** SAP SE
**(21)** 2024205026 **(22)** 22.07.2024
**(54)** Multi-version concurrency control (MVCC) in non-volatile memory

---

**(71)** Seminis Vegetable Seeds, Inc.
**(21)** 2024204982 **(22)** 19.07.2024
**(54)** Spinach hybrid SVVB2740 and parents thereof

---

**(71)** Seminis Vegetable Seeds, Inc.
**(21)** 2024204993 **(22)** 19.07.2024
**(54)** Spinach hybrid SVVB2725

---

**(71)** Seminis Vegetable Seeds, Inc.
**(21)** 2024204998 **(22)** 19.07.2024
**(54)** Spinach hybrid SVVB2741

---

**(71)** SENSE2 PTY LTD
**(21)** 2024205007 **(22)** 20.07.2024
**(54)** Advanced Boron-Doped Diamond Structures for High-Performance Semiconductor and Electronic Applications

---

**(71)** SHAHEEN INNOVATIONS HOLDING LIMITED
**(21)** 2024204936 **(22)** 18.07.2024
**(54)** A nicotine delivery device

---

**(71)** SHIH, C.
**(21)** 2024204946 **(22)** 18.07.2024
**(54)** Anti-pinch electric linear actuator

---

**(71)** SK Innovation Co., Ltd.
**(21)** 2024204970 **(22)** 19.07.2024
**(54)** SYSTEM FOR DECOMPOSING AMMONIA AND METHOD OF DECOMPOSING AMMONIA

---

**(71)** SK Innovation Co., Ltd.
**(21)** 2024204971 **(22)** 19.07.2024
**(54)** APPARATUS FOR CONTROLLING VEHICLE EQUIPPED WITH AMMONIA FUEL CELL AND METHOD FOR OPERATING THE SAME

---

**(71)** SK Innovation Co., Ltd.
**(21)** 2024204975 **(22)** 19.07.2024
**(54)** HYDROGEN CRACKING APPARATUS, HYDROGEN CRACKING METHOD USING THE SAME AND ENERGY GENERATION SYSTEM

---

**(71)** SK Innovation Co., Ltd.
**(21)** 2024204976 **(22)** 19.07.2024
**(54)** SYSTEM FOR CONTROLLING AMMONIA REACTOR AND METHOD OF GENERATING HYDROGEN

---

**(71)** SK Innovation Co., Ltd.
**(21)** 2024204990 **(22)** 19.07.2024
**(54)** ADSORPTION TOWER FOR CONTROLLING A FLUID SUPPLY ROUTE TO A PLURALITY OF BEDS AND OPERATING CONTROL METHOD THEREOF

---

**(71)** SK Innovation Co., Ltd.
**(21)** 2024204991 **(22)** 19.07.2024
**(54)** AMMONIA ADSORPTION TOWER OPERATING CONTROL DEVICE AND CONTROL METHOD USING THE SAME

---

**(71)** Smart Shade Innovations Inc.
**(21)** 2024204948 **(22)** 18.07.2024
**(54)** Roller shade assembly

---

**(71)** SMC Technologies Pty Ltd
**(21)** 2024205034 **(22)** 23.07.2024
**(54)** Air brake dash valve lockout

---

**Smith, L. see Smith, B.**
**(21)** 2024204955

---

**(71)** Smith, B.; Smith, L.
**(21)** 2024204955 **(22)** 18.07.2024
**(54)** Child drink device lid transition to open cup

---

**(71)** Snap-on Incorporated
**(21)** 2024204931 **(22)** 18.07.2024
**(54)** Handle support module

---

**Solymosi, G. see Wang, Y.**
**(21)** 2024204986

---

**(71)** Sterlite Technologies Limited
**(21)** 2024204889 **(22)** 16.07.2024
**(54)** TOOL TO REMOVE DUST CAP OF FIBER CONNECTOR

---

**(71)** Sungrow Power Supply Co., Ltd.
**(21)** 2024205003 **(22)** 19.07.2024
**(54)** Microgrid inverter, microgrid system, and method for controlling microgrid inverter

---

**(71)** Takeda Pharmaceutical Company Limited
**(21)** 2024204995 **(22)** 19.07.2024
**(54)** A METHOD TO PRODUCE AN IMMUNOGLOBULIN PREPARATION WITH IMPROVED YIELD

---

**(71)** Technische Universität München
**(21)** 2024204996 **(22)** 19.07.2024
**(54)** METHANATION WITH TURBOCHARGER

---

**(71)** Technological Resources Pty. Limited
**(21)** 2024204963 **(22)** 18.07.2024
**(54)** Mining System

---

**(71)** Ted Golf Equipment Co., Ltd
**(21)** 2024204997 **(22)** 19.07.2024
**(54)** WHEEL BUILT-IN POWER SYSTEM FOR ELECTRIC GOLF BAG TROLLEY

## Complete Applications Filed - Name Index cont'd

**(71)** Tencent America LLC
**(21)** 2024204951 **(22)** 18.07.2024
**(54)** METHOD AND DEVICE FOR CODING VIDEO SEQUENCE

**(71)** Tencent America LLC
**(21)** 2024204958 **(22)** 18.07.2024
**(54)** METHOD AND DEVICE FOR VIDEO CODING

**(71)** Tencent America LLC
**(21)** 2024204959 **(22)** 18.07.2024
**(54)** METHOD AND DEVICE FOR VIDEO CODING

**(71)** The Coca-Cola Company
**(21)** 2024204978 **(22)** 19.07.2024
**(54)** Sweetness and taste improvement of steviol glycoside and mogroside sweeteners with cyclamate

**(71)** The Regents of the University of California
**(21)** 2024204947 **(22)** 18.07.2024
**(54)** Methods and compositions for treatment of angiogenic disorders using anti-VEGF agents

**The Regents of the University of Colorado, a body corporate see Alcon, Inc.**
**(21)** 2024204907

**(71)** The Scripps Research Institute
**(21)** 2024204977 **(22)** 19.07.2024
**(54)** Pharmacophore for trail induction

**(71)** The Tru Shrimp Company
**(21)** 2024204983 **(22)** 19.07.2024
**(54)** RACEWAYS AND SYSTEMS THEREOF

**(71)** Trina Solar Co., Ltd.
**(21)** 2024204909 **(22)** 17.07.2024
**(54)** Solar cell and manufacturing method therefor, and photovoltaic module

**Triomviri Pty Ltd see Relborgn Pty Ltd**
**(21)** 2024204944

**(71)** ULMA Packaging, S.Coop.
**(21)** 2024204897 **(22)** 17.07.2024
**(54)** Packaging machine

**(71)** Universal Field Robots Pty Ltd.
**(21)** 2024205011 **(22)** 22.07.2024
**(54)** Automated vehicle

**(71)** Virentia Innovation Inc.
**(21)** 2024205025 **(22)** 22.07.2024
**(54)** COMPOSITIONS COMPRISING FABACEAE FAMILY PLANT COMPONENTS, PROCESSES OF PREPARATION AND USES THEREOF

**(71)** Volvo Autonomous Solutions AB
**(21)** 2024204932 **(22)** 18.07.2024
**(54)** System and method for handling bandwidth of a wireless communication link for a vehicle

**(71)** W.M. Barr & Company, Inc.
**(21)** 2024205002 **(22)** 19.07.2024
**(54)** Spill resistant and moisture absorbing device

**(71)** Wagstaff Food Services Pty Ltd
**(21)** 2024205030 **(22)** 22.07.2024
**(54)** KNOCKING BOX

**(71)** Wang, Y.; Solymosi, G.; Kim, Y.
**(21)** 2024204986 **(22)** 19.07.2024
**(54)** System and method for evaluating models for predictive failure of renewable energy assets

**(71)** WAVE LIFE SCIENCES LTD.
**(21)** 2024204904 **(22)** 17.07.2024
**(54)** Technologies for oligonucleotide preparation

**(71)** Willow Innovations, Inc.
**(21)** 2024204917 **(22)** 17.07.2024
**(54)** Breast pump assembly and methods

**(71)** Wonderland Switzerland AG
**(21)** 2024204953 **(22)** 18.07.2024
**(54)** FOLDABLE LOCKING MECHANISM

**(71)** Wonderland Switzerland AG
**(21)** 2024205013 **(22)** 22.07.2024
**(54)** Child Restraint with Rotating Seat

**(71)** Yates, S.
**(21)** 2024205008 **(22)** 21.07.2024
**(54)** Plumbing Equipment

**(71)** Yodlee, Inc.
**(21)** 2024205001 **(22)** 19.07.2024
**(54)** Predicting recurrence from financial data

**(71)** Yuyao Linsheng Electrical Appliance Co., Ltd
**(21)** 2024204969 **(22)** 18.07.2024
**(54)** SOCKET WITH WATERPROOF STRUCTURE

**(71)** Zhejiang Hongli (A/List) Tools Co.#Ltd.
**(21)** 2024205028 **(22)** 22.07.2024
**(54)** Top-Driven Jack

**(71)** Zhejiang Hongli (A/List) Tools Co.#Ltd.
**(21)** 2024205029 **(22)** 22.07.2024
**(54)** Height Quickly-Adjustable Jack

**Numerical Index**

## Complete Applications Filed - Numerical Index cont'd

| | |
|---|---|
| **2024205021** | Janssen Biotech, Inc. |
| **2024205023** | Canva Pty Ltd |
| **2024205024** | InfraBuild Australia Pty Ltd |
| **2024205025** | Virentia Innovation Inc. |
| **2024205026** | SAP SE |
| **2024205027** | Elevation Spine, Inc. |
| **2024205028** | Zhejiang Hongli (A/List) Tools Co.#Ltd. |
| **2024205029** | Zhejiang Hongli (A/List) Tools Co.#Ltd. |
| **2024205030** | Wagstaff Food Services Pty Ltd |
| **2024205031** | BruMate, Inc. |
| **2024205032** | Cantor Index LLC |
| **2024205033** | Nearmap US, Inc. |
| **2024205034** | SMC Technologies Pty Ltd |
| **2024205035** | Canva Pty Ltd |
| **2024205036** | FUJIFILM Irvine Scientific, Inc. |
| **2024205037** | Multiturn Pty Ltd |
| **2024205038** | Regeneron Pharmaceuticals, Inc. |

## Innovation Patent Applications Filed

**Name Index**

Applications listed below were processed through the Patent Office Canberra during the period ending 16 Jul 2024 .
(This list may contain multiple listings of a patent application where there are multiple applicants for that patent.)

---

**(71)** Adama Agan Ltd.
**(21)** 2024100023 **(22)** 19.07.2024
**(54)** Solid state form of Pyroxasulfone
**(62)** 2021207765

**Numerical Index**

## Applications Lapsed, Refused Or Withdrawn, Patents Ceased or Expired

Reference to the application numbers must include the year of the application of the patent, which is shown preceding the numbers.

The codes next to each number have the following meanings:

| Code | Meaning |
|---|---|
| 1 | Application Lapsed Section 142(2)(a) |
| 3 | Application Lapsed Section 142(2)(c) |
| 4 | Application Lapsed Section 142(2)(d) |
| 5 | Application Lapsed Section 142(2)(e) |
| 6 | Application Lapsed Section 142(2)(f)/Reg. 13.5A(2)\Reg. 8.3(3) |
| 7 | Application Lapsed Reg. 3.2A(3)/Reg. 3.2C |
| 8 | Application Lapsed Reg. 3.4(6) |
| 9 | Application Lapsed Section 142(3) |
| 11 | Application Lapsed Section 148(1)(c) |
| 12 | Application Withdrawn Section 141(1) |
| 13 | Application Withdrawn Section 141(2)/Reg 13.1C\Section 141(3)/See Reg 8.3(2) |
| 14 | Patent Ceased Section 143(a), or Expired |
| 15 | Patent Ceased Section 143(b) |
| 16 | Application Refused |
| 17 | Application Lapsed Reg. 22.2B(2) |
| 18 | Application Lapsed Reg. 3.2B(3),(5) or (6) |
| 20 | Patent Ceased Section 143A(b)/Reg. 22.2D(2) or (4) |
| 21 | Patent Ceased Section 101C(b)/Section 143A(c)/Reg. 9A.4 |
| 22 | Patent Ceased Section 143A(d), or Expired |
| 23 | Patent Ceased Section 143A(e) |
| 24 | Application Lapsed Reg. 22.2E(2) |
| 25 | Application Lapsed Reg. 22.2I(2) |
| 26 | Application Lapsed Reg. 3.5AC(11) |
| 27 | Application Lapsed Reg. 3.5AF(2F) |
| 28 | Application Lapsed Reg. 22.15A(3) |
| A | Applications on which examination has not been requested or directed |
| B | Applications on which a direction to request examination has been given |
| C | Applications on which examination has been requested or on which an examination report has been issued |
| D | Applications which have been accepted or advertised accepted |
| E | Patents on which an examination has not been requested |
| F | Patents on which an examination has been requested or report issued |
| G | Patents Certified |
| N | Applications not Open to Public Inspection |

**2004**

2004203132 ( 14 ) 2004255268 ( 14 ) 2004256215 ( 14 )
2004256313 ( 14 ) 2004256315 ( 14 ) 2004256354 ( 14 )
2004256368 ( 14 ) 2004256649 ( 14 ) 2004256962 ( 14 )
2004256976 ( 14 ) 2004257228 ( 14 ) 2004257448 ( 14 )
2004257450 ( 14 ) 2004257456 ( 14 ) 2004257693 ( 14 )
2004257842 ( 14 ) 2004258013 ( 14 ) 2004258175 ( 14 )
2004258667 ( 14 ) 2004259140 ( 14 ) 2004259362 ( 14 )
2004259426 ( 14 ) 2004259433 ( 14 ) 2004259699 ( 14 )
2004260247 ( 14 ) 2004260440 ( 14 ) 2004260588 ( 14 )
2004260651 ( 14 ) 2004260652 ( 14 ) 2004260657 ( 14 )
2004261561 ( 14 ) 2004262527 ( 14 ) 2004266445 ( 14 )
2004268510 ( 14 ) 2004280153 ( 14 ) 2004296710 ( 14 )
2004300755 ( 14 ) 2004301258 ( 14 ) 2004301610 ( 14 )
2004301746 ( 14 ) 2004307920 ( 14 ) 2004307921 ( 14 )
2004314114 ( 14 ) 2004321459 ( 14 ) 2004321724 ( 14 )

**2005**

2005203826 ( 14 ) 2005203844 ( 14 ) 2005203946 ( 14 )
2005204044 ( 14 ) 2005207876 ( 14 ) 2005323528 ( 14 )
2005323539 ( 14 )

**2006**

2006200046 ( 14 ) 2006200068 ( 14 ) 2006203828 ( 14 )
2006203892 ( 14 ) 2006204001 ( 14 ) 2006204110 ( 14 )
2006206137 ( 14 ) 2006298052 ( 14 )

**2007**

2007200077 ( 14 ) 2007200635 ( 14 ) 2007204067 ( 14 )
2007204296 ( 14 ) 2007204735 ( 14 ) 2007205337 ( 14 )
2007212045 ( 14 ) 2007240247 ( 14 ) 2007249711 ( 14 )

**2008**

2008200107 ( 14 ) 2008202949 ( 14 ) 2008204998 ( 14 )
2008205145 ( 14 ) 2008205147 ( 14 ) 2008205155 ( 14 )
2008205235 ( 14 ) 2008205244 ( 14 ) 2008207635 ( 14 )
2008210887 ( 14 ) 2008211636 ( 14 ) 2008211637 ( 14 )
2008229966 ( 14 ) 2008271011 ( 14 )

**2009**

2009200084 ( 14 ) 2009200097 ( 14 ) 2009200105 ( 14 )
2009203614 ( 14 ) 2009203682 ( 14 ) 2009203851 ( 14 )
2009203890 ( 14 ) 2009204160 ( 14 ) 2009204324 ( 14 )
2009204427 ( 14 ) 2009208741 ( 14 ) 2009220004 ( 14 )

**2010**

2010200043 ( 14 ) 2010203674 ( 14 ) 2010203710 ( 14 )
2010204209 ( 14 ) 2010204442 ( 14 ) 2010210323 ( 14 )
2010246396 ( 14 ) 2010257308 ( 14 )

**2011**

2011200308 ( 14 ) 2011201169 ( 14 ) 2011201178 ( 14 )
2011201199 ( 14 ) 2011204405 ( 14 ) 2011204407 ( 14 )
2011204706 ( 14 ) 2011204743 ( 14 ) 2011205498 ( 14 )
2011206693 ( 14 ) 2011206714 ( 14 ) 2011218606 ( 14 )
2011232785 ( 14 ) 2011265585 ( 14 )

**2012**

2012200028 ( 14 ) 2012200095 ( 14 ) 2012201972 ( 14 )
2012204266 ( 14 ) 2012204271 ( 14 ) 2012204277 ( 14 )
2012204339 ( 14 ) 2012204340 ( 14 ) 2012204353 ( 14 )
2012206728 ( 14 ) 2012207635 ( 14 ) 2012209471 ( 14 )
2012216738 ( 14 ) 2012359084 ( 14 )

**2013**

2013200115 ( 14 ) 2013200842 ( 14 ) 2013201115 ( 14 )
2013201278 ( 14 ) 2013202702 ( 14 ) 2013202708 ( 14 )
2013202716 ( 14 ) 2013204646 ( 14 ) 2013204658 ( 14 )
2013204667 ( 14 ) 2013207186 ( 14 ) 2013207423 ( 14 )
2013208197 ( 14 ) 2013372508 ( 14 )

**2014**

2014200012 ( 14 ) 2014200056 ( 14 ) 2014200283 ( 14 )
2014203893 ( 14 ) 2014204153 ( 14 ) 2014204207 ( 14 )
2014204314 ( 14 ) 2014204491 ( 14 ) 2014204666 ( 14 )
2014204935 ( 14 ) 2014204936 ( 14 ) 2014205366 ( 14 )
2014205544 ( 14 ) 2014207234 ( 14 ) 2014215681 ( 14 )

**2015**

2015200017 ( 14 ) 2015200062 ( 14 ) 2015202363 ( 14 )
2015203087 ( 14 ) 2015203937 ( 14 ) 2015204847 ( 14 )
2015205143 ( 14 ) 2015205308 ( 14 ) 2015205454 ( 14 )
2015205600 ( 14 ) 2015205697 ( 14 ) 2015205701 ( 14 )
2015205755 ( 14 ) 2015207690 ( 14 ) 2015208668 ( 14 )
2015210565 ( 14 )

**2016**

2016101051 ( 22 ) 2016101060 ( 22 ) 2016101072 ( 22 )
2016101073 ( 22 ) 2016101088 ( 22 ) 2016101573 ( 22 )
2016102479 ( 22 ) 2016200066 ( 14 ) 2016202160 ( 14 )
2016205197 ( 14 ) 2016205460 ( 14 ) 2016205495 ( 14 )
2016205781 ( 14 ) 2016206108 ( 14 ) 2016208294 ( 14 )
2016210539 ( 14 ) 2016273889 ( 14 ) 2016314156 ( 14 )

2016383826 ( 14 )

**2017**

2017101794 ( 22 ) 2017200058 ( 14 ) 2017200062 ( 14 )
2017200064 ( 14 ) 2017200067 ( 14 ) 2017200068 ( 14 )
2017200070 ( 14 ) 2017200128 ( 14 ) 2017200369 ( 14 )
2017201527 ( 14 ) 2017202320 ( 14 ) 2017205089 ( 4D )
2017205337 ( 14 ) 2017205628 ( 14 ) 2017206039 ( 14 )
2017206097 ( 14 ) 2017215235 ( 14 ) 2017215241 ( 14 )
2017215242 ( 14 ) 2017215247 ( 14 ) 2017222240 ( 14 )
2017258930 ( 14 ) 2017298035 ( 14 ) 2017357843 ( 5C )
2017391323 ( 14 ) 2017431149 ( 5C ) 2017437551 ( 25D )

**2018**

2018100114 ( 22 ) 2018200127 ( 4C ) 2018200696 ( 14 )
2018201262 ( 14 ) 2018205503 ( 4C ) 2018205667 ( 14 )
2018205755 ( 14 ) 2018205845 ( 14 ) 2018205885 ( 4C )
2018207464 ( 14 ) 2018207866 ( 14 ) 2018208463 ( 4C )
2018208844 ( 14 ) 2018210188 ( 4D ) 2018213417 ( 5C )
2018213848 ( 14 ) 2018236732 ( 5C ) 2018247308 ( 14 )
2018247567 ( 5C ) 2018253657 ( 14 ) 2018259303 ( 14 )
2018259304 ( 14 ) 2018274997 ( 14 ) 2018298410 ( 5C )
2018299025 ( 5C ) 2018300705 ( 5C ) 2018303331 ( 5C )
2018307356 ( 25D ) 2018311965 ( 5C ) 2018311966 ( 5C )
2018313712 ( 5C ) 2018313784 ( 25D ) 2018319671 ( 4C )
2018333271 ( 5C ) 2018337066 ( 5C ) 2018337670 ( 5C )
2018338837 ( 5C ) 2018340885 ( 5C ) 2018346453 ( 5C )
2018346575 ( 5C ) 2018348644 ( 5C ) 2018361713 ( 5C )
2018375421 ( 5C ) 2018381037 ( 25D ) 2018383336 ( 25D )
2018385202 ( 25D )

**2019**

2019100460 ( 22 ) 2019100461 ( 22 ) 2019100462 ( 22 )
2019101383 ( 22 ) 2019200034 ( 4C ) 2019203258 ( 14 )
2019205038 ( 4C ) 2019205262 ( 4C ) 2019205279 ( 4C )
2019205282 ( 4C ) 2019205317 ( 14 ) 2019205406 ( 4C )
2019205496 ( 14 ) 2019205567 ( 4C ) 2019205568 ( 4C )
2019205595 ( 14 ) 2019205780 ( 4C ) 2019205809 ( 4C )
2019205816 ( 4C ) 2019205817 ( 14 ) 2019205861 ( 4C )
2019205904 ( 4C ) 2019205916 ( 4C ) 2019205919 ( 4C )
2019206417 ( 4C ) 2019206958 ( 4C ) 2019207625 ( 4C )
2019207635 ( 4C ) 2019226571 ( 5C ) 2019250210 ( 1B )
2019257462 ( 4A ) 2019310600 ( 5C ) 2019316499 ( 1B )
2019459018 ( 1B ) 2019459230 ( 1B ) 2019459231 ( 1B )
2019460295 ( 1B ) 2019460585 ( 1B )

**2020**

2020100024 ( 22E ) 2020100143 ( 22E ) 2020100300 ( 22 )
2020101418 ( 22 ) 2020101419 ( 22 ) 2020101420 ( 22 )
2020200047 ( 4A ) 2020200068 ( 4A ) 2020200182 ( 4B )
2020201010 ( 14 ) 2020201378 ( 14 ) 2020204938 ( 4C )
2020205206 ( 4C ) 2020205952 ( 4C ) 2020206679 ( 4C )
2020207080 ( 4C ) 2020207132 ( 4C ) 2020207202 ( 4C )
2020207521 ( 14 ) 2020210167 ( 1B ) 2020210200 ( 1B )
2020210267 ( 1B ) 2020210290 ( 1B ) 2020213301 ( 1B )
2020233787 ( 4B ) 2020239779 ( 4C ) 2020244431 ( 5C )
2020257099 ( 5C ) 2020258486 ( 4B ) 2020259631 ( 4B )
2020265149 ( 4C ) 2020271449 ( 4C ) 2020277199 ( 5C )
2020319687 ( 1B ) 2020319700 ( 1B ) 2020319705 ( 1B )
2020319736 ( 1B ) 2020319755 ( 1B ) 2020319819 ( 1B )
2020319840 ( 1B ) 2020319876 ( 1B ) 2020319879 ( 1B )
2020319898 ( 1B ) 2020319911 ( 1B ) 2020319934 ( 1B )
2020320008 ( 1B ) 2020320022 ( 1B ) 2020320029 ( 1B )
2020320131 ( 1B ) 2020320133 ( 1B ) 2020320415 ( 1B )
2020321067 ( 1B ) 2020321422 ( 1B ) 2020321667 ( 1B )
2020321670 ( 1B ) 2020321711 ( 1B ) 2020321986 ( 1B )
2020321987 ( 1B ) 2020322013 ( 1B ) 2020322031 ( 1B )
2020322231 ( 1B ) 2020322306 ( 1B ) 2020322414 ( 1B )
2020322416 ( 1B ) 2020322455 ( 1B ) 2020322459 ( 1B )
2020322598 ( 1B ) 2020322765 ( 1B ) 2020322790 ( 1B )
2020323092 ( 1B ) 2020323514 ( 1B ) 2020323601 ( 1B )
2020323616 ( 1B ) 2020323846 ( 1B ) 2020323852 ( 1B )
2020323892 ( 1B ) 2020323923 ( 1B ) 2020323925 ( 1B )
2020324281 ( 1B ) 2020324628 ( 1B ) 2020324695 ( 1B )
2020324936 ( 1B ) 2020324961 ( 1B ) 2020324970 ( 1B )
2020325026 ( 1B ) 2020325059 ( 1B ) 2020325097 ( 1B )
2020325675 ( 1B ) 2020325691 ( 1B ) 2020326454 ( 1B )
2020326547 ( 1B ) 2020326589 ( 1B ) 2020326590 ( 1B )
2020326774 ( 1B ) 2020327213 ( 1B ) 2020327251 ( 1B )
2020331561 ( 14 ) 2020343722 ( 12C ) 2020377204 ( 5C )
2020392963 ( 5C ) 2020397616 ( 5C ) 2020402659 ( 5C )
2020404558 ( 5C ) 2020405669 ( 5C ) 2020406768 ( 4A )
2020420252 ( 4C )

**2021**

2021100015 ( 22E ) 2021100026 ( 22E ) 2021100028 ( 22E )
2021100041 ( 22E ) 2021100051 ( 22E ) 2021100054 ( 22E )
2021100056 ( 22E ) 2021100057 ( 22E ) 2021100063 ( 22E )
2021100066 ( 22E ) 2021100466 ( 22E ) 2021100875 ( 22 )
2021100889 ( 22 ) 2021103352 ( 22E ) 2021104742 ( 22E )
2021200412 ( 5C ) 2021200648 ( 5C ) 2021200935 ( 5C )
2021201466 ( 14 ) 2021203058 ( 4C ) 2021205791 ( 5C )
2021225127 ( 14 ) 2021225159 ( 5C ) 2021227611 ( 5C )
2021234173 ( 5C ) 2021240184 ( 4C ) 2021245207 ( 4C )
2021277670 ( 5C ) 2021290342 ( 5C ) 2021303387 ( 25D )
2021307413 ( 5C ) 2021372968 ( 5C )

**2022**

2022200416 ( 14 ) 2022200951 ( 14 ) 2022201028 ( 16C )
2022201451 ( 4C ) 2022201591 ( 5C ) 2022201654 ( 5C )
2022201890 ( 5C ) 2022201953 ( 4C ) 2022202571 ( 5C )
2022202643 ( 4C ) 2022202668 ( 5C ) 2022202871 ( 5C )
2022202895 ( 5C ) 2022202910 ( 5C ) 2022202928 ( 5C )
2022202986 ( 5C ) 2022203038 ( 5C ) 2022203052 ( 5C )
2022203411 ( 5C ) 2022203426 ( 5C ) 2022203442 ( 5C )
2022203541 ( 5C ) 2022203632 ( 5C ) 2022204221 ( 5C )
2022204478 ( 5C ) 2022204480 ( 4C ) 2022204684 ( 5C )
2022204894 ( 5C ) 2022204927 ( 5C ) 2022204930 ( 5C )
2022205164 ( 5C ) 2022205242 ( 5C ) 2022206735 ( 5C )
2022209314 ( 5C ) 2022211830 ( 4C ) 2022268291 ( 5C )
2022268372 ( 5C ) 2022283616 ( 5C ) 2022390192 ( 12A )

**2023**

2023100034 ( 22 ) 2023100091 ( 21F ) 2023200895 ( 5C )
2023202282 ( 4C ) 2023203132 ( 5CN ) 2023203428 ( 5C )
2023203484 ( 12CN ) 2023902307 ( 12AN ) 2023903515 ( 12AN )

**2024**

2024202786 ( 1B ) 2024202866 ( 1B ) 2024202951 ( 1B )
2024203130 ( 7AN ) 2024901223 ( 12AN )

## Assignments before Grant, Section 113

**2017**

2017346683 2seventy bio, Inc. The application has been assigned to **Regeneron Pharmaceuticals, Inc.**

**2018**

2018372185 Axerovision, Inc. The application has been assigned to **CS Pharmaceuticals Limited**

2018382585 Cabot, Jonathan The application has been assigned to **Knee Balancer IP Pty Ltd**

**2019**

2019216973 NanoString Technologies, Inc The application has been assigned to **Bruker Spatial Biology, Inc.**

2019253139 John Innes Centre; Commonwealth Scientific and Industrial Research Organisation; The University of Sydney The applica-

## Assignments before Grant, Section 113

tion has been assigned to **John Innes Centre; Commonwealth Scientific and Industrial Research Organisation**

2019268409 Respia Technologies Pty Ltd The application has been assigned to **ResMed Sensor Technologies Limited**

2019271028 NanoString Technologies, Inc. The application has been assigned to **Bruker Spatial Biology, Inc.**

2019275404 NanoString Technologies, Inc. The application has been assigned to **Bruker Spatial Biology, Inc.**

2019333339 Cabot, Jonathan The application has been assigned to **Knee Balancer IP Pty Ltd**

2019356573 Inhibrx, Inc. The application has been assigned to **INHIBRX BIOSCIENCES, INC.**

2019366449 Hofmekler, Ori The application has been assigned to **SweetScience, LLC**

2019406198 NanoString Technologies, Inc. The application has been assigned to **Bruker Spatial Biology, Inc.**

**2020**

2020235864 Cend Therapeutics, Inc. The application has been assigned to **Lisata Therapeutics, Inc.**

2020260550 Massey University The application has been assigned to **Hughes, Samantha**

2020288384 R.E.M. Holding S.r.l. The application has been assigned to **R.E.M. PATENTS S.r.l.**

2020311826 Cabot, Jonathan Peter The application has been assigned to **Knee Balancer IP Pty Ltd**

2020365118 NanoString Technologies, Inc. The application has been assigned to **Bruker Spatial Biology, Inc.**

2020411478 GPB Scientific, Inc. The application has been assigned to **Zeon Corporation**

**2021**

2021253407 Psomagen, Inc.; Macrogen Inc. The application has been assigned to **Macrogen Inc.**

2021293238 NanoString Technologies, Inc. The application has been assigned to **Bruker Spatial Biology, Inc.**

2021343471 NANOSTRING TECHNOLOGIES, INC. The application has been assigned to **Bruker Spatial Biology, Inc.**

2021359002 NANOSTRING TECHNOLOGIES, INC. The application has been assigned to **Bruker Spatial Biology, Inc.**

2021378325 GPB SCIENTIFIC, INC. The application has been assigned to **Zeon Corporation**

## Assignments before Grant, Section 113

2021413868 BOUNCE, INC. The application has been assigned to **Bounce Enterprises LLC**

**2022**

2022209752 GPB SCIENTIFIC, INC. The application has been assigned to **Zeon Corporation**

2022212151 MEDSHINE DISCOVERY INC. The application has been assigned to **D3 Bio (Wuxi) Co., Ltd.**

2022221724 SPV APEX 1, INC. The application has been assigned to **WINDFALL BIO, INC.**

2022246473 Southern Eye Equipment Pty Ltd The application has been assigned to **Mount Spec Investments Pty Ltd**

2022341533 SIKA TECHNOLOGY AG The application has been assigned to **Construction Research & Technology GmbH**

2022360988 LINK IMMUNOTHERAPEUTICS, INC The application has been assigned to **Context Therapeutics Inc.**

2022378929 SIKA TECHNOLOGY AG The application has been assigned to **Construction Research & Technology GmbH**

**2023**

2023219998 MAXONIQ IP PTY LTD; METRO NORTH HOSPITAL AND HEALTH SERVICES The application has been assigned to **METRO NORTH HOSPITAL AND HEALTH SERVICES**

2023226700 NanoString Technologies, Inc. The application has been assigned to **Bruker Spatial Biology, Inc.**

2023226738 GPB Scientific, Inc. The application has been assigned to **Zeon Corporation**

2023278046 Nanostring Technologies, Inc. The application has been assigned to **Bruker Spatial Biology, Inc.**

2023902373 Denteric Pty Ltd; Oral Health Australia Pty Ltd The application has been assigned to **Denteric Pty Ltd**

2023902376 Denteric Pty Ltd; Oral Health Australia Pty Ltd The application has been assigned to **Denteric Pty Ltd**

2023902379 Denteric Pty Ltd; Oral Health Australia Pty Ltd The application has been assigned to **Denteric Pty Ltd**

2023902382 Denteric Pty Ltd; Oral Health Australia Pty Ltd The application has been assigned to **Denteric Pty Ltd**

2023903699 McNicoll, Campbell; O'Sullivan, Michael; de Castro, Isabela The application has been assigned to **GEO40 LIMITED**

**2024**

2024203428 TONIX PHARMACEUTICALS HOLDING CORP. The application has been assigned to **TONIX PHARMA LIMITED.**

## Extensions of Time, Section 223

### Applications Received

Notice of opposition under Section 223(6) to the undermentioned application(s) for an extension of time may be lodged at the Patent Office within the prescribed time.

**2019**

2019363610 **The Regents of the University of California** An application to extend the time from 25 Oct 2023 to 25 May 2024 in which to pay a continuation fee has been filed . Address for service - Spruson & Ferguson GPO Box 3898 Sydney NSW 2001 AU

**2022**

2022201017 **Aqseptence Group, Inc** An application to extend the time from 26 Jul 2023 to 26 Apr 2024 in which to pay a continuation fee has been filed . Address for service - James & Wells Intellectual Property GPO Box 1301 CANBERRA ACT 2601 AU

2022221432 **Buffalo Filter LLC** An application to extend the time from 21 Nov 2023 to 21 Jul 2024 in which to pay a continuation fee has been filed . Address for service - Griffith Hack Level 15, 376-390 Collins Street Melbourne VIC 3000 AU

### Applications Allowed - Section 223(2)

**2009**

2009288329 **Timilon Technology Acquisitions LLC** The time in which to pay a renewal fee has been extended to 26 Apr 2024 . Address for service - Phillips Ormonde Fitzpatrick L 16 333 Collins St Melbourne VIC 3000 AU

**2019**

2019100652 **BIOSOFT (AUSTRALIA) PTY LTD** The time in which to pay a renewal fee has been extended to 17 Feb 2024 . Address for service - shaun kerrigan Level 3 74 McEvoy Street Alexandria NSW 2015 AU

**2020**

2020100513 **Zhu, W.** The time in which to pay a continuation fee has been extended to 02 Jan 2024 . Address for service - Blockchain Economy LLC Pty Ltd U 8 3 Cecil St Ashfield NSW 2131 AU

2020213266 **Universal Polymers Pty Ltd** The time in which to request examination has been extended to 07 Aug 2024 . Address for service - Collison & Co GPO Box 2556 Adelaide SA 5001 AU

**2022**

2022202322 **Gordon Sports, LLC** The time in which to pay the acceptance fee has been extended to 28 Jul 2024 . Address for service - Krouzer IP PO Box 2035 Como WA 6152 AU

2022218591 **Cardioguidance Biomedical, LLC** The time in which to pay a continuation fee has been extended to 22 Mar 2024 . Address for service - GLMR PO Box Q1615 Queen Victoria Building NSW 1230 AU

### Section 223(1) Allowances

**2015**

2015407253 **Dyno Nobel Asia Pacific Pty Ltd** The time in which to gain acceptance has been extended to 18 Aug 2024

## Amendments

### Applications for Amendment

A person interested in opposing the allowance of amendments under Section 104 may at any time within two months from the date of this journal give notice at the Patent Office using the approved form accompanied by the prescribed fee.

A person who wishes to be heard in relation to a proposed Rectification of the Register must file a request to be heard within two months from the date of this journal.

**2017**

2017359047 Methods for cell label classification **Becton, Dickinson and Company** The nature of the amendment is as shown in the statement(s) filed 16 Jul 2024 . Address for service - Pizzeys Patent and Trade Mark Attorneys Pty Ltd GPO Box 1374 Brisbane QLD 4001 AU

**2018**

2018354942 Aqueous composition comprising a conductive polymer and use thereof **ENI S.p.A.** The nature of the amendment is as shown in the statement(s) filed 28 Jun 2024 . Address for service - Phillips Ormonde Fitzpatrick PO Box 323 COLLINS STREET WEST VIC 8007 AU

**2019**

2019236275 Method of aluminum-scandium alloy production **FEA Materials LLC** The nature of the amendment is: Add inventor HUNT, Brian . Address for service - Pizzeys Patent and Trade Mark Attorneys Pty Ltd GPO Box 1374 Brisbane QLD 4001 AU

2019288752 ECAP based control of electrical stimulation therapy **Medtronic, Inc.** The nature of the amendment is as shown in the statement(s) filed 11 Jul 2024 . Address for service - FB Rice Pty Ltd L 23 44 Market St Sydney NSW 2000 AU

2019304103 Separation of granular particles **Gulf Conveyor Systems Pty Ltd** The nature of the amendment is as shown in the statement(s) filed 15 Jul 2024 . Address for service - Dennemeyer & Associates PO Box 363 KEW VIC 3101 AU

**2020**

2020213431 A process for producing synthetic jet fuel **Greenfield Global Inc.** The nature of the amendment is as shown in the statement(s) filed 10 Jul 2024 . Address for service - WRAYS PTY LTD L7 863 Hay St Perth WA 6000 AU

### Amendments Made

**2006**

2006276205 **Novartis AG** The nature of the amendment is as shown in the statement(s) filed 15 Mar 2024

**2015**

2015305770 **Merck Sharp & Dohme LLC** The nature of the amendment is as shown in the statement(s) filed 13 Feb 2024

## Amendments

**2017**

2017367699 **Purdue Research Foundation** The nature of the amendment is: Amend the name of the inventor to read Low, Philip S.; Low, Stewart Andrew and Nielsen, Jeffery Jay Howard

**2018**

2018283155 **Wisconsin Alumni Research Foundation** The nature of the amendment is: Amend the invention title to read MODIFIED GUIDE RNAS, CRISPR-RIBONUCLEOPROTEIN COMPLEXES AND METHODS OF USE

**2020**

2020411793 **Electric Power Development Co., Ltd.** The nature of the amendment is: Amend the invention title to read Wind energy generation system

2020427793 **Nokia Technologies Oy** The nature of the amendment is as shown in the statement(s) filed 03 Apr 2024

**2021**

2021218224 **SolydEra Australia Pty Ltd** The nature of the amendment is as shown in the statement(s) filed 23 Apr 2024

2021236488 **Illumina, Inc.** The nature of the amendment is: Amend the name of the inventor to read Gloeckner, Christian; Kia, Amirali; Bomati, Erin; He, Molly; Grunenwald, Haiying Li; Kuersten, Scott; Osothprarop, Trina Faye; Haskins, Darin; Burgess, Joshua; Khanna, Anupama; Schlingman, Daniel and Vaidyanathan, Ramesh

2021249161 **Daikin Industries, Ltd.** The nature of the amendment is: Amend the invention title to read REFRIGERATION CYCLE APPARATUS

2021303068 **Sumitomo Precision Products Co., Ltd.** The nature of the amendment is as shown in the statement(s) filed 08 Apr 2024

2021445458 **YOO, Y.H.; FAWOO NANOTECH CO. LTD.** The nature of the amendment is: Amend the invention title to read Pipe insert for generating nano-bubbles and nano-bubble generator comprising the same

**2022**

2022229350 **RESEARCH TRIANGLE INSTITUTE** The nature of the amendment is: Amend the invention title to read Arylsulfonamides as orexin receptor agonists

2022246412 **iOmniscient Pty Ltd** The nature of the amendment is as shown in the statement(s) filed 21 Jun 2024

2022275399 **Zoetis Services LLC** The nature of the amendment is: Amend the name of the inventor to read DOMINOWSKI, Paul Joseph; WILMES, Lauren; FOSS, Dennis L.; GALLO, Guillermo; HARDHAM, John Morgan; KREBS, Richard Lee; LIGHTLE, Sandra Ann Marie; MAHAN, Suman; MEDIRATTA, Sangita; MOHR, Kaori; MWANGI, Duncan; RAI, Sharath K.; SALMON, Sarah A.; VORA, Shaunak; FONTAINE, Michael Christopher; SMITH, David George Emslie; FITZPATRICK, Julie Lydia; DONACHIE, William; JAGLARZ, Anita Dorota; GAY, Cyril Gerard; RODRIGUEZ, Luis Leandro; KRUG, Peter William and RIEDER, Aida Elizabeth

## Amendments

2022409512 **Icahn School of Medicine at Mount Sinai; The University of North Carolina at Chapel Hill; The Board of Trustees of the Leland Stanford Junior University; The Regents of the University of California** The nature of the amendment is: Amend the name of the inventor to read JAIN, Manish; SLOCUM, Samuel; SKINIOTIS, Georgios; BARROS, Ximena; JIN, Jian; KANISKAN, H. Umit; SUN, Ning; SUN, Renhong; XIONG, Yan; SHEN, Yudao; XU, Zhongli; QIU, Xing; QIAN, Chao; SONG, Xiangyang; DENG, Zhijie; ROTH, Bryan; DIBERTO, Jeffrey; KIM, Kuglae; SUOMIVUORI, Carl-Mikael; DAEMGEN, Marc A.; DROR, Ron; SHOICHET, Brian and KAPLAN, Anat Levit

2022412618 **EYEBIOKOREA, INC.** The nature of the amendment is: Amend the name of the inventor to read CHO, Yunseok and AHN, Byul Nim

2022420084 **HOYA TECHNOSURGICAL CORPORATION** The nature of the amendment is: Amend the invention title to read Osteosynthesis member, osteosynthesis member set, and osteosynthesis implement

2022429793 **SEQ BIOMARQUE, LLC.** The nature of the amendment is: Amend the name of the inventor to read BACUS, Sarah S. and HAMM, Christopher A.

2022430626 **HUAWEI TECHNOLOGIES CO., LTD.** The nature of the amendment is: Amend the invention title to read ENCODING CONFIGURATION METHOD AND APPARATUS

2022442457 **JFE STEEL CORPORATION** The nature of the amendment is: Amend the invention title to read METHOD OF REDUCING IRON ORE POWDER

**2023**

2023223720 **JFE STEEL CORPORATION** The nature of the amendment is: Amend the invention title to read STEEL PLATE AND METHOD OF PRODUCING SAME

2023226266 **JFE STEEL CORPORATION** The nature of the amendment is: Amend the invention title to read STEEL PLATE AND METHOD OF PRODUCING SAME

2023226269 **JFE STEEL CORPORATION** The nature of the amendment is: Amend the invention title to read STEEL PLATE AND METHOD OF PRODUCING SAME

2023285940 **Acciona Generación Renovable, S.A.; Fundación Circe-Centro de Investigación de Recursos y Consumos Energéticos** The nature of the amendment is: Amend the name of the inventor to read Antonio Miguel Muñoz Gómez; Javier Granado Fornás; Alejandro Diaz Baños; Joaquín Urretavizcaya Sanz; Miren Irune Etxegibel Campos and Silvia Lezaun Jaunsaras

2023313554 **LG ENERGY SOLUTION, LTD.** The nature of the amendment is: Amend the invention title to read Din-rail, and electronic component assembly and energy storage system including the same

2023327731 **LG ENERGY SOLUTION, LTD.** The nature of the amendment is: Amend the invention title to read BATTERY RACK AND ELECTRIC POWER STORAGE SYSTEM INCLUDING SAME

2023902317 **Children's Medical Research Institute; University of Sydney; The Westmead Institute for Medical Research; Western**

## Amendments

**Sydney Local Health District** The nature of the amendment is to add the co- applicants University of Sydney; The Westmead Institute for Medical Research and Western Sydney Local Health District

**2024**

2024204844 **Air Products and Chemicals, Inc.** The nature of the amendment is: Amend the priority details to read 63/528,115 21 Jul 2023 US and 18/409,971 11 Jan 2024 US

**Alteration of Name(s) of Applicant(s)/Patentee(s)**

**2006**

2006217963 Evolva S.A. The name of the patentee has been altered to **Danstar Ferment AG**

**2009**

2009288329 Timilon Technology Acquisitions LLC The name of the patentee has been altered to **Timilon Corporation**

**2016**

2016250128 Oberthur Technologies The name of the patentee has been altered to **IDEMIA France**

**2018**

2018282344 Oberthur Technologies The name of the patentee has been altered to **IDEMIA France**

2018323455 Altor Bioscience LLC The name of the patentee has been altered to **Altor Bioscience, LLC**

**2020**

2020202228 SCHOTT Flat Glass CR, s.r.o.; Schott AG The name of the applicant has been altered to **Schott AG; SCHOTT Termofrost s.r.o.**

2020202636 SCHOTT Flat Glass CR, s.r.o.; Schott AG The name of the applicant has been altered to **SCHOTT Termofrost s.r.o.; Schott AG**

2020268503 SCHOTT Flat Glass CR, s.r.o.; Schott AG The name of the applicant has been altered to **SCHOTT Termofrost s.r.o.; Schott AG**

2020289673 SCHOTT Flat Glass CR, s.r.o.; SCHOTT AG The name of the applicant has been altered to **SCHOTT Termofrost s.r.o.; SCHOTT AG**

**2021**

2021240312 ENVISION VR PTY LTD The name of the applicant has been altered to **ENVIZ CO PTY LTD**

**2022**

2022201758 Altor BioScience Corporation The name of the applicant has been altered to **Altor Bioscience, LLC**

2022275399 Zoetis Services LLC The name of the applicant has been altered to **Zoetis Services LLC; United States of America as represented by the Secretary of Agriculture**

## Amendments

2022392233 EYETELLIGENCE LIMITED The name of the applicant has been altered to **Eyetelligence PTY LTD**

2022409512 ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI; THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL; THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY; THE REGENTS OF THE UNIVERSITY OF CALIFORNIA; Manish JAIN; Samuel SLOCUM; Georgios SKINIOTIS; Ximena BARROS The name of the applicant has been altered to **Icahn School of Medicine at Mount Sinai; The University of North Carolina at Chapel Hill; The Board of Trustees of the Leland Stanford Junior University; The Regents of the University of California**

2022417524 THE KATHOLIEKE UNIVERSITEIT LEUVEN; SPRINGWORKS THERAPEUTICS INC.; VIB VZW The name of the applicant has been altered to **Katholieke Universiteit Leuven; SPRINGWORKS THERAPEUTICS INC.; VIB VZW**

2022419653 THE KATHOLIEKE UNIVERSITEIT LEUVEN; SPRINGWORKS THERAPEUTICS INC.; VIB VZW The name of the applicant has been altered to **Katholieke Universiteit Leuven; SPRINGWORKS THERAPEUTICS INC.; VIB VZW**

2022420025 THE KATHOLIEKE UNIVERSITEIT LEUVEN; SPRINGWORKS THERAPEUTICS INC.; VIB VZW The name of the applicant has been altered to **Katholieke Universiteit Leuven; SPRINGWORKS THERAPEUTICS INC.; VIB VZW**

2022420619 THE KATHOLIEKE UNIVERSITEIT LEUVEN; SPRINGWORKS THERAPEUTICS INC.; VIB VZW The name of the applicant has been altered to **Katholieke Universiteit Leuven; SPRINGWORKS THERAPEUTICS INC.; VIB VZW**

2022421248 THE KATHOLIEKE UNIVERSITEIT LEUVEN; SPRINGWORKS THERAPEUTICS INC.; VIB VZW The name of the applicant has been altered to **Katholieke Universiteit Leuven; SPRINGWORKS THERAPEUTICS INC.; VIB VZW**

**2023**

2023214467 THE KATHOLIEKE UNIVERSITEIT LEUVEN; SPRINGWORKS THERAPEUTICS INC.; VIB VZW The name of the applicant has been altered to **Katholieke Universiteit Leuven; SPRINGWORKS THERAPEUTICS INC.; VIB VZW**

2023225036 THE KATHOLIEKE UNIVERSITEIT LEUVEN; SPRINGWORKS THERAPEUTICS INC.; VIB VZW The name of the applicant has been altered to **Katholieke Universiteit Leuven; SPRINGWORKS THERAPEUTICS INC.; VIB VZW**

2023903727 Roger Thomas Mascull ; Elizabeth Jocelyn Mascull The name of the applicant has been altered to **Khan, A.; Mascull, G.; Svistunov, S.; Vitalyevich, V.**

**2024**

2024204957 Altor BioScience Corporation The name of the applicant has been altered to **Altor Bioscience, LLC**

2024901429 Slim Shade Pty Ltd The name of the applicant has been altered to **Swim Shady Pty Ltd**

**Notice of Intention to Amend under Section 105 pursuant to the Federal Court Rules**

## Amendments

Australian Patent/Patent Application 2015305271 in the name(s) of Perfect Day, Inc.

## Applications Open to Public Inspection

**Name Index**

. (*) Title not in Roman characters
. (**) Title not given

---

**(71)** Abbott Diabetes Care Inc.
**(11)** AU-A-2024204775
**(21)** 2024204775 **(22)** 10.07.2024
**(54)** Application interface and display control in an analyte monitoring environment
**(51)** Int. Cl.
***G06F 21/30*** ( 2013.01 )
**(43)** 01.08.2024
**(62)** 2022231687
**(72)** Berman, Glenn; Love, Michael R.; Crouther, Nathan; Sloan, Mark
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** ABUS August Bremicker Söhne KG
**(11)** AU-A-2024200027
**(21)** 2024200027 **(22)** 03.01.2024
**(54)** ELECTRONIC PADLOCK
**(51)** Int. Cl.
***E05B 67/00*** ( 2006.01 )
***E05B 47/00*** ( 2006.01 )
**(31)** 102023100671.1 **(32)** 12.01.23 **(33)** DE
**(43)** 01.08.2024
**(72)** Weiershausen, Bernd
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Acerta Pharma B.V.
**(11)** AU-A-2024204906
**(21)** 2024204906 **(22)** 17.07.2024
**(54)** ACALABRUTINIB MALEATE DOSAGE FORMS
**(51)** Int. Cl.
***A61K 9/20*** ( 2006.01 )
***A61K 9/16*** ( 2006.01 )
***A61K 31/4985*** ( 2006.01 )
***A61P 35/02*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2021291437
**(72)** Bethel, Paul; Blyth, John; Cosgrove, Steve; Golden, Michael; Mann, James; Pepin, Xavier Jacques Henri; Robbins, Andrew; Simpson, David
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Adobe Inc.
**(11)** AU-A-2023270212
**(21)** 2023270212 **(22)** 21.11.2023
**(54)** GENERATING IMAGES USING TRANSFER LEARNING
**(51)** Int. Cl.
***G06T 11/00*** ( 2006.01 )
***G06N 3/02*** ( 2006.01 )
***G06N 3/0475*** ( 2023.01 )
***G06N 3/094*** ( 2023.01 )
***G06N 3/096*** ( 2023.01 )
***G06N 20/00*** ( 2019.01 )
**(31)** 18/097,856 **(32)** 17.01.23 **(33)** US
**(43)** 01.08.2024
**(72)** Puneet Mangla; Balaji Krishnamurthy
**(74)** RnB IP Pty Ltd

---

**(71)** AI21 Labs
**(11)** AU-A-2024204869
**(21)** 2024204869 **(22)** 16.07.2024
**(54)** SYSTEMS AND METHODS OF CONTROLLABLE NATURAL LANGUAGE GENERATION
**(51)** Int. Cl.
***G06F 40/00*** ( 2020.01 )
**(43)** 01.08.2024
**(62)** 2023241291
**(72)** PELEG, Barak; PADNOS, Dan; MORAG, Amnon; LUMBROSO, Gilad; SHOHAM, Yoav; GOSHEN, Ori; LENZ, Barak; DAGAN, Or
**(74)** RnB IP Pty Ltd

---

**(71)** Alcon, Inc.; The Regents of the University of Colorado, a body corporate
**(11)** AU-A-2024204907
**(21)** 2024204907 **(22)** 17.07.2024
**(54)** Intraocular lens designs for improved stability
**(51)** Int. Cl.
***A61F 2/16*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2022203099
**(72)** KAHOOK, Malik, Y.; SUSSMAN, Glenn; ZACHER, Rudolph, F.; MCLEAN, Paul, J.; ATKINSON, Robert, E.
**(74)** FB Rice Pty Ltd

---

**(71)** Alcon Inc.
**(11)** AU-A-2024204749
**(21)** 2024204749 **(22)** 10.07.2024
**(54)** MULTIPLE-INPUT-COUPLED ILLUMINATED MULTI-SPOT LASER PROBE
**(51)** Int. Cl.
***A61F 9/008*** ( 2006.01 )
***A61B 18/20*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2018385649
**(72)** Smith, Ronald T.; Mirsepassi, Alireza; Farley, Mark Harrison; Bacher, Gerald David
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Allergan, Inc.
**(11)** AU-A-2024204883
**(21)** 2024204883 **(22)** 16.07.2024
**(54)** Crosslinked HA-collagen hydrogels as dermal fillers
**(51)** Int. Cl.
***A61K 8/04*** ( 2006.01 )
***A61K 8/44*** ( 2006.01 )
***A61K 8/65*** ( 2006.01 )
***A61K 8/73*** ( 2006.01 )
***A61Q 19/08*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2020411515
**(72)** TRAINA, Christopher A.; KUTIKOV, Artem B.; YU, Xiaojie; HEE, Christopher K.; MESSINA, Darin J.; MORELL, Julie; DURIEUX, Florent; GUETTA, Olivier; ROCA MARTINEZ, Jean-Xavier
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Amgen Research (Munich) GmbH
**(11)** AU-A-2024203384
**(21)** 2024203384 **(22)** 21.05.2024
**(54)** Bispecific T Cell Engaging Antibody Constructs
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***C07K 16/30*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2017214251
**(72)** Raum, Tobias; Muenz, Markus; Brozy, Johannes; Kufer, Peter; Hoffmann, Patrick; Friedrich, Matthias; Rattel, Benno; Bogner, Pamela; Wolf, Andreas; Pompe, Cornelius
**(74)** WRAYS PTY LTD

---

**(71)** Amicus Therapeutics, Inc.
**(11)** AU-A-2024204823
**(21)** 2024204823 **(22)** 12.07.2024
**(54)** METHODS OF TREATING FABRY PATIENTS HAVING RENAL IMPAIRMENT
**(51)** Int. Cl.
***A61K 31/445*** ( 2006.01 )
***A61P 13/12*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2018277756
**(72)** Castelli, Jeff
**(74)** Dark IP

---

**(71)** Amsted Rail Company, Inc.
**(11)** AU-A-2024204825
**(21)** 2024204825 **(22)** 12.07.2024
**(54)** AUTONOMOUS OPTIMIZATION OF INTRA-TRAIN COMMUNICATION NETWORK
**(51)** Int. Cl.
***B61L 27/57*** ( 2022.01 )
***B61L 23/34*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2019255287
**(72)** MANSFIELD, Edward J.
**(74)** Murray Trento & Associates Pty Ltd

---

**(71)** Anbio Biotechnology Limited; WANG, J.
**(11)** AU-A-2023200795
**(21)** 2023200795 **(22)** 13.02.2023
**(54)** BDNF QUANTITATIVE IMMUNOCHROMATOGRAPHIC TEST STRIP AND PREPARATION METHOD THEREOF

## Applications Open to Public Inspection - Name Index cont'd

**(51)** Int. Cl.
***G01N 33/543*** ( 2006.01 )
***G01N 21/64*** ( 2006.01 )
***G01N 33/533*** ( 2006.01 )
***G01N 33/558*** ( 2006.01 )
***G01N 33/68*** ( 2006.01 )
**(31)** 18/098,193 **(32)** 18.01.23 **(33)** US
**(43)** 01.08.2024
**(72)** WANG, DAMING; WANG, JINCHENG
**(74)** MOHAN MURALI KODIVEL

---

**(71)** Anbio Biotechnology Limited; WANG, J.
**(11)** AU-A-2023200796
**(21)** 2023200796 **(22)** 13.02.2023
**(54)** NUCLEIC ACID DETECTION REAGENT AND DETECTION METHOD FOR MYCOBACTERIUM TUBERCULOSIS
**(51)** Int. Cl.
***C12Q 1/6813*** ( 2018.01 )
***C12Q 1/689*** ( 2018.01 )
**(31)** 18/098,196 **(32)** 18.01.23 **(33)** US
**(43)** 01.08.2024
**(72)** WANG, DAMING; WANG, JINCHENG
**(74)** MOHAN MURALI KODIVEL

---

**(71)** Angel Group Co., Ltd.
**(11)** AU-A-2024204793
**(21)** 2024204793 **(22)** 11.07.2024
**(54)** Playing card
**(51)** Int. Cl.
***A63F 1/02*** ( 2006.01 )
***A63F 1/14*** ( 2006.01 )
***A63F 1/18*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2022203394
**(72)** SHIGETA, Yasushi
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Angel Group Co., Ltd.
**(11)** AU-A-2024204812
**(21)** 2024204812 **(22)** 12.07.2024
**(54)** Chip measurement system
**(51)** Int. Cl.
***G07F 17/32*** ( 2006.01 )
***A63F 3/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2022205270
**(72)** SHIGETA, Yasushi
**(74)** FB Rice Pty Ltd

---

**(71)** Angel Group Co., Ltd.
**(11)** AU-A-2024204819
**(21)** 2024204819 **(22)** 12.07.2024
**(54)** Game System
**(51)** Int. Cl.
***G07F 17/32*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2020267196
**(72)** Shigeta, Yasushi
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Angel Group Co., Ltd.
**(11)** AU-A-2024204886
**(21)** 2024204886 **(22)** 16.07.2024
**(54)** PACKING BOX FOR SHUFFLED PLAYING CARDS
**(51)** Int. Cl.
***A63F 1/06*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2024201496
**(72)** Shigeta, Yasushi
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Aristocrat Technologies Australia Pty Limited
**(11)** AU-A-2024204828
**(21)** 2024204828 **(22)** 12.07.2024
**(54)** GAMING SYSTEM AD METHOD OF GAMING
**(51)** Int. Cl.
***A63F 13/52*** ( 2014.01 )
***A63F 13/26*** ( 2014.01 )
**(43)** 01.08.2024
**(62)** 2018223057
**(72)** MARKS, Daniel
**(74)** Griffith Hack

---

**(71)** AstraZeneca AB
**(11)** AU-A-2024204913
**(21)** 2024204913 **(22)** 17.07.2024
**(54)** COMBINATION OF ZIBOTENTAN AND DAPAGLIFLOZIN FOR THE TREATMENT OF CHRONIC KIDNEY DISEASE
**(51)** Int. Cl.
***A61K 31/497*** ( 2006.01 )
***A61K 31/70*** ( 2006.01 )
***A61P 13/12*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2021305983
**(72)** Greasley, Peter; Ahlström, Christine; Skrtic, Stanko; Menzies, Robert; Sunnåker, Mikael; Mercier, Anne-Kristina
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Aurea Software FZ-LLC
**(11)** AU-A-2024204827
**(21)** 2024204827 **(22)** 12.07.2024
**(54)** Extensible analytics and recommendation engine for network traffic data
**(51)** Int. Cl.
***H04L 12/801*** ( 2013.01 )
***H04L 12/24*** ( 2006.01 )
***H04L 12/26*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2022215255
**(72)** Veres, Greg; Loop, Sandra
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** BASF SE
**(11)** AU-A-2024204866
**(21)** 2024204866 **(22)** 15.07.2024
**(54)** Herbicidal mixtures comprising L-glufosinate or its salt and at least one VLCFA inhibitor
**(51)** Int. Cl.
***A01N 37/22*** ( 2006.01 )
***A01N 37/20*** ( 2006.01 )
***A01N 37/26*** ( 2006.01 )
***A01N 39/02*** ( 2006.01 )
***A01N 43/10*** ( 2006.01 )
***A01N 43/56*** ( 2006.01 )
***A01N 43/80*** ( 2006.01 )
***A01N 43/82*** ( 2006.01 )
***A01N 47/38*** ( 2006.01 )
***A01N 57/20*** ( 2006.01 )
***A01P 13/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2018314562
**(72)** WINTER, Christian Harald; GEWEHR, Markus
**(74)** Griffith Hack

---

**BASF SE see President and Fellows of Harvard College**
**(21)** 2024204893

---

**(71)** Bayer Healthcare LLC
**(11)** AU-A-2024204755
**(21)** 2024204755 **(22)** 10.07.2024
**(54)** System, method, and computer program product for predictive maintenance
**(51)** Int. Cl.
***G16H 40/40*** ( 2018.01 )
***G05B 23/02*** ( 2006.01 )
*G06Q 50/00* ( 2012.01 )
*G16H 20/17* ( 2018.01 )
**(43)** 01.08.2024
**(62)** 2018317866
**(72)** SCHRIVER, Ralph; UBER III, Arthur; ARCHIBALD, Janele; BREWER, Matthew; CHAYA, Amy; FIORENTINI, Christopher; GRIFFITHS, David; HARTMANN, Jacob; HULBERT, Joseph; MICHEL, Susan; PETRILLI, Janel; POGOZELEC, Michael; SKIRBLE, Barry
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** BEIJING DAJIA INTERNET INFORMATION TECHNOLOGY CO., LTD.
**(11)** AU-A-2024204747
**(21)** 2024204747 **(22)** 10.07.2024
**(54)** A METHOD FOR VIDEO CODING
**(51)** Int. Cl.
***H04N 19/70*** ( 2014.01 )
***H04N 19/117*** ( 2014.01 )
***H04N 19/119*** ( 2014.01 )
***H04N 19/176*** ( 2014.01 )
**(43)** 01.08.2024
**(62)** 2022204998
**(72)** JHU, Hong-Jheng; XIU, Xiaoyu; CHEN, Yi-Wen; CHEN, Wei; KUO, Che-Wei; WANG, Xianglin; YU, Bing
**(74)** IP GATEWAY PATENT & TRADE MARK ATTORNEYS PTY LTD

---

**(71)** BEIJING DAJIA INTERNET INFORMATION TECHNOLOGY CO., LTD.
**(11)** AU-A-2024204748
**(21)** 2024204748 **(22)** 10.07.2024
**(54)** A METHOD FOR VIDEO CODING
**(51)** Int. Cl.
***H04N 19/70*** ( 2014.01 )
***H04N 19/117*** ( 2014.01 )
***H04N 19/119*** ( 2014.01 )

## Applications Open to Public Inspection - Name Index cont'd

***H04N 19/176*** ( 2014.01 )
**(43)** 01.08.2024
**(62)** 2022204998
**(72)** JHU, Hong-Jheng; XIU, Xiaoyu; CHEN, Yi-Wen; CHEN, Wei; KUO, Che-Wei; WANG, Xianglin; YU, Bing
**(74)** IP GATEWAY PATENT & TRADE MARK ATTORNEYS PTY LTD

---

**(71)** Blackhawk Network, Inc.
**(11)** AU-A-2024204826
**(21)** 2024204826 **(22)** 12.07.2024
**(54)** "System and method of registering stored-value cards into electronic wallets"
**(51)** Int. Cl.
***G06Q 20/36*** ( 2012.01 )
**(43)** 01.08.2024
**(62)** 2022221528
**(72)** CAMPOS, Tomas Ariel; VAISH, Tushar; AGONCILLO-ANDRES, Sheila; PONNAM, Rajesh
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Body Vision Medical Ltd.
**(11)** AU-A-2024204763
**(21)** 2024204763 **(22)** 10.07.2024
**(54)** METHODS AND SYSTEMS FOR USING MULTI VIEW POSE ESTIMATION
**(51)** Int. Cl.
***A61B 5/00*** ( 2006.01 )
***A61B 5/055*** ( 2006.01 )
***A61B 5/06*** ( 2006.01 )
***A61B 6/00*** ( 2006.01 )
***A61B 6/02*** ( 2006.01 )
***A61B 6/12*** ( 2006.01 )
***A61B 34/20*** ( 2016.01 )
**(43)** 01.08.2024
**(62)** 2022201732
**(72)** Averbuch, Dorian; Amir, Eliron; Sezganov, Dima; Cohen, Eyal
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Boston Scientific Scimed, Inc.
**(11)** AU-A-2024204751
**(21)** 2024204751 **(22)** 10.07.2024
**(54)** Powder for achieving hemostasis
**(51)** Int. Cl.
***A61L 31/04*** ( 2006.01 )
***A61K 31/722*** ( 2006.01 )
***A61L 26/00*** ( 2006.01 )
***A61L 31/16*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2019207880
**(72)** FREDRICKSON, Gerald; SMITH, Amanda L.; PIC, Andrew; GERVASIO, Sophia; LYDECKER, Lauren
**(74)** Spruson & Ferguson

---

**(71)** Bradley, C.
**(11)** AU-A-2024204903
**(21)** 2024204903 **(22)** 17.07.2024
**(54)** MASSIVELY MULTIPLEXED HOMOLOGOUS TEMPLATE REPAIR FOR WHOLE-GENOME REPLACEMENT
**(51)** Int. Cl.
***C12N 15/10*** ( 2006.01 )
***C12Q 1/68*** ( 2018.01 )
***G16B 30/00*** ( 2019.01 )
**(43)** 01.08.2024
**(62)** 2017362513
**(72)** Bradley, Christopher
**(74)** James & Wells Intellectual Property

---

**(71)** Bristol-Myers Squibb Company
**(11)** AU-A-2024204870
**(21)** 2024204870 **(22)** 16.07.2024
**(54)** STABLE FORMULATIONS OF FIBRONECTIN BASED SCAFFOLD DOMAIN PROTEINS THAT BIND TO MYOSTATIN
**(51)** Int. Cl.
***A61K 9/08*** ( 2006.01 )
***A61K 38/39*** ( 2006.01 )
***A61K 47/18*** ( 2017.01 )
***A61K 47/26*** ( 2006.01 )
***A61P 21/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2018261154
**(72)** Nashine, Vishal C.; Patel, Rushikesh K.
**(74)** AJ PARK

---

**(71)** Christopher Vandecar
**(11)** AU-A-2024203881
**(21)** 2024203881 **(22)** 07.06.2024
**(54)** Plant and animal extracts and related methods
**(51)** Int. Cl.
***A01N 65/00*** ( 2009.01 )
**(43)** 01.08.2024
**(62)** 2022202818
**(72)** VANDECAR, Christopher
**(74)** FB Rice Pty Ltd

---

**(71)** CI Surfboards, LLC
**(11)** AU-A-2024200286
**(21)** 2024200286 **(22)** 16.01.2024
**(54)** Surfboard Leash
**(51)** Int. Cl.
***B63B 32/73*** ( 2020.01 )
***B63B 32/77*** ( 2020.01 )
**(31)** 63/439,484 **(32)** 17.01.23 **(33)** US
**(43)** 01.08.2024
**(72)** JANDA, Todd
**(74)** WRAYS PTY LTD

---

**CNH Industrial America LLC see CNH Industrial Harbin Machinery Co., Ltd.**
**(21)** 2024200334

---

**(71)** CNH Industrial Harbin Machinery Co., Ltd.; CNH Industrial America LLC
**(11)** AU-A-2024200334
**(21)** 2024200334 **(22)** 18.01.2024
**(54)** Independent and suspended spreader hood and distribution deflector
**(51)** Int. Cl.
***A01D 41/12*** ( 2006.01 )
***A01F 12/40*** ( 2006.01 )
**(31)** 18/098,403 **(32)** 18.01.23 **(33)** US
**(43)** 01.08.2024
**(72)** ISAAC, Nathan E.; LINDE, Cooper; ZHAO, Ziying
**(74)** Griffith Hack

---

**(71)** Commonwealth Scientific and Industrial Research Organisation
**(11)** AU-A-2024203407
**(21)** 2024203407 **(22)** 22.05.2024
**(54)** RNA molecules comprising non-canonical base pairs
**(51)** Int. Cl.
***C12N 15/113*** ( 2010.01 )
**(43)** 01.08.2024
**(62)** 2019313162
**(72)** SMITH, Neil Andrew; WANG, Ming Bo; ZHANG, Daai; DORAN, Timothy James; TIZARD, Mark; ALLU, Annapurna Devi; GREAVES, Ian Kevin; GAO, Lingling; ANDERSON, Jonathan Paul; DE FEYTER, Robert
**(74)** FB Rice Pty Ltd

---

**CommScope Connectivity Belgium BVBA see CommScope Technologies LLC**
**(21)** 2024204894

---

**CommScope Connectivity UK Limited see CommScope Technologies LLC**
**(21)** 2024204894

---

**(71)** CommScope Technologies LLC; CommScope Connectivity Belgium BVBA; CommScope Connectivity UK Limited
**(11)** AU-A-2024204894
**(21)** 2024204894 **(22)** 17.07.2024
**(54)** Optical Network Converter Module
**(51)** Int. Cl.
***H04B 10/25*** ( 2013.01 )
**(43)** 01.08.2024
**(62)** 2022221377
**(72)** ERREYGERS, Jan Jozef Julia Maria; FRANCKX, Joris; WEEKS, William Atley; SHADDOCK, Robert Neil; MATHER, David; BROWN, David
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** ConocoPhillips Company
**(11)** AU-A-2024204781
**(21)** 2024204781 **(22)** 11.07.2024
**(54)** PROPPANT FROM CAPTURED CARBON
**(51)** Int. Cl.
***B28B 11/00*** ( 2006.01 )
***B28B 11/24*** ( 2006.01 )
***B28B 13/02*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2022270686
**(72)** Laycock, Dallin L.; Plombin, Charlotte; Huisman, Samuel K.
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Cytokinetics, Inc.
**(11)** AU-A-2024204859

## Applications Open to Public Inspection - Name Index cont'd

**(21)** 2024204859 **(22)** 15.07.2024
**(54)** Dihydrobenzofuran and inden analogs as cardiac sarcomere inhibitors
**(51)** Int. Cl.
***C07D 403/12*** ( 2006.01 )
***A61K 31/4196*** ( 2006.01 )
***A61P 9/04*** ( 2006.01 )
***C07D 231/14*** ( 2006.01 )
***C07D 271/06*** ( 2006.01 )
***C07D 401/12*** ( 2006.01 )
***C07D 413/04*** ( 2006.01 )
***C07D 413/12*** ( 2006.01 )
***C07D 413/14*** ( 2006.01 )
***C07D 417/12*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2019208331
**(72)** CHUANG, Chihyuan; MORGAN, Bradley P.; VANDERWAL, Mark; WANG, Wenyue; ASHCRAFT, Luke W.
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** DAIKIN INDUSTRIES, LTD.
**(11)** AU-A-2024204735
**(21)** 2024204735 **(22)** 09.07.2024
**(54)** Indoor unit of air conditioning device
**(51)** Int. Cl.
***F24F 1/0073*** ( 2019.01 )
***F24F 8/108*** ( 2021.01 )
***F24F 8/22*** ( 2021.01 )
**(43)** 01.08.2024
**(62)** 2022335810
**(72)** OJI, Kana; FUKUSHIMA, Wataru; NAKAYAMA, Toshimichi; SUHARA, Ryota
**(74)** FB Rice Pty Ltd

---

**(71)** Dexlevo Inc.
**(11)** AU-A-2024204794
**(21)** 2024204794 **(22)** 11.07.2024
**(54)** TISSUE RESTORATION COMPOSITION
**(51)** Int. Cl.
***A61L 27/60*** ( 2006.01 )
***A61L 27/14*** ( 2006.01 )
***C08G 63/08*** ( 2006.01 )
***C08G 63/664*** ( 2006.01 )
***C08J 3/03*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2020387490
**(72)** YU, Jae Won; SHIM, Myung Seob; KIM, Jun Bae
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** DRW Technologies, LLC
**(11)** AU-A-2024204832
**(21)** 2024204832 **(22)** 12.07.2024
**(54)** System and method for latency critical quality of service using continuous bandwidth control
**(51)** Int. Cl.
***H04L 47/00*** ( 2022.01 )
**(43)** 01.08.2024
**(62)** 2023200407
**(72)** MAS, Samuel Philippe; YU, Jie; WOLFSBERGER, Philip; TRUDEL-LAPIERRE, Vincent; GROGAN, Patrick; RICHARDSON, Francois-Dominique; WU, Jun
**(74)** Spruson & Ferguson

---

**(71)** ECHOSENS
**(11)** AU-A-2024200156
**(21)** 2024200156 **(22)** 10.01.2024
**(54)** ELASTOGRAPHY DEVICE AND METHOD
**(51)** Int. Cl.
***A61B 5/00*** ( 2006.01 )
***A61B 8/00*** ( 2006.01 )
**(31)** 23305032.7 **(32)** 10.01.23 **(33)** EP
18/152,516 10.01.23 US
**(43)** 01.08.2024
**(72)** SANDRIN, Laurent; AUDIERE, Stéphane
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Encore Medical, LP DBA DJO Surgical
**(11)** AU-A-2024204784
**(21)** 2024204784 **(22)** 11.07.2024
**(54)** SYSTEMS AND METHODS FOR RECONSTRUCTION AND CHARACTERIZATION OF PHYSIOLOGICALLY HEALTHY AND PHYSIOLOGICALLY DEFECTIVE ANATOMICAL STRUCTURES TO FACILITATE PREOPERATIVE SURGICAL PLANNING
**(51)** Int. Cl.
***A61B 34/10*** ( 2016.01 )
***G16H 50/50*** ( 2018.01 )
*A61B 34/00* ( 2016.01 )
**(43)** 01.08.2024
**(62)** 2020358717
**(72)** GUTIERREZ, Sergio; IANNOTTI, Joseph P.; FRANKLE, Mark A.; WILLIAMS, Gerald; EDWARDS, Thomas Brad; LEVY, Jonathan; ABBOUD, Joseph A.
**(74)** AJ PARK

---

**(71)** F. & J. Attard & Sons Pty. Limited
**(11)** AU-A-2024204910
**(21)** 2024204910 **(22)** 17.07.2024
**(54)** TRUCK CURTAIN AND CURTAIN SYSTEM
**(51)** Int. Cl.
***B60J 5/06*** ( 2006.01 )
***B60J 1/20*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2022200472
**(72)** Grech, Julian
**(74)** Jones Tulloch

---

**(71)** F. HOFFMANN-LA ROCHE AG
**(11)** AU-A-2024204847
**(21)** 2024204847 **(22)** 15.07.2024
**(54)** Quinazoline Derivatives as Antitumor Agents
**(51)** Int. Cl.
***C07D 403/14*** ( 2006.01 )
***A61K 31/517*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2019341273
**(72)** ZHOU, Ding; CHENG, Ziqiang
**(74)** Eagar & Associates Pty Ltd

---

**(71)** FORD, S.
**(11)** AU-A-2024204820
**(21)** 2024204820 **(22)** 12.07.2024
**(54)** A PREFABRICATED WALL STRUCTURE
**(51)** Int. Cl.
***E04C 2/34*** ( 2006.01 )
***E04B 2/86*** ( 2006.01 )
***E04G 11/06*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2018203654
**(72)** FORD, Shane
**(74)** Baxter Patent Attorneys Pty Ltd

---

**(71)** Ford Global Technologies, LLC
**(11)** AU-A-2024200031
**(21)** 2024200031 **(22)** 03.01.2024
**(54)** Engine and engine exhaust control system
**(51)** Int. Cl.
***F02D 41/28*** ( 2006.01 )
***F01N 1/16*** ( 2006.01 )
**(31)** 18/153723 **(32)** 12.01.23 **(33)** US
**(43)** 01.08.2024
**(72)** WESTON, Keith; DIAMOND, Brendan F.; MCNEES, Michael Alan; MARTINEZ, Victor
**(74)** WRAYS PTY LTD

---

**(71)** Georg Fischer Rohrleitungssysteme AG
**(11)** AU-A-2024200053
**(21)** 2024200053 **(22)** 04.01.2024
**(54)** Slide unit for a shut-off valve
**(51)** Int. Cl.
***F16K 3/314*** ( 2006.01 )
***F16K 31/50*** ( 2006.01 )
**(31)** 23 151 434.0 **(32)** 13.01.23 **(33)** EP
**(43)** 01.08.2024
**(72)** TREFZ, Oliver; ANDRY, Martin; HUNNEKUHL, Joerg; KRAUTER, Christoph; HUESSY, Jonas
**(74)** FB Rice Pty Ltd

---

**(71)** Getac Technology Corporation
**(11)** AU-A-2023203389
**(21)** 2023203389 **(22)** 31.05.2023
**(54)** Hinge assembly and casing assembly for electronic device
**(51)** Int. Cl.
***G06F 1/16*** ( 2006.01 )
**(31)** 202310073077.0 **(32)** 18.01.23 **(33)** CN
**(43)** 01.08.2024
**(72)** LEE, Kun-Cheng; CHANG, Juei-Chi
**(74)** A.P.T. Patent and Trade Mark Attorneys

---

**(71)** Getac Technology Corporation
**(11)** AU-A-2023204706
**(21)** 2023204706 **(22)** 15.07.2023
**(54)** Protective case and portable electronic device
**(51)** Int. Cl.
***A45C 13/36*** ( 2006.01 )
***A45C 11/00*** ( 2006.01 )
***B65D 85/30*** ( 2006.01 )
***G06F 1/16*** ( 2006.01 )
***H04B 1/3888*** ( 2015.01 )

## Applications Open to Public Inspection - Name Index cont'd

**(31)** 202310064070.2 **(32)** 13.01.23 **(33)** CN
**(43)** 01.08.2024
**(72)** WANG, Shih-Wei
**(74)** A.P.T. Patent and Trade Mark Attorneys

---

**(71)** Gilead Sciences, Inc.
**(11)** AU-A-2024204902
**(21)** 2024204902 **(22)** 17.07.2024
**(54)** Cot modulators and methods of use thereof
**(51)** Int. Cl.
***C07D 401/14*** ( 2006.01 )
***A61K 31/4709*** ( 2006.01 )
***A61P 29/00*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07D 401/12*** ( 2006.01 )
***C07D 405/14*** ( 2006.01 )
***C07D 409/14*** ( 2006.01 )
***C07D 413/14*** ( 2006.01 )
***C07D 417/14*** ( 2006.01 )
***C07D 471/04*** ( 2006.01 )
***C07D 495/04*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2022204050
**(72)** Bacon, Elizabeth M.; Balan, Gayatri; Chou, Chien-Hung; Clark, Christopher T.; Cottell, Jeromy J.; Kim, Musong; Kirschberg, Thorsten A.; Link, John O.; Phillips, Gary; Schroeder, Scott D.; Squires, Neil H.; Stevens, Kirk L.; Taylor, James G.; Watkins, William J.; Wright, Nathan E.; Zipfel, Sheila M.
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Global Blue SA
**(11)** AU-A-2024204771
**(21)** 2024204771 **(22)** 10.07.2024
**(54)** PAYMENT TERMINAL DEVICE AND METHOD
**(51)** Int. Cl.
***G06Q 20/38*** ( 2012.01 )
***G06Q 20/34*** ( 2012.01 )
**(43)** 01.08.2024
**(62)** 2018340290
**(72)** TAN, Puay Hiang; LING, James Michael
**(74)** IP GATEWAY PATENT & TRADE MARK ATTORNEYS PTY LTD

---

**(71)** Globeride, Inc.
**(11)** AU-A-2023282189
**(21)** 2023282189 **(22)** 12.12.2023
**(54)** FISHING REEL
**(51)** Int. Cl.
***A01K 89/01*** ( 2006.01 )
**(31)** 2023-003643 **(32)** 13.01.23 **(33)** JP
**(43)** 01.08.2024
**(72)** OKUMA, Kentaro
**(74)** Griffith Hack

---

**(71)** Great Plains Manufacturing, Inc.
**(11)** AU-A-2024204745
**(21)** 2024204745 **(22)** 10.07.2024
**(54)** Compact Utility Loader
**(51)** Int. Cl.
***E02F 9/08*** ( 2006.01 )
***E02F 3/34*** ( 2006.01 )
***E02F 9/20*** ( 2006.01 )
***E02F 9/26*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2024200396
**(72)** Carlson, Jason; Takemura, Toshihiko; Relph, John; Shobe, Matthew; Welsh, Jeff
**(74)** SR Intellectual Property

---

**(71)** Gregg Drilling, LLC
**(11)** AU-A-2024201614
**(21)** 2024201614 **(22)** 12.03.2024
**(54)** Geotechnical rig systems and methods
**(51)** Int. Cl.
***E21B 7/00*** ( 2006.01 )
***E21B 7/02*** ( 2006.01 )
***E21B 19/00*** ( 2006.01 )
***E21B 19/20*** ( 2006.01 )
***E21B 44/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2023210570
**(72)** GREGG, John; SCHUBERT, Matthew; SCHUBERT, Phillip
**(74)** Spruson & Ferguson

---

**(71)** Grip Holdings LLC
**(11)** AU-A-2024204899
**(21)** 2024204899 **(22)** 17.07.2024
**(54)** Anti-Slippage Fastener
**(51)** Int. Cl.
***F16B 23/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2019226491
**(72)** KUKUCKA, Paul; KUKUCKA, Thomas Stefan
**(74)** A.P.T. Patent and Trade Mark Attorneys

---

**(71)** Guangdong Aiko Solar Energy Technology Co., Ltd.
**(11)** AU-A-2024204838
**(21)** 2024204838 **(22)** 13.07.2024
**(54)** ELECTRODE STRUCTURE OF BACK CONTACT CELL, BACK CONTACT CELL, BACK CONTACT CELL MODULE, AND BACK CONTACT CELL SYSTEM
**(51)** Int. Cl.
***H01L 31/0224*** ( 2006.01 )
***H01G 2/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2023200965
**(72)** WANG, Yongqian; YANG, Xinqiang; CHEN, Gang
**(74)** LAMINAR IP PTY LTD

---

**(71)** Hamex Fuel Cell Pvt Ltd.
**(11)** AU-A-2024204815
**(21)** 2024204815 **(22)** 12.07.2024
**(54)** Controlled Dosage Dispensing Valve
**(51)** Int. Cl.
***F16K 3/26*** ( 2006.01 )
***F16K 1/30*** ( 2006.01 )
***F16K 21/16*** ( 2006.01 )
***F17C 13/04*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2023251484
**(72)** McCormack, Rex; Moza, Vinod Kumar
**(74)** Southern Cross Intellectual Property

---

**(71)** Hera Health Solutions Inc.
**(11)** AU-A-2024204746
**(21)** 2024204746 **(22)** 10.07.2024
**(54)** Bioerodible drug delivery implants
**(51)** Int. Cl.
***A61K 9/70*** ( 2006.01 )
***A61K 9/00*** ( 2006.01 )
***B29C 53/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2018301320
**(72)** WHITFIELD, Garrett; MATHEW, Idicula; DEVLIN, Matthew; MCVEY, Anthony
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Highlight Therapeutics, S.L.
**(11)** AU-A-2024204758
**(21)** 2024204758 **(22)** 10.07.2024
**(54)** NOVEL PHARMACEUTICAL COMPOSITION COMPRISING PARTICLES COMPRISING A COMPLEX OF A DOUBLE-STRANDED POLYRIBONUCLEOTIDE AND A POLYALKYLENEIMINE
**(51)** Int. Cl.
***A61K 9/08*** ( 2006.01 )
***A61K 9/19*** ( 2006.01 )
***A61K 47/26*** ( 2006.01 )
***A61P 31/04*** ( 2006.01 )
***A61P 31/12*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2017414660
**(72)** Quintero Ortiz, Marisol; Pozuelo Rubio, Mercedes; Planelles Carazo, Lourdes
**(74)** Jones Tulloch

---

**(71)** Hollister Incorporated
**(11)** AU-A-2024204895
**(21)** 2024204895 **(22)** 17.07.2024
**(54)** Package for medical device for ergonomic device removal
**(51)** Int. Cl.
***A61M 27/00*** ( 2006.01 )
***A61M 25/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2018378592
**(72)** RYAN, Owen; LAUNOIS, Pascal
**(74)** Spruson & Ferguson

---

**(71)** Huawei Technologies Co., Ltd.
**(11)** AU-A-2024204772
**(21)** 2024204772 **(22)** 10.07.2024
**(54)** BANDWIDTH INDICATION METHOD APPLIED IN WIRELESS LOCAL AREA NETWORK AND COMMUNICATION APPARATUS
**(51)** Int. Cl.
***H04W 28/20*** ( 2009.01 )
**(43)** 01.08.2024
**(62)** 2021264578
**(72)** Yu, Jian; Hu, Mengshi; Gan, Ming
**(74)** PHILLIPS ORMONDE FITZPATRICK

**Applications Open to Public Inspection - Name Index cont'd**

**(71)** Idemitsu Kosan Co., Ltd.
**(11)** AU-A-2024204750
**(21)** 2024204750 **(22)** 10.07.2024
**(54)** HYDRAULIC OIL COMPOSITION
**(51)** Int. Cl.
***C10M 141/06*** ( 2006.01 )
***C10M 141/10*** ( 2006.01 )
*C10M 129/10* ( 2006.01 )
*C10M 133/12* ( 2006.01 )
*C10M 133/16* ( 2006.01 )
*C10M 133/56* ( 2006.01 )
*C10M 137/04* ( 2006.01 )
*C10M 137/08* ( 2006.01 )
*C10N 10/04* ( 2006.01 )
*C10N 20/00* ( 2006.01 )
*C10N 30/00* ( 2006.01 )
*C10N 30/06* ( 2006.01 )
*C10N 30/10* ( 2006.01 )
*C10N 40/08* ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2018352257
**(72)** Aoki, Shinji; Inoue, Shota
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Igin Smart Hygiene Ltd
**(11)** AU-A-2024204901
**(21)** 2024204901 **(22)** 17.07.2024
**(54)** Apparatus for Putting a Glove on a Palm Hand
**(51)** Int. Cl.
***A61B 42/50*** ( 2016.01 )
***A61B 42/00*** ( 2016.01 )
***A61B 42/10*** ( 2016.01 )
***A61B 42/40*** ( 2016.01 )
***B65G 47/00*** ( 2006.01 )
***B65G 47/90*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2020426470
**(72)** AVSHALOM, Shlomo Matan Shalom
**(74)** A.P.T. Patent and Trade Mark Attorneys

---

**(71)** Ignis Technologies Pty Ltd
**(11)** AU-A-2024204861
**(21)** 2024204861 **(22)** 15.07.2024
**(54)** RETURN EXHAUST ASSEMBLY FOR A REVERSE CIRCULATION HAMMER
**(51)** Int. Cl.
***E21B 21/12*** ( 2006.01 )
***E21B 4/14*** ( 2006.01 )
***E21B 10/38*** ( 2006.01 )
***E21B 17/18*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2020311828
**(72)** BOSWELL, Peter Warwick
**(74)** Integrated IP

---

**(71)** Incyte Corporation
**(11)** AU-A-2024204891
**(21)** 2024204891 **(22)** 16.07.2024
**(54)** JAK1 PATHWAY INHIBITORS FOR THE TREATMENT OF CYTOKINE-RELATED DISORDERS
**(51)** Int. Cl.
***A61K 31/4155*** ( 2006.01 )
***A61K 31/437*** ( 2006.01 )
***A61K 31/519*** ( 2006.01 )
***A61P 37/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2019221667
**(72)** O'NEILL MONTGOMERY, Michael; NAIM, Ahmad; SNODGRASS, Susan
**(74)** Houlihan Intellectual Property Pty Ltd

---

**(71)** Inguran, LLC
**(11)** AU-A-2024204802
**(21)** 2024204802 **(22)** 11.07.2024
**(54)** SERIALIZED ARTIFICIAL INSEMINATION STRAWS AND SYSTEMS AND METHODS OF AUTHENTICATION
**(51)** Int. Cl.
***G06Q 99/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2021209079
**(72)** GILLIGAN, Thomas Boyd
**(74)** AJ PARK

---

**(71)** James Hardie Technology Limited
**(11)** AU-A-2023285745
**(21)** 2023285745 **(22)** 19.12.2023
**(54)** A fastening system
**(51)** Int. Cl.
***E04F 13/24*** ( 2006.01 )
**(31)** 23151501.6 **(32)** 13.01.23 **(33)** EP
**(43)** 01.08.2024
**(72)** TWIN, Stephen John; HAMMOND, Toby John
**(74)** Spruson & Ferguson

---

**(71)** James W. Schleiffarth
**(11)** AU-A-2024204736
**(21)** 2024204736 **(22)** 09.07.2024
**(54)** Concentrator and crystallizer evaporation system
**(51)** Int. Cl.
***B01D 19/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2022203355
**(72)** SCHLEIFFARTH, James W
**(74)** FB Rice Pty Ltd

---

**(71)** Jaram Products Pty Ltd
**(11)** AU-A-2024204867
**(21)** 2024204867 **(22)** 15.07.2024
**(54)** Shelf System And A Securing System For Use With Same
**(51)** Int. Cl.
***A47B 57/00*** ( 2006.01 )
***A47B 45/00*** ( 2006.01 )
***A47B 47/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2022204752
**(72)** McEwen, Jonathan Lloyd
**(74)** WRAYS PTY LTD

---

**(71)** Joy Global Surface Mining Inc
**(11)** AU-A-2024204857
**(21)** 2024204857 **(22)** 15.07.2024
**(54)** Predictive replacement for heavy machinery
**(51)** Int. Cl.
***E02F 9/26*** ( 2006.01 )
***E02F 9/28*** ( 2006.01 )
***G06Q 10/06*** ( 2023.01 )
**(43)** 01.08.2024
**(62)** 2018203749
**(72)** RESTUM, David; TAYLOR, Wesley
**(74)** Griffith Hack

---

**(71)** Joy Global Underground Mining LLC
**(11)** AU-A-2023200359
**(21)** 2023200359 **(22)** 24.01.2023
**(54)** Guide shoe for mining machine
**(51)** Int. Cl.
***E21C 35/12*** ( 2006.01 )
***E21C 27/24*** ( 2006.01 )
***E21C 29/02*** ( 2006.01 )
**(31)** 18/097,067 **(32)** 13.01.23 **(33)** US
**(43)** 01.08.2024
**(72)** PERRY, Ryan E.; FRANKLIN, Shawn; LUTZ, Joshua
**(74)** Griffith Hack

---

**(71)** Joy Global Underground Mining LLC
**(11)** AU-A-2023204295
**(21)** 2023204295 **(22)** 04.07.2023
**(54)** Shaft support for industrial machine
**(51)** Int. Cl.
***F16C 23/00*** ( 2006.01 )
***B65G 23/44*** ( 2006.01 )
***B65G 39/09*** ( 2006.01 )
***B65G 39/16*** ( 2006.01 )
***F16C 35/00*** ( 2006.01 )
**(31)** 63/439,493 **(32)** 17.01.23 **(33)** US
**(43)** 01.08.2024
**(72)** WATTERS, Logan S.; WATSON, Charles W.
**(74)** Griffith Hack

---

**(71)** Karyopharm Therapeutics Inc.
**(11)** AU-A-2024204818
**(21)** 2024204818 **(22)** 12.07.2024
**(54)** Nuclear transport modulators and uses thereof
**(51)** Int. Cl.
***C07D 249/08*** ( 2006.01 )
***A61K 31/497*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2022283662
**(72)** BALOGLU, Erkan; SHACHAM, Sharon; MCCAULEY, Dilara; KASHYAP, Trinayan; SENAPEDIS, William; LANDESMAN, Yosef; GOLAN, Gali; KALID, Ori; SHECHTER, Sharon
**(74)** Spruson & Ferguson

---

**(71)** Kelly Slater Wave Company, LLC
**(11)** AU-A-2024204780
**(21)** 2024204780 **(22)** 11.07.2024
**(54)** WAVE POOL AND WAVE GENERATOR FOR BI-DIRECTIONAL AND DYNAMICALLY-SHAPED SURFING WAVES
**(51)** Int. Cl.
***E04H 4/00*** ( 2006.01 )
***A63B 69/00*** ( 2006.01 )
***F04D 35/00*** ( 2006.01 )

## Applications Open to Public Inspection - Name Index cont'd

**(43)** 01.08.2024
**(62)** 2018323631
**(72)** Fincham, Adam; Poirot, Alex; Loewen, Nathan; Slater, Robert Kelly
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Kingsway Enterprises (UK) Limited
**(11)** AU-A-2023285797
**(21)** 2023285797 **(22)** 20.12.2023
**(54)** Door system
**(51)** Int. Cl.
***E06B 1/04*** ( 2006.01 )
***E06B 1/18*** ( 2006.01 )
***E06B 1/52*** ( 2006.01 )
***E06B 5/10*** ( 2006.01 )
**(31)** 2300492.2 **(32)** 12.01.23 **(33)** GB
**(43)** 01.08.2024
**(72)** HALL, Benjamin; FRENCH, Melvyn
**(74)** FB Rice Pty Ltd

---

**(71)** L3Harris Technologies, Inc.
**(11)** AU-A-2023282223
**(21)** 2023282223 **(22)** 13.12.2023
**(54)** SYSTEM AND METHOD OF DETERMINING INTERFERING SIGNAL PARAMETERS
**(51)** Int. Cl.
***H04B 1/10*** ( 2006.01 )
***G01S 19/13*** ( 2010.01 )
***G01S 19/21*** ( 2010.01 )
**(31)** 18/154288 **(32)** 13.01.23 **(33)** US
**(43)** 01.08.2024
**(72)** KELLER, David R; GIBSON, L Andrew; KIMANI, Alexander; LINDSAY, Lance
**(74)** Maxwells Patent & Trade Mark Attorneys Pty Ltd

---

**(71)** LEPRINO FOODS COMPANY
**(11)** AU-A-2023327767
**(21)** 2023327767 **(22)** 24.11.2023
**(54)** DENATURED MILK PROTEINS AND METHODS OF MAKING THEM
**(51)** Int. Cl.
***A23J 3/08*** ( 2006.01 )
***A23C 9/13*** ( 2006.01 )
***A23C 21/02*** ( 2006.01 )
***A23J 3/34*** ( 2006.01 )
**(31)** 18/097,003 **(32)** 13.01.23 **(33)** US
18/503,535 07.11.23 US
**(43)** 01.08.2024
**(72)** TESFE, Paulos; LI, Jiancai; MAIER, Bradley; MERRILL, Richard K.
**(74)** Halfords IP

---

**(71)** LG ELECTRONICS INC.
**(11)** AU-A-2023387765
**(21)** 2023387765 **(22)** 20.09.2023
**(54)** LAUNDRY TREATMENT DEVICE
**(51)** Int. Cl.
***D06F 34/34*** ( 2020.01 )
***D06F 34/32*** ( 2020.01 )
**(31)** 10-2023-0000728 **(32)** 03.01.23 **(33)** KR
**(43)** 01.08.2024
**(72)** JANG, Ho Sung; YOO, Sang Hee; GWON, Hyeok Jin; YOON, Ji Hyun
**(74)** FB Rice Pty Ltd

---

**(71)** LG ELECTRONICS INC.
**(11)** AU-A-2024204742
**(21)** 2024204742 **(22)** 10.07.2024
**(54)** REFRIGERATOR
**(51)** Int. Cl.
***F25D 17/06*** ( 2006.01 )
***F25C 1/04*** ( 2018.01 )
**(43)** 01.08.2024
**(62)** 2022202533
**(72)** HONG, Jinil; KIM, Nayoung; CHOO, Ayoung
**(74)** Dentons Patent Attorneys Australasia Limited

---

**(71)** LivePerson, Inc.
**(11)** AU-A-2024204915
**(21)** 2024204915 **(22)** 17.07.2024
**(54)** Systems and methods for intent response solicitation and processing
**(51)** Int. Cl.
***H04L 51/046*** ( 2022.01 )
***G06Q 10/10*** ( 2023.01 )
***G06Q 30/02*** ( 2023.01 )
***H04M 3/523*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2021283265
**(72)** COHEN, Goor; AVIRAM, Shai; KEDMI, Avi
**(74)** Spruson & Ferguson

---

**(71)** LOMBARDI THOMAS, L.; THOMAS, B.
**(11)** AU-A-2024204325
**(21)** 2024204325 **(22)** 10.01.2024
**(54)** METHOD AND SYSTEM FOR ASSESSING RACKET STROKE HEAVINESS
**(51)** Int. Cl.
***A63B 24/00*** ( 2006.01 )
***A63B 69/38*** ( 2006.01 )
**(31)** 63/479,366 **(32)** 11.01.23 **(33)** US
18/342,063 27.06.23 US
18/515,448 21.11.23 US
**(43)** 01.08.2024
**(72)** LOMBARDI THOMAS, Lindsey; THOMAS, Brian
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** LuxCreo (Beijing) Inc.
**(11)** AU-A-2024204916
**(21)** 2024204916 **(22)** 17.07.2024
**(54)** Additive manufacturing apparatus and method
**(51)** Int. Cl.
***B29C 64/286*** ( 2017.01 )
***B29C 35/08*** ( 2006.01 )
***B29C 64/129*** ( 2017.01 )
***B33Y 30/00*** ( 2015.01 )
**(43)** 01.08.2024
**(62)** 2022291205
**(72)** ZHU, Guang; YANG, Mike Shang-Yu; STROHECKER, Michael Robert
**(74)** Spruson & Ferguson

---

**(71)** Mahindra & Mahindra Limited
**(11)** AU-A-2024200317
**(21)** 2024200317 **(22)** 17.01.2024
**(54)** A VEHICULAR STEERING WHEEL ASSEMBLY
**(51)** Int. Cl.
***B60R 21/203*** ( 2006.01 )
***B60R 21/215*** ( 2011.01 )
**(31)** 202341003449 **(32)** 17.01.23 **(33)** IN
**(43)** 01.08.2024
**(72)** Mareeswaran, Periyaswamy; Fernandes, Bradley Diago
**(74)** Madderns Pty Ltd

---

**(71)** Mars Engineers Pty Ltd
**(11)** AU-A-2023200205
**(21)** 2023200205 **(22)** 16.01.2023
**(54)** ROLLER BEARING SUPPORT APPARATUS
**(51)** Int. Cl.
***B66C 1/62*** ( 2006.01 )
*B60B 29/00* ( 2006.01 )
*B60B 30/00* ( 2006.01 )
**(43)** 01.08.2024
**(72)** Farahpour, Hamed
**(74)** Mann IP

---

**(71)** McCain Foods Limited
**(11)** AU-A-2024204808
**(21)** 2024204808 **(22)** 12.07.2024
**(54)** Blade assembly for cutting food
**(51)** Int. Cl.
***A47J 43/07*** ( 2006.01 )
***B26D 1/00*** ( 2006.01 )
***B26D 3/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2020201917
**(72)** ROGERS, David M.; AIKENS, John Warren; BÖMONT, Sylvain
**(74)** FB Rice Pty Ltd

---

**(71)** McCain Foods Limited
**(11)** AU-A-2024204809
**(21)** 2024204809 **(22)** 12.07.2024
**(54)** Blade assembly for cutting food
**(51)** Int. Cl.
***A47J 43/07*** ( 2006.01 )
***B26D 1/00*** ( 2006.01 )
***B26D 3/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2020201917
**(72)** ROGERS, David M.; AIKENS, John Warren; BÖMONT, Sylvain
**(74)** FB Rice Pty Ltd

---

**(71)** McCain Foods Limited
**(11)** AU-A-2024204810
**(21)** 2024204810 **(22)** 12.07.2024
**(54)** Blade assembly for cutting food
**(51)** Int. Cl.
***A47J 43/07*** ( 2006.01 )
***B26D 1/00*** ( 2006.01 )
***B26D 3/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2020201917
**(72)** ROGERS, David M.; AIKENS, John Warren; BÖMONT, Sylvain
**(74)** FB Rice Pty Ltd

---

**Applications Open to Public Inspection - Name Index cont'd**

**(71)** Miles, S.
**(11)** AU-A-2024204855
**(21)** 2024204855 **(22)** 15.07.2024
**(54)** VEHICLE MIRRORS
**(51)** Int. Cl.
***B60R 1/078*** ( 2006.01 )
***B60R 1/02*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2022201814
**(72)** Miles, Shane
**(74)** Ahearn Fox

---

**(71)** Millennium Pharmaceuticals, Inc.
**(11)** AU-A-2024203289
**(21)** 2024203289 **(22)** 17.05.2024
**(54)** Methods of treating or preventing graft versus host disease
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61K 39/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2017234010
**(72)** Sachs, Jessica A.; Ford, John E.
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Mountain Top (Denmark) ApS
**(11)** AU-A-2024204878
**(21)** 2024204878 **(22)** 16.07.2024
**(54)** A rear corner element
**(51)** Int. Cl.
***B60R 13/07*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2020273513
**(72)** VOETMANN, Thomas Rendbeck; HANSEN, Peter Singer; SZABOLCS, Feigler
**(74)** Adams Pluck

---

**(71)** Mountain Top (Denmark) ApS
**(11)** AU-A-2024204888
**(21)** 2024204888 **(22)** 16.07.2024
**(54)** A lid arrangement for a canister for a retractable rollup truck bed cover
**(51)** Int. Cl.
***B60J 7/04*** ( 2006.01 )
***B60J 7/06*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2020279506
**(72)** VOETMANN, Thomas Rendbeck; HANSEN, Peter Singer; SZABOLCS, Feigler
**(74)** Adams Pluck

---

**(71)** Mybiotics Pharma Ltd.
**(11)** AU-A-2024204814
**(21)** 2024204814 **(22)** 12.07.2024
**(54)** COMPOSITION AND METHODS FOR MICROBIOTA THERAPY
**(51)** Int. Cl.
***A61K 35/66*** ( 2015.01 )
***A61K 31/00*** ( 2006.01 )
***A61K 35/74*** ( 2015.01 )
***A61K 35/741*** ( 2015.01 )
***A61K 35/744*** ( 2015.01 )
***A61K 35/745*** ( 2015.01 )
**(43)** 01.08.2024
**(62)** 2017271491
**(72)** Baram, David; Dabush, David; Diamant, Rachel
**(74)** Collison & Co

---

**(71)** Netsweeper (Barbados) Inc.
**(11)** AU-A-2024204882
**(21)** 2024204882 **(22)** 16.07.2024
**(54)** Computer Network System and Process for Collecting Tax on Online Commerce
**(51)** Int. Cl.
***G06Q 30/04*** ( 2012.01 )
***G06Q 40/00*** ( 2023.01 )
**(43)** 01.08.2024
**(62)** 2022256232
**(72)** Roach, Perry; Erdelyi, Lou
**(74)** Patentec Patent Attorneys

---

**(71)** Novel Microdevices, Inc.
**(11)** AU-A-2024204813
**(21)** 2024204813 **(22)** 12.07.2024
**(54)** SAMPLE PROCESSING DEVICE COMPRISING MAGNETIC AND MECHANICAL ACTUATING ELEMENTS USING LINEAR OR ROTATIONAL MOTION AND METHODS OF USE THEREOF
**(51)** Int. Cl.
***B01L 3/00*** ( 2006.01 )
***B65D 35/30*** ( 2006.01 )
***B65D 35/56*** ( 2006.01 )
***B65D 47/36*** ( 2006.01 )
***G01N 33/487*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2022200541
**(72)** Pais, Andrea Maria Dominic; Pais, Rohan Joseph Alexander
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Nu Flow Technologies 2000 Inc.
**(11)** AU-A-2024204912
**(21)** 2024204912 **(22)** 17.07.2024
**(54)** Liner assembly for pipelines and related method
**(51)** Int. Cl.
***F16L 55/18*** ( 2006.01 )
***B29C 63/34*** ( 2006.01 )
***F16L 55/163*** ( 2006.01 )
***F16L 58/10*** ( 2006.01 )
***F17D 1/08*** ( 2006.01 )
***F22B 33/18*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2019273872
**(72)** CORNEIL, Paul; DUXBURY, Grant; MANNERS, Cameron
**(74)** Griffith Hack

---

**(71)** Panduit Corp.
**(11)** AU-A-2023282258
**(21)** 2023282258 **(22)** 14.12.2023
**(54)** Connectivity verification for an absence of voltage tester system
**(51)** Int. Cl.
***H02J 50/20*** ( 2016.01 )
***H02J 3/00*** ( 2006.01 )
***H02M 7/00*** ( 2006.01 )
**(31)** 18/097411 **(32)** 16.01.23 **(33)** US
**(43)** 01.08.2024
**(72)** Balid, Walid; Bolouri-Saransar, Masud
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Phoenix Steel Sales Pty Ltd
**(11)** AU-A-2023274189
**(21)** 2023274189 **(22)** 30.11.2023
**(54)** Cable support system
**(51)** Int. Cl.
***H02G 3/04*** ( 2006.01 )
***H02G 3/30*** ( 2006.01 )
***H02G 3/38*** ( 2006.01 )
*H02G 3/36* ( 2006.01 )
**(31)** 2023900061 **(32)** 12.01.23 **(33)** AU
**(43)** 01.08.2024
**(72)** Peter DALY
**(74)** WRAYS PTY LTD

---

**(71)** Precision BioSciences, Inc.
**(11)** AU-A-2024203387
**(21)** 2024203387 **(22)** 22.05.2024
**(54)** Rationally-designed single-chain meganucleases with non-palindromic recognition sequences
**(51)** Int. Cl.
***C12N 9/22*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2021236437
**(72)** SMITH, James Jefferson; JANTZ, Derek
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** President and Fellows of Harvard College; BASF SE
**(11)** AU-A-2024204893
**(21)** 2024204893 **(22)** 16.07.2024
**(54)** MICROSPHERES COMPRISING POLYDISPERSE POLYMER NANOSPHERES AND POROUS METAL OXIDE MICROSPHERES
**(51)** Int. Cl.
***B29B 9/00*** ( 2006.01 )
***B32B 5/16*** ( 2006.01 )
***B41M 3/14*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2018329177
**(72)** DARJI, Rupa Hiremath; NEWHOUSE, James; MANOHARAN, Vinothan N.; HWANG, Victoria; STEPHENSON, Anna B.
**(74)** Griffith Hack

---

**(71)** PrisymID Limited
**(11)** AU-A-2024204834
**(21)** 2024204834 **(22)** 12.07.2024
**(54)** LABEL DATA PROCESSING SYSTEM
**(51)** Int. Cl.
***G06V 30/412*** ( 2022.01 )
***G06T 7/00*** ( 2017.01 )
***G06V 10/98*** ( 2022.01 )

## Applications Open to Public Inspection - Name Index cont'd

**(43)** 01.08.2024
**(62)** 2019232388
**(72)** Plant, Robert Graham; Todd, Thomas Matthew Andrew
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** PRYSMIAN S.P.A.
**(11)** AU-A-2024200144
**(21)** 2024200144 **(22)** 10.01.2024
**(54)** Power cable with non-metallic tape armour
**(51)** Int. Cl.
***H01B 7/00*** ( 2006.01 )
***H01B 9/00*** ( 2006.01 )
**(31)** 102023000000684 **(32)** 18.01.23 **(33)** IT
**(43)** 01.08.2024
**(72)** CONSONNI, Enrico Maria; CONTE, Alessandro; COSTAGLIOLA, Piervincenzo; FRANCHI BONONI, Stefano
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Rado, J.
**(11)** AU-A-2023200173
**(21)** 2023200173 **(22)** 13.01.2023
**(54)** Ganja Army Hemp Fabric Print
**(51)** Int. Cl.
***D03D 1/00*** ( 2006.01 )
**(43)** 01.08.2024
**(72)** Rado, Juliska
**(74)** Juliska Rado

---

**(71)** Regeneron Pharmaceuticals, Inc.
**(11)** AU-A-2024204645
**(21)** 2024204645 **(22)** 04.07.2024
**(54)** GENETICALLY MODIFIED T CELL RECEPTOR MICE
**(51)** Int. Cl.
***C07K 14/705*** ( 2006.01 )
***A01K 67/027*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2021203192
**(72)** Macdonald, Lynn; Murphy, Andrew J.; McWhirter, John; Tu, Naxin; Voronina, Vera; Gurer, Cagan; Meagher, Karolina A.; Stevens, Sean
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** ResMed Asia Pte. Ltd.
**(11)** AU-A-2024204860
**(21)** 2024204860 **(22)** 15.07.2024
**(54)** PATIENT INTERFACE WITH FOAM CUSHION
**(51)** Int. Cl.
***A61M 16/06*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2019478910
**(72)** YEW, Robin; SEET, Lik Tze; BATE, Andrew James; LAW, Kam Man
**(74)** Halfords IP

---

**(71)** ResMed Sensor Technologies Limited
**(11)** AU-A-2024204900
**(21)** 2024204900 **(22)** 17.07.2024
**(54)** METHOD AND APPARATUS FOR DETERMINING POTENTIAL ONSET OF AN ACUTE MEDICAL CONDITION
**(51)** Int. Cl.
***A61B 5/08*** ( 2006.01 )
***G06N 20/00*** ( 2019.01 )
***G08B 21/02*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2019268409
**(72)** KAWECKI, Katherine; REEKS, Christian
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Rodriguez, R.
**(11)** AU-A-2024200235
**(21)** 2024200235 **(22)** 12.01.2024
**(54)** METHODS AND SYSTEMS FOR DETERMINING THE AUTHENTICITY OF AN IDENTITY DOCUMENT
**(51)** Int. Cl.
***G06K 5/00*** ( 2006.01 )
***G06K 7/14*** ( 2006.01 )
***G06K 19/06*** ( 2006.01 )
***G06V 30/413*** ( 2022.01 )
***G06V 30/418*** ( 2022.01 )
**(31)** 18096644 **(32)** 13.01.23 **(33)** US
**(43)** 01.08.2024
**(72)** Rodriguez, Raphael
**(74)** Wallington-Dummer

---

**(71)** Sangamo Therapeutics, Inc.
**(11)** AU-A-2024203182
**(21)** 2024203182 **(22)** 14.05.2024
**(54)** Engineered target specific nucleases
**(51)** Int. Cl.
***C12N 9/14*** ( 2006.01 )
***A61K 38/16*** ( 2006.01 )
***C12N 9/22*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2017315414
**(72)** Miller, Jeffrey C.; Rebar, Edward J.
**(74)** Griffith Hack

---

**(71)** Sanofi Biotechnology
**(11)** AU-A-2024204004
**(21)** 2024204004 **(22)** 13.06.2024
**(54)** Humanized Anti-IL-1R3 antibodies
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
*A61K 39/00* ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2017260399
**(72)** FISCHER, Stephan; BRANDT, Michael; KAZANDJIAN, Linda Veronique
**(74)** Griffith Hack

---

**(71)** SCALEOP OÜ
**(11)** AU-A-2023285766
**(21)** 2023285766 **(22)** 20.12.2023
**(54)** A CABLE FEEDING UNIT FOR A SHORE CABLE MANAGEMENT SYSTEM
**(51)** Int. Cl.
***B66D 1/26*** ( 2006.01 )
***B66D 1/02*** ( 2006.01 )
***B66D 1/36*** ( 2006.01 )
***B66D 1/40*** ( 2006.01 )
**(31)** 23151536.2 **(32)** 13.01.23 **(33)** EP
**(43)** 01.08.2024
**(72)** Jo#gi, Alar; Vinni, Mehis
**(74)** Collison & Co

---

**(71)** Schneider Electric (Australia) Pty Limited
**(11)** AU-A-2024204754
**(21)** 2024204754 **(22)** 10.07.2024
**(54)** CONNECTION SYSTEM AND METHOD FOR ELECTRICAL OUTLETS
**(51)** Int. Cl.
***H05K 7/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2022252756
**(72)** de Man, Gerrit; Reuter, Mark
**(74)** Madderns Pty Ltd

---

**(71)** Schneider Electric Industries SAS
**(11)** AU-A-2023285728
**(21)** 2023285728 **(22)** 19.12.2023
**(54)** RESETTING RCD MECHANISM BY THE HANDLE
**(51)** Int. Cl.
***H01H 71/52*** ( 2006.01 )
***H01H 3/04*** ( 2006.01 )
***H01H 15/02*** ( 2006.01 )
***H01H 71/02*** ( 2006.01 )
**(31)** FR2300432 **(32)** 17.01.23 **(33)** FR
**(43)** 01.08.2024
**(72)** Burnot, Claude
**(74)** Madderns Pty Ltd

---

**(71)** SELC Ireland Ltd.
**(11)** AU-A-2024204849
**(21)** 2024204849 **(22)** 15.07.2024
**(54)** Streetlight asset module, streetlights and related systems
**(51)** Int. Cl.
***F21V 23/00*** ( 2015.01 )
**(43)** 01.08.2024
**(62)** 2019334447
**(72)** KERRIGAN, William John; MAGEE, Francis Joseph; POWER, John Martin
**(74)** Griffith Hack

---

**(71)** Selecta Biosciences, Inc.
**(11)** AU-A-2024204850
**(21)** 2024204850 **(22)** 15.07.2024
**(54)** Methods and compositions related to combined treatment with anti-inflammatories and synthetic nanocarriers comprising an immunosuppressant
**(51)** Int. Cl.
***A61K 45/00*** ( 2006.01 )
***A61K 38/43*** ( 2006.01 )
***A61P 29/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2018236123
**(72)** Johnston, Lloyd
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Selecta Biosciences, Inc.
**(11)** AU-A-2024204851
**(21)** 2024204851 **(22)** 15.07.2024

## Applications Open to Public Inspection - Name Index cont'd

**(54)** Formulations and doses of pegylated uricase
**(51)** Int. Cl.
***A61K 38/44*** ( 2006.01 )
***A61K 9/14*** ( 2006.01 )
***A61K 31/436*** ( 2006.01 )
***A61K 45/06*** ( 2006.01 )
***B82Y 5/00*** ( 2011.01 )
**(43)** 01.08.2024
**(62)** 2017230891
**(72)** Johnston, Lloyd; Cautreels, Werner; Sands, Earl; Kishimoto, Takashi K.
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Seres Therapeutics, Inc.
**(11)** AU-A-2024204663
**(21)** 2024204663 **(22)** 05.07.2024
**(54)** SYNERGISTIC BACTERIAL COMPOSITIONS AND METHODS OF PRODUCTION AND USE THEREOF
**(51)** Int. Cl.
***A01N 63/00*** ( 2020.01 )
***A01N 65/00*** ( 2009.01 )
**(43)** 01.08.2024
**(62)** 2022204478
**(72)** Von Maltzahn, Geoffrey; Henn, Matthew R.; D'Onofrio, Anthony Mario; Litcofsky, Kevin Daniel; Berry, David A.; Cook, David; Afeyan, Noubar B.; Aunins, John G.
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** SHAHEEN INNOVATIONS HOLDING LIMITED
**(11)** AU-A-2024204767
**(21)** 2024204767 **(22)** 10.07.2024
**(54)** Mist inhaler devices
**(51)** Int. Cl.
***A24B 15/167*** ( 2020.01 )
***A24F 40/05*** ( 2020.01 )
***A24F 40/10*** ( 2020.01 )
***A24F 40/485*** ( 2020.01 )
***A61M 11/00*** ( 2006.01 )
***A61M 15/00*** ( 2006.01 )
***B05B 17/06*** ( 2006.01 )
***B06B 1/02*** ( 2006.01 )
*B05B 17/00* ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2021404157
**(72)** ALSHAIBA SALEH GHANNAM ALMAZROUEI, Mohammed; BHATTI, Sajid; MACHOVEC, Jeff; LAMOUREUX, Clement
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Shenzhen Aiper Intelligent Co., Ltd.
**(11)** AU-A-2023202909
**(21)** 2023202909 **(22)** 10.05.2023
**(54)** Robot Swimming Pool Cleaner with Convenient-to-Replace Battery
**(51)** Int. Cl.
***E04H 4/16*** ( 2006.01 )
***A47L 9/28*** ( 2006.01 )
***A47L 11/00*** ( 2006.01 )
**(31)** 202310040417X **(32)** 13.01.23 **(33)** CN
**(43)** 01.08.2024
**(72)** WANG, Yang; YU, Xueliang; YE, Yudong; LI, Kun; LI, Yunxuan
**(74)** Collison & Co

---

**(71)** Shenzhen Aiper Intelligent Co., Ltd.
**(11)** AU-A-2023202910
**(21)** 2023202910 **(22)** 10.05.2023
**(54)** Water Surface Profile Cleaning Method and System of Robot Swimming Pool Cleaner, and Readable Storage Medium
**(51)** Int. Cl.
***E04H 4/16*** ( 2006.01 )
***A47L 9/28*** ( 2006.01 )
***A47L 11/38*** ( 2006.01 )
**(31)** 2023100557669 **(32)** 17.01.23 **(33)** CN
**(43)** 01.08.2024
**(72)** WANG, Yang; YU, Xueliang; YE, Liangwen
**(74)** Collison & Co

---

**(71)** Shenzhen Aiper Intelligent Co., Ltd.
**(11)** AU-A-2023203971
**(21)** 2023203971 **(22)** 23.06.2023
**(54)** Robot Swimming Pool Cleaner with Filter Screen Anti-blocking Function
**(51)** Int. Cl.
***E04H 4/16*** ( 2006.01 )
***A47L 9/10*** ( 2006.01 )
***B01D 29/66*** ( 2006.01 )
**(31)** 2023100600137 **(32)** 17.01.23 **(33)** CN
**(43)** 01.08.2024
**(72)** WANG, Yang; YU, Xueliang; Huang, Lilian
**(74)** Collison & Co

---

**(71)** Sigilon Therapeutics, Inc.
**(11)** AU-A-2024204785
**(21)** 2024204785 **(22)** 11.07.2024
**(54)** AFIBROTIC COMPOUNDS, DEVICES, AND USES THEREOF
**(51)** Int. Cl.
***C07D 405/06*** ( 2006.01 )
***A61K 31/4192*** ( 2006.01 )
***A61N 1/05*** ( 2006.01 )
***C07D 249/06*** ( 2006.01 )
***C07D 405/12*** ( 2006.01 )
***C07D 417/06*** ( 2006.01 )
***C07D 487/06*** ( 2006.01 )
***C07D 491/10*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2019226587
**(72)** VEISEH, Omid; HEIDEBRECHT, Richard; MILLER, Robert James
**(74)** Pearce IP Pty Ltd

---

**(71)** Slingshot Haulage Pty Ltd
**(11)** AU-A-2024204853
**(21)** 2024204853 **(22)** 15.07.2024
**(54)** A TRAILER ASSEMBLY
**(51)** Int. Cl.
***B62D 53/00*** ( 2006.01 )
***B60P 3/40*** ( 2006.01 )
***B62D 13/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2017421574
**(72)** DEHNE, Leigh; MCDONNELL, Kevin
**(74)** Baxter Patent Attorneys Pty Ltd

---

**(71)** Société des Produits Nestlé S.A.
**(11)** AU-A-2024204833
**(21)** 2024204833 **(22)** 12.07.2024
**(54)** Modular production line and process for using it
**(51)** Int. Cl.
***A23G 3/08*** ( 2006.01 )
***A23G 1/00*** ( 2006.01 )
***A23G 3/34*** ( 2006.01 )
***A23G 7/00*** ( 2006.01 )
***A23G 7/02*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2018356581
**(72)** CHONG, Peng-Siong; KNAPP, Mark Robert; PARKINSON, John; CHAPMAN, Stephen
**(74)** Spruson & Ferguson

---

**(71)** Soflex Furniture Co Ltd
**(11)** AU-A-2024200308
**(21)** 2024200308 **(22)** 17.01.2024
**(54)** ANTI-PINCH SYSTEM FOR AN ELECTRIC SEAT
**(51)** Int. Cl.
***A47C 1/032*** ( 2006.01 )
***A47C 1/035*** ( 2006.01 )
***A61G 5/10*** ( 2006.01 )
***A61G 15/02*** ( 2006.01 )
**(31)** 112200714 **(32)** 18.01.23 **(33)** TW
**(43)** 01.08.2024
**(72)** Wang, Andy
**(74)** Madderns Pty Ltd

---

**(71)** SOLE, T.
**(11)** AU-A-2023200193
**(21)** 2023200193 **(22)** 16.01.2023
**(54)** Multi-game Tile or Card Sets
**(51)** Int. Cl.
***A63F 9/20*** ( 2006.01 )
***A63F 1/04*** ( 2006.01 )
*A63F 3/00* ( 2006.01 )
**(43)** 01.08.2024
**(72)** SOLE, Timothy
**(74)** PIPERS

---

**(71)** Sungrow Power Supply (Nanjing) Co., Ltd
**(11)** AU-A-2023270191
**(21)** 2023270191 **(22)** 20.11.2023
**(54)** Method and apparatus for processing photovoltaic data, and system for managing photovoltaic data
**(51)** Int. Cl.
***G06F 7/06*** ( 2006.01 )
***G06F 16/20*** ( 2019.01 )
**(31)** 202310067393.7 **(32)** 16.01.23 **(33)** CN
**(43)** 01.08.2024
**(72)** Zhenhai XIONG
**(74)** Davies Collison Cave Pty Ltd

---

## Applications Open to Public Inspection - Name Index cont'd

**(71)** Swan Hill Engineering Pty Ltd
**(11)** AU-A-2024200145
**(21)** 2024200145 **(22)** 10.01.2024
**(54)** Door Assembly
**(51)** Int. Cl.
***E05D 15/06*** ( 2006.01 )
***E06B 3/46*** ( 2006.01 )
***E06B 3/72*** ( 2006.01 )
*A01K 1/00* ( 2006.01 )
*E06B 3/76* ( 2006.01 )
**(31)** 2023900089 **(32)** 16.01.23 **(33)** AU
**(43)** 01.08.2024
**(72)** McCalman, Laurie; Vanninen, Jussi; Kirk, Aston
**(74)** Sandercock & Cowie

---

**(71)** Swan Hill Engineering Pty Ltd
**(11)** AU-A-2024200160
**(21)** 2024200160 **(22)** 10.01.2024
**(54)** Structure Support
**(51)** Int. Cl.
***E04C 3/40*** ( 2006.01 )
***E04B 1/32*** ( 2006.01 )
***E04B 7/10*** ( 2006.01 )
*E04C 3/04* ( 2006.01 )
*E04C 3/06* ( 2006.01 )
*E04H 3/12* ( 2006.01 )
*E04H 3/14* ( 2006.01 )
*E04H 5/08* ( 2006.01 )
**(31)** 2023900079 **(32)** 13.01.23 **(33)** AU
**(43)** 01.08.2024
**(72)** McCalman, Greg; McCalman, Laurie; Sobey, Jayden; Vanninen, Jussi
**(74)** Sandercock & Cowie

---

**(71)** Takeda Pharmaceutical Company Limited
**(11)** AU-A-2024204779
**(21)** 2024204779 **(22)** 11.07.2024
**(54)** REMOVAL OF SERINE PROTEASES BY TREATMENT WITH FINELY DIVIDED SILICON DIOXIDE
**(51)** Int. Cl.
***C07K 16/00*** ( 2006.01 )
***A61K 9/00*** ( 2006.01 )
***A61K 9/08*** ( 2006.01 )
***A61K 38/17*** ( 2006.01 )
***A61K 47/18*** ( 2017.01 )
**(43)** 01.08.2024
**(62)** 2021286395
**(72)** Svatos, Sonja; Teschner, Wolfgang; Schwarz, Hans-Peter; Pljevljakovic, Azra; Weber, Alfred; Madlener, Ruth
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Techtronic Cordless GP
**(11)** AU-A-2024200175
**(21)** 2024200175 **(22)** 11.01.2024
**(54)** Lawn mowers and associated features and methods
**(51)** Int. Cl.
***A01D 34/00*** ( 2006.01 )
***A01D 34/81*** ( 2006.01 )
***A01D 34/82*** ( 2006.01 )
**(31)** 18/367550 **(32)** 13.09.23 **(33)** US
63/438915 13.01.23 US
**(43)** 01.08.2024
**(72)** PENSKI, Samuel A. Dueñas; TORRISI, Gregory S.
**(74)** Spruson & Ferguson

---

**(71)** Teleflex Medical Incorporated
**(11)** AU-A-2024204741
**(21)** 2024204741 **(22)** 10.07.2024
**(54)** SURGICAL CLIP
**(51)** Int. Cl.
***A61B 17/122*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2020405150
**(72)** SHELLENBERGER, Carson; ENNISS, Ian
**(74)** RnB IP Pty Ltd

---

**(71)** TELEFLEX MEDICAL INCORPORATED
**(11)** AU-A-2024204740
**(21)** 2024204740 **(22)** 10.07.2024
**(54)** SURGICAL CLIP
**(51)** Int. Cl.
***A61B 17/122*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2022202708
**(72)** FOSHEE, David Lee; CASTRO, Salvatore
**(74)** RnB IP Pty Ltd

---

**(71)** Tencent America LLC
**(11)** AU-A-2024204880
**(21)** 2024204880 **(22)** 16.07.2024
**(54)** METHOD AND APPARATUS FOR VIDEO ENCODING OR DECODING
**(51)** Int. Cl.
***H04N 19/10*** ( 2014.01 )
***H04N 19/12*** ( 2014.01 )
***H04N 19/122*** ( 2014.01 )
***H04N 19/157*** ( 2014.01 )
***H04N 19/176*** ( 2014.01 )
***H04N 19/186*** ( 2014.01 )
***H04N 19/60*** ( 2014.01 )
**(43)** 01.08.2024
**(62)** 2023214363
**(72)** ZHAO, Xin; XU, Xiaozhong; LI, Xiang; LIU, Shan
**(74)** Griffith Hack

---

**(71)** The Board of Regents of the University of Texas System
**(11)** AU-A-2024204761
**(21)** 2024204761 **(22)** 10.07.2024
**(54)** Connexin (Cx) 43 hemichannel-binding antibodies and uses thereof
**(51)** Int. Cl.
***C07K 16/18*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***C12N 15/79*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2017224122
**(72)** JIANG, Jean X.; AN, Zhiqiang; ZHANG, Ningyan; XIONG, Wei; RIQUELME, Manuel A.; GU, Sumin; SAYRE, Naomi Ledene
**(74)** Spruson & Ferguson

---

**(71)** The Boeing Company
**(11)** AU-A-2023258346
**(21)** 2023258346 **(22)** 31.10.2023
**(54)** Overlaying flight paths for environmental impact mitigation
**(51)** Int. Cl.
***G08G 5/00*** ( 2006.01 )
**(31)** 18/154,657 **(32)** 13.01.23 **(33)** US
**(43)** 01.08.2024
**(72)** Kirk A. VINING; Alvin L. SIPE; Stephen S. ALTUS; Steven L. BAUGHCUM; Tristan C. FLANZER
**(74)** Spruson & Ferguson

---

**(71)** The Council of The Queensland Institute of Medical Research
**(11)** AU-A-2024204831
**(21)** 2024204831 **(22)** 12.07.2024
**(54)** Methods of treating autoimmune disease using allogeneic T cells
**(51)** Int. Cl.
***A61K 35/17*** ( 2015.01 )
***A61K 39/245*** ( 2006.01 )
***A61P 37/00*** ( 2006.01 )
***C12N 5/0783*** ( 2010.01 )
**(43)** 01.08.2024
**(62)** 2017271134
**(72)** Khanna, Rajiv
**(74)** Pearce IP Pty Ltd

---

**The Regents of the University of Colorado, a body corporate see Alcon, Inc.**
**(21)** 2024204907

---

**THOMAS, B. see LOMBARDI THOMAS, L.**
**(21)** 2024204325

---

**(71)** Topelia Aust Limited
**(11)** AU-A-2024204821
**(21)** 2024204821 **(22)** 12.07.2024
**(54)** Products of manufacture and methods for treating, ameliorating or preventing coronavirus infection
**(51)** Int. Cl.
***A61K 31/7048*** ( 2006.01 )
***A61K 31/165*** ( 2006.01 )
***A61K 31/215*** ( 2006.01 )
***A61K 31/375*** ( 2006.01 )
***A61K 31/427*** ( 2006.01 )
***A61K 31/4409*** ( 2006.01 )
***A61K 31/4706*** ( 2006.01 )
***A61K 31/495*** ( 2006.01 )
***A61K 31/593*** ( 2006.01 )
***A61K 31/65*** ( 2006.01 )
***A61K 31/675*** ( 2006.01 )
***A61K 33/30*** ( 2006.01 )
***A61P 31/14*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2021217089
**(72)** BORODY, Thomas Julius
**(74)** Spruson & Ferguson

---

**(71)** TransMedics, Inc.
**(11)** AU-A-2024204777
**(21)** 2024204777 **(22)** 11.07.2024

## Applications Open to Public Inspection - Name Index cont'd

**(54)** APPARATUS FOR PERFUSION OF AN EXCISED ORGAN
**(51)** Int. Cl.
***A01N 1/02*** ( 2006.01 )
***A61J 1/00*** ( 2023.01 )
**(43)** 01.08.2024
**(62)** 2018368000
**(72)** FREED, Darren
**(74)** Adams Pluck

---

**(71)** TRIAGENICS, INC.
**(11)** AU-A-2024204765
**(21)** 2024204765 **(22)** 10.07.2024
**(54)** Ablation probe systems
**(51)** Int. Cl.
***A61B 18/18*** ( 2006.01 )
***A61B 18/12*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2020475251
**(72)** COLBY, Leigh E.; WATSON, David
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Trina Solar Co., Ltd.
**(11)** AU-A-2024204845
**(21)** 2024204845 **(22)** 15.07.2024
**(54)** Solar cell and preparation method thereof, photovoltaic module, and photovoltaic system
**(51)** Int. Cl.
***H01L 31/04*** ( 2014.01 )
***H01L 31/0216*** ( 2014.01 )
***H01L 31/0224*** ( 2006.01 )
***H01L 31/0352*** ( 2006.01 )
**(31)** 202410118651.4 **(32)** 29.01.24 **(33)** CN
**(43)** 01.08.2024
**(72)** CHEN, Daming; LIU, Wei; HU, Yunyun; CHEN, Yifeng
**(74)** FB Rice Pty Ltd

---

**(71)** Trina Solar Co., Ltd.
**(11)** AU-A-2024204864
**(21)** 2024204864 **(22)** 15.07.2024
**(54)** Solar cell and manufacturing method thereof, photovoltaic module and photovoltaic system
**(51)** Int. Cl.
***H01L 31/04*** ( 2014.01 )
***H01L 27/142*** ( 2014.01 )
**(31)** 202311518068.4 **(32)** 15.11.23 **(33)** CN
**(43)** 01.08.2024
**(72)** ZOU, Yang; LIU, Chengfa; CHEN, Hong
**(74)** FB Rice Pty Ltd

---

**(71)** UNIQCO-IP PTY LTD
**(11)** AU-A-2023200260
**(21)** 2023200260 **(22)** 18.01.2023
**(54)** CONTAINER, CONTAINER BLANK, AND METHOD OF FORMING A CONTAINER
**(51)** Int. Cl.
***B65D 5/00*** ( 2006.01 )
***B65D 5/20*** ( 2006.01 )
***B65D 5/22*** ( 2006.01 )
***B65D 5/46*** ( 2006.01 )
***B65D 5/468*** ( 2006.01 )
***B65D 21/02*** ( 2006.01 )
**(43)** 01.08.2024
**(72)** Delafosse, Mark; Turley, Matthew
**(74)** mdp Patent and Trade Mark Attorneys

---

**(71)** VACCINEX, INC.
**(11)** AU-A-2024204752
**(21)** 2024204752 **(22)** 10.07.2024
**(54)** HUMAN ANTI-SEMAPHORIN 4D ANTIBODY
**(51)** Int. Cl.
***C07K 16/18*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***C07K 16/28*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2018261947
**(72)** SMITH, Ernest S; CORNELISON, Angelica; SCRIVENS, Maria GM; PARIS, Mark; ZAUDERER, Maurice
**(74)** AJ PARK

---

**(71)** VelocityEHS Holdings, Inc.
**(11)** AU-A-2024200306
**(21)** 2024200306 **(22)** 17.01.2024
**(54)** AUTOMATED INDEXING AND EXTRACTION OF INFORMATION IN DIGITAL DOCUMENTS
**(51)** Int. Cl.
***G06V 30/413*** ( 2022.01 )
***G06F 40/279*** ( 2020.01 )
***G06F 40/30*** ( 2020.01 )
***G06V 30/416*** ( 2022.01 )
**(31)** 18/098,055 **(32)** 17.01.23 **(33)** US
**(43)** 01.08.2024
**(72)** PENFIELD, Julia; SUMAN, Aatish; TALREJA, Veeru; KHAN, Misbah Zahid
**(74)** K&L Gates

---

**WANG, J. see Anbio Biotechnology Limited**
**(21)** 2023200795

---

**WANG, J. see Anbio Biotechnology Limited**
**(21)** 2023200796

---

**(71)** Washington University
**(11)** AU-A-2024204862
**(21)** 2024204862 **(22)** 15.07.2024
**(54)** Compositions and methods for targeted cytokine delivery
**(51)** Int. Cl.
***C07K 19/00*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2017213659
**(72)** Krupnick, Alexander Sasha; Lazear, Eric Reed; Westwick, John; Fremont, Daved Henry
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** WAVE LIFE SCIENCES LTD.
**(11)** AU-A-2024204904
**(21)** 2024204904 **(22)** 17.07.2024
**(54)** Technologies for oligonucleotide preparation
**(51)** Int. Cl.
***C07H 21/02*** ( 2006.01 )
***C07C 317/28*** ( 2006.01 )
***C12N 15/11*** ( 2006.01 )
***C12N 15/113*** ( 2010.01 )
***C12Q 1/68*** ( 2018.01 )
**(43)** 01.08.2024
**(62)** 2018333065
**(72)** BOWMAN, Keith Andrew; VARGEESE, Chandra; BUTLER, David Charles Donnell; KANDASAMY, Pachamuthu; ALAM, Mohammed Rowshon; SHIMIZU, Mamoru; STANDLEY, Stephany Michelle; ADUDA, Vincent; BOMMINENI, Gopal Reddy; TRIPATHI, Snehlata; KORBOUKH, Ilia
**(74)** Spruson & Ferguson

---

**(71)** Whirlpool Corporation
**(11)** AU-A-2024200141
**(21)** 2024200141 **(22)** 09.01.2024
**(54)** Magnetic Compass Interlock Vessel Detection And Vessel Recognition Device
**(51)** Int. Cl.
***A47J 43/06*** ( 2006.01 )
***H01F 7/02*** ( 2006.01 )
**(31)** 18/153,651 **(32)** 12.01.23 **(33)** US
**(43)** 01.08.2024
**(72)** BRADLEY, Samuel J; HANEY, Edward James; LEITERT, Andrew John; SHEWALE, Pravin R
**(74)** WRAYS PTY LTD

---

**(71)** Whirlpool Corporation
**(11)** AU-A-2024200163
**(21)** 2024200163 **(22)** 11.01.2024
**(54)** Food Processor Optimized Dicing Kit System
**(51)** Int. Cl.
***B26D 3/20*** ( 2006.01 )
***A47J 43/07*** ( 2006.01 )
***B26D 7/26*** ( 2006.01 )
**(31)** 18/153,619 **(32)** 12.01.23 **(33)** US
**(43)** 01.08.2024
**(72)** BRADLEY, Samuel J; HANEY, Edward James; LEITERT, Andrew John; SHEWALE, Pravin R
**(74)** WRAYS PTY LTD

---

**(71)** Xencor, Inc.
**(11)** AU-A-2024204760
**(21)** 2024204760 **(22)** 10.07.2024
**(54)** HETERODIMERIC ANTIBODIES THAT BIND CD3 AND TUMOR ANTIGENS
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61K 39/00*** ( 2006.01 )
***C07K 16/30*** ( 2006.01 )
***C07K 16/46*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2021202061
**(72)** Moore, Gregory; Desjarlais, John; Bernett, Matthew; Chu, Seung; Rashid, Rumana; Muchhal, Umesh; Lee, Sung-Hyung
**(74)** MINTER ELLISON

---

**Applications Open to Public Inspection - Name Index cont'd**

**(71)** XGS ENERGY, INC.
**(11)** AU-A-2024204753
**(21)** 2024204753 **(22)** 10.07.2024
**(54)** GEOHEAT HARVESTING ENHANCEMENT
**(51)** Int. Cl.
***F24T 10/13*** ( 2018.01 )
***F24T 10/00*** ( 2018.01 )
**(43)** 01.08.2024
**(62)** 2022370058
**(72)** MONCARZ, Piotr D.; CHANDRASEKHAR, Sharat Vishwanath; SURYANARAYANA, Poodipeddi V.
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** XING POWER INC.
**(11)** AU-A-2024204829
**(21)** 2024204829 **(22)** 12.07.2024
**(54)** BATTERY MODULE AND BATTERY SYSTEM
**(51)** Int. Cl.
***H01M 10/6568*** ( 2014.01 )
***H01M 10/613*** ( 2014.01 )
***H01M 50/258*** ( 2021.01 )
***H01M 50/262*** ( 2021.01 )
**(43)** 01.08.2024
**(62)** 2022241474
**(72)** Lee, Hung-Chi; Tu, Kai-Hsiang; Huang, De-Shiuan; Huang, Yu-Chieh; Su, Keng-Ta
**(74)** LAMINAR IP PTY LTD

---

**(71)** Zimmer, Inc.
**(11)** AU-A-2024200118
**(21)** 2024200118 **(22)** 09.01.2024
**(54)** FEMORAL TRIAL HEAD
**(51)** Int. Cl.
***A61F 2/46*** ( 2006.01 )
***A61F 2/36*** ( 2006.01 )
**(31)** 63/439,233 **(32)** 16.01.23 **(33)** US
**(43)** 01.08.2024
**(72)** Leonard, Tory
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Zinniatek Limited
**(11)** AU-A-2024204783
**(21)** 2024204783 **(22)** 11.07.2024
**(54)** A ROOF, SIDING, OR CLADDING, OR RIDGE OR HIP MEMBER FOR A ROOF
**(51)** Int. Cl.
***E04D 1/30*** ( 2006.01 )
***E04D 1/36*** ( 2006.01 )
***F24F 7/02*** ( 2006.01 )
**(43)** 01.08.2024
**(62)** 2018302522
**(72)** ROSARIA, Justin Jason; HAYNES, Andrew Leo
**(74)** AJ PARK

**Numerical Index**

## Applications Open to Public Inspection - Numerical Index cont'd

| | |
|---|---|
| **2024204882** | Netsweeper (Barbados) Inc. |
| **2024204883** | Allergan, Inc. |
| **2024204886** | Angel Group Co., Ltd. |
| **2024204888** | Mountain Top (Denmark) ApS |
| **2024204891** | Incyte Corporation |
| **2024204893** | President and Fellows of Harvard College; BASF SE |
| **2024204894** | CommScope Technologies LLC; CommScope Connectivity Belgium BVBA; CommScope Connectivity UK Limited |
| **2024204895** | Hollister Incorporated |
| **2024204899** | Grip Holdings LLC |
| **2024204900** | ResMed Sensor Technologies Limited |
| **2024204901** | Igin Smart Hygiene Ltd |
| **2024204902** | Gilead Sciences, Inc. |
| **2024204903** | Bradley, C. |
| **2024204904** | WAVE LIFE SCIENCES LTD. |
| **2024204906** | Acerta Pharma B.V. |
| **2024204907** | Alcon, Inc.; The Regents of the University of Colorado, a body corporate |
| **2024204910** | F. & J. Attard & Sons Pty. Limited |
| **2024204912** | Nu Flow Technologies 2000 Inc. |
| **2024204913** | AstraZeneca AB |
| **2024204915** | LivePerson, Inc. |
| **2024204916** | LuxCreo (Beijing) Inc. |

**IPC Index**

## Applications Open to Public Inspection - IPC Index cont'd

**C07D 271 /-**
2024204859

**C07D 401 /-**
2024204859
2024204902

**C07D 403 /-**
2024204847
2024204859

**C07D 405 /-**
2024204785
2024204902

**C07D 409 /-**
2024204902

**C07D 413 /-**
2024204859
2024204902

**C07D 417 /-**
2024204785
2024204859
2024204902

**C07D 471 /-**
2024204902

**C07D 487 /-**
2024204785

**C07D 491 /-**
2024204785

**C07D 495 /-**
2024204902

**C07H 21 /-**
2024204904

**C07K 14 /-**
2024204645

**C07K 16 /-**
2024203289
2024203384
2024204004
2024204752
2024204760
2024204761
2024204779

**C07K 19 /-**
2024204862

**C08G 63 /-**
2024204794

**C08J 3 /-**
2024204794

**C10M 129 /-**
2024204750

**C10M 133 /-**
2024204750

**C10M 137 /-**
2024204750

**C10M 141 /-**
2024204750

**C10N 10 /-**
2024204750

**C10N 20 /-**
2024204750

**C10N 30 /-**
2024204750

**C10N 40 /-**
2024204750

**C12N 15 /-**
2024203407
2024204761
2024204903
2024204904

**C12N 5 /-**
2024204831

**C12N 9 /-**
2024203182
2024203387

**C12Q 1 /-**
2023200796
2024204903
2024204904

**D03D 1 /-**
2023200173

**D06F 34 /-**
2023387765

**E02F 3 /-**
2024204745

**E02F 9 /-**
2024204745
2024204857

**E04B 1 /-**
2024200160

**E04B 2 /-**
2024204820

**E04B 7 /-**
2024200160

**E04C 2 /-**
2024204820

**E04C 3 /-**
2024200160

**E04D 1 /-**
2024204783

**E04F 13 /-**
2023285745

**E04G 11 /-**
2024204820

**E04H 3 /-**
2024200160

**E04H 4 /-**
2023202909
2023202910
2023203971
2024204780

**E04H 5 /-**
2024200160

**E05B 47 /-**
2024200027

**E05B 67 /-**
2024200027

**E05D 15 /-**
2024200145

**E06B 1 /-**
2023285797

**E06B 3 /-**
2024200145

**E06B 5 /-**
2023285797

**E21B 10 /-**
2024204861

**E21B 17 /-**
2024204861

**E21B 19 /-**
2024201614

**E21B 21 /-**
2024204861

**E21B 4 /-**
2024204861

**E21B 44 /-**
2024201614

**E21B 7 /-**
2024201614

**E21C 27 /-**
2023200359

**E21C 29 /-**
2023200359

**E21C 35 /-**
2023200359

**F01N 1 /-**
2024200031

**F02D 41 /-**
2024200031

**F04D 35 /-**
2024204780

**F16B 23 /-**
2024204899

**F16C 23 /-**
2023204295

**F16C 35 /-**
2023204295

**F16K 1 /-**
2024204815

**F16K 21 /-**
2024204815

**F16K 3 /-**
2024200053
2024204815

**F16K 31 /-**
2024200053

**F16L 55 /-**
2024204912

**F16L 58 /-**
2024204912

**F17C 13 /-**
2024204815

**F17D 1 /-**
2024204912

**F21V 23 /-**
2024204849

**F22B 33 /-**
2024204912

**F24F 1 /-**
2024204735

**F24F 7 /-**
2024204783

**F24F 8 /-**
2024204735

**F24T 10 /-**
2024204753

**F25C 1 /-**
2024204742

**F25D 17 /-**
2024204742

**G01N 21 /-**
2023200795

**G01N 33 /-**
2023200795
2024204813

**G01S 19 /-**
2023282223

**G05B 23 /-**
2024204755

**G06F 1 /-**
2023203389
2023204706

**G06F 16 /-**
2023270191

**G06F 21 /-**
2024204775

**G06F 40 /-**
2024200306
2024204869

**G06F 7 /-**
2023270191

**G06K 19 /-**
2024200235

**G06K 5 /-**
2024200235

**G06K 7 /-**
2024200235

**G06N 20 /-**
2023270212
2024204900

**G06N 3 /-**
2023270212

**G06Q 10 /-**
2024204857
2024204915

**G06Q 20 /-**
2024204771
2024204826

**G06Q 30 /-**
2024204882
2024204915

**G06Q 40 /-**
2024204882

**G06Q 50 /-**
2024204755

**G06Q 99 /-**
2024204802

**G06T 11 /-**
2023270212

**G06T 7 /-**
2024204834

**G06V 10 /-**
2024204834

**G06V 30 /-**
2024200235
2024200306
2024204834

**G07F 17 /-**
2024204812
2024204819

**G08B 21 /-**
2024204900

**G08G 5 /-**
2023258346

**G16B 30 /-**
2024204903

**G16H 20 /-**
2024204755

**G16H 40 /-**
2024204755

**G16H 50 /-**
2024204784

**H01B 7 /-**
2024200144

**H01B 9 /-**
2024200144

**H01F 7 /-**
2024200141

**H01G 2 /-**
2024204838

**H01H 15 /-**
2023285728

**H01H 3 /-**
2023285728

**H01H 71 /-**
2023285728

**H01L 27 /-**
2024204864

**H01L 31 /-**
2024204838
2024204845
2024204864

**H01M 10 /-**
2024204829

**H01M 50 /-**
2024204829

**H02G 3 /-**
2023274189

**H02J 3 /-**
2023282258

**H02J 50 /-**
2023282258

**H02M 7 /-**
2023282258

**H04B 1 /-**
2023204706
2023282223

**H04B 10 /-**
2024204894

**H04L 12 /-**
2024204827

**H04L 47 /-**
2024204832

**H04L 51 /-**
2024204915

**H04M 3 /-**
2024204915

**H04N 19 /-**
2024204747
2024204748
2024204880

**Applications Open to Public Inspection - IPC Index cont'd**

**H04W 28 /-**
2024204772

**H05K 7 /-**
2024204754

**No IPC Mark**

## Innovation Patents Open to Public Inspection

**Name Index**

. (*) Title not in Roman characters
. (**) Title not given
(This list may contain multiple listings of a patent where there are multiple patentees for that patent.)

---

**(71)** Xtract360 Ltd
**(11)** AU-A-2018102258
**(21)** 2018102258 **(22)** 16.11.2018
**(54)** Collision evaluation
**(51)** Int. Cl.
***G07C 5/08*** ( 2006.01 )
***G06N 3/008*** ( 2023.01 )
***G06N 5/04*** ( 2023.01 )
***G06N 20/00*** ( 2019.01 )
***G06Q 30/0283*** ( 2023.01 )
***G06Q 40/08*** ( 2012.01 )
**(31)** 1719108.1 **(32)** 17.11.17 **(33)** GB
**(45)** 01.08.2024
**(72)** BOURKE, Cillian; FLANAGAN, Michael; HITCHEN, Joseph
**(74)** FPA Patent Attorneys Pty Ltd

**Numerical Index**

**IPC Index**

**G06N 20 /-**

2018102258

**G06N 3 /-**

2018102258

**G06N 5 /-**

2018102258

**G06Q 30 /-**

2018102258

**G06Q 40 /-**

2018102258

**G07C 5 /-**

2018102258

## PCT applications which have entered the National Phase

**Name Index**

. (*) Title not in Roman characters
. (**) Title not given

---

**(71)** 21 ENTERTAINMENT LLC
**(11)** AU-A-2022437244
**(21)** 2022437244 **(22)** 06.10.2022
**(54)** ELECTRONIC PUBLISHING PLATFORM
**(51)** Int. Cl.
***G06F 40/106*** ( 2020.01 )
***G06F 3/0483*** ( 2013.01 )
*G06F 40/186* ( 2020.01 )
*G06F 40/197* ( 2020.01 )
*G06T 13/80* ( 2011.01 )
**(87)** WO2023/146685
**(31)** 17/584,305 **(32)** 25.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** SMITH, Mario, C.
**(74)** RnB IP Pty Ltd

---

**(71)** A.R.C. S.R.L.
**(11)** AU-A-2023211059
**(21)** 2023211059 **(22)** 26.01.2023
**(54)** HYDROGEN-POWERED COOKER BURNER
**(51)** Int. Cl.
***F23D 14/20*** ( 2006.01 )
***F23K 5/00*** ( 2006.01 )
**(87)** WO2023/144741
**(31)** 102022000001508 **(32)** 28.01.22 **(33)** IT
**(43)** 03.08.2023
**(72)** GASPARINI, Loris
**(74)** Patent Attorney Services

---

**(71)** AARDVARK THERAPEUTICS, INC.
**(11)** AU-A-2023211592
**(21)** 2023211592 **(22)** 26.01.2023
**(54)** LIQUID RESIN EXTENDED-RELEASE ORAL NALTREXONE FORMULATION FOR TREATING AUTISM-RELATED DISORDERS
**(51)** Int. Cl.
***A61K 31/12*** ( 2006.01 )
***A61K 31/485*** ( 2006.01 )
*A61K 31/137* ( 2006.01 )
**(87)** WO2023/146983
**(31)** 63/303,285 **(32)** 26.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** LEE, Tien-Li; ZHENG, Zhenhuan; TU, Yu-Hsing
**(74)** FB Rice Pty Ltd

---

**(71)** ABB SCHWEIZ AG
**(11)** AU-A-2022439192
**(21)** 2022439192 **(22)** 07.02.2022
**(54)** LOCATION-BASED OPERATING OF DEVICES IN AN INDUSTRIAL PLANT
**(51)** Int. Cl.
***B25J 9/16*** ( 2006.01 )
***G05B 19/4061*** ( 2006.01 )
**(87)** WO2023/147883
**(43)** 10.08.2023
**(72)** SCHULZ, Dirk; GAMER, Thomas; BAUER, Philipp; MENDOZA, Francisco
**(74)** Griffith Hack

---

**(71)** ABBVIE INC.
**(11)** AU-A-2023237882
**(21)** 2023237882 **(22)** 21.03.2023
**(54)** PYRIMIDINES FOR DEGRADING BRUTON'S TYROSINE KINASE
**(51)** Int. Cl.
***A61P 35/02*** ( 2006.01 )
***A61K 31/506*** ( 2006.01 )
***C07D 413/14*** ( 2006.01 )
**(87)** WO2023/183811
**(31)** 63/322,505 **(32)** 22.03.22 **(33)** US
**(43)** 28.09.2023
**(72)** BIAN, Zhiguo; BURKE, Jason, P.; JIA, Zhaozhong, J.; JIANG, Xingyu; KATCHER, Matthew, H.; MALI, Venkat, Reddy; MARIN, Violeta, L.; NOEY, Elizabeth, L.; OKANO, Akinori; RIVKIN, Alexey, A.; SCHOLZ, Spencer, O.; WOLLER, Kevin, R.; ZHAO, Xianrui; ADAMS, Ashley, M.; BIANNIC, Berenger; MORTEZAEI, Shahab; PAYETTE, Joshua, N.; ZABLOCKI, Jeffery, A.
**(74)** Spruson & Ferguson

---

**(71)** ABIVAX
**(11)** AU-A-2023207795
**(21)** 2023207795 **(22)** 12.01.2023
**(54)** COMBINATION OF 8-CHLORO-N-(4-(TRIFLUOROMETHOXY)PHENYL)QUINOLIN-2-AMINE AND ITS DERIVATIVES WITH A S1P RECEPTOR MODULATOR
**(51)** Int. Cl.
***A61K 31/405*** ( 2006.01 )
***A61K 31/47*** ( 2006.01 )
***A61K 31/706*** ( 2006.01 )
***A61P 1/00*** ( 2006.01 )
***A61P 9/00*** ( 2006.01 )
***A61P 11/00*** ( 2006.01 )
***A61P 13/00*** ( 2006.01 )
***A61P 19/00*** ( 2006.01 )
***A61P 21/00*** ( 2006.01 )
***A61P 25/00*** ( 2006.01 )
***A61P 27/00*** ( 2006.01 )
***A61P 29/00*** ( 2006.01 )
***A61P 31/00*** ( 2006.01 )
**(87)** WO2023/135207
**(31)** 22305029.5 **(32)** 13.01.22 **(33)** EP
**(43)** 20.07.2023
**(72)** SCHERRER, Didier; POULETTY, Philippe; TAZI, Jamal; GARCEL, Aude
**(74)** AJ PARK

---

**(71)** ABLYNX NV; SANOFI
**(11)** AU-A-2022409733
**(21)** 2022409733 **(22)** 16.12.2022
**(54)** POLYPEPTIDES COMPRISING IMMUNOGLOBULIN SINGLE VARIABLE DOMAINS TARGETING TCRαβ, CD33 AND CD123
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61P 35/02*** ( 2006.01 )
***C07K 16/18*** ( 2006.01 )
**(87)** WO2023/111266
**(31)** 21306822.4 **(32)** 17.12.21 **(33)** EP
22305477.6 07.04.22 EP
**(43)** 22.06.2023
**(72)** BONNEVAUX, Helène; DULLAERS, Melissa; ROOBROUCK, Annelies; STAELENS, Stephanie; VAN HOORICK, Diane; VERHELST, Judith
**(74)** Griffith Hack

---

**(71)** ACCORA LIMITED
**(11)** AU-A-2022410532
**(21)** 2022410532 **(22)** 16.12.2022
**(54)** BED SIDE RAIL ASSEMBLY
**(51)** Int. Cl.
***A47C 21/08*** ( 2006.01 )
***A47D 7/02*** ( 2006.01 )
***A61G 7/05*** ( 2006.01 )
**(87)** WO2023/111585
**(31)** 2118475.9 **(32)** 17.12.21 **(33)** GB
**(43)** 22.06.2023
**(72)** PHILLIPS, Charles
**(74)** Murray Trento & Associates Pty Ltd

---

**(71)** AERONES ENGINEERING, SIA
**(11)** AU-A-2023228399
**(21)** 2023228399 **(22)** 02.03.2023
**(54)** A METHOD FOR WIND TURBINE BLADE MECHANICAL DE-ICING
**(51)** Int. Cl.
***F03D 80/40*** ( 2016.01 )
**(87)** WO2023/166458
**(31)** 63/315,543 **(32)** 02.03.22 **(33)** US
**(43)** 07.09.2023
**(72)** PUTRAMS, Janis
**(74)** GLMR

---

**(71)** AGV DISCOVERY; INSERM (INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE); CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE; UNIVERSITE DE MONTPELLIER
**(11)** AU-A-2023207276
**(21)** 2023207276 **(22)** 13.01.2023
**(54)** AZAINDOLE DERIVATIVES AND THEIR USE AS ERK KINASE INHIBITORS
**(51)** Int. Cl.
***C07D 471/04*** ( 2006.01 )
***A61K 31/437*** ( 2006.01 )
***A61K 31/444*** ( 2006.01 )
***A61K 31/5377*** ( 2006.01 )

**PCT applications which have entered the National Phase - Name Index cont'd**

***A61P 25/00*** ( 2006.01 )
***A61P 29/00*** ( 2006.01 )
***A61P 31/18*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07D 213/64*** ( 2006.01 )
***C07F 5/02*** ( 2006.01 )
**(87)** WO2023/135233
**(31)** 22305031.1 **(32)** 14.01.22 **(33)** EP
**(43)** 20.07.2023
**(72)** BORIES, Cédric; MATHIEU, Loïc; GUICHOU, Jean-François; GELIN, Muriel; BIECHY, Aurélien
**(74)** Griffith Hack

---

**(71)** ALCON INC.
**(11)** AU-A-2023226876
**(21)** 2023226876 **(22)** 27.02.2023
**(54)** ROBOTIC IMAGING SYSTEM WITH ORBITAL SCANNING MODE
**(51)** Int. Cl.
***A61B 3/13*** ( 2006.01 )
***A61B 3/12*** ( 2006.01 )
***A61B 3/14*** ( 2006.01 )
**(87)** WO2023/166404
**(31)** 63/315,870 **(32)** 02.03.22 **(33)** US
**(43)** 07.09.2023
**(72)** TERRY, Patrick; TRIPATHI, Ashok Burton
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** ALCON INC.
**(11)** AU-A-2023229208
**(21)** 2023229208 **(22)** 28.02.2023
**(54)** HAPTIC MANAGEMENT FOR SURGICAL IMPLANTS
**(51)** Int. Cl.
***A61F 2/16*** ( 2006.01 )
**(87)** WO2023/166422
**(31)** 63/268,704 **(32)** 01.03.22 **(33)** US
**(43)** 07.09.2023
**(72)** WU, Yinghui; HOANG, Harlen; GARCIA RAMILA, Nerea; SINGH, Sudarshan; SHERRY, R. Mitchell
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** ALTERNATIVE BALLISTICS CORPORATION
**(11)** AU-A-2022413959
**(21)** 2022413959 **(22)** 12.12.2022
**(54)** BULLET CAPTURING BALLISTIC SLUGS
**(51)** Int. Cl.
***F42B 12/02*** ( 2006.01 )
**(87)** WO2023/114713
**(31)** 17/644,060 **(32)** 13.12.21 **(33)** US
**(43)** 22.06.2023
**(72)** ELLIS, Christian; WEINRIB, Benjamin
**(74)** Spruson & Ferguson

---

**(71)** ANSA BIOTECHNOLOGIES, INC.
**(11)** AU-A-2022411075
**(21)** 2022411075 **(22)** 16.12.2022
**(54)** COMPOSITIONS FOR ENZYMATIC POLYNUCLEOTIDE SYNTHESIS AND METHODS OF USE
**(51)** Int. Cl.
***C07K 19/00*** ( 2006.01 )
***C12N 9/12*** ( 2006.01 )
*C12P 19/34* ( 2006.01 )
**(87)** WO2023/115047
**(31)** 63/290,310 **(32)** 16.12.21 **(33)** US
**(43)** 22.06.2023
**(72)** NICHOLS, Robert; PALLUK, Sebastian
**(74)** FB Rice Pty Ltd

---

**(71)** ARACHNOIDE SARL; CLOQUELL, S.
**(11)** AU-A-2023206808
**(21)** 2023206808 **(22)** 17.01.2023
**(54)** LABYRINTH FOR CAPTURING AND DESTROYING MOSQUITO LARVAE
**(51)** Int. Cl.
***A01M 1/00*** ( 2006.01 )
***A01M 1/10*** ( 2006.01 )
**(87)** WO2023/135332
**(31)** FR2200340 **(32)** 17.01.22 **(33)** FR
**(43)** 20.07.2023
**(72)** BOUCHONNEAU, Ludovic
**(74)** Griffith Hack

---

**(71)** ARCA TECHNOLOGIES S.R.L.
**(11)** AU-A-2022425670
**(21)** 2022425670 **(22)** 22.12.2022
**(54)** LARGE STORAGE CAPACITY STORING AND ISSUING MODULE
**(51)** Int. Cl.
***B65H 29/00*** ( 2006.01 )
***B65H 29/56*** ( 2006.01 )
***B65H 29/58*** ( 2006.01 )
**(87)** WO2023/126792
**(31)** 102021000033155 **(32)** 30.12.21 **(33)** IT
**(43)** 06.07.2023
**(72)** PORCARI, Francesco Paolo
**(74)** James & Wells Intellectual Property

---

**(71)** ARCUTIS BIOTHERAPEUTICS, INC.
**(11)** AU-A-2022426780
**(21)** 2022426780 **(22)** 23.12.2022
**(54)** TOPICAL AEROSOL FOAMS
**(51)** Int. Cl.
***A61K 9/12*** ( 2006.01 )
***A61K 9/00*** ( 2006.01 )
***A61K 45/06*** ( 2006.01 )
***A61K 47/08*** ( 2006.01 )
***A61K 47/10*** ( 2017.01 )
**(87)** WO2023/129892
**(31)** 63/294,178 **(32)** 28.12.21 **(33)** US
63/371,967 19.08.22 US
**(43)** 06.07.2023
**(72)** OSBORNE, David W.
**(74)** Griffith Hack

---

**(71)** ARCUTIS BIOTHERAPEUTICS, INC.
**(11)** AU-A-2022429340
**(21)** 2022429340 **(22)** 19.08.2022
**(54)** TOPICAL ROFLUMILAST AEROSOL FOAMS
**(51)** Int. Cl.
***A61K 9/00*** ( 2006.01 )
***A61K 9/107*** ( 2006.01 )
***A61K 9/12*** ( 2006.01 )
***A61P 1/00*** ( 2006.01 )
**(87)** WO2023/129215
**(31)** 63/294,179 **(32)** 28.12.21 **(33)** US
**(43)** 06.07.2023
**(72)** OSBORNE, David W.
**(74)** Griffith Hack

---

**(71)** ASTRAZENECA AB
**(11)** AU-A-2022422276
**(21)** 2022422276 **(22)** 20.12.2022
**(54)** METHODS OF TREATING BRAIN TUMOURS AND NEUROBLASTOMAS
**(51)** Int. Cl.
***A61K 31/336*** ( 2006.01 )
***A61K 31/495*** ( 2006.01 )
***A61K 31/498*** ( 2006.01 )
***A61K 41/00*** ( 2020.01 )
***A61K 45/06*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
**(87)** WO2023/118085
**(31)** 63/292,029 **(32)** 21.12.21 **(33)** US
**(43)** 29.06.2023
**(72)** HAMERLIK, Petra
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** ASTRAZENECA IRELAND LIMITED
**(11)** AU-A-2023208274
**(21)** 2023208274 **(22)** 18.01.2023
**(54)** GENE THERAPY FOR GAUCHER DISEASE
**(51)** Int. Cl.
***A61K 35/761*** ( 2015.01 )
***A61K 48/00*** ( 2006.01 )
***C12N 15/861*** ( 2006.01 )
**(87)** WO2023/139496
**(31)** 63/267,046 **(32)** 21.01.22 **(33)** US
63/382,502 05.11.22 US
**(43)** 27.07.2023
**(72)** BELL, Robert D.; CHENG, Ting-Wen; NARULA, Jatin; PAN, Clark Qun; SOMANATHAN, Suryanarayan; SOUZA, David Wayne; TABET, Ricardos
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** AVERTECH, INC.
**(11)** AU-A-2022425279
**(21)** 2022425279 **(22)** 09.12.2022
**(54)** CONVERTIBLE METAL BACKINGS AND RELATED METHODS
**(51)** Int. Cl.
***A47G 1/17*** ( 2006.01 )
***A47B 97/00*** ( 2006.01 )
**(87)** WO2023/129358
**(31)** 63/295,257 **(32)** 30.12.21 **(33)** US
17/651,760 18.02.22 US
18/057,322 21.11.22 US
**(43)** 06.07.2023
**(72)** AVERY, Neal H.
**(74)** FB Rice Pty Ltd

---

**(71)** AVERY DENNISON CORPORATION
**(11)** AU-A-2023223648
**(21)** 2023223648 **(22)** 22.02.2023
**(54)** PROCESSABLE AND PRINTABLE ACRYLIC FILMS AND ARTICLES FORMED THEREFROM
**(51)** Int. Cl.
***C08J 5/18*** ( 2006.01 )
***B32B 27/08*** ( 2006.01 )

**PCT applications which have entered the National Phase - Name Index cont'd**

**(87)** WO2023/161825
**(31)** 63/312,550 **(32)** 22.02.22 **(33)** US
**(43)** 31.08.2023
**(72)** AVELLA, Nicola; HEIMBACH, Kyle
**(74)** GLMR

---

**(71)** BAKER HUGHES OILFIELD OPERATIONS LLC
**(11)** AU-A-2023208756
**(21)** 2023208756 **(22)** 19.01.2023
**(54)** MAGNETIC SWITCH ARRANGEMENT
**(51)** Int. Cl.
***E21B 41/00*** ( 2006.01 )
***E21B 17/02*** ( 2006.01 )
**(87)** WO2023/141187
**(31)** 17/579,010 **(32)** 19.01.22 **(33)** US
**(43)** 27.07.2023
**(72)** YAKELEY, Sean
**(74)** Patent Attorney Services

---

**(71)** BARTRACK, INC.
**(11)** AU-A-2023212289
**(21)** 2023212289 **(22)** 26.01.2023
**(54)** MONITORING EQUILIBRIUM AND DISPENSEMENT OF A FLUID DISPENSEMENT SYSTEM TO IMPROVE QUALITY AND EFFICIENCY
**(51)** Int. Cl.
***B67D 1/08*** ( 2006.01 )
*A47J 31/58* ( 2006.01 )
*B67D 1/12* ( 2006.01 )
**(87)** WO2023/147411
**(31)** 63/267,253 **(32)** 28.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** DANIELSON, Brett; HOBAR, Grant; ATHERTON, David
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** BASF SE
**(11)** AU-A-2023210412
**(21)** 2023210412 **(22)** 17.01.2023
**(54)** MIXED PLATINUM RUTHENIUM OXIDE AND ELECTRODES FOR THE OXYGEN EVOLUTION REACTION
**(51)** Int. Cl.
***H01M 4/90*** ( 2006.01 )
***C25B 1/00*** ( 2021.01 )
***C25B 1/04*** ( 2021.01 )
***C25B 9/23*** ( 2021.01 )
***C25B 11/052*** ( 2021.01 )
***C25B 11/075*** ( 2021.01 )
***C25B 11/077*** ( 2021.01 )
***C25B 11/081*** ( 2021.01 )
***C25B 11/093*** ( 2021.01 )
***H01M 4/88*** ( 2006.01 )
***H01M 8/10*** ( 2016.01 )
**(87)** WO2023/139040
**(31)** 22152720.3 **(32)** 21.01.22 **(33)** EP
**(43)** 27.07.2023
**(72)** MALKO, Daniel; KOTREL, Stefan; DE, Sandip; MATTHES, Lars; SCHAEFER, Ansgar; HIRTH, Sabine; HINRICHSEN, Bernd; MUELLER, Phillipp
**(74)** Spruson & Ferguson

---

**(71)** BAYER CONSUMER CARE AG
**(11)** AU-A-2023224241
**(21)** 2023224241 **(22)** 17.02.2023
**(54)** SOFT GEL CAPSULE PREPARATIONS
**(51)** Int. Cl.
***A61K 9/48*** ( 2006.01 )
**(87)** WO2023/161143
**(31)** 22382160.4 **(32)** 24.02.22 **(33)** EP
**(43)** 31.08.2023
**(72)** BARROSO, Aude; IGLESIAS, Maria Elena; SANZ, Maria del Pilar; ALVAREZ, Blanca; PRIOR, Alberto; ZUMETA PEREZ, Javier
**(74)** Griffith Hack

---

**(71)** BEAVER-VISITEC INTERNATIONAL, INC.
**(11)** AU-A-2023208753
**(21)** 2023208753 **(22)** 18.01.2023
**(54)** INTRAOCULAR LENS DELIVERY SYSTEM
**(51)** Int. Cl.
***A61F 2/16*** ( 2006.01 )
***A61F 9/007*** ( 2006.01 )
***A61M 31/00*** ( 2006.01 )
*A61M 5/24* ( 2006.01 )
**(87)** WO2023/141179
**(31)** 63/300,819 **(32)** 19.01.22 **(33)** US
**(43)** 27.07.2023
**(72)** CAULDWELL, Nathan Stewart; WANG, Paula Yowen; ZHU, Alexander Yuping
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** BECTON DICKINSON ROWA GERMANY GMBH
**(11)** AU-A-2023224132
**(21)** 2023224132 **(22)** 05.01.2023
**(54)** MEDICAMENT ORDER-PICKING DEVICE
**(51)** Int. Cl.
***G07F 17/00*** ( 2006.01 )
***A47B 47/00*** ( 2006.01 )
***A47B 57/00*** ( 2006.01 )
***G07F 9/10*** ( 2006.01 )
***G07F 11/00*** ( 2006.01 )
***G07F 11/16*** ( 2006.01 )
***G07F 11/62*** ( 2006.01 )
**(87)** WO2023/160885
**(31)** 22158134.1 **(32)** 23.02.22 **(33)** EP
**(43)** 31.08.2023
**(72)** GROSS, Dietmar; MARTINI, Heinrich Paul; GERTEN, Markus
**(74)** FB Rice Pty Ltd

---

**(71)** BEIERSDORF AG
**(11)** AU-A-2023217178
**(21)** 2023217178 **(22)** 16.01.2023
**(54)** TOFA ANALOGUES, SEBUM REDUCTION PREPARATIONS CONTAINING SAID TYPE OF ANALOGUES AND THE COSMETIC AND/OR THERAPEUTIC USE OF SAID TYPE OF ANALOGUES AS AN EFFECTIVE PRINCIPLE FOR REDUCING OR PREVENTING SEBUM
**(51)** Int. Cl.
***C07D 307/68*** ( 2006.01 )
***A61K 31/341*** ( 2006.01 )
***A61P 17/08*** ( 2006.01 )
***A61P 17/10*** ( 2006.01 )
**(87)** WO2023/151898
**(31)** 10 2022 201 277.1 **(32)** 08.02.22 **(33)** DE
**(43)** 17.08.2023
**(72)** SEIDEL, Judith; REUTER, Jörn Hendrik; KAMAL, Ahmed; SIMMERING, Annika; MIELKE, Heiko
**(74)** Spruson & Ferguson

---

**(71)** BEIERSDORF AG
**(11)** AU-A-2023217831
**(21)** 2023217831 **(22)** 16.01.2023
**(54)** TOFA ANALOGUES, SEBUM REDUCTION PREPARATIONS CONTAINING SAID TYPE OF ANALOGUES AND THE COSMETIC AND/OR THERAPEUTIC USE OF SAID TYPE OF ANALOGUES AS AN EFFECTIVE PRINCIPLE FOR REDUCING OR PREVENTING SEBUM
**(51)** Int. Cl.
***C07D 307/68*** ( 2006.01 )
***A61K 31/341*** ( 2006.01 )
***A61P 17/08*** ( 2006.01 )
***A61P 17/10*** ( 2006.01 )
***C07D 233/90*** ( 2006.01 )
***C07D 263/34*** ( 2006.01 )
***C07D 277/32*** ( 2006.01 )
**(87)** WO2023/151897
**(31)** 10 2022 201 276.3 **(32)** 08.02.22 **(33)** DE
**(43)** 17.08.2023
**(72)** SEIDEL, Judith; REUTER, Jörn Hendrik; KAMAL, Ahmed; SIMMERING, Annika; MIELKE, Heiko
**(74)** Spruson & Ferguson

---

**(71)** BEIJING BYTEDANCE NETWORK TECHNOLOGY CO., LTD.
**(11)** AU-A-2023205562
**(21)** 2023205562 **(22)** 03.01.2023
**(54)** VIDEO PROCESSING METHOD AND APPARATUS, AND NONVOLATILE COMPUTER READABLE STORAGE MEDIUM
**(51)** Int. Cl.
***H04N 21/431*** ( 2011.01 )
**(87)** WO2023/131112
**(31)** 202210022120.6 **(32)** 10.01.22 **(33)** CN
**(43)** 13.07.2023
**(72)** CHEN, Yue; WANG, Anqi
**(74)** Griffith Hack

---

**(71)** BEIJING LIANGYUAN BIO-SCIENCE, LLC
**(11)** AU-A-2022438138
**(21)** 2022438138 **(22)** 27.10.2022
**(54)** PROTEIN FORMULATION, PREPARATION METHOD THEREFOR AND USE THEREOF
**(51)** Int. Cl.
***A61K 38/00*** ( 2006.01 )
***A61K 9/00*** ( 2006.01 )
***A61K 47/00*** ( 2006.01 )
**(87)** WO2023/142559
**(31)** 202210101468.4 **(32)** 27.01.22 **(33)** CN

**PCT applications which have entered the National Phase - Name Index cont'd**

**(43)** 03.08.2023
**(72)** TANG, Ning; WEI, Xiuli
**(74)** Oxygene IP

---

**(71)** BEIJING ROBOROCK TECHNOLOGY CO., LTD.
**(11)** AU-A-2022428551
**(21)** 2022428551 **(22)** 02.08.2022
**(54)** SELF-CLEANING DUST-COLLECTING BASE AND DUST-COLLECTING SYSTEM
**(51)** Int. Cl.
***A47L 11/40*** ( 2006.01 )
**(87)** WO2023/124081
**(31)** 202111675965.7 **(32)** 31.12.21 **(33)** CN
**(43)** 06.07.2023
**(72)** ZHOU, Yongfei; YANG, Zhimin; DUAN, Chuanlin
**(74)** Halfords IP

---

**(71)** BEIJING SCITECH-MQ PHARMACEUTICALS LIMITED
**(11)** AU-A-2023204840
**(21)** 2023204840 **(22)** 03.01.2023
**(54)** CARBONYL BRIDGED HETEROCYCLIC COMPOUND, AND COMPOSITION AND APPLICATION THEREOF
**(51)** Int. Cl.
***C07D 403/14*** ( 2006.01 )
***A61K 31/4245*** ( 2006.01 )
***A61K 31/506*** ( 2006.01 )
***A61P 1/00*** ( 2006.01 )
***A61P 17/00*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***A61P 37/00*** ( 2006.01 )
**(87)** WO2023/131116
**(31)** 202210003492.4 **(32)** 04.01.22 **(33)** CN
202211582187.1 09.12.22 CN
**(43)** 13.07.2023
**(72)** ZHANG, Qiang; YANG, Leifu
**(74)** WRAYS PTY LTD

---

**(71)** BELL, S.C.
**(11)** AU-A-2022410500
**(21)** 2022410500 **(22)** 14.12.2022
**(54)** SYSTEMS AND METHODS FOR ATMOSPHERIC DISPERSION OF OXIDANT FOR NET CONVERSION OF ATMOSPHERIC METHANE TO CARBON DIOXIDE
**(51)** Int. Cl.
***B01F 23/213*** ( 2022.01 )
***A62D 3/38*** ( 2007.01 )
***B01F 35/21*** ( 2022.01 )
***B01F 35/222*** ( 2022.01 )
***C01B 32/50*** ( 2017.01 )
**(87)** WO2023/108278
**(31)** 63/290,540 **(32)** 16.12.21 **(33)** US
**(43)** 22.06.2023
**(72)** BELL, Scott Christopher
**(74)** Halfords IP

---

**(71)** BEYER, C.F.
**(11)** AU-A-2022431173
**(21)** 2022431173 **(22)** 07.10.2022
**(54)** INTERNAL CONDOM METHOD AND DEVICE
**(51)** Int. Cl.
***A61F 6/02*** ( 2006.01 )
**(87)** WO2023/132872
**(31)** 63/297,780 **(32)** 09.01.22 **(33)** US
**(43)** 13.07.2023
**(72)** BEYER, Craig, F.; PATTERSON, Charles A.
**(74)** Remarkable IP

---

**(71)** BIOMOLECULAR HOLDINGS LLC
**(11)** AU-A-2023207150
**(21)** 2023207150 **(22)** 12.01.2023
**(54)** TETRAHEDRAL ANTIBODIES
**(51)** Int. Cl.
***C07K 16/46*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61P 29/00*** ( 2006.01 )
***A61P 31/14*** ( 2006.01 )
***C07D 249/04*** ( 2006.01 )
***C07D 249/16*** ( 2006.01 )
***C12N 5/10*** ( 2006.01 )
***C12N 15/62*** ( 2006.01 )
**(87)** WO2023/137387
**(31)** 63/298,999 **(32)** 12.01.22 **(33)** US
**(43)** 20.07.2023
**(72)** CAPON, Daniel, J.
**(74)** FB Rice Pty Ltd

---

**(71)** BOARD OF REGENTS, THE UNIVERSITY OFTEXAS SYSTEM
**(11)** AU-A-2022415191
**(21)** 2022415191 **(22)** 01.12.2022
**(54)** REVERSAL OF SENESCENCE BY ULTRASOUND IRRADIATION
**(51)** Int. Cl.
***A61B 8/00*** ( 2006.01 )
***A61N 5/02*** ( 2006.01 )
***A61N 7/02*** ( 2006.01 )
***C12N 13/00*** ( 2006.01 )
**(87)** WO2023/114011
**(31)** 63/290,969 **(32)** 17.12.21 **(33)** US
**(43)** 22.06.2023
**(72)** SHEETZ, Michael; KUREEL, Sanjay; RASMUSSEN, Blake; MAROTO, Rosario
**(74)** RNB IP PTY LTD

---

**(71)** BOEHRINGER INGELHEIM INTERNATIONAL GMBH
**(11)** AU-A-2023232901
**(21)** 2023232901 **(22)** 08.03.2023
**(54)** METHOD FOR DETECTING CONTAMINATING CARBOXYLESTERASE ACTIVITY
**(51)** Int. Cl.
***G01N 33/58*** ( 2006.01 )
***C12Q 1/44*** ( 2006.01 )
**(87)** WO2023/170139
**(31)** 22161135.3 **(32)** 09.03.22 **(33)** EP
**(43)** 14.09.2023
**(72)** BURKERT, Oliver; WELZ, Sebastian; KNAPE, Matthias
**(74)** Spruson & Ferguson

---

**(71)** BOLDEN THERAPEUTICS, INC.
**(11)** AU-A-2023210230
**(21)** 2023210230 **(22)** 20.01.2023
**(54)** MUSK-TARGETING OLIGONUCLEOTIDES
**(51)** Int. Cl.
***C12N 15/113*** ( 2010.01 )
***A61K 31/7115*** ( 2006.01 )
***A61K 31/712*** ( 2006.01 )
***A61K 31/7125*** ( 2006.01 )
***A61P 25/00*** ( 2006.01 )
*A61K 31/713* ( 2006.01 )
*C12N 15/11* ( 2006.01 )
**(87)** WO2023/141302
**(31)** 63/301,416 **(32)** 20.01.22 **(33)** US
**(43)** 27.07.2023
**(72)** PAGE, John; VALAT, Anne; AGRAWAL, Sudhir; BROWN, Duncan
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** BOREALIS AG
**(11)** AU-A-2022422534
**(21)** 2022422534 **(22)** 22.12.2022
**(54)** A MECHANICAL POLYOLEFIN RECYCLING PROCESS
**(51)** Int. Cl.
***B29B 17/02*** ( 2006.01 )
**(87)** WO2023/118421
**(31)** 21216996.5 **(32)** 22.12.21 **(33)** EP
**(43)** 29.06.2023
**(72)** DENIFL, Peter; PIETTRE, Kilian; GOETZLOFF, Christian; HETTRICH-KELLER, Michael; MACHL, Doris; VIJAY, Sameer; PRIESTERS, Hans-Jürgen; LAMBERTZ, Oliver
**(74)** Golja Haines & Friend

---

**(71)** BOSTONGENE CORPORATION
**(11)** AU-A-2023213817
**(21)** 2023213817 **(22)** 31.01.2023
**(54)** MACHINE LEARNING TECHNIQUES FOR CYTOMETRY
**(51)** Int. Cl.
***G01N 15/10*** ( 2006.01 )
***G01N 15/14*** ( 2006.01 )
***G06N 3/02*** ( 2006.01 )
***G06N 5/01*** ( 2023.01 )
***G06N 20/20*** ( 2019.01 )
**(87)** WO2023/147177
**(31)** 63/304,990 **(32)** 31.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** ZAITSEV, Aleksandr; FASTOVETS, Dmitrii; BOBE, Anatoly; GOLDBERG, Michael, F.; ATAULLAKHANOV, Ravshan; KAMYSHEVA, Anna; VORONINA, Mariia; KOMAROVA, Mariia; KRAUZ, Ilya; KILINA, Anastasiia; PICHUGIN, Aleksei; USHAKOVA, Ekaterina; DYIKANOV, Daniiar
**(74)** RnB IP Pty Ltd

---

**(71)** BRIGHTSEED, INC.; SANFORD-BURNHAM MEDICAL RESEARCH INSTITUTE
**(11)** AU-A-2023208682
**(21)** 2023208682 **(22)** 17.01.2023
**(54)** USES AND METHODS FOR PROMOTING INCREASED MITOCHONDRIAL MASS AND FUNCTION
**(51)** Int. Cl.
***A61K 31/015*** ( 2006.01 )

**PCT applications which have entered the National Phase - Name Index cont'd**

***A61K 31/13*** ( 2006.01 )
***A61K 31/136*** ( 2006.01 )
*A61K 31/135* ( 2006.01 )
**(87)** WO2023/141427
**(31)** 63/300,364 **(32)** 18.01.22 **(33)** US
**(43)** 27.07.2023
**(72)** CHAE, Lee Heil; LEVINE, Fred
**(74)** Spruson & Ferguson

---

**(71)** BUILDING FROM ABOVE AB
**(11)** AU-A-2023208609
**(21)** 2023208609 **(22)** 23.01.2023
**(54)** A COLLABORATING JOIST AND SUSPENDED CEILING SYSTEM AND A METHOD FOR ASSEMBLING THE SYSTEM
**(51)** Int. Cl.
***E04B 9/06*** ( 2006.01 )
***E04B 9/04*** ( 2006.01 )
**(87)** WO2023/140777
**(31)** 2230017-2 **(32)** 23.01.22 **(33)** SE
**(43)** 27.07.2023
**(72)** SAN CRISTÓBAL PÉREZ, Carmen Ximena
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** CAAMTECH, INC.
**(11)** AU-A-2023215456
**(21)** 2023215456 **(22)** 01.02.2023
**(54)** PSYCHEDELIC COMPOUNDS AND THEIR THERAPEUTIC USES
**(51)** Int. Cl.
***A61K 31/404*** ( 2006.01 )
***A61K 31/396*** ( 2006.01 )
***A61K 31/397*** ( 2006.01 )
***A61K 31/445*** ( 2006.01 )
***A61K 31/55*** ( 2006.01 )
***C07D 209/04*** ( 2006.01 )
**(87)** WO2023/150547
**(31)** 63/305,309 **(32)** 01.02.22 **(33)** US
63/305,312 01.02.22 US
63/305,314 01.02.22 US
63/305,315 01.02.22 US
63/375,459 13.09.22 US
**(43)** 10.08.2023
**(72)** DISCORDIA, Robert
**(74)** Allens Patent & Trade Mark Attorneys

---

**(71)** CASCADE CORPORATION
**(11)** AU-A-2023213964
**(21)** 2023213964 **(22)** 27.01.2023
**(54)** VARIABLE LOAD GEOMETRY CLAMP PRESSURE CONTROL
**(51)** Int. Cl.
***B66F 9/18*** ( 2006.01 )
*B66C 1/28* ( 2006.01 )
*B66C 1/62* ( 2006.01 )
*B66F 9/075* ( 2006.01 )
*B66F 9/24* ( 2006.01 )
**(87)** WO2023/147494
**(31)** 63/303,782 **(32)** 27.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** RUNNING, Brent G.; WALTHERS, Christopher M.; PEARMAN, Cory Evan
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** CATERPILLAR INC.
**(11)** AU-A-2023208620
**(21)** 2023208620 **(22)** 09.01.2023
**(54)** INTEGRATED RECORD OF ASSET USAGE, MAINTENANCE, AND CONDITION, AND ASSOCIATED SYSTEMS AND METHODS
**(51)** Int. Cl.
***G06Q 10/0637*** ( 2023.01 )
**(87)** WO2023/141027
**(31)** 17/581,807 **(32)** 21.01.22 **(33)** US
**(43)** 27.07.2023
**(72)** BUSEN, Melissa A.; REAUME, Daniel J.; CLINE, Kyle J.
**(74)** Patent Attorney Services

---

**(71)** CELLAED LIFE SAVER PTY LTD
**(11)** AU-A-2022423047
**(21)** 2022423047 **(22)** 23.12.2022
**(54)** AUTOMATED EXTERNAL DEFIBRILLATOR
**(51)** Int. Cl.
***A61N 1/39*** ( 2006.01 )
***A61B 5/332*** ( 2021.01 )
**(87)** WO2023/119256
**(31)** 2021904260 **(32)** 23.12.21 **(33)** AU
**(43)** 29.06.2023
**(72)** CASEY, Donovan Lachlan; TEBER, Erol Erdogan
**(74)** Dentons Patent Attorneys Australasia Limited

---

**(71)** CENTESSA PHARMACEUTICALS (UK) LIMITED
**(11)** AU-A-2023210844
**(21)** 2023210844 **(22)** 31.01.2023
**(54)** ACTIVATABLE BISPECIFIC ANTI-CD47 AND ANTI-PD-L1 PROTEINS AND USES THEREOF
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
**(87)** WO2023/144423
**(31)** 63/305,003 **(32)** 31.01.22 **(33)** US
63/309,759 14.02.22 US
63/342,283 16.05.22 US
63/348,842 03.06.22 US
**(43)** 03.08.2023
**(72)** FINLAY, William James Jonathan
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** CENTRO DE INMUNOLOGIA MOLECULAR
**(11)** AU-A-2022420223
**(21)** 2022420223 **(22)** 09.12.2022
**(54)** FUSION PROTEINS COMPOSED OF AN ANTIBODY AND A MUTEIN
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***C07K 16/30*** ( 2006.01 )
**(87)** WO2023/116951
**(31)** 2021-0104 **(32)** 21.12.21 **(33)** CU
**(43)** 29.06.2023
**(72)** CASADESÚS PAZOS, Ana Victoria; HERNÁNDEZ GARCÍA, Tays; LEÓN MONZÓN, Kalet
**(74)** Zone Patents Limited

---

**(71)** CHARGE CCCV LLC
**(11)** AU-A-2023209071
**(21)** 2023209071 **(22)** 20.01.2023
**(54)** ELECTROCHEMICAL CELLS
**(51)** Int. Cl.
***H01M 50/207*** ( 2021.01 )
***H01M 50/20*** ( 2021.01 )
***H01M 50/204*** ( 2021.01 )
***H01M 50/271*** ( 2021.01 )
***H01M 50/548*** ( 2021.01 )
*H01M 50/502* ( 2021.01 )
**(87)** WO2023/141567
**(31)** 63/301,237 **(32)** 20.01.22 **(33)** US
**(43)** 27.07.2023
**(72)** VEERARAGHAVAN, Vishnu; UPRETI, Shailesh
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** CHIESI FARMACEUTICI S.P.A.
**(11)** AU-A-2022418176
**(21)** 2022418176 **(22)** 21.12.2022
**(54)** TRIAZOLONE DERIVATIVE SALT AS NEUTROPHIL ELASTASE INHIBITOR
**(51)** Int. Cl.
***C07D 487/04*** ( 2006.01 )
***A61K 31/519*** ( 2006.01 )
***A61P 11/00*** ( 2006.01 )
**(87)** WO2023/118258
**(31)** 21217142.5 **(32)** 22.12.21 **(33)** EP
**(43)** 29.06.2023
**(72)** AMARI, Gabriele; CAPALDI, Carmelida; ARMANI, Elisabetta
**(74)** WRAYS PTY LTD

---

**(71)** CHIESI FARMACEUTICI S.P.A.
**(11)** AU-A-2022420749
**(21)** 2022420749 **(22)** 21.12.2022
**(54)** TRIAZOLONE DERIVATIVE SALT AS NEUTROPHIL ELASTASE INHIBITOR
**(51)** Int. Cl.
***C07D 487/04*** ( 2006.01 )
***A61K 31/519*** ( 2006.01 )
***A61P 11/00*** ( 2006.01 )
**(87)** WO2023/118252
**(31)** 21217146.6 **(32)** 22.12.21 **(33)** EP
**(43)** 29.06.2023
**(72)** BASSANETTI, Irene; AMADEI, Francesco
**(74)** WRAYS PTY LTD

---

**(71)** CHINA NATIONAL PETROLEUM CORPORATION; CHINA PETROLEUM ENGINEERING CORPORATION; CHINA HUANQIU CONTRACTING & ENGINEERING CORP.
**(11)** AU-A-2022426217
**(21)** 2022426217 **(22)** 06.12.2022
**(54)** SUSPENDED CEILING STRUCTURE OF MEMBRANE TANK, AND MEMBRANE TANK
**(51)** Int. Cl.
***F17C 3/00*** ( 2006.01 )
**(87)** WO2023/124838
**(31)** 202111676465.5 **(32)** 31.12.21 **(33)** CN

**PCT applications which have entered the National Phase - Name Index cont'd**

**(43)** 06.07.2023
**(72)** LIU, Bo; ZHANG, Jinwei; CHENG, Wei; GAO, Xian; TANG, Huiyong; LONG, Zhen; DU, Yu; KONG, Xiangying
**(74)** ET Intellectual Property

---

**(71)** CHONG KUN DANG PHARMACEUTICAL CORP.
**(11)** AU-A-2023211937
**(21)** 2023211937 **(22)** 26.01.2023
**(54)** COMPOSITIONS FOR PREVENTING OR TREATING HEART FAILURE (HF)
**(51)** Int. Cl.
***A61K 31/5377*** ( 2006.01 )
***A61K 9/00*** ( 2006.01 )
***A61K 31/4245*** ( 2006.01 )
***A61K 31/438*** ( 2006.01 )
***A61K 31/496*** ( 2006.01 )
***A61K 31/541*** ( 2006.01 )
***A61K 31/551*** ( 2006.01 )
***A61P 9/04*** ( 2006.01 )
**(87)** WO2023/144737
**(31)** 10-2022-0013636 **(32)** 28.01.22 **(33)** KR
**(43)** 03.08.2023
**(72)** LEE, Ju Hee; LEE, Beom Seob; JANG, Yeong Su
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** CINDERELLA TECHNOLOGY AS
**(11)** AU-A-2023209572
**(21)** 2023209572 **(22)** 19.01.2023
**(54)** INCINERATION TOILET WITH SAFETY SYSTEM
**(51)** Int. Cl.
***F23B 60/00*** ( 2006.01 )
***A47K 11/02*** ( 2006.01 )
***F23G 5/08*** ( 2006.01 )
***F23G 5/44*** ( 2006.01 )
***F23N 5/24*** ( 2006.01 )
**(87)** WO2023/139184
**(31)** 20220109 **(32)** 21.01.22 **(33)** NO
**(43)** 27.07.2023
**(72)** HANSEN, Frode; ASLAKSEN, Odd Arne; MOEN, Freddy, Roger
**(74)** Griffith Hack

---

**(71)** CLAROS TECHNOLOGIES INC.
**(11)** AU-A-2023212774
**(21)** 2023212774 **(22)** 25.01.2023
**(54)** COMBINED ELECTROCHEMICAL PRE-TREATMENT AND SORPTION OF POLLUTANTS
**(51)** Int. Cl.
***C02F 1/28*** ( 2023.01 )
***C02F 1/461*** ( 2023.01 )
***C02F 1/467*** ( 2023.01 )
***C02F 1/469*** ( 2023.01 )
*C02F 101/20* ( 2006.01 )
*C02F 101/30* ( 2006.01 )
*C02F 101/32* ( 2006.01 )
*C02F 101/36* ( 2006.01 )
**(87)** WO2023/146905
**(31)** 63/302,899 **(32)** 25.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** ABBAS, Abdennour; BROCKGREITENS, John Wilfrid; LESLIE, Evan Anthony; BRODERICK, Conor Hogan
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** COLGATE-PALMOLIVE COMPANY
**(11)** AU-A-2023215384
**(21)** 2023215384 **(22)** 03.02.2023
**(54)** HERBAL ORAL CARE COMPOSITIONS
**(51)** Int. Cl.
***A61K 8/19*** ( 2006.01 )
***A61K 8/27*** ( 2006.01 )
***A61K 8/73*** ( 2006.01 )
***A61K 8/92*** ( 2006.01 )
***A61K 8/96*** ( 2006.01 )
***A61Q 11/00*** ( 2006.01 )
**(87)** WO2023/150296
**(31)** 202211006252 **(32)** 05.02.22 **(33)** IN
**(43)** 10.08.2023
**(72)** MANDHARE, Manish; MALI, Nikhil; JADHAV, Purushottam; UTGIKAR, Neelima; CHAVAN, Bhagyashri; SUN, Fusong; AMBUNDO, Edna
**(74)** Spruson & Ferguson

---

**(71)** COLGATE-PALMOLIVE COMPANY
**(11)** AU-A-2023219189
**(21)** 2023219189 **(22)** 10.02.2023
**(54)** MICROBIALLY INDUCED INFLAMMATION PRODUCES CHANGES IN DISTINCT HEALTHY TISSUES IN HUMAN ORAL CAVITY
**(51)** Int. Cl.
***C12Q 1/02*** ( 2006.01 )
***C12Q 1/04*** ( 2006.01 )
***C12Q 1/06*** ( 2006.01 )
***C12Q 1/689*** ( 2018.01 )
**(87)** WO2023/154889
**(31)** 63/308,543 **(32)** 10.02.22 **(33)** US
**(43)** 17.08.2023
**(72)** CHEN, Dandan; TRIVEDI, Harsh Mahendra; MASTERS, James; DARVEAU, Richard, P.; MCLEAN, Jeffrey, S.
**(74)** Spruson & Ferguson

---

**(71)** COMAU S.P.A.
**(11)** AU-A-2023224434
**(21)** 2023224434 **(22)** 22.02.2023
**(54)** METHOD FOR INSPECTING AND/OR HANDLING A COMPONENT VIA A ROBOTIC ARM, AND CORRESPONDING SYSTEM AND COMPUTER-PROGRAM PRODUCT
**(51)** Int. Cl.
***B25J 9/16*** ( 2006.01 )
**(87)** WO2023/161801
**(31)** 102022000003365 **(32)** 23.02.22 **(33)** IT
**(43)** 31.08.2023
**(72)** LONGO, Nicola; DI STEFANO, Giovanni; PANICUCCI, Simone
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** COMERCIAL INDUSTRIAL MAQUINARIA CARTON ONDULADO, S.L.
**(11)** AU-A-2022422704
**(21)** 2022422704 **(22)** 20.12.2022
**(54)** DIE-HOLDING CYLINDER FOR A LAMINATE DIE-CUTTING MACHINE
**(51)** Int. Cl.
***B26D 7/26*** ( 2006.01 )
***B26F 1/38*** ( 2006.01 )
**(87)** WO2023/118638
**(31)** U202132520 **(32)** 23.12.21 **(33)** ES
**(43)** 29.06.2023
**(72)** SERRA OBIOL, Ramon; PUIG VARGAS, Jordi
**(74)** Integrated IP

---

**(71)** COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION
**(11)** AU-A-2022420976
**(21)** 2022420976 **(22)** 20.12.2022
**(54)** METHOD OF PRODUCING A COLD COMPACTIBLE METALLIC POWDER
**(51)** Int. Cl.
***B22F 9/04*** ( 2006.01 )
***B22F 1/052*** ( 2022.01 )
***B22F 1/068*** ( 2022.01 )
***C23C 24/04*** ( 2006.01 )
**(87)** WO2023/115119
**(31)** 2021904141 **(32)** 20.12.21 **(33)** AU
**(43)** 29.06.2023
**(72)** WILSON, Robert; YAN, Shiqin; YANG, Kun; CHEN, Ling
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** CRODA INTERNATIONAL PLC
**(11)** AU-A-2023218608
**(21)** 2023218608 **(22)** 09.02.2023
**(54)** AGROCHEMICAL ADJUVANTS
**(51)** Int. Cl.
***A01N 43/60*** ( 2006.01 )
***A01N 43/90*** ( 2006.01 )
***A01P 3/00*** ( 2006.01 )
**(87)** WO2023/152569
**(31)** 63/309,869 **(32)** 14.02.22 **(33)** US
**(43)** 17.08.2023
**(72)** LINDNER, Gregory, James; HALTLI, Bradley, Arnold; KERR, Russell, Greig; GRUNWALD, Alyssa, Louise; CORREA VELANDIA, Hebelin; MARCHBANK, Douglas, Hubert
**(74)** Oxygene IP

---

**(71)** CRODA INTERNATIONAL PLC
**(11)** AU-A-2023219259
**(21)** 2023219259 **(22)** 09.02.2023
**(54)** AGROCHEMICAL ADJUVANTS
**(51)** Int. Cl.
***A01N 25/00*** ( 2006.01 )
***A01N 43/90*** ( 2006.01 )
***A01N 47/24*** ( 2006.01 )
***A01P 3/00*** ( 2006.01 )
**(87)** WO2023/152566
**(31)** 63/309,907 **(32)** 14.02.22 **(33)** US
**(43)** 17.08.2023
**(72)** LINDNER, Gregory, James; HALTLI, Bradley, Arnold; KERR, Russell, Greig; GRUNWALD, Alyssa, Louise; CORREA VELANDIA, Hebelin; MARCHBANK, Douglas, Hubert
**(74)** Oxygene IP

---

**(71)** CYTOVALE INC.
**(11)** AU-A-2023215271
**(21)** 2023215271 **(22)** 02.02.2023

## PCT applications which have entered the National Phase - Name Index cont'd

**(54)** SYSTEM AND METHOD FOR CORRECTING PATIENT INDEX
**(51)** Int. Cl.
***G01N 15/14*** ( 2006.01 )
***B01L 3/00*** ( 2006.01 )
***G01N 15/02*** ( 2006.01 )
***G01N 33/49*** ( 2006.01 )
***G16H 50/20*** ( 2018.01 )
**(87)** WO2023/150232
**(31)** 17/592,040 **(32)** 03.02.22 **(33)** US
17/841,519 15.06.22 US
**(43)** 10.08.2023
**(72)** TSE, Henry Tat Kwong; SHAH, Ajay M.; GUILLOU, Lionel; SHEYBANI, Roya; JOHNSON, Audun; LANDWEHR, Peter; STEVENSON, Hunter
**(74)** FB Rice Pty Ltd

---

**(71)** D'ANGLADE, P.
**(11)** AU-A-2023277224
**(21)** 2023277224 **(22)** 24.05.2023
**(54)** PAPERBOARD PROTECTIVE CORNER AND METHOD FOR MANUFACTURING THE SAME
**(51)** Int. Cl.
***B65D 19/38*** ( 2006.01 )
***B31F 1/00*** ( 2006.01 )
**(87)** WO2023/225747
**(31)** 63/365,220 **(32)** 24.05.22 **(33)** US
**(43)** 30.11.2023
**(72)** D'ANGLADE, Pierre-Michel
**(74)** Spruson & Ferguson

---

**(71)** DAEWOONG PHARMACEUTICAL CO., LTD.
**(11)** AU-A-2023206441
**(21)** 2023206441 **(22)** 12.01.2023
**(54)** METHOD FOR PRODUCING INTERMEDIATE USEFUL FOR SYNETHESIS OF SGLT INHIBITOR
**(51)** Int. Cl.
***C07D 307/78*** ( 2006.01 )
***A61K 31/7048*** ( 2006.01 )
**(87)** WO2023/136617
**(31)** 10-2022-0005965 **(32)** 14.01.22 **(33)** KR
**(43)** 20.07.2023
**(72)** YOON, Hee Kyoon; YOON, Youn Jung
**(74)** WRAYS PTY LTD

---

**(71)** DAIICHI SANKYO COMPANY, LIMITED
**(11)** AU-A-2023218678
**(21)** 2023218678 **(22)** 08.02.2023
**(54)** ENVIRONMENTALLY RESPONSIVE MASKED ANTIBODY AND USE THEREOF
**(51)** Int. Cl.
***C07K 19/00*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61K 47/68*** ( 2017.01 )
***A61K 49/00*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07K 14/00*** ( 2006.01 )
***C07K 14/52*** ( 2006.01 )
***C07K 16/00*** ( 2006.01 )
***C07K 16/18*** ( 2006.01 )
***C07K 16/28*** ( 2006.01 )
***C12N 1/15*** ( 2006.01 )
***C12N 1/19*** ( 2006.01 )
***C12N 1/21*** ( 2006.01 )
***C12N 5/10*** ( 2006.01 )
***C12N 15/13*** ( 2006.01 )
***C12P 21/02*** ( 2006.01 )
***C12P 21/08*** ( 2006.01 )
***C40B 40/10*** ( 2006.01 )
***G01N 33/531*** ( 2006.01 )
**(87)** WO2023/153442
**(31)** 2022-019125 **(32)** 09.02.22 **(33)** JP
2022-196524 08.12.22 JP
**(43)** 17.08.2023
**(72)** KUDO Shota; SAEKI Kazunori
**(74)** Spruson & Ferguson

---

**(71)** DEEPMIND TECHNOLOGIES LIMITED
**(11)** AU-A-2023215615
**(21)** 2023215615 **(22)** 02.02.2023
**(54)** COMPUTER CODE GENERATION FROM TASK DESCRIPTIONS USING NEURAL NETWORKS
**(51)** Int. Cl.
***G06F 8/30*** ( 2018.01 )
***G06N 3/02*** ( 2006.01 )
***G06N 3/0455*** ( 2023.01 )
**(87)** WO2023/148286
**(31)** 63/306,043 **(32)** 02.02.22 **(33)** US
**(43)** 10.08.2023
**(72)** LI, Yujia; CHOI, David Hugo; CHUNG, Junyoung; KUSHMAN, Nathaniel Arthur; SCHRITTWIESER, Julian; LEBLOND, Rémi; ECCLES, Thomas Edward; KEELING, James Thomas; GIMENO GIL, Felix Axel; DAL LAGO, Agustín Matías; HUBERT, Thomas Keisuke; CHOY, Peter; DE MASSON D'AUTUME, Cyprien; SUTHERLAND ROBSON, Esme; VINYALS, Oriol
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** DEEPULL DIAGNOSTICS S.L.
**(11)** AU-A-2023206702
**(21)** 2023206702 **(22)** 13.01.2023
**(54)** SYSTEMS, METHODS, AND DEVICES FOR ANTIMICROBIAL SUSCEPTIBILITY TESTING
**(51)** Int. Cl.
***G01N 35/10*** ( 2006.01 )
**(87)** WO2023/135574
**(31)** 63/299,555 **(32)** 14.01.22 **(33)** US
**(43)** 20.07.2023
**(72)** BRU GIBERT, Rafael; CARRERA FABRA, Jordi; MARÍ ALMIRALL, Marta; SANGLAS BAULENAS, Ariadna
**(74)** AJ PARK

---

**(71)** DEEPULL DIAGNOSTICS S.L.
**(11)** AU-A-2023207327
**(21)** 2023207327 **(22)** 13.01.2023
**(54)** SYSTEMS, METHODS, AND DEVICES FOR PATHOGEN IDENTIFICATION
**(51)** Int. Cl.
***B01L 3/00*** ( 2006.01 )
***G01N 35/10*** ( 2006.01 )
**(87)** WO2023/135575
**(31)** 63/299,611 **(32)** 14.01.22 **(33)** US
**(43)** 20.07.2023
**(72)** BRU GIBERT, Rafael; CARRERA FABRA, Jordi; COSGAYA CASTRO, Clara; MARTÍNEZ MOLINER, Verónica
**(74)** AJ PARK

---

**(71)** DEMATIC CORP.
**(11)** AU-A-2023211063
**(21)** 2023211063 **(22)** 26.01.2023
**(54)** RIGHT ANGLE TRANSFER DEVICE
**(51)** Int. Cl.
***B65G 47/54*** ( 2006.01 )
***B65G 47/64*** ( 2006.01 )
*B65G 13/07* ( 2006.01 )
*B65G 13/10* ( 2006.01 )
*B65G 13/11* ( 2006.01 )
**(87)** WO2023/144751
**(31)** 63/303,056 **(32)** 26.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** FIKE, Rustin; COLE, Veronique; GERMAN, Harry Thad; SZEBELLEDY, Laszlo T.; STICKLAND, William R.
**(74)** Griffith Hack

---

**(71)** DENTERIC PTY LTD
**(11)** AU-A-2023208227
**(21)** 2023208227 **(22)** 20.01.2023
**(54)** CHIMERIC POLYPEPTIDES
**(51)** Int. Cl.
***A61K 39/02*** ( 2006.01 )
***A61K 39/00*** ( 2006.01 )
***A61K 39/40*** ( 2006.01 )
***A61P 31/04*** ( 2006.01 )
***C07K 5/113*** ( 2006.01 )
***C12N 9/52*** ( 2006.01 )
**(87)** WO2023/137522
**(31)** 2022900102 **(32)** 20.01.22 **(33)** AU
**(43)** 27.07.2023
**(72)** REYNOLDS, Eric Charles; SLAKESKI, Nada; O'BRIEN-SIMPSON, Neil
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** DENTERIC PTY LTD
**(11)** AU-A-2023209364
**(21)** 2023209364 **(22)** 20.01.2023
**(54)** CHIMERIC POLYPEPTIDES
**(51)** Int. Cl.
***A61K 39/02*** ( 2006.01 )
***A61K 39/40*** ( 2006.01 )
***A61P 31/04*** ( 2006.01 )
***C12N 9/52*** ( 2006.01 )
**(87)** WO2023/137521
**(31)** 2022900103 **(32)** 20.01.22 **(33)** AU
**(43)** 27.07.2023
**(72)** REYNOLDS, Eric Charles; SLAKESKI, Nada; O'BRIEN-SIMPSON, Neil Martin
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** DENTERIC PTY LTD
**(11)** AU-A-2023209795
**(21)** 2023209795 **(22)** 20.01.2023
**(54)** CHIMERIC POLYPEPTIDES
**(51)** Int. Cl.
***A61K 39/02*** ( 2006.01 )
***A61K 39/00*** ( 2006.01 )
***A61K 39/40*** ( 2006.01 )
***A61P 31/04*** ( 2006.01 )

**PCT applications which have entered the National Phase - Name Index cont'd**

***C12N 9/52*** ( 2006.01 )
**(87)** WO2023/137519
**(31)** 2022900101 **(32)** 20.01.22 **(33)** AU
**(43)** 27.07.2023
**(72)** REYNOLDS, Eric Charles; SLAKESKI, Nada; O'BRIEN-SIMPSON, Neil
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** DERWENT INDUSTRIES PTY LTD
**(11)** AU-A-2022419408
**(21)** 2022419408 **(22)** 23.12.2022
**(54)** UNIVERSAL VALVE ASSEMBLY
**(51)** Int. Cl.
***F16K 27/00*** ( 2006.01 )
***F16L 23/00*** ( 2006.01 )
***F16L 23/18*** ( 2006.01 )
***F16L 29/00*** ( 2006.01 )
***F16L 58/18*** ( 2006.01 )
**(87)** WO2023/115161
**(31)** 2021904224 **(32)** 23.12.21 **(33)** AU
**(43)** 29.06.2023
**(72)** EVANS, Craig; GEORGES, Alexander
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** DETNET SOUTH AFRICA (PTY) LTD
**(11)** AU-A-2023338642
**(21)** 2023338642 **(22)** 01.09.2023
**(54)** METHOD OF MANAGING A BLASTING SYSTEM
**(51)** Int. Cl.
***F42D 1/045*** ( 2006.01 )
**(87)** WO2024/055050
**(31)** 2022/09857 **(32)** 05.09.22 **(33)** ZA
**(43)** 14.03.2024
**(72)** LIEBENBERG, Abraham Johannes; MEYER, Tielman Christiaan
**(74)** Gestalt Law Pty Ltd

---

**(71)** DIAMENTIS INC.
**(11)** AU-A-2023219254
**(21)** 2023219254 **(22)** 09.02.2023
**(54)** SYSTEMS AND METHODS FOR RETINAL STIMULATION AND/OR COLLECTING RETINAL SIGNAL DATA
**(51)** Int. Cl.
***A61B 3/14*** ( 2006.01 )
***A61B 5/297*** ( 2021.01 )
***A61B 5/398*** ( 2021.01 )
**(87)** WO2023/150878
**(31)** 63/308,169 **(32)** 09.02.22 **(33)** US
**(43)** 17.08.2023
**(72)** HARITON, Claude
**(74)** SR Intellectual Property

---

**(71)** DIC CORPORATION
**(11)** AU-A-2022441552
**(21)** 2022441552 **(22)** 24.11.2022
**(54)** CROSS-LINKED POLY (ASPARTIC ACID) PRODUCT AND METHOD FOR PRODUCING SAME
**(51)** Int. Cl.
***C08G 73/10*** ( 2006.01 )
***C08G 69/48*** ( 2006.01 )
***C08J 3/24*** ( 2006.01 )
**(87)** WO2023/155523
**(31)** PCT/CN2022/076421 **(32)** 16.02.22 **(33)** CN
**(43)** 24.08.2023
**(72)** JIANG, Xin; DOHI, Tomoki; KAMBARA, Manabu; CUI, Qing-Zhang; GUO, Jin; DENG, Chang-Jun
**(74)** FB Rice Pty Ltd

---

**(71)** DIESEKO GROUP B.V.
**(11)** AU-A-2023205309
**(21)** 2023205309 **(22)** 04.01.2023
**(54)** VIBRATORY PILE DRIVING APPARATUS
**(51)** Int. Cl.
***E02D 5/04*** ( 2006.01 )
***E02D 7/18*** ( 2006.01 )
***E02D 9/02*** ( 2006.01 )
***E02D 11/00*** ( 2006.01 )
**(87)** WO2023/131623
**(31)** 2030443 **(32)** 06.01.22 **(33)** NL
**(43)** 13.07.2023
**(72)** SMULDERS, Dirk; VAN DONGEN, Timo Olivier
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** DIVA INTERNATIONAL INC.; SAINI, C.
**(11)** AU-A-2022431738
**(21)** 2022431738 **(22)** 16.12.2022
**(54)** MENSTRUAL DISC
**(51)** Int. Cl.
***A61F 5/455*** ( 2006.01 )
***A61F 5/451*** ( 2006.01 )
***A61F 5/453*** ( 2006.01 )
***A61F 13/24*** ( 2006.01 )
**(87)** WO2023/130176
**(31)** 63/297,088 **(32)** 06.01.22 **(33)** US
**(43)** 13.07.2023
**(72)** SAINI, Carinne
**(74)** FB Rice Pty Ltd

---

**(71)** DORPHAN SA
**(11)** AU-A-2022433340
**(21)** 2022433340 **(22)** 23.12.2022
**(54)** COMPOUNDS AND USE THEREOF FOR THE TREATMENT OF DISEASES ASSOCIATED WITH IMPAIRED β-GALACTOSIDASE ACTIVITY
**(51)** Int. Cl.
***C07D 303/38*** ( 2006.01 )
***A61K 31/336*** ( 2006.01 )
***A61P 25/00*** ( 2006.01 )
***C07D 405/12*** ( 2006.01 )
**(87)** WO2023/135480
**(31)** 22151412.8 **(32)** 13.01.22 **(33)** EP
**(43)** 20.07.2023
**(72)** ROCHAT, Virginie; MARTI, Roger; DESCLOUX, Mélanie; DEMOTZ, Stéphane; MUTEL, Vincent
**(74)** Collison & Co

---

**(71)** DOT INCORPORATION
**(11)** AU-A-2022421934
**(21)** 2022421934 **(22)** 22.12.2022
**(54)** INFORMATION OUTPUT DEVICE
**(51)** Int. Cl.
***G06F 3/01*** ( 2006.01 )
***H01F 7/20*** ( 2006.01 )
**(87)** WO2023/121340
**(31)** 10-2021-0186177 **(32)** 23.12.21 **(33)** KR
**(43)** 29.06.2023
**(72)** KIM, Ju Yoon; KIM, Ji Ho; PARK, Hyeon Cheol
**(74)** LAMINAR IP PTY LTD

---

**(71)** DOW GLOBAL TECHNOLOGIES LLC
**(11)** AU-A-2021480352
**(21)** 2021480352 **(22)** 24.12.2021
**(54)** AQUEOUS COATING COMPOSITION
**(51)** Int. Cl.
***C09D 5/02*** ( 2006.01 )
***C09D 7/65*** ( 2018.01 )
***C09D 133/04*** ( 2006.01 )
***C09D 143/02*** ( 2006.01 )
**(87)** WO2023/115541
**(43)** 29.06.2023
**(72)** YANG, Weijun; CUI, Longlan
**(74)** Maxwells Patent & Trade Mark Attorneys Pty Ltd

---

**(71)** DROTASTAR LLC
**(11)** AU-A-2023218629
**(21)** 2023218629 **(22)** 09.02.2023
**(54)** A PHARMACEUTICAL COMBINATION OF ANTISPASMODIC AND ANXIOLYTIC AGENT
**(51)** Int. Cl.
***A61K 9/20*** ( 2006.01 )
***A61K 9/24*** ( 2006.01 )
***A61K 9/28*** ( 2006.01 )
***A61K 31/472*** ( 2006.01 )
***A61K 31/5513*** ( 2006.01 )
***A61P 1/06*** ( 2006.01 )
**(87)** WO2023/152674
**(31)** 202211006919 **(32)** 09.02.22 **(33)** IN
**(43)** 17.08.2023
**(72)** BERLIA, Sushma Paul; BERLIA, Nishant; BERLIA, Aditya; SINGH, Gurvinder
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** DURAN DOĞAN BASIM VE AMBALAJ SANAYİ A.Ş.
**(11)** AU-A-2022441288
**(21)** 2022441288 **(22)** 16.02.2022
**(54)** PACKAGING MATERIAL AND PRODUCTION METHOD THEREOF
**(51)** Int. Cl.
***D21H 19/04*** ( 2006.01 )
***B32B 15/12*** ( 2006.01 )
***B32B 29/00*** ( 2006.01 )
***D21H 19/82*** ( 2006.01 )
***D21H 27/10*** ( 2006.01 )
**(87)** WO2023/158393
**(43)** 24.08.2023
**(72)** ACEMYAN, Dikran Mihran; ACEMYAN, Dikran; ÇAM AKDENİZ, Neslihan; KARABOSYAN, Levon
**(74)** Dennemeyer & Associates

---

**(71)** EBR SYSTEMS, INC.
**(11)** AU-A-2023217604
**(21)** 2023217604 **(22)** 07.02.2023
**(54)** TISSUE STIMULATION SYSTEMS AND METHODS, SUCH AS FOR PACING CARDIAC TISSUE
**(51)** Int. Cl.

**PCT applications which have entered the National Phase - Name Index cont'd**

***A61N 1/378*** ( 2006.01 )
***A61N 1/372*** ( 2006.01 )
**(87)** WO2023/154288
**(31)** 17/668,771 **(32)** 10.02.22 **(33)** US
**(43)** 17.08.2023
**(72)** WILLIS, Parker; RILEY, Richard; FAYRAM, Timothy A.
**(74)** FB Rice Pty Ltd

---

**(71)** ECOCEM MATERIALS LIMITED; ECOLE NORMALE SUPERIEURE PARIS-SACLAY; CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE
**(11)** AU-A-2023210817
**(21)** 2023210817 **(22)** 27.01.2023
**(54)** READY-MIX CONCRETE OR MORTAR, OR PRECAST CONCRETE COMPOSITION, COMPRISING GROUND GRANULATED BLAST FURNACE SLAG, AN ALKALI SULFATE ACTIVATOR AND A PCE TYPE WATER REDUCING POLYMER
**(51)** Int. Cl.
***C04B 24/16*** ( 2006.01 )
***C04B 24/24*** ( 2006.01 )
***C04B 24/26*** ( 2006.01 )
***C04B 28/08*** ( 2006.01 )
*C04B 103/30* ( 2006.01 )
**(87)** WO2023/144288
**(31)** 22305083.2 **(32)** 27.01.22 **(33)** EP
**(43)** 03.08.2023
**(72)** FROUIN, Laurent; ALFANI, Roberta; CHAOUCHE, Mohend; PLANK, Johann; LEI, Lei
**(74)** WRAYS PTY LTD

---

**(71)** EDWARDS LIFESCIENCES CORPORATION
**(11)** AU-A-2023219501
**(21)** 2023219501 **(22)** 05.02.2023
**(54)** HOLLOW NEEDLE FOR DELIVERING A GUIDEWIRE
**(51)** Int. Cl.
***A61B 17/00*** ( 2006.01 )
***A61B 17/22*** ( 2006.01 )
***A61B 17/34*** ( 2006.01 )
***A61M 25/00*** ( 2006.01 )
***A61M 25/06*** ( 2006.01 )
***A61M 25/09*** ( 2006.01 )
**(87)** WO2023/154235
**(31)** 63/308,454 **(32)** 09.02.22 **(33)** US
**(43)** 17.08.2023
**(72)** LAM, Jonathan, Andrew; VANEVERY, Zachary, Charles; GUTIERREZ, Tarannum, Ishaq; SRIDHAR, Nithya; QUACH, Lan, T.; VERASTEGUI JAIMEZ, Maria, G.
**(74)** Spruson & Ferguson

---

**(71)** ELECTROLUX APPLIANCES AKTIEBOLAG
**(11)** AU-A-2023236885
**(21)** 2023236885 **(22)** 09.03.2023
**(54)** COMBINATION APPLIANCE AND METHOD FOR ASSEMBLING A COMBINATION APPLIANCE
**(51)** Int. Cl.
***F24C 15/20*** ( 2006.01 )
**(87)** WO2023/174800
**(31)** 22162304.4 **(32)** 15.03.22 **(33)** EP
**(43)** 21.09.2023
**(72)** BAYERLEIN, Stefan; LEYH, Björn; BÖHM, Raimund; LEO, Orlando; VERDOLIVA, Valerio
**(74)** Halfords IP

---

**(71)** ELI LILLY AND COMPANY
**(11)** AU-A-2023216231
**(21)** 2023216231 **(22)** 30.01.2023
**(54)** REGIONAL TAU IMAGING FOR DIAGNOSING AND TREATING ALZHEIMER'S DISEASE
**(51)** Int. Cl.
***A61K 51/04*** ( 2006.01 )
***A61P 25/00*** ( 2006.01 )
***C07K 16/18*** ( 2006.01 )
*A61K 39/00* ( 2006.01 )
**(87)** WO2023/150483
**(31)** 63/306,168 **(32)** 03.02.22 **(33)** US
63/369,795 29.07.22 US
63/382,914 09.11.22 US
**(43)** 10.08.2023
**(72)** KOTARI, Vikas; SHCHERBININ, Sergey; SOUTHEKAL, Sudeepti Suresh; TUNALI, Ilke
**(74)** Spruson & Ferguson

---

**(71)** ELLSI LIMITED
**(11)** AU-A-2023206648
**(21)** 2023206648 **(22)** 11.01.2023
**(54)** COMPOSITE TOILET SEAT
**(51)** Int. Cl.
***A47K 13/00*** ( 2006.01 )
***B28B 1/00*** ( 2006.01 )
***C08L 67/06*** ( 2006.01 )
**(87)** WO2023/135414
**(31)** 2200275.2 **(32)** 11.01.22 **(33)** GB
**(43)** 20.07.2023
**(72)** DELANEY, Paul
**(74)** Kings Patent & Trade Marks Attorneys Pty Ltd

---

**(71)** ELYSIS LIMITED PARTNERSHIP
**(11)** AU-A-2022380585
**(21)** 2022380585 **(22)** 07.11.2022
**(54)** ADVANCED ALUMINUM ELECTROLYSIS CELL
**(51)** Int. Cl.
***C25C 3/08*** ( 2006.01 )
***C25C 3/12*** ( 2006.01 )
***C25C 3/24*** ( 2006.01 )
**(87)** WO2023/081480
**(31)** 63/311,374 **(32)** 17.02.22 **(33)** US
**(43)** 11.05.2023
**(72)** LIU, Xinghua; MOSSER, Benjamin D.
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** ENABL A/S
**(11)** AU-A-2023210811
**(21)** 2023210811 **(22)** 25.01.2023
**(54)** WIND TURBINE INSTALLATION SYSTEM AND METHOD FOR INSTALLATION A WIND TURBINE
**(51)** Int. Cl.
***F03D 13/10*** ( 2016.01 )
***B66C 1/10*** ( 2006.01 )
***B66C 23/18*** ( 2006.01 )
***F03D 13/25*** ( 2016.01 )
**(87)** WO2023/143683
**(31)** PA 2022 70031 **(32)** 25.01.22 **(33)** DK
**(43)** 03.08.2023
**(72)** VAGTHOLM, Henrik; SVENNINGGAARD, Jon
**(74)** Spruson & Ferguson

---

**(71)** ENLAZA THERAPEUTICS, INC.
**(11)** AU-A-2022419596
**(21)** 2022419596 **(22)** 22.12.2022
**(54)** CROSSLINKING ANTIBODIES
**(51)** Int. Cl.
***A61K 47/68*** ( 2017.01 )
***A61K 51/10*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07K 16/18*** ( 2006.01 )
***C07K 16/30*** ( 2006.01 )
***C12N 9/00*** ( 2006.01 )
***C12P 21/02*** ( 2006.01 )
**(87)** WO2023/122753
**(31)** 63/293,025 **(32)** 22.12.21 **(33)** US
63/346,799 27.05.22 US
63/388,072 11.07.22 US
**(43)** 29.06.2023
**(72)** DURON, Sergio; ROLAND, Jason; PTACIN, Jerod; HEIDT, Analeah; LIU, Jun
**(74)** FB Rice Pty Ltd

---

**(71)** ENODA LTD
**(11)** AU-A-2022437848
**(21)** 2022437848 **(22)** 20.12.2022
**(54)** ELECTRICAL POWER APPARATUS
**(51)** Int. Cl.
***H02J 3/28*** ( 2006.01 )
***H01M 8/00*** ( 2016.01 )
***H01M 16/00*** ( 2006.01 )
***H02J 3/01*** ( 2006.01 )
***H02J 3/14*** ( 2006.01 )
***H02J 3/38*** ( 2006.01 )
***H02M 1/12*** ( 2006.01 )
*H02M 7/483* ( 2007.01 )
**(87)** WO2023/144615
**(31)** 2022900140 **(32)** 27.01.22 **(33)** AU
**(43)** 03.08.2023
**(72)** SCOBIE, Andrew John; LIMMER, Ludwig Johann
**(74)** RnB IP Pty Ltd

---

**(71)** ENVISION ENERGY CO., LTD
**(11)** AU-A-2022430059
**(21)** 2022430059 **(22)** 10.01.2022
**(54)** LIGHTNING PROTECTION DEVICE FOR WIND TURBINE BLADES AND MOUNTING METHOD THEREFOR
**(51)** Int. Cl.
***F03D 80/30*** ( 2016.01 )
***F03D 1/06*** ( 2006.01 )
**(87)** WO2023/130424
**(43)** 13.07.2023
**(72)** GONG, Shichang; MA, Hao; SUN, Jianxu; BIAN, Jiayan; DONG, Zhenhua
**(74)** Collison & Co

---

**PCT applications which have entered the National Phase - Name Index cont'd**

**(71)** EVOQUA WATER TECHNOLOGIES LLC
**(11)** AU-A-2023211584
**(21)** 2023211584 **(22)** 26.01.2023
**(54)** INCREASING FLOW RATE IN ELECTRODEIONIZATION DEVICES
**(51)** Int. Cl.
***B01D 61/50*** ( 2006.01 )
***C02F 1/469*** ( 2023.01 )
**(87)** WO2023/146948
**(31)** 63/303,145 **(32)** 26.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** WILKINS, Frederick C.; GANZI, Gary C.; TELEPCIAK, Jacob; LIANG, Li-Shiang
**(74)** Spruson & Ferguson

---

**(71)** EXELIXIS, INC.
**(11)** AU-A-2023209061
**(21)** 2023209061 **(22)** 19.01.2023
**(54)** PHARMACEUTICAL COMPOSITIONS COMPRISING ANTI-TISSUE FACTOR ANTIBODY-DRUG CONJUGATES
**(51)** Int. Cl.
***A61K 47/68*** ( 2017.01 )
*A61K 47/64* ( 2017.01 )
**(87)** WO2023/141517
**(31)** 63/301,994 **(32)** 21.01.22 **(33)** US
**(43)** 27.07.2023
**(72)** REYNOLDS, Mark; LI, Hui; MAHAJAN, Rajiv
**(74)** Blue Penguin IP Ltd

---

**(71)** EXXONMOBIL CHEMICAL PATENTS INC.; PLASTIC ENERGY LIMITED
**(11)** AU-A-2023208725
**(21)** 2023208725 **(22)** 17.01.2023
**(54)** WATER-WASHED RECYCLE PYROLYSIS OIL FOR CRACKER FEED
**(51)** Int. Cl.
***C10G 1/00*** ( 2006.01 )
***C10G 1/10*** ( 2006.01 )
***C10G 55/04*** ( 2006.01 )
**(87)** WO2023/141109
**(31)** 63/301,085 **(32)** 20.01.22 **(33)** US
**(43)** 27.07.2023
**(72)** JOHNSON, Brittney A.; ROUGEAU, Jennifer L.; WEBER, Michael W.; MCNAMARA, David; LAKE, Andrew; HARGREAVES, George
**(74)** James & Wells Intellectual Property

---

**(71)** F. HOFFMANN-LA ROCHE AG
**(11)** AU-A-2023217241
**(21)** 2023217241 **(22)** 09.02.2023
**(54)** METHODS AND DEVICES FOR PERFORMING AN ANALYTICAL MEASUREMENT
**(51)** Int. Cl.
***G01N 21/84*** ( 2006.01 )
***G01N 21/93*** ( 2006.01 )
**(87)** WO2023/152207
**(31)** 22156299.4 **(32)** 11.02.22 **(33)** EP
**(43)** 17.08.2023
**(72)** BERG, Max; HAILER, Fredrik; LIMBURG, Bernd
**(74)** Spruson & Ferguson

---

**(71)** FAIRHAVEN PHARMACEUTICALS INC.
**(11)** AU-A-2022417301
**(21)** 2022417301 **(22)** 20.12.2022
**(54)** OXER1 ANTAGONISTS AND USES THEREOF
**(51)** Int. Cl.
***C07D 209/24*** ( 2006.01 )
***A61K 31/343*** ( 2006.01 )
***A61K 31/381*** ( 2006.01 )
***A61K 31/395*** ( 2006.01 )
***A61K 31/40*** ( 2006.01 )
***A61K 31/404*** ( 2006.01 )
***A61K 31/407*** ( 2006.01 )
***A61K 31/415*** ( 2006.01 )
***A61K 31/4164*** ( 2006.01 )
***A61K 31/4184*** ( 2006.01 )
***A61K 31/4192*** ( 2006.01 )
***A61K 31/421*** ( 2006.01 )
***A61K 31/437*** ( 2006.01 )
***A61K 31/44*** ( 2006.01 )
***A61K 31/4439*** ( 2006.01 )
***A61K 31/47*** ( 2006.01 )
***A61K 31/495*** ( 2006.01 )
***A61K 31/497*** ( 2006.01 )
***A61K 31/4985*** ( 2006.01 )
***A61K 31/519*** ( 2006.01 )
***A61K 31/5383*** ( 2006.01 )
***A61P 11/06*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07D 207/337*** ( 2006.01 )
***C07D 209/30*** ( 2006.01 )
***C07D 213/55*** ( 2006.01 )
***C07D 215/18*** ( 2006.01 )
***C07D 231/12*** ( 2006.01 )
***C07D 233/64*** ( 2006.01 )
***C07D 235/06*** ( 2006.01 )
***C07D 241/12*** ( 2006.01 )
***C07D 249/04*** ( 2006.01 )
***C07D 263/32*** ( 2006.01 )
***C07D 307/80*** ( 2006.01 )
***C07D 307/82*** ( 2006.01 )
***C07D 333/60*** ( 2006.01 )
***C07D 401/06*** ( 2006.01 )
***C07D 403/06*** ( 2006.01 )
***C07D 405/06*** ( 2006.01 )
***C07D 471/04*** ( 2006.01 )
***C07D 487/04*** ( 2006.01 )
***C07D 491/048*** ( 2006.01 )
***C07D 498/04*** ( 2006.01 )
**(87)** WO2023/115203
**(31)** 63/291,555 **(32)** 20.12.21 **(33)** US
**(43)** 29.06.2023
**(72)** ABBOTT, Shaun; GREEN, Jeremy; BOURQUE, Elyse; DE LÉSÉLEUC, Mylène; MARTEL, Julien
**(74)** FB Rice Pty Ltd

---

**(71)** FISHER & PAYKEL APPLIANCES LIMITED
**(11)** AU-A-2022421643
**(21)** 2022421643 **(22)** 22.12.2022
**(54)** WASHING APPLIANCE
**(51)** Int. Cl.
***A47L 15/42*** ( 2006.01 )
***A47L 15/00*** ( 2006.01 )
***D06F 37/26*** ( 2006.01 )
***D06F 39/12*** ( 2006.01 )
**(87)** WO2023/121482
**(31)** 783815 **(32)** 22.12.21 **(33)** NZ
**(43)** 29.06.2023
**(72)** RONEY, Philip
**(74)** AJ PARK

---

**(71)** FMC CORPORATION; FMC IP TECHNOLOGY GMBH
**(11)** AU-A-2023212864
**(21)** 2023212864 **(22)** 30.01.2023
**(54)** METHODS FOR THE PREPARATION OF ETHYL 3-BROMO-1-(3-CHLOROPYRIDIN-2-YL)-4,5-DIHYDRO-1 H-PYRAZOLE-5-CARBOXYLATE
**(51)** Int. Cl.
***C07D 401/04*** ( 2006.01 )
**(87)** WO2023/147104
**(31)** 63/304,772 **(32)** 31.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** LEI, Minghai; YU, Fengdong; WANG, Miao; HAN, Zongren
**(74)** WRAYS PTY LTD

---

**(71)** FONTERRA CO-OPERATIVE GROUP LIMITED
**(11)** AU-A-2023222562
**(21)** 2023222562 **(22)** 17.02.2023
**(54)** FOOD SUPPLEMENT
**(51)** Int. Cl.
***A23L 33/135*** ( 2016.01 )
***A61P 25/24*** ( 2006.01 )
*A61K 9/107* ( 2006.01 )
**(87)** WO2023/156945
**(31)** 22157612.7 **(32)** 18.02.22 **(33)** EP
**(43)** 24.08.2023
**(72)** FANNING, Aaron Calvin; DEKKER, James William; SALTINI, Rolando; ZE, Xiaolei; ZHANG, Xuguang
**(74)** AJ PARK

---

**(71)** FORESEE PHARMACEUTICALS CO., LTD.
**(11)** AU-A-2023221377
**(21)** 2023221377 **(22)** 15.02.2023
**(54)** CRYSTALLINE (+)-TETRABENAZINE
**(51)** Int. Cl.
***A61K 31/473*** ( 2006.01 )
***A61K 9/28*** ( 2006.01 )
***A61K 31/33*** ( 2006.01 )
***A61K 45/06*** ( 2006.01 )
*A61K 9/14* ( 2006.01 )
*A61K 9/48* ( 2006.01 )
**(87)** WO2023/159040
**(31)** 63/268,017 **(32)** 15.02.22 **(33)** US
**(43)** 24.08.2023
**(72)** JANG, Shih-fan; HUANG, Wen-yen; LI, Ming-hsin; LI, Yuhua
**(74)** Spruson & Ferguson

---

**(71)** FORM ENERGY, INC.
**(11)** AU-A-2023213702
**(21)** 2023213702 **(22)** 27.01.2023
**(54)** BIFACIAL SEALED GAS DIFFUSION ELECTRODE
**(51)** Int. Cl.
***H01M 4/86*** ( 2006.01 )
***H01M 4/88*** ( 2006.01 )
***H01M 12/06*** ( 2006.01 )

## PCT applications which have entered the National Phase - Name Index cont'd

***H01M 12/08*** ( 2006.01 )
**(87)** WO2023/147074
**(31)** 63/304,425 **(32)** 28.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** PATRICK, Meghan Marya; DONAHEY, Glenn; TRAINI, Erica Skye; WOODFORD, William Henry; REYNOLDS, Christopher Thomas; TARASOV, Vladimir Sergeyevich; MCKIBBEN, Nicholas; WOOD, Christopher Evan; YANG, Kalina
**(74)** RnB IP Pty Ltd

---

**(71)** FRAUNHOFER-GESELLSCHAFT ZUR FÖRDERUNG DER ANGEWANDTEN FORSCHUNG E.V.
**(11)** AU-A-2023215649
**(21)** 2023215649 **(22)** 03.02.2023
**(54)** DEVICE AND METHOD FOR CONE PENETRATION TESTING OF GROUNDS
**(51)** Int. Cl.
***G01V 1/16*** ( 2006.01 )
***E02D 1/00*** ( 2006.01 )
***G01N 33/24*** ( 2006.01 )
***G01V 1/20*** ( 2006.01 )
**(87)** WO2023/148336
**(31)** 10 2022 201 173.2 **(32)** 03.02.22 **(33)** DE
**(43)** 10.08.2023
**(72)** SIEMANN, Lennart; HEBIG, Jan; PEIN, Taisiya; WERPUP OGURO, Aisgo; PREU, Benedict
**(74)** Golja Haines & Friend

---

**(71)** FREEDMAN ELECTRONICS PTY LTD
**(11)** AU-A-2022438825
**(21)** 2022438825 **(22)** 22.12.2022
**(54)** AUDIO HEADSET
**(51)** Int. Cl.
***H04R 1/10*** ( 2006.01 )
***H04R 5/033*** ( 2006.01 )
**(87)** WO2023/147622
**(31)** 17/592,722 **(32)** 04.02.22 **(33)** US
**(43)** 10.08.2023
**(72)** SCHILLEBEECKX, Pieter; WINKLER, Stephanie Gertrude; TREWARTHA, Samuel Dean; SUNWOO, Sun Kyung
**(74)** FOUNDRY INTELLECTUAL PROPERTY PTY LTD

---

**(71)** FREULER, G.B.
**(11)** AU-A-2023212054
**(21)** 2023212054 **(22)** 26.01.2023
**(54)** ERGONOMIC HOLDERS FOR HAND TOOLS
**(51)** Int. Cl.
***A46B 17/02*** ( 2006.01 )
***A46B 7/04*** ( 2006.01 )
**(87)** WO2023/146981
**(31)** 63/303,768 **(32)** 27.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** FREULER, Gregory, Brian
**(74)** LAMINAR IP PTY LTD

---

**(71)** FRITO-LAY TRADING COMPANY GMBH
**(11)** AU-A-2023214760
**(21)** 2023214760 **(22)** 01.02.2023
**(54)** REDUCED OR ZERO ADDED SODIUM SNACK FOOD PELLETS
**(51)** Int. Cl.
***A23N 17/00*** ( 2006.01 )
***A23P 30/20*** ( 2016.01 )
***A23P 30/34*** ( 2016.01 )
**(87)** WO2023/148633
**(31)** 2201543.2 **(32)** 07.02.22 **(33)** GB
**(43)** 10.08.2023
**(72)** DUCKWORTH, Rachel Emily; JONES, David Paul; PATEL, Bhavnita; PATEL, Roshni; TALSANIA, Monica; STANNARD, Alan John; TARA, Amrit Kaur
**(74)** James & Wells Intellectual Property

---

**(71)** FROMM HOLDING AG
**(11)** AU-A-2023230185
**(21)** 2023230185 **(22)** 07.03.2023
**(54)** STRAPPING DEVICE
**(51)** Int. Cl.
***B65B 13/02*** ( 2006.01 )
**(87)** WO2023/170093
**(31)** CH000232/2022 **(32)** 07.03.22 **(33)** CH
**(43)** 14.09.2023
**(72)** BASSLER, Jürgen; LEPPERT, Klaus; ECKERT, Markus; WALL, Steffen
**(74)** Spruson & Ferguson

---

**(71)** FUNDACIÓ CENTRE DE REGULACIÓ GENÒMICA; INSTITUCIÓ CATALANA DE RECERCA I ESTUDIS AVANÇATS
**(11)** AU-A-2023210838
**(21)** 2023210838 **(22)** 30.01.2023
**(54)** THERAPEUTIC CYTOKINES AND METHODS
**(51)** Int. Cl.
***A61P 29/00*** ( 2006.01 )
***C07K 14/54*** ( 2006.01 )
**(87)** WO2023/144393
**(31)** 22382073.9 **(32)** 28.01.22 **(33)** EP
**(43)** 03.08.2023
**(72)** DELGADO BLANCO, Francisco Javier; SERRANO PUBUL, Luís; MONTERO BLAY, Ariadna
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** GENENTECH, INC.
**(11)** AU-A-2023232080
**(21)** 2023232080 **(22)** 06.03.2023
**(54)** RANDOM HETEROPOLYMER EXCIPIENTS FOR HIGH PROTEIN CONCENTRATION FORMULATIONS
**(51)** Int. Cl.
***C08F 220/14*** ( 2006.01 )
***C08F 220/28*** ( 2006.01 )
**(87)** WO2023/172864
**(31)** 63/317,648 **(32)** 08.03.22 **(33)** US
**(43)** 14.09.2023
**(72)** WOYS, Ann Marie; MESSINA, Kathryn Margaret Mansfield
**(74)** Griffith Hack

---

**(71)** GENIS HF.
**(11)** AU-A-2022417673
**(21)** 2022417673 **(22)** 20.12.2022
**(54)** IMPLANTS WITH BIOACTIVE COATING COMPRISING PARTIALLY DEACETYLATED CHITOSAN
**(51)** Int. Cl.
***A61L 27/06*** ( 2006.01 )
***A61L 27/20*** ( 2006.01 )
***A61L 27/34*** ( 2006.01 )
**(87)** WO2023/119335
**(31)** IS 050351 **(32)** 20.12.21 **(33)** IS
**(43)** 29.06.2023
**(72)** NG, Chuen How; ORLYGSSON, Gissur
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** GENNY FACTORY SA
**(11)** AU-A-2023206800
**(21)** 2023206800 **(22)** 16.01.2023
**(54)** PARKING DEVICE FOR A SELF-BALANCING WHEELCHAIR
**(51)** Int. Cl.
***A61G 5/10*** ( 2006.01 )
**(87)** WO2023/135279
**(31)** 102022000000602 **(32)** 17.01.22 **(33)** IT
**(43)** 20.07.2023
**(72)** BADANO, Paolo; WULLSCHLEGER, Luca
**(74)** Patent Attorney Services

---

**(71)** GENZYME CORPORATION
**(11)** AU-A-2022419588
**(21)** 2022419588 **(22)** 22.12.2022
**(54)** FITUSIRAN FOR USE IN IMPROVING PATIENT-REPORTED OUTCOME IN HEMOPHILIA PATIENTS
**(51)** Int. Cl.
***A61K 31/7105*** ( 2006.01 )
***A61P 7/04*** ( 2006.01 )
**(87)** WO2023/122713
**(31)** 63/293,070 **(32)** 22.12.21 **(33)** US
63/305,550 01.02.22 US
63/335,535 27.04.22 US
63/359,717 08.07.22 US
63/382,223 03.11.22 US
63/386,489 07.12.22 US
**(43)** 29.06.2023
**(72)** ANDERSSON, Shauna; BARTELT-HOFER, Jose; DASMAHAPATRA, Pronabesh
**(74)** Griffith Hack

---

**(71)** GEOTHERMAL TECHNOLOGIES, INC.
**(11)** AU-A-2022414101
**(21)** 2022414101 **(22)** 15.12.2022
**(54)** MULTIPLE WELL PAIRS FOR SCALING THE OUTPUT OF GEOTHERMAL ENERGY POWER PLANTS
**(51)** Int. Cl.
***F03G 4/00*** ( 2006.01 )
***F24T 10/10*** ( 2018.01 )
**(87)** WO2023/114917
**(31)** 17/554,126 **(32)** 17.12.21 **(33)** US
**(43)** 22.06.2023
**(72)** MARSH, Bruce, D.; KARIMI, Saman; HOLLIS, James; MCDANIEL, J. Gary
**(74)** Davies Collison Cave Pty Ltd

---

**PCT applications which have entered the National Phase - Name Index cont'd**

**(71)** GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED
**(11)** AU-A-2023213173
**(21)** 2023213173 **(22)** 26.01.2023
**(54)** COMBINATION THERAPY FOR TREATING HEPATITIS B VIRUS INFECTIONS
**(51)** Int. Cl.
***A61P 31/20*** ( 2006.01 )
***A61K 31/00*** ( 2006.01 )
***A61K 31/7105*** ( 2006.01 )
***A61K 31/7115*** ( 2006.01 )
**(87)** WO2023/144750
**(31)** 63/304,091 **(32)** 28.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** DELAHAYE, Jared Loren; LEIVERS, Martin R.; OKOUR, Malek; YOU, Shihyun Kieffer
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** GLENCORE OPERATIONS SOUTH AFRICA (PTY) LIMITED
**(11)** AU-A-2023255789
**(21)** 2023255789 **(22)** 21.04.2023
**(54)** SLEEVE AND METHOD FOR THERMALLY-INSULATING A BLAST HOLE
**(51)** Int. Cl.
***F42D 1/08*** ( 2006.01 )
**(87)** WO2023/205823
**(31)** 2022/04166 **(32)** 21.04.22 **(33)** ZA
**(43)** 26.10.2023
**(72)** STENZEL, Gerhard Johann
**(74)** Armour IP

---

**(71)** GOLDWIND SCIENCE & TECHNOLOGY CO., LTD.
**(11)** AU-A-2022414369
**(21)** 2022414369 **(22)** 14.03.2022
**(54)** CONTROL METHOD AND CONTROL APPARATUS FOR VOLTAGE-SOURCE-TYPE WIND TURBINE GENERATOR SYSTEM
**(51)** Int. Cl.
***H02J 3/24*** ( 2006.01 )
**(87)** WO2023/108926
**(31)** 202111535560.3 **(32)** 15.12.21 **(33)** CN
**(43)** 22.06.2023
**(72)** GUO, Rui; YU, Xiao; LIU, Chuang
**(74)** Madderns Pty Ltd

---

**(71)** GOLDWIND SCIENCE & TECHNOLOGY CO., LTD.
**(11)** AU-A-2022427999
**(21)** 2022427999 **(22)** 29.06.2022
**(54)** ZERO-SEQUENCE CURRENT SUPPRESSION METHOD AND DEVICE, CONVERTER AND WIND GENERATING SET
**(51)** Int. Cl.
***H02M 1/32*** ( 2007.01 )
***H02J 3/38*** ( 2006.01 )
**(87)** WO2023/123947
**(31)** 202111632947.0 **(32)** 29.12.21 **(33)** CN
**(43)** 06.07.2023
**(72)** WANG, Jinpeng
**(74)** Madderns Pty Ltd

---

**(71)** GOOGLE LLC
**(11)** AU-A-2023213763
**(21)** 2023213763 **(22)** 30.01.2023
**(54)** ROUTING TO EXPERT SUBNETWORKS IN MIXTURE-OF-EXPERTS NEURAL NETWORKS
**(51)** Int. Cl.
***G06N 3/045*** ( 2023.01 )
**(87)** WO2023/147140
**(31)** 63/304,507 **(32)** 28.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** LIU, Hanxiao; LE, Quoc V.; ZHOU, Yanqi; LEI, Tao; ZHAO, Yuzhe; HUANG, Yanping; DU, Nan; CHEN, Zhifeng; DAI, Andrew M.; LAUDON, James
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** GREEN CROSS CORPORATION; HANMI PHARM. CO., LTD.
**(11)** AU-A-2023233398
**(21)** 2023233398 **(22)** 10.03.2023
**(54)** LYOPHILIZED FORMULATION COMPRISING A FUSION PROTEIN INCLUDING α-GALACTOSIDASE A
**(51)** Int. Cl.
***A61K 9/19*** ( 2006.01 )
***A61K 38/47*** ( 2006.01 )
***A61K 47/02*** ( 2006.01 )
***A61K 47/12*** ( 2006.01 )
***A61K 47/18*** ( 2017.01 )
***A61K 47/22*** ( 2006.01 )
***A61K 47/26*** ( 2006.01 )
***A61K 47/68*** ( 2017.01 )
***A61P 3/00*** ( 2006.01 )
***A61P 43/00*** ( 2006.01 )
**(87)** WO2023/177159
**(31)** 10-2022-0032091 **(32)** 15.03.22 **(33)** KR
**(43)** 21.09.2023
**(72)** KIM, Miroo; YOO, Miri; SON, Jae Woon; PARK, Da-eui; YI, Shin-Ae; KIM, Jin Young; PARK, Jun Sub; JANG, Doo Seo; HONG, Sung Hee; KIM, Sang Yun
**(74)** James & Wells Intellectual Property

---

**(71)** GREEN CROSS CORPORATION; HANMI PHARM. CO., LTD.
**(11)** AU-A-2023234973
**(21)** 2023234973 **(22)** 10.03.2023
**(54)** LIQUID FORMULATION COMPRISING A FUSION PROTEIN INCLUDING α-GALACTOSIDASE A
**(51)** Int. Cl.
***A61K 9/08*** ( 2006.01 )
***A61K 9/00*** ( 2006.01 )
***A61K 38/47*** ( 2006.01 )
***A61K 47/02*** ( 2006.01 )
***A61K 47/12*** ( 2006.01 )
***A61K 47/18*** ( 2017.01 )
***A61K 47/22*** ( 2006.01 )
***A61K 47/26*** ( 2006.01 )
***A61K 47/68*** ( 2017.01 )
***A61P 3/00*** ( 2006.01 )
**(87)** WO2023/177158
**(31)** 10-2022-0032090 **(32)** 15.03.22 **(33)** KR
**(43)** 21.09.2023
**(72)** KIM, Miroo; YOO, Miri; SON, Jae Woon; PARK, Da-eui; YI, Shin-Ae; KIM, Jin Young; PARK, Jun Sub; JANG, Doo Seo; HONG, Sung Hee; KIM, Sang Yun
**(74)** James & Wells Intellectual Property

---

**(71)** GTINVENT LIMITED
**(11)** AU-A-2023206604
**(21)** 2023206604 **(22)** 12.01.2023
**(54)** METHOD FOR DETECTING A TAU PROTEIN IN A SALIVA SAMPLE
**(51)** Int. Cl.
***C07K 16/18*** ( 2006.01 )
***A61K 39/00*** ( 2006.01 )
***C07K 14/47*** ( 2006.01 )
***G01N 33/487*** ( 2006.01 )
***G01N 33/574*** ( 2006.01 )
***G01N 33/68*** ( 2006.01 )
**(87)** WO2023/135200
**(31)** 2200326.3 **(32)** 12.01.22 **(33)** GB
**(43)** 20.07.2023
**(72)** LOFTHOUSE, Richard; PENNY, Lewis Kirk; ARASTOO, Mohammad; PALLIYIL SOMAN, Soumya; PORTER, Andrew Justin Radcliffe; WISCHIK, Claude Michel
**(74)** FB Rice Pty Ltd

---

**(71)** H.J. HEINZ COMPANY BRANDS LLC
**(11)** AU-A-2023207602
**(21)** 2023207602 **(22)** 11.01.2023
**(54)** CONTAINER, CLOSURE, AND METHODS FOR MANUFACTURE
**(51)** Int. Cl.
***B65D 43/16*** ( 2006.01 )
***B65D 43/02*** ( 2006.01 )
***B65D 47/06*** ( 2006.01 )
**(87)** WO2023/137052
**(31)** 63/298,522 **(32)** 11.01.22 **(33)** US
**(43)** 20.07.2023
**(72)** HILTSER, Balint; DE JONG, Jonathan Ralph; SCHOLTE, Geert Petrus Jacobus; HEMMES, Bastiaan Pieter; STAM, Fredrik Cornelis; DEVRIES, Charlotte Catherine Erik
**(74)** AJ PARK

---

**(71)** HALLIBURTON ENERGY SERVICES, INC.
**(11)** AU-A-2022464726
**(21)** 2022464726 **(22)** 21.06.2022
**(54)** SYNTHETIC SILICA GLASS IN NON-PORTLAND CEMENTS
**(51)** Int. Cl.
***C09K 8/467*** ( 2006.01 )
***C04B 28/04*** ( 2006.01 )
***C04B 28/06*** ( 2006.01 )
***C04B 28/24*** ( 2006.01 )
***E21B 33/14*** ( 2006.01 )
**(87)** WO2023/244273
**(31)** 17/807,106 **(32)** 15.06.22 **(33)** US
**(43)** 21.12.2023
**(72)** PISKLAK, Thomas, Jason; AGAPIOU, Kyriacos; LEWIS, Samuel, J.
**(74)** Spruson & Ferguson

---

**(71)** HANSHOW TECHNOLOGY CO., LTD.
**(11)** AU-A-2023231265
**(21)** 2023231265 **(22)** 08.03.2023

**PCT applications which have entered the National Phase - Name Index cont'd**

**(54)** ELECTRONIC PRICE TAG NETWORK ACCESS AND ROAMING COMMUNICATION METHOD AND SYSTEM
**(51)** Int. Cl.
***H04W 4/021*** ( 2018.01 )
**(87)** WO2023/169460
**(31)** 202210242934.0 **(32)** 11.03.22 **(33)** CN
**(43)** 14.09.2023
**(72)** LIANG, Min; HOU, Shiguo; JI, Yaping; WANG, Yujing; ZHANG, Ju; ZHANG, Guofeng; JIANG, Qi
**(74)** FB Rice Pty Ltd

---

**(71)** HEIDELBERG MATERIALS AG
**(11)** AU-A-2023230083
**(21)** 2023230083 **(22)** 16.02.2023
**(54)** METHOD FOR CARBONATING WASTE MATERIALS
**(51)** Int. Cl.
***B01D 53/62*** ( 2006.01 )
***C04B 18/00*** ( 2006.01 )
**(87)** WO2023/169798
**(31)** 22161403.5 **(32)** 10.03.22 **(33)** EP
22166347.9 01.04.22 EP
**(43)** 14.09.2023
**(72)** SKOCEK, Jan; SCHADE, Tim; DIENEMANN, Wolfgang
**(74)** Griffith Hack

---

**(71)** HEIDELBERG MATERIALS AG
**(11)** AU-A-2023230207
**(21)** 2023230207 **(22)** 09.03.2023
**(54)** REMOVING HEAVY METALS FROM OFF-GAS FOR CARBON CAPTURE
**(51)** Int. Cl.
***B01D 53/62*** ( 2006.01 )
***B01D 53/64*** ( 2006.01 )
***B01D 53/80*** ( 2006.01 )
***C04B 20/02*** ( 2006.01 )
***C04B 28/02*** ( 2006.01 )
**(87)** WO2023/170203
**(31)** 22161403.5 **(32)** 10.03.22 **(33)** EP
**(43)** 14.09.2023
**(72)** CARRASCO MALDONADO, Francisco; ZAJAC, Maciej; PATO, Nicolas
**(74)** Griffith Hack

---

**(71)** HELSINGIN YLIOPISTO
**(11)** AU-A-2022418344
**(21)** 2022418344 **(22)** 23.12.2022
**(54)** METHOD FOR SCREENING A SIGNAL PEPTIDE FOR EFFICIENT EXPRESSION AND SECRETION OF A HETEROLOGOUS POLYPEPTIDE IN MAMMALIAN CELLS
**(51)** Int. Cl.
***C07K 14/705*** ( 2006.01 )
***C07K 19/00*** ( 2006.01 )
***C12N 15/86*** ( 2006.01 )
**(87)** WO2023/118670
**(31)** 20216346 **(32)** 23.12.21 **(33)** FI
**(43)** 29.06.2023
**(72)** PAAVILAINEN, Ville; KELLOSALO, Juho; CARLSON, Paul; ROSTI, Katja; GREEN, Maryna; NANEKAR, Rahul
**(74)** FB Rice Pty Ltd

---

**(71)** HETTICH-ONI GMBH & CO. KG
**(11)** AU-A-2023208258
**(21)** 2023208258 **(22)** 10.01.2023
**(54)** ITEM OF FURNITURE
**(51)** Int. Cl.
***E05D 3/02*** ( 2006.01 )
***E05D 15/26*** ( 2006.01 )
***E05D 15/40*** ( 2006.01 )
***E05F 1/10*** ( 2006.01 )
***E05F 1/12*** ( 2006.01 )
***E05F 5/02*** ( 2006.01 )
***E05F 5/06*** ( 2006.01 )
***E05F 5/10*** ( 2006.01 )
**(87)** WO2023/138943
**(31)** 10 2022 101 401.0 **(32)** 21.01.22 **(33)** DE
**(43)** 27.07.2023
**(72)** TOFALL, Ralf
**(74)** FOUNDRY INTELLECTUAL PROPERTY PTY LTD

---

**(71)** HETTICH-ONI GMBH & CO. KG
**(11)** AU-A-2023208849
**(21)** 2023208849 **(22)** 10.01.2023
**(54)** FLAP FITTING AND ITEM OF FURNITURE
**(51)** Int. Cl.
***E05D 3/02*** ( 2006.01 )
***E05D 11/06*** ( 2006.01 )
***E05D 15/26*** ( 2006.01 )
***E05D 15/40*** ( 2006.01 )
***E05F 1/12*** ( 2006.01 )
***E05F 5/02*** ( 2006.01 )
***E05F 5/10*** ( 2006.01 )
**(87)** WO2023/138942
**(31)** 10 2022 101 398.7 **(32)** 21.01.22 **(33)** DE
**(43)** 27.07.2023
**(72)** TOFALL, Ralf
**(74)** FOUNDRY INTELLECTUAL PROPERTY PTY LTD

---

**(71)** HETTICH-ONI GMBH & CO. KG
**(11)** AU-A-2023210030
**(21)** 2023210030 **(22)** 10.01.2023
**(54)** ITEM OF FURNITURE
**(51)** Int. Cl.
***E05F 1/12*** ( 2006.01 )
**(87)** WO2023/138944
**(31)** 10 2022 101 400.2 **(32)** 21.01.22 **(33)** DE
**(43)** 27.07.2023
**(72)** TOFALL, Ralf
**(74)** FOUNDRY INTELLECTUAL PROPERTY PTY LTD

---

**(71)** HIGGINS RESEARCH & DEVELOPMENT, LLC
**(11)** AU-A-2022432802
**(21)** 2022432802 **(22)** 28.06.2022
**(54)** FLOOR COVERING
**(51)** Int. Cl.
***D05C 17/02*** ( 2006.01 )
***A47G 27/02*** ( 2006.01 )
***A47G 27/04*** ( 2006.01 )
***B32B 5/06*** ( 2006.01 )
***B32B 5/26*** ( 2006.01 )
***B32B 7/12*** ( 2006.01 )
***D06N 7/00*** ( 2006.01 )
**(87)** WO2023/136857
**(31)** 17/573,811 **(32)** 12.01.22 **(33)** US
**(43)** 20.07.2023
**(72)** HIGGINS, Kenneth, B.
**(74)** IP GATEWAY PATENT & TRADE MARK ATTORNEYS PTY LTD

---

**(71)** HILL'S PET NUTRITION, INC.
**(11)** AU-A-2023217068
**(21)** 2023217068 **(22)** 09.02.2023
**(54)** PET FOOD COMPOSITIONS
**(51)** Int. Cl.
***A23K 10/20*** ( 2016.01 )
***A23K 10/22*** ( 2016.01 )
***A23K 10/26*** ( 2016.01 )
***A23K 10/30*** ( 2016.01 )
***A23K 10/35*** ( 2016.01 )
***A23K 20/142*** ( 2016.01 )
***A23K 20/158*** ( 2016.01 )
***A23K 20/174*** ( 2016.01 )
***A23K 20/22*** ( 2016.01 )
***A23K 20/24*** ( 2016.01 )
***A23K 40/30*** ( 2016.01 )
***A23K 50/40*** ( 2016.01 )
**(87)** WO2023/154792
**(31)** 63/308,703 **(32)** 10.02.22 **(33)** US
**(43)** 17.08.2023
**(72)** BADRI, Dayakar; JEWELL, Dennis; PANICKAR, Kiran
**(74)** FOUNDRY INTELLECTUAL PROPERTY PTY LTD

---

**(71)** HOYA TECHNOSURGICAL CORPORATION
**(11)** AU-A-2022420084
**(21)** 2022420084 **(22)** 18.11.2022
**(54)** OSTEOSYNTHESIS IMPLEMENT, OSTEOSYNTHESIS SET, AND OSTEOSYNTHESIS MEMBER SET
**(51)** Int. Cl.
***A61B 17/76*** ( 2006.01 )
***A61B 17/72*** ( 2006.01 )
**(87)** WO2023/119979
**(31)** 2021-208193 **(32)** 22.12.21 **(33)** JP
**(43)** 29.06.2023
**(72)** YANAGIDA Shun; ONOSE Takeshi
**(74)** FB Rice Pty Ltd

---

**(71)** HUAWEI TECHNOLOGIES CO., LTD.
**(11)** AU-A-2022430626
**(21)** 2022430626 **(22)** 17.10.2022
**(54)** CODING CONFIGURATION METHOD AND APPARATUS
**(51)** Int. Cl.
***H04L 1/00*** ( 2006.01 )
**(87)** WO2023/130796
**(31)** 202210015997.2 **(32)** 07.01.22 **(33)** CN
**(43)** 13.07.2023
**(72)** WU, Xuming; LUO, Chengxian
**(74)** Spruson & Ferguson

---

**(71)** HUAWEI TECHNOLOGIES CO., LTD.
**(11)** AU-A-2022430796
**(21)** 2022430796 **(22)** 25.07.2022
**(54)** MULTI-LINK COMMUNICATION METHOD AND MULTI-LINK DEVICE
**(51)** Int. Cl.
***H04W 28/04*** ( 2009.01 )
**(87)** WO2023/130713

## PCT applications which have entered the National Phase - Name Index cont'd

**(31)** 202210023124.6 **(32)** 10.01.22 **(33)** CN
**(43)** 13.07.2023
**(72)** LI, Yiqing; LI, Yunbo; GUO, Yuchen; GAN, Ming
**(74)** Spruson & Ferguson

---

**(71)** HUAWEI TECHNOLOGIES CO., LTD.
**(11)** AU-A-2022432618
**(21)** 2022432618 **(22)** 30.12.2022
**(54)** METHOD AND APPARATUS FOR TRANSMITTING RANGING SIGNAL IN UWB, AND READABLE STORAGE MEDIUM
**(51)** Int. Cl.
***H04W 4/029*** ( 2018.01 )
**(87)** WO2023/134473
**(31)** 202210045268.1 **(32)** 15.01.22 **(33)** CN
**(43)** 20.07.2023
**(72)** SUN, Li; LIU, Peng; WANG, Yuwei
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** HUAWEI TECHNOLOGIES CO., LTD.
**(11)** AU-A-2023206483
**(21)** 2023206483 **(22)** 04.01.2023
**(54)** BROADCAST COMMUNICATION METHOD AND APPARATUS
**(51)** Int. Cl.
***H04W 72/00*** ( 2023.01 )
**(87)** WO2023/134516
**(31)** 202210030311.7 **(32)** 12.01.22 **(33)** CN
**(43)** 20.07.2023
**(72)** LI, Meng; LI, Bingzhao; WANG, Yan
**(74)** Spruson & Ferguson

---

**(71)** HUAWEI TECHNOLOGIES CO., LTD.
**(11)** AU-A-2023209486
**(21)** 2023209486 **(22)** 06.01.2023
**(54)** MULTI-LINK COMMUNICATION METHOD AND APPARATUS
**(51)** Int. Cl.
***H04L 45/24*** ( 2022.01 )
**(87)** WO2023/138414
**(31)** 202210076088.X **(32)** 23.01.22 **(33)** CN
202210109328.1 28.01.22 CN
**(43)** 27.07.2023
**(72)** LI, Yunbo; LI, Yiqing; GAN, Ming; GUO, Yuchen
**(74)** Halfords IP

---

**(71)** ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI; THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL; THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY; THE REGENTS OF THE UNIVERSITY OF CALIFORNIA; JAIN, M.; SLOCUM, S.; SKINIOTIS, G.; BARROS, X.
**(11)** AU-A-2022409512
**(21)** 2022409512 **(22)** 16.12.2022
**(54)** HETEROCYCLIC COMPOUNDS AS 5HT2A BIASED AGONISTS
**(51)** Int. Cl.
***A61K 31/33*** ( 2006.01 )
***A61K 31/395*** ( 2006.01 )
***A61K 31/40*** ( 2006.01 )
*A61K 31/407* ( 2006.01 )
**(87)** WO2023/114472
**(31)** 63/290,602 **(32)** 16.12.21 **(33)** US
63/407,529 16.09.22 US
**(43)** 22.06.2023
**(72)** JAIN, Manish; SLOCUM, Samuel; SKINIOTIS, Georgios; BARROS, Ximena; JIN, Jian; KANISKAN, H. Umit; SUN, Ning; SUN, Rehong; XIONG, Yan; SHEN, Yudao; XU, Zhongli; QIU, Xing; QIAN, Chao; SONG, Xiangyang; DENG, Zhijie; ROTH, Bryan; DIBERTO, Jeffrey; KUGLAE, Kim; SUOMIVUORI, Carl-Mikael; DAEMGEN, Marc A.; DROR, Ron; SHOICHET, Brian; KAPLAN, Anat Levit
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** ICONEX LLC
**(11)** AU-A-2023212417
**(21)** 2023212417 **(22)** 31.01.2023
**(54)** CONTAINER CONTENT ALIGNMENT APPARATUS AND SYSTEM
**(51)** Int. Cl.
***B65D 5/32*** ( 2006.01 )
*B65D 5/44* ( 2006.01 )
*B65D 5/46* ( 2006.01 )
*B65D 5/50* ( 2006.01 )
*G09F 3/20* ( 2006.01 )
**(87)** WO2023/147598
**(31)** 17/589,362 **(32)** 31.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** LIVINGSTON, Timothy Darren
**(74)** Spruson & Ferguson

---

**(71)** ILOQ OY
**(11)** AU-A-2023206011
**(21)** 2023206011 **(22)** 05.01.2023
**(54)** A LOCKING SYSTEM OF ONE OR MORE BUILDINGS
**(51)** Int. Cl.
***G07C 9/00*** ( 2020.01 )
**(87)** WO2023/131646
**(31)** 22150537.3 **(32)** 07.01.22 **(33)** EP
**(43)** 13.07.2023
**(72)** KARJALAINEN, Tomi; LEPISTÖ, Juha
**(74)** Griffith Hack

---

**(71)** I-MAB BIOPHARMA CO., LTD.
**(11)** AU-A-2023205989
**(21)** 2023205989 **(22)** 09.01.2023
**(54)** MULTISPECIFIC CONSTRUCTS AND USES THEREOF
**(51)** Int. Cl.
***C07K 16/46*** ( 2006.01 )
***C07K 16/28*** ( 2006.01 )
***C07K 16/44*** ( 2006.01 )
**(87)** WO2023/131329
**(31)** PCT/ **(32)** 09.01.22 **(33)** CN
CN2022/070870
PCT/ 06.09.22 CN
CN2022/117334
**(43)** 13.07.2023
**(72)** JIANG, Wenqing; LI, Jian; CHEN, Xi; LIU, Yan; GUO, Bingshi
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** IMDEX TECHNOLOGIES PTY LTD
**(11)** AU-A-2022419406
**(21)** 2022419406 **(22)** 22.12.2022
**(54)** DEPTH MEASUREMENT WITHIN A BOREHOLE
**(51)** Int. Cl.
***E21B 47/04*** ( 2012.01 )
***E21B 44/00*** ( 2006.01 )
***E21B 47/01*** ( 2012.01 )
***E21B 47/024*** ( 2006.01 )
**(87)** WO2023/115151
**(31)** 2021904223 **(32)** 23.12.21 **(33)** AU
**(43)** 29.06.2023
**(72)** KOPLAN, Chris; HAY, Wayne; WHITE, Matthew; BLAINE, Fred
**(74)** FB Rice Pty Ltd

---

**(71)** INARI MEDICAL, INC.
**(11)** AU-A-2023217032
**(21)** 2023217032 **(22)** 19.01.2023
**(54)** CLOT TREATMENT SYSTEMS WITH DILATOR LOCKING MECHANISMS, AND ASSOCIATED DEVICES AND METHODS
**(51)** Int. Cl.
***A61M 25/18*** ( 2006.01 )
***A61M 39/10*** ( 2006.01 )
**(87)** WO2023/154612
**(31)** 63/307,766 **(32)** 08.02.22 **(33)** US
**(43)** 17.08.2023
**(72)** LONG, Joshua Garrett; BARKLEY, Mikayla Ann; MERRITT, Benjamin Edward
**(74)** RnB IP Pty Ltd

---

**(71)** INBIOSE N.V.
**(11)** AU-A-2022409554
**(21)** 2022409554 **(22)** 14.12.2022
**(54)** PRODUCTION OF ALPHA-1,3-FUCOSYLATED COMPOUNDS
**(51)** Int. Cl.
***C12N 9/10*** ( 2006.01 )
***C07H 1/08*** ( 2006.01 )
***C12P 19/18*** ( 2006.01 )
**(87)** WO2023/110995
**(31)** LU501009 **(32)** 14.12.21 **(33)** LU
21214480.2 14.12.21 EP
**(43)** 22.06.2023
**(72)** BEAUPREZ, Joeri; VANDEWALLE, Kristof; VERCAUTEREN, Annelies
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** INBIOSE N.V.
**(11)** AU-A-2022415533
**(21)** 2022415533 **(22)** 14.12.2022
**(54)** PRODUCTION OF ALPHA-1,4-FUCOSYLATED COMPOUNDS
**(51)** Int. Cl.
***C12P 19/18*** ( 2006.01 )
***C12N 5/0775*** ( 2010.01 )
**(87)** WO2023/110994
**(31)** LU501008 **(32)** 14.12.21 **(33)** LU
21214478.6 14.12.21 EP
**(43)** 22.06.2023
**(72)** BEAUPREZ, Joeri; VANDEWALLE, Kristof; VERCAUTEREN, Annelies
**(74)** FPA Patent Attorneys Pty Ltd

**PCT applications which have entered the National Phase - Name Index cont'd**

**(71)** INNOVATIVE MOLECULES GMBH
**(11)** AU-A-2023206628
**(21)** 2023206628 **(22)** 16.01.2023
**(54)** SOLID CRYSTALLINE FORMS OF HELICASE-PRIMASE INHIBITORS AND PROCESS OF PREPARATION THEREOF
**(51)** Int. Cl.
***C07D 277/54*** ( 2006.01 )
***A61K 31/426*** ( 2006.01 )
***A61P 31/22*** ( 2006.01 )
**(87)** WO2023/135303
**(31)** 22151820.2 **(32)** 17.01.22 **(33)** EP
22170332.5 27.04.22 EP
**(43)** 20.07.2023
**(72)** KLEYMANN, Gerald; GEGE, Christian
**(74)** AJ PARK

---

**(71)** INNOVSTONE THERAPEUTICS LIMITED
**(11)** AU-A-2022412821
**(21)** 2022412821 **(22)** 15.12.2022
**(54)** AROMATIC HETEROCYCLIC COMPOUNDS, PREPARATION METHOD THEREFOR AND USES THEREOF
**(51)** Int. Cl.
***C07D 471/12*** ( 2006.01 )
***A61K 31/4375*** ( 2006.01 )
***A61K 31/4985*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07D 498/12*** ( 2006.01 )
**(87)** WO2023/109909
**(31)** 202111536972.9 **(32)** 15.12.21 **(33)** CN
202210449583.0 24.04.22 CN
**(43)** 22.06.2023
**(72)** SONG, Yunlong; ZHOU, Yuanshu; FU, Yiwei; LI, Dapei; WANG, Disha; KOU, Hongyan; ZHAO, Liang; LU, Kai; DONG, Weibing; LAI, Qingqin
**(74)** Churchill Attorneys

---

**(71)** INSIGHTS INTERNATIONAL HOLDINGS, LLC, DBA NANTRAK INDUSTRIES
**(11)** AU-A-2022405021
**(21)** 2022405021 **(22)** 08.12.2022
**(54)** TRACKING PROJECTILE FOR TARGET DESIGNATION
**(51)** Int. Cl.
***F42B 12/38*** ( 2006.01 )
*G01S 1/02* ( 2010.01 )
*G01S 19/00* ( 2010.01 )
**(87)** WO2023/107633
**(31)** 63/288,586 **(32)** 11.12.21 **(33)** US
**(43)** 15.06.2023
**(72)** PARKER, Evan; PARKER, Evan Jackson
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** INSINKERATOR LLC
**(11)** AU-A-2023217660
**(21)** 2023217660 **(22)** 13.02.2023
**(54)** BAFFLE WITH ANTI-REVERSE STOPPERS
**(51)** Int. Cl.
***E03C 1/266*** ( 2006.01 )
**(87)** WO2023/154503
**(31)** 63/309,772 **(32)** 14.02.22 **(33)** US
18/108,382 10.02.23 US
**(43)** 17.08.2023
**(72)** SANDOVAL, Matthew
**(74)** Spruson & Ferguson

---

**(71)** INSTANT SEED GMBH
**(11)** AU-A-2023208835
**(21)** 2023208835 **(22)** 17.01.2023
**(54)** PREPARATION SET FOR COATING SEEDS
**(51)** Int. Cl.
***A01N 63/20*** ( 2020.01 )
***A01N 25/00*** ( 2006.01 )
***A01N 25/24*** ( 2006.01 )
**(87)** WO2023/138722
**(31)** 10 2022 000 218.3 **(32)** 21.01.22 **(33)** DE
**(43)** 27.07.2023
**(72)** KRECISZ, Thomas; KRECISZ, Margarethe
**(74)** Integrated IP

---

**(71)** INSTIL BIO, INC.
**(11)** AU-A-2023209445
**(21)** 2023209445 **(22)** 19.01.2023
**(54)** RECEPTORS PROVIDING TARGETED COSTIMULATION FOR ADOPTIVE CELL THERAPY
**(51)** Int. Cl.
***C07K 14/715*** ( 2006.01 )
***C07K 14/47*** ( 2006.01 )
*A61K 38/17* ( 2006.01 )
*A61P 37/02* ( 2006.01 )
**(87)** WO2023/141530
**(31)** 63/301,340 **(32)** 20.01.22 **(33)** US
17/807,109 15.06.22 US
**(43)** 27.07.2023
**(72)** BRIDGEMAN, John; HAWKINS, Robert; RODRIGUEZ, Ruben; KUEBERUWA, Gray; KALAITSIDOU, Milena; KING, Michael Gavin
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** INTEGRITY ENGINEERING SOLUTIONS PTY LTD
**(11)** AU-A-2023207643
**(21)** 2023207643 **(22)** 14.01.2023
**(54)** SYSTEM FOR ASSEMBLY OF FLANGED JOINTS
**(51)** Int. Cl.
***G01L 5/24*** ( 2006.01 )
***B25B 13/50*** ( 2006.01 )
***F16L 23/00*** ( 2006.01 )
***F16L 23/02*** ( 2006.01 )
**(87)** WO2023/133612
**(31)** 2022900067 **(32)** 14.01.22 **(33)** AU
**(43)** 20.07.2023
**(72)** BROWN, Ian Warren
**(74)** Westmark IP

---

**(71)** INVAIO SCIENCES, INC.
**(11)** AU-A-2023208038
**(21)** 2023208038 **(22)** 12.01.2023
**(54)** HIGH YIELD MINICELL AND PROTEIN PRODUCING BACTERIAL STRAINS
**(51)** Int. Cl.
***A01N 63/50*** ( 2020.01 )
***A01N 25/02*** ( 2006.01 )
***A01N 25/14*** ( 2006.01 )
***A01N 63/20*** ( 2020.01 )
***A01P 1/00*** ( 2006.01 )
**(87)** WO2023/137383
**(31)** 63/299,321 **(32)** 13.01.22 **(33)** US
63/322,978 23.03.22 US
**(43)** 20.07.2023
**(72)** AVENDAÑO AMADO, Maier Steve; GRIFFIN, Lydia Jane; KRAEMER, James Aaron; SIMHADRI, Rama Krishna
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** INVIZYNE TECHNOLOGIES, INC.
**(11)** AU-A-2023204836
**(21)** 2023204836 **(22)** 06.01.2023
**(54)** RECOMBINANT POLYPEPTIDES WITH BERBERINE BRIDGE ENZYME ACTIVITY USEFUL FOR THE BIOSYNTHESIS OF CANNABINOIDS
**(51)** Int. Cl.
***C12N 9/02*** ( 2006.01 )
***C12N 15/63*** ( 2006.01 )
***C12Q 1/26*** ( 2006.01 )
*C07C 39/19* ( 2006.01 )
*C07D 311/58* ( 2006.01 )
*C07D 311/76* ( 2006.01 )
**(87)** WO2023/133483
**(31)** 63/297,561 **(32)** 07.01.22 **(33)** US
**(43)** 13.07.2023
**(72)** KORMAN, Tyler; BILLINGSLEY, John; HAYAT, Mohammad
**(74)** Blue Penguin IP Ltd

---

**(71)** ISOL8 (HOLDINGS) LIMITED
**(11)** AU-A-2023210385
**(21)** 2023210385 **(22)** 24.01.2023
**(54)** DOWNHOLE HEATING
**(51)** Int. Cl.
***E21B 36/00*** ( 2006.01 )
**(87)** WO2023/138905
**(31)** 2200887.4 **(32)** 24.01.22 **(33)** GB
**(43)** 27.07.2023
**(72)** LOUDEN, Andrew; LOWRY, William Edward; LIPP, Niall
**(74)** Spruson & Ferguson

---

**(71)** ITALTRACTOR ITM S.P.A.
**(11)** AU-A-2023213172
**(21)** 2023213172 **(22)** 26.01.2023
**(54)** WORK MACHINE COMPONENT
**(51)** Int. Cl.
***E02F 9/02*** ( 2006.01 )
***B62D 55/32*** ( 2006.01 )
***B66C 3/00*** ( 2006.01 )
***B66C 7/00*** ( 2006.01 )
***B66C 23/00*** ( 2006.01 )
***E02F 3/80*** ( 2006.01 )
***E02F 3/96*** ( 2006.01 )
***E02F 9/00*** ( 2006.01 )
***E02F 9/26*** ( 2006.01 )
***G01N 3/56*** ( 2006.01 )
***G01N 27/00*** ( 2006.01 )
**(87)** WO2023/144745
**(31)** 102022000001370 **(32)** 27.01.22 **(33)** IT

**PCT applications which have entered the National Phase - Name Index cont'd**

**(43)** 03.08.2023
**(72)** ECHAMANOV, Askar; CALIA, Eustachio; BELLINI, Adriano; SALSI, Stefano
**(74)** Origin Patent and Trade Mark Attorneys

---

**(71)** ITM ISOTOPE TECHNOLOGIES MUNICH SE
**(11)** AU-A-2023262181
**(21)** 2023262181 **(22)** 27.04.2023
**(54)** COMBINATION TREATMENT OF SMALL-CELL LUNG CANCER
**(51)** Int. Cl.
***A61K 51/04*** ( 2006.01 )
***A61K 51/08*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
**(87)** WO2023/209122
**(31)** PCT/ **(32)** 27.04.22 **(33)** EP
EP2022/061254
**(43)** 02.11.2023
**(72)** KOSSATZ, Susanne; WEBER, Wolfgang; RAUCH, Hartmut; MECKEL, Marian; ZHERNOSEKOV, Konstantin
**(74)** Allens Patent & Trade Mark Attorneys

---

**(71)** J.R. SIMPLOT COMPANY
**(11)** AU-A-2023206378
**(21)** 2023206378 **(22)** 13.01.2023
**(54)** METHODS FOR REDUCING INHERITED BOVINE CONGESTIVE HEART FAILURE RISK FACTORS IN A BOVINE POPULATION
**(51)** Int. Cl.
***C12Q 1/6883*** ( 2018.01 )
***C12Q 1/6888*** ( 2018.01 )
***G06Q 50/02*** ( 2012.01 )
**(87)** WO2023/137431
**(31)** 63/299,384 **(32)** 13.01.22 **(33)** US
**(43)** 20.07.2023
**(72)** RAYMOND, Randall; BUCHANAN, Justin
**(74)** Knightsbridge Patent Attorneys

---

**(71)** JALMRR, LLC
**(11)** AU-A-2023208742
**(21)** 2023208742 **(22)** 18.01.2023
**(54)** DEFLECTABLE CLEAT SYSTEM FOR FOOTWEAR
**(51)** Int. Cl.
***A43C 15/00*** ( 2006.01 )
***A43C 15/02*** ( 2006.01 )
***A43C 15/14*** ( 2006.01 )
***A43C 15/16*** ( 2006.01 )
***A43C 15/18*** ( 2006.01 )
*A43B 5/02* ( 2006.01 )
*A43B 21/26* ( 2006.01 )
*A43B 21/39* ( 2006.01 )
*A43B 21/433* ( 2006.01 )
*A43C 15/04* ( 2006.01 )
*A43C 15/09* ( 2006.01 )
**(87)** WO2023/141152
**(31)** 63/300,775 **(32)** 19.01.22 **(33)** US
63/332,654 19.04.22 US
**(43)** 27.07.2023
**(72)** RASMUSSEN, Jack, Stearns; RASMUSSEN, Jeffrey, Mark; STESZYN, Michael; RUEEGGER, Peter, Christian; MCMILLAN III, Joseph, Fulford; VALOIS, Peter, Andrew
**(74)** Northern Lights IP

---

**(71)** JANSSEN BIOTECH, INC.
**(11)** AU-A-2022410678
**(21)** 2022410678 **(22)** 13.12.2022
**(54)** VACCINES BASED ON MUTANT CALR AND JAK2 AND THEIR USES
**(51)** Int. Cl.
***C12N 9/12*** ( 2006.01 )
***C07K 16/28*** ( 2006.01 )
***C12N 15/861*** ( 2006.01 )
***C12N 15/863*** ( 2006.01 )
*A61K 39/00* ( 2006.01 )
*A61P 35/00* ( 2006.01 )
*C07K 19/00* ( 2006.01 )
**(87)** WO2023/111862
**(31)** 63/290,156 **(32)** 16.12.21 **(33)** US
63/317,143 07.03.22 US
**(43)** 22.06.2023
**(72)** WILKINSON, Patrick; SEPULVEDA, Manuel Alejandro; DRAKE, Charles George; SIEGEL, Derick
**(74)** Spruson & Ferguson

---

**(71)** JANSSEN BIOTECH, INC.
**(11)** AU-A-2022414274
**(21)** 2022414274 **(22)** 13.12.2022
**(54)** PROSTATE CANCER VACCINES AND USES THEREOF
**(51)** Int. Cl.
***A61K 39/00*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61P 13/08*** ( 2006.01 )
***C12N 15/861*** ( 2006.01 )
***C12N 15/863*** ( 2006.01 )
**(87)** WO2023/111861
**(31)** 63/290,164 **(32)** 16.12.21 **(33)** US
**(43)** 22.06.2023
**(72)** WILKINSON, Patrick; SEPULVEDA, Manuel Alejandro; DRAKE, Charles George; SIEGEL, Derick
**(74)** Spruson & Ferguson

---

**(71)** JANSSEN BIOTECH, INC.; THE UNIVERSITY OF TOKYO
**(11)** AU-A-2022414309
**(21)** 2022414309 **(22)** 16.12.2022
**(54)** IL-23 SPECIFIC ANTIBODIES FOR THE TREATMENT OF SYSTEMIC SCLEROSIS
**(51)** Int. Cl.
***A61P 37/06*** ( 2006.01 )
***C07K 16/24*** ( 2006.01 )
**(87)** WO2023/111981
**(31)** 63/290,987 **(32)** 17.12.21 **(33)** US
**(43)** 22.06.2023
**(72)** FUKASAWA, Takemichi; GAO, Sheng; KAKUI, Nobukazu; KAWASHIMA, Naoko; KIMURA, Takayuki; MORISHIMA, Hitomi; MUNOZ, Ernesto; ROSE, Shawn; SAKAMOTO, Takehiko; SATO, Shinichi; TOSO, John; UKYO, Yoshifumi; YOSHIZAKI, Ayumi; ZHENG, Richuan
**(74)** Spruson & Ferguson

---

**(71)** JIANGSU YAYO BIOTECHNOLOGY CO., LTD.
**(11)** AU-A-2022434686
**(21)** 2022434686 **(22)** 30.12.2022
**(54)** NEW TYPE PYRAZOLOPYRIMIDINE COMPOUND AND COMPOSITION THEREOF, PREPARATION METHOD THEREFOR AND USE THEREOF
**(51)** Int. Cl.
***C07D 487/04*** ( 2006.01 )
***A61K 31/519*** ( 2006.01 )
***A61K 31/5386*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07D 498/08*** ( 2006.01 )
**(87)** WO2023/138343
**(31)** 202210053350.9 **(32)** 18.01.22 **(33)** CN
**(43)** 27.07.2023
**(72)** XIAO, Fei; WENG, Yali; WU, Meng
**(74)** Halfords IP

---

**(71)** JTL ENTERPRISES, INC.
**(11)** AU-A-2023207610
**(21)** 2023207610 **(22)** 12.01.2023
**(54)** APPARATUS FOR COLD AND HEAT THERAPY IN A RECLINED POSITION
**(51)** Int. Cl.
***A61H 9/00*** ( 2006.01 )
*A61H 23/04* ( 2006.01 )
**(87)** WO2023/137092
**(31)** 63/299,326 **(32)** 13.01.22 **(33)** US
18/095,796 11.01.23 US
**(43)** 20.07.2023
**(72)** LUNTER, Paul; SIMOES, Mario; ELLIOT, Timothy; CONAWAY, Kevin; JOHNSON, Larry; PALMER, Jesse
**(74)** WRAYS PTY LTD

---

**(71)** KASHIV BIOSCIENCES, LLC
**(11)** AU-A-2023223660
**(21)** 2023223660 **(22)** 25.02.2023
**(54)** A PROCESS FOR IMPROVING POLYPEPTIDE EXPRESSION IN MAMMALIAN CELL CULTURE
**(51)** Int. Cl.
***C12P 21/00*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***C12N 5/00*** ( 2006.01 )
*G01N 33/68* ( 2006.01 )
**(87)** WO2023/161885
**(31)** 202221010310 **(32)** 25.02.22 **(33)** IN
**(43)** 31.08.2023
**(72)** BHAVSAR, Kaumil Bhupendra bhai; PATEL, Ghanshyam Madhabhai; VAISHNAV, Parth Hitarthbhai
**(74)** FB Rice Pty Ltd

---

**(71)** KDH ADVANCED RESEARCH PTY LTD
**(11)** AU-A-2023207134
**(21)** 2023207134 **(22)** 17.01.2023
**(54)** SEE THROUGH DISPLAY
**(51)** Int. Cl.
***G02B 27/01*** ( 2006.01 )
***G02B 5/20*** ( 2006.01 )
***G02B 26/10*** ( 2006.01 )
***G02B 27/09*** ( 2006.01 )
***G06F 3/01*** ( 2006.01 )
**(87)** WO2023/133614
**(31)** 2022900077 **(32)** 17.01.22 **(33)** AU

**PCT applications which have entered the National Phase - Name Index cont'd**

**(43)** 20.07.2023
**(72)** UNNITHAN, Ranjith Rajasekharan; LIANG, Wei-Young
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** KEMIWATT; UNIVERSITE DE RENNES; CENTRALE LILLE INSTITUT; CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE
**(11)** AU-A-2023211813
**(21)** 2023211813 **(22)** 27.01.2023
**(54)** NOVEL AQUEOUS-PHASE REDOX FLOW BATTERIES
**(51)** Int. Cl.
***H01M 8/18*** ( 2006.01 )
***C08K 5/13*** ( 2006.01 )
**(87)** WO2023/144319
**(31)** FR2200707 **(32)** 27.01.22 **(33)** FR
**(43)** 03.08.2023
**(72)** GODET-BAR, Thibault; OZOUF, Guillaume; FLONER, Didier; GENESTE, Florence; GUIHENEUF, Solène; FONTMORIN, Jean-Marie; AUBRY, Jean-Marie; RATAJ, Véronique; LEBEUF, Raphael; GAUDIN, Théophile
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** KEYTHERA (SUZHOU) BIO-PHARMACEUTICALS CO., LIMITED
**(11)** AU-A-2022411308
**(21)** 2022411308 **(22)** 01.12.2022
**(54)** PARP INHIBITOR, PHARMACEUTICAL COMPOSITION COMPRISING SAME, AND USE THEREOF
**(51)** Int. Cl.
***C07D 471/04*** ( 2006.01 )
***A61K 31/4375*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07D 401/14*** ( 2006.01 )
***C07D 403/14*** ( 2006.01 )
***C07D 487/04*** ( 2006.01 )
**(87)** WO2023/109521
**(31)** 202111559484.X **(32)** 17.12.21 **(33)** CN
**(43)** 22.06.2023
**(72)** DENG, Yongqi; TIAN, Yuan; JIA, Yanlin; ZHU, Shijun
**(74)** FB Rice Pty Ltd

---

**(71)** KOMATSU LTD.
**(11)** AU-A-2023208395
**(21)** 2023208395 **(22)** 23.01.2023
**(54)** IMAGE CORRECTION DEVICE, IMAGE CORRECTION METHOD, AND REMOTE OPERATION SYSTEM
**(51)** Int. Cl.
***E02F 9/26*** ( 2006.01 )
***E02F 9/20*** ( 2006.01 )
**(87)** WO2023/140372
**(31)** 2022-008826 **(32)** 24.01.22 **(33)** JP
**(43)** 27.07.2023
**(72)** MATSUMURA Yukinori
**(74)** FB Rice Pty Ltd

---

**(71)** KOMATSU LTD.
**(11)** AU-A-2023212554
**(21)** 2023212554 **(22)** 24.01.2023
**(54)** CONTROL SYSTEM, WORK VEHICLE, AND WORK VEHICLE CONTROL METHOD
**(51)** Int. Cl.
***B60L 58/40*** ( 2019.01 )
***H01M 8/00*** ( 2016.01 )
***H01M 8/043*** ( 2016.01 )
***H01M 8/04313*** ( 2016.01 )
***H01M 8/04537*** ( 2016.01 )
***H01M 8/04694*** ( 2016.01 )
***H01M 8/04858*** ( 2016.01 )
**(87)** WO2023/145719
**(31)** 2022-012530 **(32)** 31.01.22 **(33)** JP
**(43)** 03.08.2023
**(72)** YAMAWAKI Shota
**(74)** FB Rice Pty Ltd

---

**(71)** KOMATSU LTD.
**(11)** AU-A-2023213255
**(21)** 2023213255 **(22)** 24.01.2023
**(54)** FUEL CELL SYSTEM AND CONTROL METHOD
**(51)** Int. Cl.
***H01M 8/04858*** ( 2016.01 )
***H01M 8/04313*** ( 2016.01 )
***H01M 8/0432*** ( 2016.01 )
***H01M 8/249*** ( 2016.01 )
**(87)** WO2023/145706
**(31)** 2022-012814 **(32)** 31.01.22 **(33)** JP
**(43)** 03.08.2023
**(72)** EBISUZAKI Hideyo
**(74)** FB Rice Pty Ltd

---

**(71)** KONINKLIJKE DOUWE EGBERTS B.V.
**(11)** AU-A-2022422285
**(21)** 2022422285 **(22)** 20.12.2022
**(54)** PROCESS FOR THE PRODUCTION OF A LIQUID COFFEE EXTRACT PRODUCT
**(51)** Int. Cl.
***A23F 5/24*** ( 2006.01 )
***A23F 5/26*** ( 2006.01 )
**(87)** WO2023/118131
**(31)** 2118988.1 **(32)** 24.12.21 **(33)** GB
**(43)** 29.06.2023
**(72)** VERHOEVEN, Maarten; MEERMAN, Marieke; ROOS, Ellen; SMITS, Han; REES, Jack
**(74)** Madderns Pty Ltd

---

**(71)** KOYA MEDICAL, INC.
**(11)** AU-A-2023217051
**(21)** 2023217051 **(22)** 07.02.2023
**(54)** COMPRESSION GARMENT APPARATUS
**(51)** Int. Cl.
***A61F 13/08*** ( 2006.01 )
***A61H 11/00*** ( 2006.01 )
***A61H 23/02*** ( 2006.01 )
***F03G 7/06*** ( 2006.01 )
**(87)** WO2023/154707
**(31)** 63/308,667 **(32)** 10.02.22 **(33)** US
**(43)** 17.08.2023
**(72)** EVANS, Ryan; BALDWIN, Jarren; PAMPLIN, John C.; MEEHAN, Connor; ZUERNDORFER, Jay; DORAISWAMY, Anand
**(74)** FB Rice Pty Ltd

---

**(71)** KROSAKIHARIMA CORPORATION
**(11)** AU-A-2023227606
**(21)** 2023227606 **(22)** 17.02.2023
**(54)** REFRACTORY PRODUCT FOR USE IN CONTINUOUS CASTING, AND REFRACTORY PRODUCT MEMBER
**(51)** Int. Cl.
***C04B 35/482*** ( 2006.01 )
***B22D 41/54*** ( 2006.01 )
**(87)** WO2023/167008
**(31)** 2022-032065 **(32)** 02.03.22 **(33)** JP
**(43)** 07.09.2023
**(72)** MATSUMOTO, Shigefumi; LI, Ling; TAKAMI, Kouhei; MORIKAWA, Katsumi; IGATA, Tetsuo
**(74)** Griffith Hack

---

**(71)** KROSAKIHARIMA CORPORATION
**(11)** AU-A-2023228446
**(21)** 2023228446 **(22)** 17.02.2023
**(54)** REFRACTORY PRODUCT FOR USE IN CONTINUOUS CASTING, AND REFRACTORY PRODUCT MEMBER
**(51)** Int. Cl.
***C04B 35/103*** ( 2006.01 )
***B22D 41/54*** ( 2006.01 )
**(87)** WO2023/167007
**(31)** 2022-032063 **(32)** 02.03.22 **(33)** JP
**(43)** 07.09.2023
**(72)** LI, Ling; MORIKAWA, Katsumi; MATSUMOTO, Shigefumi
**(74)** Griffith Hack

---

**(71)** KYOCERA SENCO INDUSTRIAL TOOLS, INC.
**(11)** AU-A-2023220911
**(21)** 2023220911 **(22)** 08.02.2023
**(54)** MAGAZINE FASTENER GUIDE FOR A FASTENER DRIVING TOOL
**(51)** Int. Cl.
***B25C 5/16*** ( 2006.01 )
***B25C 1/18*** ( 2006.01 )
**(87)** WO2023/158578
**(31)** 63/312,129 **(32)** 21.02.22 **(33)** US
**(43)** 24.08.2023
**(72)** CARRIER, Alexander
**(74)** GLMR

---

**(71)** L'AIR LIQUIDE, SOCIETE ANONYME POUR L'ETUDE ET L'EXPLOITATION DES PROCEDES GEORGES CLAUDE
**(11)** AU-A-2022418513
**(21)** 2022418513 **(22)** 16.12.2022
**(54)** METHOD FOR LARGE HYDROGEN LIQUEFACTION SYSTEM
**(51)** Int. Cl.
***F25J 1/00*** ( 2006.01 )
**(87)** WO2023/121985
**(31)** 63/293,080 **(32)** 22.12.21 **(33)** US
**(43)** 29.06.2023
**(72)** TURNEY, Michael, A.; LE BOT, Patrick; GUILLARD, Alain; CHAN, Bobby, Mon-Flan; FUENTES, Francois
**(74)** Maxwells Patent & Trade Mark Attorneys Pty Ltd

---

**PCT applications which have entered the National Phase - Name Index cont'd**

**(71)** LAMKAP BIO GAMMA AG
**(11)** AU-A-2023236910
**(21)** 2023236910 **(22)** 14.03.2023
**(54)** BISPECIFIC GPC3XCD28 AND GPC3XCD3 ANTIBODIES AND THEIR COMBINATION FOR TARGETED KILLING OF GPC3 POSITIVE MALIGNANT CELLS
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61K 39/00*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07K 16/30*** ( 2006.01 )
**(87)** WO2023/174925
**(31)** 63/319,709 **(32)** 14.03.22 **(33)** US
63/328,586 07.04.22 US
**(43)** 21.09.2023
**(72)** SECKINGER, Anja; HATTERER, Eric; HOSE, Dirk
**(74)** Spruson & Ferguson

---

**(71)** LANGWISCH, B.
**(11)** AU-A-2022432498
**(21)** 2022432498 **(22)** 21.12.2022
**(54)** UMBRELLA FOR PROTECTION FROM SUNLIGHT
**(51)** Int. Cl.
***A45B 25/20*** ( 2006.01 )
**(87)** WO2023/134990
**(31)** 20 2022 100 148.0 **(32)** 12.01.22 **(33)** DE
**(43)** 20.07.2023
**(72)** LANGWISCH, Britta
**(74)** Spruson & Ferguson

---

**(71)** LANXESS DEUTSCHLAND GMBH
**(11)** AU-A-2022420735
**(21)** 2022420735 **(22)** 20.12.2022
**(54)** METHOD FOR PRODUCING IRON OXIDE PIGMENTS
**(51)** Int. Cl.
***C09C 1/24*** ( 2006.01 )
***C01G 49/06*** ( 2006.01 )
**(87)** WO2023/118182
**(31)** 21216439.6 **(32)** 21.12.21 **(33)** EP
**(43)** 29.06.2023
**(72)** ETZENBACH, Norbert; BOERS, Matthias; RIDDER, Stefan
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** LAWVO INC.
**(11)** AU-A-2023253895
**(21)** 2023253895 **(22)** 12.04.2023
**(54)** METHOD AND SYSTEM FOR MANAGING COMPUTING RESOURCES FOR TRANSFERRING ELECTRONIC DATA
**(51)** Int. Cl.
***G06F 16/95*** ( 2019.01 )
***G06F 16/957*** ( 2019.01 )
*G06Q 30/0283* ( 2023.01 )
*G06Q 50/18* ( 2012.01 )
**(87)** WO2023/199249
**(31)** 63/330,881 **(32)** 14.04.22 **(33)** US
**(43)** 19.10.2023
**(72)** VARTANIAN, Fernand; VARTANIAN, Lena; SARAYDRIAN, Hosep
**(74)** Michael Buck IP

---

**(71)** LEPRINO FOODS COMPANY
**(11)** AU-A-2023327767
**(21)** 2023327767 **(22)** 24.11.2023
**(54)** DENATURED MILK PROTEINS AND METHODS OF MAKING THEM
**(51)** Int. Cl.
***A23J 3/08*** ( 2006.01 )
***A23C 9/13*** ( 2006.01 )
***A23C 21/02*** ( 2006.01 )
***A23J 3/34*** ( 2006.01 )
**(31)** 18/097,003 **(32)** 13.01.23 **(33)** US
18/503,535 07.11.23 US
**(43)** 01.08.2024
**(72)** TESFE, Paulos; LI, Jiancai; MAIER, Bradley; MERRILL, Richard K.
**(74)** Halfords IP

---

**(71)** LG ELECTRONICS INC.
**(11)** AU-A-2022418214
**(21)** 2022418214 **(22)** 11.11.2022
**(54)** DISHWASHER
**(51)** Int. Cl.
***A47L 15/42*** ( 2006.01 )
***A47L 15/10*** ( 2006.01 )
***A47L 15/22*** ( 2006.01 )
**(87)** WO2023/120981
**(31)** 10-2021-0187691 **(32)** 24.12.21 **(33)** KR
**(43)** 29.06.2023
**(72)** LEE, Wonjun; KIM, Miyoung; SON, Suhyeon
**(74)** FB Rice Pty Ltd

---

**(71)** LG ELECTRONICS INC.
**(11)** AU-A-2022418925
**(21)** 2022418925 **(22)** 11.11.2022
**(54)** DISHWASHER
**(51)** Int. Cl.
***A47L 15/42*** ( 2006.01 )
***A47L 15/10*** ( 2006.01 )
***A47L 15/22*** ( 2006.01 )
**(87)** WO2023/120980
**(31)** 10-2021-0187690 **(32)** 24.12.21 **(33)** KR
**(43)** 29.06.2023
**(72)** LEE, Youmin; KIM, Jindong
**(74)** FB Rice Pty Ltd

---

**(71)** LG ELECTRONICS INC.
**(11)** AU-A-2023387765
**(21)** 2023387765 **(22)** 20.09.2023
**(54)** LAUNDRY TREATMENT DEVICE
**(51)** Int. Cl.
***D06F 34/34*** ( 2020.01 )
***D06F 34/32*** ( 2020.01 )
**(31)** 10-2023-0000728 **(32)** 03.01.23 **(33)** KR
**(43)** 01.08.2024
**(72)** JANG, Ho Sung; YOO, Sang Hee; GWON, Hyeok Jin; YOON, Ji Hyun
**(74)** FB Rice Pty Ltd

---

**(71)** LG ENERGY SOLUTION, LTD.
**(11)** AU-A-2023265721
**(21)** 2023265721 **(22)** 27.04.2023
**(54)** ENERGY STORAGE SYSTEM
**(51)** Int. Cl.
***H01M 10/42*** ( 2006.01 )
***A62C 3/16*** ( 2006.01 )
***A62C 35/02*** ( 2006.01 )
***A62C 35/68*** ( 2006.01 )
***A62C 99/00*** ( 2010.01 )
***H01M 10/48*** ( 2006.01 )
***H01M 50/251*** ( 2021.01 )
***H01M 50/691*** ( 2021.01 )
**(87)** WO2023/214744
**(31)** 10-2022-0054390 **(32)** 02.05.22 **(33)** KR
10-2022-0054391 02.05.22 KR
**(43)** 09.11.2023
**(72)** KIM, Ji-Hun; KIM, Yo-Hwan; PARK, Hong-Jae; YANG, Mun-Seok; YOON, Sung-Han; LEE, Seung-Jun; LEE, Ji-Won; LEE, Hyun-Min; LEE, Hyung-Uk; CHO, Tae-Shin
**(74)** FB Rice Pty Ltd

---

**(71)** LG ENERGY SOLUTION, LTD.
**(11)** AU-A-2023313554
**(21)** 2023313554 **(22)** 24.07.2023
**(54)** DIN RAIL, ELECTRONIC COMPONENT ASSEMBLY AND ENERGY STORAGE SYSTEM COMPRISING SAME
**(51)** Int. Cl.
***H05K 7/12*** ( 2006.01 )
***H01M 10/627*** ( 2014.01 )
***H01M 10/6551*** ( 2014.01 )
***H01M 50/691*** ( 2021.01 )
***H05K 5/02*** ( 2006.01 )
**(87)** WO2024/025283
**(31)** 10-2022-0091541 **(32)** 25.07.22 **(33)** KR
**(43)** 01.02.2024
**(72)** PARK, Jung-Il; CHO, Young-Bo
**(74)** FB Rice Pty Ltd

---

**(71)** LG ENERGY SOLUTION, LTD.
**(11)** AU-A-2023327731
**(21)** 2023327731 **(22)** 17.07.2023
**(54)** BATTERY RACK AND ENERGY STORAGE SYSTEM INCLUDING SAME
**(51)** Int. Cl.
***H01M 50/24*** ( 2021.01 )
***H01M 10/42*** ( 2006.01 )
***H01M 50/251*** ( 2021.01 )
**(87)** WO2024/039079
**(31)** 10-2022-0102009 **(32)** 16.08.22 **(33)** KR
**(43)** 22.02.2024
**(72)** LEE, Seung-Jun; KIM, Hee-Chan; SON, Kown; JUNG, Goan-Su; PARK, Jung-Beom; CHOI, Byung-Hyuk
**(74)** FB Rice Pty Ltd

---

**(71)** LINDSAY CORPORATION
**(11)** AU-A-2023216279
**(21)** 2023216279 **(22)** 25.01.2023
**(54)** ALIGNMENT SYSTEM FOR A MOBILE IRRIGATION SYSTEM
**(51)** Int. Cl.
***A01G 25/09*** ( 2006.01 )
***A01G 25/02*** ( 2006.01 )
***A01G 25/16*** ( 2006.01 )
***F16L 3/205*** ( 2006.01 )
***F16L 3/215*** ( 2006.01 )
***F16L 27/02*** ( 2006.01 )
**(87)** WO2023/150444
**(31)** 17/591,377 **(32)** 02.02.22 **(33)** US

**PCT applications which have entered the National Phase - Name Index cont'd**

**(43)** 10.08.2023
**(72)** DUDIK, Matthew John; SOUTH, Michael Charles; HANSON, Troy
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** LITTLE, S.; RISLEY, M.D.; MASON, J.N.; ROUSSEAU, F.
**(11)** AU-A-2023206836
**(21)** 2023206836 **(22)** 17.01.2023
**(54)** METHOD FOR ANALYZING BLOOD STORED FOR LATER ANALYSIS OF CELL FREE DNA
**(51)** Int. Cl.
***C12Q 1/6806*** ( 2018.01 )
***C12N 15/10*** ( 2006.01 )
**(87)** WO2023/135487
**(31)** 63/300,256 **(32)** 17.01.22 **(33)** US
**(43)** 20.07.2023
**(72)** LITTLE, Stephen; RISLEY, Michael, D.; MASON, Joanne, N.; ROUSSEAU, Francois
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** LOMBARDI THOMAS, L.; THOMAS, B.
**(11)** AU-A-2024204325
**(21)** 2024204325 **(22)** 10.01.2024
**(54)** METHOD AND SYSTEM FOR ASSESSING RACKET STROKE HEAVINESS
**(51)** Int. Cl.
***A63B 24/00*** ( 2006.01 )
***A63B 69/38*** ( 2006.01 )
**(31)** 63/479,366 **(32)** 11.01.23 **(33)** US
18/342,063 27.06.23 US
18/515,448 21.11.23 US
**(43)** 01.08.2024
**(72)** LOMBARDI THOMAS, Lindsey; THOMAS, Brian
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** LYNDRA THERAPEUTICS, INC.
**(11)** AU-A-2023209872
**(21)** 2023209872 **(22)** 19.01.2023
**(54)** DOSAGE FORMS FOR GASTRIC RETENTION
**(51)** Int. Cl.
***A61K 9/00*** ( 2006.01 )
***A61K 9/14*** ( 2006.01 )
***A61M 31/00*** ( 2006.01 )
*A61K 9/20* ( 2006.01 )
**(87)** WO2023/141524
**(31)** 63/301,041 **(32)** 19.01.22 **(33)** US
63/368,605 15.07.22 US
**(43)** 27.07.2023
**(72)** LAI, Erica; VILLANUEVA, Dinara; HERZBERG, Nufar; MONTEZCO, Juan Jaramillo
**(74)** FB Rice Pty Ltd

---

**(71)** MAGNA IMPERIO SYSTEMS CORP.
**(11)** AU-A-2022413555
**(21)** 2022413555 **(22)** 14.12.2022
**(54)** ION REMOVAL FROM HEAVY ENDS USING ELECTRODIALYSIS
**(51)** Int. Cl.
***C02F 1/469*** ( 2023.01 )
***C02F 1/42*** ( 2023.01 )
*C02F 1/46* ( 2023.01 )
**(87)** WO2023/114836
**(31)** 63/289,819 **(32)** 15.12.21 **(33)** US
**(43)** 22.06.2023
**(72)** DEMETER, Ethan L.
**(74)** AJ PARK

---

**(71)** MAKO SURGICAL CORP.
**(11)** AU-A-2022432843
**(21)** 2022432843 **(22)** 28.12.2022
**(54)** SYSTEMS AND METHODS FOR GUIDING MOVEMENT OF A HANDHELD MEDICAL ROBOTIC INSTRUMENT
**(51)** Int. Cl.
***A61B 34/32*** ( 2016.01 )
***A61B 17/14*** ( 2006.01 )
***A61B 17/16*** ( 2006.01 )
***A61B 34/10*** ( 2016.01 )
***A61B 34/20*** ( 2016.01 )
**(87)** WO2023/136930
**(31)** 63/298,807 **(32)** 12.01.22 **(33)** US
63/318,182 09.03.22 US
63/354,461 22.06.22 US
**(43)** 20.07.2023
**(72)** DOZEMAN, Michael, Dale; POST, Nicholas, Jon; BEACHNAU, James, Kevin; SINHA, Harsh; WARREN, Jonathon
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** MALLINCKRODT PHARMACEUTICALS IRELAND LIMITED
**(11)** AU-A-2023205912
**(21)** 2023205912 **(22)** 04.01.2023
**(54)** USE OF INHALED NITRIC OXIDE (INO) FOR TREATING PATIENTS WITH PULMONARY HYPERTENSION ASSOCIATED WITH SARCOIDOSIS (PH-SARC)
**(51)** Int. Cl.
***A61P 9/12*** ( 2006.01 )
***A61M 16/00*** ( 2006.01 )
***A61M 16/10*** ( 2006.01 )
*A61K 33/00* ( 2006.01 )
**(87)** WO2023/133399
**(31)** 63/296,359 **(32)** 04.01.22 **(33)** US
63/341,986 13.05.22 US
63/342,535 16.05.22 US
**(43)** 13.07.2023
**(72)** SHAH, Parag; FERNANDES, Peter Paul; KIM, Bobae; DEKKER, Martin
**(74)** Spruson & Ferguson

---

**(71)** MARCHESAN IMPLEMENTOS E MÁQUINAS AGRÍCOLAS TATU S/A
**(11)** AU-A-2022414211
**(21)** 2022414211 **(22)** 15.12.2022
**(54)** WHOLE CANE HARVESTING EQUIPMENT AND RELATED DEVICES
**(51)** Int. Cl.
***A01D 57/22*** ( 2006.01 )
***A01D 45/10*** ( 2006.01 )
***A01D 61/00*** ( 2006.01 )
***A01D 85/00*** ( 2006.01 )
**(87)** WO2023/108239
**(31)** BR102021025427-0 **(32)** 16.12.21 **(33)** BR
**(43)** 22.06.2023
**(72)** SILVEIRA, Marcio Aparecido
**(74)** Spruson & Ferguson

---

**(71)** MAZEN ANIMAL HEALTH INC.
**(11)** AU-A-2022426775
**(21)** 2022426775 **(22)** 22.12.2022
**(54)** EXPRESSION OF EIMERIA SEQUENCES IN PLANTS AND PLANT PRODUCED VACCINE FOR SAME
**(51)** Int. Cl.
***A61K 39/00*** ( 2006.01 )
***A23K 10/00*** ( 2016.01 )
***A61K 39/012*** ( 2006.01 )
***A61K 47/00*** ( 2006.01 )
***C07H 21/04*** ( 2006.01 )
***C07K 14/00*** ( 2006.01 )
***C12N 5/00*** ( 2006.01 )
***C12N 15/82*** ( 2006.01 )
**(87)** WO2023/129867
**(31)** 63/266,112 **(32)** 29.12.21 **(33)** US
**(43)** 06.07.2023
**(72)** HOWARD, John; EGELKROUT, Erin; SCHRADER, Joan
**(74)** Spruson & Ferguson

---

**(71)** MEDACTA INTERNATIONAL SA
**(11)** AU-A-2023231764
**(21)** 2023231764 **(22)** 06.03.2023
**(54)** METHOD FOR DETERMINING INTERVERTEBRAL IMPLANT DEVICE PARAMETERS OF AN INTERVERTEBRAL IMPLANT DEVICE FOR SPINAL FUSION
**(51)** Int. Cl.
***A61B 17/20*** ( 2006.01 )
**(87)** WO2023/170539
**(31)** 102022000004367 **(32)** 08.03.22 **(33)** IT
**(43)** 14.09.2023
**(72)** SICCARDI, Francesco; FIECHTER, Meinrad; AMBROSINI, Athos
**(74)** GLMR

---

**(71)** MEDACTA INTERNATIONAL SA
**(11)** AU-A-2023232527
**(21)** 2023232527 **(22)** 24.02.2023
**(54)** METHOD FOR CALCULATING THE SHAPE OF A ROD OF A PEDICLE SCREW SYSTEM FOR SPINAL FUSION
**(51)** Int. Cl.
***A61B 17/70*** ( 2006.01 )
***A61B 34/10*** ( 2016.01 )
**(87)** WO2023/170505
**(31)** 102022000004382 **(32)** 08.03.22 **(33)** IT
**(43)** 14.09.2023
**(72)** SICCARDI, Francesco; FIECHTER, Meinrad
**(74)** GLMR

---

**(71)** MEDOS INTERNATIONAL SARL
**(11)** AU-A-2022409583
**(21)** 2022409583 **(22)** 14.12.2022
**(54)** Surgical Device Activation Detection Using Current Sensing
**(51)** Int. Cl.
***A61B 18/12*** ( 2006.01 )

**PCT applications which have entered the National Phase - Name Index cont'd**

***A61B 17/32*** ( 2006.01 )
***A61B 18/00*** ( 2006.01 )
***A61M 3/02*** ( 2006.01 )
**(87)** WO2023/111067
**(31)** 17/550,586 **(32)** 14.12.21 **(33)** US
**(43)** 22.06.2023
**(72)** DUMAS, Oliver; CONFOEY, Michael; MIGUEL, Pedro John
**(74)** Spruson & Ferguson

---

**(71)** MEMBRAN TECH GMBH
**(11)** AU-A-2023209577
**(21)** 2023209577 **(22)** 20.01.2023
**(54)** TENSIOMETER AND METHOD FOR DETERMINING A SPATIALLY AVERAGED WATER POTENTIAL IN A TEST PIECE
**(51)** Int. Cl.
***G01N 33/24*** ( 2006.01 )
***G01N 13/04*** ( 2006.01 )
**(87)** WO2023/139209
**(31)** 10 2022 200 685.2 **(32)** 21.01.22 **(33)** DE
**(43)** 27.07.2023
**(72)** LAZIK, Detlef; DE ROOIJ, Gerrit
**(74)** Griffith Hack

---

**(71)** MERUS N.V.
**(11)** AU-A-2022420709
**(21)** 2022420709 **(22)** 20.12.2022
**(54)** BINDING DOMAINS AGAINST CANCER-ASSOCIATED MUC1
**(51)** Int. Cl.
***C07K 16/30*** ( 2006.01 )
**(87)** WO2023/121448
**(31)** 2030198 **(32)** 21.12.21 **(33)** NL
**(43)** 29.06.2023
**(72)** KLOOSTER, Rinse; WIDJAJA, Ivy; MAYES, Patrick; NASTRI, Horacio G.; ZHOU, Jing; GUPTA, Vijay; VARGHESE, Bindu
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** METALOGENIA RESEARCH & TECHNOLOGIES S.L.
**(11)** AU-A-2022420829
**(21)** 2022420829 **(22)** 22.12.2022
**(54)** LIP FOR EARTH MOVING MACHINE SHOVEL AND LIP MANUFACTURING METHOD
**(51)** Int. Cl.
***E02F 9/28*** ( 2006.01 )
***B22C 9/08*** ( 2006.01 )
***B22C 9/22*** ( 2006.01 )
***B22D 31/00*** ( 2006.01 )
***E02F 3/40*** ( 2006.01 )
**(87)** WO2023/118517
**(31)** 21383213.2 **(32)** 23.12.21 **(33)** EP
**(43)** 29.06.2023
**(72)** AMAT HOLGADO, Carlos; PÉREZ SORIA, Francisco
**(74)** Michael Buck IP

---

**(71)** MIRECULE, INC.
**(11)** AU-A-2022422149
**(21)** 2022422149 **(22)** 23.12.2022
**(54)** COMPOSITIONS FOR DELIVERY OF POLYNUCLEOTIDES
**(51)** Int. Cl.
***A61K 47/68*** ( 2017.01 )
***A61P 35/00*** ( 2006.01 )
**(87)** WO2023/122347
**(31)** 63/293,614 **(32)** 23.12.21 **(33)** US
**(43)** 29.06.2023
**(72)** SALEH, Anthony; MARUSAK, Charles; WILLIAMS, Tishan; KANG, Fu-An
**(74)** Forte Intellectual Property Pty Ltd

---

**(71)** MODEX THERAPEUTICS, INC.
**(11)** AU-A-2022420594
**(21)** 2022420594 **(22)** 21.12.2022
**(54)** CONDITIONALLY ACTIVATED ANTIGEN BINDING POLYPEPTIDE COMPLEXES AND METHODS OF USE THEREOF
**(51)** Int. Cl.
***C07K 16/46*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07K 16/28*** ( 2006.01 )
***C07K 16/30*** ( 2006.01 )
**(87)** WO2023/122659
**(31)** 63/292,382 **(32)** 21.12.21 **(33)** US
**(43)** 29.06.2023
**(72)** XU, Ling; WU, Lan; SEUNG, Edward; YANG, Zhi-Yong; NABEL, Gary J.; ZERHOUNI, Elias; WEI, Ronnie R.; CHEN, Hao; GRECI, Mark; JONES, Nicholas
**(74)** FB Rice Pty Ltd

---

**(71)** MOLECULENT AB
**(11)** AU-A-2023213160
**(21)** 2023213160 **(22)** 24.01.2023
**(54)** DETECTION OF PROXIMITY ASSAY PRODUCTS IN SITU
**(51)** Int. Cl.
***C12Q 1/6804*** ( 2018.01 )
***C12Q 1/6841*** ( 2018.01 )
**(87)** WO2023/144685
**(31)** 63/303,348 **(32)** 26.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** ERICSSON, Olof John; ROOS, Fredrik
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** MONOLITH MATERIALS, Inc.
**(11)** AU-A-2023206924
**(21)** 2023206924 **(22)** 12.01.2023
**(54)** METHODS AND SYSTEMS FOR USING SILICON-CONTAINING ADDITIVES TO PRODUCE CARBON PARTICLES
**(51)** Int. Cl.
***C09C 1/44*** ( 2006.01 )
***C01B 32/05*** ( 2017.01 )
***C01B 33/02*** ( 2006.01 )
***C08K 3/34*** ( 2006.01 )
*C23F 14/00* ( 2006.01 )
**(87)** WO2023/137120
**(31)** 63/298,912 **(32)** 12.01.22 **(33)** US
63/350,801 09.06.22 US
**(43)** 20.07.2023
**(72)** DAMES, Enoch E.; WYSE, Elliott T.; FRENKLACH, Michael; MESROBIAN, Christopher
**(74)** RnB IP Pty Ltd

---

**(71)** MYENERGI LTD
**(11)** AU-A-2022422471
**(21)** 2022422471 **(22)** 16.12.2022
**(54)** DETECTION CIRCUITRY
**(51)** Int. Cl.
***G01R 19/155*** ( 2006.01 )
***G01R 31/54*** ( 2020.01 )
**(87)** WO2023/118821
**(31)** 2118618.4 **(32)** 21.12.21 **(33)** GB
**(43)** 29.06.2023
**(72)** SUTTON, Lee Robert; RICHARD, Robin Loïc; AHMED, Seif Aleslam Ibrahim Mahmoud
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** MYLAPS B.V.
**(11)** AU-A-2023207052
**(21)** 2023207052 **(22)** 17.01.2023
**(54)** UHF SPORTS TIMING TAG ASSEMBLY
**(51)** Int. Cl.
***G09F 3/06*** ( 2006.01 )
***G06K 19/077*** ( 2006.01 )
**(87)** WO2023/136724
**(31)** 2030572 **(32)** 17.01.22 **(33)** NL
**(43)** 20.07.2023
**(72)** VERWOERD, Adriaan Klaas
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** NANJING ZAIMING PHARMACEUTICAL CO., LTD.
**(11)** AU-A-2023207390
**(21)** 2023207390 **(22)** 13.01.2023
**(54)** SIX-MEMBERED CYCLOTHIAZOLE COMPOUND AND USE THEREOF
**(51)** Int. Cl.
***C07D 513/04*** ( 2006.01 )
***A61K 31/428*** ( 2006.01 )
***A61K 31/429*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07D 417/12*** ( 2006.01 )
***C07D 417/14*** ( 2006.01 )
**(87)** WO2023/134739
**(31)** 202210038783.7 **(32)** 13.01.22 **(33)** CN
202211207114.4 30.09.22 CN
**(43)** 20.07.2023
**(72)** LI, Zhen; TANG, Feng; LIU, Le; LIU, Lu; JIANG, Lei; ZHOU, Feng; TANG, Renhong; REN, Jinsheng
**(74)** FB Rice Pty Ltd

---

**(71)** NEOINNOTECH. CORP.
**(11)** AU-A-2022437669
**(21)** 2022437669 **(22)** 28.11.2022
**(54)** IMMEDIATE-RELEASE PESTICIDE FORMULATION
**(51)** Int. Cl.
***A01N 25/12*** ( 2006.01 )
***A01N 25/08*** ( 2006.01 )
***A01N 25/30*** ( 2006.01 )
***A01N 41/02*** ( 2006.01 )
***A01N 43/56*** ( 2006.01 )
***A01N 43/90*** ( 2006.01 )
***A01N 47/36*** ( 2006.01 )
**(87)** WO2023/146099
**(31)** 10-2022-0012424 **(32)** 27.01.22 **(33)** KR

## PCT applications which have entered the National Phase - Name Index cont'd

10-2022-0152929 15.11.22 KR
**(43)** 03.08.2023
**(72)** KIM, Ji Yeon
**(74)** FB Rice Pty Ltd

---

**(71)** NEWRONIKA S.P.A
**(11)** AU-A-2023210497
**(21)** 2023210497 **(22)** 18.01.2023
**(54)** DEVICE FOR ADAPTIVE TREATMENT OF NEUROLOGICAL DISEASES AND METHOD FOR CONTROLLING A DEVICE FOR ADAPTIVE TREATMENT OF NEUROLOGICAL DISEASES
**(51)** Int. Cl.
***A61N 1/36*** ( 2006.01 )
***A61B 5/00*** ( 2006.01 )
***A61B 5/37*** ( 2021.01 )
***A61B 5/374*** ( 2021.01 )
***A61B 5/383*** ( 2021.01 )
*A61N 1/05* ( 2006.01 )
**(87)** WO2023/139503
**(31)** 102022000000965 **(32)** 20.01.22 **(33)** IT
**(43)** 27.07.2023
**(72)** ROSSI, Lorenzo; ARLOTTI, Mattia
**(74)** Baxter Patent Attorneys Pty Ltd

---

**(71)** NEWSOUTH INNOVATIONS PTY LIMITED
**(11)** AU-A-2023208224
**(21)** 2023208224 **(22)** 16.01.2023
**(54)** HYDROGEN-DIESEL DIRECT INJECTION DUAL-FUEL SYSTEM FOR INTERNAL COMBUSTION ENGINES
**(51)** Int. Cl.
***F02D 19/06*** ( 2006.01 )
***F02D 19/08*** ( 2006.01 )
***F02M 43/04*** ( 2006.01 )
**(87)** WO2023/137515
**(31)** 2022900118 **(32)** 21.01.22 **(33)** AU
**(43)** 27.07.2023
**(72)** KOOK, Sanghoon; EDMONDS, Bryce; LIU, Xinyu
**(74)** Spruson & Ferguson

---

**(71)** NEWSOUTH INNOVATIONS PTY LIMITED
**(11)** AU-A-2023212477
**(21)** 2023212477 **(22)** 23.01.2023
**(54)** A ROTOR TOPOLOGY FOR VERY HIGH SPEED PERMANENT MAGNET MACHINES
**(51)** Int. Cl.
***H02K 1/276*** ( 2022.01 )
***H02K 21/02*** ( 2006.01 )
***H02K 21/14*** ( 2006.01 )
**(87)** WO2023/141671
**(31)** 2022900134 **(32)** 25.01.22 **(33)** AU
**(43)** 03.08.2023
**(72)** CHU, Guoyu; DUTTA, Rukmi; RAHMAN, Fazlur
**(74)** Spruson & Ferguson

---

**(71)** NEXTPOINT THERAPEUTICS, INC.
**(11)** AU-A-2023217006
**(21)** 2023217006 **(22)** 10.02.2023
**(54)** T CELL AND NK CELL ENGAGERS
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***C07K 16/30*** ( 2006.01 )
***C12N 5/10*** ( 2006.01 )
***C12N 15/85*** ( 2006.01 )
*G01N 33/574* ( 2006.01 )
**(87)** WO2023/154482
**(31)** 63/308,800 **(32)** 10.02.22 **(33)** US
**(43)** 17.08.2023
**(72)** ETEMAD-GILBERTSON, Bijan; RAUSCH, Matthew
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** NIDO BIOSCIENCES, INC.
**(11)** AU-A-2023206373
**(21)** 2023206373 **(22)** 13.01.2023
**(54)** CRYSTALLINE FORMS OF 3-(5-(2-HYDROXY-2-METHYLPROPOXY)-6-METHYLPYRAZIN-2-YL)-1H-INDOLE-7-CARBONITRILE
**(51)** Int. Cl.
***C07D 403/04*** ( 2006.01 )
***A61K 31/497*** ( 2006.01 )
***A61P 21/00*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
**(87)** WO2023/137420
**(31)** 63/299,678 **(32)** 14.01.22 **(33)** US
**(43)** 20.07.2023
**(72)** TOURE, Bakary-Barry; RONN, Magnus
**(74)** FB Rice Pty Ltd

---

**(71)** NIHILL, J.
**(11)** AU-A-2023209365
**(21)** 2023209365 **(22)** 22.01.2023
**(54)** HEAT ENGINE
**(51)** Int. Cl.
***F01D 1/36*** ( 2006.01 )
***F01D 5/04*** ( 2006.01 )
***F01K 7/34*** ( 2006.01 )
***F01K 11/00*** ( 2006.01 )
***F02C 1/10*** ( 2006.01 )
***F04D 5/00*** ( 2006.01 )
***F04D 17/16*** ( 2006.01 )
**(87)** WO2023/137526
**(31)** 2022900123 **(32)** 22.01.22 **(33)** AU
**(43)** 27.07.2023
**(72)** NIHILL, Jack
**(74)** Jack Samuel Nihill

---

**(71)** NOGA 3D INNOVATIONS LTD
**(11)** AU-A-2023209644
**(21)** 2023209644 **(22)** 18.01.2023
**(54)** HIGH PERFORMANCE THERMOSET RESINS FOR 3D PRINTING
**(51)** Int. Cl.
***C09D 11/101*** ( 2014.01 )
***B33Y 70/00*** ( 2020.01 )
***C09D 11/03*** ( 2014.01 )
**(87)** WO2023/139579
**(31)** 63/266,890 **(32)** 18.01.22 **(33)** US
**(43)** 27.07.2023
**(72)** VIDAVSKY, Yuval; ATAR, Nurit; GROSSMAN, Eitan
**(74)** Collison & Co

---

**(71)** NOKIA TECHNOLOGIES OY
**(11)** AU-A-2022427854
**(21)** 2022427854 **(22)** 09.12.2022
**(54)** APPARATUS, METHODS AND COMPUTER PROGRAMS FOR ENABLING RENDERING OF SPATIAL AUDIO
**(51)** Int. Cl.
***G10L 19/16*** ( 2013.01 )
***G10L 19/008*** ( 2013.01 )
***H04S 3/00*** ( 2006.01 )
***H04S 7/00*** ( 2006.01 )
**(87)** WO2023/126573
**(31)** 2119070.7 **(32)** 29.12.21 **(33)** GB
**(43)** 06.07.2023
**(72)** LAITINEN, Mikko-Ville; VILKAMO, Juha Tapio
**(74)** Spruson & Ferguson

---

**(71)** NOVO NORDISK A/S
**(11)** AU-A-2023224521
**(21)** 2023224521 **(22)** 24.02.2023
**(54)** METHODS FOR TREATING SUBJECTS WITH ABDOMINAL OBESITY HYPERTRIGLYCERIDEMIA AND/OR IMPAIRED GLUCOSE
**(51)** Int. Cl.
***A61K 31/415*** ( 2006.01 )
***A61P 3/04*** ( 2006.01 )
***A61P 3/06*** ( 2006.01 )
***C07D 231/12*** ( 2006.01 )
**(87)** WO2023/159317
**(31)** 63/268,460 **(32)** 24.02.22 **(33)** US
**(43)** 31.08.2023
**(72)** CRATER, Glenn; RAVENELLE, Francois; HARVEY, Michael
**(74)** Pearce IP Pty Ltd

---

**(71)** OAK CREST INSTITUTE OF SCIENCE
**(11)** AU-A-2023205140
**(21)** 2023205140 **(22)** 06.01.2023
**(54)** SUBDERMAL IMPLANT FOR SUSTAINED DRUG DELIVERY
**(51)** Int. Cl.
***C07K 5/09*** ( 2006.01 )
***C07K 5/11*** ( 2006.01 )
***C07K 5/117*** ( 2006.01 )
**(87)** WO2023/133517
**(31)** 63/297,191 **(32)** 06.01.22 **(33)** US
**(43)** 13.07.2023
**(72)** BAUM, Marc, M.; GUNAWARDANA, Manjula
**(74)** Catalyst Intellectual Property

---

**(71)** OCADO INNOVATION LIMITED
**(11)** AU-A-2023211794
**(21)** 2023211794 **(22)** 25.01.2023
**(54)** POWER SOURCES OF LOAD HANDLING DEVICES OPERATIVE ON A GRID FRAMEWORK STRUCTURE
**(51)** Int. Cl.
***B65G 1/04*** ( 2006.01 )
**(87)** WO2023/144224
**(31)** 2200956.7 **(32)** 25.01.22 **(33)** GB
**(43)** 03.08.2023
**(72)** CORSER, Philip; NADESAN, Yashlin; RIZVI, Irfan; COUNSELL, Nathan
**(74)** James & Wells Intellectual Property

---

**PCT applications which have entered the National Phase - Name Index cont'd**

**(71)** OLEON NV; BERG+SCHMIDT ASIA PTE. LTD.
**(11)** AU-A-2023226598
**(21)** 2023226598 **(22)** 23.02.2023
**(54)** EMULSIFIER MIXTURE
**(51)** Int. Cl.
***A23D 7/01*** ( 2006.01 )
***A23D 7/005*** ( 2006.01 )
***A23K 20/158*** ( 2016.01 )
***A23K 20/28*** ( 2016.01 )
***A23K 50/30*** ( 2016.01 )
***A23K 50/70*** ( 2016.01 )
***A23K 50/75*** ( 2016.01 )
***A23K 50/80*** ( 2016.01 )
**(87)** WO2023/161377
**(31)** 22305219.2 **(32)** 25.02.22 **(33)** EP
**(43)** 31.08.2023
**(72)** VAN DER WEEËN, Pieter; TEULON, Nadine; DEPREY, Sophie; WESTPHAL, Dirk; ZSARNOCZAY, Sandor
**(74)** Griffith Hack

---

**(71)** OSLER DIAGNOSTICS LIMITED
**(11)** AU-A-2022418277
**(21)** 2022418277 **(22)** 22.12.2022
**(54)** LIQUID HANDLING DEVICE
**(51)** Int. Cl.
***B01L 3/00*** ( 2006.01 )
**(87)** WO2023/118540
**(31)** 2118921.2 **(32)** 23.12.21 **(33)** GB
**(43)** 29.06.2023
**(72)** LUXTON, Richard; LILLIS, Barry; HYLAND, Mark
**(74)** FB Rice Pty Ltd

---

**(71)** OSLER DIAGNOSTICS LIMITED
**(11)** AU-A-2022420878
**(21)** 2022420878 **(22)** 22.12.2022
**(54)** Liquid handling device
**(51)** Int. Cl.
***B01L 3/00*** ( 2006.01 )
**(87)** WO2023/118537
**(31)** 2118922.0 **(32)** 23.12.21 **(33)** GB
**(43)** 29.06.2023
**(72)** LILLIS, Barry; LUXTON, Richard; HYLAND, Mark
**(74)** FB Rice Pty Ltd

---

**(71)** OVUN AS
**(11)** AU-A-2022420763
**(21)** 2022420763 **(22)** 20.12.2022
**(54)** A BUOYANCY AND CLAMPING ASSEMBLY FOR USE WITH A SUBSEA LINE AND A METHOD FOR PROVIDING BUOYANCY TO A SUBSEA LINE
**(51)** Int. Cl.
***E21B 17/01*** ( 2006.01 )
***B63B 22/04*** ( 2006.01 )
***B63B 27/24*** ( 2006.01 )
**(87)** WO2023/121478
**(31)** 20211570 **(32)** 22.12.21 **(33)** NO
**(43)** 29.06.2023
**(72)** BURGER, Charl
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** OXFORD UNIVERSITY INNOVATION LIMITED
**(11)** AU-A-2022421021
**(21)** 2022421021 **(22)** 21.12.2022
**(54)** CAF2-BASED FLUORINATION REAGENTS, METHODS OF PREPARATION AND USES THEREOF
**(51)** Int. Cl.
***C01F 11/18*** ( 2006.01 )
***C01B 25/16*** ( 2006.01 )
***C01F 11/46*** ( 2006.01 )
**(87)** WO2023/118867
**(31)** 2118767.9 **(32)** 22.12.21 **(33)** GB
**(43)** 29.06.2023
**(72)** GOUVERNEUR, Veronique; PUPO, Gabriele; LEITCH, Jamie; BROWNE, Duncan
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** PARADOX, INC.
**(11)** AU-A-2022441312
**(21)** 2022441312 **(22)** 29.12.2022
**(54)** INTELLIGENT ASSISTANT SYSTEM FOR CONVERSATIONAL JOB SEARCH
**(51)** Int. Cl.
***G06Q 10/10*** ( 2023.01 )
***G06F 16/332*** ( 2019.01 )
***G06F 40/20*** ( 2020.01 )
***G06F 40/35*** ( 2020.01 )
*G06F 16/33* ( 2019.01 )
**(87)** WO2023/158523
**(31)** 63/268,105 **(32)** 16.02.22 **(33)** US
**(43)** 24.08.2023
**(72)** OST, Stephen, Derek; SHAFEEVA, Zarina
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** PARALLEL CAPTURE BRANDS, INC.
**(11)** AU-A-2022411082
**(21)** 2022411082 **(22)** 19.12.2022
**(54)** FLOSS APPLICATOR DEVICE WITH DUAL FLOSS RECEIVING PORTS
**(51)** Int. Cl.
***A61C 15/04*** ( 2006.01 )
*A61C 15/00* ( 2006.01 )
**(87)** WO2023/115067
**(31)** 63/265,700 **(32)** 19.12.21 **(33)** US
**(43)** 22.06.2023
**(72)** THORNTON, Brett W.
**(74)** AJ Pietras IP Limited

---

**(71)** PARION SCIENCES, INC.
**(11)** AU-A-2023213626
**(21)** 2023213626 **(22)** 25.01.2023
**(54)** BIPHENYL-SUBSTITUTED EPITHELIAL SODIUM CHANNEL BLOCKING COMPOUNDS
**(51)** Int. Cl.
***C07D 241/20*** ( 2006.01 )
*A61K 31/4965* ( 2006.01 )
*A61P 11/06* ( 2006.01 )
**(87)** WO2023/146892
**(31)** 63/303,197 **(32)** 26.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** VOSS, Matthew; CONVERTINO, Marino
**(74)** RnB IP Pty Ltd

---

**(71)** PARITY QUANTUM COMPUTING GMBH
**(11)** AU-A-2022443191
**(21)** 2022443191 **(22)** 23.02.2022
**(54)** METHOD OF PERFORMING A QUANTUM COMPUTATION, APPARATUS FOR PERFORMING A QUANTUM COMPUTATION
**(51)** Int. Cl.
***G06N 5/00*** ( 2023.01 )
***G06N 10/20*** ( 2022.01 )
***G06N 10/60*** ( 2022.01 )
*G06N 10/40* ( 2022.01 )
**(87)** WO2023/160781
**(43)** 31.08.2023
**(72)** ENDER, Kilian; MESSINGER, Anette; FELLNER, Michael; LECHNER, Wolfgang
**(74)** Spruson & Ferguson

---

**(71)** PAUL HETTICH GMBH & CO. KG
**(11)** AU-A-2023227388
**(21)** 2023227388 **(22)** 02.03.2023
**(54)** ELEMENT FOR FURNITURE OR DOMESTIC APPLIANCES
**(51)** Int. Cl.
***A47B 49/00*** ( 2006.01 )
**(87)** WO2023/166145
**(31)** 10 2022 105 121.8 **(32)** 04.03.22 **(33)** DE
**(43)** 07.09.2023
**(72)** BAUERRICHTER, Frank; MONTECCHIO, Andreas; KOPTIK, Christian; SCHÄFER, Thomas; SZLAPKA, Timo; PETKER, Waldemar; KLÜTER, Sören
**(74)** FOUNDRY INTELLECTUAL PROPERTY PTY LTD

---

**(71)** PAUL HETTICH GMBH & CO. KG
**(11)** AU-A-2023228339
**(21)** 2023228339 **(22)** 02.03.2023
**(54)** FURNITURE OR DOMESTIC APPLIANCE ELEMENT
**(51)** Int. Cl.
***A47B 49/00*** ( 2006.01 )
***A47B 81/00*** ( 2006.01 )
**(87)** WO2023/166143
**(31)** 10 2022 105 122.6 **(32)** 04.03.22 **(33)** DE
**(43)** 07.09.2023
**(72)** KOPTIK, Christian; SCHÄFER, Thomas; PETKER, Waldemar; KLÜTER, Sören
**(74)** FOUNDRY INTELLECTUAL PROPERTY PTY LTD

---

**(71)** PEGAVISION CORPORATION
**(11)** AU-A-2022465944
**(21)** 2022465944 **(22)** 17.06.2022
**(54)** CONTACT LENS PRODUCT AS WELL AS PACKAGING CASE THEREOF AND TEST METHOD THEREFOR
**(51)** Int. Cl.
***A45C 11/04*** ( 2006.01 )
***G01M 11/00*** ( 2006.01 )
***G02C 7/04*** ( 2006.01 )
**(87)** WO2023/240581

**PCT applications which have entered the National Phase - Name Index cont'd**

**(43)** 21.12.2023
**(72)** HUANG, Yi-Fang; CHEN, Po-Chun
**(74)** A.P.T. Patent and Trade Mark Attorneys

---

**(71)** PERIOTECH, LLC
**(11)** AU-A-2022434535
**(21)** 2022434535 **(22)** 29.12.2022
**(54)** DEVICES AND METHODS OF TREATING ORAL TISSUES
**(51)** Int. Cl.
***A61C 1/07*** ( 2006.01 )
*A61C 17/02* ( 2006.01 )
*A61C 17/20* ( 2006.01 )
**(87)** WO2023/141009
**(31)** 17/578,282 **(32)** 18.01.22 **(33)** US
**(43)** 27.07.2023
**(72)** JOHNSON, Richard; PURO, Nicholas
**(74)** RnB IP Pty Ltd

---

**(71)** PETMEDIX LTD
**(11)** AU-A-2023219227
**(21)** 2023219227 **(22)** 08.02.2023
**(54)** THERAPEUTIC ANTIBODIES
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61P 29/00*** ( 2006.01 )
***A61P 37/06*** ( 2006.01 )
**(87)** WO2023/152486
**(31)** 2201674.5 **(32)** 09.02.22 **(33)** GB
2209454.4 28.06.22 GB
**(43)** 17.08.2023
**(72)** BANDIERA, Roberto
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** PHYDELITER, INC.
**(11)** AU-A-2023207964
**(21)** 2023207964 **(22)** 11.01.2023
**(54)** METHOD FOR THE IDENTIFICATION, AUTHENTICATION, AND TRACKING OF PHYSICAL ASSETS
**(51)** Int. Cl.
***G06Q 10/08*** ( 2023.01 )
*G06F 16/51* ( 2019.01 )
*G06F 16/58* ( 2019.01 )
*G06Q 10/087* ( 2023.01 )
**(87)** WO2023/137046
**(31)** 63/298,371 **(32)** 11.01.22 **(33)** US
**(43)** 20.07.2023
**(72)** CAMINSCHI, Andrew
**(74)** RnB IP Pty Ltd

---

**(71)** POSCO CO., LTD; RESEARCH INSTITUTE OF INDUSTRIAL SCIENCE & TECHNOLOGY
**(11)** AU-A-2022414975
**(21)** 2022414975 **(22)** 15.12.2022
**(54)** RECOVERY METHOD OF LITHIUM ION
**(51)** Int. Cl.
***C22B 26/12*** ( 2006.01 )
***C22B 1/02*** ( 2006.01 )
***C22B 3/20*** ( 2006.01 )
**(87)** WO2023/113504
**(31)** 10-2021-0181816 **(32)** 17.12.21 **(33)** KR
**(43)** 22.06.2023
**(72)** HAN, Gi-Chun; SON, Young Geun; KIM, Sang Won; JEUNG, Kee Uek; KIM, Seung Goo; LEE, Seung Seok; KO, Young-Seon
**(74)** Michael Buck IP

---

**(71)** POW GENETIC SOLUTIONS, INC.
**(11)** AU-A-2022418603
**(21)** 2022418603 **(22)** 21.12.2022
**(54)** METHODS AND SYSTEMS FOR OPTIMIZING CULTURE CONDITIONS IN A CULTURE PROCESS
**(51)** Int. Cl.
***C12N 5/02*** ( 2006.01 )
***C12N 5/00*** ( 2006.01 )
***C12Q 1/02*** ( 2006.01 )
***G06N 3/12*** ( 2023.01 )
*G06N 3/00* ( 2023.01 )
*G16B 5/00* ( 2019.01 )
**(87)** WO2023/122224
**(31)** 63/292,397 **(32)** 21.12.21 **(33)** US
**(43)** 29.06.2023
**(72)** HALL, Shannon; WANG, Ouwei; LEE, Brian; EMRICH, Charles
**(74)** FB Rice Pty Ltd

---

**(71)** PRG S&TECH INC.
**(11)** AU-A-2023211896
**(21)** 2023211896 **(22)** 19.01.2023
**(54)** GRANULES COMPRISING PROGERININ, AND SACHETS USING SAME
**(51)** Int. Cl.
***A61K 9/16*** ( 2006.01 )
***A61K 9/00*** ( 2006.01 )
***A61K 31/365*** ( 2006.01 )
***A61K 47/22*** ( 2006.01 )
***A61K 47/38*** ( 2006.01 )
***A61P 43/00*** ( 2006.01 )
**(87)** WO2023/146211
**(31)** 10-2022-0010690 **(32)** 25.01.22 **(33)** KR
**(43)** 03.08.2023
**(72)** PARK, Hong Gyun
**(74)** FB Rice Pty Ltd

---

**(71)** PRINCIPIA BIOPHARMA INC.
**(11)** AU-A-2022421837
**(21)** 2022421837 **(22)** 20.12.2022
**(54)** CRYSTALLINE FORMS OF (R)-1-(1-ACRYLOYLPIPERIDIN-3-YL)-4-AMINO-3-(4-PHENOXYPHENYL)-1H-IMIDAZO[4,5-C]PYRIDIN-2(3H)-ONE AND SALTS THEREOF
**(51)** Int. Cl.
***C07D 471/04*** ( 2006.01 )
***A61K 31/437*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***A61P 37/00*** ( 2006.01 )
**(87)** WO2023/122072
**(31)** 63/292,124 **(32)** 21.12.21 **(33)** US
63/432,169 13.12.22 US
**(43)** 29.06.2023
**(72)** OWENS, Tim; OCHSENBEIN, Philippe E.; DIAZ, Krista
**(74)** Griffith Hack

---

**(71)** PROSPECTORS IP HOLDINGS PTY LTD
**(11)** AU-A-2022414202
**(21)** 2022414202 **(22)** 14.12.2022
**(54)** CORE TRAY
**(51)** Int. Cl.
***B65D 1/36*** ( 2006.01 )
***B65D 21/02*** ( 2006.01 )
***B65D 25/20*** ( 2006.01 )
***B65D 25/28*** ( 2006.01 )
***B65D 85/20*** ( 2006.01 )
***E21B 25/00*** ( 2006.01 )
**(87)** WO2023/108209
**(31)** 2021904047 **(32)** 14.12.21 **(33)** AU
2022903015 14.10.22 AU
**(43)** 22.06.2023
**(72)** KEAST, Robert
**(74)** IP SOLVED (ANZ) PTY. LTD.

---

**(71)** PROVIDENCE THERAPEUTICS HOLDINGS INC.
**(11)** AU-A-2022419419
**(21)** 2022419419 **(22)** 22.12.2022
**(54)** IONIZABLE DISULFIDE LIPIDS AND LIPID NANOPARTICLES DERIVED THEREFROM
**(51)** Int. Cl.
***C07C 323/52*** ( 2006.01 )
***A61K 9/51*** ( 2006.01 )
***A61K 39/00*** ( 2006.01 )
***A61K 47/20*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***A61P 37/04*** ( 2006.01 )
**(87)** WO2023/115221
**(31)** 3143650 **(32)** 22.12.21 **(33)** CA
**(43)** 29.06.2023
**(72)** GOPALAKRISHNA PANICKER, Rajesh Krishnan; KARPOV, Yury; OLSEN, Kirstin
**(74)** AJ PARK

---

**(71)** PSYLO PTY LTD
**(11)** AU-A-2022422215
**(21)** 2022422215 **(22)** 23.12.2022
**(54)** COMPOUNDS
**(51)** Int. Cl.
***C07D 471/04*** ( 2006.01 )
***A61K 31/407*** ( 2006.01 )
***A61K 31/416*** ( 2006.01 )
***A61K 31/423*** ( 2006.01 )
***A61P 25/00*** ( 2006.01 )
***A61P 25/18*** ( 2006.01 )
***A61P 25/24*** ( 2006.01 )
***C07D 231/56*** ( 2006.01 )
***C07D 261/20*** ( 2006.01 )
**(87)** WO2023/115165
**(31)** 2021904268 **(32)** 24.12.21 **(33)** AU
**(43)** 29.06.2023
**(72)** BANISTER, Samuel; JORGENSEN, William; TAN, Jinlong
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** PYC THERAPEUTICS LIMITED
**(11)** AU-A-2023212479
**(21)** 2023212479 **(22)** 31.01.2023
**(54)** METHOD OF TREATMENT FOR OPTIC ATROPHY
**(51)** Int. Cl.
***C12N 15/113*** ( 2010.01 )

**PCT applications which have entered the National Phase - Name Index cont'd**

***A61P 27/02*** ( 2006.01 )
**(87)** WO2023/141681
**(31)** 2022900163 **(32)** 31.01.22 **(33)** AU
**(43)** 03.08.2023
**(72)** GRAINOK, Janya; RICE, Kim; UTAMA, Sasiwimon
**(74)** FB Rice Pty Ltd

---

**(71)** QIAO, Y.
**(11)** AU-A-2022412535
**(21)** 2022412535 **(22)** 15.11.2022
**(54)** BILLIARD TABLE CAPABLE OF PREVENTING BALL JUMPS
**(51)** Int. Cl.
***A63D 15/00*** ( 2006.01 )
**(87)** WO2023/109406
**(31)** 202111542227.5 **(32)** 16.12.21 **(33)** CN
**(43)** 22.06.2023
**(72)** QIAO, Yuanxu
**(74)** A.P.T. Patent and Trade Mark Attorneys

---

**(71)** QINETIQ LIMITED
**(11)** AU-A-2023216391
**(21)** 2023216391 **(22)** 23.01.2023
**(54)** METHOD FOR PREPARING PRECURSORS
**(51)** Int. Cl.
***C08G 77/62*** ( 2006.01 )
**(87)** WO2023/148041
**(31)** 2201257.9 **(32)** 01.02.22 **(33)** GB
**(43)** 10.08.2023
**(72)** FOOTER, Charles John Michael
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** QINGDAO HAIER WASHING MACHINE CO., LTD.; HAIER SMART HOME CO., LTD.
**(11)** AU-A-2022433280
**(21)** 2022433280 **(22)** 29.12.2022
**(54)** CONDENSATION CHANNEL FOR DRYING APPARATUS, AND DRYING APPARATUS
**(51)** Int. Cl.
***D06F 58/24*** ( 2006.01 )
**(87)** WO2023/134460
**(31)** 202210051236.2 **(32)** 17.01.22 **(33)** CN
**(43)** 20.07.2023
**(72)** FANG, Xiangjiu; LI, Tao; LV, Peishi; YANG, Long
**(74)** Madderns Pty Ltd

---

**(71)** RADIN, D.P.
**(11)** AU-A-2022415337
**(21)** 2022415337 **(22)** 13.12.2022
**(54)** COMPOSITIONS AND METHODS FOR TREATING CANCERS OF THE CENTRAL NERVOUS SYSTEM (CNS), INCLUDING GLIOBLASTOMA AND CHEMORESISTANT CNS TUMORS, AND RELATED COMPOSITIONS AND METHODS FOR INHIBITING AND ELIMINATING CNS CANCER STEM CELLS
**(51)** Int. Cl.
***A61K 31/382*** ( 2006.01 )
***A61K 31/495*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
**(87)** WO2023/114245
**(31)** 63/289,630 **(32)** 14.12.21 **(33)** US
63/421,503 01.11.22 US
**(43)** 22.06.2023
**(72)** RADIN, Daniel Pierce
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** REBALANCE HEALTH, INC.
**(11)** AU-A-2023209079
**(21)** 2023209079 **(22)** 20.01.2023
**(54)** ASHWAGANDHA EXTRACTS AND FORMULATIONS THEREOF
**(51)** Int. Cl.
***A61K 36/185*** ( 2006.01 )
***A61P 25/20*** ( 2006.01 )
*A61K 36/84* ( 2006.01 )
*A61P 25/24* ( 2006.01 )
**(87)** WO2023/141607
**(31)** 63/301,965 **(32)** 21.01.22 **(33)** US
**(43)** 27.07.2023
**(72)** HAI, Justin; GLENN, Russell
**(74)** FB Rice Pty Ltd

---

**(71)** RECURIUM IP HOLDINGS, LLC
**(11)** AU-A-2022409798
**(21)** 2022409798 **(22)** 14.12.2022
**(54)** USE OF COMBINATION THERAPY FOR TREATING CANCER
**(51)** Int. Cl.
***A61K 31/519*** ( 2006.01 )
***A61K 39/00*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07K 16/28*** ( 2006.01 )
***C07K 16/32*** ( 2006.01 )
**(87)** WO2023/114871
**(31)** 63/265,441 **(32)** 15.12.21 **(33)** US
**(43)** 22.06.2023
**(72)** SAMATAR, Ahmed, Abdi; DONATE, Fernando; LI, Jiali; MA, Jianhui; BUNKER, Kevin, Duane; HUANG, Peter, Qinhua
**(74)** Griffith Hack

---

**(71)** REDWOOD MATERIALS
**(11)** AU-A-2023220914
**(21)** 2023220914 **(22)** 09.02.2023
**(54)** METHOD OF MAKING A CATHODE ACTIVE MATERIAL
**(51)** Int. Cl.
***C01G 53/00*** ( 2006.01 )
***H01M 4/02*** ( 2006.01 )
***H01M 4/505*** ( 2010.01 )
***H01M 4/525*** ( 2010.01 )
**(87)** WO2023/158586
**(31)** 63/311,535 **(32)** 18.02.22 **(33)** US
63/341,270 12.05.22 US
**(43)** 24.08.2023
**(72)** NELSON, Alan; KAO, Yu-Hua; MALLEY, Benjamin; ZHANG, Fangfu; MATIOS, Edward
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** REGENERON PHARMACEUTICALS, INC.
**(11)** AU-A-2022409690
**(21)** 2022409690 **(22)** 13.12.2022
**(54)** METHODS AND SYSTEMS FOR PARTICLE CLASSIFICATION
**(51)** Int. Cl.
***G06V 10/44*** ( 2022.01 )
***G06V 10/82*** ( 2022.01 )
***G06V 20/69*** ( 2022.01 )
**(87)** WO2023/114776
**(31)** 63/289,489 **(32)** 14.12.21 **(33)** US
63/341,775 13.05.22 US
**(43)** 22.06.2023
**(72)** NAGARKATTI, Aslam; RAVI, Shiva Naveen; PRADEEP, Kaushik Krishna; HU, Qingyan; HERNANDEZ, Marco
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** REGENTS OF THE UNIVERSITY OF MINNESOTA
**(11)** AU-A-2023208662
**(21)** 2023208662 **(22)** 24.01.2023
**(54)** ANTI-B7-H3 COMPOUNDS AND METHODS OF USE
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
*A61K 39/395* ( 2006.01 )
*A61P 35/00* ( 2006.01 )
**(87)** WO2023/141360
**(31)** 63/302,290 **(32)** 24.01.22 **(33)** US
**(43)** 27.07.2023
**(72)** HACKEL, Benjamin; HARTHORN, Abbigael
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** REHAU INDUSTRIES SE & CO. KG
**(11)** AU-A-2023236347
**(21)** 2023236347 **(22)** 02.03.2023
**(54)** MULTILAYER COMPOSITE BODY
**(51)** Int. Cl.
***B32B 27/20*** ( 2006.01 )
**(87)** WO2023/174699
**(31)** 20 2022 101 371.3 **(32)** 15.03.22 **(33)** DE
**(43)** 21.09.2023
**(72)** ENGELBRECHT, Thorsten; WÖLFEL, Michael
**(74)** Spruson & Ferguson

---

**(71)** REKOR SYSTEMS, INC.
**(11)** AU-A-2023234374
**(21)** 2023234374 **(22)** 16.03.2023
**(54)** SYSTEMS AND METHODS FOR DISTRIBUTED VIDEO-MANAGEMENT IN TRAFFIC MONITORING SYSTEMS
**(51)** Int. Cl.
***G08G 1/00*** ( 2006.01 )
***G06V 20/54*** ( 2022.01 )
***H04L 67/12*** ( 2022.01 )
*G07C 5/08* ( 2006.01 )
*G08G 1/01* ( 2006.01 )
*G08G 1/017* ( 2006.01 )
*G08G 1/04* ( 2006.01 )
*G08G 1/054* ( 2006.01 )
**(87)** WO2023/177784
**(31)** 63/320,616 **(32)** 16.03.22 **(33)** US
18/184,576 15.03.23 US
**(43)** 21.09.2023
**(72)** KADOCH, Christopher Allen
**(74)** Chrysiliou IP

**PCT applications which have entered the National Phase - Name Index cont'd**

**(71)** RENATA PHARMACEUTICAL (IRELAND) LIMITED
**(11)** AU-A-2022435654
**(21)** 2022435654 **(22)** 26.10.2022
**(54)** SUSTAINED RELEASE PHARMACEUTICAL COMPOSITION OF UPADACITINIB
**(51)** Int. Cl.
***A61K 9/20*** ( 2006.01 )
**(87)** WO2023/138804
**(31)** 63/266,947 **(32)** 20.01.22 **(33)** US
**(43)** 27.07.2023
**(72)** KABIR, Syed S. Kaiser; KABIR, Syed Omar; GAT, Ganesh Vinayak; BOORUGU, Rambabu; RAHMAN, A.H.M. Masbahur
**(74)** James & Wells Intellectual Property

---

**(71)** RENERVA, LLC
**(11)** AU-A-2022425103
**(21)** 2022425103 **(22)** 30.12.2022
**(54)** NEURORRHAPHY SYSTEMS, DEVICES, AND METHODS
**(51)** Int. Cl.
***A61F 2/02*** ( 2006.01 )
***A61B 17/11*** ( 2006.01 )
***A61L 27/54*** ( 2006.01 )
*A61B 17/00* ( 2006.01 )
*A61F 2/04* ( 2013.01 )
**(87)** WO2023/129720
**(31)** 63/295,642 **(32)** 31.12.21 **(33)** US
**(43)** 06.07.2023
**(72)** SOLETTI, Lorenzo; TURCHICK, Victoria; MAHAN, Mark; SCHRAYER, Howard; WAINWRIGHT, John; CWALINA, Nicole; BURGER, Brandon
**(74)** Griffith Hack

---

**(71)** RESOTHER PHARMA A/S
**(11)** AU-A-2023226134
**(21)** 2023226134 **(22)** 23.02.2023
**(54)** ANNEXIN A1-DERIVED POLYPEPTIDE ANALOGUES
**(51)** Int. Cl.
***C07K 14/47*** ( 2006.01 )
***A61K 38/17*** ( 2006.01 )
***A61P 29/02*** ( 2006.01 )
**(87)** WO2023/161323
**(31)** 22158253.9 **(32)** 23.02.22 **(33)** EP
**(43)** 31.08.2023
**(72)** JONASSEN, Thomas Engelbrecht Nordkild
**(74)** FB Rice Pty Ltd

---

**(71)** REVEAL GENOMICS S.L; FUNDACIÓ DE RECERCA CLÍNIC BARCELONA-INSTITUT D'INVESTIGACIONS BIOMÈDIQUES AUGUST PI I SUNYER; UNIVERSITAT DE BARCELONA; HOSPITAL CLINIC DE BARCELONA; UNIVERSITÀ DEGLI STUDI DI PADOVA
**(11)** AU-A-2022419002
**(21)** 2022419002 **(22)** 16.12.2022
**(54)** DEVELOPMENT AND VALIDATION OF AN IN VITRO METHOD FOR THE PROGNOSIS OF PATIENTS SUFFERING FROM HER2-POSITIVE BREAST CANCER
**(51)** Int. Cl.
***C12Q 1/6886*** ( 2018.01 )
**(87)** WO2023/117807
**(31)** 21383165.4 **(32)** 20.12.21 **(33)** EP
**(43)** 29.06.2023
**(72)** PRAT APARICIO, Aleix; BRASÓ MARISTANY, Fara; CONTE, Pierfranco; DIECI, Maria Vittoria; GUARNERI, Valentina; VILLAGRASA GONZALEZ, Patricia
**(74)** Spruson & Ferguson

---

**(71)** ROQUETTE FRERES
**(11)** AU-A-2023217824
**(21)** 2023217824 **(22)** 08.02.2023
**(54)** DIRECTLY COMPRESSIBLE MANNITOL GRANULES
**(51)** Int. Cl.
***A61K 9/20*** ( 2006.01 )
***A61K 47/26*** ( 2006.01 )
**(87)** WO2023/151868
**(31)** 2201119 **(32)** 08.02.22 **(33)** FR
2211326 28.10.22 FR
**(43)** 17.08.2023
**(72)** BOIT, Baptiste; SALOME, Antoine; BUQUET, Fabrice; LEFEVRE, Philippe; TARLIER, Nicolas
**(74)** Spruson & Ferguson

---

**(71)** RPG ACOUSTICAL SYSTEMS LLC
**(11)** AU-A-2022420923
**(21)** 2022420923 **(22)** 14.12.2022
**(54)** FURNITURE WITH ACOUSTICAL TREATMENTS
**(51)** Int. Cl.
***A47B 13/02*** ( 2006.01 )
***A47B 96/20*** ( 2006.01 )
***G10K 11/168*** ( 2006.01 )
**(87)** WO2023/121928
**(31)** 17/557,188 **(32)** 21.12.21 **(33)** US
**(43)** 29.06.2023
**(72)** MADISON, Jeffrey, S.; D'ANTONIO, Peter
**(74)** Griffith Hack

---

**(71)** SABIC AGRI-NUTRIENTS COMPANY
**(11)** AU-A-2022426818
**(21)** 2022426818 **(22)** 30.12.2022
**(54)** NANO BIO-CARRIER WITH PLANT ADDITIVES COMBINED WITH CHEMICAL FERTILIZERS
**(51)** Int. Cl.
***C05B 7/00*** ( 2006.01 )
***A01N 25/28*** ( 2006.01 )
***C05C 9/00*** ( 2006.01 )
***C05D 9/02*** ( 2006.01 )
***C05F 1/00*** ( 2006.01 )
***C05F 11/02*** ( 2006.01 )
***C05F 11/10*** ( 2006.01 )
***C05G 3/40*** ( 2020.01 )
***C05G 5/10*** ( 2020.01 )
***C05G 5/20*** ( 2020.01 )
***C05G 5/30*** ( 2020.01 )
***C05G 5/40*** ( 2020.01 )
**(87)** WO2023/126894
**(31)** 21218442.8 **(32)** 31.12.21 **(33)** EP
21218446.9 31.12.21 EP
21218449.3 31.12.21 EP
**(43)** 06.07.2023
**(72)** MARKANDAY, Meghna; HEGDE, Ravi; BELLA, Ridha; ABDALLAH, Radwan
**(74)** FB Rice Pty Ltd

---

**(71)** SABIC AGRI-NUTRIENTS COMPANY
**(11)** AU-A-2022427995
**(21)** 2022427995 **(22)** 30.12.2022
**(54)** NANO BIO-CARRIER WITH PLANT ADDITIVES COATED ON CHEMICAL FERTILIZERS
**(51)** Int. Cl.
***C05B 7/00*** ( 2006.01 )
***A01N 25/28*** ( 2006.01 )
***C05C 9/00*** ( 2006.01 )
***C05D 9/02*** ( 2006.01 )
***C05F 1/00*** ( 2006.01 )
***C05F 11/02*** ( 2006.01 )
***C05F 11/10*** ( 2006.01 )
***C05G 3/40*** ( 2020.01 )
***C05G 5/10*** ( 2020.01 )
***C05G 5/20*** ( 2020.01 )
***C05G 5/30*** ( 2020.01 )
***C05G 5/40*** ( 2020.01 )
**(87)** WO2023/126895
**(31)** 21218442.8 **(32)** 31.12.21 **(33)** EP
21218446.9 31.12.21 EP
21218449.3 31.12.21 EP
**(43)** 06.07.2023
**(72)** MARKANDAY, Meghna; HEGDE, Ravi; BELLA, Ridha; ABDALLAH, Radwan
**(74)** FB Rice Pty Ltd

---

**(71)** SAFEGRID OY
**(11)** AU-A-2023206640
**(21)** 2023206640 **(22)** 10.01.2023
**(54)** SENSING APPARATUS, SYSTEMS AND METHODS FOR MONITORING AND MANAGING FAULTS IN ELECTRICAL UTILITY GRID
**(51)** Int. Cl.
***H02H 1/00*** ( 2006.01 )
***G01R 19/25*** ( 2006.01 )
***H02J 13/00*** ( 2006.01 )
**(87)** WO2023/135364
**(31)** 20225035 **(32)** 17.01.22 **(33)** FI
**(43)** 20.07.2023
**(72)** MÄNTYSALO, Tapio; HAKUNTI, Jussi
**(74)** Collison & Co

---

**(71)** SANDVIK MINING AND CONSTRUCTION OY
**(11)** AU-A-2023207496
**(21)** 2023207496 **(22)** 13.01.2023
**(54)** A MOBILE MINING MACHINE COMPRISING AN OSCILLATION BEARING ARRANGEMENT
**(51)** Int. Cl.
***F16C 17/10*** ( 2006.01 )
***F16C 17/18*** ( 2006.01 )
***F16C 33/08*** ( 2006.01 )
***F16C 33/12*** ( 2006.01 )
***F16C 33/16*** ( 2006.01 )
***F16C 33/20*** ( 2006.01 )
***F16C 33/28*** ( 2006.01 )
**(87)** WO2023/135566
**(31)** 22151370.8 **(32)** 13.01.22 **(33)** EP

**PCT applications which have entered the National Phase - Name Index cont'd**

**(43)** 20.07.2023
**(72)** HICKEY, Kyle
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** SANOFI
**(11)** AU-A-2022413622
**(21)** 2022413622 **(22)** 16.12.2022
**(54)** LYME DISEASE RNA VACCINE
**(51)** Int. Cl.
***A61P 31/04*** ( 2006.01 )
***A61K 39/00*** ( 2006.01 )
***A61K 39/02*** ( 2006.01 )
**(87)** WO2023/111262
**(31)** 21315283.8 **(32)** 17.12.21 **(33)** EP
21315291.1 23.12.21 EP
**(43)** 22.06.2023
**(72)** PAVOT, Vincent; GIRERD-CHAMBAZ, Yves; CIVAT, Céline; PION, Corinne
**(74)** Griffith Hack

---

**(71)** SARTORIUS BIA SEPARATIONS D.O.O.
**(11)** AU-A-2023215593
**(21)** 2023215593 **(22)** 31.01.2023
**(54)** METHOD OF PURIFYING OR REMOVING A TARGET COMPONENT FROM FULL PLASMA
**(51)** Int. Cl.
***B01D 15/08*** ( 2006.01 )
***A61K 35/16*** ( 2015.01 )
***B01D 15/16*** ( 2006.01 )
***B01D 15/22*** ( 2006.01 )
***C07K 1/16*** ( 2006.01 )
***C07K 1/36*** ( 2006.01 )
***C07K 14/745*** ( 2006.01 )
***G01N 33/50*** ( 2006.01 )
**(87)** WO2023/148172
**(31)** 22154718.5 **(32)** 02.02.22 **(33)** EP
**(43)** 10.08.2023
**(72)** JOSIC, Djuro; BEGIC, Marija; SIMOVIC MEDICA, Jasmina
**(74)** Spruson & Ferguson

---

**(71)** SCEPTER U.S. HOLDING COMPANY
**(11)** AU-A-2023213938
**(21)** 2023213938 **(22)** 25.01.2023
**(54)** FLAME MITIGATION DEVICE FOR FUEL CONTAINER
**(51)** Int. Cl.
***A62C 3/06*** ( 2006.01 )
***A62C 4/00*** ( 2006.01 )
**(87)** WO2023/147373
**(31)** 63/303,302 **(32)** 26.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** MARSHALL, Daniel; GARZA, Sergio
**(74)** Minter Ellison

---

**(71)** SCHLETTER INTERNATIONAL B.V.
**(11)** AU-A-2023214606
**(21)** 2023214606 **(22)** 31.01.2023
**(54)** DRIVE ARRANGEMENT
**(51)** Int. Cl.
***F24S 30/425*** ( 2018.01 )
***F16H 27/06*** ( 2006.01 )
***H02S 20/32*** ( 2014.01 )
**(87)** WO2023/148150
**(31)** 10 2022 102 608.6 **(32)** 03.02.22 **(33)** DE
**(43)** 10.08.2023
**(72)** DECHANT, Gabriel; ZAPFE, Jan
**(74)** DAVIS IP PTY LTD

---

**(71)** SCHREDER S.A.
**(11)** AU-A-2022430193
**(21)** 2022430193 **(22)** 07.01.2022
**(54)** RECEPTACLE ASSEMBLY WITH PROTECTION SKIRT
**(51)** Int. Cl.
***F21S 8/08*** ( 2006.01 )
***F21V 23/04*** ( 2006.01 )
***F21V 23/06*** ( 2006.01 )
***F21V 31/00*** ( 2006.01 )
*F21V 17/12* ( 2006.01 )
*F21W 131/103* ( 2006.01 )
**(87)** WO2023/131408
**(43)** 13.07.2023
**(72)** RIMÓCZI, Roland; RAMASZ, Gábor; HORVÁTH, Csaba; FÓRIÁN, Zoltán
**(74)** Golja Haines & Friend

---

**(71)** SCIENCONS AS
**(11)** AU-A-2023208408
**(21)** 2023208408 **(22)** 20.01.2023
**(54)** COMPLEXES FOR CANCER TREATMENT AND IMAGING
**(51)** Int. Cl.
***A61K 51/04*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***A61K 103/00*** ( 2006.01 )
**(87)** WO2023/139203
**(31)** 22152725.2 **(32)** 21.01.22 **(33)** EP
**(43)** 27.07.2023
**(72)** LARSEN, Roy H.
**(74)** Spruson & Ferguson

---

**(71)** SENTINEL SUBSEA LTD
**(11)** AU-A-2023222491
**(21)** 2023222491 **(22)** 15.02.2023
**(54)** A FLUID DIVERTER
**(51)** Int. Cl.
***E21B 47/11*** ( 2012.01 )
***E21B 47/001*** ( 2012.01 )
***G01M 3/04*** ( 2006.01 )
***G01M 3/20*** ( 2006.01 )
**(87)** WO2023/156770
**(31)** 2202115.8 **(32)** 17.02.22 **(33)** GB
2202116.6 17.02.22 GB
**(43)** 24.08.2023
**(72)** GORDON, Neil; JAFFREY, Andrew
**(74)** IP GATEWAY PATENT & TRADE MARK ATTORNEYS PTY LTD

---

**(71)** SHAHEEN INNOVATIONS HOLDING LIMITED
**(11)** AU-A-2021479275
**(21)** 2021479275 **(22)** 15.12.2021
**(54)** A MICROCHIP FOR DRIVING A RESONANT CIRCUIT
**(51)** Int. Cl.
***H03K 19/00*** ( 2006.01 )
***B06B 1/02*** ( 2006.01 )
**(87)** WO2023/111495
**(43)** 22.06.2023
**(72)** LAHOUD, Imad; ALSHAIBA SALEH GHANNAM ALMAZROUEI, Mohammed; BHATTI, Sajid; MACHOVEC, Jeff; LAMOUREUX, Clement
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** SHANGHAI ARGO BIOPHARMACEUTICAL CO., LTD.
**(11)** AU-A-2023210979
**(21)** 2023210979 **(22)** 28.01.2023
**(54)** COMPOSITIONS AND METHODS FOR INHIBITING EXPRESSION OF PREKALLIKREIN (PKK) PROTEIN
**(51)** Int. Cl.
***C12N 15/00*** ( 2006.01 )
***A61K 31/713*** ( 2006.01 )
***C12N 15/113*** ( 2010.01 )
**(87)** WO2023/143483
**(31)** PCT/ **(32)** 28.01.22 **(33)** CN
CN2022/074535
**(43)** 03.08.2023
**(72)** SHU, Dongxu; SHAO, Pengcheng, Patrick; XIA, Shiwei
**(74)** Minter Ellison

---

**(71)** SHANGHAI CELL THERAPY GROUP CO., LTD; SHANGHAI CELL THERAPY GROUP PHARMACEUTICAL TECHNOLOGY CO., LTD.
**(11)** AU-A-2022424159
**(21)** 2022424159 **(22)** 29.12.2022
**(54)** ANTI-MESOTHELIN NANOBODY CHIMERIC ANTIGEN RECEPTOR AND USE THEREOF
**(51)** Int. Cl.
***C12N 5/10*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07K 16/28*** ( 2006.01 )
***C12N 15/13*** ( 2006.01 )
***C12N 15/62*** ( 2006.01 )
**(87)** WO2023/125813
**(31)** 202111681582.0 **(32)** 29.12.21 **(33)** CN
**(43)** 06.07.2023
**(72)** ZHU, Xingli; LIU, Xiangzhen; SUN, Yan; DING, Na; QIAN, Qijun
**(74)** FB Rice Pty Ltd

---

**(71)** SHANGHAI IASO BIOTECHNOLOGY CO., LTD.
**(11)** AU-A-2022418639
**(21)** 2022418639 **(22)** 21.12.2022
**(54)** FULLY HUMAN ANTIBODY TARGETING GPRC5D AND CHIMERIC ANTIGEN RECEPTOR (CAR) AND USE THEREOF
**(51)** Int. Cl.
***C12N 5/02*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***C07H 21/04*** ( 2006.01 )
***C07K 16/30*** ( 2006.01 )
***C07K 16/46*** ( 2006.01 )
***G01N 33/574*** ( 2006.01 )
**(87)** WO2023/116782
**(31)** PCT/ **(32)** 21.12.21 **(33)** CN
CN2021/140153
PCT/ 15.03.22 CN
CN2022/080836
**(43)** 29.06.2023
**(72)** TAN, Taochao; LUO, Qian; DAI, Zhenyu; WEI, Qiaoe; ZHAO, Ya;

**PCT applications which have entered the National Phase - Name Index cont'd**

ZHANG, Yanying; LIU, Jianwei; JIA, Xiangyin; ZHANG, Qianqian; XIE, Meng
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** SHANGHAI INSTITUTE OF MATERIA MEDICA, CHINESE ACADEMY OF SCIENCES
**(11)** AU-A-2022429732
**(21)** 2022429732 **(22)** 28.12.2022
**(54)** CLASS OF QUINOLINE COMPOUNDS, PREPARATION METHOD THEREFOR, PHARMACEUTICAL COMPOSITION AND USE THEREOF
**(51)** Int. Cl.
***C07D 403/12*** ( 2006.01 )
***A61K 31/53*** ( 2006.01 )
***A61P 1/16*** ( 2006.01 )
***A61P 3/00*** ( 2006.01 )
***A61P 3/04*** ( 2006.01 )
***A61P 3/06*** ( 2006.01 )
***A61P 3/10*** ( 2006.01 )
***A61P 5/14*** ( 2006.01 )
***A61P 9/00*** ( 2006.01 )
***A61P 9/10*** ( 2006.01 )
***A61P 9/12*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07D 215/02*** ( 2006.01 )
***C07D 253/06*** ( 2006.01 )
***C07D 253/065*** ( 2006.01 )
***C07D 253/07*** ( 2006.01 )
***C07D 253/075*** ( 2006.01 )
***C07D 401/12*** ( 2006.01 )
***C07D 401/14*** ( 2006.01 )
***C07D 403/14*** ( 2006.01 )
***C07D 405/14*** ( 2006.01 )
***C07D 407/14*** ( 2006.01 )
***C07D 409/14*** ( 2006.01 )
***C07D 471/00*** ( 2006.01 )
***C07K 14/705*** ( 2006.01 )
***C07K 14/72*** ( 2006.01 )
**(87)** WO2023/125716
**(31)** 202111627000.0 **(32)** 28.12.21 **(33)** CN
**(43)** 06.07.2023
**(72)** LIU, Hong; LI, Jia; WANG, Jiang; ZANG, Yi; CHEN, Feiyang; GAO, Lixin; ZHAO, Jing; SUN, Dandan; WANG, Ke'an; JIANG, Hualiang; XIE, Rongrong
**(74)** Spruson & Ferguson

---

**(71)** SHENZHEN FRONTIERGATE BIOTECHNOLOGY CO., LTD
**(11)** AU-A-2023206501
**(21)** 2023206501 **(22)** 09.01.2023
**(54)** DENDRITIC CELL TUMOR VACCINE AND USES THEREOF
**(51)** Int. Cl.
***C12N 15/867*** ( 2006.01 )
***A61K 39/00*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C12N 5/10*** ( 2006.01 )
***C12N 15/12*** ( 2006.01 )
***C12N 15/62*** ( 2006.01 )
**(87)** WO2023/134600
**(31)** PCT/CN2022/071239 **(32)** 11.01.22 **(33)** CN
PCT/CN2022/138288 12.12.22 CN
**(43)** 20.07.2023
**(72)** XU, Yang
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** SICONA BATTERY TECHNOLOGIES PTY LTD
**(11)** AU-A-2022417289
**(21)** 2022417289 **(22)** 22.12.2022
**(54)** EDGE FUNCTIONALISED GRAPHENE THERMAL NANOFLUIDS
**(51)** Int. Cl.
***B82Y 30/00*** ( 2011.01 )
***B33Y 70/00*** ( 2020.01 )
***B82Y 40/00*** ( 2011.01 )
***C01B 32/19*** ( 2017.01 )
***C01B 32/194*** ( 2017.01 )
***C01B 32/196*** ( 2017.01 )
***C08K 3/04*** ( 2006.01 )
***C09K 5/10*** ( 2006.01 )
**(87)** WO2023/115143
**(31)** 2021904251 **(32)** 23.12.21 **(33)** AU
**(43)** 29.06.2023
**(72)** RYDER, Gregory Michael
**(74)** Spruson & Ferguson

---

**(71)** SICPA HOLDING SA
**(11)** AU-A-2022418000
**(21)** 2022418000 **(22)** 16.12.2022
**(54)** METHOD AND SYSTEM FOR VALIDATING TRANSFERRING DATA BETWEEN COMMUNICATION DEVICES
**(51)** Int. Cl.
***H04W 12/10*** ( 2021.01 )
***G06Q 20/10*** ( 2012.01 )
***G06Q 20/22*** ( 2012.01 )
***G06Q 20/32*** ( 2012.01 )
***G06Q 20/36*** ( 2012.01 )
***G06Q 20/38*** ( 2012.01 )
***G06Q 20/40*** ( 2012.01 )
***H04L 9/00*** ( 2022.01 )
***H04L 9/32*** ( 2006.01 )
***H04L 9/40*** ( 2022.01 )
***H04L 67/06*** ( 2022.01 )
***H04W 12/069*** ( 2021.01 )
*H04L 67/104* ( 2022.01 )
**(87)** WO2023/117766
**(31)** 21217192.0 **(32)** 22.12.21 **(33)** EP
**(43)** 29.06.2023
**(72)** HARDMAN, Daniel; SUICHIES, Bart; NICOLOV, Kalin
**(74)** Spruson & Ferguson

---

**(71)** SICPA HOLDING SA
**(11)** AU-A-2022421462
**(21)** 2022421462 **(22)** 16.12.2022
**(54)** SECURITY ELEMENT, CORRESPONDING ENGRAVED INTAGLIO PRINTING PLATE, AND METHODS AND DEVICES FOR PRODUCING, DECODING AND AUTHENTICATING SECURITY MARKING OF SAID SECURITY ELEMENT
**(51)** Int. Cl.
***B42D 25/305*** ( 2014.01 )
***B41C 1/02*** ( 2006.01 )
***B41N 1/00*** ( 2006.01 )
***B42D 25/324*** ( 2014.01 )
***G06K 19/06*** ( 2006.01 )
***G07D 7/206*** ( 2016.01 )
**(87)** WO2023/117765
**(31)** 21216149.1 **(32)** 20.12.21 **(33)** EP
**(43)** 29.06.2023
**(72)** DECOUX, Eric; LEFEBVRE, Olivier; DUCA, Nicola
**(74)** Spruson & Ferguson

---

**(71)** SIMBL ESG PTY LTD
**(11)** AU-A-2022420975
**(21)** 2022420975 **(22)** 19.12.2022
**(54)** RECYCLING SYSTEMS AND METHODS
**(51)** Int. Cl.
***G06Q 10/30*** ( 2023.01 )
***G06Q 20/06*** ( 2012.01 )
***G06Q 20/22*** ( 2012.01 )
***G06Q 30/0208*** ( 2023.01 )
***H04L 9/00*** ( 2022.01 )
**(87)** WO2023/115114
**(31)** 2021904170 **(32)** 21.12.21 **(33)** AU
**(43)** 29.06.2023
**(72)** ASHLIN, Leigh
**(74)** LAMINAR IP PTY LTD

---

**(71)** SLINGSHOT AEROSPACE, INC.; MARCHAND, B.G.; LEDERMAN, J.; KOENIG, D.; JONDROW, M.
**(11)** AU-A-2023209396
**(21)** 2023209396 **(22)** 20.01.2023
**(54)** METHODS AND SYSTEMS FOR STREAMING BUFFER NUMERICAL PROPAGATION
**(51)** Int. Cl.
***B64G 1/10*** ( 2006.01 )
***G01S 19/10*** ( 2010.01 )
***G01S 19/28*** ( 2010.01 )
***G06F 16/182*** ( 2019.01 )
***G06F 16/487*** ( 2019.01 )
***G06T 19/00*** ( 2011.01 )
***G09B 9/12*** ( 2006.01 )
*G01S 19/31* ( 2010.01 )
*G06F 3/04845* ( 2022.01 )
*G06F 3/04847* ( 2022.01 )
*G06F 3/06* ( 2006.01 )
*G06F 16/44* ( 2019.01 )
*G06F 30/20* ( 2020.01 )
*G06T 15/00* ( 2011.01 )
**(87)** WO2023/141303
**(31)** 63/301,919 **(32)** 21.01.22 **(33)** US
63/368,954 20.07.22 US
**(43)** 27.07.2023
**(72)** MARCHAND, Belinda Grace; LEDERMAN, Joshua; KOENIG, Daniel; JONDROW, Matthew
**(74)** RnB IP Pty Ltd

---

**(71)** SOCIEDAD ESPAÑOLA DE ELECTROMEDICINA Y CALIDAD, S.A.
**(11)** AU-A-2023357514
**(21)** 2023357514 **(22)** 05.05.2023
**(54)** CIRCUIT FOR DIRECT CONTROL OF THE ANODE CURRENT OF AN X- RAY TUBE WITH MONOPOLAR OR BIPOLAR POWER SUPPLY BY MEANS OF THE AUTOMATIC REGULATION OF THE GRID CURRENT
**(51)** Int. Cl.
***H05G 1/34*** ( 2006.01 )
**(87)** WO2024/074737
**(31)** PCT/ES2022/070631 **(32)** 04.10.22 **(33)** ES

**PCT applications which have entered the National Phase - Name Index cont'd**

**(43)** 11.04.2024
**(72)** DíAZ CARMENA, Ángel; MOLINA CASLA, José Luis; MIRÓN QUIRÓS, Agustín
**(74)** Walker IP

---

**(71)** SOCIÉTÉ DES PRODUITS NESTLÉ S.A.
**(11)** AU-A-2023229070
**(21)** 2023229070 **(22)** 22.02.2023
**(54)** USE OF A COMPOSITION FOR MANAGING POSTPRANDIAL GLUCOSE RESPONSE AND ASSOCIATED DISORDERS
**(51)** Int. Cl.
***A61K 31/20*** ( 2006.01 )
***A61K 31/202*** ( 2006.01 )
***A61K 31/445*** ( 2006.01 )
***A61K 31/733*** ( 2006.01 )
***A61K 36/605*** ( 2006.01 )
***A61P 3/10*** ( 2006.01 )
***A61P 9/00*** ( 2006.01 )
**(87)** WO2023/165856
**(31)** 63/315,752 **(32)** 02.03.22 **(33)** US
**(43)** 07.09.2023
**(72)** MOULLAN, Norman; DARIMONT-NICOLAU, Christian; DING, Tze Wan, Cherlyn; FU, Qu
**(74)** Spruson & Ferguson

---

**(71)** SOLMIC BIOTECH GMBH
**(11)** AU-A-2022239827
**(21)** 2022239827 **(22)** 17.03.2022
**(54)** VITAMIN D FORMULATIONS
**(51)** Int. Cl.
***A61K 9/107*** ( 2006.01 )
***A61K 31/00*** ( 2006.01 )
***A61K 31/593*** ( 2006.01 )
***A61K 47/22*** ( 2006.01 )
**(87)** WO2022/195016
**(31)** 21163104.9 **(32)** 17.03.21 **(33)** EP
**(43)** 22.09.2022
**(72)** FURCH, Marcus; BESECKE, Karen F.W.; DINKLER, Helge; MACZKA, Michael
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** SOLODOVNIK, S.A.
**(11)** AU-A-2022450437
**(21)** 2022450437 **(22)** 09.12.2022
**(54)** A TRAINING MACHINE FOR A SIMULTANEOUS TRAINING OF HUMAN SHOULDER GIRDLE, PELVIC GIRDLE, AND TRUNK MUSCLES (VARIANTS)
**(51)** Int. Cl.
***A63B 21/005*** ( 2006.01 )
***A63B 21/00*** ( 2006.01 )
***A63B 22/00*** ( 2006.01 )
***A63B 22/06*** ( 2006.01 )
*A63B 71/06* ( 2006.01 )
**(87)** WO2023/191761
**(31)** a 2021 07374 **(32)** 17.12.21 **(33)** UA
**(43)** 05.10.2023
**(72)** SOLODOVNIK, Sergii Anatoliyovych; VOYTULIEVICH, Dienis Mikhaylovich
**(74)** Madderns Pty Ltd

---

**(71)** SOLUM CO., LTD.
**(11)** AU-A-2022418319
**(21)** 2022418319 **(22)** 21.12.2022
**(54)** CHARGER
**(51)** Int. Cl.
***H01R 13/58*** ( 2006.01 )
***H01R 13/04*** ( 2006.01 )
***H02J 7/00*** ( 2006.01 )
**(87)** WO2023/121309
**(31)** 10-2021-0184298 **(32)** 21.12.21 **(33)** KR
10-2022-0180446 21.12.22 KR
**(43)** 29.06.2023
**(72)** KIM, Hyun Su; JANG, Young Jun; AN, Ung Seop
**(74)** Evermore IP

---

**(71)** SOLUTION SEEKER AS
**(11)** AU-A-2023205841
**(21)** 2023205841 **(22)** 09.01.2023
**(54)** A METHOD OF TRAINING A MODEL FOR ONE OR MORE PRODUCTION WELLS
**(51)** Int. Cl.
***E21B 41/00*** ( 2006.01 )
***E21B 47/00*** ( 2012.01 )
***G06N 5/02*** ( 2023.01 )
***G06N 5/04*** ( 2023.01 )
***G06N 20/00*** ( 2019.01 )
**(87)** WO2023/132753
**(31)** 2200184.6 **(32)** 07.01.22 **(33)** GB
**(43)** 13.07.2023
**(72)** GUNNERUD, Vidar; GRIMSTAD, Bjarne; LØVLAND, Kristian
**(74)** Griffith Hack

---

**(71)** SOMPO CARE INC.
**(11)** AU-A-2023227622
**(21)** 2023227622 **(22)** 22.02.2023
**(54)** CARE MANAGEMENT ASSISTANCE METHOD, INFORMATION PROCESSING DEVICE, SYSTEM, AND PROGRAM
**(51)** Int. Cl.
***G06Q 50/22*** ( 2018.01 )
**(87)** WO2023/167088
**(31)** 2022-032934 **(32)** 03.03.22 **(33)** JP
**(43)** 07.09.2023
**(72)** MIYAGATA Yohei; HORI Keiko; TORII Masaki
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** SOMPO CARE INC.
**(11)** AU-A-2023229117
**(21)** 2023229117 **(22)** 22.02.2023
**(54)** INDEPENDENCE ASSISTANCE METHOD, INFORMATION PROCESSING DEVICE, SYSTEM, AND PROGRAM
**(51)** Int. Cl.
***G16H 50/30*** ( 2018.01 )
***G06Q 50/22*** ( 2018.01 )
**(87)** WO2023/167090
**(31)** 2022-032939 **(32)** 03.03.22 **(33)** JP
**(43)** 07.09.2023
**(72)** HIRANUMA Naoki; KAWABATA Shigeki; MASUYAMA Midori; OE Yukiko
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** STORA ENSO OYJ
**(11)** AU-A-2023220046
**(21)** 2023220046 **(22)** 17.02.2023
**(54)** A COMPOSTABLE CONTAINER FOR PACKAGING OF LIQUID, FATTY- AND/OR FROZEN FOOD
**(51)** Int. Cl.
***B65D 3/04*** ( 2006.01 )
***B32B 29/00*** ( 2006.01 )
***B65D 5/02*** ( 2006.01 )
***B65D 65/46*** ( 2006.01 )
***B65D 81/00*** ( 2006.01 )
***D21H 19/00*** ( 2006.01 )
***D21H 27/30*** ( 2006.01 )
**(87)** WO2023/156962
**(31)** 2230048-7 **(32)** 21.02.22 **(33)** SE
**(43)** 24.08.2023
**(72)** BONNERUP, Chris; BACKFOLK, Kaj; EKBERG, Magnus
**(74)** Spruson & Ferguson

---

**(71)** SUNCOR ENERGY INC.
**(11)** AU-A-2023207136
**(21)** 2023207136 **(22)** 10.01.2023
**(54)** SYSTEMS, METHODS, AND MEDIA FOR INSTRUCTING POWER SHOVEL OPERATORS
**(51)** Int. Cl.
***G01G 19/08*** ( 2006.01 )
***E02F 3/00*** ( 2006.01 )
***G01G 23/01*** ( 2006.01 )
***G07C 5/02*** ( 2006.01 )
***G09B 19/16*** ( 2006.01 )
***G09B 19/24*** ( 2006.01 )
**(87)** WO2023/133629
**(31)** 3145559 **(32)** 13.01.22 **(33)** CA
**(43)** 20.07.2023
**(72)** ROUSELL, Tobi; DO, An Khac; LUTHER, Daniel Laverne Gray
**(74)** Golja Haines & Friend

---

**(71)** SUNGROW POWER SUPPLY CO., LTD.
**(11)** AU-A-2022456807
**(21)** 2022456807 **(22)** 27.12.2022
**(54)** PHOTOVOLTAIC CONNECTOR
**(51)** Int. Cl.
***H01R 13/10*** ( 2006.01 )
***H01R 13/04*** ( 2006.01 )
***H01R 13/514*** ( 2006.01 )
***H01R 13/73*** ( 2006.01 )
**(87)** WO2023/213090
**(31)** 202221074330.1 **(32)** 06.05.22 **(33)** CN
**(43)** 09.11.2023
**(72)** SHEN, Zhanliang; YU, Yanfei; CHEN, Peng
**(74)** FB Rice Pty Ltd

---

**(71)** SUNSHINE LAKE PHARMA CO., LTD.
**(11)** AU-A-2023212736
**(21)** 2023212736 **(22)** 16.01.2023

## PCT applications which have entered the National Phase - Name Index cont'd

**(54)** VIRAL VECTOR AND APPLICATION THEREOF
**(51)** Int. Cl.
***C12N 15/867*** ( 2006.01 )
***A61K 39/205*** ( 2006.01 )
***A61K 47/68*** ( 2017.01 )
***A61K 48/00*** ( 2006.01 )
***A61P 31/14*** ( 2006.01 )
***C12N 7/01*** ( 2006.01 )
***C12N 15/47*** ( 2006.01 )
***C12N 15/62*** ( 2006.01 )
**(87)** WO2023/143209
**(31)** 202210298203.8 **(32)** 24.03.22 **(33)** CN
202210089576.4 25.01.22 CN
**(43)** 03.08.2023
**(72)** YANG, Xiaodan; CHEN, Shiyou; ZHU, Xiuqin; LI, Linsheng; DONG, Junji; ZHAO, Guanghui; LI, Lijia; CHEN, Xiaofeng; LI, Wenjia
**(74)** MINTER ELLISON

---

**(71)** SUZHOU PUHE BIOPHARMA CO., LTD.
**(11)** AU-A-2022432354
**(21)** 2022432354 **(22)** 28.10.2022
**(54)** 2-PIPERIDYL OR 2-PYRAZOLYL SUBSTITUTED PYRIMIDINE COMPOUND SERVING AS EGFR INHIBITOR
**(51)** Int. Cl.
***C07D 401/14*** ( 2006.01 )
***A61K 31/506*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07D 471/04*** ( 2006.01 )
***C07D 491/04*** ( 2006.01 )
***C07D 491/08*** ( 2006.01 )
***C07D 491/10*** ( 2006.01 )
***C07D 519/00*** ( 2006.01 )
**(87)** WO2023/134266
**(31)** PCT/ **(32)** 17.01.22 **(33)** CN
CN2022/072306
PCT/ 12.05.22 CN
CN2022/092375
**(43)** 20.07.2023
**(72)** LIU, Bin; GAO, Feng; YUAN, Shuai; ZHAO, Hui; PENG, Xingzhe; LIU, Chong; SHAO, Ning; GUO, Yongqi; WU, Yongyong; WU, Zhuo
**(74)** WRAYS PTY LTD

---

**(71)** SUZHOU YIHANG ELECTRONIC TECHNOLOGY CO., LTD.
**(11)** AU-A-2022487602
**(21)** 2022487602 **(22)** 15.12.2022
**(54)** QUICK-CHANGE STRUCTURE OF LIQUID-COOLED CHARGING GUN
**(51)** Int. Cl.
***H01R 13/42*** ( 2006.01 )
***B60L 53/16*** ( 2019.01 )
***B60L 53/302*** ( 2019.01 )
***H01R 13/66*** ( 2006.01 )
**(87)** WO2024/108696
**(31)** 202211488671.8 **(32)** 25.11.22 **(33)** CN
**(43)** 30.05.2024
**(72)** WANG, Jihua; YANG, Tao; LIAO, Yongjie; LV, Ting
**(74)** Ran Tao

---

**(71)** SWISSPEARL DANMARK HOLDING A/S
**(11)** AU-A-2023222398
**(21)** 2023222398 **(22)** 15.02.2023
**(54)** FIBRE CEMENT PLATE AND A WALL STRUCTURE HAVING THE FIBRE CEMENT PLATES
**(51)** Int. Cl.
***E04F 13/08*** ( 2006.01 )
***E04F 13/14*** ( 2006.01 )
*E04C 2/00* ( 2006.01 )
**(87)** WO2023/156455
**(31)** PA202270059 **(32)** 15.02.22 **(33)** DK
**(43)** 24.08.2023
**(72)** JENSEN, Mia Werner; POULSEN, Carsten Borum; VIG, Peter Hessellund Møller
**(74)** Spruson & Ferguson

---

**(71)** SYDDANSK UNIVERSITET
**(11)** AU-A-2023210747
**(21)** 2023210747 **(22)** 26.01.2023
**(54)** ALLELE SPECIFIC SPLICE SWITCHING OLIGONUCLEOTIDES TARGETING PSEUDOEXONS
**(51)** Int. Cl.
***C12N 15/11*** ( 2006.01 )
***A61K 31/7088*** ( 2006.01 )
***C12N 15/113*** ( 2010.01 )
**(87)** WO2023/144263
**(31)** PCT/ **(32)** 26.01.22 **(33)** EP
EP2022/051790
PA202270346 29.06.22 DK
**(43)** 03.08.2023
**(72)** ANDRESEN, Brage Storstein; DOKTOR, Thomas Koed; HOLM, Lise Lolle; PETERSEN, Ulrika Simone Spangsberg; BRUUN, Gitte Hoffmann
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** T.EN PROCESS TECHNOLOGY, INC.
**(11)** AU-A-2023209379
**(21)** 2023209379 **(22)** 19.01.2023
**(54)** PROCESSES FOR MAKING ETHYLENE GLYCOL AND/OR PROPYLENE GLYCOL FROM ALDOSE- AND/OR KETOSE-YIELDING CARBOHYDRATES WITH INTEGRATED TUNGSTEN CATALYST RECOVERY
**(51)** Int. Cl.
***C07C 29/09*** ( 2006.01 )
***C07C 29/153*** ( 2006.01 )
***C07C 29/74*** ( 2006.01 )
*B01J 19/00* ( 2006.01 )
**(87)** WO2023/141211
**(31)** 63/300,696 **(32)** 19.01.22 **(33)** US
**(43)** 27.07.2023
**(72)** BINDER, Thomas P.; KAPICAK, Louis
**(74)** Spruson & Ferguson

---

**(71)** TANGO THERAPEUTICS, INC.
**(11)** AU-A-2023213736
**(21)** 2023213736 **(22)** 26.01.2023
**(54)** COMPOUNDS AND METHODS OF USE
**(51)** Int. Cl.
***C07D 213/75*** ( 2006.01 )
***A61K 31/437*** ( 2006.01 )
***A61K 31/4427*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07D 213/82*** ( 2006.01 )
***C07D 401/14*** ( 2006.01 )
***C07D 471/04*** ( 2006.01 )
**(87)** WO2023/146987
**(31)** 63/303,409 **(32)** 26.01.22 **(33)** US
63/435,210 23.12.22 US
**(43)** 03.08.2023
**(72)** COTTRELL, Kevin, M.
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** TCHIBO GMBH
**(11)** AU-A-2023207781
**(21)** 2023207781 **(22)** 10.01.2023
**(54)** PORTION CAPSULE
**(51)** Int. Cl.
***B65D 85/804*** ( 2006.01 )
***B65B 51/22*** ( 2006.01 )
**(87)** WO2023/135137
**(31)** 22150889.8 **(32)** 11.01.22 **(33)** EP
**(43)** 20.07.2023
**(72)** MÜLLER, Ralf
**(74)** Catalyst Intellectual Property

---

**(71)** TECHNIP ENERGIES FRANCE
**(11)** AU-A-2023208262
**(21)** 2023208262 **(22)** 20.01.2023
**(54)** MODULAR MID-SCALE LIQUEFIED NATURAL GAS PRODUCTION SYSTEM AND METHOD
**(51)** Int. Cl.
***F25J 1/00*** ( 2006.01 )
**(87)** WO2023/139436
**(31)** 17/581,302 **(32)** 21.01.22 **(33)** US
**(43)** 27.07.2023
**(72)** NANDA, Rajeev; SMITHIES, Terence, Ashley; HU, Jichuan; PIPARIA, Jagdish, J.; JIN, Xun; GHOSAL, Partha
**(74)** Spruson & Ferguson

---

**(71)** TEIJIN PHARMA LIMITED; UNIVERSITY PUBLIC CORPORATION OSAKA
**(11)** AU-A-2023226313
**(21)** 2023226313 **(22)** 27.02.2023
**(54)** THERAPEUTIC AGENT FOR NEURODEGENERATIVE DISORDER
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61K 31/713*** ( 2006.01 )
***A61K 35/12*** ( 2015.01 )
***A61K 38/02*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61K 45/00*** ( 2006.01 )
***A61K 48/00*** ( 2006.01 )
***A61P 25/00*** ( 2006.01 )
***A61P 25/28*** ( 2006.01 )
***A61P 37/04*** ( 2006.01 )
***A61P 43/00*** ( 2006.01 )
***C07K 14/705*** ( 2006.01 )
***C07K 16/46*** ( 2006.01 )
***C12N 1/15*** ( 2006.01 )
***C12N 1/19*** ( 2006.01 )
***C12N 1/21*** ( 2006.01 )
***C12N 5/10*** ( 2006.01 )
***C12N 15/06*** ( 2006.01 )
***C12N 15/13*** ( 2006.01 )
***C12N 15/63*** ( 2006.01 )

**PCT applications which have entered the National Phase - Name Index cont'd**

***C12P 21/08*** ( 2006.01 )
**(87)** WO2023/163187
**(31)** 2022-029825 **(32)** 28.02.22 **(33)** JP
2022-075095 28.04.22 JP
**(43)** 31.08.2023
**(72)** EGUCHI, Hiroshi; TOMIYAMA, Takami; UMEDA, Tomohiro
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** TEITUR TROPHICS APS
**(11)** AU-A-2023218551
**(21)** 2023218551 **(22)** 09.02.2023
**(54)** NOVEL PEPTIDES
**(51)** Int. Cl.
***A61K 47/54*** ( 2017.01 )
***A61P 25/00*** ( 2006.01 )
***C07K 14/435*** ( 2006.01 )
***C07K 14/705*** ( 2006.01 )
*A61K 38/00* ( 2006.01 )
**(87)** WO2023/152229
**(31)** 22155992.5 **(32)** 09.02.22 **(33)** EP
22160222.0 04.03.22 EP
**(43)** 17.08.2023
**(72)** DALBY, Anders; JENSEN, Simon Mølgaard; OLLENDORFF, Mathias Kaas; STRØMGAARD, Kristian; FOSGERAU, Keld
**(74)** Spruson & Ferguson

---

**(71)** TELEFONAKTIEBOLAGET LM ERICSSON (publ)
**(11)** AU-A-2023212361
**(21)** 2023212361 **(22)** 28.01.2023
**(54)** SUPPORT FOR SIMULTANEOUS EDGE APPLICATION SERVER (EAS) CONNECTIVITY IN APPLICATION CONTEXT RELOCATION (ACR)
**(51)** Int. Cl.
***H04W 36/18*** ( 2009.01 )
***H04L 65/1095*** ( 2022.01 )
***H04L 67/148*** ( 2022.01 )
***H04W 36/00*** ( 2009.01 )
**(87)** WO2023/143492
**(31)** PCT/ **(32)** 28.01.22 **(33)** CN
CN2022/074527
**(43)** 03.08.2023
**(72)** XU, Wenliang
**(74)** AJ PARK

---

**(71)** TEVA PHARMACEUTICALS INTERNATIONAL GMBH
**(11)** AU-A-2023208281
**(21)** 2023208281 **(22)** 20.01.2023
**(54)** OLANZAPINE, COMPOSITIONS THEREOF AND METHODS OF USE THEREOF
**(51)** Int. Cl.
***A61K 9/14*** ( 2006.01 )
**(87)** WO2023/139531
**(31)** 63/301,202 **(32)** 20.01.22 **(33)** US
**(43)** 27.07.2023
**(72)** KLARIC, Dario; SILIC, Dunja; MARTINELLI, Antonia Giacobi; MUSANIC, Sanja Matecic; ŠAHNIĆ, Damir
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** TEXTRON SYSTEMS CORPORATION
**(11)** AU-A-2023211613
**(21)** 2023211613 **(22)** 30.01.2023
**(54)** PAYLOAD INTERFACE MODULE FOR REMOTELY PILOTED VEHICLES
**(51)** Int. Cl.
***H04B 7/185*** ( 2006.01 )
**(87)** WO2023/147109
**(31)** 63/304,226 **(32)** 28.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** MAUST, Urbane Dwane; POPOWYCH, Mark Andrew; BEVARD, Christopher David
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** THE GOVERNOR & COMPANY OF THE BANK OF ENGLAND
**(11)** AU-A-2023220920
**(21)** 2023220920 **(22)** 03.02.2023
**(54)** DOCUMENT RECOGNITION DEVICE
**(51)** Int. Cl.
***G07D 7/04*** ( 2016.01 )
***G07D 7/121*** ( 2016.01 )
**(87)** WO2023/156756
**(31)** 2202327.9 **(32)** 21.02.22 **(33)** GB
**(43)** 24.08.2023
**(72)** MCGRATH, Anthony; NOBLE, Richard; NOBLE, Charles
**(74)** Spruson & Ferguson

---

**(71)** THE JACKSON LABORATORY
**(11)** AU-A-2022421979
**(21)** 2022421979 **(22)** 21.12.2022
**(54)** HUMANIZED MOUSE MODELS
**(51)** Int. Cl.
***C12N 15/85*** ( 2006.01 )
***A01K 67/027*** ( 2006.01 )
***A61K 35/28*** ( 2015.01 )
***A61N 5/10*** ( 2006.01 )
***C07K 14/535*** ( 2006.01 )
***C07K 14/54*** ( 2006.01 )
***C07K 16/28*** ( 2006.01 )
***C12N 5/00*** ( 2006.01 )
**(87)** WO2023/122138
**(31)** 63/292,757 **(32)** 22.12.21 **(33)** US
**(43)** 29.06.2023
**(72)** KECK, James
**(74)** Spruson & Ferguson

---

**(71)** THE KATHOLIEKE UNIVERSITEIT LEUVEN; SPRINGWORKS THERAPEUTICS INC.; VIB VZW
**(11)** AU-A-2022417524
**(21)** 2022417524 **(22)** 23.12.2022
**(54)** 2-PYRAZOLE ANILINES AND RELATED ANALOGS FOR INHIBITING YAP/TAZ-TEAD
**(51)** Int. Cl.
***A61K 31/33*** ( 2006.01 )
***A61K 31/13*** ( 2006.01 )
***A61K 31/395*** ( 2006.01 )
*A61K 31/454* ( 2006.01 )
**(87)** WO2023/122780
**(31)** 63/293,531 **(32)** 23.12.21 **(33)** US
**(43)** 29.06.2023
**(72)** VANDERHOYDONCK, Bart; MARCHAND, Arnaud; GWALTNEY, Stephen, L.; SPIESER, Stephane; SMETS, Wim; CANDI, Aurelie; VERSELE, Matthias; HALDER, Georg
**(74)** FB Rice Pty Ltd

---

**(71)** THE PROCTER & GAMBLE COMPANY
**(11)** AU-A-2023234531
**(21)** 2023234531 **(22)** 15.03.2023
**(54)** CAP OF A PACKAGE SUITABLE FOR STORING PERSONAL HEALTH CARE PRODUCTS
**(51)** Int. Cl.
***B65D 35/44*** ( 2006.01 )
***B65D 47/00*** ( 2006.01 )
**(87)** WO2023/178119
**(31)** 22162690.6 **(32)** 17.03.22 **(33)** EP
**(43)** 21.09.2023
**(72)** TROMBLEY, Kurt, Franklin; MIDDLETON, Peter; BAILLELY, Susan, Eleanor
**(74)** AJ PARK

---

**(71)** THE PROCTER & GAMBLE COMPANY
**(11)** AU-A-2023235280
**(21)** 2023235280 **(22)** 15.03.2023
**(54)** CAP OF A PACKAGE SUITABLE FOR STORING PERSONAL HEALTH CARE PRODUCTS
**(51)** Int. Cl.
***B65D 35/44*** ( 2006.01 )
***B65D 47/00*** ( 2006.01 )
**(87)** WO2023/178120
**(31)** 22162693.0 **(32)** 17.03.22 **(33)** EP
**(43)** 21.09.2023
**(72)** TROMBLEY, Kurt, Franklin; MIDDLETON, Peter; BAILLELY, Susan, Eleanor
**(74)** AJ PARK

---

**(71)** THE PROGERIA RESEARCH FOUNDATION
**(11)** AU-A-2022429913
**(21)** 2022429913 **(22)** 29.12.2022
**(54)** NOVEL ASSAY AND NOVEL METHODS OF TREATING HUTCHINSON-GILFORD PROGERIA SYNDROME
**(51)** Int. Cl.
***G01N 33/53*** ( 2006.01 )
***G01N 33/543*** ( 2006.01 )
***G01N 33/68*** ( 2006.01 )
**(87)** WO2023/126868
**(31)** 63/294,418 **(32)** 29.12.21 **(33)** US
**(43)** 06.07.2023
**(72)** GORDON, Leslie B.; HAMREN, Sarah; GOODSON, Robert
**(74)** SR Intellectual Property

---

**(71)** THE TORO COMPANY
**(11)** AU-A-2023220951
**(21)** 2023220951 **(22)** 13.02.2023
**(54)** SYSTEM AND METHOD FOR DEFINING A WORK REGION BOUNDARY FOR USE BY AN AUTONOMOUS GROUNDS CARE VEHICLE
**(51)** Int. Cl.

**PCT applications which have entered the National Phase - Name Index cont'd**

***A01D 34/00*** ( 2006.01 )
**(87)** WO2023/158606
**(31)** 63/310,427 **(32)** 15.02.22 **(33)** US
63/337,675 03.05.22 US
63/354,302 22.06.22 US
**(43)** 24.08.2023
**(72)** CURD, Derek Raymond; TATE, Jeremy J.; PRYOR, Justin Leigh; KRAUSE, William J.; LEWIS, Weston M.
**(74)** Michael Buck IP

---

**(71)** THE TRUSTEES OF INDIANA UNIVERSITY
**(11)** AU-A-2022414095
**(21)** 2022414095 **(22)** 15.12.2022
**(54)** CELL TARGETING COMPOSITIONS AND METHODS
**(51)** Int. Cl.
***C12N 9/22*** ( 2006.01 )
***C07K 14/47*** ( 2006.01 )
*C07K 19/00* ( 2006.01 )
*C12N 15/63* ( 2006.01 )
**(87)** WO2023/114887
**(31)** 63/289,788 **(32)** 15.12.21 **(33)** US
**(43)** 22.06.2023
**(72)** RADOVICH, Milan; SOLZAK, Jeffrey; WANG, Chao
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** THYSSENKRUPP NUCERA AG & CO. KGAA
**(11)** AU-A-2023225006
**(21)** 2023225006 **(22)** 17.02.2023
**(54)** ELECTROLYSIS CELL
**(51)** Int. Cl.
***C25B 1/04*** ( 2021.01 )
***C25B 1/24*** ( 2021.01 )
***C25B 3/11*** ( 2021.01 )
***C25B 3/27*** ( 2021.01 )
***C25B 9/01*** ( 2021.01 )
***C25B 9/19*** ( 2021.01 )
***C25B 9/60*** ( 2021.01 )
***C25B 9/70*** ( 2021.01 )
***C25B 11/03*** ( 2021.01 )
**(87)** WO2023/161148
**(31)** 22158904.7 **(32)** 25.02.22 **(33)** EP
**(43)** 31.08.2023
**(72)** AUSTENFELD, Sebastian; TOROS, Peter; FUNCK, Frank; WAGNER, Michael
**(74)** Griffith Hack

---

**(71)** THYSSENKRUPP NUCERA AG & CO. KGAA
**(11)** AU-A-2023231737
**(21)** 2023231737 **(22)** 02.03.2023
**(54)** PRESSURE CONTROL SYSTEM AND ELECTROLYSIS FACILITY WITH PRESSURE CONTROL SYSTEM
**(51)** Int. Cl.
***C25B 1/04*** ( 2021.01 )
***C25B 9/05*** ( 2021.01 )
***C25B 9/07*** ( 2021.01 )
***C25B 15/02*** ( 2021.01 )
***H01M 8/04*** ( 2016.01 )
***H01M 8/04082*** ( 2016.01 )
***H01M 8/04089*** ( 2016.01 )
***H01M 8/04313*** ( 2016.01 )
***H01M 8/04694*** ( 2016.01 )
**(87)** WO2023/169929
**(31)** 22161378.9 **(32)** 10.03.22 **(33)** EP
**(43)** 14.09.2023
**(72)** KLINK, Stefan; BRINKMANN, Jonas
**(74)** Griffith Hack

---

**(71)** TIANDI SCIENCE & TECHNOLOGY CO., LTD; CCTEG COAL MINING RESEARCH INSTITUTE
**(11)** AU-A-2022411124
**(21)** 2022411124 **(22)** 21.09.2022
**(54)** ZERO-POWER-CONSUMPTION MULTI-PATH CARBON DIOXIDE RECOVERY DEVICE IN COAL MINE AIR SHAFT
**(51)** Int. Cl.
***E21F 1/00*** ( 2006.01 )
**(87)** WO2023/109234
**(31)** 202111529663.9 **(32)** 14.12.21 **(33)** CN
**(43)** 22.06.2023
**(72)** XU, Yajun; PANG, Xiaoliang; PANG, Desheng; MA, Ying
**(74)** LexGeneris Pty Ltd

---

**(71)** TOHO TITANIUM CO.,LTD.
**(11)** AU-A-2022437514
**(21)** 2022437514 **(22)** 27.12.2022
**(54)** TITANIUM POROUS BODY, AND TITANIUM POROUS BODY MANUFACTURING METHOD
**(51)** Int. Cl.
***C22C 1/08*** ( 2006.01 )
***B22F 3/02*** ( 2006.01 )
***B22F 3/10*** ( 2006.01 )
***B22F 3/11*** ( 2006.01 )
***C22C 14/00*** ( 2006.01 )
**(87)** WO2023/145374
**(31)** 2022-012822 **(32)** 31.01.22 **(33)** JP
**(43)** 03.08.2023
**(72)** INOUE,Yosuke
**(74)** FB Rice Pty Ltd

---

**(71)** TOKAMAK ENERGY LTD
**(11)** AU-A-2023206804
**(21)** 2023206804 **(22)** 16.01.2023
**(54)** EVAPORATION PUMP
**(51)** Int. Cl.
***F04B 37/02*** ( 2006.01 )
***F04B 37/04*** ( 2006.01 )
***G21B 1/05*** ( 2006.01 )
***G21B 1/17*** ( 2006.01 )
***H01J 41/12*** ( 2006.01 )
**(87)** WO2023/135312
**(31)** 2200451.9 **(32)** 14.01.22 **(33)** GB
**(43)** 20.07.2023
**(72)** BENAYAS, Juan; LEE, Vivian; BAMBER, Robert; BUNTING, Patrick; ANTAR, Ghassan; HANKS, Simon; MOSHKUNOV, Konstantin
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** TOOLGEN INCORPORATED
**(11)** AU-A-2023207033
**(21)** 2023207033 **(22)** 12.01.2023
**(54)** SCHWANN CELL-SPECIFIC PROMOTER
**(51)** Int. Cl.
***C12N 15/86*** ( 2006.01 )
***C12N 5/079*** ( 2010.01 )
***C12N 15/90*** ( 2006.01 )
**(87)** WO2023/136624
**(31)** 10-2022-0005303 **(32)** 13.01.22 **(33)** KR
**(43)** 20.07.2023
**(72)** SONG, Dong Woo; LEE, Hyerim; OH, Hye-Kyung; CHOI, Beom Seok; LEE, Kyu Jun; GO, Nan Yeong; LEE, Jae Young
**(74)** Griffith Hack

---

**(71)** TORUS INC.
**(11)** AU-A-2023213969
**(21)** 2023213969 **(22)** 27.01.2023
**(54)** MECHANICAL ENERGY STORAGE UNIT-BASED ENERGY PLATFORM
**(51)** Int. Cl.
***H02J 3/30*** ( 2006.01 )
***G05B 15/02*** ( 2006.01 )
***G06Q 10/06*** ( 2023.01 )
***G06Q 50/06*** ( 2012.01 )
***H02J 3/38*** ( 2006.01 )
***H02K 7/02*** ( 2006.01 )
*H02J 13/00* ( 2006.01 )
**(87)** WO2023/147519
**(31)** 63/303,984 **(32)** 27.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** WALKINGSHAW, Nathan; LEE, Gilbert
**(74)** FB Rice Pty Ltd

---

**(71)** TRACKMOBILE LLC
**(11)** AU-A-2023216370
**(21)** 2023216370 **(22)** 07.02.2023
**(54)** AIR HOSE COUPLING IN AUTOMATED GLADHAND SYSTEM
**(51)** Int. Cl.
***B61G 5/08*** ( 2006.01 )
**(87)** WO2023/150787
**(31)** 63/307,602 **(32)** 07.02.22 **(33)** US
**(43)** 10.08.2023
**(72)** GEIST, James; NGUYEN, Phuc; SMID, Jason; DIFATTA, Vince; EVANS, Bob
**(74)** Spruson & Ferguson

---

**(71)** TRAMES BIO, INC.; KERAVALA, A.
**(11)** AU-A-2023214024
**(21)** 2023214024 **(22)** 31.01.2023
**(54)** EXPRESSION CASSETTES FOR TREATING EPILEPSY AND NEUROPATHIC PAIN
**(51)** Int. Cl.
***C12N 15/85*** ( 2006.01 )
***A61K 31/7088*** ( 2006.01 )
***A61K 48/00*** ( 2006.01 )
**(87)** WO2023/147604
**(31)** 63/304,960 **(32)** 31.01.22 **(33)** US
63/312,480 22.02.22 US
**(43)** 03.08.2023
**(72)** KERAVALA, Annahita
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** TRUE CORNERS, LLC
**(11)** AU-A-2023207615
**(21)** 2023207615 **(22)** 12.01.2023

**PCT applications which have entered the National Phase - Name Index cont'd**

**(54)** WALLBOARD-FASTENING DEVICE FOR SECURING WALLBOARDS IN AN INSIDE-CORNER CONFIGURATION
**(51)** Int. Cl.
***E04F 19/06*** ( 2006.01 )
***E04F 19/02*** ( 2006.01 )
*E04B 9/18* ( 2006.01 )
**(87)** WO2023/137117
**(31)** 63/266,701 **(32)** 12.01.22 **(33)** US
**(43)** 20.07.2023
**(72)** MINEO, Charles W.; MINEO, Samuel J.
**(74)** FB Rice Pty Ltd

---

**(71)** TRUSTEES OF BOSTON UNIVERSITY
**(11)** AU-A-2022422112
**(21)** 2022422112 **(22)** 22.12.2022
**(54)** BODIPY-BASED DYES FOR DIGITAL SPATIAL PROTEOMICS
**(51)** Int. Cl.
***G01N 33/58*** ( 2006.01 )
***G01N 33/68*** ( 2006.01 )
*C07F 5/02* ( 2006.01 )
**(87)** WO2023/122248
**(31)** 63/292,683 **(32)** 22.12.21 **(33)** US
63/339,137 06.05.22 US
**(43)** 29.06.2023
**(72)** BEELER, Aaron Beaty; EMILI, Andrew; LENIHAN, Jason Michael; HENDRICK, Nathaniel Ryan; CHEN, Ichun Anderson
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** TRUSTEES OF TUFTS COLLEGE
**(11)** AU-A-2022414087
**(21)** 2022414087 **(22)** 14.12.2022
**(54)** USE OF HYPERPOLARIZING AGENTS ALONE AND IN COMBINATION WITH OTHER THERAPEUTIC AGENTS FOR TREATING CANCERS INCLUDING GLIOBLASTOMA
**(51)** Int. Cl.
***A61K 31/33*** ( 2006.01 )
***A61K 31/395*** ( 2006.01 )
***A61K 31/40*** ( 2006.01 )
*A61K 31/407* ( 2006.01 )
**(87)** WO2023/114868
**(31)** 63/265,403 **(32)** 14.12.21 **(33)** US
**(43)** 22.06.2023
**(72)** LEVIN, Michael; MATHEWS, Juanita
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** UMICORE
**(11)** AU-A-2022418104
**(21)** 2022418104 **(22)** 20.12.2022
**(54)** PROCESS FOR PREPARING A HIGH-PURITY NICKEL SULPHATE SOLUTION
**(51)** Int. Cl.
***C01G 53/10*** ( 2006.01 )
**(87)** WO2023/118037
**(31)** 21216032.9 **(32)** 20.12.21 **(33)** EP
**(43)** 29.06.2023
**(72)** RONDAS, Francis; LUYTEN, Jan; ROOSEN, Joris; DE MOOR, Wannes; SCHURMANS, Maarten
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** UNITED THERAPEUTICS CORPORATION
**(11)** AU-A-2023219692
**(21)** 2023219692 **(22)** 07.02.2023
**(54)** TREPROSTINIL ILOPROST COMBINATION THERAPY
**(51)** Int. Cl.
***A61K 9/00*** ( 2006.01 )
***A61K 31/5575*** ( 2006.01 )
***A61K 31/5578*** ( 2006.01 )
***A61P 9/04*** ( 2006.01 )
***A61P 9/08*** ( 2006.01 )
**(87)** WO2023/154705
**(31)** 63/307,919 **(32)** 08.02.22 **(33)** US
**(43)** 17.08.2023
**(72)** POISSON, Patrick; PATEL, Ravi; GURLEY, Robert Stewart; FRENCH, Elizabeth Anne
**(74)** Griffith Hack

---

**(71)** UNIVERSIDAD DE CHILE
**(11)** AU-A-2021480388
**(21)** 2021480388 **(22)** 24.12.2021
**(54)** METHOD AND SYSTEM FOR NAVIGATING AN AUTONOMOUS VEHICLE IN AN OPEN-PIT SITE
**(51)** Int. Cl.
***G05D 1/00*** ( 2024.01 )
**(87)** WO2023/118946
**(43)** 29.06.2023
**(72)** RUIZ DEL SOLAR SAN MARTÍN, Javier; HERRMANN PRIESNITZ, Daniel; PARRA TSUNEKAWA, Sebastián Isao; CORREA PÉREZ, Mauricio
**(74)** MEYER WEST IP

---

**(71)** UNIVERSIDAD DE SALAMANCA
**(11)** AU-A-2023209144
**(21)** 2023209144 **(22)** 19.01.2023
**(54)** PEPTIDES AND PHARMACEUTICAL COMPOSITION FOR THE TREATMENT OF TUMOURS
**(51)** Int. Cl.
***A61K 38/08*** ( 2019.01 )
**(87)** WO2023/139156
**(31)** P202230039 **(32)** 19.01.22 **(33)** ES
**(43)** 27.07.2023
**(72)** TABERNERO URBIETA, Aránzazu; OLLAURI IBÁÑEZ, Claudia Casilda; ÁLVAREZ VÁZQUEZ, Andrea; GUTIÉRREZ PELAZ, Sara; JARAÍZ RODRÍGUEZ, Myriam; FLORES HERNÁNDEZ, Raquel; PANIAGUA SANCHO, María
**(74)** Wallington-Dummer

---

**(71)** UNIVERSITÄTSMEDIZIN DER JOHANNES GUTENBERG-UNIVERSITÄT MAINZ
**(11)** AU-A-2023208415
**(21)** 2023208415 **(22)** 20.01.2023
**(54)** ROLLER BLIND SLAT AND ROLLER BLIND
**(51)** Int. Cl.
***E06B 9/15*** ( 2006.01 )
***E06B 9/58*** ( 2006.01 )
**(87)** WO2023/139238
**(31)** 10 2022 200 637.2 **(32)** 20.01.22 **(33)** DE
**(43)** 27.07.2023
**(72)** RINN, Friedrich Karl
**(74)** Evermore IP

---

**(71)** UNIVERSITY OF CINCINNATI
**(11)** AU-A-2023205769
**(21)** 2023205769 **(22)** 09.01.2023
**(54)** METHODS FOR SELF-SEEDED HYDROTHERMAL GROWTH OF MFI ZEOLITE NANOSHEETS AND NANOSHEET ASSEMBLIES
**(51)** Int. Cl.
***C01B 39/40*** ( 2006.01 )
***C01B 33/20*** ( 2006.01 )
**(87)** WO2023/133323
**(31)** 63/297,442 **(32)** 07.01.22 **(33)** US
63/427,428 22.11.22 US
**(43)** 13.07.2023
**(72)** DONG, Junhang; CAO, Zishu; ISKHAKOVA, Landysh
**(74)** Spruson & Ferguson

---

**(71)** UNIVERSITY OF HOUSTON SYSTEM
**(11)** AU-A-2023209401
**(21)** 2023209401 **(22)** 23.01.2023
**(54)** INTRANASAL VACCINES AND THERAPEUTICS FOR RESPIRATORY DISEASES
**(51)** Int. Cl.
***A61K 39/145*** ( 2006.01 )
***A61K 39/00*** ( 2006.01 )
***A61K 39/215*** ( 2006.01 )
***A61P 31/14*** ( 2006.01 )
***A61P 31/16*** ( 2006.01 )
**(87)** WO2023/141328
**(31)** 63/301,918 **(32)** 21.01.22 **(33)** US
63/329,261 08.04.22 US
**(43)** 27.07.2023
**(72)** VARADARAJAN, Navin; LEEKHA, Ankita
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** UNIVERSITY OF PITTSBURGH-OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION
**(11)** AU-A-2022434038
**(21)** 2022434038 **(22)** 19.09.2022
**(54)** TARGETING OF XKR8 IN THERAPIES
**(51)** Int. Cl.
***A61K 31/713*** ( 2006.01 )
***A61K 9/107*** ( 2006.01 )
***C12N 15/113*** ( 2010.01 )
**(87)** WO2023/136868
**(31)** 63/299,466 **(32)** 14.01.22 **(33)** US
**(43)** 20.07.2023
**(72)** LI, Song; CHEN, Yuang
**(74)** Minter Ellison

---

**(71)** UNIVERSITY OF WASHINGTON
**(11)** AU-A-2023207156
**(21)** 2023207156 **(22)** 13.01.2023
**(54)** DE NOVO DESIGNED LUCIFERASE
**(51)** Int. Cl.
***C07K 14/435*** ( 2006.01 )
***C12N 9/00*** ( 2006.01 )

**PCT applications which have entered the National Phase - Name Index cont'd**

***C12Q 1/66*** ( 2006.01 )
*C12N 15/85* ( 2006.01 )
**(87)** WO2023/137417
**(31)** 63/300,171 **(32)** 17.01.22 **(33)** US
63/381,922 01.11.22 US
**(43)** 20.07.2023
**(72)** BAKER, David; YEH, Hsien-Wei; NORN, Christoffer; KIPNIS, Yakov
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** UPSIDE FOODS, INC.
**(11)** AU-A-2022419583
**(21)** 2022419583 **(22)** 21.12.2022
**(54)** SCALING UP MYOGENIC TISSUE: LATE PASSAGE MYOGENICITY
**(51)** Int. Cl.
***C12N 5/077*** ( 2010.01 )
***C07K 14/47*** ( 2006.01 )
***C12N 9/12*** ( 2006.01 )
***C12N 15/87*** ( 2006.01 )
**(87)** WO2023/122688
**(31)** 63/293,578 **(32)** 23.12.21 **(33)** US
**(43)** 29.06.2023
**(72)** HWANG, Ara; DAMBOURNET, Daphne; VALENZUELA, Rachel; SIERRA, Robert Anthony
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** VENARESOURCES, INC.
**(11)** AU-A-2023210199
**(21)** 2023210199 **(22)** 18.01.2023
**(54)** ADAPTIVE RFID INVENTORY SYSTEM
**(51)** Int. Cl.
***G06K 7/10*** ( 2006.01 )
***G06K 19/07*** ( 2006.01 )
**(87)** WO2023/141148
**(31)** 63/300,365 **(32)** 18.01.22 **(33)** US
**(43)** 27.07.2023
**(72)** BUTLER, Jonathan, Michael
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** VERACIO LTD.
**(11)** AU-A-2022418530
**(21)** 2022418530 **(22)** 20.12.2022
**(54)** DEVICES, SYSTEMS, AND METHODS FOR ALIGNING DRILL RIGS
**(51)** Int. Cl.
***E21B 47/022*** ( 2012.01 )
***E21B 47/01*** ( 2012.01 )
***E21B 47/013*** ( 2012.01 )
***E21B 47/02*** ( 2006.01 )
***E21B 47/0228*** ( 2012.01 )
***E21B 47/12*** ( 2012.01 )
***G01C 9/00*** ( 2006.01 )
***G01C 19/00*** ( 2013.01 )
**(87)** WO2023/122073
**(31)** 63/291,582 **(32)** 20.12.21 **(33)** US
**(43)** 29.06.2023
**(72)** CASE, Michael; MORONEY, Geoff; TOMASZEWSKI, Adam
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** VICTORIA LINK LIMITED; UNIVERSITY OF MELBOURNE; MALCORP BIODISCOVERIES LIMITED
**(11)** AU-A-2022420764
**(21)** 2022420764 **(22)** 22.12.2022
**(54)** IMMUNOSTIMULATORY COMPOSITIONS
**(51)** Int. Cl.
***A61K 39/39*** ( 2006.01 )
***A61K 9/127*** ( 2006.01 )
***A61K 31/7008*** ( 2006.01 )
***A61K 31/7115*** ( 2006.01 )
***A61K 39/00*** ( 2006.01 )
***A61K 39/015*** ( 2006.01 )
***A61K 39/29*** ( 2006.01 )
***A61K 47/69*** ( 2017.01 )
***A61P 1/16*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07H 15/14*** ( 2006.01 )
***C07H 19/056*** ( 2006.01 )
***C07H 23/00*** ( 2006.01 )
***C07K 9/00*** ( 2006.01 )
**(87)** WO2023/121483
**(31)** 2021904282 **(32)** 24.12.21 **(33)** AU
**(43)** 29.06.2023
**(72)** PAINTER, Gavin Frank; HERMANS, Ian Francis; GANLEY, Mitch; HEATH, William; HOLZ, Lauren; ANDERSON, Regan James; COMPTON, Benjamin Jason; MARSHALL, Andrew
**(74)** James & Wells Intellectual Property

---

**(71)** VIKING THERAPEUTICS, INC.
**(11)** AU-A-2023208627
**(21)** 2023208627 **(22)** 11.01.2023
**(54)** PHARMACEUTICAL FORMULATIONS AND METHODS FOR THE TREATMENT OF METABOLIC AND LIVER DISORDERS
**(51)** Int. Cl.
***A61K 47/54*** ( 2017.01 )
***A61K 38/26*** ( 2006.01 )
***A61K 47/10*** ( 2017.01 )
***A61K 47/60*** ( 2017.01 )
***A61P 1/16*** ( 2006.01 )
***A61P 3/00*** ( 2006.01 )
***C07K 19/00*** ( 2006.01 )
**(87)** WO2023/141044
**(31)** 63/300,538 **(32)** 18.01.22 **(33)** US
**(43)** 27.07.2023
**(72)** LIAN, Brian; BARKER, Geoffrey E.; BARNES, Maureen; YAGIZ, Kader
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** VISTERRA, INC.
**(11)** AU-A-2023219773
**(21)** 2023219773 **(22)** 10.02.2023
**(54)** INTERLEUKIN-2 MUTEINS FOR THE TREATMENT OF AUTOIMMUNE DISEASES
**(51)** Int. Cl.
***A61K 38/20*** ( 2006.01 )
***A61P 37/06*** ( 2006.01 )
**(87)** WO2023/154870
**(31)** 63/309,293 **(32)** 11.02.22 **(33)** US
**(43)** 17.08.2023
**(72)** SCHACHTER, Asher; MATHUR, Mohit; OLDACH, David William; SLOAN, Susan; YARBROUGH, Jill; AKRAMOFF, Nicole; MA, Diane; TUBBS, William C.; SCHULTZ, Michaela
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** VYSOKA SKOLA CHEMICKO-TECHNOLOGICKA V PRAZE
**(11)** AU-A-2023218773
**(21)** 2023218773 **(22)** 03.02.2023
**(54)** METHOD OF MANUFACTURING MULTIPLE DOSAGE FORMS WITH PERSONALISED COMPOSITION AND DEVICE FOR CARRYING OUT THIS METHOD
**(51)** Int. Cl.
***A61J 3/07*** ( 2006.01 )
**(87)** WO2023/151732
**(31)** PV 2022-66 **(32)** 11.02.22 **(33)** CZ
**(43)** 17.08.2023
**(72)** SONNTAG, Erik; STEPANEK, Frantisek; VRBA, Jan; MUTYLO, Elizaveta; SLEZAKOVA, Silvia
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** WAGSTAFF, INC.
**(11)** AU-A-2023212404
**(21)** 2023212404 **(22)** 30.01.2023
**(54)** COMPACT FORCE APPLYING DEVICE
**(51)** Int. Cl.
***F16H 25/20*** ( 2006.01 )
***B22D 11/049*** ( 2006.01 )
***B22D 11/05*** ( 2006.01 )
***B22D 11/051*** ( 2006.01 )
***B22D 11/053*** ( 2006.01 )
***B22D 11/16*** ( 2006.01 )
***F16H 1/16*** ( 2006.01 )
***F16H 1/22*** ( 2006.01 )
**(87)** WO2023/147536
**(31)** 17/649,427 **(32)** 31.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** THIELMAN, Brett; CORDILL, Craig
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** WASHINGTON UNIVERSITY; THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY
**(11)** AU-A-2023206361
**(21)** 2023206361 **(22)** 12.01.2023
**(54)** LIQUID BIOPSY ANALYSIS OF CELLULAR STATES TO PREDICT IMMUNOTHERAPY TOXICITY
**(51)** Int. Cl.
***G01N 33/50*** ( 2006.01 )
***C12Q 1/68*** ( 2018.01 )
*G01N 33/574* ( 2006.01 )
**(87)** WO2023/137390
**(31)** 63/299,377 **(32)** 13.01.22 **(33)** US
**(43)** 20.07.2023
**(72)** CHAUDHURI, Aadel; NEWMAN, Aaron; LOZANO, Alexander
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** WASHINGTON UNIVERSITY
**(11)** AU-A-2023216258
**(21)** 2023216258 **(22)** 02.02.2023
**(54)** OMICRON CORONAVIRUS VACCINE CONSTRUCTS AND METHODS OF MAKING AND USING SAME

## PCT applications which have entered the National Phase - Name Index cont'd

**(51)** Int. Cl.
***C12N 15/86*** ( 2006.01 )
***A61K 39/12*** ( 2006.01 )
***C07K 14/165*** ( 2006.01 )
*A61P 31/12* ( 2006.01 )
**(87)** WO2023/150638
**(31)** 63/305,979 **(32)** 02.02.22 **(33)** US
63/375,803 15.09.22 US
63/384,075 16.11.22 US
63/434,815 22.12.22 US
**(43)** 10.08.2023
**(72)** DIAMOND, Michael; DMITRIEV, Igor; HASSAN, Ahmed; CURIEL, David
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** WELL-SET P&A AS
**(11)** AU-A-2023222660
**(21)** 2023222660 **(22)** 07.02.2023
**(54)** TOOL, SYSTEM AND METHOD FOR DELIVERING AND PRESSURE TESTING A DOWNHOLE PLUG IN ONE TRIP
**(51)** Int. Cl.
***E21B 29/00*** ( 2006.01 )
***E21B 33/12*** ( 2006.01 )
***E21B 47/117*** ( 2012.01 )
**(87)** WO2023/158317
**(31)** 20220221 **(32)** 16.02.22 **(33)** NO
**(43)** 24.08.2023
**(72)** BEHJAT, Nader; KNIGHT, Grant Mackenzie
**(74)** James & Wells Intellectual Property

---

**(71)** WHITE, M.
**(11)** AU-A-2022420974
**(21)** 2022420974 **(22)** 16.12.2022
**(54)** SYSTEM AND METHOD OF ASSOCIATING SOCIAL MEDIA ACTIVITY WITH CALENDAR EVENTS
**(51)** Int. Cl.
***G06Q 30/0601*** ( 2023.01 )
***G06Q 10/06*** ( 2023.01 )
***G06Q 10/109*** ( 2023.01 )
***G06Q 30/0201*** ( 2023.01 )
***G06Q 50/00*** ( 2012.01 )
**(87)** WO2023/115109
**(31)** 2021904272 **(32)** 24.12.21 **(33)** AU
**(43)** 29.06.2023
**(72)** WHITE, Mariah
**(74)** Murray Trento & Associates Pty Ltd

---

**(71)** WILLIAM MARSH RICE UNIVERSITY
**(11)** AU-A-2022411048
**(21)** 2022411048 **(22)** 16.12.2022
**(54)** ENCAPSULATED CELLS EXPRESSING IL-12 AND USES THEREOF
**(51)** Int. Cl.
***C12N 5/00*** ( 2006.01 )
***A61K 38/20*** ( 2006.01 )
***C07K 14/54*** ( 2006.01 )
**(87)** WO2023/114967
**(31)** 63/291,129 **(32)** 17.12.21 **(33)** US
**(43)** 22.06.2023
**(72)** VEISEH, Omid; NASH, Amanda; AGHLARA-FOTOVAT, Samira
**(74)** Spruson & Ferguson

---

**(71)** WILMAR (SHANGHAI) BIOTECHNOLOGY RESEARCH & DEVELOPMENT CENTER CO., LTD.
**(11)** AU-A-2022420136
**(21)** 2022420136 **(22)** 21.12.2022
**(54)** MUTATED LYSOPHOSPHOLIPASE, AND MUTATED ASPERGILLUS NIGER STRAIN FOR EXPRESSING LYSOPHOSPHOLIPASE
**(51)** Int. Cl.
***C12N 9/18*** ( 2006.01 )
***C11B 3/00*** ( 2006.01 )
***C12N 1/15*** ( 2006.01 )
*C12R 1/685* ( 2006.01 )
**(87)** WO2023/116738
**(31)** 202111586420.9 **(32)** 23.12.21 **(33)** CN
202111598184.2 24.12.21 CN
**(43)** 29.06.2023
**(72)** XUAN, Yaoji; WU, Wei; SUN, Jianan; LIU, Guorui; DAI, Xiaojun; NIU, Qiwen; WANG, Shengnan
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** WORLDLINE; INGENICO BELGIUM
**(11)** AU-A-2023207280
**(21)** 2023207280 **(22)** 13.01.2023
**(54)** METHOD FOR PROCESSING A TRANSACTION, SYSTEM AND CORRESPONDING PROGRAM
**(51)** Int. Cl.
***G06F 21/32*** ( 2013.01 )
***G06F 3/01*** ( 2006.01 )
***G06F 21/82*** ( 2013.01 )
***G06F 21/84*** ( 2013.01 )
**(87)** WO2023/135253
**(31)** FR22/00281 **(32)** 14.01.22 **(33)** FR
**(43)** 20.07.2023
**(72)** LEFEBVRE, Guillaume; MERY, Olivier; VANOPHALVENS, Mark
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** WORTHINGTON PRODUCTS INCORPORATED
**(11)** AU-A-2022436869
**(21)** 2022436869 **(22)** 23.02.2022
**(54)** IMPROVED HIGH-DENSITY POLYETHYLENE MARINE BOOM
**(51)** Int. Cl.
***B63B 35/62*** ( 2006.01 )
***B63B 21/04*** ( 2006.01 )
***B63B 22/00*** ( 2006.01 )
***B63B 35/44*** ( 2006.01 )
***E02B 15/04*** ( 2006.01 )
**(87)** WO2023/146557
**(31)** 63/303,217 **(32)** 26.01.22 **(33)** US
63/303,220 26.01.22 US
63/303,224 26.01.22 US
63/303,232 26.01.22 US
63/303,259 26.01.22 US
**(43)** 03.08.2023
**(72)** MEEKS, Paul S.; SCHNEIDER, Marc; GARVER, Jon
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** WORTHINGTON PRODUCTS INCORPORATED
**(11)** AU-A-2022437764
**(21)** 2022437764 **(22)** 23.02.2022
**(54)** HDPE MARINE BOOM WITH AXIAL PASSAGE AND CHAIN STOP
**(51)** Int. Cl.
***B63B 35/62*** ( 2006.01 )
***B63B 21/04*** ( 2006.01 )
***B63B 22/00*** ( 2006.01 )
***B63B 35/44*** ( 2006.01 )
***E02B 15/04*** ( 2006.01 )
**(87)** WO2023/146559
**(31)** 63/303,217 **(32)** 26.01.22 **(33)** US
63/303,220 26.01.22 US
63/303,224 26.01.22 US
63/303,232 26.01.22 US
63/303,259 26.01.22 US
**(43)** 03.08.2023
**(72)** MEEKS, Paul, S.; SCHNEIDER, Marc; GARVER, Jon
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** WORTHINGTON PRODUCTS INCORPORATED
**(11)** AU-A-2022438259
**(21)** 2022438259 **(22)** 23.02.2022
**(54)** FLANGED HDPE MARINE BOOM, MARINE BOOM SYSTEM, AND LUG PLATE
**(51)** Int. Cl.
***B63B 35/62*** ( 2006.01 )
***B63B 21/04*** ( 2006.01 )
***B63B 22/00*** ( 2006.01 )
***B63B 35/44*** ( 2006.01 )
***E02B 15/04*** ( 2006.01 )
**(87)** WO2023/146558
**(31)** 63/303,217 **(32)** 26.01.22 **(33)** US
63/303,220 26.01.22 US
63/303,224 26.01.22 US
63/303,232 26.01.22 US
63/303,259 26.01.22 US
**(43)** 03.08.2023
**(72)** MEEKS, Paul S.; SCHNEIDER, Marc; GARVER, Jon
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** XERO LIMITED
**(11)** AU-A-2023209744
**(21)** 2023209744 **(22)** 19.01.2023
**(54)** METHODS AND SYSTEMS FOR PERFORMING DATABASE OPERATIONS
**(51)** Int. Cl.
***G06F 16/9032*** ( 2019.01 )
*G06F 16/13* ( 2019.01 )
*G06F 16/176* ( 2019.01 )
*H04L 67/562* ( 2022.01 )
**(87)** WO2023/140745
**(31)** 2022900112 **(32)** 21.01.22 **(33)** AU
**(43)** 27.07.2023
**(72)** MCFAULL, Cassandra; THORNBURROW, Geoff
**(74)** FB Rice Pty Ltd

---

**(71)** YALE UNIVERSITY
**(11)** AU-A-2023213843
**(21)** 2023213843 **(22)** 24.01.2023
**(54)** VACCINE AGAINST LEPTOSPIROSIS
**(51)** Int. Cl.
***C07K 14/20*** ( 2006.01 )
***A61K 39/02*** ( 2006.01 )

**PCT applications which have entered the National Phase - Name Index cont'd**

***A61P 31/04*** ( 2006.01 )
**(87)** WO2023/147307
**(31)** 63/302,817 **(32)** 25.01.22 **(33)** US
**(43)** 03.08.2023
**(72)** WUNDER, Elsio; KO, Albert
**(74)** RnB IP

---

**(71)** YNSECT
**(11)** AU-A-2022429780
**(21)** 2022429780 **(22)** 27.12.2022
**(54)** NON-DESTRUCTIVE QUANTITATIVE DETERMINATION OF AT LEAST ONE PERFORMANCE INDICATOR IN REARING A POPULATION OF LIVE INSECTS IN A COMPLEX MEDIUM
**(51)** Int. Cl.
***G01N 21/359*** ( 2014.01 )
***A01K 67/00*** ( 2006.01 )
***A01K 67/033*** ( 2006.01 )
***G01N 21/94*** ( 2006.01 )
**(87)** WO2023/126616
**(31)** FR2114582 **(32)** 28.12.21 **(33)** FR
**(43)** 06.07.2023
**(72)** LORRETTE, Bénédicte; RICHARD, Jérôme; DARAI, Laura; ARMENJON, Benjamin; NOURI, Maroua
**(74)** Griffith Hack

---

**(71)** ZERO NOX, INC.
**(11)** AU-A-2022409800
**(21)** 2022409800 **(22)** 14.12.2022
**(54)** VENTURI DEVICE WITH FORCED INDUCTION SYSTEMS AND METHODS
**(51)** Int. Cl.
***F03B 13/06*** ( 2006.01 )
***F02B 31/04*** ( 2006.01 )
***F02B 37/00*** ( 2006.01 )
***F02M 26/10*** ( 2016.01 )
***F02M 35/10*** ( 2006.01 )
***F03B 17/00*** ( 2006.01 )
***F03G 7/04*** ( 2006.01 )
***F04F 5/10*** ( 2006.01 )
***F04F 5/16*** ( 2006.01 )
***F15D 1/00*** ( 2006.01 )
**(87)** WO2023/114879
**(31)** 63/265,478 **(32)** 15.12.21 **(33)** US
63/265,483 15.12.21 US
63/265,484 15.12.21 US
63/265,486 15.12.21 US
63/265,489 15.12.21 US
63/268,053 15.02.22 US
PCT/US2022/026399 26.04.22 US
63/381,905 01.11.22 US
63/381,906 01.11.22 US
PCT/US2022/050797 22.11.22 US
**(43)** 22.06.2023
**(72)** KERTON, James, Matthew
**(74)** FB Rice Pty Ltd

---

**(71)** ZHEJIANG CFMOTO POWER CO., LTD.
**(11)** AU-A-2022435902
**(21)** 2022435902 **(22)** 07.12.2022
**(54)** SADDLE-TYPE VEHICLE
**(51)** Int. Cl.
***B62J 50/21*** ( 2020.01 )
***B62J 50/22*** ( 2020.01 )
***B62K 11/14*** ( 2006.01 )
**(87)** WO2023/138248
**(31)** 202210069981.X **(32)** 21.01.22 **(33)** CN
202211045151.X 25.08.22 CN
202211360075.1 31.10.22 CN
**(43)** 27.07.2023
**(72)** TANG, Yazhou; QIN, Xiaoang; SHEN, Yupeng
**(74)** Madderns Pty Ltd

---

**(71)** ZMAG, LTD.
**(11)** AU-A-2023216572
**(21)** 2023216572 **(22)** 30.01.2023
**(54)** MAGNETIC FIELD GENERATION DEVICE AND MOLTEN METAL DRIVE SYSTEM
**(51)** Int. Cl.
***B22D 11/115*** ( 2006.01 )
***B22D 11/04*** ( 2006.01 )
***B22D 27/02*** ( 2006.01 )
***F27D 27/00*** ( 2010.01 )
***H05B 6/18*** ( 2006.01 )
***H05B 6/44*** ( 2006.01 )
**(87)** WO2023/149395
**(31)** 2022-015921 **(32)** 03.02.22 **(33)** JP
**(43)** 10.08.2023
**(72)** TAKAHASHI Kenzo
**(74)** Griffith Hack

---

**(71)** ZYTOX THERAPEUTICS AB
**(11)** AU-A-2023215789
**(21)** 2023215789 **(22)** 06.02.2023
**(54)** FUSION PROTEIN COMPRISING AN EGFR-BINDING DOMAIN AND A MASKING DOMAIN
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07K 14/71*** ( 2006.01 )
***G01N 33/554*** ( 2006.01 )
**(87)** WO2023/148388
**(31)** 2250114-2 **(32)** 04.02.22 **(33)** SE
**(43)** 10.08.2023
**(72)** STÅHL, Stefan; DAHLSSON LEITAO, Charles; LÖFBLOM, John; MESTRE BORRAS, Anna
**(74)** James & Wells Intellectual Property

**Numerical Index**

## PCT applications which have entered the National Phase - Numerical Index cont'd

**2022430059** ENVISION ENERGY CO., LTD
**2022430193** SCHREDER S.A.
**2022430626** HUAWEI TECHNOLOGIES CO., LTD.
**2022430796** HUAWEI TECHNOLOGIES CO., LTD.
**2022431173** BEYER, C.F.
**2022431738** DIVA INTERNATIONAL INC.; SAINI, C.
**2022432354** SUZHOU PUHE BIOPHARMA CO., LTD.
**2022432498** LANGWISCH, B.
**2022432618** HUAWEI TECHNOLOGIES CO., LTD.
**2022432802** HIGGINS RESEARCH & DEVELOPMENT, LLC
**2022432843** MAKO SURGICAL CORP.
**2022433280** QINGDAO HAIER WASHING MACHINE CO., LTD.; HAIER SMART HOME CO., LTD.
**2022433340** DORPHAN SA
**2022434038** UNIVERSITY OF PITTSBURGH-OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION
**2022434535** PERIOTECH, LLC
**2022434686** JIANGSU YAYO BIOTECHNOLOGY CO., LTD.
**2022435654** RENATA PHARMACEUTICAL (IRELAND) LIMITED
**2022435902** ZHEJIANG CFMOTO POWER CO., LTD.
**2022436869** WORTHINGTON PRODUCTS INCORPORATED
**2022437244** 21 ENTERTAINMENT LLC
**2022437514** TOHO TITANIUM CO.,LTD.
**2022437669** NEOINNOTECH. CORP.
**2022437764** WORTHINGTON PRODUCTS INCORPORATED
**2022437848** ENODA LTD
**2022438138** BEIJING LIANGYUAN BIO-SCIENCE, LLC
**2022438259** WORTHINGTON PRODUCTS INCORPORATED
**2022438825** FREEDMAN ELECTRONICS PTY LTD
**2022439192** ABB SCHWEIZ AG
**2022441288** DURAN DOĞAN BASIM VE AMBALAJ SANAYİ A.Ş.
**2022441312** PARADOX, INC.
**2022441552** DIC CORPORATION
**2022443191** PARITY QUANTUM COMPUTING GMBH
**2022450437** SOLODOVNIK, S.A.
**2022456807** SUNGROW POWER SUPPLY CO., LTD.
**2022464726** HALLIBURTON ENERGY SERVICES, INC.
**2022465944** PEGAVISION CORPORATION
**2022487602** SUZHOU YIHANG ELECTRONIC TECHNOLOGY CO., LTD.
**2023204836** INVIZYNE TECHNOLOGIES, INC.
**2023204840** BEIJING SCITECH-MQ PHARMACEUTICALS LIMITED
**2023205140** OAK CREST INSTITUTE OF SCIENCE
**2023205309** DIESEKO GROUP B.V.
**2023205562** BEIJING BYTEDANCE NETWORK TECHNOLOGY CO., LTD.
**2023205769** UNIVERSITY OF CINCINNATI
**2023205841** SOLUTION SEEKER AS
**2023205912** MALLINCKRODT PHARMACEUTICALS IRELAND LIMITED
**2023205989** I-MAB BIOPHARMA CO., LTD.
**2023206011** ILOQ OY
**2023206361** WASHINGTON UNIVERSITY; THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY
**2023206373** NIDO BIOSCIENCES, INC.
**2023206378** J.R. SIMPLOT COMPANY
**2023206441** DAEWOONG PHARMACEUTICAL CO., LTD.
**2023206483** HUAWEI TECHNOLOGIES CO., LTD.
**2023206501** SHENZHEN FRONTIERGATE BIOTECHNOLOGY CO., LTD
**2023206604** GTINVENT LIMITED
**2023206628** INNOVATIVE MOLECULES GMBH
**2023206640** SAFEGRID OY
**2023206648** ELLSI LIMITED
**2023206702** DEEPULL DIAGNOSTICS S.L.
**2023206800** GENNY FACTORY SA
**2023206804** TOKAMAK ENERGY LTD
**2023206808** ARACHNOIDE SARL; CLOQUELL, S.
**2023206836** LITTLE, S.; RISLEY, M.D.; MASON, J.N.; ROUSSEAU, F.
**2023206924** MONOLITH MATERIALS, Inc.
**2023207033** TOOLGEN INCORPORATED
**2023207052** MYLAPS B.V.
**2023207134** KDH ADVANCED RESEARCH PTY LTD
**2023207136** SUNCOR ENERGY INC.
**2023207150** BIOMOLECULAR HOLDINGS LLC
**2023207156** UNIVERSITY OF WASHINGTON
**2023207276** AGV DISCOVERY; INSERM (INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE); CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE; UNIVERSITE DE MONTPELLIER
**2023207280** WORLDLINE; INGENICO BELGIUM
**2023207327** DEEPULL DIAGNOSTICS S.L.
**2023207390** NANJING ZAIMING PHARMACEUTICAL CO., LTD.
**2023207496** SANDVIK MINING AND CONSTRUCTION OY
**2023207602** H.J. HEINZ COMPANY BRANDS LLC
**2023207610** JTL ENTERPRISES, INC.
**2023207615** TRUE CORNERS, LLC
**2023207643** INTEGRITY ENGINEERING SOLUTIONS PTY LTD
**2023207781** TCHIBO GMBH
**2023207795** ABIVAX
**2023207964** PHYDELITER, INC.
**2023208038** INVAIO SCIENCES, INC.
**2023208224** NEWSOUTH INNOVATIONS PTY LIMITED
**2023208227** DENTERIC PTY LTD
**2023208258** HETTICH-ONI GMBH & CO. KG
**2023208262** TECHNIP ENERGIES FRANCE
**2023208274** ASTRAZENECA IRELAND LIMITED
**2023208281** TEVA PHARMACEUTICALS INTERNATIONAL GMBH
**2023208395** KOMATSU LTD.
**2023208408** SCIENCONS AS
**2023208415** UNIVERSITÄTSMEDIZIN DER JOHANNES GUTENBERG-UNIVERSITÄT MAINZ
**2023208609** BUILDING FROM ABOVE AB
**2023208620** CATERPILLAR INC.
**2023208627** VIKING THERAPEUTICS, INC.
**2023208662** REGENTS OF THE UNIVERSITY OF MINNESOTA
**2023208682** BRIGHTSEED, INC.; SANFORD-BURNHAM MEDICAL RESEARCH INSTITUTE
**2023208725** EXXONMOBIL CHEMICAL PATENTS INC.; PLASTIC ENERGY LIMITED
**2023208742** JALMRR, LLC
**2023208753** BEAVER-VISITEC INTERNATIONAL, INC.
**2023208756** BAKER HUGHES OILFIELD OPERATIONS LLC
**2023208835** INSTANT SEED GMBH
**2023208849** HETTICH-ONI GMBH & CO. KG
**2023209061** EXELIXIS, INC.
**2023209071** CHARGE CCCV LLC
**2023209079** REBALANCE HEALTH, INC.
**2023209144** UNIVERSIDAD DE SALAMANCA
**2023209364** DENTERIC PTY LTD
**2023209365** NIHILL, J.
**2023209379** T.EN PROCESS TECHNOLOGY, INC.
**2023209396** SLINGSHOT AEROSPACE, INC.; MARCHAND, B.G.; LEDERMAN, J.; KOENIG, D.; JONDROW, M.
**2023209401** UNIVERSITY OF HOUSTON SYSTEM
**2023209445** INSTIL BIO, INC.
**2023209486** HUAWEI TECHNOLOGIES CO., LTD.
**2023209572** CINDERELLA TECHNOLOGY AS
**2023209577** MEMBRAN TECH GMBH
**2023209644** NOGA 3D INNOVATIONS LTD
**2023209744** XERO LIMITED
**2023209795** DENTERIC PTY LTD
**2023209872** LYNDRA THERAPEUTICS, INC.
**2023210030** HETTICH-ONI GMBH & CO. KG
**2023210199** VENARESOURCES, INC.
**2023210230** BOLDEN THERAPEUTICS, INC.
**2023210385** ISOL8 (HOLDINGS) LIMITED
**2023210412** BASF SE
**2023210497** NEWRONIKA S.P.A
**2023210747** SYDDANSK UNIVERSITET
**2023210811** ENABL A/S

**PCT applications which have entered the National Phase - Numerical Index cont'd**

**2023210817** ECOCEM MATERIALS LIMITED; ECOLE NORMALE SUPERIEURE PARIS-SACLAY; CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE
**2023210838** FUNDACIÓ CENTRE DE REGULACIÓ GENÒMICA; INSTITUCIÓ CATALANA DE RECERCA I ESTUDIS AVANÇATS
**2023210844** CENTESSA PHARMACEUTICALS (UK) LIMITED
**2023210979** SHANGHAI ARGO BIOPHARMACEUTICAL CO., LTD.
**2023211059** A.R.C. S.R.L.
**2023211063** DEMATIC CORP.
**2023211584** EVOQUA WATER TECHNOLOGIES LLC
**2023211592** AARDVARK THERAPEUTICS, INC.
**2023211613** TEXTRON SYSTEMS CORPORATION
**2023211794** OCADO INNOVATION LIMITED
**2023211813** KEMIWATT; UNIVERSITE DE RENNES; CENTRALE LILLE INSTITUT; CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE
**2023211896** PRG S&TECH INC.
**2023211937** CHONG KUN DANG PHARMACEUTICAL CORP.
**2023212054** FREULER, G.B.
**2023212289** BARTRACK, INC.
**2023212361** TELEFONAKTIEBOLAGET LM ERICSSON (publ)
**2023212404** WAGSTAFF, INC.
**2023212417** ICONEX LLC
**2023212477** NEWSOUTH INNOVATIONS PTY LIMITED
**2023212479** PYC THERAPEUTICS LIMITED
**2023212554** KOMATSU LTD.
**2023212736** SUNSHINE LAKE PHARMA CO., LTD.
**2023212774** CLAROS TECHNOLOGIES INC.
**2023212864** FMC CORPORATION; FMC IP TECHNOLOGY GMBH
**2023213160** MOLECULENT AB
**2023213172** ITALTRACTOR ITM S.P.A.
**2023213173** GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED
**2023213255** KOMATSU LTD.
**2023213626** PARION SCIENCES, INC.
**2023213702** FORM ENERGY, INC.
**2023213736** TANGO THERAPEUTICS, INC.
**2023213763** GOOGLE LLC
**2023213817** BOSTONGENE CORPORATION
**2023213843** YALE UNIVERSITY
**2023213938** SCEPTER U.S. HOLDING COMPANY
**2023213964** CASCADE CORPORATION
**2023213969** TORUS INC.
**2023214024** TRAMES BIO, INC.; KERAVALA, A.
**2023214606** SCHLETTER INTERNATIONAL B.V.
**2023214760** FRITO-LAY TRADING COMPANY GMBH
**2023215271** CYTOVALE INC.
**2023215384** COLGATE-PALMOLIVE COMPANY
**2023215456** CAAMTECH, INC.
**2023215593** SARTORIUS BIA SEPARATIONS D.O.O.
**2023215615** DEEPMIND TECHNOLOGIES LIMITED
**2023215649** FRAUNHOFER-GESELLSCHAFT ZUR FÖRDERUNG DER ANGEWANDTEN FORSCHUNG E.V.
**2023215789** ZYTOX THERAPEUTICS AB
**2023216231** ELI LILLY AND COMPANY
**2023216258** WASHINGTON UNIVERSITY
**2023216279** LINDSAY CORPORATION
**2023216370** TRACKMOBILE LLC
**2023216391** QINETIQ LIMITED
**2023216572** ZMAG, LTD.
**2023217006** NEXTPOINT THERAPEUTICS, INC.
**2023217032** INARI MEDICAL, INC.
**2023217051** KOYA MEDICAL, INC.
**2023217068** HILL'S PET NUTRITION, INC.
**2023217178** BEIERSDORF AG
**2023217241** F. HOFFMANN-LA ROCHE AG
**2023217604** EBR SYSTEMS, INC.
**2023217660** INSINKERATOR LLC
**2023217824** ROQUETTE FRERES
**2023217831** BEIERSDORF AG
**2023218551** TEITUR TROPHICS APS
**2023218608** CRODA INTERNATIONAL PLC
**2023218629** DROTASTAR LLC
**2023218678** DAIICHI SANKYO COMPANY, LIMITED
**2023218773** VYSOKA SKOLA CHEMICKO-TECHNOLOGICKA V PRAZE
**2023219189** COLGATE-PALMOLIVE COMPANY
**2023219227** PETMEDIX LTD
**2023219254** DIAMENTIS INC.
**2023219259** CRODA INTERNATIONAL PLC
**2023219501** EDWARDS LIFESCIENCES CORPORATION
**2023219692** UNITED THERAPEUTICS CORPORATION
**2023219773** VISTERRA, INC.
**2023220046** STORA ENSO OYJ
**2023220911** KYOCERA SENCO INDUSTRIAL TOOLS, INC.
**2023220914** REDWOOD MATERIALS
**2023220920** THE GOVERNOR & COMPANY OF THE BANK OF ENGLAND
**2023220951** THE TORO COMPANY
**2023221377** FORESEE PHARMACEUTICALS CO., LTD.
**2023222398** SWISSPEARL DANMARK HOLDING A/S
**2023222491** SENTINEL SUBSEA LTD
**2023222562** FONTERRA CO-OPERATIVE GROUP LIMITED
**2023222660** WELL-SET P&A AS
**2023223648** AVERY DENNISON CORPORATION
**2023223660** KASHIV BIOSCIENCES, LLC
**2023224132** BECTON DICKINSON ROWA GERMANY GMBH
**2023224241** BAYER CONSUMER CARE AG
**2023224434** COMAU S.P.A.
**2023224521** NOVO NORDISK A/S
**2023225006** THYSSENKRUPP NUCERA AG & CO. KGAA
**2023226134** RESOTHER PHARMA A/S
**2023226313** TEIJIN PHARMA LIMITED; UNIVERSITY PUBLIC CORPORATION OSAKA
**2023226598** OLEON NV; BERG+SCHMIDT ASIA PTE. LTD.
**2023226876** ALCON INC.
**2023227388** PAUL HETTICH GMBH & CO. KG
**2023227606** KROSAKIHARIMA CORPORATION
**2023227622** SOMPO CARE INC.
**2023228339** PAUL HETTICH GMBH & CO. KG
**2023228399** AERONES ENGINEERING, SIA
**2023228446** KROSAKIHARIMA CORPORATION
**2023229070** SOCIÉTÉ DES PRODUITS NESTLÉ S.A.
**2023229117** SOMPO CARE INC.
**2023229208** ALCON INC.
**2023230083** HEIDELBERG MATERIALS AG
**2023230185** FROMM HOLDING AG
**2023230207** HEIDELBERG MATERIALS AG
**2023231265** HANSHOW TECHNOLOGY CO., LTD.
**2023231737** THYSSENKRUPP NUCERA AG & CO. KGAA
**2023231764** MEDACTA INTERNATIONAL SA
**2023232080** GENENTECH, INC.
**2023232527** MEDACTA INTERNATIONAL SA
**2023232901** BOEHRINGER INGELHEIM INTERNATIONAL GMBH
**2023233398** GREEN CROSS CORPORATION; HANMI PHARM. CO., LTD.
**2023234374** REKOR SYSTEMS, INC.
**2023234531** THE PROCTER & GAMBLE COMPANY
**2023234973** GREEN CROSS CORPORATION; HANMI PHARM. CO., LTD.
**2023235280** THE PROCTER & GAMBLE COMPANY
**2023236347** REHAU INDUSTRIES SE & CO. KG
**2023236885** ELECTROLUX APPLIANCES AKTIEBOLAG
**2023236910** LAMKAP BIO GAMMA AG
**2023237882** ABBVIE INC.
**2023253895** LAWVO INC.
**2023255789** GLENCORE OPERATIONS SOUTH AFRICA (PTY) LIMITED
**2023262181** ITM ISOTOPE TECHNOLOGIES MUNICH SE
**2023265721** LG ENERGY SOLUTION, LTD.
**2023277224** D'ANGLADE, P.
**2023313554** LG ENERGY SOLUTION, LTD.
**2023327731** LG ENERGY SOLUTION, LTD.

**PCT applications which have entered the National Phase - Numerical Index cont'd**

**2023327767** LEPRINO FOODS COMPANY
**2023338642** DETNET SOUTH AFRICA (PTY) LTD
**2023357514** SOCIEDAD ESPAÑOLA DE ELECTROMEDICINA Y CALIDAD, S.A.
**2023387765** LG ELECTRONICS INC.
**2024204325** LOMBARDI THOMAS, L.; THOMAS, B.

**IPC Index**

**A01D 34 /-**

2023220951

**A01D 45 /-**

2022414211

**A01D 57 /-**

2022414211

**A01D 61 /-**

2022414211

**A01D 85 /-**

2022414211

**A01G 25 /-**

2023216279

**A01K 67 /-**

2022421979
2022429780

**A01M 1 /-**

2023206808

**A01N 25 /-**

2022426818
2022427995
2022437669
2023208038
2023208835
2023219259

**A01N 41 /-**

2022437669

**A01N 43 /-**

2022437669
2023218608
2023219259

**A01N 47 /-**

2022437669
2023219259

**A01N 63 /-**

2023208038
2023208835

**A01P 1 /-**

2023208038

**A01P 3 /-**

2023218608
2023219259

**A23C 21 /-**

2023327767

**A23C 9 /-**

2023327767

**A23D 7 /-**

2023226598

**A23F 5 /-**

2022422285

**A23J 3 /-**

2023327767

**A23K 10 /-**

2022426775
2023217068

**A23K 20 /-**

2023217068
2023226598

**A23K 40 /-**

2023217068

**A23K 50 /-**

2023217068
2023226598

**A23L 33 /-**

2023222562

**A23N 17 /-**

2023214760

**A23P 30 /-**

2023214760

**A43B 21 /-**

2023208742

**A43B 5 /-**

2023208742

**A43C 15 /-**

2023208742

**A45B 25 /-**

2022432498

**A45C 11 /-**

2022465944

**A46B 17 /-**

2023212054

**A46B 7 /-**

2023212054

**A47B 13 /-**

2022420923

**A47B 47 /-**

2023224132

**A47B 49 /-**

2023227388
2023228339

**A47B 57 /-**

2023224132

**A47B 81 /-**

2023228339

**A47B 96 /-**

2022420923

**A47B 97 /-**

2022425279

**A47C 21 /-**

2022410532

**A47D 7 /-**

2022410532

**A47G 1 /-**

2022425279

**A47G 27 /-**

2022432802

**A47J 31 /-**

2023212289

**A47K 11 /-**

2023209572

**A47K 13 /-**

2023206648

**A47L 11 /-**

2022428551

**A47L 15 /-**

2022418214
2022418925
2022421643

**A61B 17 /-**

2022409583
2022420084
2022425103
2022432843
2023219501
2023231764
2023232527

**A61B 18 /-**

2022409583

**A61B 3 /-**

2023219254
2023226876

**A61B 34 /-**

2022432843
2023232527

**A61B 5 /-**

2022423047
2023210497
2023219254

**A61B 8 /-**

2022415191

**A61C 1 /-**

2022434535

**A61C 15 /-**

2022411082

**A61C 17 /-**

2022434535

**A61F 13 /-**

2022431738
2023217051

**A61F 2 /-**

2022425103
2023208753
2023229208

**A61F 5 /-**

2022431738

**A61F 6 /-**

2022431173

**A61F 9 /-**

2023208753

**A61G 5 /-**

2023206800

**A61G 7 /-**

2022410532

**A61H 11 /-**

2023217051

**A61H 23 /-**

2023207610
2023217051

**A61H 9 /-**

2023207610

**A61J 3 /-**

2023218773

**A61K 103 /-**

2023208408

**A61K 31 /-**

2022239827
2022409512
2022409798
2022411308
2022412821
2022414087
2022415337
2022417301
2022417524
2022418176
2022419588
2022420749
2022420764
2022421837
2022422215
2022422276
2022429732
2022432354
2022433340
2022434038
2022434686
2023204840
2023206373
2023206441
2023206628
2023207276
2023207390
2023207795
2023208682
2023210230
2023210747
2023210979
2023211592
2023211896
2023211937
2023213173
2023213626
2023213736
2023214024
2023215456
2023217178
2023217831
2023218629
2023219692
2023221377
2023224521
2023226313
2023229070
2023237882

**A61K 33 /-**

2023205912

**A61K 35 /-**

2022421979
2023208274
2023215593
2023226313

**A61K 36 /-**

2023209079
2023229070

**A61K 38 /-**

2022411048
2022438138
2023208627
2023209144
2023209445
2023218551
2023219773
2023226134
2023226313
2023233398
2023234973

**A61K 39 /-**

2022409798
2022410678
2022413622
2022414274
2022418639
2022419419
2022420594
2022420764
2022424159
2022426775
2023206501
2023206604
2023207150
2023208227
2023208662
2023209364
2023209401
2023209795
2023210844
2023212736
2023213843
2023216231
2023216258
2023217006
2023218678
2023223660
2023226313
2023236910

## PCT applications which have entered the National Phase - IPC Index cont'd

**A61K 41 /-**

2022422276

**A61K 45 /-**

2022422276
2022426780
2023221377
2023226313

**A61K 47 /-**

2022239827
2022419419
2022419596
2022420764
2022422149
2022426775
2022426780
2022438138
2023208627
2023209061
2023211896
2023212736
2023217824
2023218551
2023218678
2023233398
2023234973

**A61K 48 /-**

2023208274
2023212736
2023214024
2023226313

**A61K 49 /-**

2023218678

**A61K 51 /-**

2022419596
2023208408
2023216231
2023262181

**A61K 8 /-**

2023215384

**A61K 9 /-**

2022239827
2022419419
2022420764
2022426780
2022429340
2022434038
2022435654
2022438138
2023208281
2023209872
2023211896
2023211937
2023217824
2023218629
2023219692
2023221377
2023222562
2023224241
2023233398
2023234973

**A61L 27 /-**

2022417673
2022425103

**A61M 16 /-**

2023205912

**A61M 25 /-**

2023217032
2023219501

**A61M 3 /-**

2022409583

**A61M 31 /-**

2023208753
2023209872

**A61M 39 /-**

2023217032

**A61M 5 /-**

2023208753

**A61N 1 /-**

2022423047
2023210497
2023217604

**A61N 5 /-**

2022415191
2022421979

**A61N 7 /-**

2022415191

**A61P 1 /-**

2022420764
2022429340
2022429732
2023204840
2023207795
2023208627
2023218629

**A61P 11 /-**

2022417301
2022418176
2022420749
2023207795
2023213626

**A61P 13 /-**

2022414274
2023207795

**A61P 17 /-**

2023204840
2023217178
2023217831

**A61P 19 /-**

2023207795

**A61P 21 /-**

2023206373
2023207795

**A61P 25 /-**

2022422215
2022433340
2023207276
2023207795
2023209079
2023210230
2023216231
2023218551
2023222562
2023226313

**A61P 27 /-**

2023207795
2023212479

**A61P 29 /-**

2023207150
2023207276
2023207795
2023210838
2023219227
2023226134

**A61P 3 /-**

2022429732
2023208627
2023224521
2023229070
2023233398
2023234973

**A61P 31 /-**

2022413622
2023206628
2023207150
2023207276
2023207795
2023208227
2023209364
2023209401
2023209795
2023212736
2023213173
2023213843
2023216258

**A61P 35 /-**

2022409733
2022409798
2022410678
2022411308
2022412821
2022415337
2022417301
2022419419
2022419596
2022420594
2022420764
2022421837
2022422149
2022422276
2022424159
2022429732
2022432354
2022434686
2023204840
2023206373
2023206501
2023207276
2023207390
2023208408
2023208662
2023210844
2023213736
2023215789
2023218678
2023236910
2023237882
2023262181

**A61P 37 /-**

2022414309
2022419419
2022421837
2023204840
2023209445
2023219227
2023219773
2023226313

**A61P 43 /-**

2023211896
2023226313
2023233398

**A61P 5 /-**

2022429732

**A61P 7 /-**

2022419588

**A61P 9 /-**

2022429732
2023205912
2023207795
2023211937
2023219692
2023229070

**A61Q 11 /-**

2023215384

**A62C 3 /-**

2023213938
2023265721

**A62C 35 /-**

2023265721

**A62C 4 /-**

2023213938

**A62C 99 /-**

2023265721

**A62D 3 /-**

2022410500

**A63B 21 /-**

2022450437

**A63B 22 /-**

2022450437

**A63B 24 /-**

2024204325

**A63B 69 /-**

2024204325

**A63B 71 /-**

2022450437

**A63D 15 /-**

2022412535

**B01D 15 /-**

2023215593

**B01D 53 /-**

2023230083
2023230207

**B01D 61 /-**

2023211584

**B01F 23 /-**

2022410500

**B01F 35 /-**

2022410500

**B01J 19 /-**

2023209379

**B01L 3 /-**

2022418277
2022420878
2023207327
2023215271

**B06B 1 /-**

2021479275

**B22C 9 /-**

2022420829

**B22D 11 /-**

2023212404
2023216572

**B22D 27 /-**

2023216572

**B22D 31 /-**

2022420829

**B22D 41 /-**

2023227606
2023228446

**B22F 1 /-**

2022420976

**B22F 3 /-**

2022437514

**B22F 9 /-**

2022420976

**B25B 13 /-**

2023207643

**B25C 1 /-**

2023220911

**B25C 5 /-**

2023220911

**B25J 9 /-**

2022439192
2023224434

**B26D 7 /-**

2022422704

**B26F 1 /-**

2022422704

**B28B 1 /-**

2023206648

**B29B 17 /-**

2022422534

**B31F 1 /-**

2023277224

**B32B 15 /-**

2022441288

**B32B 27 /-**

2023223648
2023236347

**B32B 29 /-**

2022441288

## PCT applications which have entered the National Phase - IPC Index cont'd

2023220046

**B32B 5 /-**

2022432802

**B32B 7 /-**

2022432802

**B33Y 70 /-**

2022417289
2023209644

**B41C 1 /-**

2022421462

**B41N 1 /-**

2022421462

**B42D 25 /-**

2022421462

**B60L 53 /-**

2022487602

**B60L 58 /-**

2023212554

**B61G 5 /-**

2023216370

**B62D 55 /-**

2023213172

**B62J 50 /-**

2022435902

**B62K 11 /-**

2022435902

**B63B 21 /-**

2022436869
2022437764
2022438259

**B63B 22 /-**

2022420763
2022436869
2022437764
2022438259

**B63B 27 /-**

2022420763

**B63B 35 /-**

2022436869
2022437764
2022438259

**B64G 1 /-**

2023209396

**B65B 13 /-**

2023230185

**B65B 51 /-**

2023207781

**B65D 1 /-**

2022414202

**B65D 19 /-**

2023277224

**B65D 21 /-**

2022414202

**B65D 25 /-**

2022414202

**B65D 3 /-**

2023220046

**B65D 35 /-**

2023234531
2023235280

**B65D 43 /-**

2023207602

**B65D 47 /-**

2023207602
2023234531
2023235280

**B65D 5 /-**

2023212417
2023220046

**B65D 65 /-**

2023220046

**B65D 81 /-**

2023220046

**B65D 85 /-**

2022414202
2023207781

**B65G 1 /-**

2023211794

**B65G 13 /-**

2023211063

**B65G 47 /-**

2023211063

**B65H 29 /-**

2022425670

**B66C 1 /-**

2023210811
2023213964

**B66C 23 /-**

2023210811
2023213172

**B66C 3 /-**

2023213172

**B66C 7 /-**

2023213172

**B66F 9 /-**

2023213964

**B67D 1 /-**

2023212289

**B82Y 30 /-**

2022417289

**B82Y 40 /-**

2022417289

**C01B 25 /-**

2022421021

**C01B 32 /-**

2022410500
2022417289
2023206924

**C01B 33 /-**

2023205769
2023206924

**C01B 39 /-**

2023205769

**C01F 11 /-**

2022421021

**C01G 49 /-**

2022420735

**C01G 53 /-**

2022418104
2023220914

**C02F 1 /-**

2022413555
2023211584
2023212774

**C02F 101 /-**

2023212774

**C04B 103 /-**

2023210817

**C04B 18 /-**

2023230083

**C04B 20 /-**

2023230207

**C04B 24 /-**

2023210817

**C04B 28 /-**

2022464726
2023210817
2023230207

**C04B 35 /-**

2023227606
2023228446

**C05B 7 /-**

2022426818
2022427995

**C05C 9 /-**

2022426818
2022427995

**C05D 9 /-**

2022426818
2022427995

**C05F 1 /-**

2022426818
2022427995

**C05F 11 /-**

2022426818
2022427995

**C05G 3 /-**

2022426818
2022427995

**C05G 5 /-**

2022426818
2022427995

**C07C 29 /-**

2023209379

**C07C 323 /-**

2022419419

**C07C 39 /-**

2023204836

**C07D 207 /-**

2022417301

**C07D 209 /-**

2022417301
2023215456

**C07D 213 /-**

2022417301
2023207276
2023213736

**C07D 215 /-**

2022417301
2022429732

**C07D 231 /-**

2022417301
2022422215
2023224521

**C07D 233 /-**

2022417301
2023217831

**C07D 235 /-**

2022417301

**C07D 241 /-**

2022417301
2023213626

**C07D 249 /-**

2022417301
2023207150

**C07D 253 /-**

2022429732

**C07D 261 /-**

2022422215

**C07D 263 /-**

2022417301
2023217831

**C07D 277 /-**

2023206628
2023217831

**C07D 303 /-**

2022433340

**C07D 307 /-**

2022417301
2023206441

2023217178
2023217831

**C07D 311 /-**

2023204836

**C07D 333 /-**

2022417301

**C07D 401 /-**

2022411308
2022417301
2022429732
2022432354
2023212864
2023213736

**C07D 403 /-**

2022411308
2022417301
2022429732
2023204840
2023206373

**C07D 405 /-**

2022417301
2022429732
2022433340

**C07D 407 /-**

2022429732

**C07D 409 /-**

2022429732

**C07D 413 /-**

2023237882

**C07D 417 /-**

2023207390

**C07D 471 /-**

2022411308
2022412821
2022417301
2022421837
2022422215
2022429732
2022432354
2023207276
2023213736

**C07D 487 /-**

2022411308
2022417301
2022418176
2022420749
2022434686

**C07D 491 /-**

2022417301
2022432354

## PCT applications which have entered the National Phase - IPC Index cont'd

**C07D 498 /-**

2022412821
2022417301
2022434686

**C07D 513 /-**

2023207390

**C07D 519 /-**

2022432354

**C07F 5 /-**

2022422112
2023207276

**C07H 1 /-**

2022409554

**C07H 15 /-**

2022420764

**C07H 19 /-**

2022420764

**C07H 21 /-**

2022418639
2022426775

**C07H 23 /-**

2022420764

**C07K 1 /-**

2023215593

**C07K 14 /-**

2022411048
2022414095
2022418344
2022419583
2022421979
2022426775
2022429732
2023206604
2023207156
2023209445
2023210838
2023213843
2023215593
2023215789
2023216258
2023218551
2023218678
2023226134
2023226313

**C07K 16 /-**

2022409733
2022409798
2022410678
2022414309
2022418639
2022419596
2022420223
2022420594
2022420709
2022421979
2022424159
2023205989
2023206604
2023207150
2023208662
2023210844
2023215789
2023216231
2023217006
2023218678
2023219227
2023226313
2023236910

**C07K 19 /-**

2022410678
2022411075
2022414095
2022418344
2023208627
2023218678

**C07K 5 /-**

2023205140
2023208227

**C07K 9 /-**

2022420764

**C08F 220 /-**

2023232080

**C08G 69 /-**

2022441552

**C08G 73 /-**

2022441552

**C08G 77 /-**

2023216391

**C08J 3 /-**

2022441552

**C08J 5 /-**

2023223648

**C08K 3 /-**

2022417289
2023206924

**C08K 5 /-**

2023211813

**C08L 67 /-**

2023206648

**C09C 1 /-**

2022420735
2023206924

**C09D 11 /-**

2023209644

**C09D 133 /-**

2021480352

**C09D 143 /-**

2021480352

**C09D 5 /-**

2021480352

**C09D 7 /-**

2021480352

**C09K 5 /-**

2022417289

**C09K 8 /-**

2022464726

**C10G 1 /-**

2023208725

**C10G 55 /-**

2023208725

**C11B 3 /-**

2022420136

**C12N 1 /-**

2022420136
2023218678
2023226313

**C12N 13 /-**

2022415191

**C12N 15 /-**

2022410678
2022414095
2022414274
2022418344
2022419583
2022421979
2022424159
2022426775
2022434038
2023204836
2023206501
2023206836
2023207033
2023207150
2023207156
2023208274
2023210230
2023210747
2023210979
2023212479
2023212736
2023214024
2023216258
2023217006
2023218678
2023226313

**C12N 5 /-**

2022411048
2022415533
2022418603
2022418639
2022419583
2022421979
2022424159
2022426775
2023206501
2023207033
2023207150
2023217006
2023218678
2023223660
2023226313

**C12N 7 /-**

2023212736

**C12N 9 /-**

2022409554
2022410678
2022411075
2022414095
2022419583
2022419596
2022420136
2023204836
2023207156
2023208227
2023209364
2023209795

**C12P 19 /-**

2022409554
2022411075
2022415533

**C12P 21 /-**

2022419596
2023218678
2023223660
2023226313

**C12Q 1 /-**

2022418603
2022419002
2023204836
2023206361
2023206378
2023206836
2023207156
2023213160
2023219189
2023232901

**C12R 1 /-**

2022420136

**C22B 1 /-**

2022414975

**C22B 26 /-**

2022414975

**C22B 3 /-**

2022414975

**C22C 1 /-**

2022437514

**C22C 14 /-**

2022437514

**C23C 24 /-**

2022420976

**C23F 14 /-**

2023206924

**C25B 1 /-**

2023210412
2023225006
2023231737

**C25B 11 /-**

2023210412
2023225006

**C25B 15 /-**

2023231737

**C25B 3 /-**

2023225006

**C25B 9 /-**

2023210412
2023225006
2023231737

**C25C 3 /-**

2022380585

**C40B 40 /-**

2023218678

**D05C 17 /-**

2022432802

**D06F 34 /-**

2023387765

**D06F 37 /-**

2022421643

**D06F 39 /-**

2022421643

**D06F 58 /-**

2022433280

**D06N 7 /-**

2022432802

**D21H 19 /-**

2022441288
2023220046

**D21H 27 /-**

2022441288
2023220046

**E02B 15 /-**

2022436869
2022437764
2022438259

**E02D 1 /-**

2023215649

**E02D 11 /-**

2023205309

**E02D 5 /-**

2023205309

**E02D 7 /-**

2023205309

**E02D 9 /-**

2023205309

**E02F 3 /-**

2022420829
2023207136
2023213172

**E02F 9 /-**

2022420829
2023208395
2023213172

**E03C 1 /-**

2023217660

**E04B 9 /-**

2023207615
2023208609

**E04C 2 /-**

2023222398

## PCT applications which have entered the National Phase - IPC Index cont'd

**E04F 13 /-**

2023222398

**E04F 19 /-**

2023207615

**E05D 11 /-**

2023208849

**E05D 15 /-**

2023208258
2023208849

**E05D 3 /-**

2023208258
2023208849

**E05F 1 /-**

2023208258
2023208849
2023210030

**E05F 5 /-**

2023208258
2023208849

**E06B 9 /-**

2023208415

**E21B 17 /-**

2022420763
2023208756

**E21B 25 /-**

2022414202

**E21B 29 /-**

2023222660

**E21B 33 /-**

2022464726
2023222660

**E21B 36 /-**

2023210385

**E21B 41 /-**

2023205841
2023208756

**E21B 44 /-**

2022419406

**E21B 47 /-**

2022418530
2022419406
2023205841
2023222491
2023222660

**E21F 1 /-**

2022411124

**F01D 1 /-**

2023209365

**F01D 5 /-**

2023209365

**F01K 11 /-**

2023209365

**F01K 7 /-**

2023209365

**F02B 31 /-**

2022409800

**F02B 37 /-**

2022409800

**F02C 1 /-**

2023209365

**F02D 19 /-**

2023208224

**F02M 26 /-**

2022409800

**F02M 35 /-**

2022409800

**F02M 43 /-**

2023208224

**F03B 13 /-**

2022409800

**F03B 17 /-**

2022409800

**F03D 1 /-**

2022430059

**F03D 13 /-**

2023210811

**F03D 80 /-**

2022430059
2023228399

**F03G 4 /-**

2022414101

**F03G 7 /-**

2022409800
2023217051

**F04B 37 /-**

2023206804

**F04D 17 /-**

2023209365

**F04D 5 /-**

2023209365

**F04F 5 /-**

2022409800

**F15D 1 /-**

2022409800

**F16C 17 /-**

2023207496

**F16C 33 /-**

2023207496

**F16H 1 /-**

2023212404

**F16H 25 /-**

2023212404

**F16H 27 /-**

2023214606

**F16K 27 /-**

2022419408

**F16L 23 /-**

2022419408
2023207643

**F16L 27 /-**

2023216279

**F16L 29 /-**

2022419408

**F16L 3 /-**

2023216279

**F16L 58 /-**

2022419408

**F17C 3 /-**

2022426217

**F21S 8 /-**

2022430193

**F21V 17 /-**

2022430193

**F21V 23 /-**

2022430193

**F21V 31 /-**

2022430193

**F21W 131 /-**

2022430193

**F23B 60 /-**

2023209572

**F23D 14 /-**

2023211059

**F23G 5 /-**

2023209572

**F23K 5 /-**

2023211059

**F23N 5 /-**

2023209572

**F24C 15 /-**

2023236885

**F24S 30 /-**

2023214606

**F24T 10 /-**

2022414101

**F25J 1 /-**

2022418513
2023208262

**F27D 27 /-**

2023216572

**F42B 12 /-**

2022405021
2022413959

**F42D 1 /-**

2023255789
2023338642

**G01C 19 /-**

2022418530

**G01C 9 /-**

2022418530

**G01G 19 /-**

2023207136

**G01G 23 /-**

2023207136

**G01L 5 /-**

2023207643

**G01M 11 /-**

2022465944

**G01M 3 /-**

2023222491

**G01N 13 /-**

2023209577

**G01N 15 /-**

2023213817
2023215271

**G01N 21 /-**

2022429780
2023217241

**G01N 27 /-**

2023213172

**G01N 3 /-**

2023213172

**G01N 33 /-**

2022418639
2022422112
2022429913
2023206361
2023206604
2023209577
2023215271
2023215593
2023215649
2023215789
2023217006
2023218678
2023223660
2023232901

**G01N 35 /-**

2023206702
2023207327

**G01R 19 /-**

2022422471
2023206640

**G01R 31 /-**

2022422471

**G01S 1 /-**

2022405021

**G01S 19 /-**

2022405021
2023209396

**G01V 1 /-**

2023215649

**G02B 26 /-**

2023207134

**G02B 27 /-**

2023207134

**G02B 5 /-**

2023207134

**G02C 7 /-**

2022465944

**G05B 15 /-**

2023213969

**G05B 19 /-**

2022439192

**G05D 1 /-**

2021480388

**G06F 16 /-**

2022441312
2023207964
2023209396
2023209744
2023253895

**G06F 21 /-**

2023207280

**G06F 3 /-**

2022421934
2022437244
2023207134
2023207280
2023209396

**G06F 30 /-**

2023209396

**G06F 40 /-**

2022437244
2022441312

## PCT applications which have entered the National Phase - IPC Index cont'd

**G06F 8 /-**

2023215615

**G06K 19 /-**

2022421462
2023207052
2023210199

**G06K 7 /-**

2023210199

**G06N 10 /-**

2022443191

**G06N 20 /-**

2023205841
2023213817

**G06N 3 /-**

2022418603
2023213763
2023213817
2023215615

**G06N 5 /-**

2022443191
2023205841
2023213817

**G06Q 10 /-**

2022420974
2022420975
2022441312
2023207964
2023208620
2023213969

**G06Q 20 /-**

2022418000
2022420975

**G06Q 30 /-**

2022420974
2022420975
2023253895

**G06Q 50 /-**

2022420974
2023206378
2023213969
2023227622
2023229117
2023253895

**G06T 13 /-**

2022437244

**G06T 15 /-**

2023209396

**G06T 19 /-**

2023209396

**G06V 10 /-**

2022409690

**G06V 20 /-**

2022409690
2023234374

**G07C 5 /-**

2023207136
2023234374

**G07C 9 /-**

2023206011

**G07D 7 /-**

2022421462
2023220920

**G07F 11 /-**

2023224132

**G07F 17 /-**

2023224132

**G07F 9 /-**

2023224132

**G08G 1 /-**

2023234374

**G09B 19 /-**

2023207136

**G09B 9 /-**

2023209396

**G09F 3 /-**

2023207052
2023212417

**G10K 11 /-**

2022420923

**G10L 19 /-**

2022427854

**G16B 5 /-**

2022418603

**G16H 50 /-**

2023215271
2023229117

**G21B 1 /-**

2023206804

**H01F 7 /-**

2022421934

**H01J 41 /-**

2023206804

**H01M 10 /-**

2023265721
2023313554
2023327731

**H01M 12 /-**

2023213702

**H01M 16 /-**

2022437848

**H01M 4 /-**

2023210412
2023213702
2023220914

**H01M 50 /-**

2023209071
2023265721
2023313554
2023327731

**H01M 8 /-**

2022437848
2023210412
2023211813
2023212554
2023213255
2023231737

**H01R 13 /-**

2022418319
2022456807
2022487602

**H02H 1 /-**

2023206640

**H02J 13 /-**

2023206640
2023213969

**H02J 3 /-**

2022414369
2022427999
2022437848
2023213969

**H02J 7 /-**

2022418319

**H02K 1 /-**

2023212477

**H02K 21 /-**

2023212477

**H02K 7 /-**

2023213969

**H02M 1 /-**

2022427999
2022437848

**H02M 7 /-**

2022437848

**H02S 20 /-**

2023214606

**H03K 19 /-**

2021479275

**H04B 7 /-**

2023211613

**H04L 1 /-**

2022430626

**H04L 45 /-**

2023209486

**H04L 65 /-**

2023212361

**H04L 67 /-**

2022418000
2023209744
2023212361
2023234374

**H04L 9 /-**

2022418000
2022420975

**H04N 21 /-**

2023205562

**H04R 1 /-**

2022438825

**H04R 5 /-**

2022438825

**H04S 3 /-**

2022427854

**H04S 7 /-**

2022427854

**H04W 12 /-**

2022418000

**H04W 28 /-**

2022430796

**H04W 36 /-**

2023212361

**H04W 4 /-**

2022432618
2023231265

**H04W 72 /-**

2023206483

**H05B 6 /-**

2023216572

**H05G 1 /-**

2023357514

**H05K 5 /-**

2023313554

**H05K 7 /-**

2023313554

## Applications Accepted

**Name Index**

---

**(71)** 4D Molecular Therapeutics Inc.
**(11)** AU-B-2022203494
**(21)** 2022203494 **(22)** 23.05.2022
**(54)** Adeno-Associated Virus Variant Capsids And Use For Inhibiting Angiogenesis
**(51)** Int. Cl.
***C12N 7/00*** ( 2006.01 )
***A61K 9/00*** ( 2006.01 )
***A61K 35/76*** ( 2015.01 )
***C12N 15/86*** ( 2006.01 )
**(43)** 09.06.2022
**(44)** 01.08.2024
**(62)** 2018372235
**(72)** KIRN, David H.; KOTTERMAN, Melissa; SCHAFFER, David; SZYMANSKI, Paul; FRANCIS, Peter
**(74)** WRAYS PTY LTD

---

**(71)** ABB Schweiz AG
**(11)** AU-B-2020452061
**(21)** 2020452061 **(22)** 11.06.2020
**(54)** Method of controlling propulsion system of marine vehicle and propulsion system
**(51)** Int. Cl.
***B63H 1/10*** ( 2006.01 )
**(87)** WO2021/249644
**(43)** 16.12.2021
**(44)** 01.08.2024
**(72)** NUUTINEN, Mika; JI, Wei; LIU, Bin; PELJO, Veli-Pekka; GARCIA-GABIN, Winston; MISHCHENKO, Kateryna
**(74)** Griffith Hack

---

**(71)** Abiomed, Inc.
**(11)** AU-B-2023214339
**(21)** 2023214339 **(22)** 11.08.2023
**(54)** Heart pump with passive purge system
**(51)** Int. Cl.
***A61M 60/122*** ( 2021.01 )
***A61M 60/139*** ( 2021.01 )
**(43)** 31.08.2023
**(44)** 01.08.2024
**(62)** 2017378806
**(72)** Barry, Vincent
**(74)** Davies Collison Cave Pty Ltd

---

**Abiomed, Inc. see Oscor, Inc.**
**(21)** 2023214347

---

**(71)** Abiomed Europe GmbH
**(11)** AU-B-2018316543
**(21)** 2018316543 **(22)** 17.08.2018
**(54)** Blood pump
**(51)** Int. Cl.
***A61M 60/17*** ( 2021.01 )
**(87)** WO2019/034775
**(31)** 17186897.9 **(32)** 18.08.17 **(33)** EP
**(43)** 21.02.2019
**(44)** 01.08.2024
**(72)** NIX, Christoph; LUNZE, Katrin; SIESS, Thorsten; ABOULHOSN, Walid
**(74)** Spruson & Ferguson

---

**ABL Bio Inc. see I-Mab Biopharma Co., Ltd.**
**(21)** 2020329466

---

**(71)** Able High International Ltd
**(11)** AU-B-2017202923
**(21)** 2017202923 **(22)** 02.05.2017
**(54)** Improvements in or in relation to automated packaging
**(51)** Int. Cl.
***B65D 43/14*** ( 2006.01 )
***B29C 51/02*** ( 2006.01 )
**(43)** 22.11.2018
**(44)** 01.08.2024
**(72)** Mo, Helan
**(74)** Intellepro

---

**(71)** Ablynx NV
**(11)** AU-B-2021201640
**(21)** 2021201640 **(22)** 16.03.2021
**(54)** Methods for detecting and/or measuring anti-drug antibodies, in particular treatment-emergent anti-drug antibodies
**(51)** Int. Cl.
***G01N 33/531*** ( 2006.01 )
***C07K 16/18*** ( 2006.01 )
***G01N 33/68*** ( 2006.01 )
**(43)** 08.04.2021
**(44)** 01.08.2024
**(62)** 2015261467
**(72)** Snoeck, Veerle; Buyse, Marie-Ange; Baumeister, Judith
**(74)** Spruson & Ferguson

---

**(71)** ABUS August Bremicker Söhne KG
**(11)** AU-B-2019204274
**(21)** 2019204274 **(22)** 19.06.2019
**(54)** PADLOCK
**(51)** Int. Cl.
***E05B 67/24*** ( 2006.01 )
**(31)** 102018117023.8 **(32)** 13.07.18 **(33)** DE
**(43)** 30.01.2020
**(44)** 01.08.2024
**(72)** Fan, Wai Kuen
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** ADAMA Makhteshim Ltd.
**(11)** AU-B-2022228194
**(21)** 2022228194 **(22)** 09.09.2022
**(54)** A stable, self-dispersible, low foaming solid pesticide formulation
**(51)** Int. Cl.
***A01N 47/04*** ( 2006.01 )
***A01N 25/12*** ( 2006.01 )
***A01N 25/34*** ( 2006.01 )
***A01N 37/38*** ( 2006.01 )
***A01N 43/707*** ( 2006.01 )
***A01N 43/90*** ( 2006.01 )
***A01N 47/12*** ( 2006.01 )
***A01N 51/00*** ( 2006.01 )
***A01N 57/12*** ( 2006.01 )
***A01P 3/00*** ( 2006.01 )
**(43)** 29.09.2022
**(44)** 01.08.2024
**(62)** 2017371838
**(72)** LEVY, Shlomo; BERKOVITCH, Michael; FIRER, Viacheslav
**(74)** Spruson & Ferguson

---

**(71)** ADC Therapeutics SA; MedImmune Limited
**(11)** AU-B-2018253948
**(21)** 2018253948 **(22)** 20.04.2018
**(54)** Combination therapy with an anti-AXL Antibody-Drug Conjugate
**(51)** Int. Cl.
***A61K 47/68*** ( 2017.01 )
***A61K 31/502*** ( 2006.01 )
***A61K 31/706*** ( 2006.01 )
***A61K 31/7068*** ( 2006.01 )
***A61K 45/06*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
**(87)** WO2018/193102
**(31)** 1706231.6 **(32)** 20.04.17 **(33)** GB
1706230.8 20.04.17 GB
1706229.0 20.04.17 GB
1706228.2 20.04.17 GB
1706227.4 20.04.17 GB
1706226.6 20.04.17 GB
1706225.8 20.04.17 GB
1706224.1 20.04.17 GB
1706223.3 20.04.17 GB
**(43)** 25.10.2018
**(44)** 01.08.2024
**(72)** Van Berkel, Patricius Hendrikus Cornelis; Wuerthner, Jens; Hartley, John; Zammarchi, Francesca
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Adimab, LLC
**(11)** AU-B-2017345786
**(21)** 2017345786 **(22)** 20.10.2017
**(54)** Anti-respiratory syncytial virus antibodies, and methods of their generation and use
**(51)** Int. Cl.
***C07K 16/10*** ( 2006.01 )
***A61K 39/00*** ( 2006.01 )
**(87)** WO2018/075974
**(31)** 62/411,508 **(32)** 21.10.16 **(33)** US
**(43)** 26.04.2018
**(44)** 01.08.2024
**(72)** Walker, Laura M.
**(74)** FB Rice Pty Ltd

---

**(71)** Adlai Nortye Biopharma Co., Ltd.
**(11)** AU-B-2020413555
**(21)** 2020413555 **(22)** 22.12.2020
**(54)** PD-L1 antagonist compound
**(51)** Int. Cl.
***C07D 401/14*** ( 2006.01 )

## Applications Accepted - Name Index cont'd

***A61K 31/4427*** ( 2006.01 )
***A61P 37/02*** ( 2006.01 )
***C07D 401/02*** ( 2006.01 )
***C07D 401/06*** ( 2006.01 )
**(87)** WO2021/129584
**(31)** 201911368320.1 **(32)** 26.12.19 **(33)** CN
**(43)** 01.07.2021
**(44)** 01.08.2024
**(72)** YU, Zhiyong; LI, Pan; XU, Beidi; ZHOU, Yu; PANG, Wei; WEN, Qiaodong; SHI, Yongqiang; SUN, Zhao; LV, Meng
**(74)** Spruson & Ferguson

---

**(71)** ADVANCED LITHIUM ELECTROCHEMISTRY CO., LTD.
**(11)** AU-B-2023204280
**(21)** 2023204280 **(22)** 03.07.2023
**(54)** METHOD OF MANUFACTURING A POSITIVE ELECTRODE MATERIAL AND BATTERY PRODUCED THEREFROM
**(51)** Int. Cl.
***H01M 4/1393*** ( 2010.01 )
***H01M 4/38*** ( 2006.01 )
***H01M 4/60*** ( 2006.01 )
***H01M 10/0525*** ( 2010.01 )
**(31)** 111132583 **(32)** 29.08.22 **(33)** TW
**(43)** 14.03.2024
**(44)** 01.08.2024
**(72)** WEI, CHAO-NAN; TSAI, FENG-YEN; WANG, YA-HUI; CHEN, HAN-YU
**(74)** BOSH IP Pty Ltd

---

**(71)** AFL Telecommunications LLC
**(11)** AU-B-2023200219
**(21)** 2023200219 **(22)** 17.01.2023
**(54)** A high density patch panel with modular cassettes
**(51)** Int. Cl.
***H04Q 1/02*** ( 2006.01 )
**(43)** 16.02.2023
**(44)** 01.08.2024
**(62)** 2018291959
**(72)** VOGEL, Mark A.
**(74)** FB Rice Pty Ltd

---

**(71)** AGENUS INC.; LUDWIG INSTITUTE FOR CANCER RESEARCH LTD; MEMORIAL SLOAN KETTERING CANCER CENTER
**(11)** AU-B-2021200281
**(21)** 2021200281 **(22)** 18.01.2021
**(54)** ANTI-PD-1 ANTIBODIES AND METHODS OF USE THEREOF
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
*A61K 39/00* ( 2006.01 )
**(43)** 18.03.2021
**(44)** 01.08.2024
**(62)** 2016317915
**(72)** VAN DIJK, Marc; MUNDT, Cornelia Anne; RITTER, Gert; WOLCHOK, Jedd David; MERGHOUB, Taha; ZAPPASODI, Roberta; HOLMGAARD, Rikke Baek; SCHAER, David; SAVITSKY, David Adam; WILSON, Nicholas Stuart
**(74)** AJ PARK

---

**(71)** Alcon Inc.
**(11)** AU-B-2018385484
**(21)** 2018385484 **(22)** 05.12.2018
**(54)** Patient interface for ophthalmic surgery
**(51)** Int. Cl.
***A61F 9/009*** ( 2006.01 )
**(87)** WO2019/116173
**(31)** 62/597,779 **(32)** 12.12.17 **(33)** US
**(43)** 20.06.2019
**(44)** 01.08.2024
**(72)** LOERNER, Johannes; RIEDEL, Peter
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Alcon Inc.
**(11)** AU-B-2019251316
**(21)** 2019251316 **(22)** 04.04.2019
**(54)** Automatic XY centering for digital microscope
**(51)** Int. Cl.
***A61B 3/13*** ( 2006.01 )
***A61B 3/15*** ( 2006.01 )
**(87)** WO2019/197951
**(31)** 62/656,079 **(32)** 11.04.18 **(33)** US
**(43)** 17.10.2019
**(44)** 01.08.2024
**(72)** CHARLES, Steven T.
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Alcon Inc.
**(11)** AU-B-2019300503
**(21)** 2019300503 **(22)** 10.07.2019
**(54)** Intraocular lens injector
**(51)** Int. Cl.
***A61F 2/16*** ( 2006.01 )
**(87)** WO2020/012386
**(31)** 62/696,084 **(32)** 10.07.18 **(33)** US
**(43)** 16.01.2020
**(44)** 01.08.2024
**(72)** WENSRICH, Douglas Brent
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Alfasigma S.p.A.
**(11)** AU-B-2018309667
**(21)** 2018309667 **(22)** 30.07.2018
**(54)** Methods of treating symptoms of gastroparesis using velusetrag
**(51)** Int. Cl.
***A61K 31/55*** ( 2006.01 )
***A61K 9/00*** ( 2006.01 )
***A61P 1/14*** ( 2006.01 )
**(87)** WO2019/027881
**(31)** 62/539,229 **(32)** 31.07.17 **(33)** US
**(43)** 07.02.2019
**(44)** 01.08.2024
**(72)** BARNES, Christopher Noel; VISCOMI, Giuseppe Claudio; RENZULLI, Cecilia; GRIMALDI, Maria
**(74)** WRAYS PTY LTD

---

**(71)** Algesacooling Pty Ltd
**(11)** AU-B-2022204001
**(21)** 2022204001 **(22)** 09.06.2022
**(54)** REFRIGERATION EVAPORATORS AND SYSTEMS
**(51)** Int. Cl.
***F25B 39/00*** ( 2006.01 )
***F25B 41/00*** ( 2021.01 )
***F28B 1/06*** ( 2006.01 )
***F28D 9/00*** ( 2006.01 )
***F28F 9/26*** ( 2006.01 )
**(43)** 30.06.2022
**(44)** 01.08.2024
**(62)** 2021290221
**(72)** Richards, Alan
**(74)** Michael Buck IP

---

**(71)** Align Technology, Inc.
**(11)** AU-B-2019346652
**(21)** 2019346652 **(22)** 27.09.2019
**(54)** Aligner damage prediction and mitigation
**(51)** Int. Cl.
***A61C 7/08*** ( 2006.01 )
***A61C 7/00*** ( 2006.01 )
**(87)** WO2020/069446
**(31)** 62/737,458 **(32)** 27.09.18 **(33)** US
16/584,786 26.09.19 US
16/584,788 26.09.19 US
16/584,791 26.09.19 US
16/584,794 26.09.19 US
**(43)** 02.04.2020
**(44)** 01.08.2024
**(72)** WANG, Yuxiang; TANUGULA, Rohit; SHIRAZI AGHJARI, Reza; JANG, Andrew; LI, Chunhua; SATO, Jun; CAI, Luyao; MEDVINSKAYA, Viktoria; KUKK, Arno; CHERKAS, Andrey; AKOPOVA, Anna; SU, Kangning
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Alnylam Pharmaceuticals, Inc.
**(11)** AU-B-2018301829
**(21)** 2018301829 **(22)** 12.07.2018
**(54)** Methods for inhibition of HAO1 (hydroxyacid oxidase 1 (glycolate oxidase) gene expression
**(51)** Int. Cl.
***A61K 31/713*** ( 2006.01 )
***A61K 31/00*** ( 2006.01 )
**(87)** WO2019/014491
**(31)** 62/682,020 **(32)** 07.06.18 **(33)** US
62/532,176 13.07.17 US
62/581,565 03.11.17 US
62/646,285 21.03.18 US
**(43)** 17.01.2019
**(44)** 01.08.2024
**(72)** ERBE, David V.; McGREGOR, Tracey L.
**(74)** Griffith Hack

---

**(71)** Alpha Tau Medical Ltd.
**(11)** AU-B-2023203996
**(21)** 2023203996 **(22)** 23.06.2023
**(54)** Wet preparation of radiotherapy sources
**(51)** Int. Cl.
***G21G 4/08*** ( 2006.01 )
***A61K 33/32*** ( 2006.01 )
***A61K 51/00*** ( 2006.01 )
***A61N 5/00*** ( 2006.01 )
***A61N 5/02*** ( 2006.01 )
***A61N 5/06*** ( 2006.01 )
***A61N 5/10*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***G21G 4/04*** ( 2006.01 )

## Applications Accepted - Name Index cont'd

***G21G 4/10*** ( 2006.01 )
**(43)** 13.07.2023
**(44)** 01.08.2024
**(62)** 2020362983
**(72)** Schmidt, Michael; Kelson, Itzhak
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Amadeus S.A.S.
**(11)** AU-B-2019260125
**(21)** 2019260125 **(22)** 23.04.2019
**(54)** Biometric authentication method, system, and computer program
**(51)** Int. Cl.
***G06F 21/32*** ( 2013.01 )
**(87)** WO2019/206854
**(31)** 18290038.1 **(32)** 23.04.18 **(33)** EP
**(43)** 31.10.2019
**(44)** 01.08.2024
**(72)** MCKELL-REDWOOD, Colin; TORRES, Nicolas; PRESTIA, Gregorio Gianluca; MAAROUFI, Mohamed-Amine
**(74)** Griffith Hack

---

**(71)** Amazentis SA
**(11)** AU-B-2019227733
**(21)** 2019227733 **(22)** 27.02.2019
**(54)** Process-scale synthesis of urolithin A
**(51)** Int. Cl.
***C07D 311/80*** ( 2006.01 )
**(87)** WO2019/168972
**(31)** 62/635,893 **(32)** 27.02.18 **(33)** US
62/765,125 17.08.18 US
**(43)** 06.09.2019
**(44)** 01.08.2024
**(72)** SKRANC, Wolfgang; YIANNIKOUROS, George; TROFIMOV, Alexander; SHAN, Zhixing; GOSS, Christopher
**(74)** Spruson & Ferguson

---

**(71)** Amgen Inc.
**(11)** AU-B-2019387079
**(21)** 2019387079 **(22)** 26.11.2019
**(54)** Systems and methods for facilitating clone selection
**(51)** Int. Cl.
***G06V 10/764*** ( 2022.01 )
**(87)** WO2020/112723
**(31)** 62/774,154 **(32)** 30.11.18 **(33)** US
**(43)** 04.06.2020
**(44)** 01.08.2024
**(72)** YUAN, Yu; MILNE, Graham F.; WANG, Tony Y.; LE, Kim H.; TAN, Glenn
**(74)** Spruson & Ferguson

---

**(71)** Amsted Rail Company, Inc.
**(11)** AU-B-2019231209
**(21)** 2019231209 **(22)** 05.03.2019
**(54)** Railway truck assembly having force-detecting load cells
**(51)** Int. Cl.
***B61F 5/00*** ( 2006.01 )
**(87)** WO2019/173328
**(31)** 62/639,780 **(32)** 07.03.18 **(33)** US
**(43)** 12.09.2019
**(44)** 01.08.2024
**(72)** WIKE, Paul Steven; PETRUNICH, Thomas
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** ANDRITZ HYDRO GMBH
**(11)** AU-B-2022264861
**(21)** 2022264861 **(22)** 08.02.2022
**(54)** ELECTRICAL MACHINE
**(51)** Int. Cl.
***H02K 9/10*** ( 2006.01 )
**(87)** WO2022/226555
**(31)** A 50314/2021 **(32)** 27.04.21 **(33)** AT
**(43)** 03.11.2022
**(44)** 01.08.2024
**(72)** KASTNER, Gebhard; LANGMAYR, Daniel; BLAZEVIC, Enes
**(74)** Chrysiliou IP

---

**(71)** Angelcare Canada Inc.; International Refills Company Ltd.
**(11)** AU-B-2018364593
**(21)** 2018364593 **(22)** 26.10.2018
**(54)** Bag roll cassette and method of use
**(51)** Int. Cl.
***B65D 33/16*** ( 2006.01 )
***B65D 30/10*** ( 2006.01 )
***B65D 33/24*** ( 2006.01 )
***B65D 85/67*** ( 2006.01 )
***B65H 75/18*** ( 2006.01 )
**(87)** WO2019/092539
**(31)** 62/577,469 **(32)** 26.10.17 **(33)** US
62/734,014 20.09.18 US
**(43)** 16.05.2019
**(44)** 01.08.2024
**(72)** MORAND, Michel; PINSONNAULT, Maurice
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Anhui University of Science and Technology; China University of Mining and Technology
**(11)** AU-B-2022291666
**(21)** 2022291666 **(22)** 31.08.2022
**(54)** Attitude self-correcting underground transportation apparatus based on UWB technology and control method thereof
**(51)** Int. Cl.
***H04W 4/02*** ( 2018.01 )
***E21F 13/00*** ( 2006.01 )
***H04W 4/029*** ( 2018.01 )
***H04W 4/30*** ( 2018.01 )
**(87)** WO2023/030362
**(31)** 202111008694.X **(32)** 31.08.21 **(33)** CN
**(43)** 16.03.2023
**(44)** 01.08.2024
**(72)** SHEN, Gang; ZHU, Zhencai; QU, Song; SA, Yunjie; TANG, Yu; LI, Xiang; YUAN, Guan; XU, Zhiou; ZHAO, Jiaqi; CHEN, Pengpeng
**(74)** Baxter Patent Attorneys Pty Ltd

---

**(71)** Aperture in Motion, LLC
**(11)** AU-B-2018389608
**(21)** 2018389608 **(22)** 17.12.2018
**(54)** Light control devices and methods for regional variation of visual information and sampling
**(51)** Int. Cl.
***A61B 3/10*** ( 2006.01 )
***A61F 2/14*** ( 2006.01 )
***A61F 11/04*** ( 2006.01 )
***A61M 1/30*** ( 2006.01 )
***G02B 5/00*** ( 2006.01 )
***G02B 26/00*** ( 2006.01 )
***G02B 26/02*** ( 2006.01 )
***G02B 27/01*** ( 2006.01 )
**(87)** WO2019/126039
**(31)** 62/608,039 **(32)** 20.12.17 **(33)** US
15/903,923 23.02.18 US
**(43)** 27.06.2019
**(44)** 01.08.2024
**(72)** SERDAREVIC, Olivia; YAVITZ, Edward
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Apnimed, Inc. (Delaware)
**(11)** AU-B-2019214891
**(21)** 2019214891 **(22)** 30.01.2019
**(54)** Methods and compositions for treating sleep apnea
**(51)** Int. Cl.
***A61K 45/06*** ( 2006.01 )
***A61K 31/138*** ( 2006.01 )
***A61K 31/216*** ( 2006.01 )
***A61P 11/00*** ( 2006.01 )
***A61P 25/00*** ( 2006.01 )
**(87)** WO2019/152475
**(31)** 62/623,892 **(32)** 30.01.18 **(33)** US
**(43)** 08.08.2019
**(44)** 01.08.2024
**(72)** MILLER, Lawrence G.; WOHL, Barry; LUNSMANN, Walter J.
**(74)** Spruson & Ferguson

---

**(71)** Apple Inc.
**(11)** AU-B-2023200021
**(21)** 2023200021 **(22)** 03.01.2023
**(54)** Mobile key enrollment and use
**(51)** Int. Cl.
***G06Q 20/36*** ( 2012.01 )
***B60R 25/24*** ( 2013.01 )
***G06F 3/0484*** ( 2022.01 )
***H04L 67/00*** ( 2022.01 )
***H04M 1/72403*** ( 2021.01 )
***H04W 4/80*** ( 2018.01 )
***H04W 12/06*** ( 2021.01 )
***H04W 12/08*** ( 2021.01 )
**(43)** 09.02.2023
**(44)** 01.08.2024
**(62)** 2021213717
**(72)** Kramar, Vitalii; Dargan, Dorian D.; Van Os, Marcel
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Apple Inc.
**(11)** AU-B-2023201077
**(21)** 2023201077 **(22)** 23.02.2023
**(54)** Multi-device charging user interface
**(51)** Int. Cl.
***H02J 7/00*** ( 2006.01 )
***G06F 1/26*** ( 2006.01 )
***H02J 50/40*** ( 2016.01 )
***H02J 50/80*** ( 2016.01 )
**(43)** 23.03.2023

## Applications Accepted - Name Index cont'd

**(44)** 01.08.2024
**(62)** 2021200894
**(72)** Behzadi, Arian; Chan, Joseph Y.; Devine, Lynne; Foss, Christopher Patrick; Mari, Pedro; Persson, Per Haakan Linus; Verweij, Hugo; Wang, Corey Keiko
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Apple Inc.
**(11)** AU-B-2023282284
**(21)** 2023282284 **(22)** 14.12.2023
**(54)** User interfaces related to time
**(51)** Int. Cl.
***G06F 3/00*** ( 2006.01 )
***G04C 17/00*** ( 2006.01 )
**(43)** 18.01.2024
**(44)** 01.08.2024
**(62)** 2023200039
**(72)** Lynch, Kevin; Dye, Alan C.; Chao, Edward; McFetridge, Geoff Boyd; Lee, Eileen Y.; Connor, Teofila; Forssell, Lisa K.; Barlier, Guillaume Pierre André; Romney, Christopher James; Rickwald, Jason; Gardner, JD; Scapel, Nicolas; Page, Pani; Wilson, Christopher; Chen, Kevin Will; Guzman, Aurelio
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** APR Co., Ltd.
**(11)** AU-B-2022218457
**(21)** 2022218457 **(22)** 02.05.2022
**(54)** Skin management device
**(51)** Int. Cl.
***A61H 23/02*** ( 2006.01 )
***A61N 1/36*** ( 2006.01 )
***A61N 5/06*** ( 2006.01 )
**(87)** WO2023/113112
**(31)** 10-2021-0182213 **(32)** 17.12.21 **(33)** KR
**(43)** 06.07.2023
**(44)** 01.08.2024
**(72)** LEE, Jeong Ho; KANG, Do Hee
**(74)** Griffith Hack

---

**(71)** Aquafortus Technologies Limited
**(11)** AU-B-2018346086
**(21)** 2018346086 **(22)** 03.10.2018
**(54)** A salt recovery solution and processes of use thereof
**(51)** Int. Cl.
***C01D 3/06*** ( 2006.01 )
***C02F 1/26*** ( 2006.01 )
**(87)** WO2019/070134
**(31)** 62/567,545 **(32)** 03.10.17 **(33)** US
**(43)** 11.04.2019
**(44)** 01.08.2024
**(72)** BRIGGS, Daryl Joseph; PRAKASH, Chaitra
**(74)** Southern Cross Intellectual Property Limited

---

**(71)** Aristocrat Technologies Australia Pty Limited
**(11)** AU-B-2022202200
**(21)** 2022202200 **(22)** 31.03.2022
**(54)** ARTICULATING HINGE ASSEMBLY FOR SECURING AN ACCESS DOOR ON A GAMING MACHINE CABINET
**(51)** Int. Cl.
***E05D 3/16*** ( 2006.01 )
***E05D 5/06*** ( 2006.01 )
***G07F 9/00*** ( 2006.01 )
**(43)** 21.04.2022
**(44)** 01.08.2024
**(62)** 2020202013
**(72)** PATEL, Jigarkumar Ghanshyambhai; BARBOUR, Timothy Francis
**(74)** Griffith Hack

---

**(71)** ARKEMA FRANCE
**(11)** AU-B-2022216473
**(21)** 2022216473 **(22)** 03.02.2022
**(54)** POLYESTERAMINES AND POLYESTER QUATS
**(51)** Int. Cl.
***B03D 1/01*** ( 2006.01 )
***B03D 1/016*** ( 2006.01 )
***C08G 63/685*** ( 2006.01 )
**(87)** WO2022/167756
**(31)** 2101067 **(32)** 04.02.21 **(33)** FR
**(43)** 11.08.2022
**(44)** 01.08.2024
**(72)** DELROISSE, Henry; BARRETO, Gilles; JORDA, Eric; BALOCHE, Alain
**(74)** Griffith Hack

---

**(71)** Asahi Group Holdings, Ltd.; Tokushima University
**(11)** AU-B-2017287987
**(21)** 2017287987 **(22)** 29.06.2017
**(54)** Cartilage regeneration facilitating composition
**(51)** Int. Cl.
***A61K 35/747*** ( 2015.01 )
***A23C 9/12*** ( 2006.01 )
***A23L 33/135*** ( 2016.01 )
***A61K 35/74*** ( 2006.01 )
***A61P 19/02*** ( 2006.01 )
**(87)** WO2018/003898
**(31)** 2016-130847 **(32)** 30.06.16 **(33)** JP
**(43)** 04.01.2018
**(44)** 01.08.2024
**(72)** Rokutan, Kazuhito; Nishida, Kensei; Kuwano, Yuki; Fujiwara, Shigeru; Sugawara, Tomonori; Aoki, Yumeko; Sawada, Daisuke
**(74)** FB Rice Pty Ltd

---

**(71)** Asahi Group Holdings, Ltd.; Tokushima University
**(11)** AU-B-2017287988
**(21)** 2017287988 **(22)** 29.06.2017
**(54)** Renal anemia ameliorating composition
**(51)** Int. Cl.
***A61K 35/747*** ( 2015.01 )
***A23C 9/12*** ( 2006.01 )
***A23L 33/135*** ( 2016.01 )
***A61P 7/06*** ( 2006.01 )
***A61P 13/12*** ( 2006.01 )
**(87)** WO2018/003899
**(31)** 2016-130811 **(32)** 30.06.16 **(33)** JP
**(43)** 04.01.2018
**(44)** 01.08.2024
**(72)** Rokutan Kazuhito; Nishida Kensei; Kuwano Yuki; Fujiwara Shigeru; Sugawara Tomonori; Aoki Yumeko; Sawada Daisuke
**(74)** FB Rice Pty Ltd

---

**(71)** Ascendis Pharma Bone Diseases A/S
**(11)** AU-B-2017336249
**(21)** 2017336249 **(22)** 28.09.2017
**(54)** Dosage regimen for a controlled-release PTH compound
**(51)** Int. Cl.
***A61K 38/29*** ( 2006.01 )
***A61K 9/00*** ( 2006.01 )
***A61K 9/16*** ( 2006.01 )
***A61K 47/34*** ( 2017.01 )
**(87)** WO2018/060310
**(31)** 16191451.0 **(32)** 29.09.16 **(33)** EP
17155843.0 13.02.17 EP
**(43)** 05.04.2018
**(44)** 01.08.2024
**(72)** Holten-Andersen, Lars; Sprogøe, Kennett; Karpf, David Brian
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Aspen Aerogels, Inc.
**(11)** AU-B-2023201064
**(21)** 2023201064 **(22)** 23.02.2023
**(54)** Improved hydrophobic aerogel materials
**(51)** Int. Cl.
***C01B 33/158*** ( 2006.01 )
***C01B 33/159*** ( 2006.01 )
**(43)** 04.05.2023
**(44)** 01.08.2024
**(62)** 2021209172
**(72)** Evans, Owen; Dekraft, Kathryn; Zafiropoulos, Nicholas; Dong, Wenting; Mihalcik, David; Gould, George; Melnikova, Irene
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Automated Rig Technologies Ltd.
**(11)** AU-B-2019210723
**(21)** 2019210723 **(22)** 22.01.2019
**(54)** Passive rotating jointed tubular injector
**(51)** Int. Cl.
***E21B 19/08*** ( 2006.01 )
***E21B 19/06*** ( 2006.01 )
***E21B 19/22*** ( 2006.01 )
**(87)** WO2019/144223
**(31)** 62/622,575 **(32)** 26.01.18 **(33)** US
**(43)** 01.08.2019
**(44)** 01.08.2024
**(72)** RICHARD, David Louis; MILLER, Harold James; AMIC, Ivan; SERRAN, Christopher Jason; SCHROEDER, Jason Brent
**(74)** Spruson & Ferguson

---

**(71)** Avent, Inc.
**(11)** AU-B-2019312205
**(21)** 2019312205 **(22)** 24.07.2019

## Applications Accepted - Name Index cont'd

**(54)** Dispersive return pad with phase change material for active thermal management during an ablation procedure
**(51)** Int. Cl.
***A61B 18/16*** ( 2006.01 )
**(87)** WO2020/023577
**(31)** 16/043,696 **(32)** 24.07.18 **(33)** US
**(43)** 30.01.2020
**(44)** 01.08.2024
**(72)** WANG, Ruoya; BARRETT, Jennifer J.
**(74)** Spruson & Ferguson

---

**(71)** Avent Investment, LLC
**(11)** AU-B-2019236304
**(21)** 2019236304 **(22)** 15.03.2019
**(54)** System and method to percutaneously block painful sensations
**(51)** Int. Cl.
***A61N 1/36*** ( 2006.01 )
***A61B 17/34*** ( 2006.01 )
***A61N 1/05*** ( 2006.01 )
**(87)** WO2019/178571
**(31)** 62/643,216 **(32)** 15.03.18 **(33)** US
**(43)** 19.09.2019
**(44)** 01.08.2024
**(72)** LIU, Wanzhan; ALEXEEVA, Natalia; BOYLE, Anthony; HANSON, Todd; OSTER, Daniel; SCHEPIS, Eric A.; SCHORR, Phillip A.; SASTRY, Shyamant R.; SOIN, Amol; CALDWELL, Ryan; PAGE, David M.
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Avient Protective Materials B.V.
**(11)** AU-B-2018387007
**(21)** 2018387007 **(22)** 12.12.2018
**(54)** Ballistic-resistant molded article
**(51)** Int. Cl.
***B32B 5/12*** ( 2006.01 )
***B32B 3/14*** ( 2006.01 )
***B32B 3/16*** ( 2006.01 )
***B32B 5/26*** ( 2006.01 )
***B32B 7/12*** ( 2006.01 )
***B32B 37/06*** ( 2006.01 )
***B32B 37/10*** ( 2006.01 )
***F41H 5/04*** ( 2006.01 )
**(87)** WO2019/121209
**(31)** 62/599,924 **(32)** 18.12.17 **(33)** US
**(43)** 27.06.2019
**(44)** 01.08.2024
**(72)** VAN ELBURG, Johann; CRAIG, Matthew; ROGERS, James
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Axon Enterprise, Inc.
**(11)** AU-B-2021207400
**(21)** 2021207400 **(22)** 16.01.2021
**(54)** Warning system for a conducted electrical weapon
**(51)** Int. Cl.
***F41H 13/00*** ( 2006.01 )
***G08B 21/02*** ( 2006.01 )
**(87)** WO2021/144762
**(31)** 62/962,714 **(32)** 17.01.20 **(33)** US
**(43)** 22.07.2021
**(44)** 01.08.2024
**(72)** SMITH, Patrick; GISH, Michael; NERHEIM, Magne; MORITZ, Hans; FAIRBANKS, Brian; CEROVIC, Milan; EASTWOOD, Mark
**(74)** WRAYS PTY LTD

---

**(71)** AZAD Pharma AG
**(11)** AU-B-2019302997
**(21)** 2019302997 **(22)** 10.07.2019
**(54)** Electrochemically activated salt solution
**(51)** Int. Cl.
***A61P 31/04*** ( 2006.01 )
***A61K 33/20*** ( 2006.01 )
***A61P 31/10*** ( 2006.01 )
***A61P 31/12*** ( 2006.01 )
***A61P 31/22*** ( 2006.01 )
**(87)** WO2020/011870
**(31)** 18183127.2 **(32)** 12.07.18 **(33)** EP
**(43)** 16.01.2020
**(44)** 01.08.2024
**(72)** BARONIAN, Mihran; CARLI, Fabio; CHIELLINI, Elisabetta; BAEHLER, Ernest
**(74)** FB Rice Pty Ltd

---

**(71)** B. Braun Medical Inc.
**(11)** AU-B-2022224870
**(21)** 2022224870 **(22)** 02.09.2022
**(54)** Compounding device, system, kit, software, and method
**(51)** Int. Cl.
***A61J 3/00*** ( 2006.01 )
**(43)** 29.09.2022
**(44)** 01.08.2024
**(62)** 2022200587
**(72)** Janders, Mike; Bartholomew, Joel; Konrad, Karl; Pearl, Aaron S.; Hershey, Dave E.; Burnard, Edwin; Flamm, Alex K.; Larrow, Chet B.; Savage, Jeremy C.; Kendall, Jamie; Mumpower, Mariano; Cowperthwaite, Jack A.; Lane, Benjamin R.; Brown, Michael Y.
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** B1 INSTITUTE OF IMAGE TECHNOLOGY, INC.
**(11)** AU-B-2022228201
**(21)** 2022228201 **(22)** 09.09.2022
**(54)** Image encoding/decoding method and device
**(51)** Int. Cl.
***H04N 19/105*** ( 2014.01 )
***H04N 19/117*** ( 2014.01 )
***H04N 19/124*** ( 2014.01 )
***H04N 19/172*** ( 2014.01 )
***H04N 19/176*** ( 2014.01 )
***H04N 19/186*** ( 2014.01 )
***H04N 19/51*** ( 2014.01 )
***H04N 19/593*** ( 2014.01 )
***H04N 19/70*** ( 2014.01 )
**(43)** 06.10.2022
**(44)** 01.08.2024
**(62)** 2019241823
**(72)** KIM, Ki Baek
**(74)** FB Rice Pty Ltd

---

**(71)** Baker Hughes Oilfield Operations LLC
**(11)** AU-B-2021308709
**(21)** 2021308709 **(22)** 07.07.2021
**(54)** Filtration media including porous polymeric material and degradable shape memory material
**(51)** Int. Cl.
***E21B 43/08*** ( 2006.01 )
***E21B 43/12*** ( 2006.01 )
**(87)** WO2022/016174
**(31)** 16/927,056 **(32)** 13.07.20 **(33)** US
**(43)** 20.01.2022
**(44)** 01.08.2024
**(72)** SADANA, Anil; DUAN, Ping
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Balance Ophthalmics, Inc.
**(11)** AU-B-2022211909
**(21)** 2022211909 **(22)** 05.08.2022
**(54)** Apparatus and methods to adjust spontaneous venous pulsation
**(51)** Int. Cl.
***A61B 3/12*** ( 2006.01 )
***A61B 3/16*** ( 2006.01 )
***A61B 5/021*** ( 2006.01 )
***A61B 5/024*** ( 2006.01 )
***A61B 5/03*** ( 2006.01 )
***A61F 9/00*** ( 2006.01 )
***A61F 9/007*** ( 2006.01 )
***A61F 9/02*** ( 2006.01 )
**(43)** 01.09.2022
**(44)** 01.08.2024
**(62)** 2019319942
**(72)** BERDAHL, John; TSAI, George; WALBRINK, Hal; THOMPSON, Vance Michael; BRAMBILLA, Enrico
**(74)** FB Rice Pty Ltd

---

**(71)** Balsam International Unlimited Company
**(11)** AU-B-2021260175
**(21)** 2021260175 **(22)** 20.04.2021
**(54)** Christmas tree and method of assembling a tree
**(51)** Int. Cl.
***A47G 33/06*** ( 2006.01 )
***A47G 33/12*** ( 2006.01 )
**(87)** WO2021/214667
**(31)** 63/012,552 **(32)** 20.04.20 **(33)** US
**(43)** 28.10.2021
**(44)** 01.08.2024
**(72)** KAPLAN, Jonathan I.; YU, Ta-li; WILKINS, David Jason
**(74)** Oxygene IP

---

**(71)** Bambino Prezioso Switzerland AG
**(11)** AU-B-2020383668
**(21)** 2020383668 **(22)** 10.11.2020
**(54)** Safety belt automatic adjustment apparatus and child safety seat therewith
**(51)** Int. Cl.
***B60R 22/10*** ( 2006.01 )
***B60N 2/28*** ( 2006.01 )
***B60R 22/357*** ( 2006.01 )
**(87)** WO2021/094305
**(31)** 201911095674.3 **(32)** 11.11.19 **(33)** CN
**(43)** 20.05.2021
**(44)** 01.08.2024
**(72)** ZHANG, Da Liang
**(74)** Griffith Hack

---

## Applications Accepted - Name Index cont'd

**(71)** Bambino Prezioso Switzerland AG
**(11)** AU-B-2021231211
**(21)** 2021231211 **(22)** 03.03.2021
**(54)** Seat misuse alarm device
**(51)** Int. Cl.
***B60N 2/28*** ( 2006.01 )
***B60N 2/02*** ( 2006.01 )
***B60R 21/015*** ( 2006.01 )
**(87)** WO2021/175892
**(31)** 202010141341.6 **(32)** 03.03.20 **(33)** CN
**(43)** 10.09.2021
**(44)** 01.08.2024
**(72)** LIU, Zu Jian; GUO, Zhengwen
**(74)** Griffith Hack

---

**(71)** BASF SE
**(11)** AU-B-2018314562
**(21)** 2018314562 **(22)** 02.08.2018
**(54)** Herbicidal mixtures comprising L-glufosinate or its salt and at least one VLCFA inhibitor
**(51)** Int. Cl.
***A01N 37/22*** ( 2006.01 )
***A01N 37/20*** ( 2006.01 )
***A01N 37/26*** ( 2006.01 )
***A01N 39/02*** ( 2006.01 )
***A01N 43/10*** ( 2006.01 )
***A01N 43/56*** ( 2006.01 )
***A01N 43/80*** ( 2006.01 )
***A01N 43/82*** ( 2006.01 )
***A01N 47/38*** ( 2006.01 )
***A01N 57/20*** ( 2006.01 )
***A01P 13/00*** ( 2006.01 )
**(87)** WO2019/030104
**(31)** 17185455.7 **(32)** 09.08.17 **(33)** EP
**(43)** 14.02.2019
**(44)** 01.08.2024
**(72)** WINTER, Christian Harald; GEWEHR, Markus
**(74)** Griffith Hack

---

**(71)** BASF SE
**(11)** AU-B-2018376915
**(21)** 2018376915 **(22)** 28.11.2018
**(54)** Plants having increased tolerance to herbicides
**(51)** Int. Cl.
***A01N 43/54*** ( 2006.01 )
**(87)** WO2019/106568
**(31)** 62/592,037 **(32)** 29.11.17 **(33)** US
**(43)** 06.06.2019
**(44)** 01.08.2024
**(72)** APONTE, Raphael; SEISER, Tobias; TRESCH, Stefan; BOWERMAN, Peter Alexander; PARRA RAPADO, Liliana; WITSCHEL, Matthias; SOUILLART, Laetitia; JOHANNES, Manuel; MIETZNER, Thomas; PAULIK, Jill Marie
**(74)** Griffith Hack

---

**Baxter Healthcare SA see Baxter International Inc.**
**(21)** 2019309390

---

**(71)** Baxter International Inc.; Baxter Healthcare SA; Welch Allyn, Inc.
**(11)** AU-B-2019309390
**(21)** 2019309390 **(22)** 24.07.2019
**(54)** Patch-based physiological sensor
**(51)** Int. Cl.
***A61B 5/0205*** ( 2006.01 )
***A61B 5/1455*** ( 2006.01 )
***A61B 5/259*** ( 2021.01 )
**(87)** WO2020/023681
**(31)** 16/044,401 **(32)** 24.07.18 **(33)** US
16/044,404 24.07.18 US
16/044,386 24.07.18 US
16/044,392 24.07.18 US
16/044,397 24.07.18 US
**(43)** 30.01.2020
**(44)** 01.08.2024
**(72)** TANG, Erik; BANET, Matthew; DHILLON, Marshal; MCCANNA, James; QUINN, David E.; GOLDFAIN, Ervin
**(74)** K&L Gates

---

**(71)** Becton, Dickinson and Company
**(11)** AU-B-2019274523
**(21)** 2019274523 **(22)** 22.05.2019
**(54)** Blood collection assembly with vibration module
**(51)** Int. Cl.
***A61B 5/15*** ( 2006.01 )
***A61B 5/151*** ( 2006.01 )
**(87)** WO2019/226754
**(31)** 62/676,325 **(32)** 25.05.18 **(33)** US
**(43)** 28.11.2019
**(44)** 01.08.2024
**(72)** IVOSEVIC, Milan
**(74)** FB Rice Pty Ltd

---

**(71)** Becton, Dickinson and Company
**(11)** AU-B-2023200280
**(21)** 2023200280 **(22)** 19.01.2023
**(54)** Safety IV catheter with V-clip interlock and needle tip capture
**(51)** Int. Cl.
***A61M 5/32*** ( 2006.01 )
**(43)** 23.02.2023
**(44)** 01.08.2024
**(62)** 2020201828
**(72)** STOKES, John; SHEVGOOR, Siddarth K.; BORNHOFT, Stephen T.; HARDING, Weston; BURKHOLZ, Jon
**(74)** FB Rice Pty Ltd

---

**(71)** Becton Dickinson and Company Limited
**(11)** AU-B-2019290533
**(21)** 2019290533 **(22)** 17.06.2019
**(54)** Piercing member for vial adapter
**(51)** Int. Cl.
***A61J 1/20*** ( 2006.01 )
**(87)** WO2019/245962
**(31)** 62/686,144 **(32)** 18.06.18 **(33)** US
**(43)** 26.12.2019
**(44)** 01.08.2024
**(72)** MARICI, Paul Paia; HARDING, Weston F.
**(74)** FB Rice Pty Ltd

---

**(71)** BeiGene, Ltd.
**(11)** AU-B-2017317227
**(21)** 2017317227 **(22)** 25.08.2017
**(54)** Anti-Tim-3 antibodies and use thereof
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***A61P 37/00*** ( 2006.01 )
**(87)** WO2018/036561
**(31)** PCT/ **(32)** 26.08.16 **(33)** CN
CN2016/096924
**(43)** 01.03.2018
**(44)** 01.08.2024
**(72)** Zhang, Tong; Xue, Liu; Liu, Qi; Peng, Hao; Wei, Min; Li, Kang
**(74)** FB Rice Pty Ltd

---

**(71)** Beijing Roborock Technology Co., Ltd.
**(11)** AU-B-2021349067
**(21)** 2021349067 **(22)** 02.02.2021
**(54)** Automatic cleaning device
**(51)** Int. Cl.
***A47L 11/282*** ( 2006.01 )
**(87)** WO2022/062296
**(31)** 202011027138.2 **(32)** 25.09.20 **(33)** CN
202011024890.1 25.09.20 CN
202011027130.6 25.09.20 CN
202011024897.3 25.09.20 CN
**(43)** 31.03.2022
**(44)** 01.08.2024
**(72)** LI, Xing; CHENG, Pan; DUAN, Chuanlin; YANG, Zhimin; PENG, Song
**(74)** Collison & Co

---

**(71)** Beijing Tusen Zhitu Technology Co., Ltd.
**(11)** AU-B-2019302312
**(21)** 2019302312 **(22)** 05.03.2019
**(54)** System for realizing automated transport of goods and related apparatus
**(51)** Int. Cl.
***G05B 19/418*** ( 2006.01 )
**(87)** WO2020/010859
**(31)** 201810765504.0 **(32)** 12.07.18 **(33)** CN
**(43)** 16.01.2020
**(44)** 01.08.2024
**(72)** WU, Nan
**(74)** FB Rice Pty Ltd

---

**(71)** Bell Identification BV
**(11)** AU-B-2023202521
**(21)** 2023202521 **(22)** 26.04.2023
**(54)** Method and Apparatus for Providing Secure Services Using a Mobile Device
**(51)** Int. Cl.
***G06Q 20/00*** ( 2012.01 )
***G06Q 20/32*** ( 2012.01 )
**(43)** 11.05.2023
**(44)** 01.08.2024
**(62)** 2021209143
**(72)** Bouda, Mohammed Chakib
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Bermad CS Ltd.
**(11)** AU-B-2019321096
**(21)** 2019321096 **(22)** 18.08.2019
**(54)** Pilot valve assembly with orientation adjustment
**(51)** Int. Cl.

## Applications Accepted - Name Index cont'd

***F16K 31/12*** ( 2006.01 )
***F16K 31/00*** ( 2006.01 )
**(87)** WO2020/035836
**(31)** 16/104,259 **(32)** 17.08.18 **(33)** US
**(43)** 20.02.2020
**(44)** 01.08.2024
**(72)** WEINGARTEN, Zvi
**(74)** Wallington-Dummer

---

**(71)** Binding Solutions Ltd
**(11)** AU-B-2019321069
**(21)** 2019321069 **(22)** 15.08.2019
**(54)** Binder formulation
**(51)** Int. Cl.
***C22B 1/242*** ( 2006.01 )
**(87)** WO2020/035691
**(31)** 1813370.2 **(32)** 16.08.18 **(33)** GB
**(43)** 20.02.2020
**(44)** 01.08.2024
**(72)** JOYCE, Richard
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Biogen MA Inc.
**(11)** AU-B-2019234759
**(21)** 2019234759 **(22)** 13.03.2019
**(54)** O-glycoprotein-2-acetamido-2-deoxy-3-D-glycopyranosidase inhibitors
**(51)** Int. Cl.
***C07D 417/06*** ( 2006.01 )
***A61K 31/427*** ( 2006.01 )
***A61K 31/445*** ( 2006.01 )
***A61P 25/28*** ( 2006.01 )
***C07D 417/14*** ( 2006.01 )
***C07D 495/04*** ( 2006.01 )
**(87)** WO2019/178191
**(31)** 62/642,932 **(32)** 14.03.18 **(33)** US
62/699,443 17.07.18 US
62/690,536 27.06.18 US
**(43)** 19.09.2019
**(44)** 01.08.2024
**(72)** GENUNG, Nathan; GUCKIAN, Kevin M.; VESSELS, Jeffrey; ZHANG, Lei; GIANATASSIO, Ryan; LIN, Edward Yin Shiang; XIN, Zhili
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Bioprojet
**(11)** AU-B-2019208166
**(21)** 2019208166 **(22)** 23.07.2019
**(54)** Novel combinations of a H3 antagonist and a noradrenaline reuptake inhibitor, and the therapeutical uses thereof
**(51)** Int. Cl.
***A61K 31/4453*** ( 2006.01 )
***A61K 31/137*** ( 2006.01 )
***A61K 31/138*** ( 2006.01 )
***A61K 31/381*** ( 2006.01 )
***A61K 31/4545*** ( 2006.01 )
***A61K 31/5375*** ( 2006.01 )
***A61K 31/55*** ( 2006.01 )
***A61P 25/00*** ( 2006.01 )
***A61P 25/32*** ( 2006.01 )
***C07D 295/088*** ( 2006.01 )
***C07D 401/12*** ( 2006.01 )
**(31)** 18306017.7 **(32)** 27.07.18 **(33)** EP
**(43)** 13.02.2020
**(44)** 01.08.2024
**(72)** Ligneau, Xavier; Landais, Laurent; Perrin, David; Lecomte, Jeanne Marie; Schwartz, Jean Charles
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Biorem Engineering SA
**(11)** AU-B-2019314696
**(21)** 2019314696 **(22)** 02.08.2019
**(54)** Citrate perhydrates and uses thereof
**(51)** Int. Cl.
***A01N 59/00*** ( 2006.01 )
***A01N 37/36*** ( 2006.01 )
***A01N 59/06*** ( 2006.01 )
***A01N 59/08*** ( 2006.01 )
***A01N 59/16*** ( 2006.01 )
**(87)** WO2020/025816
**(31)** 1857317 **(32)** 03.08.18 **(33)** FR
**(43)** 06.02.2020
**(44)** 01.08.2024
**(72)** LAKAYE, Frédéric; GAUME, Alain; GINDRO, Katia; SCHNEE, Sylvain; HARDY, Wendy; NOËL, Marc; SEMER, Maurice
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Bioverativ Therapeutics Inc.
**(11)** AU-B-2021202912
**(21)** 2021202912 **(22)** 07.05.2021
**(54)** Factor VIII-Fc chimeric and hybrid polypeptides, and methods of use thereof
**(51)** Int. Cl.
***A61K 38/37*** ( 2006.01 )
***C07K 14/755*** ( 2006.01 )
**(43)** 03.06.2021
**(44)** 01.08.2024
**(62)** 2019202969
**(72)** DUMONT, Jennifer A.; LOW, Susan; BITONTI, Alan J.; PIERCE, Glenn; LUK, Alvin; JIANG, Haiyan; MCKINNEY, Byron; OTTMER, Matt; SOMMER, Jurg; NUGENT, Karen; LI, Lian; PETERS, Robert
**(74)** Spruson & Ferguson

---

**(71)** Bitterly, S.
**(11)** AU-B-2019231708
**(21)** 2019231708 **(22)** 06.03.2019
**(54)** Water purification system and process
**(51)** Int. Cl.
***B01D 1/00*** ( 2006.01 )
***B01D 3/00*** ( 2006.01 )
***C02F 1/00*** ( 2006.01 )
***C02F 9/00*** ( 2006.01 )
**(87)** WO2019/173535
**(31)** 62/639,399 **(32)** 06.03.18 **(33)** US
**(43)** 12.09.2019
**(44)** 01.08.2024
**(72)** BITTERLY, Steven
**(74)** Armour IP Pty Ltd

---

**(71)** Board of Regents, The University of Texas System
**(11)** AU-B-2018346957
**(21)** 2018346957 **(22)** 12.10.2018
**(54)** T cell receptors for immunotherapy
**(51)** Int. Cl.
***C07K 14/725*** ( 2006.01 )
***C12N 5/10*** ( 2006.01 )
***C12N 15/12*** ( 2006.01 )
**(87)** WO2019/075385
**(31)** 62/571,447 **(32)** 12.10.17 **(33)** US
**(43)** 18.04.2019
**(44)** 01.08.2024
**(72)** LIZEE, Gregory; YEE, Cassian
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Bodor Laboratories, Inc.
**(11)** AU-B-2023202689
**(21)** 2023202689 **(22)** 02.05.2023
**(54)** Formulation for soft anticholinergic analogs
**(51)** Int. Cl.
***A61K 8/49*** ( 2006.01 )
***A61K 31/40*** ( 2006.01 )
***A61P 43/00*** ( 2006.01 )
**(43)** 18.05.2023
**(44)** 01.08.2024
**(62)** 2017298469
**(72)** Bodor, Nicholas S.; Koleng, John J.; Angulo, David
**(74)** Griffith Hack

---

**(71)** Boehringer Ingelheim International GmbH
**(11)** AU-B-2018279184
**(21)** 2018279184 **(22)** 08.06.2018
**(54)** Anti-TrkB antibodies
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
*A61K 39/00* ( 2006.01 )
**(87)** WO2018/224630
**(31)** 17175122.5 **(32)** 09.06.17 **(33)** EP
**(43)** 13.12.2018
**(44)** 01.08.2024
**(72)** Herrmann, Rolf; Bakker, Remko Alexander; Bandholtz, Sebastian; Benz, Peter Michael; Dziegelewski, Michael; Florin, Lore; Kenny, Cynthia Hess; Low, Sarah; Rosenbrock, Holger; Singh, Sanjaya; Stahl, Heiko Friedrich; Venkataramani, Sathyadevi; Voynov, Vladimir; Xiao, Haiguang
**(74)** Spruson & Ferguson

---

**(71)** Boral IP Holdings (Australia) PTY Limited; Lloyd, R.; Keyte, L.
**(11)** AU-B-2017436163
**(21)** 2017436163 **(22)** 17.10.2017
**(54)** Methods for producing a cement composition
**(51)** Int. Cl.
***C04B 28/04*** ( 2006.01 )
***B28C 7/02*** ( 2006.01 )
***C04B 14/06*** ( 2006.01 )
***C04B 18/14*** ( 2006.01 )
***C04B 22/08*** ( 2006.01 )
***C04B 22/12*** ( 2006.01 )
***C04B 24/12*** ( 2006.01 )
***C04B 40/00*** ( 2006.01 )
*C04B 103/10* ( 2006.01 )
*C04B 103/20* ( 2006.01 )
**(87)** WO2019/077389
**(43)** 25.04.2019

## Applications Accepted - Name Index cont'd

**(44)** 01.08.2024
**(72)** LLOYD, Redmond Richard; KEYTE, Louise Margaret
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Boston Scientific Scimed, Inc.
**(11)** AU-B-2021215985
**(21)** 2021215985 **(22)** 02.02.2021
**(54)** Stent, mandrel, and method for forming a stent with anti-migration features
**(51)** Int. Cl.
***A61F 2/848*** ( 2013.01 )
***A61F 2/90*** ( 2013.01 )
**(87)** WO2021/158564
**(31)** 62/969,498 **(32)** 03.02.20 **(33)** US
**(43)** 12.08.2021
**(44)** 01.08.2024
**(72)** FOLAN, Martyn G.
**(74)** Spruson & Ferguson

---

**(71)** Boston Scientific Scimed, Inc.
**(11)** AU-B-2021336228
**(21)** 2021336228 **(22)** 17.08.2021
**(54)** Grappling systems and methods for lumen apposition or wound defects
**(51)** Int. Cl.
***A61B 17/02*** ( 2006.01 )
***A61B 17/064*** ( 2006.01 )
***A61B 17/068*** ( 2006.01 )
**(87)** WO2022/051085
**(31)** 63/073,192 **(32)** 01.09.20 **(33)** US
**(43)** 10.03.2022
**(44)** 01.08.2024
**(72)** PIC, Andrew; KING, Joseph W.; SAENZ VILLALOBOS, Gonzalo Jose; AMAYA PINEDA, Deborah
**(74)** Spruson & Ferguson

---

**Boutros, J. see Data.world, Inc.**
**(21)** 2022218590

---

**Bristol-Myers Squibb Company see Seagen Inc.**
**(21)** 2017274444

---

**(71)** BURG LÜLING GMBH & CO. KG; USM U. Schärer Söhne AG
**(11)** AU-B-2021294863
**(21)** 2021294863 **(22)** 18.06.2021
**(54)** Locking device
**(51)** Int. Cl.
***E05B 65/44*** ( 2006.01 )
**(87)** WO2021/259776
**(31)** 20 2020 103 687.4 **(32)** 26.06.20 **(33)** DE
**(43)** 30.12.2021
**(44)** 01.08.2024
**(72)** Backhaus, Dirk; Lüthi, Christian
**(74)** Griffith Hack

---

**(71)** CamelBak Products, LLC
**(11)** AU-B-2022202276
**(21)** 2022202276 **(22)** 05.04.2022
**(54)** Bite-actuated mouthpieces and drink vessels including bite-actuated mouthpieces
**(51)** Int. Cl.
***B65D 47/20*** ( 2006.01 )
**(43)** 21.04.2022
**(44)** 01.08.2024
**(62)** 2019277458
**(72)** CAMPBELL, Derek; MAR, Eric; LUHRS, Thomas R.
**(74)** Spruson & Ferguson

---

**(71)** Camso Inc.
**(11)** AU-B-2020396809
**(21)** 2020396809 **(22)** 07.12.2020
**(54)** Systems and methods for monitoring wheel assemblies
**(51)** Int. Cl.
***B60C 99/00*** ( 2006.01 )
***B60C 7/00*** ( 2006.01 )
***B60K 35/00*** ( 2006.01 )
***B60S 5/00*** ( 2006.01 )
***B66F 9/06*** ( 2006.01 )
***G01M 17/013*** ( 2006.01 )
***G01M 17/02*** ( 2006.01 )
***H04W 4/38*** ( 2018.01 )
**(87)** WO2021/108930
**(31)** 62/944,536 **(32)** 06.12.19 **(33)** US
**(43)** 10.06.2021
**(44)** 01.08.2024
**(72)** DE WITTE, Tim; MESSINA, Salvatore; MEIER, Loic
**(74)** Griffith Hack

---

**(71)** Canva Pty Ltd
**(11)** AU-B-2022204492
**(21)** 2022204492 **(22)** 24.06.2022
**(54)** Systems and methods for compressing vector graphics
**(51)** Int. Cl.
***G06T 9/00*** ( 2006.01 )
***G06T 11/20*** ( 2006.01 )
***H04N 1/41*** ( 2006.01 )
**(43)** 18.01.2024
**(44)** 01.08.2024
**(72)** IGUARO JARAMILLO, Henrry Eduardo; SCHWIEBERT, Stephan; YANCHINA, Velislava
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Canva Pty Ltd
**(11)** AU-B-2022206819
**(21)** 2022206819 **(22)** 22.07.2022
**(54)** Systems and methods for compressing vector graphics
**(51)** Int. Cl.
***G06T 9/00*** ( 2006.01 )
***G06T 11/20*** ( 2006.01 )
***H04N 1/41*** ( 2006.01 )
**(43)** 18.01.2024
**(44)** 01.08.2024
**(62)** 2022204492
**(72)** IGUARO JARAMILLO, Henrry Eduardo; SCHWIEBERT, Stephan; YANCHINA, Velislava
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Canva Pty Ltd
**(11)** AU-B-2022209306
**(21)** 2022209306 **(22)** 28.07.2022
**(54)** Systems and methods for video style transfer
**(51)** Int. Cl.
***G06T 5/10*** ( 2006.01 )
***G06T 3/00*** ( 2006.01 )
***G06T 5/77*** ( 2024.01 )
***G06T 11/00*** ( 2006.01 )
***H04N 5/06*** ( 2006.01 )
***H04N 7/10*** ( 2006.01 )
***H04N 9/79*** ( 2006.01 )
***H04N 21/21*** ( 2011.01 )
*G06N 3/02* ( 2006.01 )
*H04N 5/222* ( 2006.01 )
**(43)** 15.02.2024
**(44)** 01.08.2024
**(72)** Joshi, Bhautik
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Canva Pty Ltd
**(11)** AU-B-2022246408
**(21)** 2022246408 **(22)** 05.10.2022
**(54)** Digital image processing systems, methods, and graphical user interfaces
**(51)** Int. Cl.
***H04N 1/60*** ( 2006.01 )
***G09G 3/34*** ( 2006.01 )
***G09G 5/02*** ( 2006.01 )
***H04N 1/56*** ( 2006.01 )
*G06F 3/04847* ( 2022.01 )
*H04N 1/00* ( 2006.01 )
*H04N 1/62* ( 2006.01 )
**(43)** 02.05.2024
**(44)** 01.08.2024
**(72)** Cook, Christopher James
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Capital One Services, LLC
**(11)** AU-B-2019302646
**(21)** 2019302646 **(22)** 10.07.2019
**(54)** System and method for dynamic generation of URL by smart card
**(51)** Int. Cl.
***G06F 21/62*** ( 2013.01 )
***G06K 19/07*** ( 2006.01 )
**(87)** WO2020/014369
**(31)** 16/034,229 **(32)** 12.07.18 **(33)** US
**(43)** 16.01.2020
**(44)** 01.08.2024
**(72)** RULE, Jeffrey; LUTZ, Wayne; MORETON, Paul; OSBORN, Kevin
**(74)** Spruson & Ferguson

---

**(71)** Cargill, Incorporated
**(11)** AU-B-2019217905
**(21)** 2019217905 **(22)** 07.02.2019
**(54)** Liquid oils without unwanted contaminants
**(51)** Int. Cl.
***A23D 9/04*** ( 2006.01 )
***C11B 3/00*** ( 2006.01 )
***C11B 3/06*** ( 2006.01 )
***C11B 3/10*** ( 2006.01 )
***C11B 3/14*** ( 2006.01 )
**(87)** WO2019/157141
**(31)** 18155453.6 **(32)** 07.02.18 **(33)** EP
**(43)** 15.08.2019

## Applications Accepted - Name Index cont'd

**(44)** 01.08.2024
**(72)** BRÜSE, Falk
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Caterpillar Inc.
**(11)** AU-B-2018261457
**(21)** 2018261457 **(22)** 03.05.2018
**(54)** Pin retention design for a track chain
**(51)** Int. Cl.
***B62D 55/20*** ( 2006.01 )
***B62D 55/21*** ( 2006.01 )
**(87)** WO2018/204588
**(31)** 62/501,189 **(32)** 04.05.17 **(33)** US
15/943,823 03.04.18 US
**(43)** 08.11.2018
**(44)** 01.08.2024
**(72)** De La Torre, Jose G.
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Caterpillar Inc.
**(11)** AU-B-2019280585
**(21)** 2019280585 **(22)** 05.06.2019
**(54)** Pin and retainer locking system
**(51)** Int. Cl.
***E02F 9/00*** ( 2006.01 )
***E02F 3/48*** ( 2006.01 )
***E02F 3/50*** ( 2006.01 )
***F16C 11/10*** ( 2006.01 )
**(87)** WO2019/236675
**(31)** 16/001,207 **(32)** 06.06.18 **(33)** US
**(43)** 12.12.2019
**(44)** 01.08.2024
**(72)** STOLZ, Michael R.
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Cedars-Sinai Medical Center
**(11)** AU-B-2017286561
**(21)** 2017286561 **(22)** 14.06.2017
**(54)** Sensitization of tumors to therapies through endoglin antagonism
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61K 31/282*** ( 2006.01 )
***A61K 31/337*** ( 2006.01 )
***A61K 31/4045*** ( 2006.01 )
***A61K 31/44*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
**(87)** WO2017/218708
**(31)** 62/350,017 **(32)** 14.06.16 **(33)** US
**(43)** 21.12.2017
**(44)** 01.08.2024
**(72)** Bhowmick, Neil; Smith, Bethany; Placencio, Veronica; Madhav, Anisha
**(74)** FB Rice Pty Ltd

---

**Centre Hospitalier Régional Universitaire de Nancy see Université de Lorraine**
**(21)** 2018228352

---

**(71)** Checkpoint Therapeutics, Inc.
**(11)** AU-B-2017290709
**(21)** 2017290709 **(22)** 28.06.2017
**(54)** PD-L1-specific antibodies and methods of using the same
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61K 45/06*** ( 2006.01 )
***C07K 16/30*** ( 2006.01 )
**(87)** WO2018/005682
**(31)** 62/356,105 **(32)** 29.06.16 **(33)** US
**(43)** 04.01.2018
**(44)** 01.08.2024
**(72)** Belk, Jonathan; Sharkey, Nathan J.; Gorelik, Leonid
**(74)** FB Rice Pty Ltd

---

**(71)** China Agricultural University
**(11)** AU-B-2020282488
**(21)** 2020282488 **(22)** 01.07.2020
**(54)** Parthenogenetic haploid induction gene DMP and application thereof
**(51)** Int. Cl.
***C12N 15/82*** ( 2006.01 )
***A01H 6/46*** ( 2018.01 )
**(87)** WO2020/239137
**(31)** 201910445082.3 **(32)** 27.05.19 **(33)** CN
**(43)** 03.12.2020
**(44)** 01.08.2024
**(72)** CHEN, Shaojiang; ZHONG, Yu; LIU, Chenxu; QI, Xiaolong; LI, Mengran; CHEN, Baojian; JIAO, Yanyan; LIU, Zongkai
**(74)** Spruson & Ferguson

---

**(71)** China Mobile Communication Co., Ltd Research Institute; China Mobile Communications Group Co., Ltd.
**(11)** AU-B-2021291265
**(21)** 2021291265 **(22)** 21.06.2021
**(54)** Information sending method, information receiving method and device
**(51)** Int. Cl.
***H04W 74/08*** ( 2009.01 )
**(87)** WO2021/254520
**(31)** 202010568297.7 **(32)** 19.06.20 **(33)** CN
**(43)** 23.12.2021
**(44)** 01.08.2024
**(72)** XIE, Fang; LIU, Guangyi
**(74)** Michael Buck IP

---

**(71)** CHINA MOBILE COMMUNICATION CO., LTD RESEARCH INSTITUTE; CHINA MOBILE COMMUNICATIONS GROUP CO., LTD.
**(11)** AU-B-2021416031
**(21)** 2021416031 **(22)** 22.12.2021
**(54)** INFORMATION TRANSMISSION METHOD AND APPARATUS, RELATED DEVICES, AND STORAGE MEDIUM
**(51)** Int. Cl.
***H04W 12/02*** ( 2009.01 )
**(87)** WO2022/143353
**(31)** 202011581551.3 **(32)** 28.12.20 **(33)** CN
**(43)** 07.07.2022
**(44)** 01.08.2024
**(72)** CHEN, Ningyu
**(74)** Remarkable IP

---

**China Mobile Communications Group Co., Ltd. see China Mobile Communication Co., Ltd Research Institute**
**(21)** 2021291265

---

**CHINA MOBILE COMMUNICATIONS GROUP CO., LTD. see CHINA MOBILE COMMUNICATION CO., LTD RESEARCH INSTITUTE**
**(21)** 2021416031

---

**China University of Mining and Technology see Anhui University of Science and Technology**
**(21)** 2022291666

---

**(71)** CHIYODA CORPORATION; KYOTO UNIVERSITY
**(11)** AU-B-2021459856
**(21)** 2021459856 **(22)** 12.08.2021
**(54)** PROTON CONDUCTOR AND MANUFACTURING METHOD THEREOF
**(51)** Int. Cl.
***H01M 8/1246*** ( 2016.01 )
***H01M 10/0562*** ( 2010.01 )
**(87)** WO2023/017602
**(43)** 16.02.2023
**(44)** 01.08.2024
**(72)** OKADA Yoshimi; YASUNISHI Takuo; IMAGAWA Kenichi; EGUCHI Koichi; MATSUI Toshiaki; MUROYAMA Hiroki; OZEKI Takashi
**(74)** Madderns Pty Ltd

---

**(71)** CHONGQING HAIER REFRIGERATION ELECTRIC APPLIANCE CO., LTD.; QINGDAO HAIER REFRIGERATOR CO., LTD.; HAIER SMART HOME CO., LTD.
**(11)** AU-B-2021343158
**(21)** 2021343158 **(22)** 26.08.2021
**(54)** REFRIGERATOR
**(51)** Int. Cl.
***F25B 21/02*** ( 2006.01 )
**(87)** WO2022/057590
**(31)** 202010970307.X **(32)** 15.09.20 **(33)** CN
**(43)** 24.03.2022
**(44)** 01.08.2024
**(72)** CUI, Zhanpeng; LI, Jiaming; JI, Lisheng; LV, Peng
**(74)** Madderns Pty Ltd

---

**(71)** Chongqing Upgra Biotechnology Co., Ltd.
**(11)** AU-B-2020389657
**(21)** 2020389657 **(22)** 18.11.2020
**(54)** Polyethylene glycol conjugate medicament, preparation method therfor and use thereof
**(51)** Int. Cl.
***A61K 47/60*** ( 2017.01 )
***A61K 45/06*** ( 2006.01 )
***A61K 47/55*** ( 2017.01 )
***A61P 35/00*** ( 2006.01 )
**(87)** WO2021/104120
**(31)** 201911190064.1 **(32)** 28.11.19 **(33)** CN

## Applications Accepted - Name Index cont'd

202010737415.2 28.07.20 CN
202010738638.0 28.07.20 CN
**(43)** 03.06.2021
**(44)** 01.08.2024
**(72)** LI, Gaoquan; LI, Dajun; ZHANG, Qian; WEI, Yusong; PENG, Yongchen; YANG, Xiangwei; ZENG, Xiafan; MEI, Gang; LI, Diedie; GAO, Chengzhi; DING, Xiaoling; LIU, Yue; GAO, Jia; YI, Yuyang; HENG, Yanxia; LIU, Xi; TU, Tao; WANG, Kai; LIU, Liwei; LIU, Mei; LUO, Qiang; TANG, Xiao; LOU, Jie; CHEN, Huiyu; YANG, Yue; WANG, Yuanqiang
**(74)** AJ PARK

---

**(71)** Chugai Seiyaku Kabushiki Kaisha
**(11)** AU-B-2017303205
**(21)** 2017303205 **(22)** 27.07.2017
**(54)** Bispecific antibody exhibiting increased alternative FVIII-cofactor-function activity
**(51)** Int. Cl.
***C07K 16/46*** ( 2006.01 )
***C12P 21/08*** ( 2006.01 )
*C12N 15/09* ( 2006.01 )
**(87)** WO2018/021450
**(31)** 2016-150769 **(32)** 29.07.16 **(33)** JP
**(43)** 01.02.2018
**(44)** 01.08.2024
**(72)** Igawa, Tomoyuki; Teranishi, Yuri; Kato, Kazuki; Koga, Hikaru
**(74)** Spruson & Ferguson

---

**(71)** CHUGAI SEIYAKU KABUSHIKI KAISHA; OSAKA UNIVERSITY
**(11)** AU-B-2022297107
**(21)** 2022297107 **(22)** 24.06.2022
**(54)** USE OF ANTI-CTLA-4 ANTIBODY
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61K 45/00*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***A61P 43/00*** ( 2006.01 )
***C12N 15/13*** ( 2006.01 )
**(87)** WO2022/270612
**(31)** 2021-105823 **(32)** 25.06.21 **(33)** JP
**(43)** 29.12.2022
**(44)** 01.08.2024
**(72)** KATADA, Hitoshi; TATSUMI, Kanako; MATSUDA, Yutaka; SHIMIZU, Shun; KAMIMURA, Masaki; KOMORI, Yasunori; HORI, Yuji; IGAWA, Tomoyuki; KAWAUCHI, Hiroki; HAYASHI, Hiroki; SAKAGUCHI, Shimon; SUSUMU, Hiroaki
**(74)** Spruson & Ferguson

---

**(71)** Cisco Technology, Inc.
**(11)** AU-B-2019390284
**(21)** 2019390284 **(22)** 12.11.2019
**(54)** Dynamic intent-based firewall
**(51)** Int. Cl.
***H04L 67/01*** ( 2022.01 )
***H04L 41/00*** ( 2022.01 )
**(87)** WO2020/112345
**(31)** 62/774,103 **(32)** 30.11.18 **(33)** US
16/434,115 06.06.19 US
**(43)** 04.06.2020
**(44)** 01.08.2024
**(72)** VALLURI, Vamsidhar; RADHAKRISHNAN, Saravanan; OSWAL, Anand; PRABHU, Vinay; EVANS, Sarah Adelaide; RANGASWAMY, Suraj
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** CMBlu Energy AG
**(11)** AU-B-2023202814
**(21)** 2023202814 **(22)** 05.05.2023
**(54)** Sulfonated aromatic compounds
**(51)** Int. Cl.
***C10G 1/00*** ( 2006.01 )
**(43)** 25.05.2023
**(44)** 01.08.2024
**(62)** 2017246493
**(72)** Krawczyk, Nastaran; Möller, Alexander; Geigle, Peter; Larionov, Evgeny; Hartwig, Jan
**(74)** Allens Patent & Trade Mark Attorneys

---

**(71)** CNH Industrial America LLC
**(11)** AU-B-2022241554
**(21)** 2022241554 **(22)** 29.09.2022
**(54)** System and method for destroying seeds in crop residue prior to discharge from agricultural harvester
**(51)** Int. Cl.
***A01D 41/00*** ( 2006.01 )
**(43)** 27.10.2022
**(44)** 01.08.2024
**(62)** 2018204474
**(72)** Isaac, Nathan; Roberge, Martin J.; Henry, Jim; Dilts, Mark
**(74)** Griffith Hack

---

**(71)** Colgate-Palmolive Company
**(11)** AU-B-2021336768
**(21)** 2021336768 **(22)** 30.08.2021
**(54)** Oral care compositions
**(51)** Int. Cl.
***A61K 8/22*** ( 2006.01 )
***A61K 8/36*** ( 2006.01 )
***A61Q 11/00*** ( 2006.01 )
**(87)** WO2022/051214
**(31)** 63/073,717 **(32)** 02.09.20 **(33)** US
**(43)** 10.03.2022
**(44)** 01.08.2024
**(72)** PAN, Guisheng; FEI, Lin; CHOPRA, Suman
**(74)** Spruson & Ferguson

---

**(71)** Coloplast A/S
**(11)** AU-B-2018363492
**(21)** 2018363492 **(22)** 02.11.2018
**(54)** Complementary-material element for an ostomy appliance
**(51)** Int. Cl.
***A61F 5/443*** ( 2006.01 )
***A61F 5/448*** ( 2006.01 )
**(87)** WO2019/091527
**(31)** PA 2017 70836 **(32)** 08.11.17 **(33)** DK
**(43)** 16.05.2019
**(44)** 01.08.2024
**(72)** MORGAN HICKMOTT, Richard; HOLLER LANGHORN, Philip; HANSEN, Kristoffer; DAUCKE VON BARNER, Joergen; GROVE SUND, Anders
**(74)** FB Rice Pty Ltd

---

**(71)** Compañía Electro Metalúrgica S.A.
**(11)** AU-B-2019290532
**(21)** 2019290532 **(22)** 17.06.2019
**(54)** Improved liner assembly for ore grinding mill
**(51)** Int. Cl.
***B02C 17/18*** ( 2006.01 )
***B02C 17/22*** ( 2006.01 )
**(87)** WO2019/245961
**(31)** 62/686,649 **(32)** 18.06.18 **(33)** US
**(43)** 26.12.2019
**(44)** 01.08.2024
**(72)** MELVILLE, Jason S.; MEDINA, Ariel
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** CompoSecure, LLC
**(11)** AU-B-2020282974
**(21)** 2020282974 **(22)** 27.05.2020
**(54)** RFID device
**(51)** Int. Cl.
***G06K 19/077*** ( 2006.01 )
**(87)** WO2020/243148
**(31)** 16/427,864 **(32)** 31.05.19 **(33)** US
**(43)** 03.12.2020
**(44)** 01.08.2024
**(72)** LOWE, Adam
**(74)** Oxygene IP

---

**(71)** COMPOSECURE, LLC
**(11)** AU-B-2021371164
**(21)** 2021371164 **(22)** 28.10.2021
**(54)** TRANSACTION CARD WITH PARTIAL GLASS LAYER
**(51)** Int. Cl.
***G06K 19/077*** ( 2006.01 )
***G06K 19/02*** ( 2006.01 )
**(87)** WO2022/094021
**(31)** 63/107,698 **(32)** 30.10.20 **(33)** US
**(43)** 05.05.2022
**(44)** 01.08.2024
**(72)** LOWE, Adam; POTOCKI, Kristin
**(74)** Oxygene IP

---

**(71)** Conductix-Wampfler Pty Ltd
**(11)** AU-B-2018223009
**(21)** 2018223009 **(22)** 30.08.2018
**(54)** ROLLER RETAINING ARRANGEMENT
**(51)** Int. Cl.
***B66C 13/12*** ( 2006.01 )
***H02G 11/00*** ( 2006.01 )
**(31)** 2017903583 **(32)** 05.09.17 **(33)** AU
**(43)** 21.03.2019
**(44)** 01.08.2024
**(72)** Lo, Ching Men; Wheatley, Stuart Russell
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** CONOCOPHILLIPS COMPANY
**(11)** AU-B-2022270686
**(21)** 2022270686 **(22)** 05.05.2022

## Applications Accepted - Name Index cont'd

**(54)** PROPPANT FROM CAPTURED CARBON
**(51)** Int. Cl.
***B28B 11/00*** ( 2006.01 )
***B28B 11/24*** ( 2006.01 )
***B28B 13/02*** ( 2006.01 )
**(87)** WO2022/235987
**(31)** 63/201,662 **(32)** 07.05.21 **(33)** US
**(43)** 10.11.2022
**(44)** 01.08.2024
**(72)** LAYCOCK, Dallin L.; PLOMBIN, Charlotte; HUISMAN, Samuel K.
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Coolamon Steelworks Pty Ltd
**(11)** AU-B-2018214140
**(21)** 2018214140 **(22)** 10.08.2018
**(54)** AGRICULTURAL BIN
**(51)** Int. Cl.
***A01F 25/14*** ( 2006.01 )
***A01F 25/00*** ( 2006.01 )
***B60P 1/42*** ( 2006.01 )
***B65D 88/30*** ( 2006.01 )
**(31)** 2017903187 **(32)** 10.08.17 **(33)** AU
**(43)** 28.02.2019
**(44)** 01.08.2024
**(72)** HUTCHEON, Heath John; HUTCHEON, George Bruce
**(74)** Griffith Hack

---

**(71)** COOPERVISION INTERNATIONAL LIMITED
**(11)** AU-B-2023290599
**(21)** 2023290599 **(22)** 13.06.2023
**(54)** CATIONIC CONTACT LENS
**(51)** Int. Cl.
***G02B 1/04*** ( 2006.01 )
**(87)** WO2023/242552
**(31)** 63/351,443 **(32)** 13.06.22 **(33)** US
**(43)** 21.12.2023
**(44)** 01.08.2024
**(72)** JI, Yuan; LIU, Yuwen; LEE, Hyo Jeang
**(74)** Griffith Hack

---

**(71)** Corn Products Development, Inc.
**(11)** AU-B-2018359405
**(21)** 2018359405 **(22)** 30.10.2018
**(54)** Starch blends and uses thereof
**(51)** Int. Cl.
***A23L 29/212*** ( 2016.01 )
***C08B 30/12*** ( 2006.01 )
***C08B 30/20*** ( 2006.01 )
**(87)** WO2019/089656
**(31)** 62/581,235 **(32)** 03.11.17 **(33)** US
**(43)** 09.05.2019
**(44)** 01.08.2024
**(72)** ROA, Brandon; YILDIZ, Erhan; MARTIN, Alicia; WOO, Kyungsoo; YANG, Xin
**(74)** Spruson & Ferguson

---

**(71)** CRAGE medical Co., Limited
**(11)** AU-B-2017294276
**(21)** 2017294276 **(22)** 10.07.2017
**(54)** Antibody for anti-claudin 18A2 and use thereof
**(51)** Int. Cl.
***C07K 16/30*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07K 19/00*** ( 2006.01 )
***C12N 5/10*** ( 2006.01 )
***C12N 15/13*** ( 2006.01 )
***C12N 15/85*** ( 2006.01 )
**(87)** WO2018/006882
**(31)** PCT/CN2017/082024 **(32)** 26.04.17 **(33)** CN
201610536449.9 08.07.16 CN
**(43)** 11.01.2018
**(44)** 01.08.2024
**(72)** Wang, Peng; Jiang, Hua; Yang, Linlin; Shi, Zhimin; Wang, Huamao; Li, Zonghai
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** CRRC Qiqihar Rolling Stock Co., Ltd.
**(11)** AU-B-2021429319
**(21)** 2021429319 **(22)** 10.08.2021
**(54)** MIDDLE BEAM OF FLATCAR AND FLATCAR WITH MIDDLE BEAM
**(51)** Int. Cl.
***B61F 1/02*** ( 2006.01 )
***B61D 3/20*** ( 2006.01 )
***B61F 1/08*** ( 2006.01 )
**(87)** WO2022/179060
**(31)** 202110217803.2 **(32)** 26.02.21 **(33)** CN
**(43)** 01.09.2022
**(44)** 01.08.2024
**(72)** SHEN, Caiyu; WU, Rongkun; TIAN, Xiaochun; FU, Yong; LI, Hua
**(74)** James & Wells Intellectual Property

---

**(71)** Daewoong Pharmaceutical Co., Ltd.
**(11)** AU-B-2020467086
**(21)** 2020467086 **(22)** 10.09.2020
**(54)** Synthesis method for preparing SGLT inhibitor intermediate
**(51)** Int. Cl.
***C07D 307/79*** ( 2006.01 )
**(87)** WO2022/051980
**(43)** 17.03.2022
**(44)** 01.08.2024
**(72)** HUANG, Zhining; YE, Weiping; ZHOU, Zhangtao; WANG, Junjing; YOON, Heekyoon; CHOI, Ji-Soo
**(74)** WRAYS PTY LTD

---

**(71)** DAIKIN INDUSTRIES, LTD.
**(11)** AU-B-2022335810
**(21)** 2022335810 **(22)** 01.06.2022
**(54)** INDOOR UNIT OF AIR CONDITIONING DEVICE
**(51)** Int. Cl.
***F24F 1/0073*** ( 2019.01 )
***F24F 8/108*** ( 2021.01 )
***F24F 8/22*** ( 2021.01 )
**(87)** WO2023/026623
**(31)** 2021-136179 **(32)** 24.08.21 **(33)** JP
**(43)** 02.03.2023
**(44)** 01.08.2024
**(72)** OJI, Kana; FUKUSHIMA, Wataru; NAKAYAMA, Toshimichi; SUHARA, Ryota
**(74)** FB Rice Pty Ltd

---

**(71)** Dai Nippon Printing Co., Ltd.
**(11)** AU-B-2019350313
**(21)** 2019350313 **(22)** 30.09.2019
**(54)** Decorative sheet and decorative material using same
**(51)** Int. Cl.
***B32B 7/023*** ( 2019.01 )
***B32B 27/00*** ( 2006.01 )
**(87)** WO2020/067569
**(31)** 2018-184058 **(32)** 28.09.18 **(33)** JP
**(43)** 02.04.2020
**(44)** 01.08.2024
**(72)** GOTO, Osamu; UENO, Masanori
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Damen 40 B.V.
**(11)** AU-B-2019220437
**(21)** 2019220437 **(22)** 15.02.2019
**(54)** A vessel for towing another vessel
**(51)** Int. Cl.
***B63B 35/68*** ( 2006.01 )
***B63B 21/58*** ( 2006.01 )
**(87)** WO2019/158702
**(31)** 18156858.5 **(32)** 15.02.18 **(33)** EP
**(43)** 22.08.2019
**(44)** 01.08.2024
**(72)** GOSLINGA, Ernst Jan; HAVERKAMP, Robbert Marinus; VAN DEN HEUVEL, Tim; VAN KOPEREN, Robert Michiel
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Data.world, Inc.; Jacob, B.K.; Loyens, J.; Griffith, D.L.; Hurt, B.A.; Le, T.M.; Reynolds, S.W.; Keen, A.A.; Boutros, J.; Zelenak, A.J.
**(11)** AU-B-2022218590
**(21)** 2022218590 **(22)** 19.08.2022
**(54)** Collaborative dataset consolidation via distributed computer networks
**(51)** Int. Cl.
***G06F 17/00*** ( 2019.01 )
**(43)** 15.09.2022
**(44)** 01.08.2024
**(62)** 2017282656
**(72)** JACOB, Bryon Kristen; LOYENS, Jon; GRIFFITH, David Lee; HURT, Brett A.; LE, Triet Minh; REYNOLDS, Shad William; KEEN, Arthur Albert; BOUTROS, Joseph; ZELENAK, Alexander John
**(74)** FB Rice Pty Ltd

---

**(71)** Deciphera Pharmaceuticals, LLC
**(11)** AU-B-2023286024
**(21)** 2023286024 **(22)** 28.12.2023
**(54)** Ripretinib for treating gastrointestinal stromal tumors
**(51)** Int. Cl.
***A61K 31/4375*** ( 2006.01 )
***A61K 45/06*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
**(43)** 25.01.2024
**(44)** 01.08.2024
**(62)** 2020329956
**(72)** SOTO, Rodrigo Ruiz; ROSEN, Oliver; PITMAN, Jama
**(74)** Spruson & Ferguson

---

## Applications Accepted - Name Index cont'd

**(71)** DEEPMIND TECHNOLOGIES LIMITED
**(11)** AU-B-2022292104
**(21)** 2022292104 **(22)** 15.06.2022
**(54)** ADAPTIVE VISUAL SPEECH RECOGNITION
**(51)** Int. Cl.
***G10L 15/16*** ( 2006.01 )
***G06N 3/04*** ( 2023.01 )
***G06N 3/08*** ( 2023.01 )
***G06V 40/16*** ( 2022.01 )
***G10L 15/26*** ( 2006.01 )
*G10L 15/25* ( 2013.01 )
**(87)** WO2022/263570
**(31)** 20210100402 **(32)** 18.06.21 **(33)** GR
**(43)** 22.12.2022
**(44)** 01.08.2024
**(72)** ASSAEL, Ioannis Alexandros; SHILLINGFORD, Brendan; GOMES DE FREITAS, Joao Ferdinando
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Deere & Company
**(11)** AU-B-2018226382
**(21)** 2018226382 **(22)** 03.09.2018
**(54)** System of integrated passageways in a carbon fiber boom and method thereof
**(51)** Int. Cl.
***B05B 1/14*** ( 2006.01 )
***A01G 25/09*** ( 2006.01 )
***B05B 1/20*** ( 2006.01 )
**(31)** 15/724,324 **(32)** 04.10.17 **(33)** US
**(43)** 18.04.2019
**(44)** 01.08.2024
**(72)** Murphy, Patrick M.
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Dentsply Sirona Inc.
**(11)** AU-B-2019294497
**(21)** 2019294497 **(22)** 25.06.2019
**(54)** Method and system for dynamic adjustment of a model
**(51)** Int. Cl.
***G16H 50/50*** ( 2018.01 )
***A61C 13/00*** ( 2006.01 )
**(87)** WO2020/005912
**(31)** 16/023,671 **(32)** 29.06.18 **(33)** US
**(43)** 02.01.2020
**(44)** 01.08.2024
**(72)** SCHNEIDER, Sascha; DERZAPF, Evgenij; ALONI, Ravid
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Depuy Ireland Unlimited Company
**(11)** AU-B-2019225764
**(21)** 2019225764 **(22)** 10.01.2019
**(54)** Acetabular reamer handle and method of reaming an acetabulum
**(51)** Int. Cl.
***A61B 17/16*** ( 2006.01 )
**(87)** WO2019/161986
**(31)** 1802787.0 **(32)** 21.02.18 **(33)** GB
**(43)** 29.08.2019
**(44)** 01.08.2024
**(72)** FLATTERS, Ian; HORNE, David; TEMPLE, Duncan
**(74)** Spruson & Ferguson

---

**(71)** Depuy Ireland Unlimited Company
**(11)** AU-B-2019276041
**(21)** 2019276041 **(22)** 28.05.2019
**(54)** Robotic system for removing bony material from an anatomical structure
**(51)** Int. Cl.
***A61B 17/16*** ( 2006.01 )
***A61B 34/30*** ( 2016.01 )
*A61B 90/00* ( 2016.01 )
**(87)** WO2019/229071
**(31)** 18305649.8 **(32)** 28.05.18 **(33)** EP
**(43)** 05.12.2019
**(44)** 01.08.2024
**(72)** LAVALLEE, Stéphane; GIRARDEAU-MONTAUT, Daniel; URVOY, François; DEMANGET, Nicolas
**(74)** Spruson & Ferguson

---

**(71)** Dexcom, Inc.
**(11)** AU-B-2018334410
**(21)** 2018334410 **(22)** 31.07.2018
**(54)** Invasive biosensor alignment and retention
**(51)** Int. Cl.
***A61B 5/1473*** ( 2006.01 )
**(87)** WO2019/055146
**(31)** 15/703,087 **(32)** 13.09.17 **(33)** US
**(43)** 21.03.2019
**(44)** 01.08.2024
**(72)** LIN, Arthur; WANG, Xianyan; KO, Pey-Jiun
**(74)** FB Rice Pty Ltd

---

**(71)** Dialight Corporation
**(11)** AU-B-2019294827
**(21)** 2019294827 **(22)** 27.06.2019
**(54)** Lighting control network and associated method
**(51)** Int. Cl.
***H04B 10/114*** ( 2013.01 )
**(87)** WO2020/006256
**(31)** 62/691,111 **(32)** 28.06.18 **(33)** US
**(43)** 02.01.2020
**(44)** 01.08.2024
**(72)** AHMAD, Rizwan; SONDERICKER III, John Herbert; KOOSHA, Eman; SOHRABI, Katayoun
**(74)** Spruson & Ferguson

---

**(71)** Digital Diagnostics Inc.
**(11)** AU-B-2021239843
**(21)** 2021239843 **(22)** 15.03.2021
**(54)** Dynamic adjustment of flash intensity based on retinal pigmentation
**(51)** Int. Cl.
***A61B 3/10*** ( 2006.01 )
**(87)** WO2021/188462
**(31)** 62/992,037 **(32)** 19.03.20 **(33)** US
**(43)** 23.09.2021
**(44)** 01.08.2024
**(72)** CLARIDA, Warren James; AMELON, Ryan Earl Rohret; SHAH, Abhay; SUTHER, Jacob Patrick; NIEMEIJER, Meindert; ABRAMOFF, Michael David
**(74)** FB Rice Pty Ltd

---

**(71)** Disney Enterprises, Inc.; ETH Zürich (Eidgenössische Technische Hochschule Zürich)
**(11)** AU-B-2022263508
**(21)** 2022263508 **(22)** 02.11.2022
**(54)** Synthesizing sequences of 3D geometries for movement-based performance
**(51)** Int. Cl.
***G06T 13/40*** ( 2011.01 )
***G06N 3/02*** ( 2006.01 )
**(31)** 17/526,608 **(32)** 15.11.21 **(33)** US
**(43)** 01.06.2023
**(44)** 01.08.2024
**(72)** Bradley, Derek Edward; Chandran, Prashanth; Urnau Gotardo, Paulo Fabiano; Zoss, Gaspard
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** DJ Therapeutics LLC
**(11)** AU-B-2019228634
**(21)** 2019228634 **(22)** 01.03.2019
**(54)** Bexarotene derivatives and their use in treating cancer
**(51)** Int. Cl.
***C07C 13/48*** ( 2006.01 )
***A61K 31/192*** ( 2006.01 )
***C07C 63/74*** ( 2006.01 )
**(87)** WO2019/169270
**(31)** 62/637,387 **(32)** 01.03.18 **(33)** US
**(43)** 06.09.2019
**(44)** 01.08.2024
**(72)** TSAI, Donald; KAELIN, David
**(74)** Spruson & Ferguson

---

**Dolby International AB see Dolby Laboratories Licensing Corporation**
**(21)** 2019298240

---

**(71)** Dolby Laboratories Licensing Corporation; Dolby International AB
**(11)** AU-B-2019298240
**(21)** 2019298240 **(22)** 02.07.2019
**(54)** Methods and devices for encoding and/or decoding immersive audio signals
**(51)** Int. Cl.
***G10L 19/008*** ( 2013.01 )
***G10L 19/02*** ( 2013.01 )
***G10L 19/04*** ( 2013.01 )
***G10L 19/18*** ( 2013.01 )
**(87)** WO2020/010072
**(31)** 62/693,246 **(32)** 02.07.18 **(33)** US
**(43)** 09.01.2020
**(44)** 01.08.2024
**(72)** MCGRATH, David S.; ECKERT, Michael; PURNHAGEN, Heiko; BRUHN, Stefan
**(74)** Spruson & Ferguson

---

**(71)** Dolby Laboratories Licensing Corporation
**(11)** AU-B-2024201690
**(21)** 2024201690 **(22)** 14.03.2024
**(54)** Source color volume information messaging
**(51)** Int. Cl.
***H04N 19/186*** ( 2014.01 )
***H04N 19/46*** ( 2014.01 )

***H04N 19/70*** ( 2014.01 )
***H04N 21/235*** ( 2011.01 )
***H04N 21/84*** ( 2011.01 )
**(43)** 04.04.2024
**(44)** 01.08.2024
**(62)** 2023285711
**(72)** CHEN, Tao; YIN, Peng; LU, Taoran; HUSAK, Walter J.
**(74)** Spruson & Ferguson

---

**(71)** Donaghys Limited
**(11)** AU-B-2020315758
**(21)** 2020315758 **(22)** 15.07.2020
**(54)** Transdermal solvent system and methods of use
**(51)** Int. Cl.
***A61K 9/08*** ( 2006.01 )
***A61K 9/10*** ( 2006.01 )
***A61K 31/4164*** ( 2006.01 )
***A61K 31/429*** ( 2006.01 )
***A61K 31/5415*** ( 2006.01 )
***A61K 31/7048*** ( 2006.01 )
***A61K 31/714*** ( 2006.01 )
***A61K 33/04*** ( 2006.01 )
***A61K 47/06*** ( 2006.01 )
***A61K 47/08*** ( 2006.01 )
***A61K 47/10*** ( 2017.01 )
***A61K 47/14*** ( 2017.01 )
***A61K 47/20*** ( 2006.01 )
***A61K 47/26*** ( 2006.01 )
***A61K 47/44*** ( 2017.01 )
***A61P 33/00*** ( 2006.01 )
**(87)** WO2021/010843
**(31)** 755474 **(32)** 16.07.19 **(33)** NZ
**(43)** 21.01.2021
**(44)** 01.08.2024
**(72)** YERITSYAN, Karen
**(74)** CreateIP

---

**(71)** DRAEGER SAFETY AG & CO. KGAA
**(11)** AU-B-2024202878
**(21)** 2024202878 **(22)** 01.05.2024
**(54)** SAFETY HELMET WITH AN INTERMEDIATE PIECE FOR CHANGING THE CENTER OF GRAVITY AND ARRANGEMENTS COMPRISING SUCH A SAFETY HELMET AND TWO ALTERNATIVE INTERMEDIATE PIECES
**(51)** Int. Cl.
***A42B 3/14*** ( 2006.01 )
***A42B 3/04*** ( 2006.01 )
***A42B 3/08*** ( 2006.01 )
**(43)** 23.05.2024
**(44)** 01.08.2024
**(61)** 2021202596
**(62)** 2023202307
**(72)** TOLK, Siegbert; RAHMATYAN, Jasser
**(74)** Oxygene IP

---

**(71)** Drilling Technical Services (Pty) Ltd
**(11)** AU-B-2018311427
**(21)** 2018311427 **(22)** 31.07.2018
**(54)** Mobile underground tunnel borer arrangement
**(51)** Int. Cl.
***E21D 9/11*** ( 2006.01 )
***E21D 9/087*** ( 2006.01 )
***E21D 9/12*** ( 2006.01 )
**(87)** WO2019/025959
**(31)** 2017/02323 **(32)** 31.07.17 **(33)** ZA
2018/00727 05.02.18 ZA
2017/07079 19.10.17 ZA
**(43)** 07.02.2019
**(44)** 01.08.2024
**(72)** JORDAAN, Barend Jacobus; PRETORIUS, Gerhard; CALITZ, Johannes Nicolaas Jacobus; ROOTHMAN, Willem Hermanus
**(74)** Clark Intellectual Property Pty Ltd

---

**(71)** DSI Underground Australia Pty Limited
**(11)** AU-B-2018329868
**(21)** 2018329868 **(22)** 07.09.2018
**(54)** Encapsulation system and method of installing a rock bolt
**(51)** Int. Cl.
***E21D 20/02*** ( 2006.01 )
**(87)** WO2019/046883
**(31)** 2017903643 **(32)** 08.09.17 **(33)** AU
**(43)** 14.03.2019
**(44)** 01.08.2024
**(72)** EVANS, David William; HIRD, Derek Colin
**(74)** Spruson & Ferguson

---

**(71)** DSM IP Assets B.V.
**(11)** AU-B-2018387681
**(21)** 2018387681 **(22)** 17.12.2018
**(54)** Storage stable mixtures, method of improving retention of a compound and use of rice hulls and/or rice bran to enhance retention of a compound
**(51)** Int. Cl.
***A23K 20/10*** ( 2016.01 )
***A23L 7/10*** ( 2016.01 )
**(87)** WO2019/121515
**(31)** 17207908.9 **(32)** 18.12.17 **(33)** EP
**(43)** 27.06.2019
**(44)** 01.08.2024
**(72)** BRUNNER, Dominik Josef; CLASADONTE, Laure; GADIENT, Martin Reto; SCHUEPFER, Roland
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Dutch Renewable Energy B.V.
**(11)** AU-B-2018304851
**(21)** 2018304851 **(22)** 13.07.2018
**(54)** Dispensing system for use in cryogenic skin treatment
**(51)** Int. Cl.
***A61M 11/02*** ( 2006.01 )
***A61B 18/02*** ( 2006.01 )
***B05B 1/16*** ( 2006.01 )
**(87)** WO2019/016105
**(31)** 17182068.1 **(32)** 19.07.17 **(33)** EP
**(43)** 24.01.2019
**(44)** 01.08.2024
**(72)** KLEVER, Diede Hendrik Paul; PELLIKAAN, Hubert Clemens
**(74)** Griffith Hack

---

**(71)** Dyno Nobel Inc
**(11)** AU-B-2022201304
**(21)** 2022201304 **(22)** 25.02.2022
**(54)** SYSTEMS FOR DELIVERING EXPLOSIVES AND METHODS RELATED THERETO
**(51)** Int. Cl.
***F42D 5/06*** ( 2006.01 )
***F42D 3/04*** ( 2006.01 )
**(43)** 24.03.2022
**(44)** 01.08.2024
**(62)** 2020203855
**(72)** John B., Halander; Cornelis L., Kome; Casey L., Nelson; Jon, Bruner
**(74)** Spruson & Ferguson

---

**(71)** Eberhard Karls Universitaet Tuebingen Medizinische Fakultaet
**(11)** AU-B-2021224972
**(21)** 2021224972 **(22)** 17.02.2021
**(54)** Medical device and method for producing a plasma-activated liquid
**(51)** Int. Cl.
***A61B 18/04*** ( 2006.01 )
***A61L 2/14*** ( 2006.01 )
***H05H 1/24*** ( 2006.01 )
**(87)** WO2021/165334
**(31)** 10 2020 104 261.2 **(32)** 18.02.20 **(33)** DE
**(43)** 26.08.2021
**(44)** 01.08.2024
**(72)** WEISS, Martin
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Ecole de technologie superieure
**(11)** AU-B-2018333308
**(21)** 2018333308 **(22)** 17.09.2018
**(54)** An intra- and circum-aural eeg brain computer interface
**(51)** Int. Cl.
***A61B 5/291*** ( 2021.01 )
***A61B 5/369*** ( 2021.01 )
**(87)** WO2019/051613
**(31)** 62/559,133 **(32)** 15.09.17 **(33)** US
**(43)** 21.03.2019
**(44)** 01.08.2024
**(72)** VALENTIN, Olivier; VIALLET, Guilhem; DUCHARME, Mikael; DELNAVAZ, Aidin; MONSARRAT-CHANON, Hami; VOIX, Jeremie
**(74)** Caska Intellectual Property Pty Ltd

---

**(71)** Einhell Germany AG
**(11)** AU-B-2023202872
**(21)** 2023202872 **(22)** 09.05.2023
**(54)** PROTECTION SYSTEM FOR A POWER TOOL
**(51)** Int. Cl.
***B25F 5/00*** ( 2006.01 )
***A61F 11/14*** ( 2006.01 )
***H02J 15/00*** ( 2006.01 )
***H04R 1/10*** ( 2006.01 )
**(31)** 20 2022 102 628.9 **(32)** 13.05.22 **(33)** DE
**(43)** 30.11.2023
**(44)** 01.08.2024
**(72)** MAYR, Stefan
**(74)** Griffith Hack

---

**(71)** E INK CORPORATION
**(11)** AU-B-2022266617
**(21)** 2022266617 **(22)** 28.04.2022

## Applications Accepted - Name Index cont'd

**(54)** DISAGGREGATION DRIVING SEQUENCES FOR FOUR PARTICLE ELECTROPHORETIC DISPLAYS
**(51)** Int. Cl.
***G02F 1/167*** ( 2019.01 )
***G02F 1/1675*** ( 2019.01 )
***G02F 1/1676*** ( 2019.01 )
**(87)** WO2022/232345
**(31)** 63/181,514 **(32)** 29.04.21 **(33)** US
**(43)** 03.11.2022
**(44)** 01.08.2024
**(72)** JAN, Ning-Wei; CHIU, Chen-Kai; LIN, Feng-Shou; CHENG, Chih-Yu
**(74)** RnB IP Pty Ltd

---

**(71)** ELC MANAGEMENT LLC
**(11)** AU-B-2022386086
**(21)** 2022386086 **(22)** 07.11.2022
**(54)** COSMETIC COMPOSITIONS AND METHOD OF USING THE SAME
**(51)** Int. Cl.
***A61K 8/9789*** ( 2017.01 )
***A61K 8/64*** ( 2006.01 )
***A61Q 19/00*** ( 2006.01 )
***A61Q 19/08*** ( 2006.01 )
**(87)** WO2023/086305
**(31)** 63/277,487 **(32)** 09.11.21 **(33)** US
**(43)** 19.05.2023
**(44)** 01.08.2024
**(72)** PERNODET, Nadine; CHEN, Chia-Wen; TRIVERO, Jacqueline Mary; CORALLO, Krystel Rita
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** ELECTRIC POWER RESEARCH INSTITUTE OF YUNNAN POWER GRID CO., LTD
**(11)** AU-B-2022388905
**(21)** 2022388905 **(22)** 10.10.2022
**(54)** LINE PROTECTION METHOD AND RELATED APPARATUS FOR FLEXIBLE GROUNDING SYSTEM OF POWER DISTRIBUTION NETWORK
**(51)** Int. Cl.
***G01R 1/08*** ( 2006.01 )
**(87)** WO2023/216501
**(31)** 202210492798.0 **(32)** 07.05.22 **(33)** CN
**(43)** 23.11.2023
**(44)** 01.08.2024
**(72)** LIU, Hongwen; ZHAO, Xianping; YANG, Jindong; CHAI, Chenchao; TANG, Lijun; NIE, Ding; ZHU, Quancong; NIE, Yongjie; ZOU, Dexu; ZHAI, Shaolei; ZHANG, Zhilei
**(74)** Baxter Patent Attorneys Pty Ltd

---

**(71)** Electrolux Appliances Aktiebolag
**(11)** AU-B-2017437703
**(21)** 2017437703 **(22)** 31.10.2017
**(54)** Fan-shaped spray detergent nozzle
**(51)** Int. Cl.
***A47L 15/23*** ( 2006.01 )
***A47L 15/50*** ( 2006.01 )
**(87)** WO2019/086105
**(43)** 09.05.2019
**(44)** 01.08.2024
**(72)** HAEGERMARCK, Anders; HAKKARAINEN, Marie; MONOKROUSOS, Antonios
**(74)** Halfords IP

---

**(71)** ELI LILLY AND COMPANY
**(11)** AU-B-2021376367
**(21)** 2021376367 **(22)** 05.11.2021
**(54)** PYRAZOLE DERIVATIVES ASR ET KINASE INHIBITORS
**(51)** Int. Cl.
***C07D 413/12*** ( 2006.01 )
***A61K 31/42*** ( 2006.01 )
***A61K 31/425*** ( 2006.01 )
***A61K 31/443*** ( 2006.01 )
***A61K 31/4436*** ( 2006.01 )
***A61K 31/4439*** ( 2006.01 )
***A61K 31/501*** ( 2006.01 )
***A61K 31/506*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07D 413/14*** ( 2006.01 )
***C07D 417/12*** ( 2006.01 )
***C07D 417/14*** ( 2006.01 )
**(87)** WO2022/098970
**(31)** 63/110,643 **(32)** 06.11.20 **(33)** US
**(43)** 12.05.2022
**(44)** 01.08.2024
**(72)** ANDERSON, Erin, D.; ANDREWS, Steven, W.; BOLDRON, Christopher, Pierre, Albert, Jean; CONDROSKI, Kevin, R.; IRVIN, Thomas, C.; KOLAKOWSKI, Gabrielle, R., a/k/a Jody, Gabrielle, Rustmann, KOLAKOWSKI; KUMAR, Manoj; MCFADDIN, Elizabeth, A.; MCKENNEY, Megan, L.; MCLEAN, Johnathan, Alexander; MOURET, Tiphaine; MUNCHHOF, Michael, J.; PANCALDI, Thomas, Pierre, Dino; PILKINGTON-MIKSA, Michael Alexander; PINTO, Marta
**(74)** Spruson & Ferguson

---

**(71)** Engineering Services Rotorua Limited
**(11)** AU-B-2019264109
**(21)** 2019264109 **(22)** 01.05.2019
**(54)** Replaceable knife insert
**(51)** Int. Cl.
***A01G 23/095*** ( 2006.01 )
**(87)** WO2019/212363
**(31)** 742153 **(32)** 02.05.18 **(33)** NZ
**(43)** 07.11.2019
**(44)** 01.08.2024
**(72)** GUDNASON, Bjarni; SHRIMPTON, Tony Graeme
**(74)** AJ PARK

---

**(71)** Entellus Medical, Inc.
**(11)** AU-B-2022203344
**(21)** 2022203344 **(22)** 18.05.2022
**(54)** Nasal valve implants and methods of implanting the same
**(51)** Int. Cl.
***A61B 1/00*** ( 2006.01 )
***A61B 17/00*** ( 2006.01 )
***A61B 17/24*** ( 2006.01 )
***A61B 17/34*** ( 2006.01 )
***A61M 25/00*** ( 2006.01 )
***A61M 29/00*** ( 2006.01 )
**(43)** 09.06.2022
**(44)** 01.08.2024
**(62)** 2017261196
**(72)** Forsberg, Andrew T.; Duda, Anthony A.
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Epigen Biosciences, Inc.
**(11)** AU-B-2019288275
**(21)** 2019288275 **(22)** 18.06.2019
**(54)** Heterocyclic compounds useful in the treatment of disease
**(51)** Int. Cl.
***C07D 261/14*** ( 2006.01 )
***C07D 231/38*** ( 2006.01 )
***C07D 231/52*** ( 2006.01 )
***C07D 233/88*** ( 2006.01 )
***C07D 239/42*** ( 2006.01 )
***C07D 263/48*** ( 2006.01 )
***C07D 401/04*** ( 2006.01 )
***C07D 413/04*** ( 2006.01 )
**(87)** WO2019/246109
**(31)** 16/010,755 **(32)** 18.06.18 **(33)** US
**(43)** 26.12.2019
**(44)** 01.08.2024
**(72)** BEATON, Graham; TUCCI, Fabio C.; RAVULA, Satheesh B.; SHAH, Chandravadan R.; LEE, Suk Joong
**(74)** Adams Pluck

---

**(71)** Equinor Energy AS
**(11)** AU-B-2019243667
**(21)** 2019243667 **(22)** 25.03.2019
**(54)** Subsea well installation
**(51)** Int. Cl.
***E21B 43/013*** ( 2006.01 )
**(87)** WO2019/190329
**(31)** 1804819.9 **(32)** 26.03.18 **(33)** GB
**(43)** 03.10.2019
**(44)** 01.08.2024
**(72)** STOKKE, Ragnar; ELLINGSEN, Kjell Einar
**(74)** Spruson & Ferguson

---

**(71)** Eth Zürich
**(11)** AU-B-2018203875
**(21)** 2018203875 **(22)** 01.06.2018
**(54)** NANOCOMPOSITE MATERIALS COMPRISING CATIONIC NANOPARTICLES AND ANIONIC POLYMERS USEFUL IN METHODS FOR 3D PRINTING
**(51)** Int. Cl.
***A61L 27/52*** ( 2006.01 )
***B82Y 30/00*** ( 2011.01 )
**(31)** PCT/IB2017/053845 **(32)** 27.06.17 **(33)** IB
**(43)** 17.01.2019
**(44)** 01.08.2024
**(72)** Lee, Mihyun; Zenobi-Wong, Marcy; Chang, Jin
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**ETH Zürich (Eidgenössische Technische Hochschule Zürich) see Disney Enterprises, Inc.**
**(21)** 2022263508

---

## Applications Accepted - Name Index cont'd

**(71)** EuroChem Agro GmbH
**(11)** AU-B-2019280606
**(21)** 2019280606 **(22)** 03.06.2019
**(54)** Emulsion for treating urea-containing fertilizers
**(51)** Int. Cl.
***C05G 3/90*** ( 2020.01 )
**(87)** WO2019/233905
**(31)** 10 2018 208 770.9 **(32)** 04.06.18 **(33)** DE
**(43)** 12.12.2019
**(44)** 01.08.2024
**(72)** MANNHEIM, Thomas; HABERMÜLLER, Heiko
**(74)** Spruson & Ferguson

---

**(71)** EuroChem Antwerpen
**(11)** AU-B-2021339955
**(21)** 2021339955 **(22)** 12.09.2021
**(54)** N-heterocyclic compounds used as nitrification inhibitor
**(51)** Int. Cl.
***C05G 3/90*** ( 2020.01 )
***A01N 43/76*** ( 2006.01 )
***A01N 43/78*** ( 2006.01 )
***A01N 43/90*** ( 2006.01 )
***C07D 263/16*** ( 2006.01 )
***C07D 277/14*** ( 2006.01 )
***C07D 277/16*** ( 2006.01 )
***C07D 277/26*** ( 2006.01 )
***C07D 417/12*** ( 2006.01 )
***C07D 417/14*** ( 2006.01 )
***C07D 471/04*** ( 2006.01 )
***C07D 513/04*** ( 2006.01 )
**(87)** WO2022/053660
**(31)** 20196033.3 **(32)** 14.09.20 **(33)** EP
21155568.5 05.02.21 EP
**(43)** 17.03.2022
**(44)** 01.08.2024
**(72)** HABERMÜLLER, Heiko; HENKE, Catarina; THOMAS, Mannheim; PETERS, Nils; BEECKMAN, Fabian; MOTTE, Hans; DROZDZECKI, Andrzej; AUDENAERT, Dominique; BEECKMAN, Tom
**(74)** Alder IP Pty Ltd

---

**(71)** Exhalation Technology Limited
**(11)** AU-B-2019382292
**(21)** 2019382292 **(22)** 14.11.2019
**(54)** A device to measure breath humidity
**(51)** Int. Cl.
***A61B 5/08*** ( 2006.01 )
***A61B 5/097*** ( 2006.01 )
***G01N 33/497*** ( 2006.01 )
**(87)** WO2020/099874
**(31)** 1818584.3 **(32)** 14.11.18 **(33)** GB
**(43)** 22.05.2020
**(44)** 01.08.2024
**(72)** FUNCH-NIELSEN, Helle
**(74)** Argon IP Advisory Pty Ltd

---

**(71)** Exicure Operating Company
**(11)** AU-B-2017261357
**(21)** 2017261357 **(22)** 05.05.2017
**(54)** TLR9-targeted Spherical Nucleic Acids having potent antitumor activity
**(51)** Int. Cl.
***C12N 15/117*** ( 2010.01 )
***A61K 9/127*** ( 2006.01 )
***A61K 31/7088*** ( 2006.01 )
***A61K 31/7125*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61K 47/50*** ( 2017.01 )
***A61P 35/00*** ( 2006.01 )
**(87)** WO2017/193084
**(31)** 62/333,139 **(32)** 06.05.16 **(33)** US
62/480,936 03.04.17 US
**(43)** 09.11.2017
**(44)** 01.08.2024
**(72)** Nallagatla, Subbarao; Anderson, Bart; Kandimalla, Ekambar
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Expro North Sea Limited
**(11)** AU-B-2020342613
**(21)** 2020342613 **(22)** 01.09.2020
**(54)** Hydraulic protection system and method
**(51)** Int. Cl.
***E21B 21/00*** ( 2006.01 )
***E21B 21/10*** ( 2006.01 )
***F16K 17/06*** ( 2006.01 )
**(87)** WO2021/044133
**(31)** 1912684.6 **(32)** 04.09.19 **(33)** GB
**(43)** 11.03.2021
**(44)** 01.08.2024
**(72)** SZPUNAR, Dariusz Krzysztof; MANETT, Kris; DUPLESSIS, André Nicolaas
**(74)** Spruson & Ferguson

---

**(71)** F. HOFFMANN-LA ROCHE AG
**(11)** AU-B-2019410073
**(21)** 2019410073 **(22)** 19.12.2019
**(54)** Tumor-targeted agonistic CD28 antigen binding molecules
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07K 16/30*** ( 2006.01 )
***C07K 16/40*** ( 2006.01 )
**(87)** WO2020/127618
**(31)** 18215121.7 **(32)** 21.12.18 **(33)** EP
19196006.1 06.09.19 EP
19187709.1 23.07.19 EP
**(43)** 25.06.2020
**(44)** 01.08.2024
**(72)** GEORGES, Guy; HOFER, Thomas; HOSSE, Ralf; KLEIN, Christian; MOESSNER, Ekkehard; SAM, Johannes; UMAÑA, Pablo; THOM, Jenny Tosca; GASSER, Stephan; VALLIER, Jean-Baptiste Pierre; FAUTI, Tanja
**(74)** Griffith Hack

---

**(71)** Ferring B.V.
**(11)** AU-B-2019205192
**(21)** 2019205192 **(22)** 02.01.2019
**(54)** Oral liquid pharmaceutical compositions of aminosalicylates
**(51)** Int. Cl.
***A61K 9/00*** ( 2006.01 )
***A61K 9/10*** ( 2006.01 )
***A61K 9/16*** ( 2006.01 )
***A61K 9/50*** ( 2006.01 )
**(87)** WO2019/136053
**(31)** 62/613,198 **(32)** 03.01.18 **(33)** US
**(43)** 11.07.2019
**(44)** 01.08.2024
**(72)** LIANG, Alfred Chi-Yeh; EHRNSPERGER, Eric; SHEN, Xiaohong
**(74)** Davies Collison Cave Pty Ltd

---

**FF Seeley Nominees Pty Ltd see Seeley International Pty Ltd**
**(21)** 2023203352

---

**(71)** Fibrework Australia Pty Ltd
**(11)** AU-B-2017219035
**(21)** 2017219035 **(22)** 24.08.2017
**(54)** A ROOF SPACER
**(51)** Int. Cl.
***E04D 13/16*** ( 2006.01 )
***E04D 12/00*** ( 2006.01 )
**(43)** 14.03.2019
**(44)** 01.08.2024
**(72)** KLOPPER, Kim
**(74)** Baxter Patent Attorneys Pty Ltd

---

**(71)** Fidia Farmaceutici S.p.A.
**(11)** AU-B-2019223434
**(21)** 2019223434 **(22)** 26.02.2019
**(54)** Multilayer composite material
**(51)** Int. Cl.
***A61L 15/26*** ( 2006.01 )
***A61L 15/28*** ( 2006.01 )
***A61L 15/44*** ( 2006.01 )
**(87)** WO2019/162928
**(31)** 102018000003034 **(32)** 26.02.18 **(33)** IT
102018000021112 27.12.18 IT
**(43)** 29.08.2019
**(44)** 01.08.2024
**(72)** GENNARI, Giovanni; CAMPISI, Monica; ZANELLATO, Anna Maria
**(74)** AJ PARK

---

**(71)** FMC Corporation
**(11)** AU-B-2018352050
**(21)** 2018352050 **(22)** 12.10.2018
**(54)** Aqueous (2-(2,4-dichlorophenyl)methyl)-4,4-dimethyl-3-isoxazolidinone-based suspension concentrates
**(51)** Int. Cl.
***A01P 13/02*** ( 2006.01 )
***A01N 25/04*** ( 2006.01 )
***A01N 43/40*** ( 2006.01 )
***A01N 43/56*** ( 2006.01 )
***A01N 43/80*** ( 2006.01 )
***A01N 43/82*** ( 2006.01 )
**(87)** WO2019/076744
**(31)** 17196900.9 **(32)** 17.10.17 **(33)** EP
**(43)** 25.04.2019
**(44)** 01.08.2024
**(72)** KRAUSE, Jens; ZANTER, Steffen; RÖCHLING, Andreas; KRÜGER, Joachim
**(74)** WRAYS PTY LTD

---

**(71)** FMC Corporation
**(11)** AU-B-2022204532
**(21)** 2022204532 **(22)** 27.06.2022
**(54)** Method of reducing crop damage

## Applications Accepted - Name Index cont'd

**(51)** Int. Cl.
***A01N 25/32*** ( 2006.01 )
***A01N 43/80*** ( 2006.01 )
***A01N 43/82*** ( 2006.01 )
***A01P 13/00*** ( 2006.01 )
**(43)** 14.07.2022
**(44)** 01.08.2024
**(62)** 2017320741
**(72)** Auler, Thomas; Dittgen, Jan; Tossens, Herve
**(74)** WRAYS PTY LTD

---

**Forty Seven, Inc. see The Board of Trustees of The Leland Stanford Junior University**
**(21)** 2018290248

---

**(71)** Foundry Therapeutics, Inc.
**(11)** AU-B-2019270779
**(21)** 2019270779 **(22)** 11.04.2019
**(54)** Implantable depots for the controlled release of therapeutic agents
**(51)** Int. Cl.
***A61K 9/70*** ( 2006.01 )
***A61K 31/445*** ( 2006.01 )
***A61L 27/54*** ( 2006.01 )
***A61L 27/58*** ( 2006.01 )
***A61P 23/02*** ( 2006.01 )
***A61P 25/04*** ( 2006.01 )
***A61P 29/00*** ( 2006.01 )
**(87)** WO2019/221853
**(31)** 62/742,357 **(32)** 06.10.18 **(33)** US
62/670,721 12.05.18 US
PCT/US2019/012795 08.01.19 US
62/723,478 28.08.18 US
PCT/US2018/054777 06.10.18 US
**(43)** 21.11.2019
**(44)** 01.08.2024
**(72)** NAGA, Karun D.; GIFFORD III, Hanson S.; BOYD, Stephen W.; RUANE, Patrick H.; HANCOCK, Jackie Joe; FELDSTEIN, Michael; TEU, Koon Kiat; WANG, Honglei; LUO, Jingnan; SEET, Daniel Boon Lim; LEE, Wei Li; MOKARRAM-DORRI, Nassireddin
**(74)** Spruson & Ferguson

---

**(71)** FP BUSINESS INVEST
**(11)** AU-B-2019294292
**(21)** 2019294292 **(22)** 25.06.2019
**(54)** Junction device for conveyor belt
**(51)** Int. Cl.
***F16G 3/08*** ( 2006.01 )
***D03D 47/02*** ( 2006.01 )
**(87)** WO2020/002378
**(31)** 1855731 **(32)** 26.06.18 **(33)** FR
**(43)** 02.01.2020
**(44)** 01.08.2024
**(72)** TAVERNIER, Bernard
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Fraser, M.A.
**(11)** AU-B-2023202587
**(21)** 2023202587 **(22)** 28.04.2023
**(54)** A portable shelter
**(51)** Int. Cl.
***E04H 15/48*** ( 2006.01 )
***A45B 19/10*** ( 2006.01 )
***A45B 23/00*** ( 2006.01 )
***A45B 25/14*** ( 2006.01 )
**(43)** 18.05.2023
**(44)** 01.08.2024
**(62)** 2021204796
**(72)** FRASER, Mark Andrew
**(74)** Spruson & Ferguson

---

**Fred Hutchinson Cancer Research Center see Juno Therapeutics, Inc.**
**(21)** 2017277396

---

**(71)** Freia Offshore AB
**(11)** AU-B-2019208987
**(21)** 2019208987 **(22)** 16.01.2019
**(54)** Floating wind power platform with tension leg device
**(51)** Int. Cl.
***F03D 13/25*** ( 2016.01 )
***B63B 1/10*** ( 2006.01 )
***B63B 21/50*** ( 2006.01 )
***B63B 35/44*** ( 2006.01 )
**(87)** WO2019/143283
**(31)** 1850064-5 **(32)** 19.01.18 **(33)** SE
1850590-9 18.05.18 SE
**(43)** 25.07.2019
**(44)** 01.08.2024
**(72)** HUMMEL, Niklas; RAHM, Magnus; DYACHYK, Eduard
**(74)** Griffith Hack

---

**(71)** FUJIKURA LTD.
**(11)** AU-B-2021365910
**(21)** 2021365910 **(22)** 06.07.2021
**(54)** OPTICAL FIBER CABLE
**(51)** Int. Cl.
***G02B 6/44*** ( 2006.01 )
**(87)** WO2022/085245
**(31)** 2020-175528 **(32)** 19.10.20 **(33)** JP
**(43)** 28.04.2022
**(44)** 01.08.2024
**(72)** MIYATA, Miku; MURATA, Akira
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Fujitsu General Limited
**(11)** AU-B-2019242468
**(21)** 2019242468 **(22)** 15.03.2019
**(54)** Ceiling-embedded air conditioner
**(51)** Int. Cl.
***F24F 13/20*** ( 2006.01 )
***F24F 1/0007*** ( 2019.01 )
***F24F 1/0047*** ( 2019.01 )
***F24F 1/0063*** ( 2019.01 )
***F24F 13/06*** ( 2006.01 )
**(87)** WO2019/188385
**(31)** 2018-104531 **(32)** 31.05.18 **(33)** JP
2018-069617 30.03.18 JP
2018-069618 30.03.18 JP
**(43)** 03.10.2019
**(44)** 01.08.2024
**(72)** FUSE Takuto; HOSODA Kazuma
**(74)** Spruson & Ferguson

---

**(71)** FUNCTION (QINGDAO) MARINE TECHNOLOGY CO., LTD.
**(11)** AU-B-2023208144
**(21)** 2023208144 **(22)** 26.07.2023
**(54)** PROCESS FOR PRODUCING ANT-ARCTIC KRILL OIL
**(51)** Int. Cl.
***C11B 3/10*** ( 2006.01 )
***C11B 1/10*** ( 2006.01 )
***C11B 3/04*** ( 2006.01 )
**(31)** 202211036577.9 **(32)** 29.08.22 **(33)** CN
**(43)** 14.03.2024
**(44)** 01.08.2024
**(72)** YANG,Qingli; ZHOU, Fang; GAO,Yicheng; JIANG, Guoliang; LV, Lingtao; HOU, Xiudan
**(74)** MOHAN MURALI KODIVEL

---

**(71)** FUTURE MOTION, INC.
**(11)** AU-B-2021358855
**(21)** 2021358855 **(22)** 15.09.2021
**(54)** SUSPENSION SYSTEMS FOR AN ELECTRIC SKATEBOARD
**(51)** Int. Cl.
***A63C 17/12*** ( 2006.01 )
***A63C 17/00*** ( 2006.01 )
***A63C 17/08*** ( 2006.01 )
***B62K 11/00*** ( 2013.01 )
**(87)** WO2022/076141
**(31)** 63/088,192 **(32)** 06.10.20 **(33)** US
17/229,572 13.04.21 US
17/474,858 14.09.21 US
**(43)** 14.04.2022
**(44)** 01.08.2024
**(72)** DOERKSEN, Kyle Jonathan; SLUITER, Maximilian Fredrick Ballenger
**(74)** CreateIP

---

**(71)** Geberit International AG
**(11)** AU-B-2019204453
**(21)** 2019204453 **(22)** 25.06.2019
**(54)** Carrier element for a cleaning element to be introduced into a cistern
**(51)** Int. Cl.
***E03D 9/03*** ( 2006.01 )
***E03D 9/02*** ( 2006.01 )
**(31)** 18179719.2 **(32)** 26.06.18 **(33)** EP
**(43)** 23.01.2020
**(44)** 01.08.2024
**(72)** Furrer, Martin; Brändli, Pascal
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** GEMA S.r.l.
**(11)** AU-B-2023203862
**(21)** 2023203862 **(22)** 20.06.2023
**(54)** Partition Wall for Commercial Vehicles
**(51)** Int. Cl.
***E05D 15/06*** ( 2006.01 )
***B60J 5/12*** ( 2006.01 )
***B60R 21/02*** ( 2006.01 )
***B62D 33/06*** ( 2006.01 )
**(43)** 13.07.2023
**(44)** 01.08.2024
**(62)** 2017328469
**(72)** Camellini, Giancarlo
**(74)** A.P.T. Patent and Trade Mark Attorneys

---

## Applications Accepted - Name Index cont'd

**(71)** GEMA S.r.l.
**(11)** AU-B-2023203863
**(21)** 2023203863 **(22)** 20.06.2023
**(54)** Partition Wall for Commercial Vehicles
**(51)** Int. Cl.
***E05D 15/06*** ( 2006.01 )
***B60J 5/12*** ( 2006.01 )
***B60R 21/02*** ( 2006.01 )
***B62D 33/06*** ( 2006.01 )
**(43)** 13.07.2023
**(44)** 01.08.2024
**(62)** 2017328469
**(72)** Camellini, Giancarlo
**(74)** A.P.T. Patent and Trade Mark Attorneys

---

**(71)** GENENTECH, INC.
**(11)** AU-B-2020277143
**(21)** 2020277143 **(22)** 24.11.2020
**(54)** Combinations of an anti-HER2 antibody-drug conjugate and chemotherapeutic agents, and methods of use
**(51)** Int. Cl.
***A61K 31/337*** ( 2006.01 )
***A61K 31/416*** ( 2006.01 )
***A61K 31/513*** ( 2006.01 )
***A61K 31/517*** ( 2006.01 )
***A61K 31/5355*** ( 2006.01 )
***A61K 31/555*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61K 45/06*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
**(43)** 24.12.2020
**(44)** 01.08.2024
**(62)** 2019200988
**(72)** BERRY, Leanne; PHILLIPS, Gail Lewis; SLIWKOWSKI, Mark X.
**(74)** Griffith Hack

---

**(71)** Genomics PLC
**(11)** AU-B-2019227498
**(21)** 2019227498 **(22)** 26.02.2019
**(54)** A computer-implemented method of analysing genetic data about an organism
**(51)** Int. Cl.
***G16B 40/20*** ( 2019.01 )
***G16B 20/40*** ( 2019.01 )
**(87)** WO2019/166792
**(31)** 1803202.9 **(32)** 27.02.18 **(33)** GB
**(43)** 06.09.2019
**(44)** 01.08.2024
**(72)** SPENCER, Christopher Charles Alan; LUNTER, Gerard Anton; DONNELLY, Peter James; PLAGNOL, Vincent Yann Marie
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Genzyme Corporation
**(11)** AU-B-2018275881
**(21)** 2018275881 **(22)** 01.06.2018
**(54)** Methods for absolute quantification of low-abundance polypeptides using mass spectrometry
**(51)** Int. Cl.
***G01N 33/68*** ( 2006.01 )
**(87)** WO2018/223076
**(31)** 62/514,587 **(32)** 02.06.17 **(33)** US
**(43)** 06.12.2018
**(44)** 01.08.2024
**(72)** Stapels, Martha; Busch, Michelle
**(74)** Griffith Hack

---

**(71)** Genzyme Corporation
**(11)** AU-B-2019262624
**(21)** 2019262624 **(22)** 03.05.2019
**(54)** Perfusion bioreactor with filtration systems
**(51)** Int. Cl.
***C12M 1/00*** ( 2006.01 )
***C12M 1/36*** ( 2006.01 )
**(87)** WO2019/213567
**(31)** 62/667,319 **(32)** 04.05.18 **(33)** US
**(43)** 07.11.2019
**(44)** 01.08.2024
**(72)** LU, Jiuyi; WALTHER, Jason; WANG, Jonathan; CHEN, Kevin Victor
**(74)** Griffith Hack

---

**(71)** Genzyme Corporation
**(11)** AU-B-2021200988
**(21)** 2021200988 **(22)** 15.02.2021
**(54)** Gene therapy for retinitis pigmentosa
**(51)** Int. Cl.
***A61K 48/00*** ( 2006.01 )
***A61K 31/7105*** ( 2006.01 )
***C12N 15/86*** ( 2006.01 )
**(43)** 11.03.2021
**(44)** 01.08.2024
**(62)** 2015230942
**(72)** O'RIORDAN, Catherine; ADAMOWICZ, Matthew
**(74)** Griffith Hack

---

**(71)** Geobrugg AG
**(11)** AU-B-2023241265
**(21)** 2023241265 **(22)** 03.10.2023
**(54)** Resin injection device, system and method, use of the resin injection system, underground rock drilling machine, and rock anchor installation method
**(51)** Int. Cl.
***E21D 20/02*** ( 2006.01 )
***E21D 20/00*** ( 2006.01 )
**(43)** 01.08.2024
**(44)** 01.08.2024
**(72)** BROWN, Shane John; BRÄNDLE, Rico
**(74)** GLMR

---

**(71)** GeoOptics, Inc.
**(11)** AU-B-2019231115
**(21)** 2019231115 **(22)** 01.03.2019
**(54)** Symmetrical multistatic radar constellation for earth observation
**(51)** Int. Cl.
***G01S 7/35*** ( 2006.01 )
***G01S 13/00*** ( 2006.01 )
**(87)** WO2019/173149
**(31)** 15/912,041 **(32)** 05.03.18 **(33)** US
**(43)** 12.09.2019
**(44)** 01.08.2024
**(72)** YUNCK, Thomas Patrick
**(74)** Spruson & Ferguson

---

**(71)** Getac Technology Corporation
**(11)** AU-B-2023200643
**(21)** 2023200643 **(22)** 07.02.2023
**(54)** Heat Dissipation Device And Control Method Thereof
**(51)** Int. Cl.
***F24F 11/74*** ( 2018.01 )
***F04D 27/00*** ( 2006.01 )
***G05D 23/19*** ( 2006.01 )
***H01L 23/34*** ( 2006.01 )
***H05K 7/20*** ( 2006.01 )
**(31)** 202211317137.0 **(32)** 26.10.22 **(33)** CN
**(43)** 16.05.2024
**(44)** 01.08.2024
**(72)** CHIU, Chia-Chang
**(74)** WRAYS PTY LTD

---

**(71)** Giant Manufacturing Co., Ltd.
**(11)** AU-B-2023204324
**(21)** 2023204324 **(22)** 05.07.2023
**(54)** BICYCLE SHOCK ABSORBER STRUCTURE AND BICYCLE
**(51)** Int. Cl.
***B62K 25/04*** ( 2006.01 )
***B60G 17/06*** ( 2006.01 )
**(31)** 111125291 **(32)** 06.07.22 **(33)** TW
**(43)** 25.01.2024
**(44)** 01.08.2024
**(72)** SIE, Zong-Han
**(74)** Halfords IP

---

**(71)** GIANT MANUFACTURING CO., LTD.
**(11)** AU-B-2022252844
**(21)** 2022252844 **(22)** 14.10.2022
**(54)** BICYCLE CONTROL DEVICE
**(51)** Int. Cl.
***B62K 23/06*** ( 2006.01 )
***B62M 25/04*** ( 2006.01 )
**(31)** 110212194 **(32)** 15.10.21 **(33)** TW
**(43)** 04.05.2023
**(44)** 01.08.2024
**(72)** CHUANG, Cheng-Ru
**(74)** Churchill Attorneys

---

**Gilead Sciences, Inc. see Janssen Sciences Ireland Unlimited Company**
**(21)** 2018304373

---

**(71)** GILEAD SCIENCES, INC.
**(11)** AU-B-2022263410
**(21)** 2022263410 **(22)** 19.04.2022
**(54)** CARBOXY-BENZIMIDAZOLE GLP-1R MODULATING COMPOUNDS
**(51)** Int. Cl.
***C07D 401/10*** ( 2006.01 )
***A61K 31/4439*** ( 2006.01 )
***A61K 31/444*** ( 2006.01 )
***A61K 31/497*** ( 2006.01 )
***A61K 31/4985*** ( 2006.01 )
***A61K 31/506*** ( 2006.01 )
***A61K 31/5377*** ( 2006.01 )
***A61P 1/16*** ( 2006.01 )
***A61P 3/04*** ( 2006.01 )
***A61P 3/10*** ( 2006.01 )
***C07D 401/14*** ( 2006.01 )
***C07D 405/14*** ( 2006.01 )
***C07D 409/14*** ( 2006.01 )

## Applications Accepted - Name Index cont'd

***C07D 413/14*** ( 2006.01 )
***C07D 471/04*** ( 2006.01 )
***C07D 471/08*** ( 2006.01 )
***C07D 487/04*** ( 2006.01 )
***C07D 491/048*** ( 2006.01 )
***C07D 493/04*** ( 2006.01 )
***C07D 493/08*** ( 2006.01 )
***C07D 493/10*** ( 2006.01 )
**(87)** WO2022/225941
**(31)** 63/177,778 **(32)** 21.04.21 **(33)** US
63/286,475 06.12.21 US
**(43)** 27.10.2022
**(44)** 01.08.2024
**(72)** ARMSTRONG, Megan K.; CASSIDY, James S.; CHIN, Elbert; CHOU, Chienhung; COTTELL, Jeromy J.; HUNG, Chao-I; KOLAHDOUZAN, Kavoos; LIN, David W.; MITCHELL, Michael L.; ROBERTS, Ezra; SCHROEDER, Scott D.; SHAPIRO, Nathan D.; TAYLOR, James G.; THOMAS-TRAN, Rhiannon; WRIGHT, Nathan E.; YANG, Zheng-Yu
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Giuliani S.p.A.
**(11)** AU-B-2018309342
**(21)** 2018309342 **(22)** 02.08.2018
**(54)** A synergistic composition as a promoter of autophagy
**(51)** Int. Cl.
***A61K 36/53*** ( 2006.01 )
***A61K 8/00*** ( 2006.01 )
***A61K 31/132*** ( 2006.01 )
***A61K 31/4188*** ( 2006.01 )
***A61P 17/14*** ( 2006.01 )
**(87)** WO2019/025548
**(31)** 102017000089680 **(32)** 03.08.17 **(33)** IT
**(43)** 07.02.2019
**(44)** 01.08.2024
**(72)** GIULIANI, Giammaria; PAUS, Ralf; GRIMALDI, Benedetto; MARZANI, Barbara; BARONI, Sergio
**(74)** Spruson & Ferguson

---

**(71)** Gmax Biopharm LLC
**(11)** AU-B-2017273959
**(21)** 2017273959 **(22)** 27.05.2017
**(54)** ETAR antibody, pharmaceutical composition and use thereof
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61P 9/12*** ( 2006.01 )
***A61P 11/00*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C12N 15/13*** ( 2006.01 )
**(87)** WO2017/206840
**(31)** 201610376600.7 **(32)** 31.05.16 **(33)** CN
201610954533.2 27.10.16 CN
**(43)** 07.12.2017
**(44)** 01.08.2024
**(72)** Zhang, Cheng; Fan, Kesuo; Guo, Yong; Yao, Chenjiang; Zhang, Hua; Wang, Xiaofeng; Jing, Shuqian
**(74)** FB Rice Pty Ltd

---

**(71)** GMT International
**(11)** AU-B-2018366953
**(21)** 2018366953 **(22)** 07.11.2018
**(54)** Cartridge for filtering contaminated water
**(51)** Int. Cl.
***B01D 35/30*** ( 2006.01 )
***B01D 29/56*** ( 2006.01 )
***C02F 1/00*** ( 2006.01 )
**(87)** WO2019/096650
**(31)** 1760697 **(32)** 14.11.17 **(33)** FR
**(43)** 23.05.2019
**(44)** 01.08.2024
**(72)** MACHOU, Yves
**(74)** AUSTRALASIA IP PTY LTD

---

**(71)** Gomboc, LLC
**(11)** AU-B-2022246415
**(21)** 2022246415 **(22)** 06.10.2022
**(54)** Magnetic intervertebral disc replacement devices and methods thereof
**(51)** Int. Cl.
***A61F 2/44*** ( 2006.01 )
**(43)** 03.11.2022
**(44)** 01.08.2024
**(62)** 2021201064
**(72)** COOK, Stephen D.; HARRISON, Michael C.; NOLAN, Liam P.; PATRON, Laura P.; SALKELD, Samantha L.
**(74)** FB Rice Pty Ltd

---

**(71)** Google LLC
**(11)** AU-B-2023201871
**(21)** 2023201871 **(22)** 27.03.2023
**(54)** AUTOMATED ASSISTANT FOR GENERATING, IN RESPONSE TO A REQUEST FROM A USER, APPLICATION INPUT CONTENT USING APPLICATION DATA FROM OTHER SOURCES
**(51)** Int. Cl.
***G06F 3/16*** ( 2006.01 )
***G06F 9/54*** ( 2006.01 )
***G06F 16/338*** ( 2019.01 )
*G10L 15/26* ( 2006.01 )
**(43)** 04.05.2023
**(44)** 01.08.2024
**(62)** 2019444436
**(72)** VLASYUK, Bohdan; BEHZADI, Behshad; BERTSCHLER, Mario; BURAKOV, Denis; COTTING, Daniel; GOLIKOV, Michael; MIRELMANN, Lucas; CHENG, Steve; NAZAROV, Sergey; SABUR, Zaheed; LEE, Jonathan; TERRENGHI, Lucia; ZUMBRUNNEN, Adrian
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** GOOGLE LLC
**(11)** AU-B-2022261838
**(21)** 2022261838 **(22)** 12.04.2022
**(54)** JOSEPHSON PARAMETRIC DEVICES HAVING SAME-FREQUENCY PORTS
**(51)** Int. Cl.
***G06N 10/40*** ( 2022.01 )
***H03F 19/00*** ( 2006.01 )
**(87)** WO2022/225751
**(31)** 63/177,174 **(32)** 20.04.21 **(33)** US
**(43)** 27.10.2022
**(44)** 01.08.2024
**(72)** NAAMAN, Ofer
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** GOOGLE LLC
**(11)** AU-B-2022264769
**(21)** 2022264769 **(22)** 26.04.2022
**(54)** QUANTUM DATA PROCESSING SYSTEM
**(51)** Int. Cl.
***G06N 10/60*** ( 2022.01 )
***G06N 3/04*** ( 2023.01 )
**(87)** WO2022/232140
**(31)** 63/180,445 **(32)** 27.04.21 **(33)** US
**(43)** 03.11.2022
**(44)** 01.08.2024
**(72)** MCCLEAN, Jarrod Ryan
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Graco Minnesota Inc.
**(11)** AU-B-2018240380
**(21)** 2018240380 **(22)** 22.03.2018
**(54)** Dispensing meter for fluid dispensing
**(51)** Int. Cl.
***B67D 7/16*** ( 2010.01 )
***B67D 7/36*** ( 2010.01 )
***B67D 7/42*** ( 2010.01 )
**(87)** WO2018/175793
**(31)** 62/558,992 **(32)** 15.09.17 **(33)** US
15/928,828 22.03.18 US
15/928,797 22.03.18 US
**(43)** 27.09.2018
**(44)** 01.08.2024
**(72)** Bloom, Michael E.; Bauck, Mark L.; Ebben, James R.; Highland, Glenn E.; Kahler, Bradley G.; Kuschel, Anthony J.; Lorden, David J.; Norman, Shane A.; Paar, Benjamin J.
**(74)** Spruson & Ferguson

---

**(71)** GrainSense Oy
**(11)** AU-B-2019213498
**(21)** 2019213498 **(22)** 29.01.2019
**(54)** A method for calibrating an integrating cavity
**(51)** Int. Cl.
***G01J 3/00*** ( 2006.01 )
***G01N 21/25*** ( 2006.01 )
***G01N 21/27*** ( 2006.01 )
***G01N 21/31*** ( 2006.01 )
**(87)** WO2019/149997
**(31)** 20185082 **(32)** 30.01.18 **(33)** FI
**(43)** 08.08.2019
**(44)** 01.08.2024
**(72)** MARBACH, Ralf
**(74)** Griffith Hack

---

**(71)** Graphic Packaging International, LLC
**(11)** AU-B-2020336075
**(21)** 2020336075 **(22)** 26.08.2020
**(54)** Carton with tamper-evident feature
**(51)** Int. Cl.
***B65D 5/42*** ( 2006.01 )
***B65D 77/02*** ( 2006.01 )
**(87)** WO2021/041482

## Applications Accepted - Name Index cont'd

**(31)** 62/892,203 **(32)** 27.08.19 **(33)** US
62/895,603 04.09.19 US
**(43)** 04.03.2021
**(44)** 01.08.2024
**(72)** PINKSTONE, Felicia A.; RYAN, Michale D.
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Great North Research And Innovation Ltd
**(11)** AU-B-2019378143
**(21)** 2019378143 **(22)** 11.11.2019
**(54)** Apparatus
**(51)** Int. Cl.
***G01N 35/10*** ( 2006.01 )
**(87)** WO2020/099844
**(31)** 1818478.8 **(32)** 13.11.18 **(33)** GB
**(43)** 22.05.2020
**(44)** 01.08.2024
**(72)** GERARDOS, Georgios; HAWORTH, Dan; SCOTT, Paul; HARRIS, Will; SHELFORD, Leigh
**(74)** Michael Buck IP

---

**Griffith, D.L. see Data.world, Inc.**
**(21)** 2022218590

---

**Griffith Hack see Milwaukee Electric Tool Corporation**
**(21)** 2023203750

---

**(71)** Guangdong Neat Packaging Co., LTD.
**(11)** AU-B-2023208218
**(21)** 2023208218 **(22)** 29.07.2023
**(54)** Spray pump
**(51)** Int. Cl.
***B05B 11/02*** ( 2023.01 )
***B65D 83/14*** ( 2006.01 )
**(31)** 202222417761X **(32)** 13.09.22 **(33)** CN
**(43)** 28.03.2024
**(44)** 01.08.2024
**(72)** MEI, Yuanhong; ZENG, Zhiyun
**(74)** A.P.T. Patent and Trade Mark Attorneys

---

**(71)** Guangdong OPPO Mobile Telecommunications Corp.,Ltd.
**(11)** AU-B-2018436323
**(21)** 2018436323 **(22)** 09.08.2018
**(54)** Method for transmitting information, terminal device and network device
**(51)** Int. Cl.
***H04W 72/12*** ( 2009.01 )
**(87)** WO2020/029199
**(43)** 13.02.2020
**(44)** 01.08.2024
**(72)** LIN, Yanan
**(74)** Spruson & Ferguson

---

**(71)** GUANGDONG OPPO MOBILE TELECOMMUNICATIONS CORP.,LTD.
**(11)** AU-B-2018436718
**(21)** 2018436718 **(22)** 17.08.2018
**(54)** Signal transmission method, terminal device and network device
**(51)** Int. Cl.
***H04W 72/04*** ( 2009.01 )
**(87)** WO2020/034203
**(43)** 20.02.2020
**(44)** 01.08.2024
**(72)** TANG, Hai
**(74)** Spruson & Ferguson

---

**(71)** GUANGDONG OPPO MOBILE TELECOMMUNICATIONS CORP., LTD.
**(11)** AU-B-2023202428
**(21)** 2023202428 **(22)** 20.04.2023
**(54)** Wireless communication method and device
**(51)** Int. Cl.
***H04W 72/04*** ( 2023.01 )
**(43)** 11.05.2023
**(44)** 01.08.2024
**(62)** 2017418045
**(72)** Zhang, Zhi
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** GUANGZHOU OCUSUN OPHTHALMIC BIOTECHNOLOGY CO., LTD.
**(11)** AU-B-2021433515
**(21)** 2021433515 **(22)** 08.06.2021
**(54)** PRODRUG OF CELECOXIB, PREPARATION METHOD THEREFOR AND APPLICATION THEREOF
**(51)** Int. Cl.
***A61K 47/54*** ( 2017.01 )
***A61K 9/08*** ( 2006.01 )
***A61K 31/635*** ( 2006.01 )
***A61P 27/02*** ( 2006.01 )
***A61P 29/00*** ( 2006.01 )
**(87)** WO2022/193449
**(31)** 202110276245.7 **(32)** 15.03.21 **(33)** CN
**(43)** 22.09.2022
**(44)** 01.08.2024
**(72)** WANG, Yandong; LIU, Guoqiang; LIU, Wei
**(74)** Madderns Pty Ltd

---

**(71)** GW Research Limited
**(11)** AU-B-2019205117
**(21)** 2019205117 **(22)** 02.01.2019
**(54)** Pharmaceutical composition comprising a cannabinoid
**(51)** Int. Cl.
***A61K 9/48*** ( 2006.01 )
***A61K 31/352*** ( 2006.01 )
**(87)** WO2019/135075
**(31)** 1800072.9 **(32)** 03.01.18 **(33)** GB
**(43)** 11.07.2019
**(44)** 01.08.2024
**(72)** WILKHU, Jitinder; BENDER, Johan
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** GW Research Limited
**(11)** AU-B-2019205118
**(21)** 2019205118 **(22)** 02.01.2019
**(54)** Modified release composition comprising a cannabinoid
**(51)** Int. Cl.
***A61K 9/48*** ( 2006.01 )
***A61K 9/28*** ( 2006.01 )
***A61K 31/352*** ( 2006.01 )
**(87)** WO2019/135076
**(31)** 1800073.7 **(32)** 03.01.18 **(33)** GB
**(43)** 11.07.2019
**(44)** 01.08.2024
**(72)** WILKHU, Jitinder; BENDER, Johan; COLLINS, Matthew
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** H2GO Power Ltd
**(11)** AU-B-2019285846
**(21)** 2019285846 **(22)** 14.06.2019
**(54)** Hydrogen storage device and method of producing a hydrogen storage device
**(51)** Int. Cl.
***C01B 3/00*** ( 2006.01 )
***F28F 3/02*** ( 2006.01 )
**(87)** WO2019/239141
**(31)** 1809867.3 **(32)** 15.06.18 **(33)** GB
**(43)** 19.12.2019
**(44)** 01.08.2024
**(72)** HAMED, Enass Abo; SPERRIN, Luke; O'DONNELL, Kieran
**(74)** Phillips Ormonde Fitzpatrick

---

**HAIER SMART HOME CO., LTD. see CHONGQING HAIER REFRIGERATION ELECTRIC APPLIANCE CO., LTD.**
**(21)** 2021343158

---

**(71)** HANGZHOU AGS MEDTECH CO., LTD.
**(11)** AU-B-2022208119
**(21)** 2022208119 **(22)** 12.01.2022
**(54)** CLIP DEVICE, CLIP INSTRUMENT, AND CLIP UNLOCKING METHOD
**(51)** Int. Cl.
***A61B 17/12*** ( 2006.01 )
**(87)** WO2022/152187
**(31)** 202110043045.7 **(32)** 13.01.21 **(33)** CN
202110874523.9 30.07.21 CN
**(43)** 21.07.2022
**(44)** 01.08.2024
**(72)** ZHANG, Cheng; SHI, Baiming; YAN, Chao; YAO, Feng
**(74)** Spruson & Ferguson

---

**Hangzhou Grand Biologic Pharmaceutical Inc. see Peg-Bio Biopharm Co., Ltd. (Chongqing)**
**(21)** 2020276510

---

**(71)** HANSHOW TECHNOLOGY CO., LTD.
**(11)** AU-B-2023258451
**(21)** 2023258451 **(22)** 27.04.2023
**(54)** DYNAMIC FREQUENCY ALLOCATION METHOD FOR BASE STATION, SHELF LABEL SYSTEM AND COMPUTER DEVICE
**(51)** Int. Cl.
***G06K 19/077*** ( 2006.01 )
***G06F 18/00*** ( 2023.01 )
***G06K 19/07*** ( 2006.01 )
***G09F 3/20*** ( 2006.01 )
**(87)** WO2023/216898
**(31)** 202210496841.0 **(32)** 09.05.22 **(33)** CN

## Applications Accepted - Name Index cont'd

**(43)** 23.11.2023
**(44)** 01.08.2024
**(72)** LIANG, Min; JIANG, Qi; JI, Yaping
**(74)** Griffith Hack

---

**(71)** Hanwha Corporation
**(11)** AU-B-2022272224
**(21)** 2022272224 **(22)** 03.05.2022
**(54)** Blasting management system for analysis of vibration and fragmentation caused by blasting
**(51)** Int. Cl.
***G06N 20/20*** ( 2019.01 )
***F42D 3/04*** ( 2006.01 )
***F42D 5/00*** ( 2006.01 )
***F42D 99/00*** ( 2009.01 )
***G06N 5/02*** ( 2006.01 )
**(87)** WO2022/240049
**(31)** 10-2021-0060790 **(32)** 11.05.21 **(33)** KR
**(43)** 17.11.2022
**(44)** 01.08.2024
**(72)** LEE, Dong Hee; KUK, Yong Seok
**(74)** WRAYS PTY LTD

---

**(71)** Hanwha Corporation
**(11)** AU-B-2022305655
**(21)** 2022305655 **(22)** 25.10.2022
**(54)** Device and method thereof for monitoring cloud-based electronic detonators
**(51)** Int. Cl.
***G06F 18/25*** ( 2023.01 )
***G06V 20/00*** ( 2022.01 )
***G06V 20/13*** ( 2022.01 )
***H04K 3/00*** ( 2006.01 )
***H04W 4/029*** ( 2018.01 )
***H04W 4/42*** ( 2018.01 )
**(87)** WO2024/090597
**(31)** 10-2022-0138014 **(32)** 25.10.22 **(33)** KR
**(43)** 09.05.2024
**(44)** 01.08.2024
**(72)** LEE, Dong Hee; KUK, Yong Seok; LEE, Jun Pil
**(74)** WRAYS PTY LTD

---

**(71)** HatchTech Group B.V.
**(11)** AU-B-2019286055
**(21)** 2019286055 **(22)** 12.06.2019
**(54)** Egg tray for supporting eggs in an incubation chamber
**(51)** Int. Cl.
***A01K 31/18*** ( 2006.01 )
***A01K 45/00*** ( 2006.01 )
**(87)** WO2019/240576
**(31)** 2021127 **(32)** 15.06.18 **(33)** NL
**(43)** 19.12.2019
**(44)** 01.08.2024
**(72)** METER, Tjitze
**(74)** Griffith Hack

---

**(71)** Haug, T.
**(11)** AU-B-2018314391
**(21)** 2018314391 **(22)** 24.07.2018
**(54)** Remote control arrangement
**(51)** Int. Cl.
***B66C 13/40*** ( 2006.01 )
***G05D 1/00*** ( 2006.01 )
***G08C 17/00*** ( 2006.01 )
**(87)** WO2019/029983
**(31)** 20 2017 104 769.5 **(32)** 09.08.17 **(33)** DE
**(43)** 14.02.2019
**(44)** 01.08.2024
**(72)** HAUG, Thomas
**(74)** Madderns Pty Ltd

---

**(71)** Hazan, S.
**(11)** AU-B-2021241498
**(21)** 2021241498 **(22)** 22.03.2021
**(54)** Methods of preventing and treating COVID-19 infection
**(51)** Int. Cl.
***A61K 31/56*** ( 2006.01 )
***A61K 31/7048*** ( 2006.01 )
***A61K 36/24*** ( 2006.01 )
**(87)** WO2021/194970
**(31)** 62/993,345 **(32)** 23.03.20 **(33)** US
62/993,159 23.03.20 US
62/993,370 23.03.20 US
63/001,161 27.03.20 US
63/002,494 31.03.20 US
63/022,368 08.05.20 US
63/022,371 08.05.20 US
17/026,051 18.09.20 US
63/110,877 06.11.20 US
16/953,674 20.11.20 US
17/114,271 07.12.20 US
**(43)** 30.09.2021
**(44)** 01.08.2024
**(72)** HAZAN, Sabine
**(74)** Griffith Hack

---

**(71)** Henkel AG & Co. KGaA
**(11)** AU-B-2019252471
**(21)** 2019252471 **(22)** 27.03.2019
**(54)** Closure cap for detergent bottles
**(51)** Int. Cl.
***B65D 41/04*** ( 2006.01 )
***B65D 41/26*** ( 2006.01 )
***B65D 47/42*** ( 2006.01 )
***D06F 39/02*** ( 2006.01 )
**(87)** WO2019/197157
**(31)** 10 2018 205 581.5 **(32)** 12.04.18 **(33)** DE
**(43)** 17.10.2019
**(44)** 01.08.2024
**(72)** ORLICH, Bernhard; BORGER, Dannielle Paola; HENNING, Ingomar; CELADA RUIZ, Eduardo
**(74)** Spruson & Ferguson

---

**(71)** Hettich-ONI GmbH & Co. KG
**(11)** AU-B-2018364352
**(21)** 2018364352 **(22)** 06.11.2018
**(54)** Wing fitting for a piece of furniture, side wall of a body of a piece of furniture and piece of furniture comprising a side wall
**(51)** Int. Cl.
***E05D 7/04*** ( 2006.01 )
***E05D 15/40*** ( 2006.01 )
***E05F 1/10*** ( 2006.01 )
*E05D 3/16* ( 2006.01 )
**(87)** WO2019/091967
**(31)** 10 2017 126 367.5 **(32)** 10.11.17 **(33)** DE
**(43)** 16.05.2019
**(44)** 01.08.2024
**(72)** NORDIEKER, Martin; POISCHBEG, Jens; TASCHE, Michael; NOLTE, Karsten
**(74)** FOUNDRY INTELLECTUAL PROPERTY PTY LTD

---

**(71)** Hilti Aktiengesellschaft
**(11)** AU-B-2019343453
**(21)** 2019343453 **(22)** 09.09.2019
**(54)** Use of salts as accelerators in an epoxy resin compound for chemical fastening
**(51)** Int. Cl.
***C08G 59/68*** ( 2006.01 )
***C09J 163/00*** ( 2006.01 )
**(87)** WO2020/058018
**(31)** 18195409.0 **(32)** 19.09.18 **(33)** EP
**(43)** 26.03.2020
**(44)** 01.08.2024
**(72)** BEHRENS, Nicole; BORNSCHLEGL, Alexander; PFEIL, Armin
**(74)** Spruson & Ferguson

---

**(71)** HONOR SYSTEMS LLC
**(11)** AU-B-2022286923
**(21)** 2022286923 **(22)** 31.05.2022
**(54)** SOFTWARE UPDATER
**(51)** Int. Cl.
***G06F 8/10*** ( 2018.01 )
***G06F 8/71*** ( 2018.01 )
***G06F 8/75*** ( 2018.01 )
**(87)** WO2022/256350
**(31)** 17/336,260 **(32)** 01.06.21 **(33)** US
**(43)** 08.12.2022
**(44)** 01.08.2024
**(72)** DAVIDSON, Stephen
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Horton, Inc.
**(11)** AU-B-2019426844
**(21)** 2019426844 **(22)** 18.12.2019
**(54)** Pump and wiper assembly, associated viscous clutch, and associated method
**(51)** Int. Cl.
***F16D 35/02*** ( 2006.01 )
***F16H 47/06*** ( 2006.01 )
**(87)** WO2020/159637
**(31)** 62/799,232 **(32)** 31.01.19 **(33)** US
**(43)** 06.08.2020
**(44)** 01.08.2024
**(72)** HENNESSY, David R.
**(74)** FB Rice Pty Ltd

---

**(71)** Huawei Technologies Co., Ltd.
**(11)** AU-B-2021305753
**(21)** 2021305753 **(22)** 03.07.2021
**(54)** Link error recovery method and apparatus
**(51)** Int. Cl.
***H04L 1/18*** ( 2006.01 )
**(87)** WO2022/007728
**(31)** 202010664563.6 **(32)** 10.07.20 **(33)** CN
202010781257.0 06.08.20 CN
**(43)** 13.01.2022

## Applications Accepted - Name Index cont'd

**(44)** 01.08.2024
**(72)** LI, Yiqing; LI, Yunbo; GUO, Yuchen; GAN, Ming
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Huawei Technologies Co., Ltd.
**(11)** AU-B-2021319660
**(21)** 2021319660 **(22)** 05.08.2021
**(54)** Method, system and apparatus for determining user plane security algorithm
**(51)** Int. Cl.
***H04W 12/00*** ( 2021.01 )
**(87)** WO2022/028538
**(31)** 202010785355.1 **(32)** 06.08.20 **(33)** CN
**(43)** 10.02.2022
**(44)** 01.08.2024
**(72)** LEI, Ao; LI, He; WU, Yizhuang; WU, Rong
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Huawei Technologies Co., Ltd.
**(11)** AU-B-2021321730
**(21)** 2021321730 **(22)** 01.06.2021
**(54)** Charging processing method, system, and related device
**(51)** Int. Cl.
***H04W 4/24*** ( 2018.01 )
**(87)** WO2022/028076
**(31)** 202010774810.8 **(32)** 04.08.20 **(33)** CN
**(43)** 10.02.2022
**(44)** 01.08.2024
**(72)** CHAI, Xiaoqian
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** HungaroControl Zrt.
**(11)** AU-B-2018449821
**(21)** 2018449821 **(22)** 20.12.2018
**(54)** Procedure of determining aircraft position and arrangement for carrying out the procedure
**(51)** Int. Cl.
***G01S 5/10*** ( 2006.01 )
*G08G 5/00* ( 2006.01 )
**(87)** WO2020/099919
**(31)** P1800386 **(32)** 16.11.18 **(33)** HU
P1800427 13.12.18 HU
**(43)** 22.05.2020
**(44)** 01.08.2024
**(72)** BLAZSOVSZKY, György
**(74)** LAMINAR IP PTY LTD

---

**(71)** Hunter Douglas Industries B.V.
**(11)** AU-B-2018253645
**(21)** 2018253645 **(22)** 29.10.2018
**(54)** Control mechanism for a double pitch blind and a double pitch blind assembly
**(51)** Int. Cl.
***E06B 9/34*** ( 2006.01 )
**(31)** 17199445.2 **(32)** 31.10.17 **(33)** EP
**(43)** 16.05.2019
**(44)** 01.08.2024
**(72)** Slobbe, Wilfred; Ponsen, Robert Jan
**(74)** Spruson & Ferguson

---

**Hurt, B.A. see Data.world, Inc.**
**(21)** 2022218590

---

**(71)** Husqvarna AB
**(11)** AU-B-2019316523
**(21)** 2019316523 **(22)** 27.06.2019
**(54)** Two-stroke engine control
**(51)** Int. Cl.
***F02D 41/00*** ( 2006.01 )
***F02D 9/02*** ( 2006.01 )
*B23D 45/16* ( 2006.01 )
*F02B 63/02* ( 2006.01 )
**(87)** WO2020/027711
**(31)** PCT/SE2018/050785 **(32)** 02.08.18 **(33)** SE
**(43)** 06.02.2020
**(44)** 01.08.2024
**(72)** LAWENIUS, Mats; CARLSSON, Bo
**(74)** Spruson & Ferguson

---

**(71)** Hy-Tech Drilling Ltd
**(11)** AU-B-2018272327
**(21)** 2018272327 **(22)** 22.05.2018
**(54)** Drill hole inner tube plug
**(51)** Int. Cl.
***E21B 33/13*** ( 2006.01 )
***E21B 7/04*** ( 2006.01 )
***E21B 33/12*** ( 2006.01 )
**(87)** WO2018/213917
**(31)** 62/509,642 **(32)** 22.05.17 **(33)** US
**(43)** 29.11.2018
**(44)** 01.08.2024
**(72)** Johnson, Curtis; Seilstad, Mark; Christie, Alex
**(74)** James & Wells Intellectual Property

---

**(71)** I4F LICENSING NV
**(11)** AU-B-2022315518
**(21)** 2022315518 **(22)** 19.07.2022
**(54)** MULTI-PURPOSE TILE SYSTEM, TILE COVERING, AND TILE
**(51)** Int. Cl.
***E04F 15/02*** ( 2006.01 )
***E04F 15/10*** ( 2006.01 )
**(87)** WO2023/001834
**(31)** 2028776 **(32)** 19.07.21 **(33)** NL
**(43)** 26.01.2023
**(44)** 01.08.2024
**(72)** BOUCKÉ, Eddy Alberic; DEVOS, Pieter Renaat Karel
**(74)** IP GATEWAY PATENT & TRADE MARK ATTORNEYS PTY LTD

---

**(71)** Icahn School of Medicine at Mount Sinai
**(11)** AU-B-2019255206
**(21)** 2019255206 **(22)** 16.04.2019
**(54)** Method and kits for prediction of acute rejection and renal allograft loss using pre-transplant transcriptomic signatures in recipient blood
**(51)** Int. Cl.
***A61K 31/365*** ( 2006.01 )
***A61K 31/436*** ( 2006.01 )
***A61K 31/52*** ( 2006.01 )
***A61K 31/573*** ( 2006.01 )
***A61K 38/13*** ( 2006.01 )
***C12Q 1/68*** ( 2018.01 )
**(87)** WO2019/204267
**(31)** 62/658,066 **(32)** 16.04.18 **(33)** US
**(43)** 24.10.2019
**(44)** 01.08.2024
**(72)** MURPHY, Barbara; ZHANG, Weijia
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** IGT
**(11)** AU-B-2018271271
**(21)** 2018271271 **(22)** 27.11.2018
**(54)** Cashless Gaming Through Virtual Ticketing in a Gaming System
**(51)** Int. Cl.
***G07F 17/32*** ( 2006.01 )
***G06Q 20/36*** ( 2012.01 )
***G06Q 20/40*** ( 2012.01 )
**(31)** 15/859,553 **(32)** 31.12.17 **(33)** US
**(43)** 18.07.2019
**(44)** 01.08.2024
**(72)** Higgins, Kevin; Petersen, Erik
**(74)** Clark Intellectual Property Pty Ltd

---

**(71)** Illinois Tool Works Inc.
**(11)** AU-B-2018331268
**(21)** 2018331268 **(22)** 30.08.2018
**(54)** Threaded fastener
**(51)** Int. Cl.
***F16B 35/06*** ( 2006.01 )
***F16B 25/00*** ( 2006.01 )
**(87)** WO2019/055226
**(31)** 62/558,084 **(32)** 13.09.17 **(33)** US
62/633,181 21.02.18 US
16/115,797 29.08.18 US
**(43)** 21.03.2019
**(44)** 01.08.2024
**(72)** TRUONG, Victor; DILL, Michael C.; GONG, Yongping; LATZ, Mark D.
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Illinois Tool Works Inc.
**(11)** AU-B-2018336626
**(21)** 2018336626 **(22)** 22.08.2018
**(54)** Powered fastener driving tool
**(51)** Int. Cl.
***B25C 1/18*** ( 2006.01 )
**(87)** WO2019/060077
**(31)** 62/562,083 **(32)** 22.09.17 **(33)** US
16/103,348 14.08.18 US
**(43)** 28.03.2019
**(44)** 01.08.2024
**(72)** JABLONSKI, David W.; POPOVICH, Michael S.
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Illinois Tool Works Inc.
**(11)** AU-B-2018367395
**(21)** 2018367395 **(22)** 02.11.2018
**(54)** Powered fastener driving tool having hook assemblies
**(51)** Int. Cl.
***B25C 1/10*** ( 2006.01 )
**(87)** WO2019/099209
**(31)** 62/585,847 **(32)** 14.11.17 **(33)** US
16/177,731 01.11.18 US
**(43)** 23.05.2019

## Applications Accepted - Name Index cont'd

**(44)** 01.08.2024
**(72)** JABLONSKI, David W.; EATON, Edward; HURVITZ, Brian; LEE, Joey
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Illustris Pharmaceuticals, Inc.
**(11)** AU-B-2018347514
**(21)** 2018347514 **(22)** 11.10.2018
**(54)** Methods and compositions for topical delivery
**(51)** Int. Cl.
***A61K 9/06*** ( 2006.01 )
***A61K 9/70*** ( 2006.01 )
***A61K 38/00*** ( 2006.01 )
***A61K 38/39*** ( 2006.01 )
***A61P 1/02*** ( 2006.01 )
***A61P 1/04*** ( 2006.01 )
***A61P 13/02*** ( 2006.01 )
**(87)** WO2019/075263
**(31)** 62/598,796 **(32)** 14.12.17 **(33)** US
62/598,828 14.12.17 US
62/571,049 11.10.17 US
62/598,786 14.12.17 US
62/571,025 11.10.17 US
62/571,038 11.10.17 US
**(43)** 18.04.2019
**(44)** 01.08.2024
**(72)** WAUGH, Jacob M.; DAKE, Michael D.
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** I-Mab Biopharma Co., Ltd.; ABL Bio Inc.
**(11)** AU-B-2020329466
**(21)** 2020329466 **(22)** 12.08.2020
**(54)** Anti-claudin 18.2 and anti-4-1BB bispecific antibodies and uses thereof
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C12N 15/13*** ( 2006.01 )
**(87)** WO2021/027850
**(31)** PCT/CN2019/100162 **(32)** 12.08.19 **(33)** CN
PCT/CN2019/104508 05.09.19 CN
PCT/CN2020/071954 14.01.20 CN
PCT/CN2020/087968 30.04.20 CN
**(43)** 18.02.2021
**(44)** 01.08.2024
**(72)** JIANG, Wenqing; FANG, Lei; WANG, Zhengyi; GUO, Bingshi; PARK, Eunyoung; SUNG, Eunsil; SUNG, Byungje
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Impulse Downhole Solutions Ltd.
**(11)** AU-B-2023201910
**(21)** 2023201910 **(22)** 29.03.2023
**(54)** FLOW-THROUGH PULSING ASSEMBLY FOR USE IN DOWNHOLE OPERATIONS
**(51)** Int. Cl.
***E21B 7/24*** ( 2006.01 )
**(43)** 04.05.2023
**(44)** 01.08.2024
**(62)** 2017292912
**(72)** Lorenson, Troy; Leroux, Kevin; Parenteau, Dwayne; Kinsella, Douglas
**(74)** Collison & Co

---

**(71)** Incyte Holdings Corporation
**(11)** AU-B-2022275538
**(21)** 2022275538 **(22)** 28.11.2022
**(54)** Heteroaryl substituted pyrrolo[2,3-b]pyridines and pyrrolo[2,3-b]pyrimidines as Janus kinase inhibitors
**(51)** Int. Cl.
***C07D 471/04*** ( 2006.01 )
***A61K 31/395*** ( 2006.01 )
***A61P 17/00*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***A61P 37/00*** ( 2006.01 )
***C07D 487/04*** ( 2006.01 )
**(43)** 19.01.2023
**(44)** 01.08.2024
**(62)** 2020294336
**(72)** Rogers, James D.; Shepard, Stacey; Maduskuie, Thomas P.; Wang, Haisheng; Falahatpisheh, Nikoo; Rafalski, Maria; Arvanitis, Argyrios G.; Storace, Louis; Jalluri, Ravi Kumar; Fridman, Jordan S.; Vaddi, Krishna
**(74)** Houlihan Intellectual Property Pty Ltd

---

**(71)** INCYTE HOLDINGS CORPORATION
**(11)** AU-B-2022291504
**(21)** 2022291504 **(22)** 21.12.2022
**(54)** SUBSTITUTED TRICYCLIC COMPOUNDS AS FGFR INHIBITORS
**(51)** Int. Cl.
***C07D 471/14*** ( 2006.01 )
***A61K 31/4375*** ( 2006.01 )
***A61K 31/519*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07D 471/22*** ( 2006.01 )
***C07D 491/22*** ( 2006.01 )
***C07D 495/14*** ( 2006.01 )
***C07D 498/14*** ( 2006.01 )
**(43)** 02.02.2023
**(44)** 01.08.2024
**(62)** 2020270520
**(72)** WU, Liangxing; ZHANG, Colin; HE, Chunhong; SUN, Yaping; LU, Liang; QIAN, Ding-Quan; XU, Meizhong; ZHUO, Jincong; YAO, Wenqing
**(74)** Houlihan Intellectual Property Pty Ltd

---

**(71)** indurad GmbH
**(11)** AU-B-2021201833
**(21)** 2021201833 **(22)** 24.03.2021
**(54)** Method and Apparatus for the Controlled Charging and Inspection of Blasting Boreholes
**(51)** Int. Cl.
***F42D 1/08*** ( 2006.01 )
***F42D 1/10*** ( 2006.01 )
***F42D 3/04*** ( 2006.01 )
**(31)** 20 165 157.7 **(32)** 24.03.20 **(33)** EP
**(43)** 21.10.2021
**(44)** 01.08.2024
**(72)** Winkel, Reik
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** INFLOWCONTROL AS
**(11)** AU-B-2021372646
**(21)** 2021372646 **(22)** 25.10.2021
**(54)** A PRESSURE ACTUATED VALVE FOR USE DURING INSTALLATION AND COMMISSION OF A PRODUCTION STRING
**(51)** Int. Cl.
***E21B 23/00*** ( 2006.01 )
***E21B 34/10*** ( 2006.01 )
***E21B 43/12*** ( 2006.01 )
**(87)** WO2022/090132
**(31)** 20201163 **(32)** 26.10.20 **(33)** NO
**(43)** 05.05.2022
**(44)** 01.08.2024
**(72)** WERSWICK, Bjørnar; NOMME, Christian
**(74)** Griffith Hack

---

**(71)** Inkerz Pty Ltd
**(11)** AU-B-2022203118
**(21)** 2022203118 **(22)** 10.05.2022
**(54)** Computer-implemented method for extracting content from a physical writing surface
**(51)** Int. Cl.
***G06V 10/22*** ( 2022.01 )
***G06T 7/13*** ( 2017.01 )
***G06T 7/181*** ( 2017.01 )
***G06T 7/33*** ( 2017.01 )
***G06V 10/24*** ( 2022.01 )
***G06V 10/26*** ( 2022.01 )
***G06V 30/10*** ( 2022.01 )
***G06V 30/14*** ( 2022.01 )
***G06V 30/148*** ( 2022.01 )
***G06V 30/414*** ( 2022.01 )
***G06V 30/418*** ( 2022.01 )
**(43)** 16.06.2022
**(44)** 01.08.2024
**(62)** PCT/AU2020/051227
**(72)** KOLAHDOUZAN, Vahid; AMINAIEE, Abdolhossein; KOLAHDOUZAN, Masoud
**(74)** Spruson & Ferguson

---

**(71)** Innate Pharma
**(11)** AU-B-2017345203
**(21)** 2017345203 **(22)** 19.10.2017
**(54)** Treatment with anti-KIR3DL2 agents
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07K 16/30*** ( 2006.01 )
*C07K 16/46* ( 2006.01 )
**(87)** WO2018/073363
**(31)** 62/410,880 **(32)** 21.10.16 **(33)** US
**(43)** 26.04.2018
**(44)** 01.08.2024
**(72)** Paturel, Carine; Sicard, Hélène
**(74)** AJ PARK

---

**(71)** INNOMOTICS GMBH
**(11)** AU-B-2021446393
**(21)** 2021446393 **(22)** 21.05.2021

## Applications Accepted - Name Index cont'd

**(54)** ARC FAULT SOLUTION FOR MULTIPLE ELECTRIC DEVICES
**(51)** Int. Cl.
***H02H 1/00*** ( 2006.01 )
**(87)** WO2022/245375
**(43)** 24.11.2022
**(44)** 01.08.2024
**(72)** IONESCU, Bogdan Cristian
**(74)** Spruson & Ferguson

---

**(71)** INNOVARIUS CORP.
**(11)** AU-B-2018390178
**(21)** 2018390178 **(22)** 19.12.2018
**(54)** Apparatus for creating resonant standing waves in biological tissue
**(51)** Int. Cl.
***A61N 1/40*** ( 2006.01 )
***A61N 1/04*** ( 2006.01 )
***A61N 1/06*** ( 2006.01 )
***A61N 1/36*** ( 2006.01 )
***A61N 7/00*** ( 2006.01 )
**(87)** WO2019/121905
**(31)** 62/607,597 **(32)** 19.12.17 **(33)** US
**(43)** 27.06.2019
**(44)** 01.08.2024
**(72)** NUNEZ, Albert; MILLER, Eric; MINKER, Gary; NUNEZ, Alex
**(74)** AJ PARK

---

**INSERM (Institut National de la Sante et de la Recherche Medicale) see Institut Curie**
**(21)** 2021250987

---

**(71)** Institut Curie; INSERM (Institut National de la Sante et de la Recherche Medicale)
**(11)** AU-B-2021250987
**(21)** 2021250987 **(22)** 15.10.2021
**(54)** Methods for detecting inactivation of the homologous recombination pathway (BRCA1/2) in human tumors
**(51)** Int. Cl.
***C12Q 1/68*** ( 2018.01 )
**(43)** 18.11.2021
**(44)** 01.08.2024
**(62)** 2019200605
**(72)** STERN, Marc-Henri; MANIE, Elodie; POPOVA, Tatiana
**(74)** Spruson & Ferguson

---

**Institute for Research in Biomedicine (IRB) see Regeneron Pharmaceuticals, Inc.**
**(21)** 2021286279

---

**(71)** Institute of Geochemistry, Chinese Academy of Sciences
**(11)** AU-B-2020323961
**(21)** 2020323961 **(22)** 03.04.2020
**(54)** A method for extracting lithium from carbonate clay type lithium ore based on ion exchange
**(51)** Int. Cl.
***C22B 26/12*** ( 2006.01 )
**(87)** WO2021/036263
**(31)** CN201910788413.3**(32)** 26.08.19 **(33)** CN
**(43)** 01.04.2021
**(44)** 01.08.2024
**(72)** WEN, Hanjie; GU, Hannian; ZHU, Li; LUO, Chongguang; DU, Shengjiang
**(74)** IP Guardian Pty Ltd

---

**(71)** International Business Machines Corporation
**(11)** AU-B-2021294859
**(21)** 2021294859 **(22)** 17.06.2021
**(54)** Superconducting qubit lifetime and coherence improvement via substrate backside etching
**(51)** Int. Cl.
***H10N 60/85*** ( 2023.01 )
*G06N 10/00* ( 2022.01 )
**(87)** WO2021/259766
**(31)** 16/908,704 **(32)** 22.06.20 **(33)** US
**(43)** 30.12.2021
**(44)** 01.08.2024
**(72)** GILL, Douglas; SANDBERG, Martin; ADIGA, Vivekananda; MARTIN, Yves; PAIK, Hanhee
**(74)** Spruson & Ferguson

---

**(71)** INTERNATIONAL BUSINESS MACHINES CORPORATION
**(11)** AU-B-2021395683
**(21)** 2021395683 **(22)** 09.11.2021
**(54)** NON-VOLATILE ANALOG RESISTIVE MEMORY CELLS IMPLEMENTING FERROELECTRIC SELECT TRANSISTORS
**(51)** Int. Cl.
***G11C 11/22*** ( 2006.01 )
**(87)** WO2022/121603
**(31)** 17/119,350 **(32)** 11.12.20 **(33)** US
**(43)** 16.06.2022
**(44)** 01.08.2024
**(72)** GONG, Nanbo; ANDO, Takashi
**(74)** Spruson & Ferguson

---

**International Refills Company Ltd. see Angelcare Canada Inc.**
**(21)** 2018364593

---

**(71)** International Refills Company Ltd.
**(11)** AU-B-2019342090
**(21)** 2019342090 **(22)** 20.09.2019
**(54)** Waste disposal device and film dispensing cassette
**(51)** Int. Cl.
***B65F 1/06*** ( 2006.01 )
***B65D 43/26*** ( 2006.01 )
***B65F 1/16*** ( 2006.01 )
***B65H 16/06*** ( 2006.01 )
**(87)** WO2020/056523
**(31)** 62/734,008 **(32)** 20.09.18 **(33)** US
**(43)** 26.03.2020
**(44)** 01.08.2024
**(72)** MORAND, Michel
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Inventio AG
**(11)** AU-B-2020418450
**(21)** 2020418450 **(22)** 23.12.2020
**(54)** Method for moving an elevator car of an elevator in order to evacuate passengers, and brake opening device for moving an elevator car of an elevator
**(51)** Int. Cl.
***B66B 5/02*** ( 2006.01 )
**(87)** WO2021/136738
**(31)** 19220186.1 **(32)** 31.12.19 **(33)** EP
**(43)** 08.07.2021
**(44)** 01.08.2024
**(72)** BEWERSDORF, Steffen
**(74)** Griffith Hack

---

**(71)** Inventio AG
**(11)** AU-B-2021229576
**(21)** 2021229576 **(22)** 26.02.2021
**(54)** Protection device during installation works on an escalator or a moving walkway
**(51)** Int. Cl.
***B66B 23/22*** ( 2006.01 )
***B66B 31/00*** ( 2006.01 )
**(87)** WO2021/175708
**(31)** 20160964.1 **(32)** 04.03.20 **(33)** EP
**(43)** 10.09.2021
**(44)** 01.08.2024
**(72)** PFEILER, Alexander; WAGENLEITNER, Georg
**(74)** Griffith Hack

---

**(71)** i-SENS, Inc.
**(11)** AU-B-2022287557
**(21)** 2022287557 **(22)** 13.12.2022
**(54)** Applicator for continuous blood glucose measurement device
**(51)** Int. Cl.
***A61B 5/155*** ( 2006.01 )
***A61B 5/145*** ( 2006.01 )
***A61B 5/15*** ( 2006.01 )
**(43)** 02.02.2023
**(44)** 01.08.2024
**(62)** 2020265463
**(72)** CHAE, Kyung Chul; CHOI, Hyun Ho; RYU, Goang Yel; WANG, Ji Hoon; KANG, Young Jea
**(74)** LAMINAR IP PTY LTD

---

**Jacob, B.K. see Data.world, Inc.**
**(21)** 2022218590

---

**(71)** Janssen Biotech, Inc.
**(11)** AU-B-2017299673
**(21)** 2017299673 **(22)** 20.07.2017
**(54)** Anti- GPRC5D antibodies, bispecific antigen binding molecules that bind GPRC5D and CD3, and uses thereof
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61P 35/02*** ( 2006.01 )
**(87)** WO2018/017786
**(31)** 62/364,811 **(32)** 20.07.16 **(33)** US
**(43)** 25.01.2018
**(44)** 01.08.2024
**(72)** Attar, Ricardo; Chin, Diana; Edavettal, Suzanne; Gaudet, Francois; Li, Yingzhe; Luistro, Leopoldo; Majewski,

## Applications Accepted - Name Index cont'd

Nathan; Mendonca, Mark; Pillarisetti, Kondandaram; Teplyakov, Alexey; Tornetta, Mark
**(74)** Spruson & Ferguson

---

**(71)** Janssen Biotech, Inc.
**(11)** AU-B-2021200190
**(21)** 2021200190 **(22)** 13.01.2021
**(54)** Antibody Fc mutants with ablated effector functions
**(51)** Int. Cl.
***A61K 39/00*** ( 2006.01 )
***C12P 21/08*** ( 2006.01 )
**(43)** 18.03.2021
**(44)** 01.08.2024
**(62)** 2019200541
**(72)** Strohl, William; Vafa, Omid
**(74)** Spruson & Ferguson

---

**(71)** Janssen Pharmaceutica NV
**(11)** AU-B-2022221405
**(21)** 2022221405 **(22)** 23.08.2022
**(54)** Dosing regimen for missed doses for long-acting injectable paliperidone esters
**(51)** Int. Cl.
***A61K 31/519*** ( 2006.01 )
***A61K 9/10*** ( 2006.01 )
***A61P 25/18*** ( 2006.01 )
**(43)** 15.09.2022
**(44)** 01.08.2024
**(62)** 2020239611
**(72)** GOPAL, Srihari; RAVENSTIJN, Paulien Gerarda Maria; RUSSU, Alberto; SAMTANI, Mahesh Narain
**(74)** Spruson & Ferguson

---

**(71)** Janssen Sciences Ireland Unlimited Company; Gilead Sciences, Inc.
**(11)** AU-B-2018304373
**(21)** 2018304373 **(22)** 19.07.2018
**(54)** Compositions comprising darunavir, cobicistat, emtricitabine and tenofovir alafenamide for use in the treatment of HIV
**(51)** Int. Cl.
***A61K 9/20*** ( 2006.01 )
***A61K 31/34*** ( 2006.01 )
***A61K 31/513*** ( 2006.01 )
***A61K 31/5377*** ( 2006.01 )
***A61K 31/675*** ( 2006.01 )
**(87)** WO2019/018676
**(31)** 62/571,384 **(32)** 12.10.17 **(33)** US
62/623,174 29.01.18 US
62/534,885 20.07.17 US
62/665,339 01.05.18 US
**(43)** 24.01.2019
**(44)** 01.08.2024
**(72)** BOVEN, Katia; DE SMEDT, Goedele; DRIESEN, Regina; HENRIST, Dominiek; KAUWENBERGHS, Greet; MATHUR, Sandeep; MCCALLISTER, Scott; MERTENS, Roel; NETTLES, Richard; OPSOMER, Magda; PRYZ, William; ZIA, Vahid
**(74)** Spruson & Ferguson

---

**(71)** JCM American Corporation
**(11)** AU-B-2021287706
**(21)** 2021287706 **(22)** 25.05.2021
**(54)** Architectures for mobile wallet and other electronic payment operations in a gaming environment
**(51)** Int. Cl.
***G06Q 20/32*** ( 2012.01 )
***G06Q 20/34*** ( 2012.01 )
***G06Q 20/36*** ( 2012.01 )
***G07F 17/32*** ( 2006.01 )
**(87)** WO2021/252176
**(31)** 16/899,417 **(32)** 11.06.20 **(33)** US
**(43)** 16.12.2021
**(44)** 01.08.2024
**(72)** KUBAJAK, Dave; NGUYEN, Mike; LAI, Edwin; SANCHEZ, Emmanuel; CASTILO, Mark
**(74)** AJ PARK

---

**(71)** Jiangsu Hansoh Pharmaceutical Group Co., Ltd.
**(11)** AU-B-2019269815
**(21)** 2019269815 **(22)** 13.05.2019
**(54)** Pharmaceutical composition comprising small molecule EGFR inhibitor and preparation method therefor
**(51)** Int. Cl.
***A61K 31/506*** ( 2006.01 )
***A61K 9/28*** ( 2006.01 )
***A61K 47/26*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
**(87)** WO2019/218958
**(31)** 201810463668.8 **(32)** 15.05.18 **(33)** CN
**(43)** 21.11.2019
**(44)** 01.08.2024
**(72)** CHEN, Weiqi; ZHAO, Junjun; WANG, Xiaolei; YIN, Baoqing; CHEN, Xiao
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Jiangsu Shemar Electric Co., Ltd.
**(11)** AU-B-2021429593
**(21)** 2021429593 **(22)** 28.09.2021
**(54)** Composite cross arm and power transmission tower
**(51)** Int. Cl.
***E04H 12/24*** ( 2006.01 )
***E04H 12/00*** ( 2006.01 )
***H01B 17/04*** ( 2006.01 )
***H01B 17/10*** ( 2006.01 )
**(87)** WO2022/179103
**(31)** 202110206474.1 **(32)** 24.02.21 **(33)** CN
**(43)** 01.09.2022
**(44)** 01.08.2024
**(72)** MA, Bin; YU, Jie; HUANG, Qing
**(74)** James & Wells Intellectual Property

---

**(71)** Jiangsu Shemar Electric Co., Ltd.
**(11)** AU-B-2021429765
**(21)** 2021429765 **(22)** 12.10.2021
**(54)** Composite cross arm and power transmission tower
**(51)** Int. Cl.
***E04H 12/24*** ( 2006.01 )
**(87)** WO2022/179114
**(31)** 202110206367.9 **(32)** 24.02.21 **(33)** CN
**(43)** 01.09.2022
**(44)** 01.08.2024
**(72)** MA, Bin; YU, Jie; HUANG, Qing
**(74)** James & Wells Intellectual Property

---

**(71)** Johnson & Johnson Consumer Inc.
**(11)** AU-B-2019204136
**(21)** 2019204136 **(22)** 13.06.2019
**(54)** Compositions and methods for treating skin conditions using light and glucosamine hydrochloride
**(51)** Int. Cl.
***A61K 31/7008*** ( 2006.01 )
***A61K 8/60*** ( 2006.01 )
***A61N 5/06*** ( 2006.01 )
***A61N 7/00*** ( 2006.01 )
***A61P 17/00*** ( 2006.01 )
***A61Q 19/08*** ( 2006.01 )
**(31)** 16/021,748 **(32)** 28.06.18 **(33)** US
**(43)** 16.01.2020
**(44)** 01.08.2024
**(72)** Chen, Michelle; Fassih, Ali; Li, Jennifer M.; Li, Wen-Hwa; Moreira, Liliam A.; Parsa, Ramine; Southall, Michael D.
**(74)** Spruson & Ferguson

---

**(71)** Johnson & Johnson Surgical Vision, Inc.
**(11)** AU-B-2019311848
**(21)** 2019311848 **(22)** 24.07.2019
**(54)** Compositions and methods for treating the eye
**(51)** Int. Cl.
***A61K 36/75*** ( 2006.01 )
***A61K 31/00*** ( 2006.01 )
***A61K 35/74*** ( 2015.01 )
***A61K 36/28*** ( 2006.01 )
***A61K 36/48*** ( 2006.01 )
***A61K 36/54*** ( 2006.01 )
***A61P 27/00*** ( 2006.01 )
**(87)** WO2020/021480
**(31)** 62/703,943 **(32)** 27.07.18 **(33)** US
16/519,166 23.07.19 US
**(43)** 30.01.2020
**(44)** 01.08.2024
**(72)** LI, Wen-Hwa Ting; MAHMOOD, Khalid; PARSA, Ramine; RANDHAWA, Manpreet; BAI, Mingqi; HOLEVA, Kenneth T.
**(74)** Spruson & Ferguson

---

**(71)** Jubilant Prodel LLC.
**(11)** AU-B-2019234185
**(21)** 2019234185 **(22)** 13.03.2019
**(54)** Bicyclic compounds as inhibitors of PD1/PD-L1 interaction/activation
**(51)** Int. Cl.
***C07D 401/14*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07C 217/58*** ( 2006.01 )
***C07C 229/14*** ( 2006.01 )
***C07C 229/48*** ( 2006.01 )
***C07C 233/36*** ( 2006.01 )
***C07C 255/54*** ( 2006.01 )
***C07D 207/16*** ( 2006.01 )
***C07D 209/54*** ( 2006.01 )
***C07D 211/56*** ( 2006.01 )
***C07D 211/60*** ( 2006.01 )
***C07D 213/85*** ( 2006.01 )
***C07D 221/04*** ( 2006.01 )

## Applications Accepted - Name Index cont'd

***C07D 265/30*** ( 2006.01 )
***C07D 401/12*** ( 2006.01 )
***C07D 403/12*** ( 2006.01 )
***C07D 405/12*** ( 2006.01 )
***C07D 471/04*** ( 2006.01 )
***C07D 491/107*** ( 2006.01 )
**(87)** WO2019/175897
**(31)** 201841009252 **(32)** 13.03.18 **(33)** IN
**(43)** 19.09.2019
**(44)** 01.08.2024
**(72)** VENKATESHAPPA, Chandregowda; D A, Jeyaraj; PENDYALA, Muralidhar; SIVANANDHAN, Dhanalakshmi; RAJAGOPAL, Sridharan
**(74)** Spruson & Ferguson

---

**(71)** Junction7 Limited
**(11)** AU-B-2020268686
**(21)** 2020268686 **(22)** 07.05.2020
**(54)** Modular slab, slab system, piles and methods of use thereof
**(51)** Int. Cl.
***E02D 5/30*** ( 2006.01 )
***E01C 3/00*** ( 2006.01 )
***E01C 15/00*** ( 2006.01 )
***E01D 1/00*** ( 2006.01 )
***E01D 19/02*** ( 2006.01 )
***E02D 5/22*** ( 2006.01 )
***E02D 27/01*** ( 2006.01 )
***E02D 27/16*** ( 2006.01 )
***E02D 27/28*** ( 2006.01 )
***E02D 27/34*** ( 2006.01 )
***E04B 5/02*** ( 2006.01 )
***E04B 5/43*** ( 2006.01 )
**(87)** WO2020/226510
**(31)** 753353 **(32)** 09.05.19 **(33)** NZ
**(43)** 12.11.2020
**(44)** 01.08.2024
**(72)** STRETCH, David John; WEBER, Warrick John
**(74)** CreateIP

---

**(71)** Juno Therapeutics, Inc.; Fred Hutchinson Cancer Research Center
**(11)** AU-B-2017277396
**(21)** 2017277396 **(22)** 06.06.2017
**(54)** Methods for the treatment of B cell malignancies using adoptive cell therapy
**(51)** Int. Cl.
***A61K 35/17*** ( 2015.01 )
***A61K 39/00*** ( 2006.01 )
**(87)** WO2017/214207
**(31)** 62/346,547 **(32)** 06.06.16 **(33)** US
62/417,292 03.11.16 US
62/429,737 03.12.16 US
**(43)** 14.12.2017
**(44)** 01.08.2024
**(72)** Turtle, Cameron J.; Maloney, David; Riddell, Stanley R.; Gilbert, Mark
**(74)** AJ PARK

---

**(71)** JW Pharmaceutical Corporation
**(11)** AU-B-2018325148
**(21)** 2018325148 **(22)** 30.08.2018
**(54)** Solid preparation comprising dutasteride and method for preparing same
**(51)** Int. Cl.
***A61K 9/20*** ( 2006.01 )
***A61K 9/107*** ( 2006.01 )
***A61K 9/28*** ( 2006.01 )
***A61K 31/58*** ( 2006.01 )
**(87)** WO2019/045501
**(31)** 10-2017-0111953 **(32)** 01.09.17 **(33)** KR
**(43)** 07.03.2019
**(44)** 01.08.2024
**(72)** LEE, Suk; CHA, Min-Uk; YANG, Won-Kyu; CHOI, Min-Seok
**(74)** Chrysiliou IP

---

**(71)** KABUSHIKI KAISHA TOSHIBA; TOSHIBA ENERGY SYSTEMS & SOLUTIONS CORPORATION
**(11)** AU-B-2023200415
**(21)** 2023200415 **(22)** 25.01.2023
**(54)** HYDROGEN PRODUCTION SYSTEM AND HYDROGEN PRODUCTION METHOD
**(51)** Int. Cl.
***C25B 1/042*** ( 2021.01 )
**(31)** 2022-020625 **(32)** 14.02.22 **(33)** JP
**(43)** 31.08.2023
**(44)** 01.08.2024
**(72)** INUZUKA, Riko; TSUKADA, Yuka; SUZUKI, Yusuke; MATSUMOTO, Jyunpei; OSADA, Norikazu; FUJITA, Koshito; MIYAMOTO, Shinya; YAMASHITA, Yu; TSUCHIYA, Naomi; TAJIMA, Ayaka
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Kainos Medicine Inc.
**(11)** AU-B-2018287319
**(21)** 2018287319 **(22)** 19.06.2018
**(54)** Modulators of alpha-synuclein
**(51)** Int. Cl.
***A61K 31/415*** ( 2006.01 )
***A61K 31/4155*** ( 2006.01 )
***A61K 31/421*** ( 2006.01 )
***A61K 31/4439*** ( 2006.01 )
***A61P 25/28*** ( 2006.01 )
***G01N 33/68*** ( 2006.01 )
**(87)** WO2018/234864
**(31)** 62/521,758 **(32)** 19.06.17 **(33)** US
**(43)** 27.12.2018
**(44)** 01.08.2024
**(72)** KIM, Eunhee; JANG, Taeik; KIM, Boksuk; YU, Changsun; YOO, Sungeun; CHUNG, Yeontae; LEE, Jae Moon
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Kao, H.
**(11)** AU-B-2024203482
**(21)** 2024203482 **(22)** 24.05.2024
**(54)** Sensing Chip with Fluidic Device
**(51)** Int. Cl.
***G01N 27/416*** ( 2006.01 )
**(43)** 13.06.2024
**(44)** 01.08.2024
**(62)** 2022204265
**(72)** Kao, Hsi-Teng
**(74)** Wallington-Dummer

---

**(71)** Kao Germany GmbH
**(11)** AU-B-2019250243
**(21)** 2019250243 **(22)** 18.10.2019
**(54)** Shine enhancing spray composition
**(51)** Int. Cl.
***A61K 8/49*** ( 2006.01 )
***A61K 8/04*** ( 2006.01 )
***A61K 8/37*** ( 2006.01 )
***A61K 8/42*** ( 2006.01 )
***A61K 8/81*** ( 2006.01 )
***A61Q 5/06*** ( 2006.01 )
**(31)** 18202119.6 **(32)** 23.10.18 **(33)** DE
**(43)** 07.05.2020
**(44)** 01.08.2024
**(72)** Uellner, Yuqi; Schmid, Sabine; Cajan, Christine
**(74)** FB Rice Pty Ltd

---

**(71)** Karl Leibinger Medizintechnik GmbH & Co. KG.
**(11)** AU-B-2019217590
**(21)** 2019217590 **(22)** 06.02.2019
**(54)** Implant comprising a radially enlarged post on the support structure, soft tissue displacement system, manufacturing process and planning process for manufacturing an implant
**(51)** Int. Cl.
***A61C 8/00*** ( 2006.01 )
***A61C 13/00*** ( 2006.01 )
**(87)** WO2019/154873
**(31)** 10 2018 102 568.8 **(32)** 06.02.18 **(33)** DE
**(43)** 15.08.2019
**(44)** 01.08.2024
**(72)** GELLRICH, Nils-Claudius; RAHLF, Björn; REINAUER, Frank
**(74)** Spruson & Ferguson

---

**(71)** Karnak Technologies, LLC
**(11)** AU-B-2021317263
**(21)** 2021317263 **(22)** 29.07.2021
**(54)** Pharmaceutical compositions for improved delivery of therapeutic lipophilic actives
**(51)** Int. Cl.
***A61K 9/16*** ( 2006.01 )
***A61K 31/01*** ( 2006.01 )
***A61K 31/05*** ( 2006.01 )
***A61K 31/593*** ( 2006.01 )
***A61K 31/7048*** ( 2006.01 )
**(87)** WO2022/024127
**(31)** 63/058,266 **(32)** 29.07.20 **(33)** US
**(43)** 03.02.2022
**(44)** 01.08.2024
**(72)** EZRA, Rafael
**(74)** FB Rice Pty Ltd

---

**(71)** KASEYA US LLC
**(11)** AU-B-2021372249
**(21)** 2021372249 **(22)** 01.11.2021
**(54)** SYSTEM FOR MANAGING AND CONTROLLING MESH VIRTUAL PRIVATE NETWORK AND METHOD ASSOCIATED THEREWITH
**(51)** Int. Cl.
***H04L 9/40*** ( 2022.01 )
*H04L 45/00* ( 2022.01 )
*H04L 45/02* ( 2022.01 )
**(87)** WO2022/094392
**(31)** 17/379,006 **(32)** 19.07.21 **(33)** US
63/108,679 02.11.20 US
**(43)** 05.05.2022

## Applications Accepted - Name Index cont'd

**(44)** 01.08.2024
**(72)** OLSON, Zachary, Kenneth; LAKKAVALLI, Shashidhar
**(74)** Griffith Hack

---

**(71)** Kazuar Advanced Technologies Ltd.
**(11)** AU-B-2019245514
**(21)** 2019245514 **(22)** 26.03.2019
**(54)** Method of secure communication among protected containers and system thereof
**(51)** Int. Cl.
***G06F 12/14*** ( 2006.01 )
***G06F 21/53*** ( 2013.01 )
***G06F 21/62*** ( 2013.01 )
***G06F 21/64*** ( 2013.01 )
**(87)** WO2019/186554
**(31)** 258380 **(32)** 26.03.18 **(33)** IL
**(43)** 03.10.2019
**(44)** 01.08.2024
**(72)** FINCHELSTEIN, Daniel Mondy; PORAT, Yuval Moshe; GAL-BETZER, Erez; FENSTER, Yaacov
**(74)** Collison & Co

---

**Keen, A.A. see Data.world, Inc.**
**(21)** 2022218590

---

**(71)** Kelly Slater Wave Company, LLC
**(11)** AU-B-2018323631
**(21)** 2018323631 **(22)** 30.08.2018
**(54)** Wave pool and wave generator for bi-directional and dynamically-shaped surfing waves
**(51)** Int. Cl.
***E04H 4/00*** ( 2006.01 )
***A63B 69/00*** ( 2006.01 )
***F04D 35/00*** ( 2006.01 )
**(87)** WO2019/046549
**(31)** 15/691,175 **(32)** 30.08.17 **(33)** US
**(43)** 07.03.2019
**(44)** 01.08.2024
**(72)** FINCHAM, Adam; POIROT, Alex; LOEWEN, Nathan; SLATER, Robert Kelly
**(74)** Phillips Ormonde Fitzpatrick

---

**Keyte, L. see Boral IP Holdings (Australia) PTY Limited**
**(21)** 2017436163

---

**(71)** Kimberly-Clark Worldwide, Inc.
**(11)** AU-B-2017424987
**(21)** 2017424987 **(22)** 28.07.2017
**(54)** Semi-rigid tissue package
**(51)** Int. Cl.
***B65D 5/20*** ( 2006.01 )
***B65D 85/20*** ( 2006.01 )
*A47K 10/16* ( 2006.01 )
*A47K 10/24* ( 2006.01 )
*B65D 17/28* ( 2006.01 )
*B65D 71/12* ( 2006.01 )
**(87)** WO2019/022752
**(43)** 31.01.2019
**(44)** 01.08.2024
**(72)** BARRAN, Linda Marie; BURNHAM, Timothy Scott
**(74)** Spruson & Ferguson

---

**(71)** Kinamed, Inc.
**(11)** AU-B-2021301112
**(21)** 2021301112 **(22)** 16.06.2021
**(54)** Bone preparation system
**(51)** Int. Cl.
***A61F 2/46*** ( 2006.01 )
***A61B 17/56*** ( 2006.01 )
***A61F 2/30*** ( 2006.01 )
***B05B 7/02*** ( 2006.01 )
**(87)** WO2022/005752
**(31)** 63/046,357 **(32)** 30.06.20 **(33)** US
17/343,989 10.06.21 US
**(43)** 06.01.2022
**(44)** 01.08.2024
**(72)** NELSON, Adam Lee; SARIN, Vineet Kumar; BRUCE, Robert Arthur; MENEGHINI, Robert Michael; PRATT, William Ralph
**(74)** Davies Collison Cave Pty Ltd

---

**Kite Pharma, Inc. see The United States of America, as represented by the Secretary, Department of Health and Human Service**
**(21)** 2022209271

---

**(71)** KNORR-BREMSE SYSTEME FÜR SCHIENENFAHRZEUGE GMBH
**(11)** AU-B-2021395262
**(21)** 2021395262 **(22)** 11.11.2021
**(54)** TREAD BRAKE ASSEMBLY
**(51)** Int. Cl.
***B60T 1/04*** ( 2006.01 )
***B60T 17/22*** ( 2006.01 )
***B61H 1/00*** ( 2006.01 )
***B61H 13/36*** ( 2006.01 )
***F16D 49/16*** ( 2006.01 )
***F16D 65/28*** ( 2006.01 )
*F16D 66/00* ( 2006.01 )
*F16D 66/02* ( 2006.01 )
*F16D 121/04* ( 2012.01 )
*F16D 121/14* ( 2012.01 )
*F16D 125/68* ( 2012.01 )
**(87)** WO2022/122299
**(31)** 20212793.2 **(32)** 09.12.20 **(33)** EP
**(43)** 16.06.2022
**(44)** 01.08.2024
**(72)** LIKTOR, Balazs
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Komatsu Ltd.
**(11)** AU-B-2021361368
**(21)** 2021361368 **(22)** 11.10.2021
**(54)** Work vehicle control system, work vehicle control method, and work vehicle
**(51)** Int. Cl.
***E02F 3/85*** ( 2006.01 )
***E02F 3/76*** ( 2006.01 )
***E02F 9/20*** ( 2006.01 )
**(87)** WO2022/080334
**(31)** 2020-171979 **(32)** 12.10.20 **(33)** JP
**(43)** 21.04.2022
**(44)** 01.08.2024
**(72)** YAMAZAKI, Yusuke; ANDOU, Tomoki; TSUMURA, Souichi; MOTOMURA, Takuto; OKAMOTO, Kenji
**(74)** FB Rice Pty Ltd

---

**(71)** Korea Food Research Institute
**(11)** AU-B-2020228247
**(21)** 2020228247 **(22)** 27.02.2020
**(54)** Composition for preventing, alleviating, or treating obesity or fatty liver disease, comprising Leuconostoc citreum WiKim0104
**(51)** Int. Cl.
***C12N 1/20*** ( 2006.01 )
***A23K 10/16*** ( 2016.01 )
***A23L 29/00*** ( 2016.01 )
***A23L 33/135*** ( 2016.01 )
***A61K 35/744*** ( 2015.01 )
***A61P 1/16*** ( 2006.01 )
***A61P 3/04*** ( 2006.01 )
**(87)** WO2020/175940
**(31)** 10-2019-0024254 **(32)** 28.02.19 **(33)** KR
**(43)** 03.09.2020
**(44)** 01.08.2024
**(72)** CHOI, Hak-Jong; LIM, Seul-Ki
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Kunming University of Science and Technology
**(11)** AU-B-2021202279
**(21)** 2021202279 **(22)** 18.03.2021
**(54)** Method for treating Cu-Pb-Sn-Zn-Ni based multimetal industrial solid wastes by oxygen-enriched side blowing smelting furnace with chaotic stirring bath
**(51)** Int. Cl.
***C22B 7/04*** ( 2006.01 )
***B09B 3/00*** ( 2006.01 )
***F27B 3/22*** ( 2006.01 )
**(31)** 202110002963.5 **(32)** 04.01.21 **(33)** CN
**(43)** 29.09.2022
**(44)** 01.08.2024
**(72)** Wang, Hua; Zhou, Shiwei
**(74)** IP SOLVED (ANZ) PTY. LTD.

---

**(71)** Kymab Limited
**(11)** AU-B-2020294247
**(21)** 2020294247 **(22)** 23.12.2020
**(54)** Antibodies, uses & methods
**(51)** Int. Cl.
***C07K 16/00*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***C07K 16/28*** ( 2006.01 )
**(43)** 28.01.2021
**(44)** 01.08.2024
**(62)** 2015225926
**(72)** Campbell, Jamie; Holmes, Steve; Kirby, Ian; Kosmac, Miha
**(74)** Davies Collison Cave Pty Ltd

---

**KYOTO UNIVERSITY see CHIYODA CORPORATION**
**(21)** 2021459856

---

## Applications Accepted - Name Index cont'd

**(71)** L.E.A.F. Holdings Group LLC
**(11)** AU-B-2019262189
**(21)** 2019262189 **(22)** 03.05.2019
**(54)** Carotenoid compositions and uses thereof
**(51)** Int. Cl.
***A61K 31/01*** ( 2006.01 )
***A61K 47/22*** ( 2006.01 )
***A61K 47/24*** ( 2006.01 )
**(87)** WO2019/213538
**(31)** 62/666,699 **(32)** 03.05.18 **(33)** US
62/809,123 22.02.19 US
**(43)** 07.11.2019
**(44)** 01.08.2024
**(72)** NIYIKIZA, Clet; MOYO, Victor Mandla; GENG, Bolin; XU, Zhenghong; KHALIFA, Kaniz; KIM, Gwangseong
**(74)** WRAYS PTY LTD

---

**(71)** Lashify, Inc.
**(11)** AU-B-2023206075
**(21)** 2023206075 **(22)** 17.07.2023
**(54)** Applicators and cases for artificial lash extensions
**(51)** Int. Cl.
***A41G 5/02*** ( 2006.01 )
***A45D 26/00*** ( 2006.01 )
***B25B 9/02*** ( 2006.01 )
**(43)** 10.08.2023
**(44)** 01.08.2024
**(62)** 2022246369
**(72)** LOTTI, Sahara
**(74)** Spruson & Ferguson

---

**Le, T.M. see Data.world, Inc.**
**(21)** 2022218590

---

**(71)** Ledlenser GmbH & Co. KG
**(11)** AU-B-2021240792
**(21)** 2021240792 **(22)** 01.03.2021
**(54)** Torch
**(51)** Int. Cl.
***F21L 4/00*** ( 2006.01 )
***F21V 23/04*** ( 2006.01 )
**(87)** WO2021/190691
**(31)** 10 2020 108 165.0 **(32)** 25.03.20 **(33)** DE
**(43)** 30.09.2021
**(44)** 01.08.2024
**(72)** SCHOLZ, Ulrich
**(74)** FB Rice Pty Ltd

---

**(71)** Leica Biosystems Melbourne Pty Ltd
**(11)** AU-B-2019396833
**(21)** 2019396833 **(22)** 13.12.2019
**(54)** Reagent cassette
**(51)** Int. Cl.
***G01N 1/31*** ( 2006.01 )
***B01L 3/00*** ( 2006.01 )
***B05C 3/02*** ( 2006.01 )
***G01N 33/48*** ( 2006.01 )
**(87)** WO2020/118378
**(31)** 2018904754 **(32)** 14.12.18 **(33)** AU
**(43)** 18.06.2020
**(44)** 01.08.2024
**(72)** DARBYSHIRE, Paul; PAMIETA, Maxim Stanislaw; WILCOCK, Mark; BOYES, Gregory William
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Leica Biosystems Melbourne Pty Ltd
**(11)** AU-B-2019404614
**(21)** 2019404614 **(22)** 19.12.2019
**(54)** Bulk fluid wash module
**(51)** Int. Cl.
***G01N 35/00*** ( 2006.01 )
***G01N 1/00*** ( 2006.01 )
***G01N 33/00*** ( 2006.01 )
**(87)** WO2020/124155
**(31)** 2018904865 **(32)** 20.12.18 **(33)** AU
**(43)** 25.06.2020
**(44)** 01.08.2024
**(72)** SALAMA, Andrew; SPINK, Timothy Ian; CUCE, Matthew; FRASER, Daniel
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** LG Electronics Inc.
**(11)** AU-B-2019314054
**(21)** 2019314054 **(22)** 01.08.2019
**(54)** Method for controlling refrigerator
**(51)** Int. Cl.
***F25D 29/00*** ( 2006.01 )
***F25B 5/02*** ( 2006.01 )
***F25B 49/02*** ( 2006.01 )
***F25D 11/02*** ( 2006.01 )
**(87)** WO2020/027596
**(31)** 10-2018-0090461 **(32)** 02.08.18 **(33)** KR
**(43)** 06.02.2020
**(44)** 01.08.2024
**(72)** AHN, Seunguk; CHA, Kyunghun; CHAE, Sunam
**(74)** Dentons Patent Attorneys Australasia Limited

---

**(71)** LG Electronics Inc.
**(11)** AU-B-2020375409
**(21)** 2020375409 **(22)** 28.09.2020
**(54)** Plant cultivation apparatus
**(51)** Int. Cl.
***A01G 9/24*** ( 2006.01 )
***A01G 9/14*** ( 2006.01 )
***A01G 9/20*** ( 2006.01 )
***A01G 24/00*** ( 2018.01 )
***F21K 9/00*** ( 2016.01 )
*F21W 131/109* ( 2006.01 )
*F21Y 115/10* ( 2016.01 )
**(87)** WO2021/085871
**(31)** 10-2019-0138817 **(32)** 01.11.19 **(33)** KR
**(43)** 06.05.2021
**(44)** 01.08.2024
**(72)** JUNG, Yong Ki; LEE, Tae Yang
**(74)** Dentons Patent Attorneys Australasia Limited

---

**(71)** LG Electronics Inc.
**(11)** AU-B-2021301912
**(21)** 2021301912 **(22)** 18.06.2021
**(54)** Robot cleaner, robot cleaner system including same, and method for controlling robot cleaner system
**(51)** Int. Cl.
***A47L 11/40*** ( 2006.01 )
***F04D 13/06*** ( 2006.01 )
***F04D 15/02*** ( 2006.01 )
***G06F 3/0484*** ( 2022.01 )
***G06F 3/0488*** ( 2022.01 )
***G06F 11/32*** ( 2006.01 )
***G06T 11/00*** ( 2006.01 )
**(87)** WO2022/005067
**(31)** 10-2020-0080837 **(32)** 01.07.20 **(33)** KR
**(43)** 06.01.2022
**(44)** 01.08.2024
**(72)** SHIM, Inbo; KIM, Byeongju; MOON, Jeonghwan
**(74)** FB Rice Pty Ltd

---

**(71)** Limacorporate S.p.A.
**(11)** AU-B-2023206113
**(21)** 2023206113 **(22)** 18.07.2023
**(54)** Scapular anchor for fixing a glenoid component of a shoulder joint prosthesis to a scapula with compromised anatomy and related method for manufacturing said scapular anchor
**(51)** Int. Cl.
***A61F 2/40*** ( 2006.01 )
**(43)** 10.08.2023
**(44)** 01.08.2024
**(62)** 2018252160
**(72)** Sbaiz, Fausto; Pressacco, Michele
**(74)** MINTER ELLISON

---

**(71)** Lin, C.
**(11)** AU-B-2023202798
**(21)** 2023202798 **(22)** 04.05.2023
**(54)** METHOD FOR CAPTURING CARBON DIOXIDE AND NITROGEN OXIDES IN FLUE GAS AND CONVERSION THEREOF TO CARBON SOURCE AND NITROGEN SOURCE NEEDED FOR ALGAE GROWTH
**(51)** Int. Cl.
***B01D 53/56*** ( 2006.01 )
***B01D 53/62*** ( 2006.01 )
***C01B 21/38*** ( 2006.01 )
***C01B 32/60*** ( 2017.01 )
**(31)** 111150464 **(32)** 28.12.22 **(33)** TW
**(43)** 18.07.2024
**(44)** 01.08.2024
**(72)** Lin, Cheng-Jen
**(74)** Madderns Pty Ltd

---

**Lloyd, R. see Boral IP Holdings (Australia) PTY Limited**
**(21)** 2017436163

---

**(71)** Longi Green Energy Technology Co., Ltd.
**(11)** AU-B-2020429125
**(21)** 2020429125 **(22)** 22.10.2020
**(54)** Tandem photovoltaic device and production method
**(51)** Int. Cl.
***H01L 31/078*** ( 2012.01 )
**(87)** WO2021/159728
**(31)** 202010091544.9 **(32)** 13.02.20 **(33)** CN
**(43)** 19.08.2021

## Applications Accepted - Name Index cont'd

**(44)** 01.08.2024
**(72)** WU, Zhao; XU, Chen; LI, Zifeng
**(74)** WRAYS PTY LTD

---

**(71)** LONGI GREEN ENERGY TECHNOLOGY CO., LTD.
**(11)** AU-B-2021387072
**(21)** 2021387072 **(22)** 13.10.2021
**(54)** PEROVSKITE LAYER, MANUFACTURE METHOD FOR PEROVSKITE LAYER, PEROVSKITE LAYER SOLAR CELL, AND PEROVSKITE LAYER SOLAR CELL ASSEMBLY
**(51)** Int. Cl.
***H10K 71/12*** ( 2023.01 )
***H10K 71/15*** ( 2023.01 )
***H10K 71/40*** ( 2023.01 )
**(87)** WO2022/111096
**(31)** 202011343679.6 **(32)** 25.11.20 **(33)** CN
**(43)** 02.06.2022
**(44)** 01.08.2024
**(72)** XIE, Junjie; XU, Chen; LI, Zifeng; WU, Zhao; JIN, Jinling
**(74)** Madderns Pty Ltd

---

**Loyens, J. see Data.world, Inc.**
**(21)** 2022218590

---

**(71)** LTS LOHMANN THERAPIE-SYSTEME AG
**(11)** AU-B-2021374831
**(21)** 2021374831 **(22)** 05.11.2021
**(54)** ORAL THIN FILM
**(51)** Int. Cl.
***A61K 9/70*** ( 2006.01 )
***A61K 31/135*** ( 2006.01 )
***A61K 47/34*** ( 2017.01 )
***A61P 29/00*** ( 2006.01 )
**(87)** WO2022/096676
**(31)** 10 2020 129 394.1 **(32)** 09.11.20 **(33)** DE
10 2021 120 937.4 11.08.21 DE
**(43)** 12.05.2022
**(44)** 01.08.2024
**(72)** MÜLLER, Markus; FICKER, Mario; LINN, Michael; HAMMES, Florian
**(74)** Griffith Hack

---

**LUDWIG INSTITUTE FOR CANCER RESEARCH LTD see AGENUS INC.**
**(21)** 2021200281

---

**(71)** Lufthansa Technik AG
**(11)** AU-B-2020391929
**(21)** 2020391929 **(22)** 27.11.2020
**(54)** Method for applying an aerodynamically functional film
**(51)** Int. Cl.
***B64C 21/10*** ( 2006.01 )
***B64C 1/00*** ( 2006.01 )
***F15D 1/00*** ( 2006.01 )
**(87)** WO2021/105316
**(31)** 10 2019 132 347.9 **(32)** 28.11.19 **(33)** DE
**(43)** 03.06.2021
**(44)** 01.08.2024
**(72)** OESER, Oliver; GERBER, Thorsten; PFINGSTEN, Kai-Christoph; BROST, Dominik; KLEIN, Darius; RATHMANN, Holger
**(74)** Griffith Hack

---

**(71)** Lumos Pharma, Inc.
**(11)** AU-B-2019222736
**(21)** 2019222736 **(22)** 14.02.2019
**(54)** Compositions for the treatment of non-alcoholic fatty liver disease and non-alcoholic steatohepatitis
**(51)** Int. Cl.
***A61K 31/403*** ( 2006.01 )
***A61K 31/4439*** ( 2006.01 )
***A61K 38/27*** ( 2006.01 )
***A61P 1/16*** ( 2006.01 )
**(87)** WO2019/161025
**(31)** 62/630,361 **(32)** 14.02.18 **(33)** US
**(43)** 22.08.2019
**(44)** 01.08.2024
**(72)** THORNER, Michael Oliver; SMITH, Roy G.
**(74)** Griffith Hack

---

**(71)** Lycopodium Minerals Pty Ltd
**(11)** AU-B-2018222912
**(21)** 2018222912 **(22)** 28.08.2018
**(54)** ENHANCED FLOW STORAGE BIN
**(51)** Int. Cl.
***B65D 88/28*** ( 2006.01 )
**(31)** 2017904451 **(32)** 01.11.17 **(33)** AU
**(43)** 16.05.2019
**(44)** 01.08.2024
**(72)** Ruggiero, Bruno
**(74)** WRAYS PTY LTD

---

**(71)** Lynn, N.
**(11)** AU-B-2020254682
**(21)** 2020254682 **(22)** 01.04.2020
**(54)** INDEPENDENT DOUBLE-SIDED MATERIAL FASTENER WITH ADJUSTABLE INTEGRATED TENSIONING DEVICE
**(51)** Int. Cl.
***A41D 27/00*** ( 2006.01 )
***A41D 1/089*** ( 2018.01 )
***A41D 7/00*** ( 2006.01 )
**(87)** WO2020/205976
**(31)** 62/828,016 **(32)** 02.04.19 **(33)** US
**(43)** 08.10.2020
**(44)** 01.08.2024
**(72)** LYNN, Nicholas Mizrahi
**(74)** RnB IP Pty Ltd

---

**(71)** MacDon Industries Ltd
**(11)** AU-B-2018204353
**(21)** 2018204353 **(22)** 18.06.2018
**(54)** WEAR-INHIBITING CLIP FOR DRAPER CLEAT OR SLAT OF A CROP HARVESTING HEADER
**(51)** Int. Cl.
***A01D 41/14*** ( 2006.01 )
***A01D 43/00*** ( 2006.01 )
***A01D 57/20*** ( 2006.01 )
**(31)** 15/631,198 **(32)** 23.06.17 **(33)** US
**(43)** 17.01.2019
**(44)** 01.08.2024
**(72)** MARTENS, Kris; GEORGISON, Ryan; ROGALSKY, Doug
**(74)** IP Gateway Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** MARIUS PHARMACEUTICALS LLC
**(11)** AU-B-2022277557
**(21)** 2022277557 **(22)** 18.05.2022
**(54)** PREFERRED ORAL TESTOSTERONE UNDECANOATE THERAPY TO ACHIEVE TESTOSTERONE REPLACEMENT TREATMENT
**(51)** Int. Cl.
***A61K 31/568*** ( 2006.01 )
***A61K 47/14*** ( 2017.01 )
***A61P 5/26*** ( 2006.01 )
**(87)** WO2022/245933
**(31)** 63/190,609 **(32)** 19.05.21 **(33)** US
**(43)** 24.11.2022
**(44)** 01.08.2024
**(72)** DHINGRA, Om; BERNSTEIN, James, S.
**(74)** Spruson & Ferguson

---

**(71)** Match Group, LLC
**(11)** AU-B-2023222852
**(21)** 2023222852 **(22)** 29.08.2023
**(54)** SYSTEM AND METHOD FOR MATCHING USING LOCATION INFORMATION
**(51)** Int. Cl.
***H04W 64/00*** ( 2009.01 )
***G08B 1/08*** ( 2006.01 )
***H04W 4/02*** ( 2018.01 )
***H04W 4/021*** ( 2018.01 )
***H04W 4/029*** ( 2018.01 )
***H04W 4/21*** ( 2018.01 )
**(43)** 14.09.2023
**(44)** 01.08.2024
**(62)** 2023202189
**(72)** BURRELL, Robinne; SCHNEIDER, Anna M.; DUBEY, Sharmistha; DORSETT, Deryl; MILLER, Kyle; STEVENS, Samantha J.; ROSS, David A.; GAFNI, Joshua D.; HENDERSON, Shane
**(74)** RnB IP Pty Ltd

---

**(71)** Mauser-Werke GmbH
**(11)** AU-B-2018299640
**(21)** 2018299640 **(22)** 13.07.2018
**(54)** Pallet container
**(51)** Int. Cl.
***B65D 77/04*** ( 2006.01 )
**(87)** WO2019/011468
**(31)** 10 2017 006 653.1 **(32)** 13.07.17 **(33)** DE
**(43)** 17.01.2019
**(44)** 01.08.2024
**(72)** WEYRAUCH, Detlev
**(74)** FB Rice Pty Ltd

---

**(71)** Max Bögl Wind AG
**(11)** AU-B-2018310683
**(21)** 2018310683 **(22)** 01.08.2018
**(54)** Foundation for a structure
**(51)** Int. Cl.
***E04H 12/12*** ( 2006.01 )

## Applications Accepted - Name Index cont'd

***E02D 27/42*** ( 2006.01 )
***E04H 12/16*** ( 2006.01 )
**(87)** WO2019/025505
**(31)** 10 2017 120 526.8 **(32)** 06.09.17 **(33)** DE
10 2017 117 440.0 01.08.17 DE
10 2018 107 421.2 28.03.18 DE
**(43)** 07.02.2019
**(44)** 01.08.2024
**(72)** BETZ, Thorsten; REITENSPIESS, Michael
**(74)** FB Rice Pty Ltd

---

**(71)** McCain Foods Limited
**(11)** AU-B-2020201917
**(21)** 2020201917 **(22)** 17.03.2020
**(54)** Blade assembly for cutting food
**(51)** Int. Cl.
***A47J 43/07*** ( 2006.01 )
***B26D 1/00*** ( 2006.01 )
***B26D 3/00*** ( 2006.01 )
**(31)** 16/358,846 **(32)** 20.03.19 **(33)** US
**(43)** 08.10.2020
**(44)** 01.08.2024
**(72)** ROGERS, David M.; AIKENS, John Warren; BÖMONT, Sylvain
**(74)** FB Rice Pty Ltd

---

**(71)** McNeil AB
**(11)** AU-B-2019301234
**(21)** 2019301234 **(22)** 12.07.2019
**(54)** Chewing gum comprising nicotine
**(51)** Int. Cl.
***A61K 9/68*** ( 2006.01 )
***A61K 31/465*** ( 2006.01 )
**(87)** WO2020/012009
**(31)** 1850896-0 **(32)** 13.07.18 **(33)** SE
**(43)** 16.01.2020
**(44)** 01.08.2024
**(72)** THYRESSON, Kristina; KOLL, Gregory; NILGARD, Jill; MCNALLY, Gerard; LINDELL, Katarina
**(74)** Spruson & Ferguson

---

**(71)** Medela Holding AG
**(11)** AU-B-2017437176
**(21)** 2017437176 **(22)** 24.10.2017
**(54)** Breast pump
**(51)** Int. Cl.
***A61M 1/06*** ( 2006.01 )
**(87)** WO2019/080995
**(43)** 02.05.2019
**(44)** 01.08.2024
**(72)** SCHLIENGER, André; HÖNER, Sebastian; RIGERT, Mario; FELBER, Armin; STEINER, Marco
**(74)** Phillips Ormonde Fitzpatrick

---

**MedImmune Limited see ADC Therapeutics SA**
**(21)** 2018253948

---

**(71)** Medos International Sarl
**(11)** AU-B-2019201442
**(21)** 2019201442 **(22)** 01.03.2019
**(54)** Methods, systems, and devices for instability repair
**(51)** Int. Cl.
***A61B 17/04*** ( 2006.01 )
***A61B 17/06*** ( 2006.01 )
***A61F 2/08*** ( 2006.01 )
**(31)** 15/913,340 **(32)** 06.03.18 **(33)** US
**(43)** 26.09.2019
**(44)** 01.08.2024
**(72)** AARSVOLD, Kirsten H.; ORPHANOS, Stephen J.; OTRANDO, Brian
**(74)** Spruson & Ferguson

---

**(71)** Medos International Sàrl
**(11)** AU-B-2018230967
**(21)** 2018230967 **(22)** 08.03.2018
**(54)** Devices and methods for surgical retraction
**(51)** Int. Cl.
***A61B 17/34*** ( 2006.01 )
**(87)** WO2018/165374
**(31)** 62/468,475 **(32)** 08.03.17 **(33)** US
15/786,846 18.10.17 US
**(43)** 13.09.2018
**(44)** 01.08.2024
**(72)** Buehlmann, Eric; Flock, Judith; Richter, Joern; Klett, Jan; Thommen, Daniel; White, Michael; Gully, Stephane; Zollmann, Veronique Christine; Kane, William; Lilienfeld, Sean; Amaral, Joseph; Canady, John; Gamache, Thomas
**(74)** Spruson & Ferguson

---

**(71)** Medtrade Products Limited
**(11)** AU-B-2018318386
**(21)** 2018318386 **(22)** 20.08.2018
**(54)** Wound dressing
**(51)** Int. Cl.
***A61F 13/02*** ( 2006.01 )
**(87)** WO2019/034896
**(31)** 1713272.1 **(32)** 18.08.17 **(33)** GB
**(43)** 21.02.2019
**(44)** 01.08.2024
**(72)** HOGGARTH, Andrew; HARDY, Craig; GRIST, Matthew
**(74)** Spruson & Ferguson

---

**(71)** Melos GmbH
**(11)** AU-B-2021304894
**(21)** 2021304894 **(22)** 09.07.2021
**(54)** Compostable artificial turf infill
**(51)** Int. Cl.
***E01C 13/08*** ( 2006.01 )
**(87)** WO2022/008710
**(31)** 20185337.1 **(32)** 10.07.20 **(33)** EP
**(43)** 13.01.2022
**(44)** 01.08.2024
**(72)** SEIFERT, Sascha; PLACKE, Melina
**(74)** KINGS PATENT & TRADE MARKS ATTORNEYS PTY LTD

---

**MEMORIAL SLOAN KETTERING CANCER CENTER see AGENUS INC.**
**(21)** 2021200281

---

**(71)** Memorial Sloan-Kettering Cancer Center; Tri-Institutional Therapeutics Discovery Institute, Inc.
**(11)** AU-B-2019221837
**(21)** 2019221837 **(22)** 18.02.2019
**(54)** Agents and methods for treating dysproliferative diseases
**(51)** Int. Cl.
***C07D 307/93*** ( 2006.01 )
***C07D 413/04*** ( 2006.01 )
***C07D 491/048*** ( 2006.01 )
***C07D 498/04*** ( 2006.01 )
**(87)** WO2019/161345
**(31)** 62/632,372 **(32)** 19.02.18 **(33)** US
**(43)** 22.08.2019
**(44)** 01.08.2024
**(72)** FUKASE, Yoshiyuki; DUGGAN, Mark; WENDEL, Hans-Guido; SINGH, Kamini
**(74)** Griffith Hack

---

**(71)** Memphasys Limited
**(11)** AU-B-2023201892
**(21)** 2023201892 **(22)** 28.03.2023
**(54)** Electrophoresis device
**(51)** Int. Cl.
***B01D 57/02*** ( 2006.01 )
***A61K 35/15*** ( 2015.01 )
***C12N 5/076*** ( 2010.01 )
**(43)** 04.05.2023
**(44)** 01.08.2024
**(62)** 2017344755
**(72)** Zhao, Xing Feng
**(74)** Forte Intellectual Property Pty Ltd

---

**Merck Sharp & Dohme B.V. see Merck Sharp & Dohme LLC**
**(21)** 2021200984

---

**(71)** Merck Sharp & Dohme LLC; Merck Sharp & Dohme B.V.
**(11)** AU-B-2021200984
**(21)** 2021200984 **(22)** 15.02.2021
**(54)** Anti-CD27 antibodies
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
**(43)** 11.03.2021
**(44)** 01.08.2024
**(62)** 2017331380
**(72)** BEEBE, Amy M.; CHEUNG, Jason Ka Jen; JUAN, Veronica; FAYAD-AT-DILMAN, Laurence; SADEKOVA, Svetlana; WONG, Jerelyn; FISCHMANN, Thierry Olivier; PROSISE, Winifred W.; VAN EENENNAAM, Hans; VAN ELSAS, Andrea; GUELEN, Lars
**(74)** Spruson & Ferguson

---

**(71)** Merck Sharp & Dohme LLC
**(11)** AU-B-2022200142
**(21)** 2022200142 **(22)** 11.01.2022
**(54)** Crystals of anti-human PD-1 monoclonal antibodies
**(51)** Int. Cl.
***A61K 39/00*** ( 2006.01 )
**(43)** 10.02.2022

## Applications Accepted - Name Index cont'd

**(44)** 01.08.2024
**(62)** 2016223047
**(72)** REICHERT, Paul; PROSISE, Winifred W.; SCAPIN, Giovanna; YANG, Xiaoyu; KASHI, Ramesh; STRICKLAND, Corey
**(74)** Spruson & Ferguson

---

**(71)** Merck Sharp & Dohme LLC
**(11)** AU-B-2022287562
**(21)** 2022287562 **(22)** 13.12.2022
**(54)** 2-amino-N-heteroaryl-nicotinamides as NAV1.8 inhibitors
**(51)** Int. Cl.
***C07D 401/12*** ( 2006.01 )
***A61K 31/4439*** ( 2006.01 )
***A61K 31/444*** ( 2006.01 )
***A61P 29/00*** ( 2006.01 )
***C07D 401/14*** ( 2006.01 )
***C07D 413/12*** ( 2006.01 )
***C07D 413/14*** ( 2006.01 )
***C07D 417/14*** ( 2006.01 )
***C07D 471/04*** ( 2006.01 )
***C07D 471/10*** ( 2006.01 )
***C07D 487/04*** ( 2006.01 )
***C07D 491/04*** ( 2006.01 )
***C07D 495/04*** ( 2006.01 )
**(43)** 02.02.2023
**(44)** 01.08.2024
**(62)** 2019372057
**(72)** ARASAPPAN, Ashok; BELL, Ian M.; BRESLIN, Michael J.; BUNGARD, Christopher James; BURGEY, Christopher S.; CHOBANIAN, Harry R.; COX, Jason M.; GUIADEEN, Deodial Guy; JONES, Kristen L. G.; LAYTON, Mark E.; LIU, Hong; LIU, Jian; PERKINS, James J.; STACHEL, Shawn J.; SUEN-LAI, Linda M.; WU, Zhe
**(74)** Allens Patent & Trade Mark Attorneys

---

**(71)** Metalogenia Research & Technologies S.L.
**(11)** AU-B-2018385223
**(21)** 2018385223 **(22)** 07.12.2018
**(54)** Fixing means for fixing a wear element on the front edge of a support
**(51)** Int. Cl.
***E02F 9/28*** ( 2006.01 )
**(87)** WO2019/115379
**(31)** 17380027.7 **(32)** 13.12.17 **(33)** EP
**(43)** 20.06.2019
**(44)** 01.08.2024
**(72)** ROL CORREDOR, Javier; PÉREZ SORIA, Francisco; TRIGINER BOIXEDA, Jorge; MARTÍNEZ MAÑÉ, Angel; LÓPEZ REQUEJO, Sergio; AMAT HOLGADO, Carlos
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Metso Brasil Indústria e Comércio Ltda.
**(11)** AU-B-2019243544
**(21)** 2019243544 **(22)** 29.03.2019
**(54)** Roller assembly for a conveyor belt
**(51)** Int. Cl.
***B65G 39/14*** ( 2006.01 )
**(87)** WO2019/183705
**(31)** BR 10 2018 **(32)** 29.03.18 **(33)** BR
006507 6
**(43)** 03.10.2019
**(44)** 01.08.2024
**(72)** GOMES, Rodrigo Alfredo; NIKLEWSKI, Andrzej
**(74)** IP GATEWAY PATENT & TRADE MARK ATTORNEYS PTY LTD

---

**(71)** Micro Motion, Inc.
**(11)** AU-B-2021321201
**(21)** 2021321201 **(22)** 02.04.2021
**(54)** Transducer for a vibrating fluid meter
**(51)** Int. Cl.
***G01F 1/84*** ( 2006.01 )
**(87)** WO2022/031328
**(31)** 63/061,903 **(32)** 06.08.20 **(33)** US
**(43)** 10.02.2022
**(44)** 01.08.2024
**(72)** LUPIENSKI, Mark; NIELSON, Jeffrey
**(74)** GLMR

---

**(71)** MIDWEST INNOVATIVE PRODUCTS, LLC
**(11)** AU-B-2022368661
**(21)** 2022368661 **(22)** 17.10.2022
**(54)** TOOL HOLDER
**(51)** Int. Cl.
***B25H 3/00*** ( 2006.01 )
*A45C 11/00* ( 2006.01 )
*A45F 5/00* ( 2006.01 )
*A45F 5/02* ( 2006.01 )
**(87)** WO2023/069360
**(31)** 29/811,911 **(32)** 18.10.21 **(33)** US
63/257,490 19.10.21 US
17/571,258 07.01.22 US
**(43)** 27.04.2023
**(44)** 01.08.2024
**(72)** NOONER, Bryan; ZAJESKI, Robert; NOONER, Joshua
**(74)** Spruson & Ferguson

---

**(71)** Milwaukee Electric Tool Corporation; Griffith Hack
**(11)** AU-B-2023203750
**(21)** 2023203750 **(22)** 15.06.2023
**(54)** MOTOR WINDING DESIGN FOR AN ELECTRIC MOTOR
**(51)** Int. Cl.
***H02K 1/14*** ( 2006.01 )
***H02K 3/28*** ( 2006.01 )
***H02K 3/52*** ( 2006.01 )
***H02K 5/22*** ( 2006.01 )
***H02K 7/14*** ( 2006.01 )
**(43)** 13.07.2023
**(44)** 01.08.2024
**(62)** 2019390482
**(72)** BEYERL, Andrew T.; SCHWAB, Derek J.
**(74)** Griffith Hack

---

**(71)** MIND MEDICINE, INC.
**(11)** AU-B-2021382158
**(21)** 2021382158 **(22)** 04.11.2021
**(54)** MDMA PRODRUGS TO ASSIST PSYCHOTHERAPY
**(51)** Int. Cl.
***A61K 47/54*** ( 2017.01 )
***A61P 25/00*** ( 2006.01 )
**(87)** WO2022/106947
**(31)** 63/115,245 **(32)** 18.11.20 **(33)** US
**(43)** 27.05.2022
**(44)** 01.08.2024
**(72)** LUSTENBERGER, Felix; LIECHTI, Matthias Emanuel; TRACHSEL, Daniel
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Mitsubishi Power, Ltd.
**(11)** AU-B-2022275472
**(21)** 2022275472 **(22)** 24.11.2022
**(54)** Secondary battery management system, secondary battery management method and secondary battery management program for said secondary battery management system, and secondary battery system
**(51)** Int. Cl.
***H01M 10/48*** ( 2006.01 )
***G01R 31/392*** ( 2019.01 )
***H01M 10/44*** ( 2006.01 )
***H02J 7/00*** ( 2006.01 )
**(43)** 05.01.2023
**(44)** 01.08.2024
**(62)** 2019361447
**(72)** YASUGI, Akira
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Miyakoshi Printing Machinery Co., Ltd.
**(11)** AU-B-2019236697
**(21)** 2019236697 **(22)** 26.09.2019
**(54)** Blanked refuse winding apparatus for continuous label paper
**(51)** Int. Cl.
***B65H 18/26*** ( 2006.01 )
**(31)** 2018-240357 **(32)** 21.12.18 **(33)** JP
**(43)** 09.07.2020
**(44)** 01.08.2024
**(72)** Takahashi, Kazuhito; Saga, Toshihiro
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** MJNN LLC
**(11)** AU-B-2019369423
**(21)** 2019369423 **(22)** 30.10.2019
**(54)** Grow tower processing for controlled environment agriculture system
**(51)** Int. Cl.
***A01D 45/00*** ( 2018.01 )
***A01G 31/04*** ( 2006.01 )
**(87)** WO2020/092503
**(31)** 62/752,977 **(32)** 30.10.18 **(33)** US
**(43)** 07.05.2020
**(44)** 01.08.2024
**(72)** COFFIN, Gage Goodspeed; FLYNN, Michael Peter; KLEIN, Brice Leon; LE ROUX, Alexandre; STOREY, Nathaniel R.; HASOON, Tamara Tahir; JENKINS, Merritt Jonathan; MALONE, Maria Alexandria; MATERA, Matthew James; OLSON, Anna; HENDEL, Nadav Sahar
**(74)** Spruson & Ferguson

---

**(71)** Mondofix Inc.
**(11)** AU-B-2018349085
**(21)** 2018349085 **(22)** 11.10.2018
**(54)** Articulating crack curing lamp and method
**(51)** Int. Cl.

## Applications Accepted - Name Index cont'd

***B29C 35/08*** ( 2006.01 )
**(87)** WO2019/071350
**(31)** 62/571,045 **(32)** 11.10.17 **(33)** US
**(43)** 18.04.2019
**(44)** 01.08.2024
**(72)** THOMAS, Jonathan P.; NELLEN, Levi R.; CHATTERTON, Penny M.
**(74)** Griffith Hack

---

**(71)** MOOG INC.
**(11)** AU-B-2021377247
**(21)** 2021377247 **(22)** 11.11.2021
**(54)** SUBSURFACE SAFETY VALVE ACTUATOR
**(51)** Int. Cl.
***E21B 34/06*** ( 2006.01 )
**(87)** WO2022/103959
**(31)** 63/134,699 **(32)** 07.01.21 **(33)** US
63/113,012 12.11.20 US
**(43)** 19.05.2022
**(44)** 01.08.2024
**(72)** GEIGER, David; HALLORAN, Daniel, J.; BLASZ, Jeff; JANG, In Chul; GIANGRECO-MAROTTA, Joseph
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Myosa Pty Ltd
**(11)** AU-B-2019303727
**(21)** 2019303727 **(22)** 19.07.2019
**(54)** Oral appliance
**(51)** Int. Cl.
***A61F 5/56*** ( 2006.01 )
**(87)** WO2020/014748
**(31)** 2018902632 **(32)** 20.07.18 **(33)** AU
**(43)** 23.01.2020
**(44)** 01.08.2024
**(72)** FARRELL, Christopher John
**(74)** IP GATEWAY PATENT & TRADE MARK ATTORNEYS PTY LTD

---

**(71)** Nanopharmaceuticals, LLC
**(11)** AU-B-2019250980
**(21)** 2019250980 **(22)** 03.04.2019
**(54)** Composition and method for dual targeting in treatment of neuroendocrine tumors
**(51)** Int. Cl.
***A61K 31/198*** ( 2006.01 )
***A61K 31/22*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
**(87)** WO2019/199532
**(31)** 15/950,870 **(32)** 11.04.18 **(33)** US
**(43)** 17.10.2019
**(44)** 01.08.2024
**(72)** MOUSA, Shaker; RAJABI, Mehdi; KARAKUS, Ozlem O.
**(74)** Spruson & Ferguson

---

**(71)** nChain Holdings Limited
**(11)** AU-B-2022291434
**(21)** 2022291434 **(22)** 19.12.2022
**(54)** Secure Multiparty Loss Resistant Storage and Transfer of Cryptographic Keys for Blockchain Based Systems in Conjunction with a Wallet Management System
**(51)** Int. Cl.
***H04L 9/30*** ( 2006.01 )
***G06Q 20/36*** ( 2012.01 )
***H04L 9/08*** ( 2006.01 )
**(43)** 16.02.2023
**(44)** 01.08.2024
**(62)** 2017223129
**(72)** Wright, Craig Steven; Savanah, Stephane
**(74)** James & Wells Intellectual Property

---

**(71)** NEC Platforms, Ltd.
**(11)** AU-B-2019411787
**(21)** 2019411787 **(22)** 12.12.2019
**(54)** Communication system and communication device
**(51)** Int. Cl.
***H04L 12/28*** ( 2006.01 )
**(87)** WO2020/137597
**(31)** 2018-240552 **(32)** 25.12.18 **(33)** JP
**(43)** 02.07.2020
**(44)** 01.08.2024
**(72)** YAMAKI, Norimitsu
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Netflix, Inc.
**(11)** AU-B-2019391777
**(21)** 2019391777 **(22)** 25.11.2019
**(54)** Cache warming: agility for a stateful service
**(51)** Int. Cl.
***H04L 67/10*** ( 2022.01 )
**(87)** WO2020/117521
**(31)** 62/775,217 **(32)** 04.12.18 **(33)** US
16/561,668 05.09.19 US
**(43)** 11.06.2020
**(44)** 01.08.2024
**(72)** JAYARAMAN, Deva; MADAPPA, Shashi; ENUGULA, Sridhar; PAPAPANAGIOTOU, Ioannis
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Netflix, Inc.
**(11)** AU-B-2023237151
**(21)** 2023237151 **(22)** 28.09.2023
**(54)** Systems and methods for streamlining multimedia content acquisition
**(51)** Int. Cl.
***G06F 21/10*** ( 2013.01 )
**(43)** 19.10.2023
**(44)** 01.08.2024
**(62)** 2020370599
**(72)** Gala, Shyam; Shi, Katheryn; Gray, Christopher; Rangarajan, Suudhan; Correa, Manuel; Pissanetzky, Pablo; Mollinier Toublet, Bertrand; Ghate, Niranjan; Walsh, Raymond; Barker, Edward
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Netflix, Inc.
**(11)** AU-B-2023263516
**(21)** 2023263516 **(22)** 09.11.2023
**(54)** Automatic trailer detection in multimedia content
**(51)** Int. Cl.
***G11B 27/28*** ( 2006.01 )
***G06V 10/82*** ( 2022.01 )
**(43)** 07.12.2023
**(44)** 01.08.2024
**(62)** 2020383509
**(72)** Dong Liu; Lezi Wang; Rohit Puri
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** NETFLIX, INC.
**(11)** AU-B-2022219979
**(21)** 2022219979 **(22)** 10.02.2022
**(54)** TECHNIQUES FOR COMPOSITE MEDIA STORAGE AND RETRIEVAL
**(51)** Int. Cl.
***H04N 21/2343*** ( 2011.01 )
***H04N 21/262*** ( 2011.01 )
***H04N 21/845*** ( 2011.01 )
**(87)** WO2022/173991
**(31)** 17/175,338 **(32)** 12.02.21 **(33)** US
**(43)** 18.08.2022
**(44)** 01.08.2024
**(72)** NEWTON, Christopher; MOTION, Carenina Garcia; VISHWANATHAN, Vinod
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Neurolens, Inc.
**(11)** AU-B-2018330035
**(21)** 2018330035 **(22)** 04.09.2018
**(54)** Method and system for measuring binocular alignment
**(51)** Int. Cl.
***A61B 3/00*** ( 2006.01 )
***A61B 3/032*** ( 2006.01 )
***A61B 3/08*** ( 2006.01 )
***A61B 3/09*** ( 2006.01 )
***A61B 3/10*** ( 2006.01 )
***A61B 3/113*** ( 2006.01 )
***A61B 3/14*** ( 2006.01 )
**(87)** WO2019/050877
**(31)** 15/696,161 **(32)** 05.09.17 **(33)** US
**(43)** 14.03.2019
**(44)** 01.08.2024
**(72)** KRALL, Jeffrey P.; PLUMLEY, Aric
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Neuronano AB
**(11)** AU-B-2018366155
**(21)** 2018366155 **(22)** 06.11.2018
**(54)** Positional stabilization of tissue-implanted medical devices
**(51)** Int. Cl.
***A61N 1/05*** ( 2006.01 )
***A61B 5/24*** ( 2021.01 )
***A61N 1/36*** ( 2006.01 )
**(87)** WO2019/093936
**(31)** 1700274-2 **(32)** 09.11.17 **(33)** SE
**(43)** 16.05.2019
**(44)** 01.08.2024
**(72)** SCHOUENBORG, Jens
**(74)** Oxygene IP

---

**(71)** Next2Sun GmbH
**(11)** AU-B-2023200555
**(21)** 2023200555 **(22)** 03.02.2023
**(54)** PHOTOVOLTAIC SYSTEM AND ASSOCIATED USE
**(51)** Int. Cl.

***H02S 20/10*** ( 2014.01 )
**(43)** 02.03.2023
**(44)** 01.08.2024
**(62)** 2017384503
**(72)** Hildebrandt, Heiko; Probst, Markus; Brill, Thomas; Zwosta, Nicolai; Baldy, Robert
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Nexter Systems
**(11)** AU-B-2020264786
**(21)** 2020264786 **(22)** 22.04.2020
**(54)** Case head deflector and weapon provided with such a deflector as well as a method for deflecting case heads
**(51)** Int. Cl.
***F41A 9/60*** ( 2006.01 )
**(87)** WO2020/222089
**(31)** 1904423 **(32)** 29.04.19 **(33)** FR
**(43)** 05.11.2020
**(44)** 01.08.2024
**(72)** MARTINEZ, Yves
**(74)** Wallington-Dummer

---

**(71)** NextKidney SA
**(11)** AU-B-2018361950
**(21)** 2018361950 **(22)** 31.10.2018
**(54)** Automated extracorporeal blood treatment apparatus
**(51)** Int. Cl.
***A61M 1/16*** ( 2006.01 )
***A61M 1/34*** ( 2006.01 )
***A61M 1/36*** ( 2006.01 )
**(87)** WO2019/087103
**(31)** 17209126.6 **(32)** 20.12.17 **(33)** EP
17209117.5 20.12.17 EP
17199363.7 31.10.17 EP
17199362.9 31.10.17 EP
**(43)** 09.05.2019
**(44)** 01.08.2024
**(72)** VECTEN, Didier; VESCOVO, Paul; ALLENDES, Ricardo
**(74)** IP GATEWAY PATENT & TRADE MARK ATTORNEYS PTY LTD

---

**(71)** Nichiha Corporation
**(11)** AU-B-2018369233
**(21)** 2018369233 **(22)** 14.11.2018
**(54)** REPAIR SEAL, METHOD FOR MANUFACTURING REPAIR SEAL, AND REPAIR STRUCTURE
**(51)** Int. Cl.
***E04F 13/07*** ( 2006.01 )
***B32B 27/00*** ( 2006.01 )
**(87)** WO2019/098251
**(31)** 2017-218715 **(32)** 14.11.17 **(33)** JP
**(43)** 23.05.2019
**(44)** 01.08.2024
**(72)** YAMAMOTO, Hiroaki
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** NICOVENTURES TRADING LIMITED
**(11)** AU-B-2021374066
**(21)** 2021374066 **(22)** 29.10.2021
**(54)** AEROSOL-GENERATING MATERIAL
**(51)** Int. Cl.
***A24F 40/20*** ( 2020.01 )
**(87)** WO2022/096860
**(31)** 2017532.9 **(32)** 05.11.20 **(33)** GB
2114586.7 12.10.21 GB
**(43)** 12.05.2022
**(44)** 01.08.2024
**(72)** JENKINS, Benjamin
**(74)** Spruson & Ferguson

---

**(71)** NINGBO INSTITUTE OF MATERIALS TECHNOLOGY AND ENGINEERING, CHINESE ACADEMY OF SCIENCES
**(11)** AU-B-2022383821
**(21)** 2022383821 **(22)** 13.10.2022
**(54)** CATHODE MATERIAL MADE OF COBALT-FREE LAYERED OXIDE
**(51)** Int. Cl.
***H01M 4/485*** ( 2010.01 )
***H01M 4/525*** ( 2010.01 )
**(87)** WO2023/155452
**(31)** 202210157606.0 **(32)** 21.02.22 **(33)** CN
**(43)** 07.09.2023
**(44)** 01.08.2024
**(72)** WEN, Xiaohui; SHANG, You; QIU, Bao; GU, Qingwen; LIU, Zhaoping
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Nippon Steel Corporation; Vallourec Oil and Gas France
**(11)** AU-B-2021327342
**(21)** 2021327342 **(22)** 16.08.2021
**(54)** Oil-Well Metal Pipe, and Method for Producing Oil-Well Metal Pipe
**(51)** Int. Cl.
***F16L 15/04*** ( 2006.01 )
***C08K 5/3417*** ( 2006.01 )
***C08L 101/00*** ( 2006.01 )
***C10M 103/00*** ( 2006.01 )
***C10M 107/38*** ( 2006.01 )
***C10M 139/00*** ( 2006.01 )
*C10N 10/04* ( 2006.01 )
*C10N 10/08* ( 2006.01 )
*C10N 10/10* ( 2006.01 )
*C10N 10/12* ( 2006.01 )
*C10N 30/00* ( 2006.01 )
*C10N 40/02* ( 2006.01 )
**(87)** WO2022/039131
**(31)** 2020-139430 **(32)** 20.08.20 **(33)** JP
**(43)** 24.02.2022
**(44)** 01.08.2024
**(72)** ABE, Tomoka; TOMIYASU, Ken; MATSUMOTO, Keishi; OCHIAI, Mamoru
**(74)** Spruson & Ferguson

---

**(71)** Nippon Telegraph and Telephone Corporation
**(11)** AU-B-2020437843
**(21)** 2020437843 **(22)** 27.03.2020
**(54)** Resource management device, resource management method and resource management program
**(51)** Int. Cl.
***G06F 8/60*** ( 2018.01 )
***G06F 9/455*** ( 2018.01 )
***G06F 9/50*** ( 2006.01 )
**(87)** WO2021/192267
**(43)** 30.09.2021
**(44)** 01.08.2024
**(72)** AOKI, Daisuke; HASEBE, Katsuyuki; KANZAKI, Makoto; KUSAKABE, Yusuke
**(74)** Spruson & Ferguson

---

**(71)** Nippon Telegraph and Telephone Corporation
**(11)** AU-B-2020437977
**(21)** 2020437977 **(22)** 27.03.2020
**(54)** Resource management device, resource management method, and resource management program
**(51)** Int. Cl.
***G06F 8/60*** ( 2018.01 )
***G06F 9/455*** ( 2018.01 )
***G06F 9/50*** ( 2006.01 )
**(87)** WO2021/192268
**(43)** 30.09.2021
**(44)** 01.08.2024
**(72)** AOKI, Daisuke; HASEBE, Katsuyuki; KANZAKI, Makoto; KUSAKABE, Yusuke
**(74)** Spruson & Ferguson

---

**(71)** NOOTER/ERIKSEN, INC.
**(11)** AU-B-2020477490
**(21)** 2020477490 **(22)** 20.11.2020
**(54)** IMPROVED OMEGA-3 CONTAINING COMPOSITIONS
**(51)** Int. Cl.
***C11B 1/04*** ( 2006.01 )
***A23L 29/256*** ( 2016.01 )
***A61K 8/68*** ( 2006.01 )
***A61K 36/05*** ( 2006.01 )
**(87)** WO2022/108595
**(43)** 27.05.2022
**(44)** 01.08.2024
**(72)** GOODALL, Brian L.; KUKLEV, Dmitry; BOSTICK, Glen L.
**(74)** Spruson & Ferguson

---

**(71)** Nordic Minesteel Technologies Inc.
**(11)** AU-B-2022235607
**(21)** 2022235607 **(22)** 23.09.2022
**(54)** Telescoping jack for lifting large capacity trucks
**(51)** Int. Cl.
***B66F 7/28*** ( 2006.01 )
***B66F 5/04*** ( 2006.01 )
***B66F 7/20*** ( 2006.01 )
**(43)** 13.10.2022
**(44)** 01.08.2024
**(62)** 2020281125
**(72)** DESORMEAU, Wayne; WEAVER, Jeff; MATHIEU, Guy
**(74)** Spruson & Ferguson

---

**(71)** Northwest University
**(11)** AU-B-2021207155
**(21)** 2021207155 **(22)** 15.01.2021
**(54)** High-yield eurotium cristatum strain containing diketopiperazine dimer, and method for separating and purifying diketopiperazine dimer therefrom
**(51)** Int. Cl.
***C12N 1/14*** ( 2006.01 )

## Applications Accepted - Name Index cont'd

***C07D 519/00*** ( 2006.01 )
***C12N 3/00*** ( 2006.01 )
***C12P 17/18*** ( 2006.01 )
***C12R 1/645*** ( 2006.01 )
**(87)** WO2021/143833
**(31)** 202010039961.9 **(32)** 15.01.20 **(33)** CN
**(43)** 22.07.2021
**(44)** 01.08.2024
**(72)** FAN, Daidi; ZHU, Chenhui; LIU, Gang; HUI, Junfeng; ZHANG, Hui
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Novartis AG
**(11)** AU-B-2022215155
**(21)** 2022215155 **(22)** 08.08.2022
**(54)** Ribociclib tablet
**(51)** Int. Cl.
***A61K 9/20*** ( 2006.01 )
**(43)** 01.09.2022
**(44)** 01.08.2024
**(62)** 2020250190
**(72)** Gururajan, Bindhumadhavan; Grandeury, Arnaud; Costa, Rui
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Novozymes A/S
**(11)** AU-B-2018344497
**(21)** 2018344497 **(22)** 05.10.2018
**(54)** Enzyme assisted crude palm oil extraction
**(51)** Int. Cl.
***C11B 1/02*** ( 2006.01 )
**(87)** WO2019/068850
**(31)** 201741035471 **(32)** 06.10.17 **(33)** IN
**(43)** 11.04.2019
**(44)** 01.08.2024
**(72)** VENKATESH, Purna; DASGUPTA, Aindrila
**(74)** Spruson & Ferguson

---

**(71)** NPL Management Limited
**(11)** AU-B-2019306766
**(21)** 2019306766 **(22)** 16.07.2019
**(54)** System and method for obtaining thermal image data of a body part and thermal imager
**(51)** Int. Cl.
***G06T 7/00*** ( 2017.01 )
***G06T 7/11*** ( 2017.01 )
***G06T 7/174*** ( 2017.01 )
***G06T 7/194*** ( 2017.01 )
**(87)** WO2020/016569
**(31)** 1811620.2 **(32)** 16.07.18 **(33)** GB
**(43)** 23.01.2020
**(44)** 01.08.2024
**(72)** WHITTAM, Aaron; SIMPSON, Rob
**(74)** MEYER WEST IP PTY LTD

---

**(71)** NUCTECH COMPANY LIMITED; TSINGHUA UNIVERSITY
**(11)** AU-B-2021365222
**(21)** 2021365222 **(22)** 27.09.2021
**(54)** SUPPORT FRAME FOR CT SLIP-RING BEARING
**(51)** Int. Cl.
***F16C 35/02*** ( 2006.01 )
**(87)** WO2022/083421
**(31)** 202011142414.X **(32)** 22.10.20 **(33)** CN
**(43)** 28.04.2022
**(44)** 01.08.2024
**(72)** ZHANG, Li; CHEN, Zhiqiang; HONG, Mingzhi; HUANG, Qingping; WANG, Zinan; LIANG, Jinning; HOU, Hongbin
**(74)** Spruson & Ferguson

---

**(71)** NUOVO PIGNONE TECNOLOGIE - S.R.L.
**(11)** AU-B-2021392776
**(21)** 2021392776 **(22)** 26.11.2021
**(54)** A SYSTEM FOR PRODUCING LIQUEFIED NATURAL GAS AND METHOD
**(51)** Int. Cl.
***F25J 1/00*** ( 2006.01 )
**(87)** WO2022/117228
**(31)** 102020000030023 **(32)** 04.12.20 **(33)** IT
**(43)** 09.06.2022
**(44)** 01.08.2024
**(72)** AMIDEI, Simone; BURRATO, Andrea; CALDERARO, Andrea
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** NUOVO PIGNONE TECNOLOGIE - S.R.L.
**(11)** AU-B-2022209109
**(21)** 2022209109 **(22)** 10.01.2022
**(54)** PRE-SINTERED PREFORM WITH HIGH TEMPERATURE CAPABILITY, IN PARTICULAR AS ABRASIVE COATING FOR GAS TURBINE BLADES
**(51)** Int. Cl.
***F01D 5/20*** ( 2006.01 )
***F01D 11/12*** ( 2006.01 )
**(87)** WO2022/152579
**(31)** 102021000000626 **(32)** 14.01.21 **(33)** IT
**(43)** 21.07.2022
**(44)** 01.08.2024
**(72)** STRAMARE, Stefania; TOGNARELLI, Leonardo; MICHELASSI, Vittorio; BALDI, Gino; MASI, Gabriele
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Ocado Innovation Limited
**(11)** AU-B-2021232560
**(21)** 2021232560 **(22)** 03.03.2021
**(54)** Automated storage systems, and devices
**(51)** Int. Cl.
***B60B 1/00*** ( 2006.01 )
***B60B 1/02*** ( 2006.01 )
***B60B 9/26*** ( 2006.01 )
**(87)** WO2021/175956
**(31)** 2003110.0 **(32)** 04.03.20 **(33)** GB
2003097.9 04.03.20 GB
2003091.2 04.03.20 GB
2008183.2 01.06.20 GB
2008190.7 01.06.20 GB
**(43)** 10.09.2021
**(44)** 01.08.2024
**(72)** WHELAN, Matthew; JOHANNISSON, Wilhelm
**(74)** James & Wells Intellectual Property

---

**(71)** Ocado Innovation Limited
**(11)** AU-B-2021255118
**(21)** 2021255118 **(22)** 19.04.2021
**(54)** Multitemperature storage system
**(51)** Int. Cl.
***B65G 1/04*** ( 2006.01 )
***B65G 1/137*** ( 2006.01 )
***F25D 13/04*** ( 2006.01 )
***F25D 17/00*** ( 2006.01 )
***F25D 17/02*** ( 2006.01 )
***F25D 25/00*** ( 2006.01 )
***F25D 25/04*** ( 2006.01 )
***F25D 29/00*** ( 2006.01 )
**(87)** WO2021/209648
**(31)** 2005636.2 **(32)** 17.04.20 **(33)** GB
**(43)** 21.10.2021
**(44)** 01.08.2024
**(72)** MEUTH, Benjamin; REID, Brian; BOATENG, Eric; CHAPLIN, Fliss; EVANS, Gavin; CRISTESCU, Ovi; TAHIR, Ribka
**(74)** James & Wells Intellectual Property

---

**(71)** OCTOPUS ENERGY HEATING LIMITED
**(11)** AU-B-2022215955
**(21)** 2022215955 **(22)** 07.02.2022
**(54)** HEATING INSTALLATIONS, METHODS AND SYSTEMS
**(51)** Int. Cl.
***F24D 19/10*** ( 2006.01 )
***F24H 15/212*** ( 2022.01 )
***F24H 15/262*** ( 2022.01 )
***F24H 15/265*** ( 2022.01 )
***F24H 15/375*** ( 2022.01 )
**(87)** WO2022/168049
**(31)** 2101678.7 **(32)** 07.02.21 **(33)** GB
2109593.0 02.07.21 GB
2109594.8 02.07.21 GB
2109596.3 02.07.21 GB
2109597.1 02.07.21 GB
2109598.9 02.07.21 GB
2109599.7 02.07.21 GB
2109600.3 02.07.21 GB
2111076.2 02.08.21 GB
**(43)** 11.08.2022
**(44)** 01.08.2024
**(72)** KONOWALCZYK, Peter
**(74)** FB Rice Pty Ltd

---

**(71)** OCTOPUS ENERGY HEATING LIMITED
**(11)** AU-B-2022216534
**(21)** 2022216534 **(22)** 07.02.2022
**(54)** METHODS AND SYSTEMS FOR MODIFYING HEATED WATER USAGE
**(51)** Int. Cl.
***G05B 13/02*** ( 2006.01 )
**(87)** WO2022/168031
**(31)** 2101678.7 **(32)** 07.02.21 **(33)** GB
2109593.0 02.07.21 GB
2109594.8 02.07.21 GB
2109596.3 02.07.21 GB
2109597.1 02.07.21 GB
2109598.9 02.07.21 GB
2109599.7 02.07.21 GB
2109600.3 02.07.21 GB
2111083.8 02.08.21 GB
**(43)** 11.08.2022
**(44)** 01.08.2024
**(72)** KONOWALCZYK, Peter
**(74)** GLMR

## Applications Accepted - Name Index cont'd

**(71)** OHFG TECHNOLOGIES (SHANGHAI) CO., LTD
**(11)** AU-B-2023203799
**(21)** 2023203799 **(22)** 16.06.2023
**(54)** ADJUSTABLE DUMBBELL
**(51)** Int. Cl.
***A63B 21/072*** ( 2006.01 )
**(31)** 202310662407.X **(32)** 06.06.23 **(33)** CN
**(43)** 01.08.2024
**(44)** 01.08.2024
**(72)** Liu, Ping
**(74)** LAMINAR IP PTY LTD

---

**(71)** Omachron Intellectual Property Inc.
**(11)** AU-B-2021237991
**(21)** 2021237991 **(22)** 17.03.2021
**(54)** Surface cleaning apparatus with removable air treatment member assembly
**(51)** Int. Cl.
***A47L 9/10*** ( 2006.01 )
***A47L 5/24*** ( 2006.01 )
***A47L 9/32*** ( 2006.01 )
**(87)** WO2021/184117
**(31)** 16/822,708 **(32)** 18.03.20 **(33)** US
16/823,191 18.03.20 US
16/823,203 18.03.20 US
16/823,216 18.03.20 US
**(43)** 23.09.2021
**(44)** 01.08.2024
**(72)** CONRAD, Wayne Ernest
**(74)** FPA Patent Attorneys Pty Ltd

---

**Omeros Corporation see University of Leicester**
**(21)** 2022256090

---

**(71)** OmniAb, Inc.
**(11)** AU-B-2018210420
**(21)** 2018210420 **(22)** 19.01.2018
**(54)** Human antibodies from transgenic rodents with multiple heavy chain immunoglobulin loci
**(51)** Int. Cl.
***A01K 67/027*** ( 2006.01 )
***C07K 16/00*** ( 2006.01 )
**(87)** WO2018/136823
**(31)** 62/448,317 **(32)** 19.01.17 **(33)** US
**(43)** 26.07.2018
**(44)** 01.08.2024
**(72)** Buelow, Roland; Bruggemann, Marianne; Ma, Biao; Osborn, Michael J.
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Omnicell, Inc.
**(11)** AU-B-2018368950
**(21)** 2018368950 **(22)** 16.11.2018
**(54)** Temperature controlled dispense drawer
**(51)** Int. Cl.
***F25D 1/00*** ( 2006.01 )
***A47B 88/00*** ( 2017.01 )
***B65D 81/18*** ( 2006.01 )
***F25D 3/00*** ( 2006.01 )
***F25D 3/02*** ( 2006.01 )
***F25D 11/00*** ( 2006.01 )
***F25D 17/00*** ( 2006.01 )
**(87)** WO2019/099767
**(31)** 16/129,579 **(32)** 12.09.18 **(33)** US
15/816,775 17.11.17 US
**(43)** 23.05.2019
**(44)** 01.08.2024
**(72)** FISHER, Herbert Lawson; WILSON, Edith; FAMBRO, Dean; ARNOLD, Brian; BASLER, Brad; KAPADIA, Vihar; BELLIGUNDU, Sunil
**(74)** FB Rice Pty Ltd

---

**(71)** OPSEL PTY LTD
**(11)** AU-B-2021451294
**(21)** 2021451294 **(22)** 06.10.2021
**(54)** BREATHING ASSISTANCE APPARATUS
**(51)** Int. Cl.
***A61M 16/06*** ( 2006.01 )
***A61C 7/36*** ( 2006.01 )
***A61F 5/56*** ( 2006.01 )
**(87)** WO2022/261695
**(31)** 2021901778 **(32)** 14.06.21 **(33)** AU
**(43)** 22.12.2022
**(44)** 01.08.2024
**(72)** DAWSON, Peter
**(74)** Mann IP

---

**(71)** oramed Ltd.
**(11)** AU-B-2019286658
**(21)** 2019286658 **(22)** 06.06.2019
**(54)** Recombinant protease inhibitor-containing compositions, methods for producing same and uses thereof
**(51)** Int. Cl.
***A61K 38/17*** ( 2006.01 )
***A61K 9/48*** ( 2006.01 )
***A61K 38/28*** ( 2006.01 )
***A61K 38/55*** ( 2006.01 )
***A61K 38/56*** ( 2006.01 )
**(87)** WO2019/239405
**(31)** 62/683,061 **(32)** 11.06.18 **(33)** US
**(43)** 19.12.2019
**(44)** 01.08.2024
**(72)** KIDRON, Miriam; ARORA, Kajal; NAGARAJU, Ramachandra; ARORA, Nupur Mehrotra; KUNDU, Prabuddha
**(74)** Collison & Co

---

**(71)** ORPHALAN
**(11)** AU-B-2019263969
**(21)** 2019263969 **(22)** 03.05.2019
**(54)** Crystalline form of triethylenetetramine tetrahydrochloride and its pharmaceutical use
**(51)** Int. Cl.
***C07C 211/14*** ( 2006.01 )
***A61K 31/132*** ( 2006.01 )
***A61P 1/16*** ( 2006.01 )
***A61P 25/00*** ( 2006.01 )
***A61P 43/00*** ( 2006.01 )
**(87)** WO2019/211464
**(31)** 18290048.0 **(32)** 04.05.18 **(33)** EP
**(43)** 07.11.2019
**(44)** 01.08.2024
**(72)** MORLEY, Timothy James; LAWRENCE, Ronnie Maxwell; AMIN, Naseem
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** OrsoBio, Inc.
**(11)** AU-B-2022275470
**(21)** 2022275470 **(22)** 24.11.2022
**(54)** Sulfinylaminobenzamide and sulfonylaminobenzamide derivatives
**(51)** Int. Cl.
***C07D 213/71*** ( 2006.01 )
***A61P 1/16*** ( 2006.01 )
***C07C 311/08*** ( 2006.01 )
***C07C 311/14*** ( 2006.01 )
***C07C 311/21*** ( 2006.01 )
***C07C 311/29*** ( 2006.01 )
***C07C 311/39*** ( 2006.01 )
***C07C 311/46*** ( 2006.01 )
***C07C 317/14*** ( 2006.01 )
***C07D 205/04*** ( 2006.01 )
***C07D 231/18*** ( 2006.01 )
***C07D 233/20*** ( 2006.01 )
***C07D 239/26*** ( 2006.01 )
***C07D 257/04*** ( 2006.01 )
***C07D 275/02*** ( 2006.01 )
***C07D 277/36*** ( 2006.01 )
***C07D 279/12*** ( 2006.01 )
***C07D 295/26*** ( 2006.01 )
***C07D 305/06*** ( 2006.01 )
***C07D 309/08*** ( 2006.01 )
***C07D 335/02*** ( 2006.01 )
***C07D 451/14*** ( 2006.01 )
***C07D 493/08*** ( 2006.01 )
***C07F 9/46*** ( 2006.01 )
**(43)** 05.01.2023
**(44)** 01.08.2024
**(62)** 2019272538
**(72)** Farand, Julie; Kaplan, Joshua A.; Notte, Gregory; Olen, Casey Lockwood; Sangi, Michael; Sperandio, David
**(74)** FPA Patent Attorneys Pty Ltd

---

**OSAKA UNIVERSITY see CHUGAI SEIYAKU KABUSHIKI KAISHA**
**(21)** 2022297107

---

**(71)** Oscor, Inc.; Abiomed, Inc.
**(11)** AU-B-2023214347
**(21)** 2023214347 **(22)** 11.08.2023
**(54)** Overmold technique for peel-away introducer design
**(51)** Int. Cl.
***A61M 25/00*** ( 2006.01 )
***A61M 25/06*** ( 2006.01 )
***B29C 65/02*** ( 2006.01 )
**(43)** 31.08.2023
**(44)** 01.08.2024
**(62)** 2017373953
**(72)** Fantuzzi, Glen; Tafone, Michael; Drum, Jeffrey
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Otsuka Pharmaceutical Co., Ltd.
**(11)** AU-B-2019287313
**(21)** 2019287313 **(22)** 11.06.2019
**(54)** Delamanid-containing composition
**(51)** Int. Cl.
***A61K 31/454*** ( 2006.01 )
***A61K 9/16*** ( 2006.01 )
***A61K 9/20*** ( 2006.01 )

## Applications Accepted - Name Index cont'd

***A61K 9/48*** ( 2006.01 )
***A61K 47/20*** ( 2006.01 )
***A61K 47/26*** ( 2006.01 )
***A61K 47/32*** ( 2006.01 )
***A61K 47/38*** ( 2006.01 )
***A61P 31/04*** ( 2006.01 )
***A61P 31/06*** ( 2006.01 )
**(87)** WO2019/240104
**(31)** 2018-111464 **(32)** 11.06.18 **(33)** JP
**(43)** 19.12.2019
**(44)** 01.08.2024
**(72)** NAKAMURA, Atsuya; YAMAZAKI, Hiroyuki; HASEGAWA, Masahiro; KAMADA, Naoki
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Otsuka Pharmaceutical Factory, Inc.
**(11)** AU-B-2019234899
**(21)** 2019234899 **(22)** 13.03.2019
**(54)** Transfusion preparation
**(51)** Int. Cl.
***A61K 33/06*** ( 2006.01 )
***A61K 9/08*** ( 2006.01 )
***A61K 9/10*** ( 2006.01 )
***A61K 31/198*** ( 2006.01 )
***A61K 47/12*** ( 2006.01 )
***A61K 47/18*** ( 2017.01 )
***A61K 47/22*** ( 2006.01 )
***A61K 47/44*** ( 2017.01 )
***A61P 3/02*** ( 2006.01 )
**(87)** WO2019/176996
**(31)** 2018-045822 **(32)** 13.03.18 **(33)** JP
**(43)** 19.09.2019
**(44)** 01.08.2024
**(72)** TANI, Seiji; FUJITA, Seiji; NAKAI, Teru; KIUCHI, Yasuhiro; YAMANAKA, Miyuki; HAYASHI, Yui; KANNO, Hiroshi; SARUWATARI, Yu
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** PACCAR Inc
**(11)** AU-B-2018203881
**(21)** 2018203881 **(22)** 01.06.2018
**(54)** METHOD FOR IMPROVING FUEL ECONOMY BY INFLUENCING DRIVER BEHAVIOUR
**(51)** Int. Cl.
***B60W 40/10*** ( 2012.01 )
**(31)** 15/614,369 **(32)** 05.06.17 **(33)** US
**(43)** 20.12.2018
**(44)** 01.08.2024
**(72)** Seger, Matthew; Slaton, Zachary
**(74)** Madderns Pty Ltd

---

**(71)** Panasonic Intellectual Property Corporation of America
**(11)** AU-B-2019313622
**(21)** 2019313622 **(22)** 25.03.2019
**(54)** Terminal and communication method
**(51)** Int. Cl.
***H04W 72/04*** ( 2023.01 )
***H04W 28/04*** ( 2009.01 )
**(87)** WO2020/026518
**(31)** 2018-144982 **(32)** 01.08.18 **(33)** JP
**(43)** 06.02.2020
**(44)** 01.08.2024
**(72)** YAMAMOTO, Tetsuya; LI, Hongchao; SUZUKI, Hidetoshi; IWAI, Takashi
**(74)** Spruson & Ferguson

---

**(71)** PARTING STONE, INC.
**(11)** AU-B-2020265889
**(21)** 2020265889 **(22)** 23.04.2020
**(54)** Methods to solidify cremation remains
**(51)** Int. Cl.
***A61G 17/08*** ( 2006.01 )
***A61G 17/00*** ( 2006.01 )
***A61G 17/007*** ( 2006.01 )
***A61G 99/00*** ( 2006.01 )
***B09B 3/00*** ( 2006.01 )
***E04H 13/00*** ( 2006.01 )
**(87)** WO2020/223113
**(31)** 62/839,630 **(32)** 27.04.19 **(33)** US
62/905,146 24.09.19 US
**(43)** 05.11.2020
**(44)** 01.08.2024
**(72)** CROWE, Justin D.
**(74)** Spruson & Ferguson

---

**(71)** Peg-Bio Biopharm Co., Ltd. (Chongqing); Hangzhou Grand Biologic Pharmaceutical Inc.
**(11)** AU-B-2020276510
**(21)** 2020276510 **(22)** 08.05.2020
**(54)** Polyethylene glycol-modified urate oxidase
**(51)** Int. Cl.
***C12N 9/06*** ( 2006.01 )
***A61K 38/44*** ( 2006.01 )
***A61K 47/56*** ( 2017.01 )
***A61P 13/12*** ( 2006.01 )
***A61P 19/02*** ( 2006.01 )
***A61P 19/06*** ( 2006.01 )
**(87)** WO2020/228618
**(31)** 201910388717.0 **(32)** 10.05.19 **(33)** CN
**(43)** 19.11.2020
**(44)** 01.08.2024
**(72)** FAN, Kai; WANG, Zhiming; LIU, Riyong; WANG, Yu; HE, Yunfeng; YAN, Tianwen; FU, Zhicheng; SU, Guowei; HU, Chunlan; DING, Xupeng; TAN, Changcheng; WANG, Hongying; YANG, Hui; DING, Qiong; WEN, Haiyan
**(74)** MINTER ELLISON

---

**(71)** Pentair Water Pool and Spa, Inc.
**(11)** AU-B-2018320867
**(21)** 2018320867 **(22)** 22.08.2018
**(54)** Algorithm for a pool cleaner
**(51)** Int. Cl.
***G01C 3/08*** ( 2006.01 )
**(87)** WO2019/040653
**(31)** 62/548,827 **(32)** 22.08.17 **(33)** US
**(43)** 28.02.2019
**(44)** 01.08.2024
**(72)** BRAIDIC, Kevin; ROTUNDO, John; FREVE, Van; SOWERWINE, William
**(74)** GLMR

---

**(71)** Petrobras Transportes S/A - Transpetro
**(11)** AU-B-2018333031
**(21)** 2018333031 **(22)** 14.09.2018
**(54)** System and method for movement of fluid in a tank
**(51)** Int. Cl.
***B01F 23/40*** ( 2022.01 )
**(87)** WO2019/053461
**(31)** 102017019628-3 **(32)** 14.09.17 **(33)** BR
**(43)** 21.03.2019
**(44)** 01.08.2024
**(72)** DE PINHO ALHO, Alexandre Teixeira; REYES, Marta Cecilia Tapia; KALEFF, Peter; LOPES ALVES, Luiz Felipe Fontes; WARRAK, Jorge Alam; MASETTI, Isaias Quaresma
**(74)** FB Rice Pty Ltd

---

**(71)** Pioneer Hi-Bred International, Inc.
**(11)** AU-B-2019234562
**(21)** 2019234562 **(22)** 12.03.2019
**(54)** Insecticidal proteins from plants and methods for their use
**(51)** Int. Cl.
***A01N 63/00*** ( 2006.01 )
***C07K 14/415*** ( 2006.01 )
***C12N 5/10*** ( 2006.01 )
***C12N 15/09*** ( 2006.01 )
***C12N 15/29*** ( 2006.01 )
***C12N 15/79*** ( 2006.01 )
***C12N 15/82*** ( 2006.01 )
**(87)** WO2019/178038
**(31)** 62/642,644 **(32)** 14.03.18 **(33)** US
**(43)** 19.09.2019
**(44)** 01.08.2024
**(72)** BARRY, Jennifer Kara; DONG, Hua; GERBER, Ryan Michael; PETERSON-BURCH, Brooke; SCHEPERS, Eric; WOLFE, Thomas Chad; XIE, Weiping; YALPANI, Nasser; ZHONG, Xiaohong
**(74)** Oxygene IP

---

**(71)** POSCO; Research Institute of Industrial Science & Technology
**(11)** AU-B-2020405885
**(21)** 2020405885 **(22)** 07.12.2020
**(54)** A method for controlling the size of lithium peroxide and a method for preparing lithium oxide with controlled size
**(51)** Int. Cl.
***C01B 15/043*** ( 2006.01 )
***C01D 15/02*** ( 2006.01 )
**(87)** WO2021/125655
**(31)** 10-2019-0172033 **(32)** 20.12.19 **(33)** KR
**(43)** 24.06.2021
**(44)** 01.08.2024
**(72)** LEE, Jae Myung; AHN, Jun-Kyu; JUNG, Woo Chul; JEUNG, Kee Uek; PARK, Jung Kwan; KIM, Sang Won
**(74)** FB Rice Pty Ltd

---

**(71)** Praxair Technology, Inc.
**(11)** AU-B-2021221995
**(21)** 2021221995 **(22)** 18.02.2021
**(54)** Improved solvents for acetylene fluid storage
**(51)** Int. Cl.
***C10L 3/04*** ( 2006.01 )
**(87)** WO2021/168085
**(31)** 63/129,805 **(32)** 23.12.20 **(33)** US
62/978,989 20.02.20 US
17/177,636 17.02.21 US
**(43)** 26.08.2021

## Applications Accepted - Name Index cont'd

**(44)** 01.08.2024
**(72)** SONG, Xuemei; KANE, William S.; SINHA, Ashwini K.
**(74)** Griffith Hack

---

**(71)** PRC-DeSoto International, Inc.
**(11)** AU-B-2019253712
**(21)** 2019253712 **(22)** 09.04.2019
**(54)** Coatings for textured 3d-printed substrates
**(51)** Int. Cl.
***B29C 64/188*** ( 2017.01 )
***C08J 7/04*** ( 2006.01 )
**(87)** WO2019/199893
**(31)** 62/655,145 **(32)** 09.04.18 **(33)** US
**(43)** 17.10.2019
**(44)** 01.08.2024
**(72)** KRAUT, Nadine D.; ROMAN, John T.; KUTCHKO, Cynthia
**(74)** MINTER ELLISON

---

**(71)** PRECAST PERMEABLE CONCRETE AUSTRALIA PTY LTD
**(11)** AU-B-2021366961
**(21)** 2021366961 **(22)** 20.10.2021
**(54)** DRAINAGE SYSTEM
**(51)** Int. Cl.
***E01C 11/22*** ( 2006.01 )
**(87)** WO2022/082264
**(31)** 2020903810 **(32)** 21.10.20 **(33)** AU
2021221644 25.08.21 AU
**(43)** 28.04.2022
**(44)** 01.08.2024
**(72)** COOK, Martin John
**(74)** Baxter Patent Attorneys Pty Ltd

---

**(71)** Precigen, Inc.
**(11)** AU-B-2018207281
**(21)** 2018207281 **(22)** 10.01.2018
**(54)** Modulating expression of polypeptides via new gene switch expression systems
**(51)** Int. Cl.
***C12N 15/10*** ( 2006.01 )
***C12N 15/63*** ( 2006.01 )
***G01N 33/68*** ( 2006.01 )
**(87)** WO2018/132494
**(31)** 62/444,775 **(32)** 10.01.17 **(33)** US
62/464,958 28.02.17 US
**(43)** 19.07.2018
**(44)** 01.08.2024
**(72)** Shah, Rutul R.; Reed, Thomas D.; Bolinger, Cheryl G.
**(74)** Spruson & Ferguson

---

**(71)** Precision Planting LLC
**(11)** AU-B-2018345735
**(21)** 2018345735 **(22)** 02.10.2018
**(54)** Systems and apparatuses for soil and seed monitoring
**(51)** Int. Cl.
***A01C 5/06*** ( 2006.01 )
***A01B 61/04*** ( 2006.01 )
***A01B 79/00*** ( 2006.01 )
***A01C 5/00*** ( 2006.01 )
***A01C 7/20*** ( 2006.01 )
**(87)** WO2019/070617
**(31)** 62/661,783 **(32)** 24.04.18 **(33)** US
62/625,855 02.02.18 US
62/567,135 02.10.17 US
**(43)** 11.04.2019
**(44)** 01.08.2024
**(72)** STRNAD, Michael; KATER, Timothy
**(74)** Griffith Hack

---

**(71)** Precision Planting LLC
**(11)** AU-B-2019305122
**(21)** 2019305122 **(22)** 17.06.2019
**(54)** Systems and methods of working a field and determining a location of implements within a field
**(51)** Int. Cl.
***A01B 69/00*** ( 2006.01 )
**(87)** WO2020/016677
**(31)** 62/700,276 **(32)** 18.07.18 **(33)** US
**(43)** 23.01.2020
**(44)** 01.08.2024
**(72)** ALLGAIER, Ryan
**(74)** Griffith Hack

---

**(71)** President and Fellows of Harvard College
**(11)** AU-B-2021200127
**(21)** 2021200127 **(22)** 11.01.2021
**(54)** DELIVERY OF NEGATIVELY CHARGED PROTEINS USING CATIONIC LIPIDS
**(51)** Int. Cl.
***C07K 14/435*** ( 2006.01 )
***A61K 9/00*** ( 2006.01 )
**(43)** 18.03.2021
**(44)** 01.08.2024
**(62)** 2015338968
**(72)** Liu, David R.; Thompson, David B.; Zuris, John Anthony
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** President and Fellows of Harvard College
**(11)** AU-B-2021273624
**(21)** 2021273624 **(22)** 25.11.2021
**(54)** Orthogonal Cas9 proteins for RNA-guided gene regulation and editing
**(51)** Int. Cl.
***C12N 15/63*** ( 2006.01 )
***A61K 48/00*** ( 2006.01 )
***C07H 21/04*** ( 2006.01 )
***C12P 19/34*** ( 2006.01 )
**(43)** 16.12.2021
**(44)** 01.08.2024
**(62)** 2020200163
**(72)** CHURCH, George M.; ESVELT, Kevin; MALI, Prashant
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Prysmian S.p.A.
**(11)** AU-B-2018426428
**(21)** 2018426428 **(22)** 06.06.2018
**(54)** Fire resistant, all dielectric fibre optic cable with high fibre count
**(51)** Int. Cl.
***G02B 6/44*** ( 2006.01 )
**(87)** WO2019/233572
**(43)** 12.12.2019
**(44)** 01.08.2024
**(72)** SIRIN, Zekeriya; SÖNMEZ, Baris; ALTINGÖZ, Can
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** PureWick Corporation
**(11)** AU-B-2021299304
**(21)** 2021299304 **(22)** 30.06.2021
**(54)** Male fluid collection assemblies and systems, methods of using, and methods of manufacturing the same
**(51)** Int. Cl.
***A61F 5/453*** ( 2006.01 )
***A61F 5/443*** ( 2006.01 )
***A61F 5/451*** ( 2006.01 )
**(87)** WO2022/006256
**(31)** 63/047,374 **(32)** 02.07.20 **(33)** US
63/067,542 19.08.20 US
**(43)** 06.01.2022
**(44)** 01.08.2024
**(72)** MANN, Gregory; ESPOSITO, Anthony; HINE, Robert; DAVIS, Kathleen; WHITTOME, Samuel Edmund; TRIGGS, Emily Lucy; LIM SARRIAS, Merissa; WARREN, Jack; MITCHELL, Martyn; DOBSON, Barry; YU, Karen X.Z.
**(74)** Spruson & Ferguson

---

**(71)** PUREWICK CORPORATION
**(11)** AU-B-2022211357
**(21)** 2022211357 **(22)** 18.01.2022
**(54)** VARIABLE FIT FLUID COLLECTION DEVICES, SYSTEMS, AND METHODS
**(51)** Int. Cl.
***A61F 5/44*** ( 2006.01 )
***A61F 5/442*** ( 2006.01 )
***A61F 5/455*** ( 2006.01 )
**(87)** WO2022/159392
**(31)** 63/138,878 **(32)** 19.01.21 **(33)** US
**(43)** 28.07.2022
**(44)** 01.08.2024
**(72)** DAVIS, Kathleen; GRUPP, Katie; STARKIE, Joanna; LIM SARRIAS, Merissa; TRIGGS, Emily Lucy; WHITTOME, Samuel Edmund
**(74)** Spruson & Ferguson

---

**QINGDAO HAIER REFRIGERATOR CO., LTD. see CHONGQING HAIER REFRIGERATION ELECTRIC APPLIANCE CO., LTD.**
**(21)** 2021343158

---

**(71)** Qingdao Kingagroot Chemical Compound Co., Ltd.
**(11)** AU-B-2020420734
**(21)** 2020420734 **(22)** 11.12.2020
**(54)** Carboxylic acid derivative-substituted imino aryl compound, preparation method therefor, herbicidal composition and use thereof
**(51)** Int. Cl.
***C07D 239/22*** ( 2006.01 )
***A01N 43/54*** ( 2006.01 )
***C07D 239/54*** ( 2006.01 )
***C07D 409/10*** ( 2006.01 )
**(87)** WO2021/139482

## Applications Accepted - Name Index cont'd

**(31)** 202010028477.6 **(32)** 11.01.20 **(33)** CN
202010077193.6 24.01.20 CN
202010117877.4 25.02.20 CN
202010281666.4 10.04.20 CN
**(43)** 15.07.2021
**(44)** 01.08.2024
**(72)** LIAN, Lei; HUA, Rongbao; PENG, Xuegang; ZHAO, De; CUI, Qi
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Qingdao KingAgroot Chemical Compound Co., Ltd.
**(11)** AU-B-2019415587
**(21)** 2019415587 **(22)** 20.12.2019
**(54)** R-type pyridyloxycarboxylic acid, salt and ester derivative thereof, and preparation method therefor, and herbicidal composition and application thereof
**(51)** Int. Cl.
***C07D 213/73*** ( 2006.01 )
***A01N 43/40*** ( 2006.01 )
***A01N 43/54*** ( 2006.01 )
***A01N 43/58*** ( 2006.01 )
***A01N 43/66*** ( 2006.01 )
***A01P 13/00*** ( 2006.01 )
***C07D 213/75*** ( 2006.01 )
***C07D 401/12*** ( 2006.01 )
***C07D 405/12*** ( 2006.01 )
***C07D 409/12*** ( 2006.01 )
***C07D 413/12*** ( 2006.01 )
***C07D 417/12*** ( 2006.01 )
**(87)** WO2020/135235
**(31)** 201811613197.0 **(32)** 27.12.18 **(33)** CN
**(43)** 02.07.2020
**(44)** 01.08.2024
**(72)** LIAN, Lei; PENG, Xuegang; HUA, Rongbao; ZHANG, Jingyuan; CUI, Qi
**(74)** Spruson & Ferguson

---

**(71)** Qingdao KingAgroot Chemical Compound Co., Ltd.
**(11)** AU-B-2020322972
**(21)** 2020322972 **(22)** 14.07.2020
**(54)** Herbicidal composition containing R-type pyridyloxy carboxylic acid derivative and use thereof
**(51)** Int. Cl.
***A01N 43/40*** ( 2006.01 )
***A01N 43/54*** ( 2006.01 )
***A01N 43/56*** ( 2006.01 )
***A01N 43/78*** ( 2006.01 )
***A01N 47/12*** ( 2006.01 )
***A01P 13/00*** ( 2006.01 )
**(87)** WO2021/017817
**(31)** 201910685431.9 **(32)** 27.07.19 **(33)** CN
201910796285.7 27.08.19 CN
202010228317.6 27.03.20 CN
202010228765.6 27.03.20 CN
202010406451.0 14.05.20 CN
**(43)** 04.02.2021
**(44)** 01.08.2024
**(72)** PENG, Xuegang; ZHAO, De; CUI, Qi; JIN, Tao; ZHANG, Jingyuan; LIU, Na
**(74)** WRAYS PTY LTD

---

**Qiu, Y. see Wutthinitikornkit, Y.**
**(21)** 2018435428

---

**(71)** Quixotic Labs Inc.
**(11)** AU-B-2021281120
**(21)** 2021281120 **(22)** 25.05.2021
**(54)** Domain-specific language interpreter and interactive visual interface for rapid screening
**(51)** Int. Cl.
***G06F 9/451*** ( 2018.01 )
***G06F 16/954*** ( 2019.01 )
***G06F 16/957*** ( 2019.01 )
***G06F 40/58*** ( 2020.01 )
**(87)** WO2021/240370
**(31)** 63/029,556 **(32)** 24.05.20 **(33)** US
**(43)** 02.12.2021
**(44)** 01.08.2024
**(72)** ITANI, Sara
**(74)** GIRL FRIDAY IP PTY LTD

---

**(71)** Rady, M.
**(11)** AU-B-2018389229
**(21)** 2018389229 **(22)** 21.12.2018
**(54)** Physical item mapping to blockchain framework
**(51)** Int. Cl.
***G06Q 10/08*** ( 2012.01 )
***G06F 21/64*** ( 2013.01 )
**(87)** WO2019/126705
**(31)** 62/609,783 **(32)** 22.12.17 **(33)** US
**(43)** 27.06.2019
**(44)** 01.08.2024
**(72)** RADY, Max Adel
**(74)** Griffith Hack

---

**(71)** Rapid Medical Ltd.
**(11)** AU-B-2018383108
**(21)** 2018383108 **(22)** 12.12.2018
**(54)** Guide wire activation mechanism and proximal actuation mechanism
**(51)** Int. Cl.
***A61M 25/09*** ( 2006.01 )
**(87)** WO2019/116102
**(31)** 62/597,888 **(32)** 12.12.17 **(33)** US
**(43)** 20.06.2019
**(44)** 01.08.2024
**(72)** FRIEDMAN, Aharon; GEDULTER, Matan; MILLER, Moshe
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Raytheon Company
**(11)** AU-B-2020311281
**(21)** 2020311281 **(22)** 12.05.2020
**(54)** Adaptive hopping equalizer
**(51)** Int. Cl.
***H04B 1/715*** ( 2011.01 )
***H04L 25/03*** ( 2006.01 )
**(87)** WO2021/006946
**(31)** 16/506,288 **(32)** 09.07.19 **(33)** US
**(43)** 14.01.2021
**(44)** 01.08.2024
**(72)** GARDINER, Thomas E.
**(74)** RnB IP Pty Ltd

---

**(71)** Raytheon Company
**(11)** AU-B-2020318823
**(21)** 2020318823 **(22)** 16.06.2020
**(54)** Selectively-pliable chemical vapor deposition (CVD) diamond or other heat spreader
**(51)** Int. Cl.
***H01L 21/48*** ( 2006.01 )
***H01L 23/367*** ( 2006.01 )
***H01L 23/373*** ( 2006.01 )
***H01L 23/42*** ( 2006.01 )
**(87)** WO2021/015890
**(31)** 62/877,248 **(32)** 22.07.19 **(33)** US
16/901,922 15.06.20 US
**(43)** 28.01.2021
**(44)** 01.08.2024
**(72)** ALTMAN, David H.; TRULLI, Susan C.; BAR-COHEN, Avram
**(74)** RnB IP Pty Ltd

---

**(71)** Raytheon Company
**(11)** AU-B-2020348603
**(21)** 2020348603 **(22)** 03.09.2020
**(54)** Modular and stackable antenna array
**(51)** Int. Cl.
***H01Q 21/00*** ( 2006.01 )
*H05K 7/20* ( 2006.01 )
**(87)** WO2021/055175
**(31)** 16/573,954 **(32)** 17.09.19 **(33)** US
**(43)** 25.03.2021
**(44)** 01.08.2024
**(72)** MCCORDIC, Craig H.; ELLSWORTH, Joseph R.; MORIONDO, Douglas J.; DELGENIO, Joseph Angelo; WHITE, Christopher Robert; RICKIS, Adam Carl; MANTEIGA, Caroline Margaret
**(74)** RnB IP Pty Ltd

---

**(71)** Regeneron Pharmaceuticals, Inc.
**(11)** AU-B-2018307675
**(21)** 2018307675 **(22)** 26.07.2018
**(54)** Anti-CTLA-4 antibodies and uses thereof
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
**(87)** WO2019/023482
**(31)** 62/685,599 **(32)** 15.06.18 **(33)** US
62/588,853 20.11.17 US
62/645,284 20.03.18 US
62/537,753 27.07.17 US
**(43)** 31.01.2019
**(44)** 01.08.2024
**(72)** HERMANN, Aynur; IOFFE, Ella; BUROVA, Elena; THURSTON, Gavin; OLSON, William
**(74)** Griffith Hack

---

**(71)** Regeneron Pharmaceuticals, Inc.; Yale University; Institute for Research in Biomedicine (IRB)
**(11)** AU-B-2021286279
**(21)** 2021286279 **(22)** 14.12.2021
**(54)** Genetically modified non-human animals expressing human EPO
**(51)** Int. Cl.
***A01K 67/027*** ( 2006.01 )
***A61K 49/00*** ( 2006.01 )
***C07K 14/47*** ( 2006.01 )
***C07K 14/505*** ( 2006.01 )
***C07K 14/52*** ( 2006.01 )
***C07K 14/535*** ( 2006.01 )
***C07K 14/54*** ( 2006.01 )

***C07K 14/715*** ( 2006.01 )
***C12N 7/00*** ( 2006.01 )
***C12N 9/00*** ( 2006.01 )
***G01N 33/50*** ( 2006.01 )
**(43)** 06.01.2022
**(44)** 01.08.2024
**(62)** 2015264427
**(72)** MURPHY, Andrew J.; STEVENS, Sean; FLAVELL, Richard; MANZ, Markus; SHAN, Liang
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** RESC, LTD.
**(11)** AU-B-2023219831
**(21)** 2023219831 **(22)** 22.08.2023
**(54)** Battery management system
**(51)** Int. Cl.
***H02J 7/00*** ( 2006.01 )
***B60L 53/62*** ( 2019.01 )
***B60L 53/66*** ( 2019.01 )
***B60L 53/80*** ( 2019.01 )
***B60L 58/16*** ( 2019.01 )
**(43)** 07.09.2023
**(44)** 01.08.2024
**(62)** 2019292101
**(72)** SUZUKI, Daisuke
**(74)** LAMINAR IP PTY LTD

---

**Research Institute of Industrial Science & Technology see POSCO**
**(21)** 2020405885

---

**Reynolds, S.W. see Data.world, Inc.**
**(21)** 2022218590

---

**(71)** Rifeng Enterprise (Foshan) Co., Ltd; Rifeng Enterprise Group Co., Ltd; Rifeng Technology Co., Ltd
**(11)** AU-B-2021379629
**(21)** 2021379629 **(22)** 19.04.2021
**(54)** Pipe flaring device
**(51)** Int. Cl.
***B21D 41/02*** ( 2006.01 )
***B29C 57/04*** ( 2006.01 )
**(87)** WO2022/100000
**(31)** 202022608653.1 **(32)** 12.11.20 **(33)** CN
**(43)** 19.05.2022
**(44)** 01.08.2024
**(72)** CAO, Huijian; LIN, Xiyong; DIAO, Zhenbin; HE, Wangzhi
**(74)** Chrysiliou IP

---

**Rifeng Enterprise Group Co., Ltd see Rifeng Enterprise (Foshan) Co., Ltd**
**(21)** 2021379629

---

**Rifeng Technology Co., Ltd see Rifeng Enterprise (Foshan) Co., Ltd**
**(21)** 2021379629

---

**(71)** Rovi Guides, Inc.
**(11)** AU-B-2018438001
**(21)** 2018438001 **(22)** 21.08.2018
**(54)** Systems and methods for real-time adaptive bitrate transcoding and transmission of transcoded media
**(51)** Int. Cl.
***H04N 21/2343*** ( 2011.01 )
***H04N 21/2662*** ( 2011.01 )
***H04N 21/4402*** ( 2011.01 )
***H04N 21/845*** ( 2011.01 )
**(87)** WO2020/040741
**(43)** 27.02.2020
**(44)** 01.08.2024
**(72)** MAYHEW, Steven; DOBRZYNSKI, Maciej; OLIVER, Jonathan
**(74)** Spruson & Ferguson

---

**(71)** RUTE Foundation Systems, Inc.
**(11)** AU-B-2018356013
**(21)** 2018356013 **(22)** 25.10.2018
**(54)** Tower foundation with concrete box girder beams
**(51)** Int. Cl.
***E02D 27/42*** ( 2006.01 )
***E04C 5/16*** ( 2006.01 )
***E04H 12/16*** ( 2006.01 )
**(87)** WO2019/084238
**(31)** 62/576,865 **(32)** 25.10.17 **(33)** US
**(43)** 02.05.2019
**(44)** 01.08.2024
**(72)** CORELLA, Adrian; KRAUSE, Doug; GODSELL, Zach
**(74)** WRAYS PTY LTD

---

**(71)** Rutgers, The State University of New Jersey
**(11)** AU-B-2018362234
**(21)** 2018362234 **(22)** 24.10.2018
**(54)** Polymer-based railroad tie having enhanced ballast interaction
**(51)** Int. Cl.
***E01B 3/44*** ( 2006.01 )
***E01B 3/46*** ( 2006.01 )
***E01B 13/00*** ( 2006.01 )
**(87)** WO2019/089292
**(31)** 62/580,692 **(32)** 02.11.17 **(33)** US
**(43)** 09.05.2019
**(44)** 01.08.2024
**(72)** NOSKER, Thomas J.; TEWATIA, Arya Singh
**(74)** Griffith Hack

---

**(71)** SABERT (ZHONGSHAN) LIMITED
**(11)** AU-B-2020472452
**(21)** 2020472452 **(22)** 14.10.2020
**(54)** COMPOSITE THERMOFORMED TABLEWARE AND PREPARATION METHOD THEREOF
**(51)** Int. Cl.
***A47G 19/00*** ( 2006.01 )
**(87)** WO2022/077257
**(43)** 21.04.2022
**(44)** 01.08.2024
**(72)** WONG, Kamyiu
**(74)** Madderns Pty Ltd

---

**(71)** Saitama Medical University
**(11)** AU-B-2018218844
**(21)** 2018218844 **(22)** 06.02.2018
**(54)** Immunological biomarker for predicting clinical effect of cancer immunotherapy
**(51)** Int. Cl.
***G01N 33/574*** ( 2006.01 )
**(87)** WO2018/147291
**(31)** 2017-110069 **(32)** 02.06.17 **(33)** JP
2017-020685 07.02.17 JP
**(43)** 16.08.2018
**(44)** 01.08.2024
**(72)** Kagamu, Hiroshi
**(74)** WRAYS PTY LTD

---

**(71)** Samsung Electronics Co., Ltd.
**(11)** AU-B-2023201543
**(21)** 2023201543 **(22)** 13.03.2023
**(54)** Method and apparatus for controlling uplink transmission power in wireless communication system
**(51)** Int. Cl.
***H04W 52/24*** ( 2009.01 )
***H04W 52/14*** ( 2009.01 )
**(43)** 13.04.2023
**(44)** 01.08.2024
**(62)** 2019205733
**(72)** KANG, Jinkyu; KIM, Youngbum; KIM, Taehyoung; BAE, Taehan; YEO, Jeongho; OH, Jinyoung; CHOI, Seunghoon
**(74)** Griffith Hack

---

**(71)** Samsung Electronics Co., Ltd.
**(11)** AU-B-2023254881
**(21)** 2023254881 **(22)** 24.10.2023
**(54)** ENCODING METHOD AND APPARATUS THEREFOR, AND DECODING METHOD AND APPARATUS THEREFOR
**(51)** Int. Cl.
***H04N 19/124*** ( 2014.01 )
***H04N 19/119*** ( 2014.01 )
***H04N 19/129*** ( 2014.01 )
***H04N 19/176*** ( 2014.01 )
***H04N 19/70*** ( 2014.01 )
**(43)** 16.11.2023
**(44)** 01.08.2024
**(62)** 2023200269
**(72)** Yang, Heechul; Park, Minsoo
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** SAMSUNG ELECTRONICS CO., LTD.
**(11)** AU-B-2021424076
**(21)** 2021424076 **(22)** 27.12.2021
**(54)** ELECTRONIC DEVICE COMPRISING BREAKAGE PREVENTION STRUCTURE
**(51)** Int. Cl.
***G06F 1/16*** ( 2006.01 )
***G09F 9/30*** ( 2006.01 )
**(87)** WO2022/164049
**(31)** 10-2021-0011067 **(32)** 26.01.21 **(33)** KR
**(43)** 04.08.2022
**(44)** 01.08.2024
**(72)** KIM, Dooryong; BAEK, Inyoul
**(74)** Griffith Hack

---

**SANDVIK MINING AND CONSTRUCTION AUSTRALIA (PRODUCTION/SUPPLY) PTY**

## Applications Accepted - Name Index cont'd

**LTD see SANDVIK MINING AND CONSTRUCTION TOOLS AB**
**(21)** 2019324575

---

**(71)** SANDVIK MINING AND CONSTRUCTION TOOLS AB; SANDVIK MINING AND CONSTRUCTION AUSTRALIA (PRODUCTION/SUPPLY) PTY LTD
**(11)** AU-B-2019324575
**(21)** 2019324575 **(22)** 20.08.2019
**(54)** Rock bolt with information display region
**(51)** Int. Cl.
***E21D 21/00*** ( 2006.01 )
**(87)** WO2020/039340
**(31)** 18190386.5 **(32)** 23.08.18 **(33)** EP
**(43)** 27.02.2020
**(44)** 01.08.2024
**(72)** RATAJ, Mieczyslaw; WEAVER, Steven; DARLINGTON, Bradley; YOUNG, Peter; ROACH, Warren
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** SASCO Australia Pty Ltd
**(11)** AU-B-2023206077
**(21)** 2023206077 **(22)** 17.07.2023
**(54)** CHARGING DEVICE FOR A LUMINESCENT PRODUCT
**(51)** Int. Cl.
***F21L 4/02*** ( 2006.01 )
***H02G 1/08*** ( 2006.01 )
*G01N 21/64* ( 2006.01 )
**(31)** 2023900111 **(32)** 18.01.23 **(33)** AU
**(43)** 01.08.2024
**(44)** 01.08.2024
**(72)** SAMUS, Steven
**(74)** Halfords IP

---

**(71)** SAS INSTITUTE INC.
**(11)** AU-B-2023375284
**(21)** 2023375284 **(22)** 05.12.2023
**(54)** SYSTEMS AND METHODS FOR CONFIGURING AND USING A MULTI-STAGE OBJECT CLASSIFICATION AND CONDITION PIPELINE
**(51)** Int. Cl.
***G06V 10/764*** ( 2022.01 )
***G06T 3/40*** ( 2006.01 )
***G06T 7/11*** ( 2017.01 )
***G06V 10/82*** ( 2022.01 )
**(87)** WO2024/123723
**(31)** 63/431,277 **(32)** 08.12.22 **(33)** US
**(43)** 27.06.2024
**(44)** 01.08.2024
**(72)** BLANCHARD, Robert, Winston; VENGATESHWARAN, Neela, Niranjani
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Sato Holdings Kabushiki Kaisha
**(11)** AU-B-2021321476
**(21)** 2021321476 **(22)** 03.08.2021
**(54)** An antenna assembly
**(51)** Int. Cl.
***G06K 7/10*** ( 2006.01 )
***G06K 17/00*** ( 2006.01 )
**(87)** WO2022/029608
**(31)** 2020902729 **(32)** 04.08.20 **(33)** AU
**(43)** 10.02.2022
**(44)** 01.08.2024
**(72)** MURDOCH, Graham; NAGENDRA, Ganesh
**(74)** FOUNDRY INTELLECTUAL PROPERTY PTY LTD

---

**(71)** Schlage Lock Company LLC
**(11)** AU-B-2022271442
**(21)** 2022271442 **(22)** 17.11.2022
**(54)** LOCK DEVICES, SYSTEMS AND METHODS
**(51)** Int. Cl.
***E05B 47/06*** ( 2006.01 )
**(43)** 22.12.2022
**(44)** 01.08.2024
**(62)** 2021212131
**(72)** Telljohann, Brian A.; Ainley, William B.; Nardelli, Frank A.; Chen, Wu P.
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Schneider Electric Industries SAS
**(11)** AU-B-2023202074
**(21)** 2023202074 **(22)** 04.04.2023
**(54)** ARC EXTINGUISHING STRUCTURE AND DUAL POWER CHANGEOVER SWITCH
**(51)** Int. Cl.
***H01H 9/30*** ( 2006.01 )
***H01H 33/70*** ( 2006.01 )
**(31)** 202220793358.4 **(32)** 07.04.22 **(33)** CN
**(43)** 26.10.2023
**(44)** 01.08.2024
**(72)** Wang, Han; Liu, Zhenzhong; Xie, Haoyu; Geng, Xiangyu; Pan, Yanming
**(74)** Madderns Pty Ltd

---

**(71)** Schülke & Mayr GmbH
**(11)** AU-B-2018391507
**(21)** 2018391507 **(22)** 14.12.2018
**(54)** Coloured disinfectant preparation with a content of octenidine dihydrochloride
**(51)** Int. Cl.
***A01N 43/40*** ( 2006.01 )
***A01N 25/02*** ( 2006.01 )
***A01N 31/02*** ( 2006.01 )
***A01P 1/00*** ( 2006.01 )
**(87)** WO2019/121380
**(31)** 10 2017 130 313.8 **(32)** 18.12.17 **(33)** DE
**(43)** 27.06.2019
**(44)** 01.08.2024
**(72)** DETTMANN, Andreas; BEHRENDS, Sabine; LEMBKE, André
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Seagen Inc.; Bristol-Myers Squibb Company
**(11)** AU-B-2017274444
**(21)** 2017274444 **(22)** 01.06.2017
**(54)** Use of an anti-PD-1 antibody in combination with an anti-CD30 antibody in lymphoma treatment
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
*A61K 39/00* ( 2006.01 )
**(87)** WO2017/210473
**(31)** 62/344,866 **(32)** 02.06.16 **(33)** US
62/382,839 02.09.16 US
**(43)** 07.12.2017
**(44)** 01.08.2024
**(72)** Farsaci, Benedetto; Josephson, Neil; Cao, Anthony; Heiser, Ryan
**(74)** AJ PARK

---

**(71)** Season Bright (Cambodia) Electronic Lighting Co., Ltd
**(11)** AU-B-2022291503
**(21)** 2022291503 **(22)** 21.12.2022
**(54)** WATER-PROOF DECORATIVE LAMP AND LAMP STRING
**(51)** Int. Cl.
***F21V 31/00*** ( 2006.01 )
***F21S 4/20*** ( 2016.01 )
***F21V 15/00*** ( 2015.01 )
***F21V 23/00*** ( 2015.01 )
***F21V 25/00*** ( 2006.01 )
**(31)** 202222604416.7 **(32)** 29.09.22 **(33)** CN
**(43)** 18.04.2024
**(44)** 01.08.2024
**(72)** LAM, Su lo
**(74)** Flint Intellectual Property Limited

---

**(71)** Seattle Children's Hospital (dba Seattle Children's Research Institute)
**(11)** AU-B-2016318773
**(21)** 2016318773 **(22)** 07.09.2016
**(54)** Genetic engineering of macrophages for immunotherapy
**(51)** Int. Cl.
***A61K 35/12*** ( 2006.01 )
***A61K 35/17*** ( 2015.01 )
***A61P 35/00*** ( 2006.01 )
***C12N 5/0783*** ( 2010.01 )
***C12N 5/10*** ( 2006.01 )
***C12N 15/12*** ( 2006.01 )
**(87)** WO2017/044487
**(31)** 62/216,224 **(32)** 09.09.15 **(33)** US
62/361,348 12.07.16 US
**(43)** 16.03.2017
**(44)** 01.08.2024
**(72)** Crane, Courtney; Jensen, Michael C.; White Moyes, Kara; Lieberman, Nicole
**(74)** Griffith Hack

---

**(71)** Seaturns
**(11)** AU-B-2018356527
**(21)** 2018356527 **(22)** 25.10.2018
**(54)** Floating wave energy device
**(51)** Int. Cl.
***F03B 13/18*** ( 2006.01 )
***B63B 22/04*** ( 2006.01 )
***F03B 13/20*** ( 2006.01 )
**(87)** WO2019/081659
**(31)** 1771127 **(32)** 26.10.17 **(33)** FR
**(43)** 02.05.2019
**(44)** 01.08.2024
**(72)** TOURNERIE, Vincent
**(74)** Griffith Hack

---

**(71)** Seed Terminator Holdings Pty Ltd
**(11)** AU-B-2020232982
**(21)** 2020232982 **(22)** 09.03.2020
**(54)** A chaff feed stream conditioning system

## Applications Accepted - Name Index cont'd

**(51)** Int. Cl.
***A01F 12/30*** ( 2006.01 )
***A01D 41/12*** ( 2006.01 )
***A01F 12/44*** ( 2006.01 )
**(87)** WO2020/176953
**(31)** 2019900765 **(32)** 07.03.19 **(33)** AU
**(43)** 10.09.2020
**(44)** 01.08.2024
**(72)** BERRY, Nicholas Kane
**(74)** Integrated IP

---

**(71)** Seeley International Pty Ltd; FF Seeley Nominees Pty Ltd
**(11)** AU-B-2023203352
**(21)** 2023203352 **(22)** 30.05.2023
**(54)** Support for Roof Top Utility
**(51)** Int. Cl.
***F16M 11/24*** ( 2006.01 )
**(43)** 29.06.2023
**(44)** 01.08.2024
**(62)** 2021200733
**(72)** Ryan, Gary
**(74)** Caska Intellectual Property Pty Ltd

---

**(71)** Sekisui House, Ltd.
**(11)** AU-B-2019329455
**(21)** 2019329455 **(22)** 28.08.2019
**(54)** Simulation system
**(51)** Int. Cl.
***G09G 5/00*** ( 2006.01 )
***G06Q 50/08*** ( 2012.01 )
***G09F 5/00*** ( 2006.01 )
**(87)** WO2020/045512
**(31)** 2018-162570 **(32)** 31.08.18 **(33)** JP
**(43)** 05.03.2020
**(44)** 01.08.2024
**(72)** SUEZAWA Takahiro; MIKI Takeshi; MINAMI Yuusuke; HIRAOKA Chiho; IWATA Shouto; KAWAZOE Yuuta; KAWAKAMI Shintarou; YAMATO Tetsuya; OGAWA Masayuki
**(74)** Spruson & Ferguson

---

**(71)** Sekisui House, Ltd.
**(11)** AU-B-2021318678
**(21)** 2021318678 **(22)** 31.05.2021
**(54)** Diagonal beam joining hardware and beam connecting structure
**(51)** Int. Cl.
***E04B 1/58*** ( 2006.01 )
**(87)** WO2022/024542
**(31)** 2020-129645 **(32)** 30.07.20 **(33)** JP
**(43)** 03.02.2022
**(44)** 01.08.2024
**(72)** SATO, Ryosuke; FUKUMOTO, Daiki; ICHIHARI, Takeshi; TAKAHASHI, Yasuaki; HASHIMOTO, Dai; TAKEUCHI, Satoru; ISHIKAWA, Tatsuya
**(74)** Griffith Hack

---

**(71)** Sentek Pty Ltd
**(11)** AU-B-2018319222
**(21)** 2018319222 **(22)** 22.08.2018
**(54)** Method of determination of water stress in a one or more plants in a crop located in the vicinity of a soil moisture sensor array and knowledge of ETo
**(51)** Int. Cl.
***A01G 25/16*** ( 2006.01 )
**(87)** WO2019/036744
**(31)** 2017903385 **(32)** 22.08.17 **(33)** AU
**(43)** 28.02.2019
**(44)** 01.08.2024
**(72)** BUSS, Peter
**(74)** Madderns Pty Ltd

---

**(71)** Shaanxi Giant Biotechnology Co., Ltd
**(11)** AU-B-2021262336
**(21)** 2021262336 **(22)** 29.04.2021
**(54)** Double-layer osteochondral tissue repair stent and preparation method therefor
**(51)** Int. Cl.
***A61L 27/24*** ( 2006.01 )
***A61L 27/12*** ( 2006.01 )
***A61L 27/20*** ( 2006.01 )
***A61L 27/26*** ( 2006.01 )
***A61L 27/42*** ( 2006.01 )
***A61L 27/48*** ( 2006.01 )
**(87)** WO2021/219083
**(31)** 202010357320.8 **(32)** 29.04.20 **(33)** CN
**(43)** 04.11.2021
**(44)** 01.08.2024
**(72)** FAN, Daidi; LIU, Kaiqiang; DUAN, Zhiguang; YAN, Jianya
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Shaanxi YuanGuang Hi-tech Co.,Ltd.
**(11)** AU-B-2022200132
**(21)** 2022200132 **(22)** 11.01.2022
**(54)** BIO-LIGHT ELEMENT, AND PREPARATION METHOD AND USE THEREOF
**(51)** Int. Cl.
***A61K 33/12*** ( 2006.01 )
***A61H 39/00*** ( 2006.01 )
***A61K 9/14*** ( 2006.01 )
***A61K 33/00*** ( 2006.01 )
***A61K 33/30*** ( 2006.01 )
***A61K 35/00*** ( 2006.01 )
***A61N 5/00*** ( 2006.01 )
**(31)** 202111201813. 3 **(32)** 15.10.21 **(33)** CN
**(43)** 04.05.2023
**(44)** 01.08.2024
**(72)** ZHANG, Junhua
**(74)** Stellar Law Pty Ltd

---

**(71)** Shamir Optical Industry Ltd.
**(11)** AU-B-2019308833
**(21)** 2019308833 **(22)** 22.07.2019
**(54)** Aspherical ophthalmic lens
**(51)** Int. Cl.
***G02C 7/06*** ( 2006.01 )
**(87)** WO2020/021533
**(31)** 1812138.4 **(32)** 25.07.18 **(33)** GB
**(43)** 30.01.2020
**(44)** 01.08.2024
**(72)** SHUR, Alexander; AVISHAI, Dagan; BARAN, Noam
**(74)** Collison & Co

---

**SHANDONG HI-SPEED GROUP CO., LTD.**
**see SHANDONG UNIVERSITY**
**(21)** 2021359790

---

**(71)** SHANDONG UNIVERSITY; SHANDONG HI-SPEED GROUP CO., LTD.
**(11)** AU-B-2021359790
**(21)** 2021359790 **(22)** 15.10.2021
**(54)** TUNNEL BORING MACHINE-MOUNTED SYSTEM FOR MONITORING SHIELD-TO-SURROUNDING ROCK DEFORMATION AND METHOD THEREOF
**(51)** Int. Cl.
***G01B 17/04*** ( 2006.01 )
**(87)** WO2022/078515
**(31)** 202011111296.6 **(32)** 16.10.20 **(33)** CN
**(43)** 21.04.2022
**(44)** 01.08.2024
**(72)** LIU, Zhengyu; CHEN, Lei; ZUO, Zhiwu; XU, Xinji; XUE, Zhichao; REN, Yuxiao; ZHANG, Yaqin; DENG, Zhaoyang; ZHANG, Yongheng; E, Guangxun; LI, Zhijie
**(74)** Collison & Co

---

**(71)** SHANDONG WEIFANG RAINBOW CHEMICAL CO., LTD
**(11)** AU-B-2023336075
**(21)** 2023336075 **(22)** 24.10.2023
**(54)** Method for preparing 3-chlorobicyclo[3.2.1]-3-octen-2-ol
**(51)** Int. Cl.
***C07C 29/09*** ( 2006.01 )
**(31)** 202310074577.6 **(32)** 19.01.23 **(33)** CN
**(43)** 01.08.2024
**(44)** 01.08.2024
**(72)** ZHANG, Hongquan; LI, Zhiqing; HAN, Zongtao; YU, Yongquan; ZHAO, Guangli
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** SHANGHAI HAIYAN PHARMACEUTICAL TECHNOLOGY CO., LTD.; YANGTZE RIVER PHARMACEUTICAL GROUP CO., LTD.
**(11)** AU-B-2022244941
**(21)** 2022244941 **(22)** 23.03.2022
**(54)** HETEROCYCLE SUBSTITUTED KETONE DERIVATIVE, AND COMPOSITION AND MEDICINAL USE THEREOF
**(51)** Int. Cl.
***C07D 401/14*** ( 2006.01 )
***A61K 31/497*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***A61P 35/02*** ( 2006.01 )
***C07D 221/20*** ( 2006.01 )
***C07D 241/20*** ( 2006.01 )
***C07D 403/14*** ( 2006.01 )
***C07D 413/14*** ( 2006.01 )
***C07D 417/14*** ( 2006.01 )
***C07D 471/10*** ( 2006.01 )
***C07D 487/04*** ( 2006.01 )
***C07D 495/04*** ( 2006.01 )
***C07D 498/04*** ( 2006.01 )
**(87)** WO2022/199611
**(31)** 202110306983.1 **(32)** 23.03.21 **(33)** CN
202111287417.7 02.11.21 CN
**(43)** 29.09.2022
**(44)** 01.08.2024
**(72)** ZHU, Weixing; LIU, Qiang; HAO, Xuhui; CHEN, Yonggang; LI, Shaobo; HE,

Shanghua; HUANG, Xiaotian; ZHAO, Zhiming
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Shearwater GeoServices Software Inc.
**(11)** AU-B-2019346601
**(21)** 2019346601 **(22)** 26.09.2019
**(54)** Machine learning based signal recovery
**(51)** Int. Cl.
***G01V 1/30*** ( 2006.01 )
***G01V 1/36*** ( 2006.01 )
***G01V 1/37*** ( 2006.01 )
***G10L 21/02*** ( 2013.01 )
**(87)** WO2020/069143
**(31)** 62/739,260 **(32)** 30.09.18 **(33)** US
**(43)** 02.04.2020
**(44)** 01.08.2024
**(72)** LI, Chengbo
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Sheldon, B.
**(11)** AU-B-2019225473
**(21)** 2019225473 **(22)** 20.02.2019
**(54)** Flexible bridge assembly for eyewear and method of assembling flexible eyewear
**(51)** Int. Cl.
***G02C 5/06*** ( 2006.01 )
**(87)** WO2019/161488
**(31)** 62/632,921 **(32)** 20.02.18 **(33)** US
**(43)** 29.08.2019
**(44)** 01.08.2024
**(72)** SHELDON, Brent; BROUSSEAU, JR., Guy
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B.V.
**(11)** AU-B-2021360150
**(21)** 2021360150 **(22)** 04.10.2021
**(54)** METHOD OF CREATING AN ANNULAR ZONAL ISOLATION SEAL IN A DOWNHOLE ANNULUS
**(51)** Int. Cl.
***E21B 43/10*** ( 2006.01 )
***E21B 23/04*** ( 2006.01 )
***E21B 23/06*** ( 2006.01 )
**(87)** WO2022/078800
**(31)** 20201362.9 **(32)** 12.10.20 **(33)** EP
21163090.0 17.03.21 EP
21195314.6 07.09.21 EP
21195665.1 09.09.21 EP
**(43)** 21.04.2022
**(44)** 01.08.2024
**(72)** STAM, Walter
**(74)** Spruson & Ferguson

---

**(71)** SHIH, C.
**(11)** AU-B-2022307875
**(21)** 2022307875 **(22)** 06.07.2022
**(54)** CRYSTALLINE FORMS OF (S, E)-4-(DIMETHYLAMINO)-N-(3-(4-(2-HYDROXY-1-PHENYLETHYL-AMINO)-6-PHENYL-FURO[2,3-D]PYRIMIDIN-5-YL)PHENYL)BUT-2-ENAMIDE FREE BASE
**(51)** Int. Cl.
***C07D 491/02*** ( 2006.01 )
***A61K 31/50*** ( 2006.01 )
***C07D 491/04*** ( 2006.01 )
***C07D 491/044*** ( 2006.01 )
***C07D 491/048*** ( 2006.01 )
*A61K 31/33* ( 2006.01 )
**(87)** WO2023/283269
**(31)** 63/218,504 **(32)** 06.07.21 **(33)** US
**(43)** 12.01.2023
**(44)** 01.08.2024
**(72)** HSU, Tsu-An; HSIEH, Hsing-Pang; CHANG, Sue-Ming
**(74)** LAMINAR IP PTY LTD

---

**(71)** Simol S.p.A.
**(11)** AU-B-2019202329
**(21)** 2019202329 **(22)** 04.04.2019
**(54)** Support apparatus
**(51)** Int. Cl.
***B60S 9/12*** ( 2006.01 )
***B60D 1/66*** ( 2006.01 )
**(31)** 102018000004959 **(32)** 27.04.18 **(33)** IT
**(43)** 14.11.2019
**(44)** 01.08.2024
**(72)** RIGHETTI, Valter
**(74)** Spruson & Ferguson

---

**(71)** Simon Fraser University
**(11)** AU-B-2022205131
**(21)** 2022205131 **(22)** 11.07.2022
**(54)** Crosslinking of hydroxide stable, polybenzimidazoliums and polyimidazoliums membranes and ionomers
**(51)** Int. Cl.
***C09K 19/58*** ( 2006.01 )
***C08L 79/04*** ( 2006.01 )
***C09K 19/34*** ( 2006.01 )
**(43)** 28.07.2022
**(44)** 01.08.2024
**(62)** 2017305233
**(72)** Holdcroft, Steven; Weissbach, Thomas; Peckham, Timothy James; Britton, Benjamin; Wright, Andrew
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Singapore Airlines Limited
**(11)** AU-B-2017435057
**(21)** 2017435057 **(22)** 03.10.2017
**(54)** Aircraft seat
**(51)** Int. Cl.
***B64D 11/06*** ( 2006.01 )
***A47C 1/02*** ( 2006.01 )
**(87)** WO2019/070194
**(43)** 11.04.2019
**(44)** 01.08.2024
**(72)** NG, Yung Han
**(74)** Griffith Hack

---

**(71)** SmileSonica Inc.
**(11)** AU-B-2019333935
**(21)** 2019333935 **(22)** 04.09.2019
**(54)** Mouthpiece apparatus for intraoral therapy and related system and method
**(51)** Int. Cl.
***A61C 19/06*** ( 2006.01 )
**(87)** WO2020/047659
**(31)** 62/727,520 **(32)** 05.09.18 **(33)** US
**(43)** 12.03.2020
**(44)** 01.08.2024
**(72)** SCURTESCU, Cristian
**(74)** Pipers Intellectual Property

---

**(71)** Societe des Produits Nestle S.A.
**(11)** AU-B-2018382579
**(21)** 2018382579 **(22)** 13.12.2018
**(54)** Foodstuff products, ingredients, processes and uses
**(51)** Int. Cl.
***A23G 1/32*** ( 2006.01 )
***A23G 1/48*** ( 2006.01 )
**(87)** WO2019/115735
**(31)** 17207266.2 **(32)** 14.12.17 **(33)** EP
18154926.2 02.02.18 EP
18166122.4 06.04.18 EP
18178071.9 15.06.18 EP
**(43)** 20.06.2019
**(44)** 01.08.2024
**(72)** Vieira, Josélio,Batista; Kuschel, Beatrice; Festring, Daniel
**(74)** Spruson & Ferguson

---

**(71)** Sofi Filtration Oy
**(11)** AU-B-2019230645
**(21)** 2019230645 **(22)** 01.03.2019
**(54)** Method for cleaning a membrane filter using ultrasound and backwash pulses and device adapted therefor
**(51)** Int. Cl.
***B01D 65/02*** ( 2006.01 )
**(87)** WO2019/170958
**(31)** 20185214 **(32)** 08.03.18 **(33)** FI
**(43)** 12.09.2019
**(44)** 01.08.2024
**(72)** AHO, Simo; HAKALA, Ville
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Soilmec S.p.A.
**(11)** AU-B-2019293389
**(21)** 2019293389 **(22)** 26.06.2019
**(54)** Drilling machine provided with a detection system for detecting at least one locking position of a rotary head of an extension element of a drill string and method for detecting said at least one locking position
**(51)** Int. Cl.
***E21B 7/02*** ( 2006.01 )
***E21B 17/07*** ( 2006.01 )
**(87)** WO2020/003145
**(31)** 102018000006771 **(32)** 28.06.18 **(33)** IT
**(43)** 02.01.2020
**(44)** 01.08.2024
**(72)** DITILLO, Alessandro
**(74)** Phillips Ormonde Fitzpatrick

---

**(71)** Solmic Biotech GmbH
**(11)** AU-B-2018296678
**(21)** 2018296678 **(22)** 06.07.2018
**(54)** Stable cannabinoid compositions
**(51)** Int. Cl.
***A61K 9/107*** ( 2006.01 )
***A61K 31/05*** ( 2006.01 )
***A61K 31/352*** ( 2006.01 )

## Applications Accepted - Name Index cont'd

***A61K 47/10*** ( 2017.01 )
***A61K 47/22*** ( 2006.01 )
**(87)** WO2019/008178
**(31)** 17180383.6 **(32)** 07.07.17 **(33)** EP
**(43)** 10.01.2019
**(44)** 01.08.2024
**(72)** KNÖLLER, Ilse; SOWIK, Thomas
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Southern Cross Patents Pty Ltd
**(11)** AU-B-2019378091
**(21)** 2019378091 **(22)** 15.11.2019
**(54)** Pedicle screws
**(51)** Int. Cl.
***A61B 17/70*** ( 2006.01 )
**(87)** WO2020/097691
**(31)** 2018904378 **(32)** 16.11.18 **(33)** AU
**(43)** 22.05.2020
**(44)** 01.08.2024
**(72)** MCPHEE, Robert
**(74)** Clark Intellectual Property Pty Ltd

---

**(71)** STAEDTLER SE
**(11)** AU-B-2021266857
**(21)** 2021266857 **(22)** 23.04.2021
**(54)** Method for producing a molding compound
**(51)** Int. Cl.
***C08J 3/18*** ( 2006.01 )
**(87)** WO2021/223907
**(31)** 10 2020 002 693.1 **(32)** 05.05.20 **(33)** DE
**(43)** 11.11.2021
**(44)** 01.08.2024
**(72)** SCHNEIDER, Denise; BELZNER, Mathias
**(74)** Griffith Hack

---

**(71)** Steering Solutions IP Holding Corporation
**(11)** AU-B-2022202829
**(21)** 2022202829 **(22)** 28.04.2022
**(54)** Integrated thruster apparatus for a marine vessel
**(51)** Int. Cl.
***B63H 25/46*** ( 2006.01 )
***B63H 11/08*** ( 2006.01 )
***B63H 21/17*** ( 2006.01 )
**(31)** 63/182,016 **(32)** 30.04.21 **(33)** US
63/244,381 15.09.21 US
**(43)** 17.11.2022
**(44)** 01.08.2024
**(72)** Weber, John E.; Sanderson, Rodney M.; Douglas, Christopher R.; Maschke, Andrew E.; Rousseau, Philogene F.
**(74)** Davies Collison Cave Pty Ltd

---

**Stichting Het Nederlands Kanker Instituut-Antoni Van Leeuwenhoek Ziekenhuis see Stichting Sanquin Bloedvoorziening**
**(21)** 2018246333

---

**(71)** Stichting Sanquin Bloedvoorziening; Stichting Het Nederlands Kanker Instituut-Antoni Van Leeuwenhoek Ziekenhuis
**(11)** AU-B-2018246333
**(21)** 2018246333 **(22)** 29.03.2018
**(54)** Isolation of stable regulatory T cells and uses thereof
**(51)** Int. Cl.
***C12N 5/0783*** ( 2010.01 )
***A61K 35/17*** ( 2015.01 )
**(87)** WO2018/178296
**(31)** 17163525.3 **(32)** 29.03.17 **(33)** EP
**(43)** 04.10.2018
**(44)** 01.08.2024
**(72)** Amsen, Derk; Cuadrado Godia, Eloy; Borst, Jannetje Geertruida
**(74)** FB Rice Pty Ltd

---

**(71)** StubHub, Inc.
**(11)** AU-B-2021232606
**(21)** 2021232606 **(22)** 03.03.2021
**(54)** System and methods for negotiating ticket transfer
**(51)** Int. Cl.
***G06Q 10/02*** ( 2012.01 )
**(87)** WO2021/178580
**(31)** 16/810,421 **(32)** 05.03.20 **(33)** US
**(43)** 10.09.2021
**(44)** 01.08.2024
**(72)** BADIGANNAVAR, Vijet Siddalinga
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Suzhou Basecare Medical Device Co., Ltd.
**(11)** AU-B-2021359279
**(21)** 2021359279 **(22)** 15.04.2021
**(54)** Nucleic acid library construction method and application thereof in analysis of abnormal chromosome structure in preimplantation embryo
**(51)** Int. Cl.
***C12Q 1/6806*** ( 2018.01 )
***C12Q 1/6869*** ( 2018.01 )
***C12Q 1/6883*** ( 2018.01 )
***C40B 50/06*** ( 2006.01 )
**(87)** WO2022/077885
**(31)** 202011094180.6 **(32)** 14.10.20 **(33)** CN
**(43)** 21.04.2022
**(44)** 01.08.2024
**(72)** ZHAO, Dingding; MAO, Yan; KONG, Lingyin; LIANG, Bo
**(74)** GLMR

---

**(71)** Suzhou Reveda Medical Biotech Co., Ltd.
**(11)** AU-B-2021290482
**(21)** 2021290482 **(22)** 26.01.2021
**(54)** Vacuum liquid-filling needle and pressure relief valve therefor
**(51)** Int. Cl.
***B65B 39/00*** ( 2006.01 )
***B67C 3/26*** ( 2006.01 )
**(87)** WO2021/253831
**(31)** 202010549503.X **(32)** 16.06.20 **(33)** CN
**(43)** 23.12.2021
**(44)** 01.08.2024
**(72)** LIU, Long; YAN, Ping; HUANG, Yuan; QU, Qiuyu
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** SW Energy Technologies
**(11)** AU-B-2018206755
**(21)** 2018206755 **(22)** 18.07.2018
**(54)** DOWNHOLE TOOL INCLUDING A RESETTABLE PLUG WITH A FLOW-THROUGH VALVE
**(51)** Int. Cl.
***E21B 33/12*** ( 2006.01 )
***E21B 34/06*** ( 2006.01 )
**(31)** 15/869,889 **(32)** 12.01.18 **(33)** US
**(43)** 01.08.2019
**(44)** 01.08.2024
**(72)** Schroit, Sam; Wensrich, Jeffrey
**(74)** SW Energy Technologies

---

**(71)** Swiss Transportation Research Institute AG
**(11)** AU-B-2017431376
**(21)** 2017431376 **(22)** 15.09.2017
**(54)** Door system for a vacuum train
**(51)** Int. Cl.
***B61B 1/02*** ( 2006.01 )
***B61B 13/10*** ( 2006.01 )
***B61D 19/02*** ( 2006.01 )
**(87)** WO2019/052656
**(43)** 21.03.2019
**(44)** 01.08.2024
**(72)** BAHMANN, Ramon Alexander; BAHMANN, Aurelius Christian
**(74)** SR Intellectual Property

---

**(71)** SynAct Pharma ApS
**(11)** AU-B-2019289563
**(21)** 2019289563 **(22)** 24.06.2019
**(54)** Treatment of proteinuria
**(51)** Int. Cl.
***A61K 31/402*** ( 2006.01 )
***A61P 13/12*** ( 2006.01 )
**(87)** WO2019/243625
**(31)** 18179319.1 **(32)** 22.06.18 **(33)** EP
**(43)** 26.12.2019
**(44)** 01.08.2024
**(72)** JONASSEN, Thomas Engelbrecht Nordkild
**(74)** FB Rice Pty Ltd

---

**(71)** Synbalance SRL
**(11)** AU-B-2016377166
**(21)** 2016377166 **(22)** 21.12.2016
**(54)** Probiotic compositions and use thereof
**(51)** Int. Cl.
***A61K 35/745*** ( 2015.01 )
***A61K 35/741*** ( 2015.01 )
***A61K 35/747*** ( 2015.01 )
***A61P 31/00*** ( 2006.01 )
**(87)** WO2017/108955
**(31)** 102015000086645 **(32)** 22.12.15 **(33)** IT
**(43)** 29.06.2017
**(44)** 01.08.2024
**(72)** Malanchin, Rosella; Piangiolino, Cristiana; Boccarusso, Marco
**(74)** WRAYS PTY LTD

---

**(71)** Taiho Pharmaceutical Co., Ltd.
**(11)** AU-B-2020283299

## Applications Accepted - Name Index cont'd

**(21)** 2020283299 **(22)** 28.05.2020
**(54)** Combination treatment of cancer using sulfonamide compound and immune regulator
**(51)** Int. Cl.
***A61K 39/395*** ( 2006.01 )
***A61K 31/4245*** ( 2006.01 )
***A61K 45/00*** ( 2006.01 )
***A61P 43/00*** ( 2006.01 )
**(87)** WO2020/241749
**(31)** 2019-100136 **(32)** 29.05.19 **(33)** JP
**(43)** 03.12.2020
**(44)** 01.08.2024
**(72)** UENO, Hiroyuki; TSUKIOKA, Sayaka
**(74)** Spruson & Ferguson

---

**(71)** Takeda Pharmaceutical Company Limited
**(11)** AU-B-2018357917
**(21)** 2018357917 **(22)** 30.10.2018
**(54)** Environmentally compatible detergents for inactivation of lipid-enveloped viruses
**(51)** Int. Cl.
***C08G 65/26*** ( 2006.01 )
***C08G 65/334*** ( 2006.01 )
***C11D 1/72*** ( 2006.01 )
***C12N 7/00*** ( 2006.01 )
**(87)** WO2019/086463
**(31)** 62/687,023 **(32)** 19.06.18 **(33)** US
62/578,648 30.10.17 US
**(43)** 09.05.2019
**(44)** 01.08.2024
**(72)** FARCET, Jean-Baptiste; KINDERMANN, Johanna; TILLE, Björn; KREIL, Thomas R.
**(74)** Spruson & Ferguson

---

**(71)** Taylor-Listug, Inc. D/B/A Taylor Guitars
**(11)** AU-B-2020318991
**(21)** 2020318991 **(22)** 22.07.2020
**(54)** Saddle and bridge for reducing longitudinal waves in a string instrument
**(51)** Int. Cl.
***G10D 3/04*** ( 2020.01 )
*G10D 1/08* ( 2006.01 )
**(87)** WO2021/016313
**(31)** 62/876,217 **(32)** 19.07.19 **(33)** US
**(43)** 28.01.2021
**(44)** 01.08.2024
**(72)** POWERS, Andrew Taylor
**(74)** IP GATEWAY PATENT & TRADE MARK ATTORNEYS PTY LTD

---

**(71)** TELEFONAKTIEBOLAGET LM ERICSSON (PUBL)
**(11)** AU-B-2021349420
**(21)** 2021349420 **(22)** 23.09.2021
**(54)** HANDLING REGISTRATIONS OF A USER EQUIPMENT IN DIFFERENT COMMUNICATION NETWORKS
**(51)** Int. Cl.
***H04W 12/37*** ( 2021.01 )
***H04W 8/18*** ( 2009.01 )
***H04W 12/40*** ( 2021.01 )
***H04W 88/02*** ( 2009.01 )
**(87)** WO2022/064424
**(31)** 63/081,972 **(32)** 23.09.20 **(33)** US
**(43)** 31.03.2022
**(44)** 01.08.2024
**(72)** NAKARMI, Prajwol Kumar; WIFVESSON, Monica
**(74)** FB Rice Pty Ltd

---

**(71)** TELEFONAKTIEBOLAGET LM ERICSSON (PUBL)
**(11)** AU-B-2022212145
**(21)** 2022212145 **(22)** 26.01.2022
**(54)** NETWORK NODES AND METHODS THEREIN FOR PROVIDING BINDING INDICATION
**(51)** Int. Cl.
***H04L 41/0893*** ( 2022.01 )
***H04L 41/0896*** ( 2022.01 )
***H04L 41/5054*** ( 2022.01 )
**(87)** WO2022/161391
**(31)** PCT/ **(32)** 31.01.21 **(33)** CN
CN2021/074570
**(43)** 04.08.2022
**(44)** 01.08.2024
**(72)** YANG, Yong; LU, Yunjie; WANG, Chunbo
**(74)** AJ PARK

---

**(71)** Tencent America LLC
**(11)** AU-B-2023202653
**(21)** 2023202653 **(22)** 01.05.2023
**(54)** METHOD AND APPARATUS FOR REDUCING CONTEXT MODELS FOR ENTROPY CODING OF TRANSFORM COEFFICIENT SIGNIFICANT FLAG
**(51)** Int. Cl.
***H03M 7/00*** ( 2006.01 )
**(43)** 18.05.2023
**(44)** 01.08.2024
**(62)** 2020298230
**(72)** Auyeung, Cheung; Zhao, Xin; Li, Xiang; Liu, Shan
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Termotera Ltd.
**(11)** AU-B-2019226049
**(21)** 2019226049 **(22)** 26.02.2019
**(54)** Cooling, heating and humidity stabilization using humidity fluctuations
**(51)** Int. Cl.
***B01D 53/04*** ( 2006.01 )
***B01D 53/06*** ( 2006.01 )
***E04B 5/48*** ( 2006.01 )
***E04D 13/17*** ( 2006.01 )
***F24F 3/147*** ( 2006.01 )
***F24F 5/00*** ( 2006.01 )
***F24F 11/70*** ( 2018.01 )
***F24F 13/068*** ( 2006.01 )
**(87)** WO2019/162949
**(31)** 62/635,263 **(32)** 26.02.18 **(33)** US
**(43)** 29.08.2019
**(44)** 01.08.2024
**(72)** ZCHORI, Dror; RUTMAN, Jeremy
**(74)** Michael Buck IP

---

**(71)** Tetrous, Inc.
**(11)** AU-B-2018313859
**(21)** 2018313859 **(22)** 08.08.2018
**(54)** Therapeutic gas infused cosmetic and methods of infusion
**(51)** Int. Cl.
***A61K 8/19*** ( 2006.01 )
***A61K 8/22*** ( 2006.01 )
***A61K 8/70*** ( 2006.01 )
**(87)** WO2019/032756
**(31)** 62/542,726 **(32)** 08.08.17 **(33)** US
**(43)** 14.02.2019
**(44)** 01.08.2024
**(72)** PATT, Bradley E.; CARTER, Andrew J.; HUSSAIN, Ali
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Thales DIS France SAS
**(11)** AU-B-2021253684
**(21)** 2021253684 **(22)** 09.04.2021
**(54)** Data carrier with protection against subsequent laser marking
**(51)** Int. Cl.
***B42D 25/41*** ( 2014.01 )
**(87)** WO2021/205019
**(31)** 20169033.6 **(32)** 09.04.20 **(33)** EP
**(43)** 14.10.2021
**(44)** 01.08.2024
**(72)** SAILER, Christian; EGLI, Stefan
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Theaprin Pharmaceuticals, Inc.
**(11)** AU-B-2018277095
**(21)** 2018277095 **(22)** 30.05.2018
**(54)** Sublingual formulation with water-soluble cocrystals of acetylsalicylic acid with citric acid, sodium bicarbonate, and L-theanine for the treatment of acute myocardial infarction
**(51)** Int. Cl.
***A61K 31/616*** ( 2006.01 )
***A61K 9/14*** ( 2006.01 )
***A61K 9/20*** ( 2006.01 )
***A61K 31/12*** ( 2006.01 )
***A61K 31/60*** ( 2006.01 )
***A61K 45/06*** ( 2006.01 )
**(87)** WO2018/222713
**(31)** 62/512,316 **(32)** 30.05.17 **(33)** US
**(43)** 06.12.2018
**(44)** 01.08.2024
**(72)** Felice, Philip V.; Brittain, Harry G.
**(74)** Spruson & Ferguson

---

**(71)** The Board of Regents of The University of Texas System
**(11)** AU-B-2018204986
**(21)** 2018204986 **(22)** 02.01.2018
**(54)** Anti-LAIR1 antibodies and their uses
**(51)** Int. Cl.
***C07K 16/00*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***C07K 16/28*** ( 2006.01 )
***C12P 21/08*** ( 2006.01 )
**(87)** WO2018/126259
**(31)** 62/441,551 **(32)** 02.01.17 **(33)** US
62/445,673 12.01.17 US
**(43)** 05.07.2018
**(44)** 01.08.2024
**(72)** Liao, Charlene X.; Liu, Qiang; An, Zhiqiang; Zhang, Ningyan; Gui, Xun; Zhang, Chengcheng; Deng, Mi; Xie, Jingjing
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

## Applications Accepted - Name Index cont'd

**(71)** The Board of Trustees of The Leland Stanford Junior University; Forty Seven, Inc.
**(11)** AU-B-2018290248
**(21)** 2018290248 **(22)** 21.06.2018
**(54)** Dosing parameters for CD47 targeting therapies to hematologic malignancies
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
**(87)** WO2018/237168
**(31)** 62/523,182 **(32)** 21.06.17 **(33)** US
**(43)** 27.12.2018
**(44)** 01.08.2024
**(72)** Majeti, Ravindra; Chao, Mark P.; Liu, Jie; Volkmer, Jens-Peter; Weissman, Irving L.
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** The Boeing Company
**(11)** AU-B-2019250263
**(21)** 2019250263 **(22)** 18.10.2019
**(54)** Bulkhead joint assembly
**(51)** Int. Cl.
***B64C 1/26*** ( 2006.01 )
***B64C 1/06*** ( 2006.01 )
***B64C 1/10*** ( 2006.01 )
**(31)** 16/166,785 **(32)** 22.10.18 **(33)** US
**(43)** 07.05.2020
**(44)** 01.08.2024
**(72)** JOSEPH, Joel; DIEP, Paul; DOPKER, Bernhard; BUCKLEY, Mark J.
**(74)** Spruson & Ferguson

---

**(71)** The Boots Company PLC
**(11)** AU-B-2019321827
**(21)** 2019321827 **(22)** 05.08.2019
**(54)** Cosmetic compositions
**(51)** Int. Cl.
***A61K 8/49*** ( 2006.01 )
***A61K 8/06*** ( 2006.01 )
***A61K 8/73*** ( 2006.01 )
***A61K 8/81*** ( 2006.01 )
***A61K 8/86*** ( 2006.01 )
***A61Q 19/00*** ( 2006.01 )
***A61Q 19/08*** ( 2006.01 )
***A61Q 19/10*** ( 2006.01 )
**(87)** WO2020/035168
**(31)** 18020390.3 **(32)** 15.08.18 **(33)** EP
**(43)** 20.02.2020
**(44)** 01.08.2024
**(72)** HICKS, Jake Thomas; DEMURTAS, Marco; ELMS, Christopher John; TOMLINSON, Paul James; BELL, Michael David
**(74)** Griffith Hack

---

**(71)** The Catholic University of America
**(11)** AU-B-2018383125
**(21)** 2018383125 **(22)** 16.11.2018
**(54)** Control of time of setting of geopolymer compositions containing High-Ca reactive aluminosilicate materials
**(51)** Int. Cl.
***C04B 28/00*** ( 2006.01 )
***C04B 14/04*** ( 2006.01 )
***C04B 14/10*** ( 2006.01 )
***C04B 18/08*** ( 2006.01 )
***C04B 18/14*** ( 2006.01 )
***C04B 20/00*** ( 2006.01 )
***C04B 22/12*** ( 2006.01 )
*C04B 103/22* ( 2006.01 )
**(87)** WO2019/116124
**(31)** 62/703,295 **(32)** 25.07.18 **(33)** US
62/599,068 15.12.17 US
62/721,021 22.08.18 US
**(43)** 20.06.2019
**(44)** 01.08.2024
**(72)** GONG, Weiliang; XU, Hui; LUTZE, Werner; PEGG, Ian L.
**(74)** AJ PARK

---

**(71)** The Gillette Company LLC
**(11)** AU-B-2021253692
**(21)** 2021253692 **(22)** 29.03.2021
**(54)** Handle for a personal care implement and personal care implement
**(51)** Int. Cl.
***A61C 17/34*** ( 2006.01 )
***A46B 15/00*** ( 2006.01 )
***A61C 17/22*** ( 2006.01 )
**(87)** WO2021/207753
**(31)** 20168692.0 **(32)** 08.04.20 **(33)** EP
**(43)** 14.10.2021
**(44)** 01.08.2024
**(72)** JUNGNICKEL, Uwe
**(74)** AJ PARK

---

**(71)** Theia Group, Incorporated
**(11)** AU-B-2022206794
**(21)** 2022206794 **(22)** 21.07.2022
**(54)** SYSTEM FOR TRANSMISSION AND DIGITIZATION OF MACHINE TELEMETRY
**(51)** Int. Cl.
***G05B 19/02*** ( 2006.01 )
**(43)** 18.08.2022
**(44)** 01.08.2024
**(62)** 2017273616
**(72)** Olson, Erlend
**(74)** Intellepro Patent & Trade Mark Attorneys

---

**(71)** The Methodist Hospital
**(11)** AU-B-2018212887
**(21)** 2018212887 **(22)** 26.01.2018
**(54)** Core/shell structure platform for immunotherapy
**(51)** Int. Cl.
***A61K 39/39*** ( 2006.01 )
***A61K 9/127*** ( 2006.01 )
***A61K 9/51*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
**(87)** WO2018/140826
**(31)** 62/451,575 **(32)** 27.01.17 **(33)** US
**(43)** 02.08.2018
**(44)** 01.08.2024
**(72)** Shen, Haifa
**(74)** Baxter Patent Attorneys Pty Ltd

---

**(71)** The Regents of the University of California
**(11)** AU-B-2018207649
**(21)** 2018207649 **(22)** 14.01.2018
**(54)** Immunoengineered pluripotent cells
**(51)** Int. Cl.
***C12N 5/074*** ( 2010.01 )
***A61K 35/545*** ( 2015.01 )
***C12N 15/113*** ( 2010.01 )
**(87)** WO2018/132783
**(31)** 62/445,969 **(32)** 13.01.17 **(33)** US
**(43)** 19.07.2018
**(44)** 01.08.2024
**(72)** Schrepfer, Sonja; Deuse, Tobias
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** The Regents of the University of California
**(11)** AU-B-2018359211
**(21)** 2018359211 **(22)** 29.10.2018
**(54)** Calibration free in-vivo measurement of analytes using electrochemical sensors
**(51)** Int. Cl.
***A61B 5/00*** ( 2006.01 )
***A61B 5/1468*** ( 2006.01 )
***G01N 33/543*** ( 2006.01 )
**(87)** WO2019/089465
**(31)** 62/578,665 **(32)** 30.10.17 **(33)** US
**(43)** 09.05.2019
**(44)** 01.08.2024
**(72)** PLAXCO, Kevin; ARROYO CURRAS, Netzahualcoyotl
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** The Regents of The University of California
**(11)** AU-B-2018213044
**(21)** 2018213044 **(22)** 22.01.2018
**(54)** Targeted gene demethylation in plants
**(51)** Int. Cl.
***C12N 15/82*** ( 2006.01 )
***A61K 38/17*** ( 2006.01 )
**(87)** WO2018/140362
**(31)** 62/450,929 **(32)** 26.01.17 **(33)** US
62/547,053 17.08.17 US
**(43)** 02.08.2018
**(44)** 01.08.2024
**(72)** Jacobsen, Steve E.; Gallego-Bartolomé, Javier; Papikian, Ashot; Gardiner, Jason
**(74)** Spruson & Ferguson

---

**(71)** The Spacer Co Pty Ltd
**(11)** AU-B-2018208679
**(21)** 2018208679 **(22)** 25.07.2018
**(54)** A connection for connectable parts
**(51)** Int. Cl.
***F16L 3/22*** ( 2006.01 )
**(31)** 2017902916 **(32)** 25.07.17 **(33)** AU
**(43)** 14.02.2019
**(44)** 01.08.2024
**(72)** Mee, Dennis John
**(74)** Intellepro

---

**(71)** The Texas A & M University System
**(11)** AU-B-2023203349
**(21)** 2023203349 **(22)** 30.05.2023
**(54)** NR4A1 ligands, pharmaceutical compositions, and related methods of use
**(51)** Int. Cl.

## Applications Accepted - Name Index cont'd

***C07D 209/02*** ( 2006.01 )
***A61K 31/40*** ( 2006.01 )
***A61K 31/403*** ( 2006.01 )
***A61K 31/404*** ( 2006.01 )
***C07D 209/04*** ( 2006.01 )
***C07D 209/10*** ( 2006.01 )
**(43)** 29.06.2023
**(44)** 01.08.2024
**(62)** 2018313925
**(72)** SAFE, Stephen
**(74)** Spruson & Ferguson

---

**(71)** The Trustees of The University of Pennsylvania
**(11)** AU-B-2022203110
**(21)** 2022203110 **(22)** 10.05.2022
**(54)** Valve prosthesis
**(51)** Int. Cl.
***A61F 2/24*** ( 2006.01 )
**(43)** 26.05.2022
**(44)** 01.08.2024
**(62)** 2020202791
**(72)** Gorman III, Joseph H.; Gorman, Robert C.; Gillespie, Matthew J.
**(74)** Griffith Hack

---

**(71)** The United States of America, as represented by the Secretary, Department of Health & Human Services
**(11)** AU-B-2019236297
**(21)** 2019236297 **(22)** 15.03.2019
**(54)** Using machine learning and/or neural networks to validate stem cells and their derivatives for use in cell therapy, drug discovery, and diagnostics
**(51)** Int. Cl.
***G06V 20/69*** ( 2022.01 )
***G01N 15/1429*** ( 2024.01 )
***G06F 18/214*** ( 2023.01 )
***G06T 7/00*** ( 2017.01 )
***G06V 10/82*** ( 2022.01 )
**(87)** WO2019/178561
**(31)** 62/644,175 **(32)** 16.03.18 **(33)** US
**(43)** 19.09.2019
**(44)** 01.08.2024
**(72)** BHARTI, Kapil; HOTALING, Nathan A.; SCHAUB, Nicholas J.; SIMON, Carl G.
**(74)** IP GATEWAY PATENT & TRADE MARK ATTORNEYS PTY LTD

---

**(71)** The United States of America, as Represented by the Secretary, Department of Health & Human Services
**(11)** AU-B-2022203098
**(21)** 2022203098 **(22)** 09.05.2022
**(54)** Surgical tool and method for ocular tissue transplantation
**(51)** Int. Cl.
***A61F 9/00*** ( 2006.01 )
**(43)** 26.05.2022
**(44)** 01.08.2024
**(62)** 2020202248
**(72)** MAMINISHKIS, Arvydas
**(74)** Spruson & Ferguson

---

**(71)** The United States of America, as represented by the Secretary, Department of Health and Human Service; Kite Pharma, Inc.
**(11)** AU-B-2022209271
**(21)** 2022209271 **(22)** 27.07.2022
**(54)** METHODS OF PREPARING T CELLS FOR T CELL THERAPY
**(51)** Int. Cl.
***A61K 31/436*** ( 2006.01 )
***C12N 5/078*** ( 2010.01 )
***C12N 5/0783*** ( 2010.01 )
**(43)** 25.08.2022
**(44)** 01.08.2024
**(62)** 2016341966
**(72)** PEREZ, Arianne; SABATINO, Marianna; ROSENBERG, Steven A.; RESTIFO, Nicholas P.
**(74)** AJ PARK

---

**(71)** The United States of America, as represented by the Secretary, Department of Health and Human Services
**(11)** AU-B-2017271606
**(21)** 2017271606 **(22)** 26.05.2017
**(54)** FLT3-specific chimeric antigen receptors and methods using same
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61K 38/00*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
**(87)** WO2017/205747
**(31)** 62/342,394 **(32)** 27.05.16 **(33)** US
**(43)** 30.11.2017
**(44)** 01.08.2024
**(72)** Chien, Christopher D.; Fry, Terry J.
**(74)** Spruson & Ferguson

---

**(71)** The United States of America, as Represented by The Secretary, Department of Health and Human Services
**(11)** AU-B-2019263233
**(21)** 2019263233 **(22)** 01.05.2019
**(54)** T cell receptors which recognize mutated EGFR
**(51)** Int. Cl.
***C07K 14/725*** ( 2006.01 )
**(87)** WO2019/213195
**(31)** 62/665,234 **(32)** 01.05.18 **(33)** US
**(43)** 07.11.2019
**(44)** 01.08.2024
**(72)** HANADA, Kenichi; ZHAO, Chihao; PASETTO, Anna; YANG, James C.
**(74)** Spruson & Ferguson

---

**(71)** The University of Sydney
**(11)** AU-B-2022205204
**(21)** 2022205204 **(22)** 13.07.2022
**(54)** Anti-cancer compounds
**(51)** Int. Cl.
***C07D 213/75*** ( 2006.01 )
***A61K 31/341*** ( 2006.01 )
***A61K 31/36*** ( 2006.01 )
***A61K 31/4406*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***C07D 213/82*** ( 2006.01 )
***C07D 241/24*** ( 2006.01 )
***C07D 307/66*** ( 2006.01 )
***C07D 317/66*** ( 2006.01 )
**(43)** 04.08.2022
**(44)** 01.08.2024
**(62)** 2019215799
**(72)** Kassiou, Michael; Jorgensen, William; Munoz, Lenka
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Tissuegen, Inc.
**(11)** AU-B-2022231694
**(21)** 2022231694 **(22)** 13.09.2022
**(54)** Methods and compositions for maintaining the conformation and structural integrity of biomolecules
**(51)** Int. Cl.
***A61K 9/16*** ( 2006.01 )
***A61K 9/50*** ( 2006.01 )
***A61K 38/43*** ( 2006.01 )
**(43)** 06.10.2022
**(44)** 01.08.2024
**(62)** 2017300392
**(72)** Griffin, Nickolas B.; Hubbard, Paul A.; Sood, Paul R.; Patel, Alpeshkumar P.; Crow, Brent B.; Nelson, Kevin D.; Lynn Seifert, Jennifer
**(74)** FB Rice Pty Ltd

---

**Tokushima University see Asahi Group Holdings, Ltd.**
**(21)** 2017287987

---

**Tokushima University see Asahi Group Holdings, Ltd.**
**(21)** 2017287988

---

**(71)** Tongwei Solar (Meishan) Co., Ltd.
**(11)** AU-B-2022331906
**(21)** 2022331906 **(22)** 26.07.2022
**(54)** TOPCon cell, method for manufacturing the same, and electrical device
**(51)** Int. Cl.
***H01L 31/02*** ( 2006.01 )
**(87)** WO2023/071329
**(31)** 202111248983.7 **(32)** 26.10.21 **(33)** CN
**(43)** 11.05.2023
**(44)** 01.08.2024
**(72)** XU, Wenzhou; CHEN, Hao; DENG, Mingzhang; HE, Yu; ZHOU, Fan; XING, Guoqiang; YAO, Qian
**(74)** James & Wells Intellectual Property

---

**TOSHIBA ENERGY SYSTEMS & SOLUTIONS CORPORATION see KABUSHIKI KAISHA TOSHIBA**
**(21)** 2023200415

---

**(71)** TransMedics, Inc.
**(11)** AU-B-2018368000
**(21)** 2018368000 **(22)** 20.11.2018
**(54)** Apparatus for perfusion of an excised organ
**(51)** Int. Cl.
***A01N 1/02*** ( 2006.01 )
***A61J 1/00*** ( 2006.01 )
**(87)** WO2019/095079
**(31)** 62/588,727 **(32)** 20.11.17 **(33)** US
**(43)** 23.05.2019

## Applications Accepted - Name Index cont'd

**(44)** 01.08.2024
**(72)** FREED, Darren
**(74)** Adams Pluck

---

**Tri-Institutional Therapeutics Discovery Institute, Inc. see Memorial Sloan-Kettering Cancer Center**
**(21)** 2019221837

---

**TSINGHUA UNIVERSITY see NUCTECH COMPANY LIMITED**
**(21)** 2021365222

---

**(71)** Ultima Genomics, Inc.
**(11)** AU-B-2020222888
**(21)** 2020222888 **(22)** 10.02.2020
**(54)** Methods for nucleic acid analysis
**(51)** Int. Cl.
***C12Q 1/6869*** ( 2018.01 )
***C12N 15/10*** ( 2006.01 )
***C12Q 1/68*** ( 2018.01 )
***C12Q 1/6804*** ( 2018.01 )
***C12Q 1/6806*** ( 2018.01 )
***C12Q 1/6844*** ( 2018.01 )
***C12Q 1/686*** ( 2018.01 )
**(87)** WO2020/167656
**(31)** 62/804,082 **(32)** 11.02.19 **(33)** US
62/890,240 22.08.19 US
62/916,683 17.10.19 US
**(43)** 20.08.2020
**(44)** 01.08.2024
**(72)** ALMOGY, Gilad; OBERSTRASS, Florian; BARAD, Omer; SHEE, Chandan
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Ultima Genomics, Inc.
**(11)** AU-B-2024203744
**(21)** 2024203744 **(22)** 04.06.2024
**(54)** LINKERS AND METHODS FOR OPTICAL DETECTION AND SEQUENCING
**(51)** Int. Cl.
***C07K 5/02*** ( 2006.01 )
***C12Q 1/6818*** ( 2018.01 )
***G01N 33/58*** ( 2006.01 )
**(43)** 20.06.2024
**(44)** 01.08.2024
**(62)** 2020224097
**(72)** LEE, Linda G.; ALMOGY, Gilad; MENCHEN, Steven
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Umicore
**(11)** AU-B-2020327561
**(21)** 2020327561 **(22)** 27.07.2020
**(54)** Process for the recovery of metals from oxidic ores
**(51)** Int. Cl.
***C22B 15/00*** ( 2006.01 )
***C22B 3/00*** ( 2006.01 )
***C22B 47/00*** ( 2006.01 )
**(87)** WO2021/028201
**(31)** 19190915.9 **(32)** 09.08.19 **(33)** EP
**(43)** 18.02.2021
**(44)** 01.08.2024
**(72)** DANIELS, Michel; SCOYER, Jean; BALTES, Michael; NEVEN, Margot; LEYSSEN, Jan
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** UMICORE; UNIVERSITEIT GENT
**(11)** AU-B-2022299062
**(21)** 2022299062 **(22)** 10.06.2022
**(54)** ENVIRONMENTAL-FRIENDLY PROCESS FOR THE TREATMENT OF WASTEWATER
**(51)** Int. Cl.
***C02F 3/00*** ( 2023.01 )
***C02F 3/34*** ( 2023.01 )
*C02F 1/46* ( 2023.01 )
*C02F 101/10* ( 2006.01 )
*C02F 103/10* ( 2006.01 )
*C02F 103/16* ( 2006.01 )
**(87)** WO2022/268531
**(31)** 21181218.5 **(32)** 23.06.21 **(33)** EP
**(43)** 29.12.2022
**(44)** 01.08.2024
**(72)** OSTERMEYER, Pieter; RABAEY, Korneel; HENNEBEL, Tom
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Unison Industries, LLC
**(11)** AU-B-2022241537
**(21)** 2022241537 **(22)** 29.09.2022
**(54)** AIR TURBINE STARTER WITH BEARING SUPPORT STRUCTURE
**(51)** Int. Cl.
***F02C 7/06*** ( 2006.01 )
***F02C 7/277*** ( 2006.01 )
***F02C 7/32*** ( 2006.01 )
***F16C 35/04*** ( 2006.01 )
**(31)** 202211046088 **(32)** 12.08.22 **(33)** IN
**(43)** 29.02.2024
**(44)** 01.08.2024
**(72)** Tripathi, Pallavi; Nayak, Subrata; Reddy Kollam, Ramana; Patil, Sharad Pundlik; Dhabade, Milind Chandrakant; Dev Mahadevaiah, Narendra; Ganiger, Ravindra Shankar
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Universal Field Robots Pty Ltd.
**(11)** AU-B-2019340235
**(21)** 2019340235 **(22)** 16.05.2019
**(54)** Automated vehicle
**(51)** Int. Cl.
***G05D 1/00*** ( 2024.01 )
***A01D 46/30*** ( 2006.01 )
***B25J 5/00*** ( 2006.01 )
***B25J 9/16*** ( 2006.01 )
***G05B 19/42*** ( 2006.01 )
***G05D 1/243*** ( 2024.01 )
**(87)** WO2020/051620
**(31)** 2018901710 **(32)** 16.05.18 **(33)** AU
**(43)** 19.03.2020
**(44)** 01.08.2024
**(72)** STERLING, Jeffrey James; MCKERCHER, Rhys Andrew; CASSELL, Timothy
**(74)** HopgoodGanim

---

**Universidade Federal do Rio de Janeiro - UFRJ see Vale S.A.**
**(21)** 2019268743

---

**(71)** Universität Basel
**(11)** AU-B-2018342922
**(21)** 2018342922 **(22)** 27.09.2018
**(54)** Method and computer program for predicting bilirubin levels in neonates
**(51)** Int. Cl.
***G01N 33/72*** ( 2006.01 )
**(87)** WO2019/063722
**(31)** 17194160.2 **(32)** 29.09.17 **(33)** EP
**(43)** 04.04.2019
**(44)** 01.08.2024
**(72)** KOCH, Gilbert; WELLMANN, Sven; PFISTER, Marc; KASSER, Severin; WILBAUX, Melanie
**(74)** Oxygene IP

---

**(71)** Université de Lorraine; Centre Hospitalier Régional Universitaire de Nancy
**(11)** AU-B-2018228352
**(21)** 2018228352 **(22)** 28.02.2018
**(54)** Mesenchymal stem cells obtained from Wharton's jelly for the treatment of sepsis
**(51)** Int. Cl.
***A61K 35/28*** ( 2015.01 )
***A61K 35/51*** ( 2015.01 )
***A61P 31/00*** ( 2006.01 )
***C12N 5/0775*** ( 2010.01 )
**(87)** WO2018/158542
**(31)** 1751649 **(32)** 28.02.17 **(33)** FR
**(43)** 07.09.2018
**(44)** 01.08.2024
**(72)** Bensoussan, Danièle; Gibot, Sébastien; Reppel, Loïc; Laroye, Caroline; Boufenzer, Amir; Avercenc, Léonore; Huselstein, Céline
**(74)** SR Intellectual Property

---

**UNIVERSITEIT GENT see UMICORE**
**(21)** 2022299062

---

**(71)** University of Johannesburg
**(11)** AU-B-2018353564
**(21)** 2018353564 **(22)** 19.10.2018
**(54)** Gamma ray tomographic radiography
**(51)** Int. Cl.
***G01V 5/00*** ( 2006.01 )
***G01V 5/12*** ( 2006.01 )
**(87)** WO2019/077580
**(31)** 2017/07077 **(32)** 19.10.17 **(33)** ZA
**(43)** 25.04.2019
**(44)** 01.08.2024
**(72)** CONNELL, Simon Henry; COOK, Martin Nkululeko Hogan
**(74)** Alder IP Pty Ltd

---

**(71)** University of Leicester; Omeros Corporation
**(11)** AU-B-2022256090
**(21)** 2022256090 **(22)** 17.10.2022

## Applications Accepted - Name Index cont'd

**(54)** Compositions and methods of inhibiting MASP-3 for the treatment of various diseases and disorders
**(51)** Int. Cl.
***C07K 16/40*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61K 45/06*** ( 2006.01 )
**(43)** 24.11.2022
**(44)** 01.08.2024
**(62)** 2020204551
**(72)** Cummings, W. Jason; Demopulos, Gregory A.; Dudler, Thomas; Schwaeble, Hans-Wilhelm; Tjoelker, Larry W.; Wood, Christi L.; Yabuki, Munehisa
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** University of Maryland, Baltimore
**(11)** AU-B-2022204657
**(21)** 2022204657 **(22)** 29.06.2022
**(54)** Self-sealing cannula
**(51)** Int. Cl.
***A61B 17/34*** ( 2006.01 )
**(43)** 21.07.2022
**(44)** 01.08.2024
**(62)** 2020213414
**(72)** Wu, Zhongjun; Griffith, Bartley P.; Rajagopal, Keshava
**(74)** Griffith Hack

---

**(71)** UOP LLC
**(11)** AU-B-2022215201
**(21)** 2022215201 **(22)** 10.08.2022
**(54)** Temperature swing adsorption process for heavy hydrocarbon removal
**(51)** Int. Cl.
***B01D 15/00*** ( 2006.01 )
***B01D 3/14*** ( 2006.01 )
**(43)** 01.09.2022
**(44)** 01.08.2024
**(62)** 2019290680
**(72)** Doong, Shain-Jer
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** UPL Ltd
**(11)** AU-B-2018389183
**(21)** 2018389183 **(22)** 15.12.2018
**(54)** Co-crystals of boscalid and triazoles
**(51)** Int. Cl.
***A01N 43/653*** ( 2006.01 )
***A01N 25/12*** ( 2006.01 )
***A01N 43/40*** ( 2006.01 )
***A01P 3/00*** ( 2006.01 )
**(87)** WO2019/123186
**(31)** 201731045819 **(32)** 20.12.17 **(33)** IN
**(43)** 27.06.2019
**(44)** 01.08.2024
**(72)** PATEL, Rakesh Bhulabhai; BHOGE, Satish Ekanath; SHROFF, Jaidev Rajnikant; SHROFF, Vikram Rajnikant
**(74)** Churchill Attorneys

---

**(71)** USG Interiors, LLC
**(11)** AU-B-2020345562
**(21)** 2020345562 **(22)** 21.08.2020
**(54)** Tapered kerf construction
**(51)** Int. Cl.
***E04B 1/84*** ( 2006.01 )
***E04C 2/04*** ( 2006.01 )
**(87)** WO2021/050246
**(31)** 16/566,909 **(32)** 11.09.19 **(33)** US
**(43)** 18.03.2021
**(44)** 01.08.2024
**(72)** SPIHLMAN, Michael P.; GULBRANDSEN, Peder J.; HULKA, Samuel D.
**(74)** James & Wells Intellectual Property

---

**USM U. Schärer Söhne AG see BURG LÜLING GMBH & CO. KG**
**(21)** 2021294863

---

**(71)** USTAV ORGANICKE CHEMIE A BIOCHEMIE AV CR, V. V. I.
**(11)** AU-B-2022330246
**(21)** 2022330246 **(22)** 15.08.2022
**(54)** 7-SUBSTITUTED 7-DEAZAADENINE-CONTAINING 2',3'-CYCLIC DINUCLEOTIDES
**(51)** Int. Cl.
***C07H 21/02*** ( 2006.01 )
***A61K 31/7048*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
**(87)** WO2023/020640
**(31)** 21191715.8 **(32)** 17.08.21 **(33)** EP
**(43)** 23.02.2023
**(44)** 01.08.2024
**(72)** HOCEK, Michal; BIRKUS, Gabriel; PERLIKOVA, Pavla; VAVRINA, Zdenek; NOVOTNA, Barbora
**(74)** PHILLIPS ORMONDE FITZPATRICK

---

**(71)** Utting, D.
**(11)** AU-B-2018351880
**(21)** 2018351880 **(22)** 16.10.2018
**(54)** A transportable vehicle enclosure for inspecting vehicles
**(51)** Int. Cl.
***G01M 17/007*** ( 2006.01 )
**(87)** WO2019/077330
**(31)** 1716980.6 **(32)** 16.10.17 **(33)** GB
**(43)** 25.04.2019
**(44)** 01.08.2024
**(72)** UTTING, David John
**(74)** FOUNDRY INTELLECTUAL PROPERTY PTY LTD

---

**(71)** Vaccinex, Inc.
**(11)** AU-B-2018237549
**(21)** 2018237549 **(22)** 14.03.2018
**(54)** Treatment of cancer with a semaphorin-4D antibody in combination with an epigenetic modulating agent
**(51)** Int. Cl.
***C07K 16/28*** ( 2006.01 )
***A61K 39/395*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
**(87)** WO2018/175179
**(31)** 62/473,731 **(32)** 20.03.17 **(33)** US
**(43)** 27.09.2018
**(44)** 01.08.2024
**(72)** Evans, Elizabeth; Smith, Ernest S.; Zauderer, Maurice
**(74)** AJ PARK

---

**(71)** Vale S.A.; Universidade Federal do Rio de Janeiro - UFRJ
**(11)** AU-B-2019268743
**(21)** 2019268743 **(22)** 19.03.2019
**(54)** Robot device, and method for inspection of components of a belt conveyor
**(51)** Int. Cl.
***B65G 43/02*** ( 2006.01 )
***B65G 23/00*** ( 2006.01 )
***G06F 3/00*** ( 2006.01 )
***G06T 7/00*** ( 2017.01 )
**(87)** WO2019/218035
**(31)** BR1020180102133 **(32)** 18.05.18 **(33)** BR
**(43)** 21.11.2019
**(44)** 01.08.2024
**(72)** FREITAS, Gustavo Medeiros; TORRE, Marcos Paulo; GARCIA, Gabriel Carvalho; ROCHA, Filipe Augusto Santos; FRANCA, André Stanzani; DA FONSECA, Felipe Ribeiro; LIZARRALDE, Fernando Cesar; COSTA, Ramon Romankevicius; NEVES, Alex Fernandes; MONTEIRO, João Carlos Espiúca
**(74)** Spruson & Ferguson

---

**Vallourec Oil and Gas France see Nippon Steel Corporation**
**(21)** 2021327342

---

**(71)** Valmont Industries, Inc.
**(11)** AU-B-2019213837
**(21)** 2019213837 **(22)** 23.01.2019
**(54)** System and method for GPS alignment using real-time kinetics
**(51)** Int. Cl.
***G05D 3/00*** ( 2006.01 )
**(87)** WO2019/152234
**(31)** 62/623,587 **(32)** 30.01.18 **(33)** US
**(43)** 08.08.2019
**(44)** 01.08.2024
**(72)** THATCHER, Tracy A.
**(74)** James & Wells Intellectual Property

---

**(71)** Vecor IP Holdings Limited
**(11)** AU-B-2019362582
**(21)** 2019362582 **(22)** 15.10.2019
**(54)** Process for making a ceramic particulate mixture
**(51)** Int. Cl.
***C04B 35/626*** ( 2006.01 )
***B07B 4/02*** ( 2006.01 )
***B07B 9/02*** ( 2006.01 )
***C01B 33/26*** ( 2006.01 )
***C04B 33/132*** ( 2006.01 )
***C04B 33/135*** ( 2006.01 )
***C04B 33/20*** ( 2006.01 )
***C04B 33/24*** ( 2006.01 )
**(87)** WO2020/079029
**(31)** 18200339.2 **(32)** 15.10.18 **(33)** EP
**(43)** 23.04.2020
**(44)** 01.08.2024
**(72)** KOSZO, Sandor; MA, Bo Wei; BADRAN, Ahmad
**(74)** FOUNDRY INTELLECTUAL PROPERTY PTY LTD

---

## Applications Accepted - Name Index cont'd

**(71)** Vella Bioscience, Inc.
**(11)** AU-B-2021238290
**(21)** 2021238290 **(22)** 12.03.2021
**(54)** Use of cannabidiol in treating anti-depressant-induced female sexual dysfunction
**(51)** Int. Cl.
***A61K 31/352*** ( 2006.01 )
***A61K 9/00*** ( 2006.01 )
***A61K 47/38*** ( 2006.01 )
**(87)** WO2021/188388
**(31)** 62/990,026 **(32)** 16.03.20 **(33)** US
**(43)** 23.09.2021
**(44)** 01.08.2024
**(72)** FRID, Michael; PADMA-NATHAN, Harin; SEGIL, Helen; DEMENA, Nial C.
**(74)** Spruson & Ferguson

---

**(71)** Veltek Associates, Inc.
**(11)** AU-B-2022241501
**(21)** 2022241501 **(22)** 28.09.2022
**(54)** Deactivation wipe kit and method of forming and using the same
**(51)** Int. Cl.
***A47K 7/03*** ( 2006.01 )
***A61L 2/16*** ( 2006.01 )
***A61L 2/18*** ( 2006.01 )
***A61L 9/00*** ( 2006.01 )
***B65D 81/15*** ( 2006.01 )
***B65D 81/22*** ( 2006.01 )
***B65D 83/44*** ( 2006.01 )
***C11D 7/08*** ( 2006.01 )
**(43)** 27.10.2022
**(44)** 01.08.2024
**(62)** 2017251631
**(72)** Compo, Mark J.; Balestri, Michael
**(74)** FPA Patent Attorneys Pty Ltd

---

**(71)** Verdeloong Enterprises Pty Ltd
**(11)** AU-B-2018253475
**(21)** 2018253475 **(22)** 23.10.2018
**(54)** Method for producing an improved ductile iron alloy with pearlitic matrix
**(51)** Int. Cl.
***C21C 1/08*** ( 2006.01 )
***C21C 7/00*** ( 2006.01 )
***C22C 37/00*** ( 2006.01 )
**(31)** 2017904280 **(32)** 23.10.17 **(33)** AU
**(43)** 09.05.2019
**(44)** 01.08.2024
**(72)** Lagoon, Mathew; Lagoon, Colin
**(74)** FOUNDRY INTELLECTUAL PROPERTY PTY LTD

---

**(71)** V-Glass, Inc.
**(11)** AU-B-2020453185
**(21)** 2020453185 **(22)** 08.09.2020
**(54)** Two-stage hermetic seal and process of making same
**(51)** Int. Cl.
***C03C 27/08*** ( 2006.01 )
***C03C 27/10*** ( 2006.01 )
***E06B 3/66*** ( 2006.01 )
**(87)** WO2021/252000
**(31)** 63/038,102 **(32)** 11.06.20 **(33)** US
**(43)** 16.12.2021
**(44)** 01.08.2024
**(72)** PETIT, Peter
**(74)** AJ PARK

---

**(71)** Viking Therapeutics, Inc.
**(11)** AU-B-2019238090
**(21)** 2019238090 **(22)** 18.03.2019
**(54)** Crystalline forms and methods of producing crystalline forms of a compound
**(51)** Int. Cl.
***C07F 9/6571*** ( 2006.01 )
***A61K 31/683*** ( 2006.01 )
**(87)** WO2019/183004
**(31)** 62/646,540 **(32)** 22.03.18 **(33)** US
**(43)** 26.09.2019
**(44)** 01.08.2024
**(72)** LIAN, Brian; MASAMUNE, Hiroko; BARKER, Geoffrey
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** ViroPharma Biologics LLC
**(11)** AU-B-2019207717
**(21)** 2019207717 **(22)** 10.01.2019
**(54)** Stable corticosteroid compositions
**(51)** Int. Cl.
***A61K 31/573*** ( 2006.01 )
***A61K 9/107*** ( 2006.01 )
**(87)** WO2019/140032
**(31)** 62/616,213 **(32)** 11.01.18 **(33)** US
**(43)** 18.07.2019
**(44)** 01.08.2024
**(72)** KASINA, Ramalingeswar
**(74)** Spruson & Ferguson

---

**(71)** VIVORYON THERAPEUTICS N.V.
**(11)** AU-B-2022246405
**(21)** 2022246405 **(22)** 05.10.2022
**(54)** Novel inhibitors
**(51)** Int. Cl.
***C07D 403/12*** ( 2006.01 )
***A61P 25/00*** ( 2006.01 )
***A61P 35/00*** ( 2006.01 )
***A61P 37/00*** ( 2006.01 )
***C07D 235/06*** ( 2006.01 )
***C07D 249/08*** ( 2006.01 )
***C07D 285/135*** ( 2006.01 )
***C07D 401/04*** ( 2006.01 )
***C07D 401/12*** ( 2006.01 )
***C07D 417/04*** ( 2006.01 )
***C07D 417/12*** ( 2006.01 )
**(43)** 27.10.2022
**(44)** 01.08.2024
**(62)** 2018246382
**(72)** Heiser, Ulrich; Hoffmann, Torsten; Lues, Ingeborg; Meyer, Antje
**(74)** Griffith Hack

---

**(71)** VMI HOLLAND B.V.
**(11)** AU-B-2022297182
**(21)** 2022297182 **(22)** 22.06.2022
**(54)** METHOD AND PACKAGING DEVICE FOR PACKAGING DISCRETE MEDICAMENTS IN POUCHES
**(51)** Int. Cl.
***B65B 9/093*** ( 2012.01 )
***B65B 57/02*** ( 2006.01 )
***B65B 61/00*** ( 2006.01 )
***B65B 61/02*** ( 2006.01 )
***B65B 61/26*** ( 2006.01 )
**(87)** WO2022/271025
**(31)** 17/353,948 **(32)** 22.06.21 **(33)** US
**(43)** 29.12.2022
**(44)** 01.08.2024
**(72)** BRAKKEE, Martinus Johannes Donatus; VAN ROON, Peter; WIJNIA, Aalf; SPIJKERBOER, Henk Jan; JOCHEMSEN, Cornelis Jan; ROEST, Martijn
**(74)** Griffith Hack

---

**(71)** VODOPIANOV, I.M.
**(11)** AU-B-2018436895
**(21)** 2018436895 **(22)** 06.12.2018
**(54)** Stabilized hull of a monohull motor boat, which surfs on a water cushion and has a deeply submerged supporting blade
**(51)** Int. Cl.
***B63B 1/18*** ( 2006.01 )
***B63B 1/40*** ( 2006.01 )
***B63B 3/38*** ( 2006.01 )
***B63B 39/06*** ( 2006.01 )
**(87)** WO2020/035725
**(31)** RU2018129739 **(32)** 15.08.18 **(33)** RU
**(43)** 20.02.2020
**(44)** 01.08.2024
**(72)** VODOPIANOV, Ignat Mikhailovich
**(74)** Gareth Benson Lawyers & Associates

---

**(71)** W.M. Barr & Company, Inc.
**(11)** AU-B-2019257784
**(21)** 2019257784 **(22)** 26.04.2019
**(54)** Paint remover having reduced flammability
**(51)** Int. Cl.
***B08B 7/00*** ( 2006.01 )
***C09D 9/00*** ( 2006.01 )
***C09D 9/04*** ( 2006.01 )
***C11D 1/66*** ( 2006.01 )
***C11D 3/20*** ( 2006.01 )
***C11D 3/43*** ( 2006.01 )
***C11D 3/44*** ( 2006.01 )
***C11D 7/26*** ( 2006.01 )
***C11D 7/34*** ( 2006.01 )
***C11D 7/50*** ( 2006.01 )
**(87)** WO2019/210183
**(31)** 62/663,414 **(32)** 27.04.18 **(33)** US
16/394,457 25.04.19 US
**(43)** 31.10.2019
**(44)** 01.08.2024
**(72)** TEAGUE, Tim; PETKUS, Matthew Michael; SHIREMAN, Dennis Earl; BYRD, Alana
**(74)** KINGS PATENT & TRADE MARKS ATTORNEYS PTY LTD

---

**(71)** Wan, X.
**(11)** AU-B-2021326249
**(21)** 2021326249 **(22)** 11.10.2021
**(54)** Short radius, controllable track drilling tool and composite guiding and drilling tool
**(51)** Int. Cl.
***E21B 7/06*** ( 2006.01 )
***E21B 7/04*** ( 2006.01 )
**(87)** WO2022/033610
**(31)** 202010797032.4 **(32)** 10.08.20 **(33)** CN
202011358603.0 27.11.20 CN
202110814025.5 19.07.21 CN

## Applications Accepted - Name Index cont'd

**(43)** 17.02.2022
**(44)** 01.08.2024
**(72)** XU, Zichen; YANG, Zhonghua; WAN, Xiaoyue; ZHENG, Kai
**(74)** Remarkable IP

---

**(71)** Wave Swell Energy Limited
**(11)** AU-B-2022224873
**(21)** 2022224873 **(22)** 02.09.2022
**(54)** APPARATUS AND METHOD FOR EXTRACTING ENERGY FROM A FLUID
**(51)** Int. Cl.
***F03B 13/14*** ( 2006.01 )
***E02B 9/08*** ( 2006.01 )
***F03B 13/24*** ( 2006.01 )
***F03B 13/26*** ( 2006.01 )
***F03D 9/00*** ( 2016.01 )
**(43)** 29.09.2022
**(44)** 01.08.2024
**(62)** 2020204292
**(72)** DENNISS, Thomas
**(74)** Adams Pluck

---

**(71)** Weatherford Technology Holdings, LLC
**(11)** AU-B-2023202401
**(21)** 2023202401 **(22)** 19.04.2023
**(54)** SECTION MILL AND METHOD FOR ABANDONING A WELLBORE
**(51)** Int. Cl.
***E21B 29/00*** ( 2006.01 )
***E21B 29/10*** ( 2006.01 )
***E21B 43/11*** ( 2006.01 )
**(43)** 11.05.2023
**(44)** 01.08.2024
**(62)** 2021218198
**(72)** Antoine, Andrew; Brunnert, David J.; Bansal, Ram K.; Seguara, Richard; Bailey, Thomas
**(74)** IP GATEWAY PATENT & TRADE MARK ATTORNEYS PTY LTD

---

**Welch Allyn, Inc. see Baxter International Inc.**
**(21)** 2019309390

---

**(71)** WellGuard AS
**(11)** AU-B-2019211025
**(21)** 2019211025 **(22)** 25.01.2019
**(54)** A method for determining barrier and material quality behind multiple tubulars in a hydrocarbon wellbore
**(51)** Int. Cl.
***E21B 47/00*** ( 2012.01 )
***G01V 1/50*** ( 2006.01 )
**(87)** WO2019/147139
**(31)** 20180117 **(32)** 25.01.18 **(33)** NO
**(43)** 01.08.2019
**(44)** 01.08.2024
**(72)** ESPE, Eirik; NYHAVN, Fridtjof; JOHANSEN, Tonni Franke
**(74)** Davies Collison Cave Pty Ltd

---

**(71)** Well-SENSE Technology Limited
**(11)** AU-B-2019361315
**(21)** 2019361315 **(22)** 14.10.2019
**(54)** Optical communication system
**(51)** Int. Cl.
***E21B 47/12*** ( 2012.01 )
***G02B 6/42*** ( 2006.01 )
***H04B 10/25*** ( 2013.01 )
***H04B 10/43*** ( 2013.01 )
**(87)** WO2020/079410
**(31)** 1816984.7 **(32)** 18.10.18 **(33)** GB
**(43)** 23.04.2020
**(44)** 01.08.2024
**(72)** PURKIS, Daniel George
**(74)** Griffith Hack

---

**(71)** WESTFALIA-Automotive GmbH
**(11)** AU-B-2018371964
**(21)** 2018371964 **(22)** 22.11.2018
**(54)** Sensor device for a towing vehicle coupling
**(51)** Int. Cl.
***B60D 1/62*** ( 2006.01 )
***B60T 17/00*** ( 2006.01 )
***B62D 15/02*** ( 2006.01 )
***B62D 53/08*** ( 2006.01 )
**(87)** WO2019/101848
**(31)** 10 2017 127 744.7 **(32)** 23.11.17 **(33)** DE
10 2018 116 191.3 04.07.18 DE
**(43)** 31.05.2019
**(44)** 01.08.2024
**(72)** SIELHORST, Bernhard; RÖRING, Stefan
**(74)** FB Rice Pty Ltd

---

**(71)** Whistler Technologies Corp.
**(11)** AU-B-2022205205
**(21)** 2022205205 **(22)** 13.07.2022
**(54)** Terpene enrichment methods and systems
**(51)** Int. Cl.
***B01D 11/02*** ( 2006.01 )
***A61K 31/00*** ( 2006.01 )
***A61K 36/185*** ( 2006.01 )
**(43)** 04.08.2022
**(44)** 01.08.2024
**(62)** 2018360729
**(72)** LANTELA, Daniel Erik; KAMAL, Brishna Soraya; WONG, Kelvin Kin-Wing
**(74)** Dentons Patent Attorneys Australasia Limited

---

**(71)** WILHELM LAYHER VERWALTUNGS-GMBH
**(11)** AU-B-2021424267
**(21)** 2021424267 **(22)** 22.11.2021
**(54)** ARRANGEMENT OF SCAFFOLDING COMPONENTS
**(51)** Int. Cl.
***E04G 1/06*** ( 2006.01 )
***E04G 5/14*** ( 2006.01 )
***E04G 7/34*** ( 2006.01 )
**(87)** WO2022/161561
**(31)** 10 2021 101 768.8 **(32)** 27.01.21 **(33)** DE
**(43)** 04.08.2022
**(44)** 01.08.2024
**(72)** BEHRBOHM, Wolf Christian
**(74)** Griffith Hack

---

**(71)** Wisconsin Alumni Research Foundation
**(11)** AU-B-2017300361
**(21)** 2017300361 **(22)** 18.07.2017
**(54)** Radiohalogenated agents for In Situ Immune Modulated Cancer Vaccination
**(51)** Int. Cl.
***A61K 39/395*** ( 2006.01 )
***A61K 51/06*** ( 2006.01 )
**(87)** WO2018/017526
**(31)** 62/363,608 **(32)** 18.07.16 **(33)** US
**(43)** 25.01.2018
**(44)** 01.08.2024
**(72)** Weichert, Jamey; Sondel, Paul M.; Pinchuk, Anatoly; Morris, Zachary; Otto, Mario; Bednarz, Bryan
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Wisconsin Alumni Research Foundation
**(11)** AU-B-2017302539
**(21)** 2017302539 **(22)** 25.07.2017
**(54)** Targeted radiotherapy chelates for In Situ Immune Modulated Cancer Vaccination
**(51)** Int. Cl.
***A61K 39/395*** ( 2006.01 )
***A61K 51/06*** ( 2006.01 )
**(87)** WO2018/022571
**(31)** 62/366,340 **(32)** 25.07.16 **(33)** US
**(43)** 01.02.2018
**(44)** 01.08.2024
**(72)** Weichert, Jamey; Sondel, Paul M.; Pinchuk, Anatoly; Morris, Zachary; Otto, Mario; Bednarz, Bryan; Carlson, Peter
**(74)** Pizzeys Patent and Trade Mark Attorneys Pty Ltd

---

**(71)** Wonderland Switzerland AG
**(11)** AU-B-2021211194
**(21)** 2021211194 **(22)** 08.01.2021
**(54)** Support plate and carrycot
**(51)** Int. Cl.
***A47D 13/02*** ( 2006.01 )
***B62B 7/14*** ( 2006.01 )
**(87)** WO2021/148875
**(31)** 202010029526.8 **(32)** 10.01.20 **(33)** CN
**(43)** 29.07.2021
**(44)** 01.08.2024
**(72)** XIAO, Xiaohong; SHEN, Xianchen
**(74)** James & Wells Intellectual Property

---

**(71)** Woodstream Corporation
**(11)** AU-B-2018395944
**(21)** 2018395944 **(22)** 18.12.2018
**(54)** Electronic rodent trap with voltage booster circuit for improved trap performance over the life of the battery
**(51)** Int. Cl.
***A01M 23/38*** ( 2006.01 )
***A01M 19/00*** ( 2006.01 )
***A01M 23/12*** ( 2006.01 )
***A01M 31/00*** ( 2006.01 )
***G11C 5/14*** ( 2006.01 )
**(87)** WO2019/133340
**(31)** 62/610,374 **(32)** 26.12.17 **(33)** US
**(43)** 04.07.2019

## Applications Accepted - Name Index cont'd

**(44)** 01.08.2024
**(72)** WANNINGER, Daniel; MURPHY, Kevin
**(74)** Griffith Hack

---

**Wuthinitikornkit, C. see Wutthinitikornkit, Y.**
**(21)** 2018435428

---

**Wutthinitikornkit, S. see Wutthinitikornkit, Y.**
**(21)** 2018435428

---

**(71)** Wutthinitikornkit, Y.; Wutthinitikornkit, S.; Wuthinitikornkit, C.; Qiu, Y.
**(11)** AU-B-2018435428
**(21)** 2018435428 **(22)** 13.09.2018
**(54)** Process of improving the flavour and aroma of liquor
**(51)** Int. Cl.
***C12G 3/00*** ( 2019.01 )
***C12G 3/04*** ( 2019.01 )
**(87)** WO2020/026019
**(31)** 1801004535 **(32)** 01.08.18 **(33)** TH
**(43)** 06.02.2020
**(44)** 01.08.2024
**(72)** WUTTHINITIKORNKIT, Yanee; WUTTHINITIKORNKIT, Sookjai; WUTHINITIKORNKIT, Chaiyasit; QIU, Yongsheng
**(74)** Yanee WUTTHINITIKORNKIT

---

**(71)** X Development LLC
**(11)** AU-B-2022283648
**(21)** 2022283648 **(22)** 06.12.2022
**(54)** Hierarchical context in risk assessment using machine learning
**(51)** Int. Cl.
***G06T 7/00*** ( 2017.01 )
***G01C 21/04*** ( 2006.01 )
***G06N 3/02*** ( 2006.01 )
***G06N 20/00*** ( 2019.01 )
***G06V 10/70*** ( 2022.01 )
**(31)** 63/265,051 **(32)** 07.12.21 **(33)** US
**(43)** 22.06.2023
**(44)** 01.08.2024
**(72)** LI, Xin; GUPTA, Akshina; SINGARAJU, Nishanth; COWAN, Eliot Julien; COWAN, Avery Noam
**(74)** Spruson & Ferguson

---

**(71)** Xing Power Inc.
**(11)** AU-B-2022241474
**(21)** 2022241474 **(22)** 27.09.2022
**(54)** BATTERY MODULE AND BATTERY SYSTEM
**(51)** Int. Cl.
***H01M 10/6568*** ( 2014.01 )
***H01M 10/613*** ( 2014.01 )
***H01M 50/258*** ( 2021.01 )
***H01M 50/262*** ( 2021.01 )
**(31)** 63/250,846 **(32)** 30.09.21 **(33)** US
17/939,487 07.09.22 US
**(43)** 13.04.2023
**(44)** 01.08.2024
**(72)** HUANG, YU-CHIEH; TU, KAI-HSIANG; LEE, HUNG-CHI; HUANG, DE-SHIUAN; SU, KENG-TA
**(74)** LAMINAR IP PTY LTD

---

**Yale University see Regeneron Pharmaceuticals, Inc.**
**(21)** 2021286279

---

**YANGTZE RIVER PHARMACEUTICAL GROUP CO., LTD. see SHANGHAI HAIYAN PHARMACEUTICAL TECHNOLOGY CO., LTD.**
**(21)** 2022244941

---

**(71)** Yazaki Energy System Corporation
**(11)** AU-B-2021345075
**(21)** 2021345075 **(22)** 23.08.2021
**(54)** Heat-insulating window panel
**(51)** Int. Cl.
***E06B 3/263*** ( 2006.01 )
***E06B 3/58*** ( 2006.01 )
**(87)** WO2022/059432
**(31)** 2020-154296 **(32)** 15.09.20 **(33)** JP
**(43)** 24.03.2022
**(44)** 01.08.2024
**(72)** NAKAMURA Takuju
**(74)** Spruson & Ferguson

---

**Zelenak, A.J. see Data.world, Inc.**
**(21)** 2022218590

---

**(71)** ZEYRRO PTY LTD
**(11)** AU-B-2023284477
**(21)** 2023284477 **(22)** 09.06.2023
**(54)** AN APPLICATOR BOTTLE
**(51)** Int. Cl.
***A45D 34/04*** ( 2006.01 )
***A45D 33/02*** ( 2006.01 )
***A45D 40/26*** ( 2006.01 )
***B65D 21/02*** ( 2006.01 )
***B65D 51/32*** ( 2006.01 )
**(87)** WO2023/235931
**(31)** 2022901593 **(32)** 10.06.22 **(33)** AU
**(43)** 14.12.2023
**(44)** 01.08.2024
**(72)** MARTINEZZO, John
**(74)** Patentec Patent Attorneys

---

**(71)** Zhuzhou CRRC Times Electric Co., Ltd
**(11)** AU-B-2018379888
**(21)** 2018379888 **(22)** 13.09.2018
**(54)** Electrical transmission method and system for off-road vehicle
**(51)** Int. Cl.
***B60L 5/18*** ( 2006.01 )
**(87)** WO2019/109702
**(31)** 201711277435.0 **(32)** 06.12.17 **(33)** CN
**(43)** 13.06.2019
**(44)** 01.08.2024
**(72)** LIANG, Jincheng; HU, Jiaxi; LAN, Deshao; LIU, Huirong; HE, Yaping; ZHANG, Wenjing; LIU, Meng; HU, Xian; TANG, Xunlu; GAO, Yongtao
**(74)** Michael Buck IP

---

**(71)** Zimmer, Inc.
**(11)** AU-B-2023206091
**(21)** 2023206091 **(22)** 18.07.2023
**(54)** LINEAR ELECTRIC SURGICAL HAMMER IMPACT TOOL
**(51)** Int. Cl.
***A61B 17/92*** ( 2006.01 )
***A61B 17/16*** ( 2006.01 )
***A61F 2/46*** ( 2006.01 )
***B23D 43/00*** ( 2006.01 )
***B25D 11/00*** ( 2006.01 )
***B25D 17/00*** ( 2006.01 )
**(31)** 63/390,354 **(32)** 19.07.22 **(33)** US
63/450,316 06.03.23 US
**(43)** 08.02.2024
**(44)** 01.08.2024
**(72)** Slocum, Alexander; Goyal, Nitin; Dittrich, Joshua; Singer, Neil
**(74)** PHILLIPS ORMONDE FITZPATRICK

**Numerical Index**

## Applications Accepted - Numerical Index cont'd

**2018389608** Aperture in Motion, LLC
**2018390178** INNOVARIUS CORP.
**2018391507** Schülke & Mayr GmbH
**2018395944** Woodstream Corporation
**2018426428** Prysmian S.p.A.
**2018435428** Wutthinitikornkit, Y.; Wutthinitikornkit, S.; Wuthinitikornkit, C.; Qiu, Y.
**2018436323** Guangdong OPPO Mobile Telecommunications Corp.,Ltd.
**2018436718** GUANGDONG OPPO MOBILE TELECOMMUNICATIONS CORP.,LTD.
**2018436895** VODOPIANOV, I.M.
**2018438001** Rovi Guides, Inc.
**2018449821** HungaroControl Zrt.
**2019201442** Medos International Sarl
**2019202329** Simol S.p.A.
**2019204136** Johnson & Johnson Consumer Inc.
**2019204274** ABUS August Bremicker Söhne KG
**2019204453** Geberit International AG
**2019205117** GW Research Limited
**2019205118** GW Research Limited
**2019205192** Ferring B.V.
**2019207717** ViroPharma Biologics LLC
**2019208166** Bioprojet
**2019208987** Freia Offshore AB
**2019210723** Automated Rig Technologies Ltd.
**2019211025** WellGuard AS
**2019213498** GrainSense Oy
**2019213837** Valmont Industries, Inc.
**2019214891** Apnimed, Inc. (Delaware)
**2019217590** Karl Leibinger Medizintechnik GmbH & Co. KG.
**2019217905** Cargill, Incorporated
**2019220437** Damen 40 B.V.
**2019221837** Memorial Sloan-Kettering Cancer Center; Tri-Institutional Therapeutics Discovery Institute, Inc.
**2019222736** Lumos Pharma, Inc.
**2019223434** Fidia Farmaceutici S.p.A.
**2019225473** Sheldon, B.
**2019225764** Depuy Ireland Unlimited Company
**2019226049** Termotera Ltd.
**2019227498** Genomics PLC
**2019227733** Amazentis SA
**2019228634** DJ Therapeutics LLC
**2019230645** Sofi Filtration Oy
**2019231115** GeoOptics, Inc.
**2019231209** Amsted Rail Company, Inc.
**2019231708** Bitterly, S.
**2019234185** Jubilant Prodel LLC.
**2019234562** Pioneer Hi-Bred International, Inc.
**2019234759** Biogen MA Inc.
**2019234899** Otsuka Pharmaceutical Factory, Inc.
**2019236297** The United States of America, as represented by the Secretary, Department of Health & Human Services
**2019236304** Avent Investment, LLC
**2019236697** Miyakoshi Printing Machinery Co., Ltd.
**2019238090** Viking Therapeutics, Inc.
**2019242468** Fujitsu General Limited
**2019243544** Metso Brasil Indústria e Comércio Ltda.
**2019243667** Equinor Energy AS
**2019245514** Kazuar Advanced Technologies Ltd.
**2019250243** Kao Germany GmbH
**2019250263** The Boeing Company
**2019250980** Nanopharmaceuticals, LLC
**2019251316** Alcon Inc.
**2019252471** Henkel AG & Co. KGaA
**2019253712** PRC-DeSoto International, Inc.
**2019255206** Icahn School of Medicine at Mount Sinai
**2019257784** W.M. Barr & Company, Inc.
**2019260125** Amadeus S.A.S.
**2019262189** L.E.A.F. Holdings Group LLC
**2019262624** Genzyme Corporation
**2019263233** The United States of America, as Represented by The Secretary, Department of Health and Human Services
**2019263969** ORPHALAN
**2019264109** Engineering Services Rotorua Limited
**2019268743** Vale S.A.; Universidade Federal do Rio de Janeiro - UFRJ
**2019269815** Jiangsu Hansoh Pharmaceutical Group Co., Ltd.
**2019270779** Foundry Therapeutics, Inc.
**2019274523** Becton, Dickinson and Company
**2019276041** Depuy Ireland Unlimited Company
**2019280585** Caterpillar Inc.
**2019280606** EuroChem Agro GmbH
**2019285846** H2GO Power Ltd
**2019286055** HatchTech Group B.V.
**2019286658** oramed Ltd.
**2019287313** Otsuka Pharmaceutical Co., Ltd.
**2019288275** Epigen Biosciences, Inc.
**2019289563** SynAct Pharma ApS
**2019290532** Compañía Electro Metalúrgica S.A.
**2019290533** Becton Dickinson and Company Limited
**2019293389** Soilmec S.p.A.
**2019294292** FP BUSINESS INVEST
**2019294497** Dentsply Sirona Inc.
**2019294827** Dialight Corporation
**2019298240** Dolby Laboratories Licensing Corporation; Dolby International AB
**2019300503** Alcon Inc.
**2019301234** McNeil AB
**2019302312** Beijing Tusen Zhitu Technology Co., Ltd.
**2019302646** Capital One Services, LLC
**2019302997** AZAD Pharma AG
**2019303727** Myosa Pty Ltd
**2019305122** Precision Planting LLC
**2019306766** NPL Management Limited
**2019308833** Shamir Optical Industry Ltd.
**2019309390** Baxter International Inc.; Baxter Healthcare SA; Welch Allyn, Inc.
**2019311848** Johnson & Johnson Surgical Vision, Inc.
**2019312205** Avent, Inc.
**2019313622** Panasonic Intellectual Property Corporation of America
**2019314054** LG Electronics Inc.
**2019314696** Biorem Engineering SA
**2019316523** Husqvarna AB
**2019321069** Binding Solutions Ltd
**2019321096** Bermad CS Ltd.
**2019321827** The Boots Company PLC
**2019324575** SANDVIK MINING AND CONSTRUCTION TOOLS AB; SANDVIK MINING AND CONSTRUCTION AUSTRALIA (PRODUCTION/SUPPLY) PTY LTD
**2019329455** Sekisui House, Ltd.
**2019333935** SmileSonica Inc.
**2019340235** Universal Field Robots Pty Ltd.
**2019342090** International Refills Company Ltd.
**2019343453** Hilti Aktiengesellschaft
**2019346601** Shearwater GeoServices Software Inc.
**2019346652** Align Technology, Inc.
**2019350313** Dai Nippon Printing Co., Ltd.
**2019361315** Well-SENSE Technology Limited
**2019362582** Vecor IP Holdings Limited
**2019369423** MJNN LLC
**2019378091** Southern Cross Patents Pty Ltd
**2019378143** Great North Research And Innovation Ltd
**2019382292** Exhalation Technology Limited
**2019387079** Amgen Inc.
**2019390284** Cisco Technology, Inc.
**2019391777** Netflix, Inc.
**2019396833** Leica Biosystems Melbourne Pty Ltd
**2019404614** Leica Biosystems Melbourne Pty Ltd
**2019410073** F. HOFFMANN-LA ROCHE AG
**2019411787** NEC Platforms, Ltd.
**2019415587** Qingdao KingAgroot Chemical Compound Co., Ltd.
**2019426844** Horton, Inc.

## Applications Accepted - Numerical Index cont'd

**2020201917** McCain Foods Limited
**2020222888** Ultima Genomics, Inc.
**2020228247** Korea Food Research Institute
**2020232982** Seed Terminator Holdings Pty Ltd
**2020254682** Lynn, N.
**2020264786** Nexter Systems
**2020265889** PARTING STONE, INC.
**2020268686** Junction7 Limited
**2020276510** Peg-Bio Biopharm Co., Ltd. (Chongqing); Hangzhou Grand Biologic Pharmaceutical Inc.
**2020277143** GENENTECH, INC.
**2020282488** China Agricultural University
**2020282974** CompoSecure, LLC
**2020283299** Taiho Pharmaceutical Co., Ltd.
**2020294247** Kymab Limited
**2020311281** Raytheon Company
**2020315758** Donaghys Limited
**2020318823** Raytheon Company
**2020318991** Taylor-Listug, Inc. D/B/A Taylor Guitars
**2020322972** Qingdao KingAgroot Chemical Compound Co., Ltd.
**2020323961** Institute of Geochemistry, Chinese Academy of Sciences
**2020327561** Umicore
**2020329466** I-Mab Biopharma Co., Ltd.; ABL Bio Inc.
**2020336075** Graphic Packaging International, LLC
**2020342613** Expro North Sea Limited
**2020345562** USG Interiors, LLC
**2020348603** Raytheon Company
**2020375409** LG Electronics Inc.
**2020383668** Bambino Prezioso Switzerland AG
**2020389657** Chongqing Upgra Biotechnology Co., Ltd.
**2020391929** Lufthansa Technik AG
**2020396809** Camso Inc.
**2020405885** POSCO; Research Institute of Industrial Science & Technology
**2020413555** Adlai Nortye Biopharma Co., Ltd.
**2020418450** Inventio AG
**2020420734** Qingdao Kingagroot Chemical Compound Co., Ltd.
**2020429125** Longi Green Energy Technology Co., Ltd.
**2020437843** Nippon Telegraph and Telephone Corporation
**2020437977** Nippon Telegraph and Telephone Corporation
**2020452061** ABB Schweiz AG
**2020453185** V-Glass, Inc.
**2020467086** Daewoong Pharmaceutical Co., Ltd.
**2020472452** SABERT (ZHONGSHAN) LIMITED
**2020477490** NOOTER/ERIKSEN, INC.
**2021200127** President and Fellows of Harvard College
**2021200190** Janssen Biotech, Inc.
**2021200281** AGENUS INC.; LUDWIG INSTITUTE FOR CANCER RESEARCH LTD; MEMORIAL SLOAN KETTERING CANCER CENTER
**2021200984** Merck Sharp & Dohme LLC; Merck Sharp & Dohme B.V.
**2021200988** Genzyme Corporation
**2021201640** Ablynx NV
**2021201833** indurad GmbH
**2021202279** Kunming University of Science and Technology
**2021202912** Bioverativ Therapeutics Inc.
**2021207155** Northwest University
**2021207400** Axon Enterprise, Inc.
**2021211194** Wonderland Switzerland AG
**2021215985** Boston Scientific Scimed, Inc.
**2021221995** Praxair Technology, Inc.
**2021224972** Eberhard Karls Universitaet Tuebingen Medizinische Fakultaet
**2021229576** Inventio AG
**2021231211** Bambino Prezioso Switzerland AG
**2021232560** Ocado Innovation Limited
**2021232606** StubHub, Inc.
**2021237991** Omachron Intellectual Property Inc.
**2021238290** Vella Bioscience, Inc.
**2021239843** Digital Diagnostics Inc.
**2021240792** Ledlenser GmbH & Co. KG
**2021241498** Hazan, S.
**2021250987** Institut Curie; INSERM (Institut National de la Sante et de la Recherche Medicale)
**2021253684** Thales DIS France SAS
**2021253692** The Gillette Company LLC
**2021255118** Ocado Innovation Limited
**2021260175** Balsam International Unlimited Company
**2021262336** Shaanxi Giant Biotechnology Co., Ltd
**2021266857** STAEDTLER SE
**2021273624** President and Fellows of Harvard College
**2021281120** Quixotic Labs Inc.
**2021286279** Regeneron Pharmaceuticals, Inc.; Yale University; Institute for Research in Biomedicine (IRB)
**2021287706** JCM American Corporation
**2021290482** Suzhou Reveda Medical Biotech Co., Ltd.
**2021291265** China Mobile Communication Co., Ltd Research Institute; China Mobile Communications Group Co., Ltd.
**2021294859** International Business Machines Corporation
**2021294863** BURG LÜLING GMBH & CO. KG; USM U. Schärer Söhne AG
**2021299304** PureWick Corporation
**2021301112** Kinamed, Inc.
**2021301912** LG Electronics Inc.
**2021304894** Melos GmbH
**2021305753** Huawei Technologies Co., Ltd.
**2021308709** Baker Hughes Oilfield Operations LLC
**2021317263** Karnak Technologies, LLC
**2021318678** Sekisui House, Ltd.
**2021319660** Huawei Technologies Co., Ltd.
**2021321201** Micro Motion, Inc.
**2021321476** Sato Holdings Kabushiki Kaisha
**2021321730** Huawei Technologies Co., Ltd.
**2021326249** Wan, X.
**2021327342** Nippon Steel Corporation; Vallourec Oil and Gas France
**2021336228** Boston Scientific Scimed, Inc.
**2021336768** Colgate-Palmolive Company
**2021339955** EuroChem Antwerpen
**2021343158** CHONGQING HAIER REFRIGERATION ELECTRIC APPLIANCE CO., LTD.; QINGDAO HAIER REFRIGERATOR CO., LTD.; HAIER SMART HOME CO., LTD.
**2021345075** Yazaki Energy System Corporation
**2021349067** Beijing Roborock Technology Co., Ltd.
**2021349420** TELEFONAKTIEBOLAGET LM ERICSSON (PUBL)
**2021358855** FUTURE MOTION, INC.
**2021359279** Suzhou Basecare Medical Device Co., Ltd.
**2021359790** SHANDONG UNIVERSITY; SHANDONG HI-SPEED GROUP CO., LTD.
**2021360150** SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B.V.
**2021361368** Komatsu Ltd.
**2021365222** NUCTECH COMPANY LIMITED; TSINGHUA UNIVERSITY
**2021365910** FUJIKURA LTD.
**2021366961** PRECAST PERMEABLE CONCRETE AUSTRALIA PTY LTD
**2021371164** COMPOSECURE, LLC
**2021372249** KASEYA US LLC
**2021372646** INFLOWCONTROL AS
**2021374066** NICOVENTURES TRADING LIMITED
**2021374831** LTS LOHMANN THERAPIE-SYSTEME AG
**2021376367** ELI LILLY AND COMPANY
**2021377247** MOOG INC.
**2021379629** Rifeng Enterprise (Foshan) Co., Ltd; Rifeng Enterprise Group Co., Ltd; Rifeng Technology Co., Ltd
**2021382158** MIND MEDICINE, INC.
**2021387072** LONGI GREEN ENERGY TECHNOLOGY CO., LTD.
**2021392776** NUOVO PIGNONE TECNOLOGIE - S.R.L.
**2021395262** KNORR-BREMSE SYSTEME FÜR SCHIENENFAHRZEUGE GMBH

## Applications Accepted - Numerical Index cont'd

**2021395683** INTERNATIONAL BUSINESS MACHINES CORPORATION
**2021416031** CHINA MOBILE COMMUNICATION CO., LTD RESEARCH INSTITUTE; CHINA MOBILE COMMUNICATIONS GROUP CO., LTD.
**2021424076** SAMSUNG ELECTRONICS CO., LTD.
**2021424267** WILHELM LAYHER VERWALTUNGS-GMBH
**2021429319** CRRC Qiqihar Rolling Stock Co., Ltd.
**2021429593** Jiangsu Shemar Electric Co., Ltd.
**2021429765** Jiangsu Shemar Electric Co., Ltd.
**2021433515** GUANGZHOU OCUSUN OPHTHALMIC BIOTECHNOLOGY CO., LTD.
**2021446393** INNOMOTICS GMBH
**2021451294** OPSEL PTY LTD
**2021459856** CHIYODA CORPORATION; KYOTO UNIVERSITY
**2022200132** Shaanxi YuanGuang Hi-tech Co.,Ltd.
**2022200142** Merck Sharp & Dohme LLC
**2022201304** Dyno Nobel Inc
**2022202200** Aristocrat Technologies Australia Pty Limited
**2022202276** CamelBak Products, LLC
**2022202829** Steering Solutions IP Holding Corporation
**2022203098** The United States of America, as Represented by the Secretary, Department of Health & Human Services
**2022203110** The Trustees of The University of Pennsylvania
**2022203118** Inkerz Pty Ltd
**2022203344** Entellus Medical, Inc.
**2022203494** 4D Molecular Therapeutics Inc.
**2022204001** Algesacooling Pty Ltd
**2022204492** Canva Pty Ltd
**2022204532** FMC Corporation
**2022204657** University of Maryland, Baltimore
**2022205131** Simon Fraser University
**2022205204** The University of Sydney
**2022205205** Whistler Technologies Corp.
**2022206794** Theia Group, Incorporated
**2022206819** Canva Pty Ltd
**2022208119** HANGZHOU AGS MEDTECH CO., LTD.
**2022209109** NUOVO PIGNONE TECNOLOGIE - S.R.L.
**2022209271** The United States of America, as represented by the Secretary, Department of Health and Human Service; Kite Pharma, Inc.
**2022209306** Canva Pty Ltd
**2022211357** PUREWICK CORPORATION
**2022211909** Balance Ophthalmics, Inc.
**2022212145** TELEFONAKTIEBOLAGET LM ERICSSON (PUBL)
**2022215155** Novartis AG
**2022215201** UOP LLC
**2022215955** OCTOPUS ENERGY HEATING LIMITED
**2022216473** ARKEMA FRANCE
**2022216534** OCTOPUS ENERGY HEATING LIMITED
**2022218457** APR Co., Ltd.
**2022218590** Data.world, Inc.; Jacob, B.K.; Loyens, J.; Griffith, D.L.; Hurt, B.A.; Le, T.M.; Reynolds, S.W.; Keen, A.A.; Boutros, J.; Zelenak, A.J.
**2022219979** NETFLIX, INC.
**2022221405** Janssen Pharmaceutica NV
**2022224870** B. Braun Medical Inc.
**2022224873** Wave Swell Energy Limited
**2022228194** ADAMA Makhteshim Ltd.
**2022228201** B1 INSTITUTE OF IMAGE TECHNOLOGY, INC.
**2022231694** Tissuegen, Inc.
**2022235607** Nordic Minesteel Technologies Inc.
**2022241474** Xing Power Inc.
**2022241501** Veltek Associates, Inc.
**2022241537** Unison Industries, LLC
**2022241554** CNH Industrial America LLC
**2022244941** SHANGHAI HAIYAN PHARMACEUTICAL TECHNOLOGY CO., LTD.; YANGTZE RIVER PHARMACEUTICAL GROUP CO., LTD.
**2022246405** VIVORYON THERAPEUTICS N.V.
**2022246408** Canva Pty Ltd
**2022246415** Gomboc, LLC
**2022252844** GIANT MANUFACTURING CO., LTD.
**2022256090** University of Leicester; Omeros Corporation
**2022261838** GOOGLE LLC
**2022263410** GILEAD SCIENCES, INC.
**2022263508** Disney Enterprises, Inc.; ETH Zürich (Eidgenössische Technische Hochschule Zürich)
**2022264769** GOOGLE LLC
**2022264861** ANDRITZ HYDRO GMBH
**2022266617** E INK CORPORATION
**2022270686** CONOCOPHILLIPS COMPANY
**2022271442** Schlage Lock Company LLC
**2022272224** Hanwha Corporation
**2022275470** OrsoBio, Inc.
**2022275472** Mitsubishi Power, Ltd.
**2022275538** Incyte Holdings Corporation
**2022277557** MARIUS PHARMACEUTICALS LLC
**2022283648** X Development LLC
**2022286923** HONOR SYSTEMS LLC
**2022287557** i-SENS, Inc.
**2022287562** Merck Sharp & Dohme LLC
**2022291434** nChain Holdings Limited
**2022291503** Season Bright (Cambodia) Electronic Lighting Co., Ltd
**2022291504** INCYTE HOLDINGS CORPORATION
**2022291666** Anhui University of Science and Technology; China University of Mining and Technology
**2022292104** DEEPMIND TECHNOLOGIES LIMITED
**2022297107** CHUGAI SEIYAKU KABUSHIKI KAISHA; OSAKA UNIVERSITY
**2022297182** VMI HOLLAND B.V.
**2022299062** UMICORE; UNIVERSITEIT GENT
**2022305655** Hanwha Corporation
**2022307875** SHIH, C.
**2022315518** I4F LICENSING NV
**2022330246** USTAV ORGANICKE CHEMIE A BIOCHEMIE AV CR, V. V. I.
**2022331906** Tongwei Solar (Meishan) Co., Ltd.
**2022335810** DAIKIN INDUSTRIES, LTD.
**2022368661** MIDWEST INNOVATIVE PRODUCTS, LLC
**2022383821** NINGBO INSTITUTE OF MATERIALS TECHNOLOGY AND ENGINEERING, CHINESE ACADEMY OF SCIENCES
**2022386086** ELC MANAGEMENT LLC
**2022388905** ELECTRIC POWER RESEARCH INSTITUTE OF YUNNAN POWER GRID CO., LTD
**2023200021** Apple Inc.
**2023200219** AFL Telecommunications LLC
**2023200280** Becton, Dickinson and Company
**2023200415** KABUSHIKI KAISHA TOSHIBA; TOSHIBA ENERGY SYSTEMS & SOLUTIONS CORPORATION
**2023200555** Next2Sun GmbH
**2023200643** Getac Technology Corporation
**2023201064** Aspen Aerogels, Inc.
**2023201077** Apple Inc.
**2023201543** Samsung Electronics Co., Ltd.
**2023201871** Google LLC
**2023201892** Memphasys Limited
**2023201910** Impulse Downhole Solutions Ltd.
**2023202074** Schneider Electric Industries SAS
**2023202401** Weatherford Technology Holdings, LLC
**2023202428** GUANGDONG OPPO MOBILE TELECOMMUNICATIONS CORP., LTD.
**2023202521** Bell Identification BV
**2023202587** Fraser, M.A.
**2023202653** Tencent America LLC
**2023202689** Bodor Laboratories, Inc.
**2023202798** Lin, C.
**2023202814** CMBlu Energy AG
**2023202872** Einhell Germany AG
**2023203349** The Texas A & M University System
**2023203352** Seeley International Pty Ltd; FF Seeley Nominees Pty Ltd
**2023203750** Milwaukee Electric Tool Corporation; Griffith Hack

## Applications Accepted - Numerical Index cont'd

| | |
|---|---|
| **2023203799** | OHFG TECHNOLOGIES (SHANGHAI) CO., LTD |
| **2023203862** | GEMA S.r.l. |
| **2023203863** | GEMA S.r.l. |
| **2023203996** | Alpha Tau Medical Ltd. |
| **2023204280** | ADVANCED LITHIUM ELECTROCHEMISTRY CO., LTD. |
| **2023204324** | Giant Manufacturing Co., Ltd. |
| **2023206075** | Lashify, Inc. |
| **2023206077** | SASCO Australia Pty Ltd |
| **2023206091** | Zimmer, Inc. |
| **2023206113** | Limacorporate S.p.A. |
| **2023208144** | FUNCTION (QINGDAO) MARINE TECHNOLOGY CO., LTD. |
| **2023208218** | Guangdong Neat Packaging Co., LTD. |
| **2023214339** | Abiomed, Inc. |
| **2023214347** | Oscor, Inc.; Abiomed, Inc. |
| **2023219831** | RESC, LTD. |
| **2023222852** | Match Group, LLC |
| **2023237151** | Netflix, Inc. |
| **2023241265** | Geobrugg AG |
| **2023254881** | Samsung Electronics Co., Ltd. |
| **2023258451** | HANSHOW TECHNOLOGY CO., LTD. |
| **2023263516** | Netflix, Inc. |
| **2023282284** | Apple Inc. |
| **2023284477** | ZEYRRO PTY LTD |
| **2023286024** | Deciphera Pharmaceuticals, LLC |
| **2023290599** | COOPERVISION INTERNATIONAL LIMITED |
| **2023336075** | SHANDONG WEIFANG RAINBOW CHEMICAL CO., LTD |
| **2023375284** | SAS INSTITUTE INC. |
| **2024201690** | Dolby Laboratories Licensing Corporation |
| **2024202878** | DRAEGER SAFETY AG & CO. KGAA |
| **2024203482** | Kao, H. |
| **2024203744** | Ultima Genomics, Inc. |

**IPC Index**

## Applications Accepted - IPC Index cont'd

**A61F 9 /-**

2018385484
2022203098
2022211909

**A61G 17 /-**

2020265889

**A61G 99 /-**

2020265889

**A61H 23 /-**

2022218457

**A61H 39 /-**

2022200132

**A61J 1 /-**

2018368000
2019290533

**A61J 3 /-**

2022224870

**A61K 31 /-**

2017261357
2017286561
2018253948
2018277095
2018287319
2018296678
2018301829
2018304373
2018309342
2018309667
2018325148
2019204136
2019205117
2019205118
2019207717
2019208166
2019214891
2019222736
2019228634
2019234759
2019234899
2019238090
2019250980
2019255206
2019262189
2019263969
2019269815
2019270779
2019287313
2019289563
2019301234
2019311848
2020277143
2020283299
2020315758
2020413555
2021200988
2021238290
2021241498
2021317263
2021374831
2021376367
2021433515
2022205204
2022205205
2022209271
2022221405
2022244941
2022263410
2022275538
2022277557
2022287562
2022291504
2022307875
2022330246
2023202689
2023203349
2023286024

**A61K 33 /-**

2019234899
2019302997
2020315758
2022200132
2023203996

**A61K 35 /-**

2016318773
2016377166
2017277396
2017287987
2017287988
2018207649
2018228352
2018246333
2019311848
2020228247
2022200132
2022203494
2023201892

**A61K 36 /-**

2018309342
2019311848
2020477490
2021241498
2022205205

**A61K 38 /-**

2017271606
2017336249
2018213044
2018347514
2019222736
2019255206
2019286658
2020276510
2021202912
2022231694

**A61K 39 /-**

2017261357
2017271606
2017273959
2017274444
2017277396
2017286561
2017290709
2017294276
2017299673
2017300361
2017302539
2017317227
2017345203
2017345786
2018204986
2018212887
2018237549
2018279184
2020277143
2020283299
2020294247
2020329466
2021200190
2021200281
2022200142
2022256090
2022297107

**A61K 45 /-**

2017290709
2018253948
2018277095
2019214891
2020277143
2020283299
2020389657
2022256090
2022297107
2023286024

**A61K 47 /-**

2017261357
2017336249
2018253948
2018296678
2019234899
2019262189
2019269815
2019287313
2020276510
2020315758
2020389657
2021238290
2021374831
2021382158
2021433515
2022277557

**A61K 48 /-**

2021200988
2021273624

**A61K 49 /-**

2021286279

**A61K 51 /-**

2017300361
2017302539
2023203996

**A61K 8 /-**

2018309342
2018313859
2019204136
2019250243
2019321827
2020477490
2021336768
2022386086
2023202689

**A61K 9 /-**

2017261357
2017336249
2018212887
2018277095
2018296678
2018304373
2018309667
2018325148
2018347514
2019205117
2019205118
2019205192
2019207717
2019234899
2019269815
2019270779
2019286658
2019287313
2019301234
2020315758
2021200127
2021238290
2021317263
2021374831
2021433515
2022200132
2022203494
2022215155
2022221405
2022231694

**A61L 15 /-**

2019223434

**A61L 2 /-**

2021224972
2022241501

**A61L 27 /-**

2018203875
2019270779
2021262336

**A61L 9 /-**

2022241501

**A61M 1 /-**

2017437176
2018361950
2018389608

**A61M 11 /-**

2018304851

**A61M 16 /-**

2021451294

**A61M 25 /-**

2018383108
2022203344
2023214347

**A61M 29 /-**

2022203344

**A61M 5 /-**

2023200280

**A61M 60 /-**

2018316543
2023214339

**A61N 1 /-**

2018366155
2018390178
2019236304
2022218457

**A61N 5 /-**

2019204136
2022200132
2022218457
2023203996

**A61N 7 /-**

2018390178
2019204136

**A61P 1 /-**

2018309667
2018347514
2019222736
2019263969
2020228247
2022263410
2022275470

**A61P 11 /-**

2017273959
2019214891

**A61P 13 /-**

2017287988
2018347514
2019289563
2020276510

**A61P 17 /-**

2018309342
2019204136
2022275538

**A61P 19 /-**

2017287987
2020276510

**A61P 23 /-**

2019270779

**A61P 25 /-**

2018287319
2019208166
2019214891
2019234759
2019263969
2019270779
2021382158
2022221405
2022246405

**A61P 27 /-**

2019311848
2021433515

**A61P 29 /-**

2019270779
2021374831
2021433515
2022287562

**A61P 3 /-**

2019234899
2020228247
2022263410

**A61P 31 /-**

2016377166
2018228352
2019287313
2019302997

**A61P 33 /-**

2020315758

**A61P 35 /-**

2016318773
2017261357
2017273959
2017294276
2017299673
2017317227
2017345203
2018212887
2018237549
2018253948
2019234185
2019250980
2019269815
2019410073
2020277143
2020329466
2020389657
2021376367
2022205204
2022244941
2022246405
2022275538
2022291504
2022297107
2022330246
2023203996
2023286024

**A61P 37 /-**

2017317227

## Applications Accepted - IPC Index cont'd

2020413555
2022246405
2022275538

**A61P 43 /-**

2019263969
2020283299
2022297107
2023202689

**A61P 5 /-**

2022277557

**A61P 7 /-**

2017287988

**A61P 9 /-**

2017273959

**A61Q 11 /-**

2021336768

**A61Q 19 /-**

2019204136
2019321827
2022386086

**A61Q 5 /-**

2019250243

**A63B 21 /-**

2023203799

**A63B 69 /-**

2018323631

**A63C 17 /-**

2021358855

**B01D 1 /-**

2019231708

**B01D 11 /-**

2022205205

**B01D 15 /-**

2022215201

**B01D 29 /-**

2018366953

**B01D 3 /-**

2019231708
2022215201

**B01D 35 /-**

2018366953

**B01D 53 /-**

2019226049
2023202798

**B01D 57 /-**

2023201892

**B01D 65 /-**

2019230645

**B01F 23 /-**

2018333031

**B01L 3 /-**

2019396833

**B02C 17 /-**

2019290532

**B03D 1 /-**

2022216473

**B05B 1 /-**

2018226382
2018304851

**B05B 11 /-**

2023208218

**B05B 7 /-**

2021301112

**B05C 3 /-**

2019396833

**B07B 4 /-**

2019362582

**B07B 9 /-**

2019362582

**B08B 7 /-**

2019257784

**B09B 3 /-**

2020265889
2021202279

**B21D 41 /-**

2021379629

**B23D 43 /-**

2023206091

**B23D 45 /-**

2019316523

**B25B 9 /-**

2023206075

**B25C 1 /-**

2018336626
2018367395

**B25D 11 /-**

2023206091

**B25D 17 /-**

2023206091

**B25F 5 /-**

2023202872

**B25H 3 /-**

2022368661

**B25J 5 /-**

2019340235

**B25J 9 /-**

2019340235

**B26D 1 /-**

2020201917

**B26D 3 /-**

2020201917

**B28B 11 /-**

2022270686

**B28B 13 /-**

2022270686

**B28C 7 /-**

2017436163

**B29C 35 /-**

2018349085

**B29C 51 /-**

2017202923

**B29C 57 /-**

2021379629

**B29C 64 /-**

2019253712

**B29C 65 /-**

2023214347

**B32B 27 /-**

2018369233
2019350313

**B32B 3 /-**

2018387007

**B32B 37 /-**

2018387007

**B32B 5 /-**

2018387007

**B32B 7 /-**

2018387007
2019350313

**B42D 25 /-**

2021253684

**B60B 1 /-**

2021232560

**B60B 9 /-**

2021232560

**B60C 7 /-**

2020396809

**B60C 99 /-**

2020396809

**B60D 1 /-**

2018371964
2019202329

**B60G 17 /-**

2023204324

**B60J 5 /-**

2023203862
2023203863

**B60K 35 /-**

2020396809

**B60L 5 /-**

2018379888

**B60L 53 /-**

2023219831

**B60L 58 /-**

2023219831

**B60N 2 /-**

2020383668
2021231211

**B60P 1 /-**

2018214140

**B60R 21 /-**

2021231211
2023203862
2023203863

**B60R 22 /-**

2020383668

**B60R 25 /-**

2023200021

**B60S 5 /-**

2020396809

**B60S 9 /-**

2019202329

**B60T 1 /-**

2021395262

**B60T 17 /-**

2018371964
2021395262

**B60W 40 /-**

2018203881

**B61B 1 /-**

2017431376

**B61B 13 /-**

2017431376

**B61D 19 /-**

2017431376

**B61D 3 /-**

2021429319

**B61F 1 /-**

2021429319

**B61F 5 /-**

2019231209

**B61H 1 /-**

2021395262

**B61H 13 /-**

2021395262

**B62B 7 /-**

2021211194

**B62D 15 /-**

2018371964

**B62D 33 /-**

2023203862
2023203863

**B62D 53 /-**

2018371964

**B62D 55 /-**

2018261457

**B62K 11 /-**

2021358855

**B62K 23 /-**

2022252844

**B62K 25 /-**

2023204324

**B62M 25 /-**

2022252844

**B63B 1 /-**

2018436895
2019208987

**B63B 21 /-**

2019208987
2019220437

**B63B 22 /-**

2018356527

**B63B 3 /-**

2018436895

**B63B 35 /-**

2019208987
2019220437

**B63B 39 /-**

2018436895

**B63H 1 /-**

2020452061

**B63H 11 /-**

2022202829

**B63H 21 /-**

2022202829

**B63H 25 /-**

2022202829

**B64C 1 /-**

2019250263
2020391929

## Applications Accepted - IPC Index cont'd

**B64C 21 /-**

2020391929

**B64D 11 /-**

2017435057

**B65B 39 /-**

2021290482

**B65B 57 /-**

2022297182

**B65B 61 /-**

2022297182

**B65B 9 /-**

2022297182

**B65D 17 /-**

2017424987

**B65D 21 /-**

2023284477

**B65D 30 /-**

2018364593

**B65D 33 /-**

2018364593

**B65D 41 /-**

2019252471

**B65D 43 /-**

2017202923
2019342090

**B65D 47 /-**

2019252471
2022202276

**B65D 5 /-**

2017424987
2020336075

**B65D 51 /-**

2023284477

**B65D 71 /-**

2017424987

**B65D 77 /-**

2018299640
2020336075

**B65D 81 /-**

2018368950
2022241501

**B65D 83 /-**

2022241501
2023208218

**B65D 85 /-**

2017424987
2018364593

**B65D 88 /-**

2018214140
2018222912

**B65F 1 /-**

2019342090

**B65G 1 /-**

2021255118

**B65G 23 /-**

2019268743

**B65G 39 /-**

2019243544

**B65G 43 /-**

2019268743

**B65H 16 /-**

2019342090

**B65H 18 /-**

2019236697

**B65H 75 /-**

2018364593

**B66B 23 /-**

2021229576

**B66B 31 /-**

2021229576

**B66B 5 /-**

2020418450

**B66C 13 /-**

2018223009
2018314391

**B66F 5 /-**

2022235607

**B66F 7 /-**

2022235607

**B66F 9 /-**

2020396809

**B67C 3 /-**

2021290482

**B67D 7 /-**

2018240380

**B82Y 30 /-**

2018203875

**C01B 15 /-**

2020405885

**C01B 21 /-**

2023202798

**C01B 3 /-**

2019285846

**C01B 32 /-**

2023202798

**C01B 33 /-**

2019362582
2023201064

**C01D 15 /-**

2020405885

**C01D 3 /-**

2018346086

**C02F 1 /-**

2018346086
2018366953
2019231708
2022299062

**C02F 101 /-**

2022299062

**C02F 103 /-**

2022299062

**C02F 3 /-**

2022299062

**C02F 9 /-**

2019231708

**C03C 27 /-**

2020453185

**C04B 103 /-**

2017436163
2018383125

**C04B 14 /-**

2017436163
2018383125

**C04B 18 /-**

2017436163
2018383125

**C04B 20 /-**

2018383125

**C04B 22 /-**

2017436163
2018383125

**C04B 24 /-**

2017436163

**C04B 28 /-**

2017436163
2018383125

**C04B 33 /-**

2019362582

**C04B 35 /-**

2019362582

**C04B 40 /-**

2017436163

**C05G 3 /-**

2019280606
2021339955

**C07C 13 /-**

2019228634

**C07C 211 /-**

2019263969

**C07C 217 /-**

2019234185

**C07C 229 /-**

2019234185

**C07C 233 /-**

2019234185

**C07C 255 /-**

2019234185

**C07C 29 /-**

2023336075

**C07C 311 /-**

2022275470

**C07C 317 /-**

2022275470

**C07C 63 /-**

2019228634

**C07D 205 /-**

2022275470

**C07D 207 /-**

2019234185

**C07D 209 /-**

2019234185
2023203349

**C07D 211 /-**

2019234185

**C07D 213 /-**

2019234185
2019415587
2022205204
2022275470

**C07D 221 /-**

2019234185
2022244941

**C07D 231 /-**

2019288275
2022275470

**C07D 233 /-**

2019288275
2022275470

**C07D 235 /-**

2022246405

**C07D 239 /-**

2019288275
2020420734
2022275470

**C07D 241 /-**

2022205204
2022244941

**C07D 249 /-**

2022246405

**C07D 257 /-**

2022275470

**C07D 261 /-**

2019288275

**C07D 263 /-**

2019288275
2021339955

**C07D 265 /-**

2019234185

**C07D 275 /-**

2022275470

**C07D 277 /-**

2021339955
2022275470

**C07D 279 /-**

2022275470

**C07D 285 /-**

2022246405

**C07D 295 /-**

2019208166
2022275470

**C07D 305 /-**

2022275470

**C07D 307 /-**

2019221837
2020467086
2022205204

**C07D 309 /-**

2022275470

**C07D 311 /-**

2019227733

**C07D 317 /-**

2022205204

**C07D 335 /-**

2022275470

**C07D 401 /-**

2019208166
2019234185
2019288275
2019415587
2020413555
2022244941
2022246405
2022263410
2022287562

**C07D 403 /-**

2019234185
2022244941
2022246405

## Applications Accepted - IPC Index cont'd

**C07D 405 /-**

2019234185
2019415587
2022263410

**C07D 409 /-**

2019415587
2020420734
2022263410

**C07D 413 /-**

2019221837
2019288275
2019415587
2021376367
2022244941
2022263410
2022287562

**C07D 417 /-**

2019234759
2019415587
2021339955
2021376367
2022244941
2022246405
2022287562

**C07D 451 /-**

2022275470

**C07D 471 /-**

2019234185
2021339955
2022244941
2022263410
2022275538
2022287562
2022291504

**C07D 487 /-**

2022244941
2022263410
2022275538
2022287562

**C07D 491 /-**

2019221837
2019234185
2022263410
2022287562
2022291504
2022307875

**C07D 493 /-**

2022263410
2022275470

**C07D 495 /-**

2019234759
2022244941
2022287562
2022291504

**C07D 498 /-**

2019221837
2022244941
2022291504

**C07D 513 /-**

2021339955

**C07D 519 /-**

2021207155

**C07F 9 /-**

2019238090
2022275470

**C07H 21 /-**

2021273624
2022330246

**C07K 14 /-**

2018346957
2019234562
2019263233
2021200127
2021202912
2021286279

**C07K 16 /-**

2017271606
2017273959
2017274444
2017286561
2017290709
2017294276
2017299673
2017303205
2017317227
2017345203
2017345786
2018204986
2018210420
2018237549
2018279184
2018290248
2018307675
2019410073
2020294247
2020329466
2021200281
2021200984
2021201640
2022256090
2022297107

**C07K 19 /-**

2017294276

**C07K 5 /-**

2024203744

**C08B 30 /-**

2018359405

**C08G 59 /-**

2019343453

**C08G 63 /-**

2022216473

**C08G 65 /-**

2018357917

**C08J 3 /-**

2021266857

**C08J 7 /-**

2019253712

**C08K 5 /-**

2021327342

**C08L 101 /-**

2021327342

**C08L 79 /-**

2022205131

**C09D 9 /-**

2019257784

**C09J 163 /-**

2019343453

**C09K 19 /-**

2022205131

**C10G 1 /-**

2023202814

**C10L 3 /-**

2021221995

**C10M 103 /-**

2021327342

**C10M 107 /-**

2021327342

**C10M 139 /-**

2021327342

**C10N 10 /-**

2021327342

**C10N 30 /-**

2021327342

**C10N 40 /-**

2021327342

**C11B 1 /-**

2018344497
2020477490
2023208144

**C11B 3 /-**

2019217905
2023208144

**C11D 1 /-**

2018357917
2019257784

**C11D 3 /-**

2019257784

**C11D 7 /-**

2019257784
2022241501

**C12G 3 /-**

2018435428

**C12M 1 /-**

2019262624

**C12N 1 /-**

2020228247
2021207155

**C12N 15 /-**

2016318773
2017261357
2017273959
2017294276
2017303205
2018207281
2018207649
2018213044
2018346957
2019234562
2020222888
2020282488
2020329466
2021200988
2021273624
2022203494
2022297107

**C12N 3 /-**

2021207155

**C12N 5 /-**

2016318773
2017294276
2018207649
2018228352
2018246333
2018346957
2019234562
2022209271
2023201892

**C12N 7 /-**

2018357917
2021286279
2022203494

**C12N 9 /-**

2020276510
2021286279

**C12P 17 /-**

2021207155

**C12P 19 /-**

2021273624

**C12P 21 /-**

2017303205
2018204986
2021200190

**C12Q 1 /-**

2019255206
2020222888
2021250987
2021359279
2024203744

**C12R 1 /-**

2021207155

**C21C 1 /-**

2018253475

**C21C 7 /-**

2018253475

**C22B 1 /-**

2019321069

**C22B 15 /-**

2020327561

**C22B 26 /-**

2020323961

**C22B 3 /-**

2020327561

**C22B 47 /-**

2020327561

**C22B 7 /-**

2021202279

**C22C 37 /-**

2018253475

**C25B 1 /-**

2023200415

**C40B 50 /-**

2021359279

**D03D 47 /-**

2019294292

**D06F 39 /-**

2019252471

**E01B 13 /-**

2018362234

**E01B 3 /-**

2018362234

**E01C 11 /-**

2021366961

**E01C 13 /-**

2021304894

**E01C 15 /-**

2020268686

**E01C 3 /-**

2020268686

**E01D 1 /-**

2020268686

**E01D 19 /-**

2020268686

**E02B 9 /-**

2022224873

**E02D 27 /-**

2018310683
2018356013
2020268686

**E02D 5 /-**

2020268686

**E02F 3 /-**

2019280585
2021361368

**E02F 9 /-**

2018385223
2019280585
2021361368

**E03D 9 /-**

2019204453

**E04B 1 /-**

## Applications Accepted - IPC Index cont'd

2020345562
2021318678

**E04B 5 /-**

2019226049
2020268686

**E04C 2 /-**

2020345562

**E04C 5 /-**

2018356013

**E04D 12 /-**

2017219035

**E04D 13 /-**

2017219035
2019226049

**E04F 13 /-**

2018369233

**E04F 15 /-**

2022315518

**E04G 1 /-**

2021424267

**E04G 5 /-**

2021424267

**E04G 7 /-**

2021424267

**E04H 12 /-**

2018310683
2018356013
2021429593
2021429765

**E04H 13 /-**

2020265889

**E04H 15 /-**

2023202587

**E04H 4 /-**

2018323631

**E05B 47 /-**

2022271442

**E05B 65 /-**

2021294863

**E05B 67 /-**

2019204274

**E05D 15 /-**

2018364352
2023203862
2023203863

**E05D 3 /-**

2018364352
2022202200

**E05D 5 /-**

2022202200

**E05D 7 /-**

2018364352

**E05F 1 /-**

2018364352

**E06B 3 /-**

2020453185
2021345075

**E06B 9 /-**

2018253645

**E21B 17 /-**

2019293389

**E21B 19 /-**

2019210723

**E21B 21 /-**

2020342613

**E21B 23 /-**

2021360150
2021372646

**E21B 29 /-**

2023202401

**E21B 33 /-**

2018206755
2018272327

**E21B 34 /-**

2018206755
2021372646
2021377247

**E21B 43 /-**

2019243667
2021308709
2021360150
2021372646
2023202401

**E21B 47 /-**

2019211025
2019361315

**E21B 7 /-**

2018272327
2019293389
2021326249
2023201910

**E21D 20 /-**

2018329868
2023241265

**E21D 21 /-**

2019324575

**E21D 9 /-**

2018311427

**E21F 13 /-**

2022291666

**F01D 11 /-**

2022209109

**F01D 5 /-**

2022209109

**F02B 63 /-**

2019316523

**F02C 7 /-**

2022241537

**F02D 41 /-**

2019316523

**F02D 9 /-**

2019316523

**F03B 13 /-**

2018356527
2022224873

**F03D 13 /-**

2019208987

**F03D 9 /-**

2022224873

**F04D 13 /-**

2021301912

**F04D 15 /-**

2021301912

**F04D 27 /-**

2023200643

**F04D 35 /-**

2018323631

**F15D 1 /-**

2020391929

**F16B 25 /-**

2018331268

**F16B 35 /-**

2018331268

**F16C 11 /-**

2019280585

**F16C 35 /-**

2021365222
2022241537

**F16D 121 /-**

2021395262

**F16D 125 /-**

2021395262

**F16D 35 /-**

2019426844

**F16D 49 /-**

2021395262

**F16D 65 /-**

2021395262

**F16D 66 /-**

2021395262

**F16G 3 /-**

2019294292

**F16H 47 /-**

2019426844

**F16K 17 /-**

2020342613

**F16K 31 /-**

2019321096

**F16L 15 /-**

2021327342

**F16L 3 /-**

2018208679

**F16M 11 /-**

2023203352

**F21K 9 /-**

2020375409

**F21L 4 /-**

2021240792
2023206077

**F21S 4 /-**

2022291503

**F21V 15 /-**

2022291503

**F21V 23 /-**

2021240792
2022291503

**F21V 25 /-**

2022291503

**F21V 31 /-**

2022291503

**F21W 131 /-**

2020375409

**F21Y 115 /-**

2020375409

**F24D 19 /-**

2022215955

**F24F 1 /-**

2019242468
2022335810

**F24F 11 /-**

2019226049
2023200643

**F24F 13 /-**

2019226049
2019242468

**F24F 3 /-**

2019226049

**F24F 5 /-**

2019226049

**F24F 8 /-**

2022335810

**F24H 15 /-**

2022215955

**F25B 21 /-**

2021343158

**F25B 39 /-**

2022204001

**F25B 41 /-**

2022204001

**F25B 49 /-**

2019314054

**F25B 5 /-**

2019314054

**F25D 1 /-**

2018368950

**F25D 11 /-**

2018368950
2019314054

**F25D 13 /-**

2021255118

**F25D 17 /-**

2018368950
2021255118

**F25D 25 /-**

2021255118

**F25D 29 /-**

2019314054
2021255118

**F25D 3 /-**

2018368950

**F25J 1 /-**

2021392776

**F27B 3 /-**

2021202279

**F28B 1 /-**

2022204001

**F28D 9 /-**

2022204001

**F28F 3 /-**

2019285846

**F28F 9 /-**

2022204001

**F41A 9 /-**

2020264786

## Applications Accepted - IPC Index cont'd

**F41H 13 /-**

2021207400

**F41H 5 /-**

2018387007

**F42D 1 /-**

2021201833

**F42D 3 /-**

2021201833
2022201304
2022272224

**F42D 5 /-**

2022201304
2022272224

**F42D 99 /-**

2022272224

**G01B 17 /-**

2021359790

**G01C 21 /-**

2022283648

**G01C 3 /-**

2018320867

**G01F 1 /-**

2021321201

**G01J 3 /-**

2019213498

**G01M 17 /-**

2018351880
2020396809

**G01N 1 /-**

2019396833
2019404614

**G01N 15 /-**

2019236297

**G01N 21 /-**

2019213498
2023206077

**G01N 27 /-**

2024203482

**G01N 33 /-**

2018207281
2018218844
2018275881
2018287319
2018342922
2018359211
2019382292
2019396833
2019404614
2021201640
2021286279
2024203744

**G01N 35 /-**

2019378143
2019404614

**G01R 1 /-**

2022388905

**G01R 31 /-**

2022275472

**G01S 13 /-**

2019231115

**G01S 5 /-**

2018449821

**G01S 7 /-**

2019231115

**G01V 1 /-**

2019211025
2019346601

**G01V 5 /-**

2018353564

**G02B 1 /-**

2023290599

**G02B 26 /-**

2018389608

**G02B 27 /-**

2018389608

**G02B 5 /-**

2018389608

**G02B 6 /-**

2018426428
2019361315
2021365910

**G02C 5 /-**

2019225473

**G02C 7 /-**

2019308833

**G02F 1 /-**

2022266617

**G04C 17 /-**

2023282284

**G05B 13 /-**

2022216534

**G05B 19 /-**

2019302312
2019340235
2022206794

**G05D 1 /-**

2018314391
2019340235

**G05D 23 /-**

2023200643

**G05D 3 /-**

2019213837

**G06F 1 /-**

2021424076
2023201077

**G06F 11 /-**

2021301912

**G06F 12 /-**

2019245514

**G06F 16 /-**

2021281120
2023201871

**G06F 17 /-**

2022218590

**G06F 18 /-**

2019236297
2022305655
2023258451

**G06F 21 /-**

2018389229
2019245514
2019260125
2019302646
2023237151

**G06F 3 /-**

2019268743
2021301912
2022246408
2023200021
2023201871
2023282284

**G06F 40 /-**

2021281120

**G06F 8 /-**

2020437843
2020437977
2022286923

**G06F 9 /-**

2020437843
2020437977
2021281120
2023201871

**G06K 17 /-**

2021321476

**G06K 19 /-**

2019302646
2020282974
2021371164
2023258451

**G06K 7 /-**

2021321476

**G06N 10 /-**

2021294859
2022261838
2022264769

**G06N 20 /-**

2022272224
2022283648

**G06N 3 /-**

2022209306
2022263508
2022264769
2022283648
2022292104

**G06N 5 /-**

2022272224

**G06Q 10 /-**

2018389229
2021232606

**G06Q 20 /-**

2018271271
2021287706
2022291434
2023200021
2023202521

**G06Q 50 /-**

2019329455

**G06T 11 /-**

2021301912
2022204492
2022206819
2022209306

**G06T 13 /-**

2022263508

**G06T 3 /-**

2022209306
2023375284

**G06T 5 /-**

2022209306

**G06T 7 /-**

2019236297
2019268743
2019306766
2022203118
2022283648
2023375284

**G06T 9 /-**

2022204492
2022206819

**G06V 10 /-**

2019236297
2019387079
2022203118
2022283648
2023263516
2023375284

**G06V 20 /-**

2019236297
2022305655

**G06V 30 /-**

2022203118

**G06V 40 /-**

2022292104

**G07F 17 /-**

2018271271
2021287706

**G07F 9 /-**

2022202200

**G08B 1 /-**

2023222852

**G08B 21 /-**

2021207400

**G08C 17 /-**

2018314391

**G08G 5 /-**

2018449821

**G09F 3 /-**

2023258451

**G09F 5 /-**

2019329455

**G09F 9 /-**

2021424076

**G09G 3 /-**

2022246408

**G09G 5 /-**

2019329455
2022246408

**G10D 1 /-**

2020318991

**G10D 3 /-**

2020318991

**G10L 15 /-**

2022292104
2023201871

**G10L 19 /-**

2019298240

**G10L 21 /-**

2019346601

**G11B 27 /-**

2023263516

**G11C 11 /-**

2021395683

**G11C 5 /-**

2018395944

**G16B 20 /-**

2019227498

**G16B 40 /-**

2019227498

**G16H 50 /-**

2019294497

**G21G 4 /-**

2023203996

**H01B 17 /-**

## Applications Accepted - IPC Index cont'd

2021429593

**H01H 33 /-**

2023202074

**H01H 9 /-**

2023202074

**H01L 21 /-**

2020318823

**H01L 23 /-**

2020318823
2023200643

**H01L 31 /-**

2020429125
2022331906

**H01M 10 /-**

2021459856
2022241474
2022275472
2023204280

**H01M 4 /-**

2022383821
2023204280

**H01M 50 /-**

2022241474

**H01M 8 /-**

2021459856

**H01Q 21 /-**

2020348603

**H02G 1 /-**

2023206077

**H02G 11 /-**

2018223009

**H02H 1 /-**

2021446393

**H02J 15 /-**

2023202872

**H02J 50 /-**

2023201077

**H02J 7 /-**

2022275472
2023201077
2023219831

**H02K 1 /-**

2023203750

**H02K 3 /-**

2023203750

**H02K 5 /-**

2023203750

**H02K 7 /-**

2023203750

**H02K 9 /-**

2022264861

**H02S 20 /-**

2023200555

**H03F 19 /-**

2022261838

**H03M 7 /-**

2023202653

**H04B 1 /-**

2020311281

**H04B 10 /-**

2019294827
2019361315

**H04K 3 /-**

2022305655

**H04L 1 /-**

2021305753

**H04L 12 /-**

2019411787

**H04L 25 /-**

2020311281

**H04L 41 /-**

2019390284
2022212145

**H04L 45 /-**

2021372249

**H04L 67 /-**

2019390284
2019391777
2023200021

**H04L 9 /-**

2021372249
2022291434

**H04M 1 /-**

2023200021

**H04N 1 /-**

2022204492
2022206819
2022246408

**H04N 19 /-**

2022228201
2023254881
2024201690

**H04N 21 /-**

2018438001
2022209306
2022219979
2024201690

**H04N 5 /-**

2022209306

**H04N 7 /-**

2022209306

**H04N 9 /-**

2022209306

**H04Q 1 /-**

2023200219

**H04R 1 /-**

2023202872

**H04W 12 /-**

2021319660
2021349420
2021416031
2023200021

**H04W 28 /-**

2019313622

**H04W 4 /-**

2020396809
2021321730
2022291666
2022305655
2023200021
2023222852

**H04W 52 /-**

2023201543

**H04W 64 /-**

2023222852

**H04W 72 /-**

2018436323
2018436718
2019313622
2023202428

**H04W 74 /-**

2021291265

**H04W 8 /-**

2021349420

**H04W 88 /-**

2021349420

**H05H 1 /-**

2021224972

**H05K 7 /-**

2020348603
2023200643

**H10K 71 /-**

2021387072

**H10N 60 /-**

2021294859

## Certified Innovation Patents

**Name Index**

(This list may contain multiple listings of a patent where there are multiple patentees for that patent.)

---

**(71)** Cameron, A.
**(11)** AU-B-2021104592
**(21)** 2021104592 **(22)** 27.07.2021
**(54)** A Barrier Assembly and Methods of Use Thereof
**(51)** Int. Cl.
***B62D 55/088*** ( 2006.01 )
**(31)** 2020902742 **(32)** 05.08.20 **(33)** AU
**(45)** 01.08.2024
**(72)** Cameron, Ashley
**(74)** KINGS PATENT & TRADE MARKS ATTORNEYS PTY LTD

---

**(71)** Dam Buster IP Pty Ltd
**(11)** AU-B-2017100163
**(21)** 2017100163 **(22)** 13.02.2017
**(54)** Rainhead
**(51)** Int. Cl.
***E04D 13/08*** ( 2006.01 )
**(31)** 2016900590 **(32)** 19.02.16 **(33)** AU
**(45)** 01.08.2024
**(72)** Pockett, David John; Kirkwood, Russell John
**(74)** WRAYS PTY LTD

**Numerical Index**

**IPC Index**

**B62D 55 /-**

2021104592

**E04D 13 /-**

2017100163

## Opposition Proceedings

(The name in parentheses is that of the opponent)

**Opposition Lodged**

2018203749 **Joy Global Surface Mining Inc** ( CQMS Pty Ltd )

2021294333 **Austin Star Detonator Company** ( DetNet South Africa (Pty) Limited )

## Patents Granted

**Standard Patents**

2016366548 2016379413 2017213812 2017216237
2017220100 2017221456 2017222231 2017228055
2017234192 2017261367 2017279683 2017292934
2017322101 2017329654 2017330062 2017338353
2017353361 2017390075 2017390677 2017398450
2017405076 2017420800 2017421289 2017421295
2017426441 2017444240 2017444251 2018203690
2018207118 2018210375 2018214079 2018220117
2018224319 2018231072 2018232854 2018234827
2018236352 2018243407 2018244463 2018250161
2018250331 2018251725 2018255954 2018256556
2018260969 2018262342 2018272048 2018273240
2018286627 2018290348 2018292807 2018293647
2018293932 2018294185 2018295364 2018296426
2018297554 2018297614 2018300758 2018301683
2018303796 2018304533 2018306010 2018306141
2018306502 2018314852 2018317492 2018317802
2018317945 2018319344 2018320705 2018321819
2018322482 2018323035 2018326664 2018329208
2018330926 2018333537 2018335555 2018340505
2018341583 2018345716 2018346938 2018347005
2018347251 2018348700 2018353497 2018360480
2018364530 2018366936 2018377053 2018382415
2018382597 2018382905 2018383005 2018383031
2018385364 2018385893 2018387304 2018387580
2018389217 2018390791 2018400196 2018401298
2018404203 2018410828 2018422255 2018422906
2018424859 2019201010 2019201038 2019202590
2019205273 2019206351 2019206371 2019208453
2019209231 2019209323 2019209477 2019213007
2019213438 2019214252 2019215789 2019218379
2019221091 2019221107 2019221849 2019222659
2019223220 2019225527 2019227269 2019227827
2019231939 2019233643 2019236234 2019236578
2019239797 2019240363 2019244024 2019244189
2019248729 2019249801 2019251181 2019254045
2019255706 2019257116 2019259777 2019266929
2019269479 2019270795 2019272771 2019277199
2019280282 2019285766 2019291307 2019291439
2019293772 2019295576 2019302596 2019303374
2019306591 2019307597 2019307745 2019307836
2019314455 2019325400 2019338221 2019346606
2019349424 2019352009 2019359320 2019365143
2019453690 2019476338 2019479270 2020201986
2020218143 2020232179 2020234722 2020242520
2020259804 2020269164 2020282943 2020291900
2020295054 2020301385 2020313143 2020332673
2020351974 2020355421 2020357789 2020372823
2020374954 2020384216 2020384836 2020388522
2020394260 2020401934 2020402079 2020404865
2020416358 2020417294 2020418309 2020419367
2020426492 2020427144 2020427412 2020427793
2020428517 2020432994 2021200872 2021203237
2021203288 2021210170 2021210206 2021211708
2021220328 2021221828 2021222010 2021229984
2021232880 2021232892 2021238958 2021238988
2021240230 2021241695 2021244056 2021246427

## Patents Granted

**Standard Patents**

2021246963 2021250976 2021256364 2021257402
2021257418 2021258056 2021260046 2021260551
2021261912 2021268887 2021269916 2021270781
2021278253 2021281590 2021291576 2021292943
2021303068 2021307687 2021315403 2021315582
2021316062 2021316972 2021319645 2021323257
2021325685 2021329277 2021335142 2021347181
2021348707 2021360580 2021372639 2021377807
2021380440 2021395816 2021404859 2021404860
2021409314 2021415772 2021428867 2021436510
2021441275 2021453593 2022200012 2022200321
2022200397 2022200442 2022200502 2022200666
2022200891 2022201057 2022201062 2022201121
2022201200 2022201254 2022201858 2022202009
2022202147 2022202266 2022202372 2022202489
2022202598 2022202673 2022203282 2022203369
2022203625 2022203651 2022203939 2022203946
2022204002 2022204003 2022204082 2022204217
2022204371 2022204640 2022204877 2022205187
2022205222 2022205251 2022206744 2022209275
2022209293 2022211797 2022215197 2022218520
2022218560 2022218571 2022221461 2022224838
2022224868 2022235518 2022241603 2022246448
2022253874 2022255586 2022259741 2022263531
2022268313 2022268330 2022271428 2022271759
2022279546 2022283686 2022283780 2022283783
2022290254 2022291410 2022291598 2022291622
2022295551 2022307514 2022318447 2022332692
2022345353 2023200098 2023200142 2023200164
2023200293 2023200334 2023200340 2023200342
2023200606 2023200898 2023200904 2023201063
2023201068 2023201395 2023201443 2023201560
2023201673 2023201816 2023201988 2023202005
2023202394 2023202684 2023203090 2023203129
2023203898 2023203965 2023214392 2023216843
2023222912 2023226659 2023233139 2023237019
2023249429 2023263533 2023282195 2023282303

**Innovation Patents**

2018102258

## Assignments Registered

2004294229 Neuromonics Pty Ltd The patent has been assigned to **SoundVida, Inc.**

2005200402 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2008202379 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2008229894 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2008285458 Rapid Diagnostics ML Ltd The patent has been assigned to **Enigma Diagnostics IP Limited**

2008285464 Rapid Diagnostics ML Ltd The patent has been assigned to **Enigma Diagnostics IP Limited**

2008299209 Interlock USA, Inc. The patent has been assigned to **ASSA ABLOY Fenestration LLC**

2009200431 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2009208136 Interlock USA, Inc. The patent has been assigned to **ASSA ABLOY Fenestration LLC**

## Assignments Registered

2010257236 BENDING SPOONS S.P.A. The patent has been assigned to **BENDING SPOONS OPERATIONS S.P.A.**

2011201482 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2011223999 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2011226790 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2011226947 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2012211515 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2013205669 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2013205670 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2013206015 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2013276982 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2013395156 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2013397474 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2014202594 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2014221300 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2014306564 ModMab Therapeutics Corporation The patent has been assigned to **Antlera Therapeutics Inc.**

2014337339 TechMah Medical LLC The patent has been assigned to **Lima USA, Inc.**

2014363945 TechMah Medical LLC The patent has been assigned to **Lima USA, Inc.**

2015200047 Interlock USA, Inc. The patent has been assigned to **ASSA ABLOY Fenestration LLC**

2015200162 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2015200529 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2015201055 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2015201301 Neuromonics Pty Ltd The patent has been assigned to **SoundVida, Inc.**

2015218419 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2015218567 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

## Assignments Registered

2015221501 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2015224435 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2015238905 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2015264781 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2015287598 TechMah Medical LLC The patent has been assigned to **Lima USA, Inc.**

2016200046 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2016200631 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2016201090 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2016201318 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2016202445 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2016202611 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2016203508 NZ Fire Doors Limited The patent has been assigned to **Pacific Door Systems Limited**

2016209247 Inhibrx, Inc. The patent has been assigned to **INHIBRX BIOSCIENCES, INC.**

2016234946 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2016234948 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2016238980 Interlock USA, Inc. The patent has been assigned to **ASSA ABLOY Fenestration LLC**

2016247234 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2016369607 TechMah Medical LLC The patent has been assigned to **Lima USA, Inc.**

2016370940 TechMah Medical LLC The patent has been assigned to **Lima USA, Inc.**

2016392604 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2017200982 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2017201453 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2017202339 Neuromonics Pty Ltd The patent has been assigned to **SoundVida, Inc.**

2017202545 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

## Assignments Registered

2017202589 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2017203802 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2017204030 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2017204414 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2017204468 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2017207036 Optipro Corp Ltd. The patent has been assigned to **Premium Security AS**

2017221813 Interlock USA, Inc. The patent has been assigned to **ASSA ABLOY Fenestration LLC**

2017235902 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2017235912 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2017253941 Cabot, Jonathan The patent has been assigned to **Knee Balancer IP Pty Ltd**

2017262949 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2017268038 Cabot, Jonathan The patent has been assigned to **Knee Balancer IP Pty Ltd**

2017268257 Nanostring Technologies, Inc. The patent has been assigned to **Bruker Spatial Biology, Inc.**

2017268627 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2017286238 Alstom Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2017361521 NanoString Technologies, Inc. The patent has been assigned to **Bruker Spatial Biology, Inc.**

2017366502 Lee, Stewart Ping; Lee, David Wei The patent has been assigned to **HumanBody Space AI Medtech Group Pte. Ltd.**

2018200225 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2018200370 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2018200512 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2018200854 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2018201890 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2018201894 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2018201898 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

## Assignments Registered

2018201907 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2018201912 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2018202689 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2018202848 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2018202873 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2018203251 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2018203796 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2018222956 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2018243309 Interlock USA, Inc. The patent has been assigned to **ASSA ABLOY Fenestration LLC**

2018250530 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2018253490 TechMah Medical LLC The patent has been assigned to **Lima USA, Inc.**

2018264138 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2018278345 Interlock USA, Inc. The patent has been assigned to **ASSA ABLOY Fenestration LLC**

2018288848 AEGEA Medical, Inc The patent has been assigned to **Coopersurgical, Inc.**

2018318756 Psomagen, Inc. The patent has been assigned to **Macrogen Inc.**

2018373675 Deutsches Krebsforschungszentrum; Ruprecht-Karls-Universitaet Heidelberg The patent has been assigned to **Deutsches Krebsforschungszentrum**

2019100603 Pei si International (Beijing) Co.Ltd The patent has been assigned to **Pei Si Engineering Technology (Beijing) Co., Ltd.**

2019100604 Pei si International (Beijing) Co.Ltd The patent has been assigned to **Pei Si Engineering Technology (Beijing) Co., Ltd.**

2019200664 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2019200790 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2019201157 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2019201238 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2019201373 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2019201723 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

## Assignments Registered

2019202570 TechMah Medical LLC The patent has been assigned to **Lima USA, Inc.**

2019203080 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2019211465 Southern Eye Equipment Pty Ltd The patent has been assigned to **Mount Spec Investments Pty Ltd**

2019213311 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2019232853 TechMah Medical LLC The patent has been assigned to **Lima USA, Inc.**

2019257418 TechMah Medical LLC The patent has been assigned to **Lima USA, Inc.**

2019264513 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2019264562 ModMab Therapeutics Corporation The patent has been assigned to **Antlera Therapeutics Inc.**

2020200493 ALSTOM Transport Technologies The patent has been assigned to **ALSTOM Holdings**

2020205220 TechMah Medical LLC The patent has been assigned to **Lima USA, Inc.**

2020210277 NanoString Technologies, Inc. The patent has been assigned to **Bruker Spatial Biology, Inc.**

2020286294 TechMah Medical LLC The patent has been assigned to **Lima USA, Inc.**

2020289785 TechMah Medical LLC The patent has been assigned to **Lima USA, Inc.**

2020294241 TechMah Medical LLC The patent has been assigned to **Lima USA, Inc.**

2020333543 Mineral Earth Sciences LLC The patent has been assigned to **Deere & Co.**

2021202777 Aegea Medical Inc. The patent has been assigned to **Coopersurgical, Inc.**

2021277728 TechMah Medical LLC The patent has been assigned to **Lima USA, Inc.**

2021427503 Rotam Agrochem International Company Limited The patent has been assigned to **Albaugh Asia Pacific Limited**

## Licences Registered - Section 187, Reg. 19

(The name in the parentheses is that of the licensee)

2015233175 Dyson Technology Limited ( Dyson Appliances (Aust.) Pty Ltd )

## Discharge of a Mortgage

2012388708 Discharge of a Mortgage was made in the Register on 22.07.2024 .

## Extensions of Term of Standard Patents

Extension of Term of a Standard Patent relating to Pharmaceutical Substances

**Applications Filed**

The following application(s) for Extension of Term under Section 70 have been made and are open for public inspection.

## Extensions of Term of Standard Patents

Extension of Term of a Standard Patent relating to Pharmaceutical Substances

**Applications Filed**

2011234398 **OGEDA SA**

The earliest first regulatory approval date provided by the patentee 26 Feb 2024

For the goods VEOZA fezolinetant

2014242906 **OGEDA SA**

The earliest first regulatory approval date provided by the patentee 26 Feb 2024

For the goods VEOZA fezolinetant

**Applications Accepted**

The following application(s) for Extension of Term have been accepted under Section 74.

Notice of opposition under Section 75(1) to the undermentioned application(s) for an extension of term may be filed at the Patent Office within the prescribed time.

2021203840 **Emory University**

The earliest first regulatory approval date provided by the patentee 20 Jan 2022

For the goods LAGEVRIO molnupiravir

Address for service : Spruson & Ferguson GPO Box 3898 Sydney NSW 2001 AU

2022200291 **Lobsor Pharmaceuticals Aktiebolag**

The earliest first regulatory approval date provided by the patentee 01 Sep 2023

For the goods LECIGON levodopa

Address for service : Spruson & Ferguson GPO Box 3898 Sydney NSW 2001 AU

**Extensions granted**

The following application(s) for Extension of Term have been granted under Section 76.

2020239682 **Lobsor Pharmaceuticals Aktiebolag**

The earliest first regulatory approval date provided by the patentee 01 Sep 2023

For the goods LECIGON levodopa

Extension of Term of patent pursuant to Section 77 expires on 01 Sep 2038

## Corrigenda

In Vol 33 , No 35 , Page(s) 4969 under the heading **PCT applications that have entered the National Phase - Name Index** Under the name PolyActiva Pty Ltd., Application No.2018233159, under INID (72) correct the co-inventor to D'Souza, Asha Marina

In Vol 34 , No 34 , Page(s) 4782 under the heading **PCT applications that have entered the National Phase - Name Index** Under the name Ishihara Sangyo Kaisha, Ltd., Application No. 2019219963, under INID (72) correct the inventor to read UESUSUKI, Yusuke

In Vol 57 , No 9 , Page(s) 1378 under the heading **PCT applications that have entered the National Phase - Name Index** Under the name FERO INTERNATIONAL IP INC., Application No. 2021314065, under INID (71) correct the applicant name to FERO INTERNATIONAL INC.

## Corrigenda

In Vol 58 , No 17 , Page(s) 2498 under the heading **Applications Accepted - Name Index** Under the name Ishihara Sangyo Kaisha, Ltd., Application No. 2019219963, under INID (72) correct the inventor to read UESUSUKI, Yusuke

In Vol 58 , No 17 , Page(s) 2514 under the heading **Applications Accepted - Name Index** Under the name PolyActiva Pty Ltd., Application No.2018233159, under INID (72) correct the co-inventor to D'Souza, Asha Marina

In Vol 58 , No 28 , Page(s) 4165 under the heading **Applications Accepted - Name Index** Under the name Merit Technologies ( Fu Jian) Co. , Ltd., Application No. 2020404201, under INID (54) correct the title to read ZIPPER STRUCTURE FOR SUITCASES, AND TROLLEY BAG

## Specifications Republished

The following specifications contained errors when advertised OPI, Accepted or Certified. They have been reissued on the date of this Journal.

| | |
|---|---|
| 2017376801 | **BIORA THERAPEUTICS, INC.** |
| 2018296421 | **Subsea 7 Norway AS** |
| 2020471756 | **DOME MEDICAL TECHNOLOGIES, INC.** |
| 2020471964 | **ESSITY HYGIENE AND HEALTH AKTIEBOLAG** |
| 2020473099 | **ZHEJIANG SUPOR ELECTRICAL APPLIANCES MANUFACTURING CO., LTD.** |
| 2020473307 | **FORD GLOBAL TECHNOLOGIES, LLC** |
| 2020483297 | **RAZER (ASIA-PACIFIC) PTE. LTD.** |
| 2021265798 | **The Procter & Gamble Company** |
| 2021327392 | **Resolute Science Inc** |
| 2021329906 | **ENVIRO METALS, LLC** |
| 2021331790 | **WRAP TECHNOLOGIES, INC.** |
| 2021334316 | **MYOKARDIA, INC.** |
| 2021339758 | **PURINOMIA BIOTECH, INC.** |
| 2021340002 | **ASTRAZENECA UK LIMITED; DAIICHI SANKYO COMPANY, LIMITED** |
| 2021342487 | **SHATTUCK LABS, INC.** |
| 2021342516 | **MASTERBUILT MANUFACTURING, LLC** |
| 2021345278 | **WESTROCK SHARED SERVICES, LLC** |
| 2021347368 | **CARBON TECHNOLOGY HOLDINGS, LLC** |
| 2021347979 | **Danimer IPCo, LLC** |
| 2021349252 | **Danimer IPCo, LLC** |
| 2021349343 | **MYQOL LIMITED** |
| 2021349772 | **GONGWIN BIOPHARM CO., LTD** |
| 2021351695 | **COLGATE-PALMOLIVE COMPANY; KATHOLIEKE UNIVERSITEIT LEUVEN; UNIVERSITEIT GENT** |
| 2021353091 | **BOSTON SCIENTIFIC NEUROMODULATION CORPORATION** |
| 2021353965 | **AGOMAB SPAIN S.L.U.** |
| 2021354769 | **SMART & GREEN MUKRAN CONCRETE GMBH** |
| 2021355969 | **STUDIENGESELLSCHAFT KOHLE gGMBH** |
| 2021356186 | **WOAMY OY** |
| 2021356262 | **NOKIA TECHNOLOGIES OY** |
| 2021356340 | **XBIOTECH INC.** |
| 2021356705 | **MEDTRONIC, INC.** |
| 2021357551 | **ROHM AND HAAS COMPANY** |
| 2021357691 | **THERACOSBIO, LLC** |
| 2021358080 | **ZBIOTICS COMPANY** |
| 2021358532 | **COMMSCOPE TECHNOLOGIES LLC** |
| 2021358533 | **SCHLUMBERGER TECHNOLOGY B.V.** |
| 2021358629 | **Cohere Technologies, Inc.** |
| 2021360782 | **FIVE PRIME THERAPEUTICS, INC.** |
| 2021360999 | **URBAN SOFTWARE INSTITUTE GMBH** |
| 2021361044 | **C4 THERAPEUTICS, INC.** |
| 2021361059 | **GILEAD SCIENCES, INC.** |
| 2021361100 | **NEUROPLAST BEHEER B.V.** |
| 2021361160 | **DEERE & COMPANY** |

## Specifications Republished

| | |
|---|---|
| 2021361513 | **NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY** |
| 2021362667 | **HILL'S PET NUTRITION, INC.** |
| 2021363237 | **HEBEI LANSHENG BIOTECH CO., LTD; HEBEI LANRUN PLANT PROTECTION TECHNOLOGY CO., LTD; HEBEI GUZHIRUN TECHNOLOGY CO., LTD** |
| 2021364673 | **LEGACY VENTURES LLC** |
| 2021365147 | **HILL'S PET NUTRITION, INC.** |
| 2021366268 | **THE GOVERNORS OF THE UNIVERSITY OF ALBERTA** |
| 2021366325 | **CHEMISCHE FABRIK DR. WEIGERT GMBH & CO. KG** |
| 2021366672 | **AXOGEN CORPORATION** |
| 2021366678 | **BECTON, DICKINSON AND COMPANY** |
| 2021366719 | **CATALYST ENERGY SERVICES LLC** |
| 2021368285 | **PANASONIC INTELLECTUAL PROPERTY CORPORATION OF AMERICA** |
| 2021369638 | **METSO OUTOTEC FINLAND OY** |
| 2021369934 | **BOMBARDIER RECREATIONAL PRODUCTS INC.** |
| 2021369935 | **TILITER PTY LTD.** |
| 2021373705 | **THE ALFRED E. MANN FOUNDATION FOR SCIENTIFIC RESEARCH** |
| 2021373711 | **UNIVERSITY OF HOUSTON SYSTEM** |
| 2021373873 | **FLUX THERAPEUTICS, INC.** |
| 2021375733 | **AMGEN INC.; AMGEN RESEARCH (MUNICH) GMBH** |
| 2021375740 | **ESSITY HYGIENE AND HEALTH AKTIEBOLAG** |
| 2021376396 | **NEOIMMUNETECH, INC.; WASHINGTON UNIVERSITY** |
| 2021378636 | **DYNO NOBEL ASIA PACIFIC PTY LIMITED** |
| 2021379051 | **INTERNATIONAL BUSINESS MACHINES CORPORATION** |
| 2021379306 | **JANSSEN BIOTECH, INC.** |
| 2021381054 | **CELLIX BIO PRIVATE LIMITED** |
| 2021382505 | **BKT CO., LTD.** |
| 2021383514 | **BRYTE AS** |
| 2021383680 | **VEIR, INC.** |
| 2021383931 | **KARDION GMBH** |
| 2021385073 | **CARBON TECHNOLOGY HOLDINGS, LLC** |
| 2021386629 | **RHEINMETALL ELECTRONICS GMBH** |
| 2021386707 | **AESCULAP AG** |
| 2021386880 | **THE UNIVERSITY OF QUEENSLAND** |
| 2021386881 | **SAMARAWICKRAMA, C.D.** |
| 2021387768 | **FRAUNHOFER-GESELLSCHAFT ZUR FÖRDERUNG DER ANGEWANDTEN FORSCHUNG E.V.** |
| 2021387774 | **GRIFOLS WORLDWIDE OPERATIONS LIMITED** |
| 2021387949 | **TESTCARD LTD** |
| 2021389670 | **CRC CARE PTY LTD** |
| 2021390705 | **COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES; CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE; UNIVERSITE DE MONTPELLIER; ECOLE NATIONALE SUPÉRIEURE DE CHIMIE DE MONTPELLIER** |
| 2021390998 | **LART BIO CO., LTD; SEOUL NATIONAL UNIVERSITY R&DB FOUNDATION; KYUNGSANGBUK-DO (KYUNGSANGBUKDO LIVESTOCK RESEARCH INSTITUTE)** |
| 2021391427 | **ITRON GLOBAL SARL** |
| 2021391977 | **ORION CORPORATION** |
| 2021392316 | **INOVOBIOLOGIC, INC.** |
| 2021392619 | **MFTB Holdco, Inc.** |
| 2021392836 | **ELECTROLUX APPLIANCES AKTIEBOLAG** |
| 2021396411 | **HURLEY, J.** |
| 2021396463 | **TETHERS UNLIMITED, INC.** |
| 2021396812 | **GRACE, A.** |
| 2021396824 | **CASTARALO LTD.** |
| 2021397400 | **NICOVENTURES TRADING LIMITED** |
| 2021398499 | **CJ CHEILJEDANG CORPORATION** |
| 2021399124 | **YARA INTERNATIONAL ASA** |
| 2021400179 | **HUAWEI TECHNOLOGIES CO., LTD.** |
| 2021400315 | **EYEPOINT PHARMACEUTICALS, INC.** |

## Specifications Republished

2021400415 **CHEVRON AUSTRALIA PTY LTD; CHEVRON U.S.A. INC.**
2021400495 **THIRDWAYV, INC.**
2021400709 **ILDONG PHARMACEUTICAL CO., LTD.**
2021401085 **DYNAVAX TECHNOLOGIES CORPORATION**
2021401354 **HENDRICKSON USA, L.L.C.**
2021401431 **ABBOTT DIABETES CARE INC.**
2021401538 **GENESIS SYSTEMS LLC**
2021401996 **KINOXIS THERAPEUTICS PTY LTD**
2021401997 **LENDLEASE DIGITAL IP PTY LIMITED**
2021402198 **LINXENS HOLDING**
2021403089 **BIOARDIS, LLC**
2021403745 **PRECISION PLANTING LLC**
2021404944 **PFIZER INC.**
2021405064 **HYLER BV**
2021405281 **CUREVAC SE; GLAXOSMITHKLINE BIOLOGICALS SA**
2021405296 **FONTERRA CO-OPERATIVE GROUP LIMITED; AGRESEARCH LIMITED; ATTWOOD, G.T.; CROUZET, L.; BASSETT, S.A.; DEKKER, J.W.; HILL, J.P.; YOUNG, W.**
2021405498 **TOKAMAK ENERGY LTD; IMPERIAL COLLEGE INNOVATIONS LIMITED**
2021405636 **SAVENCIA SA**
2021406008 **TAURUS GMBH & CO. KG**
2021406706 **PRIME VECTOR TECHNOLOGIES GMBH**
2021407427 **ZMAG, LTD.**
2021407526 **WERLD AUSTRALIA PTY LTD**
2021409007 **SUNLIGHTEN, INC.**
2021409231 **QUALCOMM INCORPORATED**
2021409816 **QILU REGOR THERAPEUTICS INC.**
2021409914 **GENESYS TELECOMMUNICATIONS LABORATORIES, INC.**
2021409949 **SAGE PRODUCTS LLC**
2021410522 **GAURIAN CORPORATION; KOLON E&C, INC.**
2021410635 **KITE PHARMA, INC.**
2021410668 **CHEMOCENTRYX, INC.**
2021411062 **SABIC Agri-Nutrients Company**
2021411133 **UNICHARM CORPORATION**
2021411189 **I-SENS, INC.; SOGANG UNIVERSITY RESEARCH & BUSINESS DEVELOPMENT FOUNDATION**
2021411402 **KEYFACTOR, INC.**
2021411478 **STRYKER CORPORATION**
2021411594 **THE BOARD OF TRUSTEES OF THE UNIVERSITY OF ILLINOIS**
2021411950 **CONVATEC TECHNOLOGIES INC.**
2021414006 **DEERE & COMPANY**
2021416064 **SHARKNINJA OPERATING LLC**
2021416089 **GENESYS TELECOMMUNICATIONS LABORATORIES, INC.**
2021418030 **NEC CORPORATION**
2021418938 **MICRO MOTION, INC.**
2021419833 **NIPPON TELEGRAPH AND TELEPHONE CORPORATION**
2021426845 **CHANNEL MEDSYSTEMS, INC.**
2021435646 **ITRON, INC.**
2022202352 **Arbutus Biopharma Corporation**
2022205604 **GENOSCO INC.**
2022205682 **MILLER SCIENTIFIC INC.**
2022206680 **TRAFFIX DEVICES, INC.; NUTECH VENTURES**
2022207066 **AGEX THERAPEUTICS, INC.**
2022207686 **OSSTEC LIMITED**
2022208381 **APPLIED MEDICAL RESOURCES CORPORATION**
2022211588 **ARTEDRONE**
2022214135 **SOCIETE DES PRODUITS NESTLE S.A.**
2022214612 **SKELETAL DYNAMICS, INC.**
2022218707 **ENERGY EXPLORATION TECHNOLOGIES, INC.**
2022219416 **UVEX ARBEITSSCHUTZ GMBH**
2022219517 **BOEHRINGER INGELHEIM INTERNATIONAL GMBH; CDR-LIFE AG**

## Specifications Republished

2023258373 **Trina Solar Co., Ltd.; Trina Solar (Suqian) Photoelectric Co., Ltd.**

**PATENTS ACT 1990 (Cth)**

**Advertisement pursuant to rule 34.41 of the *Federal Court Rules 2011***

**FCR 34.41 (1) (a) | IDENTITY OF PROCEEDINGS**

Court: Federal Court of Australia

Victoria District Registry
Proceeding No. VID 524/2022

Parties: Perfect Day, Inc.
(**Appellant**)

and

Commissioner of Patents
(**Respondent**)

**FCR 34.41 (1) (b) PARTICULARS OF PROPOSED AMENDMENTS**

Perfect Day, Inc, the Applicant in respect of Australian Patent Application No. 2015305271 (**AU 271**) and Appellant in the above proceeding, will apply for an order under Section 105(1A) of the *Patents Act 1990* (Cth) directing the amendment of AU 271 as follows and as shown, in mark up against the version of AU 271 that is the subject of the amendment application dated 16 December 2022, in the **Annexure**:

1. Amend the spelling of "lacititol" to "lactitol" and "malititol" to "maltitol" on page 5, line 25; page 11, lines 10-11; page 12, lines 29-30; page 45, line 10; page 57, line 5; page 74, line 28; and page 77, line 8 of the specification.

2. Amend page 16, lines 25-26 of the specification to insert the phrase ", other than a cottage cheese or hard cheese," between the words "composition" and "comprising".

3. Amend page 16, line 28 of the specification to delete the words "one or".

4. Amend page 16a, line 6 of the specification to delete the word "leavening".

5. Amend claim 1 to insert ", other than a cottage cheese or a hard cheese," on line 1, and to delete "one or" on line 4 and "leavening" on line 13.

6. Delete previous claim 2.

7. Amend new claim 2 (previous claim 3) to delete "or 2" on line 1.

8. Delete previous claim 9.

9. Delete previous claim 10.

10. Amend new claim 9 (previous claim 12) to substitute "claim 8" for "claim 11".

11. Amend new claim 11 (previous claim 14) to substitute "lactitol" for "lacititol" and "maltitol" for "malititol" on line 4.

12. Amend new claim 15 (previous claim 18) to insert "whey" on line 2, and to delete "a cottage cheese," on line 3.

13. Delete previous claim 25.

14. Amend new claims 17, 18, 19, 20, 21, 22, 23, 24, 27 and 28 (previously claims 20, 21, 22, 23, 24, 26, 27, 28, 31 and 32, respectively) to substitute "claim 15" for "claim 18".

15. Amend claims 25 and 26 (previous claims 29 and 30) to substitute "claim 7" for "claim 8".

16. Amend new claim 28 (previous claim 32) to insert "whey" on line 1.

17. Amend new claim 31 (previous claim 35) to substitute "claim 1" for "claim 2" on line 1, insert "whey" on line 6, and to delete "a cottage cheese" on line 7.

**FCR 34.41 (1) (c) APPELLANT'S ADDRESS FOR SERVICE**

Pearce IP
Level 8, 350 Collins Street
Melbourne, Victoria, 3000
Attention: Naomi Pearce (naomi.pearce@pearceip.law)

**FCR 34.41 (1) (c) RESPONDENT'S ADDRESS FOR SERVICE**

The Australian Government Solicitor
Level 33, 300 George Street
Brisbane QLD 4000
Attention: Alexander Tate
(Alex.Tate@ags.gov.au)

**FCR 34.41 (1) (d) OPPOSITION**

Any person intending to oppose the application who is not a party to the proceeding must, within 28 days after publication of this advertisement, give written notice of that intention to each of the Appellant (Perfect Day, Inc.) and the Respondent (Commissioner of Patents).

**ANNEXURE**

# FOOD COMPOSITIONS COMPRISING RECOMBINANT MILK PROTEINS AND METHODS OF PRODUCING THE SAME

## CROSS-REFERENCE TO RELATED APPLICATION

This application claims priority to U.S. Provisional Patent Application No. 62/040,393, filed on August 21, 2014, the entire contents of which are incorporated by reference.

## FIELD OF THE INVENTION

The invention is directed to food compositions suitable as dairy substitutes, methods of manufacturing the same, and compositions comprising animal-free milk fats and proteins for food applications, such as milk, butter, cheese, yogurt, and cream.

## BACKGROUND OF THE INVENTION

The global dairy market is estimated at $500 billion with an average annual growth rate of 4%. Bovine milk attributes to a significant portion of the market whereas plant-based alternatives account for $1 billion in the US and an estimated $700 million is estimated for lactose-intolerant milk. Bovine milk is known to have four specific caseins, α-s1-casein, α-s2-casein, β-casein, and κ-casein. Mammal- or mammalian-produced milk is a very complex fluid that includes several thousand components (e.g., if all triglycerides are identified). Mammal- or mammalin-produced milk includes water, variety of different lipids, sugar, a variety of different proteins, and a variety of different inorganic salts and compounds (see, e.g., Boland and Thompson (Eds), Milk Proteins from Expression to Food, Academic Press, 2014). Although mammal-produced milk, such as bovine milk, is considered by many to be an ideal source of nutrition, various milk alternatives to mammal- or mammalian-produced milk (e.g., bovine milk), such as plant- or nut-based milks, e.g., soy, almond, or coconut milk, have been pursued for reasons related to mammal- or mammalian-produced milk's allergenicity, lactose intolerance of certain components, personal preference, and the perceived environmental benefits of a reduced dairy industry.

For example, the environmental impact resulting from dairy effluent can result in significant levels of nitrate which has the potential to contaminate groundwater.

Groundwater forms the main source of water supply for many towns and farms where surface water supplies are limited. In the US, half the population relies completely or partially on groundwater, and similar figures are available for Europe (see, e.g., https://www.vgls.vic.gov.au/client/en_AU/search/asset/1281606/0). The presence of foodborne pathogens in milk is due to direct contact with contaminated sources in the dairy farm environment and to excretion from the udder of an infected animal. Outbreaks of disease in humans have been traced to the consumption of unpasteurized milk and have also been traced back to pasteurized milk. The major contaminants usually encountered in milk and milk products include pesticide residues, heavy metals, and aflatoxin M1 (Awasthi et al., *Indian J. Public Health* 56:95-99, 2012).

Existing dairy milk alternatives, such as soy, almond, or coconut milk fall short both in flavor and in functionality; moreover, a large part of the industrial and cultural significance of dairy milk stems from its usefulness in derivative products, such as cheese, yogurt, cream, or butter. Non-dairy plant-based milks, while addressing environmental and health concerns (and while providing adequate flavor for a small segment of the population), almost universally fail to form such derivative products when subjected to the same processes used for dairy milk.

What is needed, therefore, is a food composition that is suitable as a dairy substitute that has desirable flavor and performance characteristics, e.g., a composition that replicates dairy flavors, minimizes foodborne pathogens, and has a lower environmental impact in production, while retaining the ability to be used for derivative or downstream applications of dairy milk and while providing a similar nutritional profile as a mammal- or mammalian-produced milk.

## SUMMARY OF THE INVENTION

The present invention is based on the discovery that only a subset of components in mammal-produced milk can be used to generate a composition that has a similar flavor, a similar appearance, a similar nutritional value, a similar aroma, and a similar mouth feel of mammal-produced milk.

2015305271 18 Jul 2024

Provided herein are compositions including: about 0.3 g/L to about 1.1 g/L κ-casein protein; about 1.25 g/L to about 4.9 g/L β-casein protein; a final total concentration of one or more lipids of about 0 weight % to about 45 weight %; a final total concentration of one or more flavor compounds of about 0.01 weight % to about 6 weight %; a final total concentration of about 0.1 weight % to about 6 weight % of one or more sweetening agents; and a final total concentration of ash of about 0.15 weight % to about 1.5 weight %, where the composition does not include an animal-derived component.

Also provided are compositions that include: about 0.3 g/L to about 1.1 g/L κ-casein protein; about 1.25 g/L to about 4.9 g/L β-casein protein; a final total concentration of one or more lipids of about 0 weight % to about 45 weight %; a final total concentration of one or more flavor compounds of about 0.01 weight % to about 6 weight %; a final total concentration of about 0.1 weight % to about 6 weight % of one or more sweetening agents; and a final total concentration of ash of about 0.15 weight % to about 1.5 weight %, where the composition: does not include at least one component found in a mammal-produced milk; includes at least one component not present in a mammal-produced milk; and/or includes a higher or lower concentration of at least one component as compared to the concentration of the at least one component in a mammal-produced milk. In some embodiments of these compositions, the composition includes a higher concentration of at least one component selected from the group of: calcium, phosphate, B complex vitamins, vitamin A, vitamin D, vitamin E, and vitamin K, as compared to the concentration of the one or more components in a mammal-produced milk. In some embodiments of these compositions, the composition does not include at least one component found in a mammal-produced milk selected from the group of: lactose, bacteria, mycobacteria, allergens, viruses, prions, yeast, growth hormones, leukocytes, antibiotics, heavy metals, immunoglobulins, lactoferrin, lactoperoxidase, and lipase. In some embodiments of these compositions, wherein the composition includes at least one component not present in a mammal-produced milk selected from the group of an artificial sweetener, a plant-derived lipid, a β-casein protein that is non-glycosylated or has a non-mammalian glycosylation pattern, and a κ-casein protein that is non-glycosylated or has a non-mammalian glycosylation pattern.

Also provided are compositions including: about 0.3 g/L to about 1.1 g/L κ-casein protein that is unglycosylated or has a non-mammalian glycosylation pattern; about 1.25 g/L to about 4.9 g/L β-casein protein that is unglycosylated or has a non-mammalian glycosylation pattern; a final total concentration of one or more lipids of about 0 weight % to about 45 weight %; a final total concentration of one or more flavor compounds of about 0.01 weight % to about 6 weight %; a final total concentration of about 0.1 weight % to about 6 weight % of one or more sweetening agents; and a final total concentration of ash of about 0.15 weight % to about 1.5 weight %.

Also provided are composition including a micelle including a κ-casein protein and a β-casein protein, where the micelle has a diameter of about 50 nm to about 350 nm, and the κ-casein protein and the β-casein protein are unglycosylated or have a non-mammalian glycosylation pattern. In some embodiments of these methods, the compositions include a final concentration of micelles of about 2.0 weight % to about 6 weight %. In some embodiments of these compositions, the ratio of the β-casein protein to the κ-casein protein in the micelle is about 3.5:1 to about 5.5:1 (e.g., about about 4:1 to about 5:1). In some embodiments of these methods, the composition further includes: a final total concentration of one or more lipids of about 0 weight % to about 45 weight %; a final total concentration of one or more flavor compounds of about 0.01 weight % to about 6 weight %; a final total concentration of about 0.1 weight % to about 6 weight % of one or more sweetening agents; and a final total concentration of ash of about 0.15 weight % to about 1.5 weight %.

In some embodiments of any of the compositions described herein, the composition comprises about 0.27 weight % to about 0.75 weight % κ-casein protein and about 1.23 weight % to about 3.27 weight % β-casein. In some embodiments of any of the compositions described herein, the final total concentration of one or more lipids of is about 0 weight % to about 45 weight %.

In some embodiments of any of the compositions described herein, the one or more lipids are selected from the group consisting of: sunflower oil, coconut oil, tributyrin, mono- and di-glycerides, free fatty acids, and phospholipids. In some embodiments of any of the compositions described herein, the composition includes one of more of: a final concentration of sunflower oil of about 1 weight % to about 28 weight

%; a final concentration of coconut oil of about 0.5 weight % to about 14 weight %; a final concentration of tributyrin of about 0.05 weight to about 1.0 weight %; a final total concentration of monoglycerides and diglycerides of about 0.08 weight % to about 1.2 weight %; a final total concentration of free fatty acids of about 0.02 weight % to about 0.28 weight %; and a final total concentration of phospholipids of about 0.02 weight % to about 0.3 weight percent. In some embodiments of any of the compositions described herein, the free fatty acids comprise at least one fatty acid selected from the group of: butyric acid, caproic acid, caprylic acid, and capric acid. In some embodiments of any of the compositions described herein, the phospholipids are soy lecithin phospholipids, sunflower lecithin phospholipids, cotton lecithin phospholipids, or rapeseed lecithin phospholipids. In some embodiments of any of the compositions described herein, the monoglycerides and diglycerides are plant-derived monoglycerides and diglycerides, or are bacteria-derived monoglycerides and diglycerides.

In some embodiments of any of the compositions described herein, the flavor compounds include at least one flavor compound selected from the group consisting of: δ-decalactone, ethyl butyrate, 2-furyl methyl ketone, 2,3-pentanedione, γ-undecalactone, and δ-undecalactone. In some embodiments of any of the compositions described herein, the one or more sweetening agents is a saccharide. In some embodiments of any of the compositions described herein, the saccharide is selected from the group consisting of: glucose, mannose, maltose, fructose, galactose, lactose, sucrose, monatin, and tagatose. In some embodiments of any of the compositions described herein, the one or more sweetening agents is an artificial sweetener. In some embodiments of any of the compositions described herein, the artificial sweetener is selected from the group of: stevia, aspartame, cyclamate, saccharin, sucralose, mogrosides, brazzein, curculin, erythritol, glycyrrhizin, inulin, isomalt, ~~lacititol~~lactitol, mabinlin, ~~malititol~~maltitol, mannitol, miraculin, monatin, monelin, osladin, pentadin, sorbitol, thaumatin, xylitol, acesulfame potassium, advantame, alitame, aspartame-acesulfame, sodium cyclamate, dulcin, glucin, neohesperidin dihyrdochalcone, neotame, and P-4000.

In some embodiments of any of the compositions described herein, the ash includes one or more of: calcium, phosphorus, potassium, sodium, citrate, and chloride. In some embodiments of any of the compositions described herein, the ash comprises one

or more (e.g., one, two, or three) of $CaCl_2$, $KH_2PO_4$, and $Na_3$ citrate. In some embodiments of any of the compositions described herein, the $CaCl_2$ has a final concentration of about 0.05 g/L to about 0.2 g/L; the $KH_2PO_4$ has a final concentration of about 0.2 g/L to about 0.4 g/L; and the $Na_3$ citrate has a final concentration of about 0.1 g/L to about 0.3 g/L.

In some embodiments of any of the compositions described herein, the κ-casein protein is a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth κ-casein protein. In some embodiments of any of the compositions described herein, the β-casein protein is a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth β-casein protein.

In some embodiments of any of the compositions described herein, the composition further includes: a final concentration of α-lactalbumin protein of about 0.4 weight % to about 2.5 weight %; and/or a final concentration of β-lactoglobulin protein of about 2.5 weight % to about 4.5 weight %. In some embodiments of any of the methods described herein, the α-lactalbumin protein is a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth α-lactalbumin protein. In some embodiments of any of the compositions described herein, the β-lactoglobulin protein is a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth β-lactoglobulin protein.

In some embodiments of any of the compositions described herein, the composition further includes: a final concentration of α-S1-casein protein of about 11

weight % to about 16 weight %; and/or a final concentration of α-S2-casein protein of about 2 weight % to about 5 weight %. In some embodiments of any of the compositions described herein, the α-S1-casein protein is a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth α-S1-casein protein; and/or the α-S2-casein protein is a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth α-S2-casein protein.

In some embodiments of any of the compositions described herein, the composition further includes one or more of: serum albumin, lactoferrin, and transferrin. In some embodiments of any of the compositions described herein, the serum albumin is a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth serum albumin; the lactoferrin is a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth lactoferrin; and/or the transferrin is a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth transferrin protein.

Some embodiments of any of the compositions described herein, further include one or more color balancing agents. In some embodiments of any of the compositions described herein, the one or more color balancing agents is β-carotene or annatto. In

some embodiments of any of the compositions described herein, the composition has a pH of about 6.2 to about 7.2 (e.g., about 6.2 to about 6.8).

Also provided are compositions including: a mammalian-produced milk or a processed mammal-produced milk; and one or both of a κ-casein protein that is unglycosylated or has an non-mammalian glycosylation pattern, and a β-casein protein that is unglycosylated or has an non-mammalian glycosylation pattern. In some embodiments of these methods, the final concentration of the κ-casein protein that is unglycosylated or has a non-mammalian glycosylation pattern in the composition is 0.02 weight % to about 3.0 weight %. In some embodiments of these methods, the final concentration of the β-casein protein that is unglycosylated or has a non-mammalian glycosylation pattern in the composition is 0.02 weight % to about 3.0 weight %. In some embodiments of these methods, the final concentration of the κ-casein protein that is unglycosylated and/or has a non-mammalian glycosylation pattern in the composition is about 0.02 weight % to about 0.6 weight %; and the final concentration of the β-casein that is unglycosylated and/or has a non-mammalian glycosylation pattern in the composition is about 0.02 weight % to about 2.5 weight %.

Also provided are powder compositions that include: a final concentration of κ-casein protein of about 3.6 weight % to about 5.4 weight %; a final concentration of β-casein protein of about 16.3 weight % to about 24.5 weight %; a final concentration of a sweetening agent of about 35 weight % to about about 40 weight %; a final concentration of one or more lipids of about 25 weight % to about 30 weight %; a final concentration of ash of about 5 weight % to about 7 weight %; and a final concentration of water of about 2 weight % to about 5 weight %, where the κ-casein protein is an unglycosylated and/or has a non-mammalian glycosylation pattern, and/or the β-casein protein is an unglycosylated and/or has a non-mammalian glycosylation pattern.

Also provided are nucleic acids that include: a promoter; a sequence encoding a signal sequence; a sequence encoding a milk protein; and a yeast termination sequence, where the promoter is operably linked to the signal sequence, the signal sequence is operably linked to the sequence encoding the milk protein, and the terminal sequence is operably linked to the sequence encoding the milk protein. In some embodiments of these nucleic acids, the promoter is a constitutive promoter. In some embodiments of

these nucleic acids, the promoter is an inducible promoter. In some embodiments of these nucleic acids, the signal sequence is a signal sequence from the encoded milk protein or a different milk protein, or is a signal sequence from a yeast mating factor. In some embodiments of these nucleic acids, the encoded milk protein is selected from the group consisting of: β-casein, κ-casein, α-S1-casein, α-S2-casein, α-lactalbumin, β-lactoglobulin, lactoferrin, or transferrin. In some embodiments of these nucleic acids, the nucleic comprises a bacterial origin of replication. In some embodiments of these nucleic acids, the nucleic acid further includes a selection marker. In some embodiments of these nucleic acids, the selection marker is an antibiotic resistance gene.

Some embodiments of these nucleic acids further include: an additional promoter sequence; an additional sequence encoding a signal sequence; a sequence encoding an additional milk protein; and an additional yeast termination sequence, where the additional promoter sequence is operably linked to the additional sequence encoding a signal sequence, the sequence encoding the signal sequence is operably linked to the sequence encoding the additional milk protein, and the sequence encoding the additional milk protein is operably linked to the additional yeast terminal sequence.

Also provided are host cells that include any of the nucleic acids described herein. In some embodiments of these host cells, the host cell is a yeast strain (e.g., a *Kluyveromyces* sp., *Pichia* sp., *Saccharomyces* sp., *Tetrahymena* sp., *Yarrowia* sp., *Hansenula* sp., *Blastobotrys* sp., *Candida* sp., *Zygosaccharomyces* sp., or *Debaryomyces* sp.).

Also provided herein are methods of producing a recombinant milk protein that is unglycosylated or has a non-mammalian glycosylation pattern, the method including: culturing any of the host cells described herein in a culture medium under conditions sufficient to allow for secretion of the milk protein that is unglycosylated or has a non-mammalian glycosylation pattern; and harvesting the milk protein that is unglycosylated or has a non-mammalian glycosylation pattern from the culture medium.

Also provided are methods of producing a micelle including a β-casein that is unglycosylated or has a non-mammalian glycosylation pattern and a κ-casein that is unglycosylated or has a non-mammalian glycosylation pattern, that include: culturing any of the host cells provided herein in a culture medium under conditions sufficient to allow

for release of the micelle from the host cell, where the host cell includes nucleic acid including a sequence that encodes a β-casein and a sequence that encodes a κ-casein.

Also provided are methods of supplementing a mammal-produced milk that include: providing a mammalian-produced milk or a processed mammalian-produced milk; and mixing into the milk at least one of: a β-casein protein that is unglycosylated or has a non-mammalian glycosylation pattern; a κ-casein protein that is unglycosylated or has a non-mammalian glycosylation pattern; and a micelle including a β-casein protein that is unglycosylated or has a non-mammalian glycosylation pattern, and a κ-casein protein that is unglycosylated or has a non-mammalian glycosylation pattern.

Also provided are methods of producing a composition that include: sonicating a liquid including a protein mixture comprising β-casein protein and casein κ protein, or comprising micelles comprising β-casein protein and κ-casein protein; mixing ash into the liquid; adding to the liquid a mixture of one or more lipids, one or more flavor compounds, and one or more color balancing agents, and sonicating the liquid; and adding to the liquid one or more sweetening agents, thereby producing the composition. In some embodiments of these methods, the β-casein protein is unglycosylated or has a non-mammalian glycosylation pattern, and/or the κ-casein protein is unglycosylated or has a non-mammalian glycosylation pattern. In some embodiments of these methods, the ash includes one or more of: calcium, phosphorus, potassium, sodium, citrate, and chloride. In some embodiments of these methods, the ash added includes one or more (e.g., one, two, or three) of $CaCl_2$, $KH_2PO_4$, and $Na_3$ citrate. In some embodiments of these methods, the one or more lipids comprises at least one of: sunflower oil, coconut oil, tributyrin, mono- and di-glycerides, free fatty acids, and phospholipids. In some embodiments of these methods, the free fatty acids comprise at least one fatty acid selected from the group of: butyric acid, caproic acid, caprylic acid, and capric acid. In some embodiments of these methods, the phospholipids are soy lecithin phospholipids, sunflower lecithin phospholipids, cotton lecithin phospholipids, or rapeseed lecithin phospholipids. In some embodiments of these methods, the monoglycerides and diglycerides are plant-derived monoglycerides and diglycerides, or are bacteria-derived monoglycerides and diglycerides. In some embodiments of these methods, the flavor compounds include at least one flavor compound selected from the group consisting of:

δ-decalactone, ethyl butyrate, 2-furyl methyl ketone, 2,3-pentanedione, γ-undecalactone, and δ-undecalactone. In some embodiments of these methods, the one or more coloring balancing agent is β-carotene or annatto. In some embodiments of these methods, the one or more sweetening agents is a saccharide. In some embodiments of these methods, the saccharide is selected from the group consisting of: glucose, mannose, maltose, fructose, galactose, lactose, sucrose, monatin, and tagatose. In some embodiments of these methods, the one or more sweetening agents is an artificial sweetener. In some embodiments of these methods, the artificial sweetener is selected from the group consisting of: stevia, aspartame, cyclamate, saccharin, sucralose, mogrosides, brazzein, curculin, erythritol, glycyrrhizin, inulin, isomalt, ~~lacititol~~lactitol, mabinlin, ~~malititol~~maltitol, mannitol, miraculin, monatin, monelin, osladin, pentadin, sorbitol, thaumatin, xylitol, acesulfame potassium, advantame, alitame, aspartame-acesulfame, sodium cyclamate, dulcin, glucin, neohesperidin dihyrdochalcone, neotame, and P-4000. In some embodiments of these methods, the pH of the liquid is between about 6.2 and about 7.4 (e.g., about 6.4 to about 6.8). In some embodiments of these methods, the β-casein protein is a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth β-casein protein; and/or the κ-casein protein is a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth κ-casein protein. In some embodiments of these methods, the protein mixture further includes one or more proteins selected from the group of: α-lactalbumin, β-lactoglobulin, α-S1-casein, α-S2-casein, lactoferrin, transferrin, and serum albumin.

Also provided is a composition produced by any of the methods described herein.

Also provided is a method of making butter, cheese, caseinate, or yogurt that include: providing any of the compositions described herein; and producing the butter, cheese, caseinate, or yogurt using any of the compositions described herein as a starting material.

Also provided are kits that include: (a) a mixture of one or more milk proteins, one or more fats, and one or flavor compounds; and (b) a mixture of ash and at least one sweetening agent. In some embodiments of these kits, the one or more milk proteins are selected from the group of: β-casein, κ-casein, α-lactalbumin, β-lactoglobulin, α-S1-casein, α-S2-casein, lactoferrin, transferrin, and serum albumin. In some embodiments of these kits, the one or more milk proteins are cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth milk proteins. In some embodiments of these kits, the one or more fats are selected from the group consisting of: sunflower oil, coconut oil, tributyrin, mono- and di-glycerides, free fatty acids, and phospholipids. In some embodiments of these kits, the free fatty acids include at least one fatty acid selected from the group of: butyric acid, caproic acid, caprylic acid, and capric acid. In some embodiments of these kits, the phospholipids are soy lecithin phospholipids, sunflower lecithin phospholipids, cotton lecithin phospholipids, or rapeseed lecithin phospholipids. In some embodiments of these kits, the monoglycerides and diglycerides are plant-derived monoglycerides and diglycerides, or are bacteria-derived monoglycerides and diglycerides. In some embodiments of these kits, the flavor compounds comprise at least one flavor compound selected from the group consisting of: δ-decalactone, ethyl butyrate, 2-furyl methyl ketone, 2,3-pentanedione, γ-undecalactone, and δ-undecalactone. In some embodiments of these kits, the mixture in (a) further includes one or more color balancing agent. In some embodiments of these kits, the one or more color balancing agent is β-carotene or annatto. In some embodiments of these kits, the one or more sweetening agents is a saccharide (e.g., a saccharide selected from the group of: glucose, mannose, maltose, fructose, galactose, lactose, sucrose, monatin, and tagatose). In some embodiments of these kits, the one or more sweetening agents is an artificial sweetener (e.g., an artificial sweetener selected from the group of: stevia, aspartame, cyclamate, saccharin, sucralose, mogrosides, brazzein, curculin, erythritol, glycyrrhizin, inulin, isomalt, ~~lacititol~~lactitol, mabinlin, ~~malititol~~maltitol, mannitol, miraculin, monatin, monelin, osladin, pentadin, sorbitol, thaumatin, xylitol, acesulfame potassium, advantame, alitame, aspartame-

acesulfame, sodium cyclamate, dulcin, glucin, neohesperidin dihyrdochalcone, neotame, and P-4000). In some embodiments of any of these kits, the ash includes one or more of: calcium, phosphorus, potassium, sodium, citrate, and chloride. In some embodiments of these kits,

the ash includes one or more (e.g., one, two, or three) of $CaCl_2$, $KH_2PO_4$, and $Na_3$ citrate. Some embodiments of these kits further include instructions for making any of the compositions described herein.

Also provided are kits that include at least one of the nucleic acids described herein.

Also provided herein are dairy substitute food products including one or more isolated milk protein components, fats, carbohydrates, and ash. In some embodiments of these dairy substitute food products, the food product is non-animal derived. In some embodiments of these substitute food product, the food product includes milk, butter, cheese, caseinare, yogurt, and cream. In some embodiments of these dairy substitute food products, the isolated milk protein components include casein and whey proteins. In some embodiments of these dairy substitute food products, the casein protein further includes alpha-s1, alpha-s2, beta, and kappa-casein. In some embodiments of these dairy substitute food products, the casein protein further includes alpha-s1, beta, and kappa. In some embodiments of these dairy substitute food products, the casein protein further includes components for micelle formation. In some embodiments of these dairy substitute food products, the casein protein exhibits curdling properties at pH 4.0 – 6.0. In some embodiments of these dairy substitute food products, the casein protein is at least or equal to 2.5% (w/v) and less than or equal to 10% (w/v). In some embodiments of these dairy substitute food products, the whey protein further includes beta-lactoglobulin and alpha-lactalbumin. In some embodiments of these dairy substitute food products, the whey protein forms a polymer matrix gel. In some embodiments of these dairy substitute food products, the whey protein is at least 0.1 % (w/v) and less than or equal to 1% (w/v). In some embodiments of these dairy substitute food products, the one or more milk protein components is isolated from microbes. In some embodiments of any of these dairy substitute food products, the one or more milk protein components is isolated from recombinant microbes. In some embodiments of these dairy substitute food products,

the one or more milk protein components is synthesized in eukaryotic microbes. In some embodiments of these dairy substitute food products, the eukaryotic microbes include yeast. In some embodiments of these dairy substitute food products, the yeast include *Kleuyveromyces* sp., *Pichia* sp., Saccharomyces sp. and *Tetrahymena* sp.

In some embodiments of these substitute food products, the fats include triglycerides. In some embodiments of these dairy substitute food products, the fats comprise high-oleic oil. In some embodiments of these dairy substitute food products, the high-oleic oil further includes one or more of monounsaturates, oleic, linoleic, linolenic and saturates. In some embodiments of these dairy substitute food products, the fats comprise short chain fatty acids. In some embodiments of these dairy substitute food products, the short chain fatty acids include butanoic, hexanoic, octanoic, and decanoic acids. In some embodiments of these dairy substitute food products, one or more of the fats comprised trans-esterified fatty acids. In some embodiments of these dairy substitute food products, one or more of the fats are isolated from plants. In some embodiments of these dairy substitute food products, the plant is selected from one or more of the following: sunflower, corn, olive, soy, peanut, walnut, almond, sesame, cottonseed, canola, safflower, flax seed, palm, palm kernel, palm fruit, coconut, babassu, shea butter, mango butter, cocoa butter, wheat germ and rice bran oil. In some embodiments of these dairy substitute food products, the sugars comprise of galactose, sucrose, glucose, fructose and maltose. In some embodiments of these dairy substitute food products, the dairy substitute food product is essentially free of lactose. In some embodiments of these dairy substitute food products, the ash includes minerals. In some embodiments of these dairy substitute food products, the minerals further include one or more of the following: sodium, potassium, calcium, magnesium, phosphorus, iron, copper, zinc, chloride, manganese, selenium, iodine, retinol, carotene, vitamins, vitamin D, vitamin E, vitamin B12, thiamin and riboflavin. In some embodiments of these dairy substitute food products, the ash includes anions. In some embodiments of these dairy substitute food products, the minerals further include one or more of the following: phosphate, citrate, sulfate, carbonate, and chloride.

Also provided are methods of making a dairy substitute food product including the step of contacting one or more isolated milk protein components, interesterified fats, carbohydrates and ash. Some embodiments of these methods, further include the step of isolating one or more milk protein components is from a lower eukaryote.

Also provided are methods of altering a flavor profile of a dairy substitute product that include modulating a combination of fatty acids in a mixture including milk protein components, carbohydrates, and ash. In some embodiments of these methods, the step of modulating includes triglyceride comprising three oleic acids and short-chain triglyceride comprising butyric, one hexanoic, and one octanoic acid. In some embodiments of these methods, the step of modulating comprises increasing or decreasing one or more fatty acids comprising butyric acid, caprioc acid, caprylic acid, and capric acid. In some embodiments of these methods, the flavor profile of a dairy substitute product mimics the flavor profile of one or more dairy product. In some embodiments of these methods, the flavor profile of one or more dairy food product includes bovine milk, goat milk, soy milk, almond milk and coconut milk. In some embodiments of these methods, the flavor profile includes one or more sensory impressions selected from: buttery, nutty, sweet, sour, fruity, floral, bitter, woody, earthy, beany, spicy, metallic, sweet, musty, oily and vinegary.

Disclosed herein are methods and compositions to produce dairy substitutes. In some embodiments, methods and compositions are provided for a dairy substitute food product comprising one or more isolated milk protein components, fats, carbohydrates and ash. In certain embodiments, methods and compositions are provided for dairy substitute composition comprising casein protein and whey protein wherein the composition is essentially free of animal products and wherein the casein protein to whey protein are in a preferred (w/v) ratio. In certain other embodiments, methods are provided to modulate a flavor profile of a dairy substitute food product comprising modulating a fatty acid content in a mixture comprising milk protein components, fats, carbohydrates, and ash. Preferred steps of modulating comprises increasing or decreasing one or more fatty acids comprising butyric acid, caproic acid, caprylic acid, and capric acid. In additional embodiments, methods and compositions of the present invention provide milk protein components and fats in a desired (w/v) ratio.

In various aspects, the methods and compositions of the present invention provide for dairy substitutes that still retain their functional characteristics and organoleptic properties. In some embodiments, the core functionalities can be, but are not limited to achieving a nutritional profile similar to a conventional dairy product, and replicates one or more, if not all, of the core functionalities thereof.

In other embodiments, the core functionalities can be, but are not limited to replicating sensory characteristics that are identical or similar to the traditional dairy-based products, which include but are not limited to taste, appearance, handling and mouthfeel, desired density, structure, texture, elasticity, springiness, coagulation, binding, leavening, aeration, foaming, creaminess, and emulsification.

Preferred methods and compositions provide dairy substitute products such as milk, butter, cheese, yogurt, and cream. Provided herein are formulations for a non-dairy milk substitute comprising (3.3%) one or more isolated milk protein components, (4.0%) fats, (2.4%) carbohydrates and (0.7%) ash (w/v). Varying the fat content through modulating triglyceride levels and the fatty acid composition of the triglycerides enhances the flavor profile of the non-dairy milk substitute.

Advantages in the methods and dairy substitute compositions include reduction or removal of antibiotic residues, heavy metals, bacteria and adulterations commonly found in natural dairy products as well as reducing environmental impact.

Accordingly, certain aspects of the present invention provide animal-free dairy substitute that has desirable flavor characteristics, e.g., replicates dairy flavors, minimizes foodborne pathogens and has a lower environmental impact, while retaining the downstream applications of dairy milk.

A definition of a specific embodiment of the invention as claimed herein follows.

According to an embodiment of the invention, there is provided a food composition, other than a cottage cheese or hard cheese, comprising:

(i) a recombinant β-lactoglobulin protein and a recombinant α-lactalbumin protein, wherein ~~one or~~ both of the recombinant β-lactoglobulin protein and the recombinant α-lactalbumin protein comprises a sequence that is at least 90% identical to the bovine protein amino acid sequence and has been produced by a fungal cell;

(ii) one or more sweetening agents;

(iii) ash; and

(iv) optionally, one or more lipids,

wherein:

the food composition has one or more characteristics of a dairy food product selected from the group consisting of: taste, aroma, appearance, handling, mouthfeel, density, structure, texture, elasticity, springiness, coagulation, binding, ~~leavening,~~ aeration, foaming, creaminess, and emulsification; and

the food composition does not comprise any other milk proteins than those in (i).

The term "comprise" and variants of the term such as "comprises" or "comprising" are used herein to denote the inclusion of a stated integer or stated integers but not to exclude any other integer or any other integers, unless in the context or usage an exclusive interpretation of the term is required.

Unless otherwise defined herein, scientific and technical terms used in connection with the present invention shall have the meanings that are commonly understood by those of ordinary skill in the art. Further, unless otherwise required by context, singular terms shall include the plural and plural terms shall include the singular. Generally, nomenclatures used in connection with, and techniques of, dairy processing, biochemistry, enzymology, molecular and cellular biology, microbiology, genetics and protein and nucleic acid chemistry and hybridization described herein are those well-known and commonly used in the art.

Methods and materials are described herein for use in the present invention; other, suitable methods and materials known in the art can also be used. The materials, methods, and examples are illustrative only and not intended to be limiting.

All publications, patents, patent applications, sequences, database entries, and other references mentioned herein are incorporated by reference to the same extent as if each individual publication, patent, patent application, sequence, database entry, or other reference was specifically and individually indicated to be incorporated by reference. In case of conflict, the present specification, including definitions, will control.

Other features and advantages of the invention will be apparent from the following detailed description and figures, and from the claims.

The terminology and description used herein is for the purpose of describing particular embodiments only and is not intended to limit the invention. As used herein, the singular forms "a," "an," and "the" can be intended to include the plural forms as well, unless the context clearly indicates otherwise. The terms "including," "includes," "having," "has," "with," or variants thereof are intended to be inclusive in a manner similar to the term "comprising".

An "isolated" RNA, DNA or a mixed polymer is one which is substantially separated from other cellular components that naturally accompany the native polynucleotide in its natural host cell, e.g., ribosomes, polymerases, and genomic sequences with which it is naturally associated.

As used herein, an "isolated" organic molecule (e.g., a fatty acid or a SCFA) is one which is substantially separated from the cellular components (membrane lipids, chromosomes, proteins) of the host cell from which it originated. As used herein, the term "isolated" with respect to protein indicates that the preparation of protein is at least 60% pure, e.g., greater than 65%, 70%, 75%, 80%, 85%, 90%, 95%, or 99% pure. The term does not require that the biomolecule has been separated from all other chemicals, although certain isolated biomolecules may be purified to near homogeneity.

The term "polynucleotide" or "nucleic acid molecule" refers to a polymeric form of nucleotides of at least 10 bases in length. The term includes DNA molecules (e.g., cDNA or genomic or synthetic DNA) and RNA molecules (e.g., mRNA or synthetic RNA), as well as analogs of DNA or RNA containing non-natural nucleotide analogs,

non-native internucleoside bonds, or both. The nucleic acid can be in any topological conformation. For instance, the nucleic acid can be single-stranded, or double-stranded, or circular.

The term "SCFA" is abbreviated for short-chain fatty acids, the term "HOSO" is abbreviated for high oleic sunflower oil, "SCTG" is abbreviated for short-chain triglycerides.

The term "milk protein component" refers to proteins or protein equivalents and variants found in milk such as casein, whey or the combination of casein and whey, including their subunits, which are derived from various sources and as further defined herein.

The term "milk protein" means a protein that is found in a mammal-produced milk or a protein having a sequence that is at least 80% identical (e.g., at least 85%, at least 90%, at least 95%, at least 96%, at least 97%, at least 98%, or at least 99% identical) to the sequence of a protein that is found in a mammal-produced milk. Non-limiting examples of milk proteins include: β-casein, κ-casein, α-S1-casein, α-S2-casein, α-lactalbumin, β-lactoglobulin, lactoferrin, transferrin, and serum albumin. Additional milk proteins are known in the art.

The term "casein protein" is art-known and represents a family of proteins that is present in mammal-produced milk and is capable of self-assembling with other proteins in the family to form micelles and/or precipitate out of an aqueous solution at an acidic pH. Non-limiting examples of casein proteins include: β-casein, κ-casein, α-S1-casein, and α-S2-casein. Non-limiting examples of sequences for casein protein from different mammals are provided herein. Additional sequences for other mammalian caseins are known in the art.

The term "mammal-produced milk" is art known and means a milk produced by a mammal.

The term "processed mammal-produced milk" means a mammal-produced milk that is processed using one or more steps known in the dairy industry (e.g., homogenization, pasteurization, irradiation, or supplementation).

The term “mammal-derived component” means a molecule or compound (e.g., a protein, a lipid, or a nucleic acid) obtained from the body of a mammal or a molecule obtained from a fluid or solid produced by a mammal.

The term “component of milk” or “milk component” is a molecule, compound, element, or an ion present in a mammal-produced milk.

The term “non-mammalian glycosylation pattern” means one of a difference in one or more location(s) of glycosylation in a protein, and/or a difference in the amount of and/or type of glycosylation at one or more location(s) in a protein produced and post-translational modified in a non-mammalian cell (e.g., a yeast cell, an insect cell, or a bacterial cell) as compared to a reference protein (e.g., the same protein produced and post-translationally modified in a mammalian cell, e.g., a CHO cell, a MEK cell, or a mammalian udder cell).

The term “lipids” means one or more molecules (e.g., biomolecules) that include a fatty acyl group (e.g., saturated or unsaturated acyl chains). For example, the term lipids includes oils, phospholipids, free fatty acids, phospholipids, monoglycerides, diglycerides, and triglycerides. Non-limiting examples of lipids are described herein. Additional examples of lipids are known in the art.

The term “plant-derived lipid” means a lipid obtained from and/or produced by a plant (e.g., monocot or dicot).

The term “sweetening agent” means a saccharide (e.g., a monosaccharide, a disaccharide, or a polysaccharide) or an artificial sweetener (e.g., a small molecule artificial sweetener or a protein artificial sweetener) that, when added to a composition, makes the composition taste sweet when ingested by a mammal, such as a human. Non-limiting examples of sweetening agents are described herein. Additional examples of sweetening agents are known in the art.

The term “ash” is an art-known term and represents one or more ions, elements, minerals, and/or compounds that can be found in a mammal-produced milk. Non-limiting ions, elements, minerals, and compounds that are found in a mammal-produced milk are described herein. Additional ions, elements, minerals, and compounds that are found in a mammal-produced milk are also known in the art.

The term “color balancing agent” or “coloring agent” means an agent added to a composition to modulate the color of the composition, e.g., to make the color of the composition appear more similar to a mammalian-produced milk. Non-limiting examples of color balancing agents or coloring agents include β-carotene and annatto. Other examples of coloring balancing agents are known in the art. A color balancing agent or a coloring agent can be produced by or obtained from a plant.

The term “micelle” means is a generally (or roughly) spherical supramolecular structure that exists as a dispersion within a composition. A micelle can have, e.g., a surface that is composed of a charged outer layer. A micelle can encapsulate one or more biomolecules. For example, a micelle can encapsulate two or more proteins (e.g., a β-casein protein and a κ-casein protein). A micelle can have diameter of between about 10 nm and about 350 nm. Additional aspects and characteristics of micelles are known in the art.

The phrase “concentration of a component in a mammal-produced milk” means the concentration of a component in the milk produced by a mammal or the mean concentration of a component in milk produced by a population of mammals of the same species.

The term “attenuate” as used herein generally refers to a functional deletion, including a mutation, partial or complete deletion, insertion, or other variation made to a gene sequence or a sequence controlling the transcription of a gene sequence, which reduces or inhibits production of the gene product, or renders the gene product non-functional. In some instances a functional deletion is described as a knockout mutation. Attenuation also includes amino acid sequence changes by altering the nucleic acid sequence, placing the gene under the control of a less active promoter, down-regulation, expressing interfering RNA, ribozymes or antisense sequences that target the gene of interest, or through any other technique known in the art. In one example, the sensitivity of a particular enzyme to feedback inhibition or inhibition caused by a composition that is not a product or a reactant (non-pathway specific feedback) is lessened such that the enzyme activity is not impacted by the presence of a compound. In other instances, an enzyme that has been altered to be less active can be referred to as attenuated.

Deletion: The removal of one or more nucleotides from a nucleic acid molecule or one or more amino acids from a protein, the regions on either side being joined together.

Knock-Out: A gene whose level of expression or activity has been reduced to zero. In some examples, a gene is knocked-out via deletion of some or all of its coding sequence. In other examples, a gene is knocked-out via introduction of one or more nucleotides into its open reading frame, which results in translation of a non-sense or otherwise non-functional protein product.

The term "synthetic milk substitute" refers to a composition that resembles, is similar to, is to equivalent to, or is nearly identical to a dairy milk.

The term "flavor" refers to the taste and/or the aroma of a food or drink.

The term "recombinant" is an art known-term. When referring to a nucleic acid (e.g., a gene), the term "recombinant" can be used, e.g., to describe a nucleic acid that has been removed from its naturally occurring environment, a nucleic acid that is not associated with all or a portion of a nucleic acid abutting or proximal to the nucleic acid when it is found in nature, a nucleic acid that is operatively linked to a nucleic acid which it is not linked to in nature, or a nucleic acid that does not occur in nature. The term "recombinant" can be used, e.g., to describe cloned DNA isolates, or a nucleic acid including a chemically-synthesized nucleotide analog. When "recombinant" is used to describe a protein, it can refer to, e.g., a protein that is produced in a cell of a different species or type, as compared to the species or type of cell that produces the protein in nature.

As used herein, an endogenous nucleic acid sequence in the genome of an organism (or the encoded protein product of that sequence) is deemed "recombinant" herein if a heterologous sequence is placed adjacent to the endogenous nucleic acid sequence, such that the expression of this endogenous nucleic acid sequence is altered. In this context, a heterologous sequence is a sequence that is not naturally adjacent to the endogenous nucleic acid sequence, whether or not the heterologous sequence is itself endogenous (originating from the same host cell or progeny thereof) or exogenous (originating from a different host cell or progeny thereof). By way of example, a promoter sequence can be substituted (e.g., by homologous recombination) for the native promoter of a gene in the genome of a host cell, such that this gene has an altered

expression pattern. This gene would now become "recombinant" because it is separated from at least some of the sequences that naturally flank it.

A nucleic acid is also considered "recombinant" if it contains any modifications that do not naturally occur to the corresponding nucleic acid in a genome. For instance, an endogenous coding sequence is considered "recombinant" if it contains an insertion, deletion, or a point mutation introduced artificially, e.g., by human intervention. A "recombinant nucleic acid" also includes a nucleic acid integrated into a host cell chromosome at a heterologous site and a nucleic acid construct present as an episome.

The term "percent sequence identity" or "identical" in the context of nucleic acid sequences refers to the residues in the two sequences which are the same when aligned for maximum correspondence. The length of sequence identity comparison may be over a stretch of at least about nine nucleotides, usually at least about 20 nucleotides, more usually at least about 24 nucleotides, typically at least about 28 nucleotides, more typically at least about 32 nucleotides, and preferably at least about 36 or more nucleotides. There are a number of different algorithms known in the art which can be used to measure nucleotide sequence identity. For instance, polynucleotide sequences can be compared using FASTA, Gap, or Bestfit, which are programs in Wisconsin Package Version 10.0, Genetics Computer Group (GCG), Madison, Wis. FASTA provides alignments and percent sequence identity of the regions of the best overlap between the query and search sequences. See, e.g., Pearson, *Methods Enzymol.* 183:63-98, 1990 (hereby incorporated by reference in its entirety). For instance, percent sequence identity between nucleic acid sequences can be determined using FASTA with its default parameters (a word size of 6 and the NOPAM factor for the scoring matrix) or using Gap with its default parameters as provided in GCG Version 6.1, herein incorporated by reference. Alternatively, sequences can be compared using the computer program, BLAST (Altschul et al., *J. Mol. Biol.* 215:403-410, 1990; Gish and States, *Nature Genet.* 3:266-272, 1993; Madden et al., *Meth. Enzymol.* 266:131-141, 1996; Altschul et al., *Nucleic Acids Res.* 25:3389-3402, 1997; Zhang and Madden, *Genome Res.* 7:649-656, 1997, especially blastp or tblastn (Altschul et al., *Nucleic Acids Res.* 25:3389-3402, 1997.

The term "substantial homology" or "substantial similarity," when referring to a nucleic acid or fragment thereof, indicates that, when optimally aligned with appropriate

nucleotide insertions or deletions with another nucleic acid (or its complementary strand), there is nucleotide sequence identity in at least about 76%, 80%, 85%, preferably at least about 90%, and more preferably at least about 95%, 96%, 97%, 98% or 99% of the nucleotide bases, as measured by any well-known algorithm of sequence identity, such as FASTA, BLAST or Gap, as discussed above.

Alternatively, substantial homology or similarity exists when a nucleic acid or fragment thereof hybridizes to another nucleic acid, to a strand of another nucleic acid, or to the complementary strand thereof, under stringent hybridization conditions. "Stringent hybridization conditions" and "stringent wash conditions" in the context of nucleic acid hybridization experiments depend upon a number of different physical parameters. Nucleic acid hybridization will be affected by such conditions as salt concentration, temperature, solvents, the base composition of the hybridizing species, length of the complementary regions, and the number of nucleotide base mismatches between the hybridizing nucleic acids, as will be readily appreciated by those skilled in the art. One having ordinary skill in the art knows how to vary these parameters to achieve a particular stringency of hybridization.

In general, "stringent hybridization" is performed at about 25 °C below the thermal melting point (Tm) for the specific DNA hybrid under a particular set of conditions. "Stringent washing" is performed at temperatures about 5 °C lower than the Tm for the specific DNA hybrid under a particular set of conditions. The Tm is the temperature at which 50% of the target sequence hybridizes to a perfectly matched probe. See Sambrook et al., Molecular Cloning: A Laboratory Manual, 2d ed., Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., page 9.51, 1989, hereby incorporated by reference. For purposes herein, "stringent conditions" are defined for solution phase hybridization as aqueous hybridization (i.e., free of formamide) in 6xSSC (where 20xSSC contains 3.0 M NaCl and 0.3 M sodium citrate), 1% SDS at 65 °C for 8-12 hours, followed by two washes in 0.2xSSC, 0.1% SDS at 65 °C. for 20 minutes. It will be appreciated by the skilled worker that hybridization at 65 °C will occur at different rates depending on a number of factors including the length and percent identity of the sequences which are hybridizing.

The nucleic acids (also referred to as polynucleotides) of this present invention may include both sense and antisense strands of RNA, cDNA, genomic DNA, and synthetic forms and mixed polymers of the above. They may be modified chemically or biochemically or may contain non-natural or derivatized nucleotide bases, as will be readily appreciated by those of skill in the art. Such modifications include, for example, labels, methylation, substitution of one or more of the naturally occurring nucleotides with an analog, internucleotide modifications such as uncharged linkages (e.g., methyl phosphonates, phosphotriesters, phosphoramidates, carbamates, etc.), charged linkages (e.g., phosphorothioates, phosphorodithioates, etc.), pendent moieties (e.g., polypeptides), intercalators (e.g., acridine, psoralen, etc.), chelators, alkylators, and modified linkages (e.g., alpha anomeric nucleic acids, etc.) Examples of modified nucleotides are described in Malyshev et al., *Nature* 509:385-388, 2014; and Li et al., *J. Am. Chem. Soc.* 136:826-829, 2014. Also included are synthetic molecules that mimic polynucleotides in their ability to bind to a designated sequence via hydrogen bonding and other chemical interactions. Such molecules are known in the art and include, for example, those in which peptide linkages substitute for phosphate linkages in the backbone of the molecule. Other modifications can include, for example, analogs in which the ribose ring contains a bridging moiety or other structure such as the modifications found in “locked” nucleic acids.

The term “mutated” when applied to nucleic acid sequences means that nucleotides in a nucleic acid sequence may be inserted, deleted, or changed compared to a reference nucleic acid sequence. A single alteration may be made at a locus (a point mutation) or multiple nucleotides may be inserted, deleted, or changed at a single locus. In addition, one or more alterations may be made at any number of loci within a nucleic acid sequence. A nucleic acid sequence may be mutated by any method known in the art including but not limited to mutagenesis techniques such as “error-prone PCR” (a process for performing PCR under conditions where the copying fidelity of the DNA polymerase is low, such that a high rate of point mutations is obtained along the entire length of the PCR product; see, e.g., Leung et al., *Technique* 1:11-15, 1989, and Caldwell and Joyce, *PCR Methods Applic.* 2:28-33, 1992); and "oligonucleotide-directed mutagenesis" (a

process which enables the generation of site-specific mutations in any cloned DNA segment of interest; see, e.g., Reidhaar-Olson and Sauer, *Science* 241:53-57, 1988).

The term "vector" as used herein is intended to refer to a nucleic acid molecule capable of transporting another nucleic acid to which it has been linked. One type of vector is a "plasmid," which generally refers to a circular double stranded DNA loop into which additional DNA segments may be ligated, but also includes linear double-stranded molecules such as those resulting from amplification by the polymerase chain reaction (PCR) or from treatment of a circular plasmid with a restriction enzyme. Other vectors include cosmids, bacterial artificial chromosomes (BAC) and yeast artificial chromosomes (YAC). Another type of vector is a viral vector, wherein additional DNA segments may be ligated into the viral genome (discussed in more detail below). Certain vectors are capable of autonomous replication in a host cell into which they are introduced (e.g., vectors having an origin of replication which functions in the host cell). Other vectors can be integrated into the genome of a host cell upon introduction into the host cell, and are thereby replicated along with the host genome. Moreover, certain preferred vectors are capable of directing the expression of genes to which they are operatively linked. Such vectors are referred to herein as "recombinant expression vectors" (or simply "expression vectors").

Promoters useful for expressing the recombinant genes described herein include both constitutive and inducible/repressible promoters. Examples of inducible/repressible promoters include galactose-inducible promoters (e.g., PLAC4-PBI). Where multiple recombinant genes are expressed in an engineered yeast, the different genes can be controlled by different promoters or by identical promoters in separate operons, or the expression of two or more genes may be controlled by a single promoter as part of an operon.

The term "operably linked" expression control sequences refers to a linkage in which the expression control sequence is contiguous with the gene of interest to control the gene of interest, as well as expression control sequences that act in trans or at a distance to control the gene of interest.

The term "expression control sequence" or "regulatory sequences" are used interchangeably and as used herein refer to polynucleotide sequences which are necessary

to affect the expression of coding sequences to which they are operably linked. Expression control sequences are sequences which control the transcription, post-transcriptional events, and translation of nucleic acid sequences. Expression control sequences include appropriate transcription initiation, termination, promoter and enhancer sequences; efficient RNA processing signals, such as splicing and polyadenylation signals; sequences that stabilize cytoplasmic mRNA; sequences that enhance translation efficiency (e.g., ribosome binding sites); sequences that enhance protein stability; and when desired, sequences that enhance protein secretion. The nature of such control sequences differs depending upon the host organism; in prokaryotes, such control sequences generally include promoter, ribosomal binding site, and transcription termination sequence. The term "control sequences" is intended to include, at a minimum, all components whose presence is essential for expression, and can also include additional components whose presence is advantageous, for example, leader sequences and fusion partner sequences.

The term "transfect", "transfection", "transfecting," and the like refer to the introduction of a heterologous nucleic acid into eukaryote cells, both higher and lower eukaryote cells. Historically, the term "transformation" has been used to describe the introduction of a nucleic acid into a yeast or fungal cell; however, herein the term "transfection" is used to refer to the introduction of a nucleic acid into any eukaryote cell, including yeast and fungal cells.

The term "recombinant host cell" ("expression host cell", "expression host system", "expression system" or simply "host cell"), as used herein, is intended to refer to a cell into which a recombinant vector has been introduced. It should be understood that such terms are intended to refer not only to the particular subject cell but to the progeny of such a cell. Because certain modifications may occur in succeeding generations due to either mutation or environmental influences, such progeny may not, in fact, be identical to the parent cell, but are still included within the scope of the term "host cell" as used herein. A recombinant host cell may be an isolated cell or cell line grown in culture or may be a cell which resides in a living tissue or organism. Preferred host cells are yeasts and fungi.

The term "yeast and filamentous fungi" include, but are not limited to any *Kluyveromyces* sp., such as *Kluyveromyces lactis*, *Kluyveromyces marxianus, Saccharomyces* sp., such as *Saccharomyces cerevisiae*, *Pichia* sp., such as *Pichia pastoris*, *Pichia finlandica*, *Pichia trehalophila*, *Pichia koclamae*, *Pichia membranaefaciens*, *Pichia minuta* (*Ogataea minuta*, *Pichia lindneri*), *Pichia opuntiae*, *Pichia thermotolerans*, *Pichia salictaria*, *Pichia guercuum*, *Pichia pijperi, Pichia stiptis*, *Pichia methanolica*, *Hansenula polymorpha*, *Candida albicans*, any *Aspergillus* sp., such as *Aspergillus nidulans*, *Aspergillus niger*, *Aspergillus oryzae*, *Trichoderma reesei*, *Chrysosporium lucknowense*, *Fusarium* sp., *Fusarium gramineum*, *Fusarium venenatum*, *Physcomitrella patens*, and *Neurospora crassa*.

As used herein, the term "predominantly" or variations thereof will be understood to mean, for instance, a) in the context of fats the amount of a particular fatty acid composition relative to the total amount of fatty acid composition; b) in the context of protein the amount of a particular protein composition (e.g., β-casein) relative to the total amount of protein composition (e.g., α-, β-, and κ-casein).

The term "about," "approximately," or "similar to" means within an acceptable error range for the particular value as determined by one of ordinary skill in the art, which can depend in part on how the value is measured or determined, or on the limitations of the measurement system. It should be understood that all ranges and quantities described below are approximations and are not intended to limit the invention. Where ranges and numbers are used these can be approximate to include statistical ranges or measurement errors or variation. In some embodiments, for instance, measurements could be plus or minus 10%.

The phrase "essentially free of" is used to indicate the indicated component, if present, is present in an amount that does not contribute, or contributes only in a *de minimus* fashion, to the properties of the composition. In various embodiments, where a composition is essentially free of a particular component, the component is present in less than a functional amount. In various embodiments, the component may be present in trace amounts. Particular limits will vary depending on the nature of the component, but may be, for example, selected from less than 10% by weight, less than 9% by weight, less than 8% by weight, less than 7% by weight, less than 6% by weight, less than 5% by

weight, less than 4% by weight, less than 3% by weight, less than 2% by weight, less than 1% by weight, or less than 0.5% by weight.

As used herein, the term "essentially free of" a particular carbohydrate, such as lactose is used to indicate that the food composition is substantially devoid of carbohydrate residues. Expressed in terms of purity, essentially free means that the amount of carbohydrate residues do not exceed 10%, and preferably is below 5%, more preferably below 1%, most preferably below 0.5%, wherein the percentages are by weight or by mole percent. Thus, substantially all of the carbohydrate residues in a food composition according to the present invention are free of, for example, lactose.

Unless indicated otherwise, percentage (%) of ingredients refer to total % by weight.

Unless otherwise indicated, and as an example for all sequences described herein under the general format "SEQ ID NO:", "nucleic acid comprising SEQ ID NO:1" refers to a nucleic acid, at least a portion of which has either (i) the sequence of SEQ ID NO:1, or (ii) a sequence complementary to SEQ ID NO:1. The choice between the two is dictated by the context. For instance, if the nucleic acid is used as a probe, the choice between the two is dictated by the requirement that the probe be complementary to the desired target.

## BRIEF DESCRIPTION OF THE FIGURES

Figure 1 represents a flow diagram representative of an exemplary process to produce synthetic milk substitute.

Figure 2A represents a picture depicting precipitate of an exemplary milk protein component.

Figure 2B represents a picture depicting a pellet of an exemplary milk protein component.

Figure 3 represents an image of a silver stain SDS-PAGE gel to visualize the milk protein components.

Figure 4 is a SYPRO Ruby-stained SDS-PAGE gel showing the levels of secretion of α-lactalbumin mediated by the OST signal sequence, the native α-

lactalbumin signal sequence, and the α mating factor signal sequence as described in Example 6.

Figure 5 is shows the levels of secretion of α-lactalbumin by wildtype yeast cells or yeast cells expressing α-lactalbumin using the native α-lactalbumin signal peptide or a OST1 signal peptide (as determined by an ELISA assay as described in Example 6).

Figure 6 is shows the levels of secretion of β-lactoglobulin by wildtype yeast cells and yeast cells including a vector as described in Example 6 (using SDS-PAGE).

Figure 7 is a Western blot showing the level of secretion of β-lactoglobulin from wildtype yeast and yeast cells including a vector as described in Example 6.

Figure 8 is a graph showing the level of secreted β-casein and secreted α-S1-casein produced by wildtype yeast and yeast cells including the vectors described in Example 6.

Figure 9 is a schematic showing the steps in the process described in Example 7.

Figure 10 is an image of a composition made by a method described herein.

## DETAILED DESCRIPTION OF THE INVENTION

The invention is based on the discovery that only a few components present in a mammal-produced milk provide for the texture and taste of a mammal-produced milk, and the development of compositions that have a similar taste, aroma, and mouth feel as compared to compositions produced from mammal-produced milk. In view of this discovery, provided herein are such compositions, methods of making the compositions, and kits including these compositions and mixtures useful for making these compositions.

The compositions provided herein provide for compositions that have a similar taste, mouth feel, aroma, and nutritional value as compared to compositions produced from mammal-produced milk, but lack one or more of the components of a mammal-produced milk that may be considered to be undesirable (e.g., allergens, lactose, antibiotics, hormones (e.g., stress hormones and/or growth hormones), heavy metals, bacteria (e.g., *E. coli*), viruses, and prions). The compositions provided herein also have an improved shelf-life as compared to compositions produced from mammal-produced milk, and can have an improved aroma profile as compared to compositions produced from mammal-produced milk.

Also provided herein are methods and compositions for dairy substitute food product comprising one or more isolated milk protein components, fats, carbohydrates and ash. In certain aspects the methods and compositions comprise milk or milk-like protein equivalents. Preferably, the milk protein component is essentially free of impurities. In some embodiments, the milk protein component comprises microbially derived or produced casein, whey or a combination thereof. More preferably, a method is provided to introduce an engineered nucleic acid sequence encoding one or more milk protein components. Even more preferably, the milk protein component is not animal derived. In other preferred embodiments, the recombinant milk protein component is modified to express the same phosphate groups or lack phosphate groups and/or carbohydrate groups attached to the casein proteins. By having recombinant β-casein and κ-casein having the same phosphate groups as the same proteins present in a mammal-produced milk, the recombinant β-casein and the recombinant κ-casein are able to form micelles.

The methods and techniques of the present invention are generally performed according to conventional methods well known in the art and as described in various general and more specific references that are cited and discussed throughout the present specification unless otherwise indicated. See, e.g., Sambrook et al., Molecular Cloning: A Laboratory Manual, 2d ed., Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., 1989; Ausubel et al., Current Protocols in Molecular Biology, Greene Publishing Associates, 1992, and Supplements to 2002); Harlow and Lane, Antibodies: A Laboratory Manual, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., 1990; Taylor and Drickamer, Introduction to Glycobiology, Oxford Univ. Press, 2003; Worthington Enzyme Manual, Worthington Biochemical Corp., Freehold, N.J.; Handbook of Biochemistry: Section A Proteins, Vol I, CRC Press, 1976; Handbook of Biochemistry: Section A Proteins, Vol II, CRC Press, 1976; Essentials of Glycobiology, Cold Spring Harbor Laboratory Press, 1999.

Exemplary materials and methods for use in any of the methods and compositions are described below, and can be used in any combination. Additional materials and methods that can be used in any of the methods and compositions are also known in the art.

**Casein Proteins**

Casein proteins include a variety of different proteins found in mammalian milk. Non-limiting examples of casein proteins include: β-casein, κ-casein, α-S2-casein, and α-S1-casein.

As an alternative to obtaining casein proteins from mammals or mammal-produced milk for us in dairy product manufacture, the present invention provides methods and composition for the production of recombinant casein proteins. In various aspects of the present invention, methods and compositions are provided for non-animal derived casein that has similar solubility and similar turbidity, and heat stability suitable for incorporation into various food products. Preferably, the non-animal derived casein has excellent solubility similar turbidity and heat stability suitable for incorporation into various dairy substitute products. Additionally, further characterization of the protein includes less or no aggregation or precipitation during such heat treatment and is suitable for procedures such as pasteurization, concentration, etc.

Difference in function of the non-animal derived casein in milk can be characterized in terms of viscosity of the liquid; the ability of the proteins to withstand heat; the ability of the proteins to form micelles; and the ability of the proteins to hold different minerals & vitamins.

***B-casein***

The primary structure of human β-casein as determined by Greenberg et al. (*J. Biol. Chem.* 259:5132-5138, 1984) was shown to be a phosphorylated protein with phosphorylation sites at specific seryl and threonyl residues located near the amino terminus. A comparison of human and bovine β-caseins showed 47% identity.

Non-limiting examples of β-casein proteins are SEQ ID Nos: 25, 27, 29, 31, 33, 35, 36, 38, 40, 42, 44, and 46. Non-limiting examples of nucleic acid sequences encoding a β-casein protein are SEQ ID NOs: 26, 28, 30, 32, 34, 37, 39, 41, 43, 45, 47, and 144. A β-casein protein can be a β-casein protein from any mammalian species, e.g., a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan,

mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth β-casein protein. Additional sequences for different β-casein proteins and nucleic acids encoding different β-casein proteins are known in the art.

A β-casein protein can also be a proteins that is at least 50% (e.g., at least 55%, at least 60%, at least 65%, at least 70%, at least 75%, at least 80%, at least 85%, at least 90%, at least 91%, at least 92%, at least 93%, at least 94%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or at least 99.5%) identical to a wildtype β-casein protein (e.g., SEQ ID Nos: 25, 27, 29, 31, 33, 35, 36, 38, 40, 42, 44, or 46). A nucleic acid encoding a β-casein protein can encode a protein that is at least 50% (e.g., at least 55%, at least 60%, at least 65%, at least 70%, at least 75%, at least 80%, at least 85%, at least 90%, at least 91%, at least 92%, at least 93%, at least 94%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or at least 99.5%) identical to a wildtype β-casein protein (e.g., SEQ ID Nos: 25, 27, 29, 31, 33, 35, 36, 38, 40, 42, 44, or 46).

Methods known for isolating β-casein from genetically engineered bacterial cells typically involve precipitating the β-casein from a supernatant derived from lysed or fractionated cells. For example, Simons, et al., *Protein Eng.* 6: 763-770 (1993), used genetically engineered *E. coli* to express bovine β-casein. The protein, which accumulated in the periplasmic spaces of the bacteria, was released into a cell suspension by osmotic shock. After centrifugation of the suspension, the β-casein in the pellet was resuspended in a cold water wash and centrifuged again. The β-casein, present in the supernatant, was precipitated by acidification with acetic acid, filtered, and further purified by HPLC. Similarly, Hansson, et al., *Protein Express. Purif.* 4:373-381, 1993, used genetically engineered *E. coli* to express β-casein. The β-casein, present in a cell lysate, was precipitated with ammonium sulfate, dissolved in ethanolamine and 6M urea, and further purified by ion-exchange chromatography. See, e.g., U.S. Patent No. 6,121,421.

Additionally, methods for isolating recombinantly produced β-casein in yeast that are simpler and more effective than known techniques are also known. Choi et al., *J. Agric. Food Chem.* 49(4):1761-1766, 2001. Expression and purification of glycosylated bovine β-casein (L70S/P71S) in *Pichia pastoris*, resulted in the observation that the

majority of bovine β-casein was not being hyperglycosylated in *P. pastoris*, and its molecular weight was estimated to be 33.6 kDa. Glycosylated bovine β-casein was normally phosphorylated to the same degree as native bovine β-casein.

***K-Casein***

Kappa-casein is both phosphorylated and glycosylated. The sequence of human κ-casein was determined by Brignon et al. (Fed. Eur. Biol. Soc. Lett. 188:48-54, 1985). See, e.g., U.S. Patent No. 5,710,044.

Non-limiting examples of κ-casein proteins are SEQ ID Nos: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, and 23. Non-limiting examples of nucleic acid sequences encoding a κ-casein protein are SEQ ID NOs: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, and 148. A κ-casein protein can be a κ-casein protein from any mammalian species, e.g., a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth κ-casein protein. Additional sequences for different κ-casein proteins and nucleic acids encoding different κ-casein proteins are known in the art.

A κ-casein protein can also be a proteins that is at least 50% (e.g., at least 55%, at least 60%, at least 65%, at least 70%, at least 75%, at least 80%, at least 85%, at least 90%, at least 91%, at least 92%, at least 93%, at least 94%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or at least 99.5%) identical to a wildtype κ-casein protein (e.g., SEQ ID Nos: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, or 23). A nucleic acid encoding a κ-casein protein can encode a protein that is at least 50% (e.g., at least 55%, at least 60%, at least 65%, at least 70%, at least 75%, at least 80%, at least 85%, at least 90%, at least 91%, at least 92%, at least 93%, at least 94%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or at least 99.5%) identical to a wildtype κ-casein protein (e.g., SEQ ID Nos: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, or 23).

**α-S1-Casein**

Non-limiting examples of α-S1-casein proteins are SEQ ID Nos: 48, 50, 52, 54, 56, 57, 59, 61, 63, 64, 66, 68, 70, 72, 74, and 76. Non-limiting examples of nucleic acid sequences encoding an α-S1-casein protein are SEQ ID NOs: 49, 51, 53, 55, 58, 60, 62, 65, 67, 69, 71, 73, 75, 77, and 147. A α-S1-casein protein can be an α-S1-casein protein from any mammalian species, e.g., a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth α-S1-casein protein. Additional sequences for different α-S1-casein proteins and nucleic acids encoding different α-S1-casein proteins are known in the art.

An α-S1-casein protein can also be a proteins that is at least 80% (e.g., at least 85%, at least 90%, at least 91%, at least 92%, at least 93%, at least 94%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or at least 99.5%) identical to a wildtype α-S1-casein protein (e.g., SEQ ID Nos: 48, 50, 52, 54, 56, 57, 59, 61, 63, 64, 66, 68, 70, 72, 74, or 76). A nucleic acid encoding an α-S1-casein protein can encode a protein that is at least 80% (e.g., at least 85%, at least 90%, at least 91%, at least 92%, at least 93%, at least 94%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or at least 99.5%) identical to a wildtype α-S1-casein protein (e.g., SEQ ID Nos: 48, 50, 52, 54, 56, 57, 59, 61, 63, 64, 66, 68, 70, 72, 74, or 76).

**α-S2-Casein**

Non-limiting examples of α-S2-casein proteins are SEQ ID Nos: 78, 80, 82, 84, 86, 88, and 90. Non-limiting examples of nucleic acid sequences encoding an α-S2-casein protein are SEQ ID NOs: 79, 81, 83, 85, 87, 89, 91, 145, and 146. A α-S2-casein protein can be an α-S2-casein protein from any mammalian species, e.g., a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth α-S2-casein protein. Additional

sequences for different α-S2-casein proteins and nucleic acids encoding different α-S2-casein proteins are known in the art.

An α-S2-casein protein can also be a proteins that is at least 80% (e.g., at least 85%, at least 90%, at least 91%, at least 92%, at least 93%, at least 94%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or at least 99.5%) identical to a wildtype α-S2-casein protein (e.g., SEQ ID Nos: 78, 80, 82, 84, 86, 88, or 90). A nucleic acid encoding an α-S2-casein protein can encode a protein that is at least 80% (e.g., at least 85%, at least 90%, at least 91%, at least 92%, at least 93%, at least 94%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or at least 99.5%) identical to a wildtype α-S2-casein protein (e.g., SEQ ID Nos: 78, 80, 82, 84, 86, 88, or 90).

**Micelles including Casein Proteins**

In bovine milk, casein or casein micelles usually makes up 2.5% of the entire mixture in suspension. If sufficient casein is not present the micelles, which are very important for the optimum behavior of milk, will not form. Too much protein does not go into solution properly resulting in an undesirable mixture. The casein micelle can include water and salts - mainly calcium and phosphorous. Casein micelles are easily separated and removed by centrifugation. Separation from whey is easily done by precipitating casein with an acid to lower the pH to around 4.6.

In some embodiments, a micelle can include a β-casein protein (e.g., any of the β-casein proteins described herein) and κ-casein protein (e.g., any of the κ-casein proteins described herein). In some examples, the ratio of β-casein protein to κ-casein protein in the micelle is about 2.0:1 to about 5.5:1, 2.0:1 to about 5.0:1, 2.0:1 to about 4.5:1, about 2.0:1 to about 4.0:1, about 2.0:1 to about 3.5:1, about 2.0:1 to about 3.0:1, about 2.0:1 to about 2.5:1, about 2.5:1 to about 5.0:1, about 2.5:1 to about 4.5:1, about 2.5:1 to about 4.0:1, about 2.5:1 to about 3.5:1, about 2.5:1 to about 3.0:1, 3.0:1 to about 5.0:1, about 3.0:1 to about 4.5:1, about 3.0:1 to about 4.0:1, about 3.0:1 to about 3.5:1, about 3.5:1 to about 5.0:1, about 3.5:1 to about 4.5:1, about 3.5:1 to about 4.0:1, about 4.0:1 to about 5.0:1, about 4.0:1 to about 4.5:1, or about 4.5:1 to about 5.0:1.

In some examples, the micelle has a diameter (or a population of micelles have an average diameter) of about 20 nm to about 350 nm, about 320 nm, about 300 nm, about

280 nm, about 260 nm, about 240 nm, about 220 nm, about 200 nm, about 180 nm, about 160 nm, about 140 nm, about 120 nm, about 100 nm, about 80 nm, about 60 nm, or about 40 nm; about 40 nm to about 350 nm, about 340 nm, about 320 nm, about 300 nm, about 280 nm, about 260 nm, about 240 nm, about 220 nm, about 200 nm, about 180 nm, about 160 nm, about 140 nm, about 120 nm, about 100 nm, about 80 nm, or about 60 nm; about 60 nm to about 350 nm, about 340 nm, about 320 nm, about 300 nm, about 280 nm, about 260 nm, about 240 nm, about 220 nm, about 200 nm, about 180 nm, about 160 nm, about 140 nm, about 120 nm, or about 100 nm; about 80 nm to about 350 nm, about 340 nm, about 320 nm, about 300 nm, about 280 nm, about 260 nm, about 240 nm, about 220 nm, about 200 nm, about 180 nm, about 160 nm, about 140 nm, about 120 nm, or about 100 nm; about 100 nm to about 350 nm, about 340 nm, about 320 nm, about 300 nm, about 280 nm, about 260 nm, about 240 nm, about 220 nm, about 200 nm, about 180 nm, about 160 nm, about 140 nm, or about 120 nm; about 120 nm to about 350 nm, about 340 nm, about 320 nm, about 300 nm, about 280 nm, about 260 nm, about 240 nm, about 220 nm, about 200 nm, about 180 nm, about 160 nm, or about 140 nm; about 140 nm to about 350 nm, about 340 nm, about 320 nm, about 300 nm, about 280 nm, about 260 nm, about 240 nm, about 220 nm, about 200 nm, about 180 nm, or about 160 nm; about 160 nm to about 350 nm, about 340 nm, about 320 nm, about 300 nm, about 280 nm, about 260 nm, about 240 nm, about 220 nm, about 200 nm, or about 180 nm; about 180 nm to about 350 nm, about 340 nm, about 320 nm, about 300 nm, about 280 nm, about 260 nm, about 240 nm, about 220 nm, or about 200 nm; about 200 nm to about 350 nm, about 340 nm, about 320 nm, about 300 nm, about 280 nm, about 260 nm, about 240 nm, or about 220 nm; about 220 nm to about 350 nm, about 340 nm, about 320 nm, about 300 nm, about 280 nm, about 260 nm, or about 240 nm; about 240 nm to about 350 nm, about 340 nm, about 320 nm, about 300 nm, about 280 nm, or about 260 nm; about 260 nm to about 350 nm, about 340 nm, about 320 nm, about 300 nm, or about 280 nm; about 280 nm to about 350 nm, about 340 nm, about 320 nm, or about 300 nm; about 300 nm to about 350 nm or about 325 nm; or about 325 nm to about 350 nm.

**Whey Proteins**

Whey is commonly known as the by-product of cheese and is also known to be one cause for milk allergies. A typical whey composition comprises a mixture of β-lactoglobulin, α-lactalbumin, serum albumin, immunoglobulins, lactoferrin, and transferrin. Whey proteins do not contain phosphorus, and remain in solution at low pH whereas casein proteins do not. In one embodiment, a select combination of whey proteins comprising β-lactoglobulin and α-lactalbumin are used as the primary component, or at least a part of the milk protein component, of a composition. Non-limiting examples of different whey proteins are provided below.

***α-Lactalbumin***

Non-limiting examples of α-lactalbumin proteins are SEQ ID Nos: 92, 94, 96, and 98. Non-limiting examples of nucleic acid sequences encoding an α-lactalbumin protein are SEQ ID NOs: 93, 95, 97, 99, and 157. An α-lactalbumin protein can be an α-lactalbumin protein from any mammalian species, e.g., a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth α-lactalbumin protein. Additional sequences for different α-lactalbumin proteins and nucleic acids encoding different α-lactalbumin proteins are known in the art.

An α-lactalbumin protein can also be a proteins that is at least 80% (e.g., at least 85%, at least 90%, at least 91%, at least 92%, at least 93%, at least 94%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or at least 99.5%) identical to a wildtype α-lactalbumin protein (e.g., SEQ ID Nos: 92, 94, 96, or 98). A nucleic acid encoding an α-lactalbumin protein can encode a protein that is at least 80% (e.g., at least 85%, at least 90%, at least 91%, at least 92%, at least 93%, at least 94%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or at least 99.5%) identical to a wildtype α- lactalbumin protein (e.g., SEQ ID Nos: 92, 94, 96, or 98).

***β-Lactoglobulin***

Non-limiting examples of β-lactoglobulin proteins are SEQ ID Nos: 100, 102, 104, and 106. Non-limiting examples of nucleic acid sequences encoding a β-lactoglobulin protein are SEQ ID NOs: 101, 103, 105, 107, and 143. A β-lactoglobulin protein can be a β-lactoglobulin protein from any mammalian species, e.g., a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth β-lactoglobulin protein. Additional sequences for different β-lactoglobulin proteins and nucleic acids encoding different β-lactoglobulin proteins are known in the art.

A β-lactoglobulin protein can also be a proteins that is at least 80% (e.g., at least 85%, at least 90%, at least 91%, at least 92%, at least 93%, at least 94%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or at least 99.5%) identical to a wildtype β-lactoglobulin protein (e.g., SEQ ID Nos: 100, 102, 104, or 106). A nucleic acid encoding a β-lactoglobulin protein can encode a protein that is at least 80% (e.g., at least 85%, at least 90%, at least 91%, at least 92%, at least 93%, at least 94%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or at least 99.5%) identical to a wildtype β-lactoglobulin protein (e.g., SEQ ID Nos: 100, 102, 104, or 106).

***Lactoferrin***

Non-limiting examples of lactoferrin proteins are SEQ ID Nos: 108, 110, 112, and 114. Non-limiting examples of nucleic acid sequences encoding a lactoferrin protein are SEQ ID NOs: 109, 111, 113, and 115. A lactoferrin protein can be a lactoferrin protein from any mammalian species, e.g., a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth lactoferrin protein. Additional sequences for different lactoferrin proteins and nucleic acids encoding different lactoferrin proteins are known in the art.

A lactoferrin protein can also be a proteins that is at least 80% (e.g., at least 85%, at least 90%, at least 91%, at least 92%, at least 93%, at least 94%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or at least 99.5%) identical to a wildtype lactoferrin protein (e.g., SEQ ID Nos: 108, 110, 112, or 114). A nucleic acid encoding a lactoferrin protein can encode a protein that is at least 80% (e.g., at least 85%, at least 90%, at least 91%, at least 92%, at least 93%, at least 94%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or at least 99.5%) identical to a wildtype lactoferrin protein (e.g., SEQ ID Nos: 108, 110, 112, or 114).

***Transferrin***

Non-limiting examples of transferrin proteins are SEQ ID Nos: 116 and 118. Non-limiting examples of nucleic acid sequences encoding a transferrin protein are SEQ ID NOs: 117 and 119. A transferrin protein can be a transferrin protein from any mammalian species, e.g., a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth transferrin protein. Additional sequences for different transferrin proteins and nucleic acids encoding different transferrin proteins are known in the art.

A transferrin protein can also be a proteins that is at least 80% (e.g., at least 85%, at least 90%, at least 91%, at least 92%, at least 93%, at least 94%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or at least 99.5%) identical to a wildtype transferrin protein (e.g., SEQ ID Nos: 116 or 118). A nucleic acid encoding a transferrin protein can encode a protein that is at least 80% (e.g., at least 85%, at least 90%, at least 91%, at least 92%, at least 93%, at least 94%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or at least 99.5%) identical to a wildtype transferrin protein (e.g., SEQ ID Nos: 116 or 118).

***Serum Albumin***

Non-limiting examples of serum albumin proteins are SEQ ID Nos: 120, 122, 124, and 126. Non-limiting examples of nucleic acid sequences encoding a serum

albumin protein are SEQ ID NOs: 121, 123, 125, and 127. A serum albumin protein can be a serum albumin protein from any mammalian species, e.g., a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth serum albumin protein. Additional sequences for different serum albumin proteins and nucleic acids encoding different serum albumin proteins are known in the art.

A serum albumin protein can also be a proteins that is at least 80% (e.g., at least 85%, at least 90%, at least 91%, at least 92%, at least 93%, at least 94%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or at least 99.5%) identical to a wildtype serum albumin protein (e.g., SEQ ID Nos: 20, 122, 124, or 126). A nucleic acid encoding a serum albumin protein can encode a protein that is at least 80% (e.g., at least 85%, at least 90%, at least 91%, at least 92%, at least 93%, at least 94%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or at least 99.5%) identical to a wildtype serum albumin protein (e.g., SEQ ID Nos: 20, 122, 124, or 126).

**Lipids in Mammal-Produced Milk**

Milk fat contains approximately 400 different fatty acids, which makes it the most complex of all natural fats. The milk fatty acids are derived almost equally from two sources, the feed and the microbial activity in the rumen of the cow and the lipids in bovine milk are mainly present in globules as an oil-in-water emulsion. Fat is present in all natural dairy products and is critical for sensory characteristics such as flavor, mouthfeel and consistency. In addition, fats provide nutrition and health benefits. The milk fat consists mainly of triglycerides, approximately 98%, while other milk lipids are diacylglycerol (about 2% of the lipid fraction), cholesterol (less than 0.5%), phospholipids (about 1%) and free fatty acids (FFA) (about 0.1%) Jensen RG, Newburg DS. Bovine milk lipids, Handbook of milk composition. Jensen RG London: Academic Press; 1995. 543–75. In addition, there are trace amounts of ether lipids, hydrocarbons, fat-soluble vitamins, flavor compounds and compounds introduced by the feed (Lindmark Mansson H., Food & Nutrition Research 2008. DOI: 10.3402/fnr.v52i0.1821)

Milk fat triglycerides are synthesized from more than 400 different fatty acids, which makes milk fat the most complex of all natural fats. Nearly all fatty acids in milk are present in trace quantities and only about 15 acids at the 1% level or higher. Many factors are associated with the variations in the amount and fatty acid composition of bovine milk lipids. They may be of animal origin, i.e. related to genetics (breed and selection), stage of lactation, mastitis and ruminal fermentation, or they may be feed-related factors, i.e. related to fibre and energy intake, dietary fats, and seasonal and regional effects. The fatty acids in the milk fat are arranged in the triglycerides in accordance with a pattern that appears to be universal among ruminants. The percent unsaturated fatty acids (e.g., oleic and linolenic) in goats do not differ from the average found for cow's milk. A major difference between the milk fat of the goat and the cow is the percentage distribution among specific short chain fatty acids. Goats have an appreciably higher proportion of capric, caprylic and caproic acids. The high amounts of these specific fatty acids are responsible for the characteristic flavor and odor associated with goat's milk. John C. Bruhn, FST, UC Davis, Davis, CA 95616-8598; Seewww.drinc.ucdavis.edu/goat1.htm; www.ncbi.nlm.nih.gov/pmc/articles/ PMC2596709/# __ffn_sectitle; Food Nutr Res. 2008; 52: 10.3402/fnr.v52i0.1821. Published online Jun 11, 2008. doi: 10.3402/fnr. v52i0.1821.

The milk fatty acids are derived almost equally from two sources, the feed and the microbial activity in the rumen of the cow. The fatty acid synthesizing system in the mammary gland of the cow produces fatty acids with even number of carbons of 4–16 carbons in length and accounts for approximately 60 and 45% of the fatty acids on a molar and weight basis, respectively. This *de novo* synthesis in the mammary gland is of the 4:0–14:0 acids together with about half of the 16:0 from acetate and β-hydroxybutyrate. Acetate and butyric acid are generated in the rumen by fermentation of feed components. The butyric acid is converted to β-hydroxybutyrate during absorption through the rumen epithelium.

Medium- and long-chain fatty acids, but mainly 18:0, may be desaturated in the mammary gland to form the corresponding monosaturated acids.

Fatty acids are not randomly esterified at the three positions of the triacylglycerol molecule (MacGibbon AHK, Taylor MW. Composition and structure of bovine milk

lipidsAdvanced dairy chemistry. Fox PFMcSweeney PLHNew York: Springer; 2006. 1–42.). The short-chain acids butyric (4:0) and caproic (6:0) are esterified almost entirely at sn-3. Medium-chain fatty acids (8:0–14:0) as well as 16:0 are preferentially esterified at positions sn-1 and sn-2. Stearic acid (18:0) is selectively placed at position sn-1, whereas oleic acid (18:1) shows preference for positions sn-1 and sn-3 (Lindmark 2008).

Milk replacers with a fat component formulated to selected fatty acid profiles exist, however, such triglycerides are not interesterified into long-chain monounsaturated fatty acid triglycerides such as found in vegetable oils. U.S. Patent Appl. No. 20140147548 discloses milk replacers for young animals with by adding medium chain triglyceride, specifically caproic, caprylic, capric and lauric fatty acid or a combination thereof.

**Lipids in the Present Compositions**

The lipids in any of the compositions or used in any of the methods described herein can include: one or more fats, one or more oils, one or more monoglycerides, diglycerides, and/or triglycerides, one or more free fatty acids, and one or more phospholipids. Exemplary oils, monoglycerides, diglycerides, free fatty acids, and phospholipids are described below. Additional examples of fats, oils, monoglycerides, diglycerides, triglycerides, free fatty acids, and phospholipids are known in the art.

***Oils***

Oils used in the present compositions or methods can include, e.g., plant-derived oils. Non-limiting examples of plant-based oils include sunflower oil, coconut oil, peanut oil, corn oil, cottonseed oil, olive oil, palm oil, rapeseed oil, safflower oil, sesame oil, soybean oil, almond oil, beech nut oil, brazil nut oil, cashew oil, hazelnut oil, macadamia nut oil, mongongo nut oil, pecan oil, pine nut oil, pistachio nut oil, walnut oil, and avocado oil.

***Monoglycerides and Diglycerides***

Monoglycerides and diglycerides that can be used in the present invention can be plant-derived monoglycerides and diglycerides. For example, monoglycerides and

diglycerides can be derived from sunflowers, coconuts, peanuts, cottonseed, olives, palm, rapeseed, safflowers, sesame seed, soybeans, almonds, beech nuts, brazil nuts, cashews, hazelnuts, macadameia nuts, mongongo nuts, pecans, pine nuts, pistachios, walnuts, and avocados. The monoglycerides and diglycerides can include the acyl chain of any of the free fatty acids listed herein. Additional examples of monoglycerides and diglycerides are known in the art.

***Free Fatty Acids***

The compositions described herein can include and the methods described herein can include the use of one or more free fatty acids. Non-limiting examples of free fatty acids include butyric acid, caproic acid, caprylic acid, and capric acid. Additional examples of fatty acids include lauric acid, myristic acid, palmitic acid, stearic acid, arachidic acid, behenic acid, lignoceric acid, cerotic acid, myristoleic acid, pamitoleic acid, sapienic acid, oleic acid, elaidic acid, vaccenic acid, linoleic acid, linoelaidic acid, α-linolenic acid, arachidonic acid, eicosapentaenoic acid, erucic acid, docosahexaenoic acid, omega-3 fatty acids, and omega-6 fatty acids. In some examples, the free fatty acid is saturated. In some examples, the free fatty acid is unsaturated. In some embodiments, the free fatty acids are not derived from or produced by a mammal. Additional examples of free fatty acids are known in the art.

***Phospholipids***

The compositions described herein and the methods described herein can include the use of one or more phospholipids. Non-limiting examples of phospholipids include lecithin phospholipids (e.g., soy lecithin phospholipids, sunflower lecithin phospholipids, cotton lecithin phospholipids, rapeseed lecithin phospholipids. rice bran lecithin phospholipids, and corn lecithin phospholipids). In some embodiments, the phospholipids are not derived from or produced by a mammal. Additional aspects of phospholipids are known in the art.

**Flavor Compounds**

Any of the compositions or methods described herein can include or include the use of one or more different flavor compounds. Non-limiting examples of flavor compounds include δ-decalactone, ethyl butyrate, 2-furyl methyl ketone, 2,3-pentanedione, γ-undecalactone, and δ-undecalactone. Additional examples of flavor compounds include artificial flavors, e.g., chocolate, coffee, strawberry, almond, hazelnut, vanilla, green tea, Irish cream, and coconut flavoring. Additional examples of flavor compounds are known in the art.

**Ash**

Any of the compositions or methods described herein can include or include the use of ash. Ash can, e.g., include one or more (two, three, four, five, six, seven, eight, nine, ten, eleven, twelve, thirteen, fourteen fifteen, sixteen, seventeen, eighteen, nineteen, or twenty) of: calcium, phosphorous, potassium, sodium, citrate, chloride, phosphate, magnesium, iron, molybdenum, manganese, copper, thiamin (vitamin B1), riboflavin (vitamin B2), niacin (vitamin B3), pantothenic acid (vitamin B5), vitamin B6 (pyridoxine), vitamin B12 (cobalamin), vitamin C, folate, vitamins A, vitamin D, vitamin E, and vitamin K. In some examples, the ash includes one or more (two or three) of $CaCl_2$, $KH_2PO_4$, and $Na_3$ citrate. Ash can be provided as a powder or as a solution. Additional components in and aspects of ash are known in the art. In some embodiments, the ash is not derived from or produced by mammal.

**Color Balancing Agents**

A variety of different color balancing agents are known in the art. For example, a color balancing agent can be a compound from obtained from a plant (e.g., a monocot or a dicot). In some examples, the color balancing agent is a synthetic compound. In some examples, the color balancing agent is not obtained from or produced by a mammal or a mammalian cell. Non-limiting examples of color balancing agents include β-carotene and annatto.

**Sweetening Agents**

A sweetening agent can be a saccharide (e.g., a monosaccharide, a disaccharide, or a polysaccharide) or an artificial sweetener. Non-limiting examples of sweetening agents that are saccharides include glucose, mannose, maltose, fructose, galactose, lactose, sucrose, monatin, and tagatose. Additional examples of saccharides that can be used as a sweetening agent in any of the compositions or methods described herein are known in the art.

Non-limiting examples of sweetening agents that are artificial sweeteners include stevia, aspartame, cyclamate, saccharin, sucralose, mogrosides, brazzein, curculin, erythritol, glycyrrhizin, inulin, isomalt, ~~lacititol~~lactitol, mabinlin, ~~malititol~~maltitol, mannitol, miraculin, monatin, monelin, osladin, pentadin, sorbitol, thaumatin, xylitol, acesulfame potassium, advantame, alitame, aspartame-acesulfame, sodium cyclamate, dulcin, glucin, neohesperidin dihyrdochalcone, neotame, and P-4000. Additional artificial sweeteners that can be used as sweetening agents in any of the compositions or methods described herein are known in the art.

**Compositions**

Provided herein are compositions including: about 0.3 g/L to about 1.1 g/L (e.g., about 0.3 g/L to about 1.0 g/L, about 0.3 g/L to about 0.9 g/L, about 0.3 g/L to about 0.8 g/L, about 0.3 g/L to about 0.7 g/L, about 0.3 g/L to about 0.6 g/L, about 0.3 g/L to about 0.5 g/L, about 0.3 g/L to about 0.4 g/L, about 0.4 g/L to about 1.1 g/L, about 0.4 g/L to about 1.0 g/L, about 0.4 g/L to about 0.9 g/L, about 0.4 g/L to about 0.8 g/L, about 0.4 g/L to about 0.7 g/L, about 0.4 g/L to about 0.6 g/L, about 0.4 g/L to about 0.5 g/L, about 0.5 g/L to about 1.1 g/L, about 0.5 g/L to about 1.0 g/L, about 0.5 g/L to about 0.9 g/L, about 0.5 g/L to about 0.8 g/L, about 0.5 g/L to about 0.7 g/L, about 0.5 g/L to about 0.6 g/L, about 0.6 g/L to about 1.1 g/L, about 0.6 g/L to about 1.0 g/L, about 0.6 g/L to about 0.9 g/L, about 0.6 g/L to about 0.8 g/L, about 0.6 g/L to about 0.7 g/L, about 0.7 g/L to about 1.1 g/L, about 0.7 g/L to about 1.0 g/L, about 0.7 g/L to about 0.9 g/L, about 0.7 g/L to about 0.8 g/L, about 0.8 g/L to about 1.1 g/L, about 0.8 g/L to about 1.0 g/L, about 0.8 g/L to about 0.9 g/L, about 0.9 g/L to about 1.1 g/L, about 0.9 g/L to about 1.0 g/L, about 1.0 g/L to about 1.1 g/L, or about 0.27 weight % to about 0.75 weight %) κ-casein

protein (e.g., any of the κ-casein proteins described herein); about 1.25 g/L to about 4.9 g/L (e.g., about 1.25 g/L to about 4.6 g/L, about 1.25 g/L to about 4.4 g/L, about 1.25 g/L to about 4.2 g/L, about 1.25 g/L to about 4.0 g/L, about 1.25 g/L to about 3.8 g/L, about 1.25 g/L to about 3.6 g/L, about 1.25 g/L to about 3.4 g/L, about 1.25 g/L to about 3.2 g/L, about 1.25 g/L to about 3.0 g/L, about 1.25 g/L to about 2.8 g/L, about 1.25 g/L to about 2.6 g/L, about 1.25 g/L to about 2.4 g/L, about 1.25 g/L to about 2.2 g/L, about 1.25 g/L to about 2.0 g/L, about 1.25 g/L to about 1.8 g/L, about 1.25 g/L to about 1.6 g/L, about 1.25 g/L to about 1.4 g/L, about 1.4 g/L to about 4.9 g/L, about 1.4 g/L to about 4.6 g/L, about 1.4 g/L to about 4.4 g/L, about 1.4 g/L to about 4.2 g/L, about 1.4 g/L to about 4.0 g/L, about 1.4 g/L to about 3.8 g/L, about 1.4 g/L to about 3.6 g/L, about 1.4 g/L to about 3.4 g/L, about 1.4 g/L to about 3.2 g/L, about 1.4 g/L to about 3.0 g/L, about 1.4 g/L to about 2.8 g/L, 1.4 g/L to about 2.6 g/L, about 1.4 g/L to about 2.4 g/L, about 1.4 g/L to about 2.2 g/L, about 1.4 g/L to about 2.0 g/L, about 1.4 g/L to about 1.8 g/L, about 1.4 g/L to about 1.6 g/L, about 1.6 g/L to about 4.9 g/L, about 1.6 g/L to about 4.6 g/L, about 1.6 g/L to about 4.4 g/L, about 1.6 g/L to about 4.2 g/L, about 1.6 g/L to about 4.0 g/L, about 1.6 g/L to about 3.8 g/L, about 1.6 g/L to about 3.6 g/L, about 1.6 g/L to about 3.4 g/L, about 1.6 g/L to about 3.2 g/L, about 1.6 g/L to about 3.0 g/L, about 1.6 g/L to about 2.8 g/L, 1.6 g/L to about 2.6 g/L, about 1.6 g/L to about 2.4 g/L, about 1.6 g/L to about 2.2 g/L, about 1.6 g/L to about 2.0 g/L, about 1.6 g/L to about 1.8 g/L, about 1.8 g/L to about 4.9 g/L, about 1.8 g/L to about 4.6 g/L, about 1.8 g/L to about 4.4 g/L, about 1.8 g/L to about 4.2 g/L, about 1.8 g/L to about 4.0 g/L, about 1.8 g/L to about 3.8 g/L, about 1.8 g/L to about 3.6 g/L, about 1.8 g/L to about 3.4 g/L, about 1.8 g/L to about 3.2 g/L, about 1.8 g/L to about 3.0 g/L, about 1.8 g/L to about 2.8 g/L, 1.8 g/L to about 2.6 g/L, about 1.8 g/L to about 2.4 g/L, about 1.8 g/L to about 2.2 g/L, about 1.8 g/L to about 2.0 g/L, about 2.0 g/L to about 4.9 g/L, about 2.0 g/L to about 4.6 g/L, about 2.0 g/L to about 4.4 g/L, about 2.0 g/L to about 4.2 g/L, about 2.0 g/L to about 4.0 g/L, about 2.0 g/L to about 3.8 g/L, about 2.0 g/L to about 3.6 g/L, about 2.0 g/L to about 3.4 g/L, about 2.0 g/L to about 3.2 g/L, about 2.0 g/L to about 3.0 g/L, about 2.0 g/L to about 2.8 g/L, 2.0 g/L to about 2.6 g/L, about 2.0 g/L to about 2.4 g/L, about 2.0 g/L to about 2.2 g/L, about 2.2 g/L to about 4.9 g/L, about 2.2 g/L to about 4.6 g/L, about 2.2 g/L to about 4.4 g/L, about 2.2 g/L to about 4.2 g/L, about 2.2 g/L to about 4.0 g/L, about 2.2

g/L to about 3.8 g/L, about 2.2 g/L to about 3.6 g/L, about 2.2 g/L to about 3.4 g/L, about 2.2 g/L to about 3.2 g/L, about 2.2 g/L to about 3.0 g/L, about 2.2 g/L to about 2.8 g/L, 2.2 g/L to about 2.6 g/L, about 2.2 g/L to about 2.4 g/L, about 2.4 g/L to about 4.9 g/L, about 2.4 g/L to about 4.6 g/L, about 2.4 g/L to about 4.4 g/L, about 2.4 g/L to about 4.2 g/L, about 2.4 g/L to about 4.0 g/L, about 2.4 g/L to about 3.8 g/L, about 2.4 g/L to about 3.6 g/L, about 2.4 g/L to about 3.4 g/L, about 2.4 g/L to about 3.2 g/L, about 2.4 g/L to about 3.0 g/L, about 2.4 g/L to about 2.8 g/L, 2.4 g/L to about 2.6 g/L, about 2.6 g/L to about 4.9 g/L, about 2.6 g/L to about 4.6 g/L, about 2.6 g/L to about 4.4 g/L, about 2.6 g/L to about 4.2 g/L, about 2.6 g/L to about 4.0 g/L, about 2.6 g/L to about 3.8 g/L, about 2.6 g/L to about 3.6 g/L, about 2.6 g/L to about 3.4 g/L, about 2.6 g/L to about 3.2 g/L, about 2.6 g/L to about 3.0 g/L, about 2.6 g/L to about 2.8 g/L, about 2.8 g/L to about 4.9 g/L, about 2.8 g/L to about 4.6 g/L, about 2.8 g/L to about 4.4 g/L, about 2.8 g/L to about 4.2 g/L, about 2.8 g/L to about 4.0 g/L, about 2.8 g/L to about 3.8 g/L, about 2.8 g/L to about 3.6 g/L, about 2.8 g/L to about 3.4 g/L, about 2.8 g/L to about 3.2 g/L, about 2.8 g/L to about 3.0 g/L, about 3.0 g/L to about 4.9 g/L, about 3.0 g/L to about 4.6 g/L, about 3.0 g/L to about 4.4 g/L, about 3.0 g/L to about 4.2 g/L, about 3.0 g/L to about 4.0 g/L, about 3.0 g/L to about 3.8 g/L, about 3.0 g/L to about 3.6 g/L, about 3.0 g/L to about 3.4 g/L, about 3.0 g/L to about 3.2 g/L, about 3.2 g/L to about 4.9 g/L, about 3.2 g/L to about 4.6 g/L, about 3.2 g/L to about 4.4 g/L, about 3.2 g/L to about 4.2 g/L, about 3.2 g/L to about 4.0 g/L, about 3.2 g/L to about 3.8 g/L, about 3.2 g/L to about 3.6 g/L, about 3.2 g/L to about 3.4 g/L, about 3.4 g/L to about 4.9 g/L, about 3.4 g/L to about 4.6 g/L, about 3.4 g/L to about 4.4 g/L, about 3.4 g/L to about 4.2 g/L, about 3.4 g/L to about 4.0 g/L, about 3.4 g/L to about 3.8 g/L, about 3.4 g/L to about 3.6 g/L, about 3.6 g/L to about 4.9 g/L, about 3.6 g/L to about 4.6 g/L, about 3.6 g/L to about 4.4 g/L, about 3.6 g/L to about 4.2 g/L, about 3.6 g/L to about 4.0 g/L, about 3.6 g/L to about 3.8 g/L, about 3.8 g/L to about 4.9 g/L, about 3.8 g/L to about 4.6 g/L, about 3.8 g/L to about 4.4 g/L, about 3.8 g/L to about 4.2 g/L, about 3.8 g/L to about 4.0 g/L, about 4.0 g/L to about 4.9 g/L, about 4.0 g/L to about 4.6 g/L, about 4.0 g/L to about 4.4 g/L, about 4.0 g/L to about 4.2 g/L, about 4.2 g/L to about 4.9 g/L, about 4.2 g/L to about 4.6 g/L, about 4.2 g/L to about 4.4 g/L, about 4.4 g/L to about 4.9 g/L, about 4.4 g/L to about 4.6 g/L, about 4,6 g/L to about 4.9 g/L, or about 1.23 weight % to about 3.27 weight %) β-casein protein (e.g., any of the

β-casein proteins described herein); a final total concentration of one or more lipids (e.g., any one or more of the lipids described herein) of about 0 weight % to about 45 weight % (e.g., 0 weight %; about 0 weight % to about 4.5 weight %; about 0.5 weight % to about 40 weight %, about 35 weight %, about 30 weight %, about 25 weight %, about 20 weight %, about 15 weight %, about 10 weight %, about 8 weight %, about 6 weight %, about 5 weight %, about 4 weight %, about 3 weight %, about 2 weight %, or about 1 weight %; about 1.0 weight % to about 40 weight %, about 35 weight %, about 30 weight %, about 25 weight %, about 20 weight %, about 15 weight %, about 10 weight %, about 8 weight %, about 6 weight %, about 5 weight %, about 4 weight %, about 3 weight %, or about 2 weight %; about 2 weight % to about 40 weight %, about 35 weight %, about 30 weight %, about 25 weight %, about 20 weight %, about 15 weight %, about 10 weight %, about 8 weight %, about 6 weight %, about 5 weight %, about 4 weight %, or about 3 weight %; about 3 weight % to about 40 weight %, about 35 weight %, about 30 weight %, about 25 weight %, about 20 weight %, about 15 weight %, about 10 weight %, about 8 weight %, about 6 weight %, about 5 weight %, or about 4 weight %; about 4 weight % to about 40 weight %, about 35 weight %, about 30 weight %, about 25 weight %, about 20 weight %, about 15 weight %, about 10 weight %, about 8 weight %, about 6 weight %, or about 5 weight %; about 5 weight % to about 40 weight %, about 35 weight %, about 30 weight %, about 25 weight %, about 20 weight %, about 15 weight %, about 10 weight %, about 8 weight %, or about 6 weight %; about 6 weight % to about 40 weight %, about 35 weight %, about 30 weight %, about 25 weight %, about 20 weight %, about 15 weight %, about 10 weight %, or about 8 weight %; about 8 weight % to about 40 weight %, about 35 weight %, about 30 weight %, about 25 weight %, about 20 weight %, about 15 weight %, or about 10 weight %; about 10 weight % to about 40 weight %, about 35 weight %, about 30 weight %, about 25 weight %, about 20 weight %, or about 15 weight %; about 15 weight % to about 40 weight %, about 35 weight %, about 30 weight %, about 25 weight %, or about 20 weight %; about 20 weight % to about 40 weight %, about 35 weight %, about 30 weight %, or about 25 weight %; about 25 weight % to about 40 weight %, about 35 weight %, or about 30 weight %; about 30 weight % to about 40 weight %, or about 35 weight %; or about 35 weight % to about 40 weight %); a final total concentration of one or more flavor compounds (e.g., any of one or more of the

flavor compounds described herein) of about 0.01 weight % to about 6 weight % (e.g., about 0.1 weight % to about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, about 3.5 weight %, about 3.0 weight %, about 2.5 weight %, about 2.0 weight %, about 1.5 weight %, about 1.0 weight %, or about 0.5 weight %; about 0.5 weight % to about 6 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, about 3.5 weight %, about 3.0 weight %, about 2.5 weight %, about 2.0 weight %, about 1.5 weight %, or about 1.0 weight %; about 1.0 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, about 3.5 weight %, about 3.0 weight %, about 2.5 weight %, about 2.0 weight %, or about 1.5 weight %; about 1.5 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, about 3.5 weight %, about 3.0 weight %, about 2.5 weight %, or about 2.0 weight %; about 2.0 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, about 3.5 weight %, about 3.0 weight %, or about 2.5 weight %; about 2.5 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, about 3.5 weight %, or about 3.0 weight %; about 3.0 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, or about 3.5 weight %; about 3.5 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, or about 4.0 weight %; about 4.0 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %; about 4.5 weight % to about 6.0 weight %, about 5.5 weight %, or about 5.0 weight %; about 5.0 weight % to about 6.0 weight % or about 5.5 weight %; or about 5.5 weight % to about 6.0 weight %); a final total concentration of about 0.1 weight % to about 6 weight % (e.g., about 0.1 weight % to about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, about 3.5 weight %, about 3.0 weight %, about 2.5 weight %, about 2.0 weight %, about 1.5 weight %, about 1.0 weight %, or about 0.5 weight %; about 0.5 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, about 3.5 weight %, about 3.0 weight %, about 2.5 weight %, about 2.0 weight %, about 1.5 weight %, or about 1.0 weight %; about 1.0 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, about

3.5 weight %, about 3.0 weight %, about 2.5 weight %, about 2.0 weight %, or about 1.5 weight %; about 1.5 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, about 3.5 weight %, about 3.0 weight %, about 2.5 weight %, or about 2.0 weight %; about 2.0 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, about 3.5 weight %, about 3.0 weight %, or about 2.5 weight %; about 2.5 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, about 3.5 weight %, or about 3.0 weight %; about 3.0 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, or about 3.5 weight %; about 3.5 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, or about 4.0 weight %; about 4.0 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, or about 4.5 weight %; about 4.5 weight % to about 6.0 weight %, about 5.5 weight %, or about 5.0 weight %; about 5.0 weight % to about 6.0 weight %, or about 5.5 weight %; or about 5.5 weight % to about 6.0 weight %) of one or more sweetening agents (e.g., any one or more of the sweetening agents described herein); and a final total concentration of ash of about 0.15 weight % to about 1.5 weight % (e.g., about 0.15 weight % to about 1.4 weight %, about 1.3 weight %, about 1.2 weight %, about 1.1 weight %, about 1.0 weight %, about 0.9 weight %, about 0.8 weight %, about 0.6 weight %, about 0.5 weight %, about 0.4 weight %, about 0.3 weight %, or about 0.2 weight %; about 0.2 weight % to about 1.5 weight %, about 1.4 weight %, about 1.3 weight %, about 1.2 weight %, about 1.1 weight %, about 1.0 weight %, about 0.9 weight %, about 0.8 weight %, about 0.6 weight %, about 0.5 weight %, about 0.4 weight %, or about 0.3 weight %; about 0.3 weight % to about 1.5 weight %, about 1.4 weight %, about 1.3 weight %, about 1.2 weight %, about 1.1 weight %, about 1.0 weight %, about 0.9 weight %, about 0.8 weight %, about 0.6 weight %, about 0.5 weight %, or about 0.4 weight %; about 0.4 weight % to about 1.5 weight %, about 1.4 weight %, about 1.3 weight %, about 1.2 weight %, about 1.1 weight %, about 1.0 weight %, about 0.9 weight %, about 0.8 weight %, about 0.6 weight %, or about 0.5 weight %; about 0.5 weight % to about 1.5 weight %, about 1.4 weight %, about 1.3 weight %, about 1.2 weight %, about 1.1 weight %, about 1.0 weight %, about 0.9 weight %, about 0.8 weight %, or about 0.6 weight %; about 0.6 weight % to about

1.5 weight %, about 1.4 weight %, about 1.3 weight %, about 1.2 weight %, about 1.1 weight %, about 1.0 weight %, about 0.9 weight %, or about 0.8 weight %; about 0.8 weight % to about 1.4 weight %, about 1.3 weight %, about 1.2 weight %, about 1.1 weight %, about 1.0 weight %, or about 0.9 weight %; about 0.9 weight % to about 1.5 weight %, about 1.4 weight %, about 1.3 weight %, about 1.2 weight %, about 1.1 weight %, or about 1.0 weight %; about 1.0 weight % to about 1.5 weight %, about 1.4 weight %, about 1.3 weight %, about 1.2 weight %, or about 1.1 weight %; about 1.1 weight % to about 1.5 weight %, about 1.4 weight %, about 1.3 weight %, or about 1.2 weight %; about 1.2 weight % to about 1.5 weight %, about 1.4 weight %, or about 1.3 weight %; about 1.3 weight % to about 1.5 weight % or about 1.4 weight %; or about 1.4 weight % to about 1.5 weight %), where the composition does not comprise an animal-derived component.

Also provided are compositions including: about 0.3 g/L to about 1.1 g/L (e.g., any of the subranges of about 0.3 g/L to about 1.1 g/L described in the above paragraph) κ-casein protein (e.g., any of the κ-casein proteins described herein); about 1.25 g/L to about 4.9 g/L (e.g., any of the subranges of about 1.25 g/L to about 4.9 g/L described in the above paragraph) β-casein protein (e.g., any of the β-casein proteins described herein); a final total concentration of one or more lipids (e.g., any of the one or more lipids described herein) of about 0 weight % to about 45 weight % (e.g., any of the subranges of about 0 weight % to about 45 weight % described in the above paragraph); a final total concentration of one or more flavor compounds (e.g., any of the one or more flavor compounds described herein) of about 0.01 weight % to about 6 weight % (e.g., any of the subranges of about 0.01 weight % to about 6 weight % described in the above paragraph); a final total concentration of about 0.1 weight % to about 6 weight % (e.g., any of the subranges of about 0.1 weight % to about 6 weight % described herein) of one or more sweetening agents (e.g., any one or more sweetening agents described herein); and a final total concentration of ash (e.g., any of the exemplary ash described herein) of about 0.15 weight % to about 1.5 weight % (e.g., any of the subranges of about 0.15 weight % to about 1.5 weight % described in the above paragraph), where: the composition: does not include at least one component found in a mammal-produced milk; includes at least one component not present in a mammal-produced milk; and/or includes

a higher or lower concentration of at least one component as compared to the concentration of the at least one component in a mammal-produced milk. In some examples of these compositions, the composition includes a higher concentration of at least one component selected from the group of: calcium, phosphate, B complex vitamins, vitamin A, vitamin D, vitamin E, and vitamin K, as compared to the concentration of the one or more components in a mammal-produced milk. In some embodiments of these compositions, the composition does not include at least one component found in a mammal-produced milk selected from the group of: lactose, bacteria, mycobacteria, allergens, viruses, prions, yeast, growth hormones, leukocytes, antibiotics, heavy metals, immunoglobulins, lactoferrin, lactoperoxidase, and lipase. In some examples of these compositions, the composition includes at least one component not present in a mammal-produced milk selected from the group of an artificial sweetener, a plant-derived lipid, a β-casein protein that is non-glycosylated or has a non-mammalian glycosylation pattern, and a κ-casein protein that is non-glycosylated or has a non-mammalian glycosylation pattern.

Also provided are compositions including: about 0.3 g/L to about 1.1 g/L (e.g., any of the subranges of about 0.3 g/L to about 1.1 g/L described in this section) κ-casein protein (e.g., any of the κ-casein proteins described herein) that is unglycosylated or has a non-mammalian glycosylation pattern; about 1.25 g/L to about 4.9 g/L (e.g., any of the subranges of about 1.25 g/L to about 4.9 g/L described in this section) β-casein protein (e.g., any of the β-casein proteins described herein) that is unglycosylated or has a non-mammalian glycosylation pattern; a final total concentration of one or more lipids (e.g., any of the one or more lipids described herein) of about 0 weight % to about 45 weight % (e.g., any of the subranges of about 0 weight % to about 45 weight % described in this section); a final total concentration of one or more flavor compounds (e.g., any of the one or more flavor compounds described herein) of about 0.01 weight % to about 6 weight % (e.g., any of the subranges of about 0.01 weight % to about 6 weight % described in this section); a final total concentration of about 0.1 weight % to about 6 weight % (e.g., any of the subranges of about 0.1 weight % to about 6 weight % described in this section) of one or more sweetening agents (e.g., any of the one or more sweetening agents described herein); and a final total concentration of ash (e.g., any of the ash described herein) of

about 0.15 weight % to about 1.5 weight % (e.g., any of the subranges of about 0.15 weight % to about 1.5 weight % described in this section).

Also provided are compositions including a micelle including a κ-casein protein (e.g., any of the κ-casein proteins described herein) and a β-casein protein (e.g., any of the β-casein proteins described herein), where the micelle has a diameter of about 50 nm to about 350 nm (e.g., any of the subranges of the diameter of a micelle described herein), and the κ-casein protein and the β-casein protein are unglycosylated or have a non-mammalian glycosylation pattern. In some embodiments, the composition includes a final concentration of micelles of about 2.0 weight % to about 6 weight % (e.g., about 2.0 weight % to about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, about 3.5 weight %, about 3.0 weight %, or about 2.5 weight %; about 2.5 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, about 3.5 weight %, or about 3.0 weight %; about 3.0 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, or about 3.5 weight %; about 3.5 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, or about 3.5 weight %; about 3.5 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, or about 4.0 weight %; about 4.5 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, about 4.5 weight %, or about 4.0 weight %; about 4.0 weight % to about 6.0 weight %, about 5.5 weight %, about 5.0 weight %, or about 4.5 weight %; about 4.5 weight % to about 5.5 weight %, or about 5.0 weight %; about 5.0 weight % to about 6.0 weight % or 5.5 weight %; or about 5.5 weight % to about 6.0 weight %). In some embodiments of these compositions, the ratio of the β-casein protein to the κ-casein protein in the micelle is about 2.0:1 to about 5.5:1 (e.g., any of the subranges of the ratios about 2.0:1 to about 5.5:1 described for the micelle herein). In some embodiments, these compositions further include: a final total concentration of one or more lipids (e.g., any of the one or more lipids described herein) of about 0 weight % to about 45 weight % (e.g., any of the subranges of about 0 weight % to about 45 weight percent described in this section); a final total concentration of one or more flavor compounds (e.g., any of the one or more flavor compounds described herein) of about 0.01 weight % to about 6 weight % (e.g., any of the subranges of 0.01

weight % to about 6 weight % described in this section); a final total concentration of about 0.1 weight % to about 6 weight % (e.g., any of the subranges of about 0.1 weight % to about 6 weight % described in this section) of one or more sweetening agents (e.g., any one or more of the sweetening agents described herein); and a final total concentration of ash (e.g., any of the ash described herein) of about 0.15 weight % to about 1.5 weight % (e.g., any of the subranges of about 0.15 weight % to about 1.5 weight % described in this section).

In some embodiments of any of the compositions described herein, the one or more lipids are selected from the group consisting of: sunflower oil, coconut oil, tributyrin, mono- and di-glycerides, free fatty acids, and phospholipids. Some examples of any of the compositions described herein further include one or more of: a final concentration of sunflower oil of about 1 weight % to about 28 weight % (e.g., about 1 weight % to about 26 weight %, about 24 weight %, about 22 weight %, about 20 weight %, about 18 weight %, about 16 weight %, about 14 weight%, about 12 weight %, about 10 weight %, about 8 weight %, about 6 weight %, about 4 weight %, or about 2 weight %; about 2 weight % to about 28 weight %, about 26 weight %, about 24 weight %, about 22 weight %, about 20 weight %, about 18 weight %, about 16 weight %, about 14 weight%, about 12 weight %, about 10 weight %, about 8 weight %, about 6 weight %, or about 4 weight %; about 4 weight % to about 28 weight %, about 26 weight %, about 24 weight %, about 22 weight %, about 20 weight %, about 18 weight %, about 16 weight %, about 14 weight%, about 12 weight %, about 10 weight %, about 8 weight %, or about 6 weight %; about 6 weight % to about 28 weight %, about 26 weight %, about 24 weight %, about 22 weight %, about 20 weight %, about 18 weight %, about 16 weight %, about 14 weight%, about 12 weight %, about 10 weight %, or about 8 weight %; about 8 weight % to about 28 weight %, about 26 weight %, about 24 weight %, about 22 weight %, about 20 weight %, about 18 weight %, about 16 weight %, about 14 weight%, about 12 weight %, or about 10 weight %; about 10 weight % to about 28 weight %, about 26 weight %, about 24 weight %, about 22 weight %, about 20 weight %, about 18 weight %, about 16 weight %, about 14 weight%, or about 12 weight %; about 12 weight % to about 28 weight %, about 26 weight %, about 24 weight %, about 22 weight %, about 20 weight %, about 18 weight %, about 16 weight %, or about 14 weight%; about 14 weight

% to about 28 weight %, about 26 weight %, about 24 weight %, about 22 weight %, about 20 weight %, about 18 weight %, or about 16 weight %; about 16 weight % to about 28 weight %, about 26 weight %, about 24 weight %, about 22 weight %, about 20 weight %, about 18 weight %; about 18 weight % to about 28 weight %, about 26 weight %, about 24 weight %, about 22 weight %, or about 20 weight %; about 20 weight % to about 28 weight %, about 26 weight %, about 24 weight %, about 22 weight %; about 22 weight % to about 28 weight %, about 26 weight %, about 24 weight %; about 24 weight % to about 28 weight % or about 26 weight %; or about 28 weight % to about 30 weight %); a final concentration of coconut oil of about 0.5 weight % to about 14 weight % (e.g., about 0.5 weight % to about 12 weight %, about 10 weight %, about 8 weight %, about 6 weight %, about 4 weight %, about 2 weight %, or about 1 weight %; about 1 weight % to about 14 weight %, about 12 weight %, about 10 weight %, about 8 weight %, about 6 weight %, about 4 weight %, or about 2 weight %; about 2 weight % to about 12 weight %, about 10 weight %, about 8 weight %, about 6 weight %, or about 4 weight %; about 4 weight % to about 14 weight %, about 12 weight %, about 10 weight %, about 8 weight %, or about 6 weight %; about 6 weight % to about 14 weight %, about 12 weight %, about 10 weight %, or about 8 weight %; about 8 weight % to about 14 weight %, about 12 weight %, or about 10 weight %; about 10 weight % to about 14 weight % or 12 weight %; or about 12 weight % to about 14 weight %); a final concentration of tributyrin of about 0.05 weight to about 1.0 weight % (e.g., between about 0.05 weight % to about 0.9 weight %, about 0.8 weight %, about 0.7 weight %, about 0.6 weight %, about 0.5 weight %, about 0.4 weight %, about 0.3 weight %, or about 0.2 weight %; 0.1 weight % to about 1.0 weight %, about 0.9 weight %, about 0.8 weight %, about 0.7 weight %, about 0.6 weight %, about 0.5 weight %, about 0.4 weight %, about 0.3 weight %, or about 0.2 weight %; about 0.2 weight % to about 1.0 weight %, about 0.9 weight %, about 0.8 weight %, about 0.7 weight %, about 0.6 weight %, about 0.5 weight %, or about 0.4 weight %; about 0.4 weight % to about 1.0 weight %, about 0.9 weight %, about 0.8 weight %, about 0.7 weight %, about 0.6 weight %, or about 0.5 weight %; about 0.5 weight % to about 1.0 weight %, about 0.9 weight %, about 0.8 weight %, about 0.7 weight %, or about 0.6 weight %; about 0.6 weight % to about 1.0 weight %, about 0.9 weight %, about 0.8 weight %, or about 0.7 weight %; about 0.7 weight % to

about 1.0 weight %, about 0.9 weight %, or about 0.8 weight %; about 0.8 weight % to about 1.0 weight % or about 0.9 weight %; or about 0.9 weight % to about 1.0 weight %); a final total concentration of monoglycerides and diglycerides (e.g., any one or more of the monoglycerides or diglycerides described herein) of about 0.08 weight % to about 1.2 weight % (e.g., 0.08 weight % to about 1.0 weight %, about 0.8 weight %, about 0.6 weight %, about 0.4 weight %, or about 0.2 weight %; about 0.2 weight % to about 1.2 weight %, about 1.0 weight %, about 0.8 weight %, about 0.6 weight %, or about 0.4 weight %; about 0.4 weight % to about 1.2 weight %, about 1.0 weight %, about 0.8 weight %, or about 0.6 weight %; about 0.6 weight % to about 1.2 weight %, about 1.0 weight %, or about 0.8 weight %; about 0.8 weight % to about 1.2 weight % or about 1.0 weight %; or about 1.0 weight % to about 1.2 weight %); and a final total concentration of free fatty acids of about 0.02 weight % to about 0.28 weight %; and a final total concentration of phospholipids (e.g., any one or more of the phospholipids described herein) of about 0.02 weight % to about 0.3 weight % (e.g., about 0.02 weight % to about 0.25 weight %, about 0.20 weight %, about 0.15 weight %, or about 0.10 weight %; about 0.05 weight % to about 0.3 weight %, about 0.25 weight %, about 0.20 weight %, about 0.15 weight %, or about 0.10 weight %; about 0.10 weight % to about 0.30 weight %, about 0.25 weight %, about 0.20 weight %, or about 0.15 weight %; about 0.15 weight % to about 0.30 weight %, about 0.25 weight %, or about 0.20 weight %; about 0.20 weight % to about 0.30 weight % or about 0.25 weight %; or about 0.25 weight % to about 0.30 weight %).

In some embodiments of any of the compositions, the free fatty acids include at least one (e.g., two, three, or four) fatty acid selected from the group of: butyric acid, caproic acid, caprylic acid, and capric acid. In some embodiments of any of the compositions, the phospholipids are soy lecithin phospholipids, sunflower lecithin phospholipids, cotton lecithin phospholipids, or rapeseed lecithin phospholipids. In some examples of any of the compositions described herein, the flavor compounds include at least one flavor compound selected from the group of: δ-decalactone, ethyl butyrate, 2-furyl methyl ketone, 2,3-pentanedione, γ-undecalactone, and δ-undecalactone. In some embodiments of any of the compositions described herein, the one or more sweetening agents is a saccharide (e.g., glucose, mannose, maltose, fructose, galactose, lactose,

sucrose, monatin, or tagatose). In some examples of any of the compositions described herein, the

one or more sweetening agents is an artificial sweetener (e.g., stevia, aspartame, cyclamate, saccharin, sucralose, mogrosides, brazzein, curculin, erythritol, glycyrrhizin, inulin, isomalt, ~~lacititol~~lactitol, mabinlin, ~~malititol~~maltitol, mannitol, miraculin, monatin, monelin, osladin, pentadin, sorbitol, thaumatin, xylitol, acesulfame potassium, advantame, alitame, aspartame-acesulfame, sodium cyclamate, dulcin, glucin, neohesperidin dihyrdochalcone, neotame, or P-4000).

In some examples of any of the compositions described herein, the ash includes one or more (e.g., two, three, four, five, or six) of: calcium, phosphorus, potassium, sodium, citrate, and chloride. In some embodiments of any of the compositions described herein, the ash comprises one or more (e.g., two or three) of $CaCl_2$, $KH_2PO_4$, and $Na_3$ citrate. Some embodiments of the compositions described herein include: a final concentration of $CaCl_2$ of about 0.05 g/L to about 0.2 g/L (e.g., about 0.05 g/L to about 0.15 g/L, about 0.05 g/L to about 0.10 g/L, about 0.10 g/L to about 0.20 g/L, about 0.10 g/L to about 0.15 g/L, or about 0.15 g/L to about 0.2 g/L); a final concentration of $KH_2PO_4$ of about 0.2 g/L to about 0.4 g/L (e.g., about 0.2 g/L to about 0.35 g/L, about 0.2 g/L to about 0.30 g/L, about 0.2 g/L to about 0.25 g/L, about 0.25 g/L to about 0.4 g/L, about 0.25 g/L to about 0.30 g/L, about 0.30 g/L to about 0.40 g/L, or about 0.30 g/L to about 0.35 g/L, or about 0.35 g/L to about 0.40 g/L); and/or a final concentration of $Na_3$ citrate of about 0.1 g/L to about 0.3 g/L (e.g., 0.1 g/L to about 0.25 g/L, about 0.1 g/L to about 0.20 g/L, about 0.1 g/L to about 0.15 g/L, about 0.15 g/L to about 0.30 g/L, about 0.15 g/L to about 0.25 g/L, about 0.15 g/L to about 0.20 g/L, about 0.20 g/L to about 0.30 g/L, about 0.20 g/L to about 0.25 g/L, or about 0.25 g/L to about 0.30 g/L).

In any of the composition described herein, the κ-casein protein can be a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth κ-casein protein. In any of the compositions described herein, the β-casein protein can be a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla,

chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth β-casein protein.

In some examples of any of the compositions described herein can further include: a final concentration of α-lactalbumin protein (e.g., any of the α-lactalbumin proteins described herein) of about 0.4 weight % to about 2.5 weight % (e.g., about 0.4 weight % to about 2.0 weight %, about 1.5 weight %, or about 1.0 weight %; about 1.0 weight % to about 2.5 weight %, about 2.0 weight %, or about 1.5 weight %, about 1.5 weight % to about 2.5 weight % or 2.0 weight %; or about 2.0 weight % to about 2.5 weight %), and/or a final concentration of β-lactoglobulin protein (e.g., any of the β-lactoglobulin proteins described herein) of about 2.5 weight % to about 4.5 weight %. In some embodiments of any of the compositions described herein, the α-lactalbumin protein can be a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth α-lactalbumin protein. In some embodiments of any of the compositions described herein, the β-lactoglobulin protein can be a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth β-lactoglobulin protein.

Some embodiments of any of the compositions described herein further include: a final concentration of α-S1-casein protein (e.g., any of the α-S1-casein proteins described herein) of about 11 weight % to about 16 weight % (e.g., about 11 weight % to about 15 weight %, about 14 weight %, about 13 weight %, or about 12 weight %; about 12 weight % to about 16 weight %, about 15 weight %, about 14 weight %, or about 13 weight %; about 13 weight % to about 16 weight %, about 15 weight %, or about 14 weight %; about 14 weight % to about 16 weight % or 15 weight %; or about 15 weight % to about 16 weight %); and/or a final concentration of α-S2-casein protein (e.g., any of the α-S2-casein proteins described herein) of about 2 weight % to about 5 weight % (e.g., about 2

weight % to about 4.5 weight %, about 4.0 weight %, about 3.5 weight %, about 3.0 weight %, or about 2.5 weight %; about 2.5 weight % to about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, about 3.5 weight %, or about 3.0 weight %; about 3.0 weight % to about 5.0 weight %, about 4.5 weight %, about 4.0 weight %, or about 3.5 weight %; about 3.5 weight % to about 5 weight %, about 4.5 weight %, or about 4.0 weight %; about 4.0 weight % to about 5.0 weight % or 4.5 weight %; or about 4.5 weight % to about 5.0 weight %).

In some examples of any of the compositions described herein, the α-S1-casein protein can be a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth α-S1-casein protein; and/or the α-S2-casein protein can be a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth α-S2-casein protein.

Some examples of any of the compositions described herein further include one or more (e.g., two or three) of serum albumin (e.g., any of the serum albumin proteins described herein), lactoferrin (e.g., any of the lactoferrin proteins described herein), and transferrin (e.g., any of the transferrin proteins described herein). In some examples of any of the compositions described herein, the serum albumin can be a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth serum albumin; the lactoferrin can be a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth lactoferrin; and/or the transferrin can be a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur,

panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth transferrin protein.

In some examples of any of the compositions described herein, the composition further includes one or more color balancing agents (e.g., any of the coloring agents described herein, e.g., β-carotene or annatto).

Any of the compositions described herein can have a pH of about 6.2 to about 7.2 (e.g., about 6.2 to about 7.0, about 6.2 to about 6.8, about 6.2 to about 6.6, about 6.2 to about 6.4, about 6.4 to about 7.2, about 6.4 to about 7.0, about 6.4 to about 6.8, about 6.4 to about 6.6, about 6.6 to about 7.2, about 6.6 to about 7.0, about 6.6 to about 6.8, about 6.8 to about 7.2, about 6.8 to about 7.0, or about 7.0 to about 7.2).

In various embodiments, the milk protein components comprise about 0.5% about 1%, about 1.5%, about 2%, about 2.5%, about 3%, about 3.5%, about 4%, about 4.5%, about 5%, about 6% milk protein by dry weight or total weight. In some embodiments, the compositions can comprise about 0.5-2.5%, about 1-2%, about 2-3%, or about 4-10% protein by dry weight or total weight. In particular embodiments, the compositions can comprise about 10-15% protein by dry weight or total weight.

A wide range of caseins including casein with substantial homology to the wild-type casein, variants, mutants of casein are expressed and incorporated as a component of milk protein.

**Dry Compositions**

Also provided are powder compositions including: a final concentration of κ-casein protein (e.g., any of the α-casein proteins described herein) of about 3.6 weight % to about 5.4 weight % (e.g., about 3.6 weight % to about 5.2 weight %, about 5.0 weight %, about 4.8 weight %, about 4.6 weight %, about 4.4 weight %, about 4.2 weight %, about 4.0 weight %, or about 3.8 weight %; about 3.8 weight % to about 5.4 weight %, about 5.2 weight %, about 5.0 weight %, about 4.8 weight %, about 4.6 weight %, about 4.4 weight %, about 4.2 weight %, or about 4.0 weight %; about 4.0 weight % to about 5.4 weight %, about 5.2 weight %, about 5.0 weight %, about 4.8 weight %, about 4.6

weight %, about 4.4 weight %, or about 4.2 weight %; about 4.2 weight % to about 5.2 weight %, about 5.2 weight %, about 5.0 weight %, about 4.8 weight %, about 4.6 weight %, or about 4.4 weight %; about 4.8 weight % to about 5.4 weight %, about 5.2 weight %, or about 5.0 weight %; about 5.0 weight % to about 5.4 weight % or about 5.2 weight %; or about 5.2 weight % to about 5.4 weight %); a final concentration of β-casein protein (e.g., any of the β-casein proteins described herein) of about 16.3 weight % to about 24.5 weight %; 16.3 weight % to about 22 weight %, about 20 weight %, or about 18 weight %; about 18 weight % to about 24.5 weight %, about 22 weight %, or about 20 weight %; about 20 weight % to about 24.5 weight % to about 22 weight %; or about 22 weight % to about 24.5 weight %); a final concentration of a sweetening agent (e.g., any one or more of the sweetening agents described herein) of about 35 weight % to about 40 weight % (e..g, about 35 weight % to about 39 weight %, about 38 weight %, about 37 weight %, or about 36 weight %; about 36 weight % to about 40 weight %, about 39 weight %, about 38 weight %, or about 37 weight %; about 37 weight % to about 40 weight %, about 39 weight %, or about 38 weight %; about 38 weight % to about 40 weight % or 39 weight %; or about 39 weight % to about 40 weight %); a final concentration of one or more lipids (e.g., any of the one or more lipids described herein) of about 25 weight % to about 30 weight % (e.g., about 25 weight % to about 29 weight %, about 28 weight %, about 27 weight %, or about 26 weight %; about 26 weight % to about 30 weight %, about 29 weight %, about 28 weight %, or about 27 weight %; about 27 weight % to about 30 weight %, about 29 weight %, or about 28 weight %; about 28 weight % to about 30 weight % or about 29 weight %; or about 29 weight % to about 30 weight %); a final concentration of ash (e.g., any of the ash described herein) of about 5 weight % to about 7 weight % (e.g., about 5 weight % to about 6.5 weight %, about 6.0 weight %, or about 5.5 weight %; about 5.5 weight % to about 7.0 weight %, about 6.5 weight %, or about 6.0 weight %; about 6.0 weight % to about 7.0 weight % or about 6.5 weight %; or about 6.5 weight % to about 7.0 weight %); and a final concentration of water of about 2 weight % to about 5 weight % (e.g., about 2 weight % to about 4 weight % or about 3 weight %; about 3 weight % to about 5 weight % or about 4 weight %; or about 4 weight % to about 5 weight %), where the κ-casein protein is an unglycosylated

and/or has a non-mammalian glycosylation pattern, and/or the β-casein protein is an unglycosylated and/or has a non-mammalian glycosylation pattern.

Any of the powder compositions can contain any of the components described in any of the compositions described herein (e.g., one or more of any of the color matching agents, α-S1-casein proteins, α-S2-casein proteins, α-lactalbumin proteins, β-lactoglobulin proteins, lactoferrin proteins, transferrin proteins, and serum albumin protein described herein at any of the concentrations described herein for each component, respectively).

**Supplemented Milk Compositions**

Also provided herein are compositions including: a mammalian-produced milk or a processed mammal-produced milk; and one or more (e.g., two or three) of a κ-casein protein that is unglycosylated or has an non-mammalian glycosylation pattern; a β-casein protein that is unglycosylated or has an non-mammalian glycosylation pattern; or a micelle including a κ-casein protein that is unglycosylated or has an non-mammalian glycosylation pattern and a β-casein protein that is unglycosylated or has an non-mammalian glycosylation pattern.

In some examples, the composition includes a mammal-produced milk or a processed mammalian-produced milk and a κ-casein protein that is unglycosylated or has a non-mammalian glycosylation pattern. In some examples, the composition includes a mammal-produced milk or a processed mammalian-produced milk and a β-casein protein that is unglycosylated or has a non-mammalian glycosylation pattern. In other examples, the composition includes a mammal-produced milk or a processed mammalian-produced milk and a micelle including a κ-casein protein that is unglycosylated or has a non-mammalian glycosylation pattern and a β-casein protein that is unglycosylated or has a non-mammalian glycosylation pattern.

In some examples, the final concentration of the κ-casein protein that is unglycosylated or has a non-mammalian glycosylation pattern or the final concentration of the β-casein protein that is unglycosylated or has a non-mammalian glycosylation pattern in the composition is: 0.02 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about

1.8 weight %, about 1.6 weight %, about 1.4 weight %, about 1.2 weight %, about 1.0 weight %, about 0.8 weight %, about 0.6 weight %, about 0.4 weight %, about 0.2 weight %, or about 0.1 weight %; about 0.1 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, about 1.6 weight %, about 1.4 weight %, about 1.2 weight %, about 1.0 weight %, about 0.8 weight %, about 0.6 weight %, about 0.4 weight %, or about 0.2 weight %; about 0.2 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, about 1.6 weight %, about 1.4 weight %, about 1.2 weight %, about 1.0 weight %, about 0.8 weight %, about 0.6 weight %, or about 0.4 weight %; about 0.8 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, about 1.6 weight %, about 1.4 weight %, about 1.2 weight %, or about 1.0 weight %; about 1.0 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, about 1.6 weight %, about 1.4 weight %, or about 1.2 weight %; about 1.2 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, about 1.6 weight %, or about 1.4 weight %; about 1.4 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, or about 1.6 weight %; about 1.6 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, or about 1.8 weight %; about 1.8 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, or about 2.0 weight %; about 2.0 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, or about 2.2 weight %; about 2.2 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, or about 2.4 weight %; about 2.4 weight % to about 3.0 weight %, about 2.8 weight %, or about 2.6 weight %; about 2.6 weight % to about 3.0 weight % or about 2.8 weight %; or about 2.8 weight % to about 3.0 weight % (of the final composition).

In some compositions, the final concentration of the κ-casein protein that is unglycosylated and/or has a non-mammalian glycosylation pattern in the composition is

about 0.02 weight % to about 0.6 weight % (e.g., about 0.02 weight % to about 0.5 weight %, about 0.02 weight % to about 0.4 weight %, about 0.02 weight % to about 0.3 weight %, about 0.02 weight % to about 0.2 weight %, about 0.02 weight % to about 0.1 weight %, about 0.1 weight % to about 0.5 weight %, about 0.1 weight %, to about 0.4 weight %, about 0.1 weight % to about 0.3 weight %, about 0.1 weight % to about 0.2 weight %, about 0.2 weight % to about 0.5 weight %, about 0.2 weight % to about 0.4 weight %, about 0.2 weight % to about 0.3 weight %, about 0.3 weight % to about 0.5 weight %, about 0.3 weight % to about 0.4 weight %, or about 0.4 weight % to about 0.5 weight %); and the final concentration of β-casein that is unglycosylated and/or has a non-mammalian glycosylation pattern in the composition is about 0.02 weight % to about 4.0 weight %, about 3.8 weight %, about 3.6 weight %, about 3.4 weight %, about 3.2 weight %, about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, about 1.6 weight %, about 1.4 weight %, about 1.2 weight %, about 1.0 weight %, about 0.8 weight %, about 0.6 weight %, about 0.4 weight %, or about 0.2 weight %; about 0.2 weight % to about 4.0 weight %, about 3.8 weight %, about 3.6 weight %, about 3.4 weight %, about 3.2 weight %, about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, about 1.6 weight %, about 1.4 weight %, about 1.2 weight %, about 1.0 weight %, about 0.8 weight %, about 0.6 weight %, or about 0.4 weight %; about 0.4 weight % to about 4.0 weight %, about 3.8 weight %, about 3.6 weight %, about 3.4 weight %, about 3.2 weight %, about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, about 1.6 weight %, about 1.4 weight %, about 1.2 weight %, about 1.0 weight %, about 0.8 weight %, or about 0.6 weight %; about 0.6 weight % to about 4.0 weight %, about 3.8 weight %, about 3.6 weight %, about 3.4 weight %, about 3.2 weight %, about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, about 1.6 weight %, about 1.4 weight %, about 1.2 weight %, about 1.0 weight %, or about 0.8 weight %; about 0.8 weight % to about 4.0 weight %, about 3.8 weight %, about 3.6 weight %, about 3.4 weight %, about 3.2 weight %, about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about

2.0 weight %, about 1.8 weight %, about 1.6 weight %, about 1.4 weight %, about 1.2 weight %, or about 1.0 weight %; about 1.0 weight % to about 4.0 weight %, about 3.8 weight %, about 3.6 weight %, about 3.4 weight %, about 3.2 weight %, about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, about 1.6 weight %, about 1.4 weight %, or about 1.2 weight %; about 1.2 weight % to about 4.0 weight %, about 3.8 weight %, about 3.6 weight %, about 3.4 weight %, about 3.2 weight %, about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, about 1.6 weight %, or about 1.4 weight %; about 1.4 weight % to about 4.0 weight %, about 3.8 weight %, about 3.6 weight %, about 3.4 weight %, about 3.2 weight %, about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, or about 1.6 weight %; about 1.6 weight % to about 4.0 weight %, about 3.8 weight %, about 3.6 weight %, about 3.4 weight %, about 3.2 weight %, about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, or about 1.8 weight %; about 1.8 weight % to about 4.0 weight %, about 3.8 weight %, about 3.6 weight %, about 3.4 weight %, about 3.2 weight %, about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, or about 2.0 weight %; about 1.8 weight % to about 4.0 weight %, about 3.8 weight %, about 3.6 weight %, about 3.4 weight %, about 3.2 weight %, about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, or about 2.0 weight %; about 2.0 weight % to about 4.0 weight %, about 3.8 weight %, about 3.6 weight %, about 3.4 weight %, about 3.2 weight %, about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, or about 2.2 weight %; about 2.2 weight % to about 4.0 weight %, about 3.8 weight %, about 3.6 weight %, about 3.4 weight %, about 3.2 weight %, about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, or about 2.4 weight %; about 2.4 weight % to about 4.0 weight %, about 3.8 weight %, about 3.6 weight %, about 3.4 weight %, about 3.2 weight %, about 3.0 weight %, about 2.8 weight %, or about 2.6 weight %; about 2.6 weight % to about 4.0 weight %, about 3.8 weight %, about 3.6 weight %, about 3.4 weight %, about 3.2 weight %, about 3.0 weight %, or about 2.8 weight %; about 2.8 weight % to about 4.0 weight %, about 3.8

weight %, about 3.6 weight %, about 3.4 weight %, about 3.2 weight %, or about 3.0 weight %; about 3.0 weight % to about 4.0 weight %, about 3.8 weight %, about 3.6 weight %, about 3.4 weight %, or about 3.2 weight %; about 3.2 weight % to about 4.0 weight %, about 3.8 weight %, about 3.6 weight %, or about 3.4 weight %; about 3.4 weight % to about 4.0 weight %, about 3.8 weight %, or about 3.6 weight %; about 3.6 weight % to about 4.0 weight % or about 3.8 weight %; or about 3.8 weight % to about 4.0 weight %.

In some examples, the final concentration of micelles including a κ-casein protein that is unglycosylated or has an non-mammalian glycosylation pattern and a β-casein protein that is unglycosylated or has an non-mammalian glycosylation pattern in the composition is: 0.02 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, about 1.6 weight %, about 1.4 weight %, about 1.2 weight %, about 1.0 weight %, about 0.8 weight %, about 0.6 weight %, about 0.4 weight %, about 0.2 weight %, or about 0.1 weight %; about 0.1 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, about 1.6 weight %, about 1.4 weight %, about 1.2 weight %, about 1.0 weight %, about 0.8 weight %, about 0.6 weight %, about 0.4 weight %, or about 0.2 weight %; about 0.2 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, about 1.6 weight %, about 1.4 weight %, about 1.2 weight %, about 1.0 weight %, about 0.8 weight %, about 0.6 weight %, or about 0.4 weight %; about 0.8 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, about 1.6 weight %, about 1.4 weight %, about 1.2 weight %, or about 1.0 weight %; about 1.0 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, about 1.6 weight %, about 1.4 weight %, or about 1.2 weight %; about 1.2 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, about 1.8 weight %, about 1.6 weight %, or about 1.4 weight %; about 1.4 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2

weight %, about 2.0 weight %, about 1.8 weight %, or about 1.6 weight %; about 1.6 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, about 2.0 weight %, or about 1.8 weight %; about 1.8 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, about 2.2 weight %, or about 2.0 weight %; about 2.0 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, about 2.4 weight %, or about 2.2 weight %; about 2.2 weight % to about 3.0 weight %, about 2.8 weight %, about 2.6 weight %, or about 2.4 weight %; about 2.4 weight % to about 3.0 weight %, about 2.8 weight %, or about 2.6 weight %; about 2.6 weight % to about 3.0 weight % or about 2.8 weight %; or about 2.8 weight % to about 3.0 weight % (of the final composition).

**Nucleic Acids and Vectors**

Also provided are nucleic acids (e.g., vectors) that include: a promoter (e.g., a yeast, bacterial, or a mammalian promoter); a sequence encoding a signal sequence; a sequence encoding a milk protein (e.g., any of the exemplary sequences described herein); and a yeast termination sequence, where the promoter is operably linked to the signal sequence, the signal sequence is operably linked to the sequence encoding the milk protein, and the terminal sequence is operably linked to the sequence encoding the milk protein. In some examples of these nucleic acids, the promoter is a constitutive promoter or an inducible promoter. Non-limiting examples of promoters are described herein. Additional promoters that can be used in these nucleic acids are known in the art.

The signal sequence in any of the vectors described herein can be a signal sequence from the encoded milk protein or a different milk protein, or is a signal sequence from a yeast mating factor (e.g., any alpha mating factor). In some examples, the encoded milk protein is selected from the group of: β-casein (e.g., any of the β-casein proteins described herein), κ-casein (e.g., any of the κ-casein proteins described herein), α-S1-casein (e.g., any of the α-S1-casein proteins described herein), α-S2-casein (e.g., any of the α-S2-casein proteins described herein), α-lactalbumin (e.g., any of the α-lactalbumin proteins described herein), β-lactoglobulin (e.g., any of the β-lactoglobulin proteins described herein), lactoferrin (e.g., any of the lactoferrin proteins described

herein), or transferrin (e.g., any of the transferrin proteins described herein). Additional signal sequences that can be used in the present vectors are known in the art.

Any of the nucleic acids described herein can further include a bacterial origin of replication. Any of the nucleic acids described herein can further include a selection marker (e.g., an antibiotic resistance gene). The sequences of bacterial origin of replication are known in the art. Non-limiting examples of antibiotic resistance genes are described herein. Additional examples of resistance genes are known in the art.

Non-limiting examples of termination sequences are described herein. Additional examples of termination sequences are known in the art.

Some embodiments of the nucleic acids provided herein further include: an additional promoter sequence (e.g., any of the exemplary promoters described herein); an additional sequence encoding a signal sequence (e.g., any of the exemplary signal sequences described herein); a sequence encoding an additional milk protein (e.g., any of the exemplary sequences encoding a milk protein described herein); and an additional yeast termination sequence (e.g.. any of the exemplary yeast termination sequences described herein), where the additional promoter sequence is operably linked to the additional sequence encoding a signal sequence, the sequence encoding the signal sequence is operably linked to the sequence encoding the additional milk protein, and the sequence encoding the additional milk protein is operably linked to the additional yeast terminal sequence. The additional milk protein can be, e.g., β-casein (e.g., any of the β-casein proteins described herein), κ-casein (e.g., any of the κ-casein proteins described herein), α-S1-casein (e.g., any of the α-S1-casein proteins described herein), α-S2-casein (e.g., any of the α-S2-casein proteins described herein), α-lactalbumin (e.g., any of the α-lactalbumin proteins described herein), β-lactoglobulin (e.g., any of the β-lactoglobulin proteins described herein), lactoferrin (e.g., any of the lactoferrin proteins described herein), or transferrin (e.g., any of the transferrin proteins described herein). In some embodiments, the nucleic acid includes a sequence encoding a β-casein and a sequence encoding a κ-casein. The promoter and the additional promoter can be the same or different. The yeast termination sequence and the additional yeast terminal sequence can be the same or different. The signal sequence and the additional signal sequence can be the same or different.

The present invention also encompasses a vector containing the isolated DNA sequence encoding casein or whey polypeptide and host cells comprising the vector. The vector may further comprise an isolated DNA sequence comprising a nucleotide sequence encoding a casein, wherein the nucleotide sequence is operably linked to a promoter, a nucleotide sequence encoding an alpha mating factor, or a variant thereof, a nucleotide sequence encoding a bacterial resistance marker and a transcription terminator. One or more of suitable promoters are utilized for expression of the genes encoding casein or whey proteins may be any promoter which is functional in the host cell and is able to elicit expression of the product encoded by the gene. Suitable promoters include, for example, $P_{LAC4\text{-}PBI}$, T7, Ptac, Pgal, λPL, λPR, bla, spa, Adh, CYC, TDH3, ADH1 and CLB1.

**Introducing Nucleic Acids into a Cell**

Methods of introducing nucleic acids (e.g., any of the nucleic acids described herein) into a cell to generate a host cell are well-known in the art. Non-limiting examples of techniques that can be used to introduce a nucleic acid into a cell include: calcium phosphate transfection, dendrimer transfection, liposome transfection (e.g., cationic liposome transfection), cationic polymer transfection, electroporation, cell squeezing, sonoporation, optical transfection, protoplast fusion, impalefection, hyrodynamic delivery, gene gun, magnetofection, and viral transduction.

One skilled in the art would be able to select one or more suitable techniques for introducing the nucleic acids into a cell based on the knowledge in the art that certain techniques for introducing a nucleic acid into a cell work better for different types of host cells. Exemplary methods for introducing a nucleic acid into a yeast cell are described in Kawai et al., *Bioeng. Bugs* 1:395-403, 2010.

**Host Cells**

Also provided herein a host cells including any of the nucleic acids (e.g., vectors) described herein. In some examples, the nucleic acid described herein is stably integrated within the genome (e.g., a chromosome) of the host cell. In other examples, the nucleic acid described herein is not stably integrated within the genome of the host cell.

In some embodiments, the host cell is a yeast strain or a bacterial strain. In some embodiments, the host cell can be, e.g., a yeast strain selected from the group of: a *Kluyveromyces* sp., *Pichia* sp., *Saccharomyces* sp., *Tetrahymena* sp., *Yarrowia* sp., *Hansenula* sp., *Blastobotrys* sp., *Candida* sp., *Zygosaccharomyces* sp., and *Debaryomyces* sp. Additional non-limiting examples of yeast strains that can be used as the host cell are *Kluyveromyces lactis*, *Kluyveromyces marxianus, Saccharomyces cerevisiae*, and *Pichia pastoris*. Additional species of yeast strains that can be used as host cells are known in the art.

In some examples, the host cell can be a protozoa, such as, e.g., *Tetrahymena thermophile*, *T. hegewischi*, *T. hyperangularis*, *T. malaccensis*, *T. pigmentosa*, *T. pyriformis*, and *T. vorax*.

It is an object of the invention to isolate milk protein components by recombinantly expressing them in any of the host cells provided herein.

**Methods of Producing a Recombinant Milk Protein and Methods of Making a Micelle**

Also provided are methods of producing a recombinant milk protein (e.g., one or more of any of the milk proteins described herein) that is unglycosylated or has a non-mammalian glycosylation pattern that include: culturing any of the host cells described herein in a culture medium under conditions sufficient to allow for secretion of the milk protein that is unglycosylated or has a non-mammalian glycosylation pattern; and harvesting the milk protein that is unglycosylated or has a non-mammalian glycosylation pattern from the culture medium. Suitable culture medium for use in these methods are known in the art. Culture conditions sufficient to allow for secretion of a milk protein are also known in the art. The host cells used in these methods can be any of the host cells described herein. The host cells can include any of the nucleic acids described herein. The recombinant milk protein produced can be one or more of: β-casein (e.g., any of the β-casein proteins described herein), κ-casein (e.g., any of the κ-casein proteins described herein), α-S1-casein (e.g., any of the α-S1 caseins described herein), α-S2-casein (e.g., any of the α-S2-caseins described herein), α-lactalbumin (e.g., any of the α-lactalbumin proteins described herein), β-lactoglobulin (e.g., any of the β-lactoglobulin proteins

described herein), lactoferrin (e.g., any of the lactoferrin proteins described herein), transferrin (e.g., any of the transferrin proteins described herein), and serum albumin (e.g., any of the serum albumin proteins described herein). Some of these methods further include isolating (e.g., purifying) the recombinant milk protein from the culture medium. Methods of isolating (e.g., purifying) a recombinant milk protein from a liquid are well-known in the art. Exemplary methods for isolating (e.g., purifying) recombinant milk proteins are described in Imafidon et al., *Crit. Rev. Food Sci. Nutrition* 37:663-669, 1997),

Also provided are methods of producing a micelle including a β-casein (e.g., any of the β-casein proteins described herein) that is unglycosylated or has a non-mammalian glycosylation pattern and a κ-casein (e.g., any of the κ-casein proteins described herein) that is unglycosylated or has a non-mammalian glycosylation pattern, that include: culturing any of the host cells described herein in a culture medium under conditions sufficient to allow for release of the micelle from the host cell, where the host cell comprises nucleic acid including a sequence that encodes a β-casein and a sequence that encodes a κ-casein; and harvesting the micelle from the culture medium. Suitable culture medium for use in these methods are known in the art. The host cells used in these methods can be any of the host cells described herein. The host cells can include any of the nucleic acids described herein. The micelles produced can be any of the micelles described herein (and can have any of the physical characteristics of micelles described herein). Some of these methods further include isolating (e.g., purifying) the micelle from the culture medium. Methods of isolating (e.g., purifying) a micelle from a liquid are well-known in the art (e.g., ultracentrifigation).

Exemplary details of culturing yeast host cells are described in Idiris et al., *Appl. Microbiol. Biotechnol.* 86:403-417, 2010; Zhang et al., *Biotechnol. Bioprocess. Eng.* 5:275-287, 2000; Zhu, *Biotechnol. Adv.* 30:1158-1170, 2012; Li et al., *MAbs* 2:466-477, 2010.

It is an object of the invention to express one or more different forms of casein for application into various types of dairy substitute products. Casein subunits such as α-s1-casein, α-s2-casein, β-casein and κ-casein differ by one or more amino acid changes. In certain embodiments, the methods and compositions comprise incorporation of bovine

casein such as α-s1-casein, α-s2-casein, β-casein and κ-casein. In other embodiments, the methods and compositions comprise incorporation of human casein such as β-casein and κ-casein. See U.S. Patent No. 5,942,274. In alternative embodiments, casein is selected from one or more following sources including but not limited to: bovine, human, buffalo, camel, goat, sheep, horse, dolphin, whale, mountain goat and pig.

Also provided are methods for producing the milk protein components that can include, e.g., using a plasmid or construct of the invention as described in Example 1. This method comprises preparing the plasmid of interest, inserting the plasmid into an appropriate host cell, culturing the host cell for a suitable time and under suitable conditions such that the protein of interest is expressed, and then purifying the protein.

Proteins can be separated on the basis of their molecular weight, for example, by size exclusion chromatography, ultrafiltration through membranes, or density centrifugation. In some embodiments, the proteins can be separated based on their surface charge, for example, by isoelectric precipitation, anion exchange chromatography, or cation exchange chromatography. Proteins also can be separated on the basis of their solubility, for example, by ammonium sulfate precipitation, isoelectric precipitation, surfactants, detergents or solvent extraction. Proteins also can be separated by their affinity to another molecule, using, for example, hydrophobic interaction chromatography, reactive dyes, or hydroxyapatite. Affinity chromatography also can include using antibodies having specific binding affinity for the protein, nickel NTA for His-tagged recombinant proteins, lectins to bind to sugar moieties on a glycoprotein, or other molecules which specifically binds the protein.

Generally, centrifugation at an optimum pH yields purification efficiency >95%. Isoelectric point for the native caseins and whey proteins are known. In nature, the pH is 4.91 for bovine α-s1-casein, pH 4.1 for bovine α-s2-casein, pH 4.5 for bovine β-casein, pH 4.1 for bovine κ-casein, pH 4.2 for bovine α-lactalbumin, and pH 5.2 for bovine β-lactoglobulin. The recombinantly produced casein and whey can differ in terms of its phosphate groups and sugar groups. Other methods for protein purification include membrane filtration to remove any potential bacteria or contaminants, followed by lyophilization for protein isolation.

Preferably, the methods and compositions provide for a production cost that is competitive at or below $1,000/kg, $500/kg, $10/kg, $1.0/kg, $0.10/kg, $0.010/kg or $0.0010/kg of milk protein component. In more preferred embodiments, the cost is below $0.009, $0.007, $0.006, $0.005/kg of milk protein component.

**Methods of Supplementing a Mammal-Produced Milk**

Also provided herein are methods of supplementing a mammal-produced milk that include providing a mammalian-produced milk or a processed mammalian-produced milk; and mixing into the milk at least one of: a β-casein protein (e.g., any of the β-casein proteins described herein) that is unglycosylated or has a non-mammalian glycosylation pattern; a κ-casein protein (e.g., any of the κ-casein proteins described herein) that is unglycosylated or has a non-mammalian glycosylation pattern; and a micelle (e.g., any of the micelles described herein) comprising a β-casein protein (e.g., any of the β-casein proteins described herein) that is unglycosylated or has a non-mammalian glycosylation pattern, and a κ-casein protein (e.g., any of the casein proteins described herein) that is unglycosylated or has a non-mammalian glycosylation pattern.

One or more of the β-casein protein, the κ-casein protein, and the micelles can be mixed into the milk to achieve any of the exemplary final concentrations of the β-casein protein, the κ-casein protein, and the micelles in a composition described in the section called "Supplemented Milk Compositions" herein. Methods of mixing are well known in the art. As one of skill in the art can appreciate, additional components described herein can also be mixed into the milk (e.g., any component described herein without limitation).

**Methods of Making a Composition**

Also provided are methods of producing a composition that include: sonicating a liquid including a protein mixture comprising β-casein protein (e.g., any of the β-casein proteins described herein) and casein κ protein (e.g., any of the κ-casein proteins described herein), or including micelles comprising β-casein protein (e.g., any of the β-casein proteins described herein) and κ-casein protein (e.g., any of the κ-casein proteins described herein); mixing ash (e.g., any of the ash described herein) into the liquid;

adding to the liquid a mixture of one or more lipids (e.g., any of the one or more liquids described herein), one or more flavor compounds (e.g., any of the one or more flavor compounds described herein), and one or more color balancing agents (e.g., any of the one or more color balancing agents described herein), and sonicating the liquid; and adding to the liquid one or more sweetening agents (e.g., one or more of any of the sweetening agents described herein), thereby producing the composition.

In some examples of these methods, the β-casein protein is unglycosylated or has a non-mammalian glycosylation pattern, and/or the κ-casein protein is unglycosylated or has a non-mammalian glycosylation pattern. In some examples of these methods, the ash includes one or more of: calcium, phosphorus, potassium, sodium, citrate, and chloride. In some examples of any of these methods, the ash added includes one or more (e.g., two or three) of $CaCl_2$, $KH_2PO_4$, and $Na_3$ citrate.

In some examples of these methods, the one or more lipids comprises at least one (e.g., two, three, four, five, six, or seven) of: sunflower oil, coconut oil, tributyrin, mono- and di-glycerides, free fatty acids, and phospholipids. In some examples of these methods, the free fatty acids comprise at least one fatty acid selected from the group of: butyric acid, caproic acid, caprylic acid, and capric acid. In some examples of these methods, the phospholipids are soy lecithin phospholipids, sunflower lecithin phospholipids, cotton lecithin phospholipids, or rapeseed lecithin phospholipids. In some embodiments of these methods, the flavor compounds include at least one (e.g., two, three, four, five, or six) flavor compound selected from the group of: δ-decalactone, ethyl butyrate, 2-furyl methyl ketone, 2,3-pentanedione, γ-undecalactone, and δ-undecalactone.

In some examples of these methods, the one or more coloring balancing agent is β-carotene or annatto. In some embodiments of these methods, the one or more sweetening agents is a saccharide (e.g., glucose, mannose, maltose, fructose, galactose, lactose, sucrose, monatin, or tagatose) or an artificial sweetener (e.g., stevia, aspartame, cyclamate, saccharin, sucralose, mogrosides, brazzein, curculin, erythritol, glycyrrhizin, inulin, isomalt, ~~lacititol~~lactitol, mabinlin, ~~malititol~~maltitol, mannitol, miraculin, monatin, monelin, osladin, pentadin, sorbitol, thaumatin, xylitol, acesulfame potassium, advantame, alitame, aspartame-acesulfame, sodium cyclamate, dulcin, glucin, neohesperidin dihyrdochalcone, neotame, or P-4000).

The pH of the resulting composition can be between about pH 6.2 and about pH 7.4 (e.g., about 6.2 to about 7.2; about 6.2 to about 7.0, about 6.2 to about 6.8, about 6.2 to about 6.6, about 6.2 to about 6.4, about 6.4 to about 7.2, about 6.4 to about 7.0, about 6.4 to about 6.8, about 6.4 to about 6.6, about 6.6 to about 7.2, about 6.6 to about 7.0, about 6.6 to about 6.8, about 6.8 to about 7.2, about 6.8 to about 7.0, or about 7.0 to about 7.2).

In any of these methods, the β-casein protein can be a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth β-casein protein; and/or the κ-casein protein can be a cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth κ-casein protein.

In some embodiments of these methods, the protein mixture further comprises one or more proteins selected from the group of: α-lactalbumin (e.g., any of the α-lactalbumin proteins described herein), β-lactoglobulin (e.g., any of the β-lactoglobulin proteins described herein), α-S1-casein (e.g., any of the α-S1-casein proteins described herein), α-S2-casein (e.g., any of the α-S2-casein proteins described herein), lactoferrin (e.g., any of the lactoferrin proteins described herein), transferrin (e.g., any of the transferrin proteins described herein), and serum albumin (e.g., any of the serum albumin proteins described herein).

As one of skill in the art can appreciate, the amount of each component used in these methods can be calculated in order to produce any of the compositions described herein.

**Methods of Making Butter, Cheese, Caseinate, or Yogurt**

Also provided herein are methods of making butter, cheese, caseinate, or yogurt that include providing any of the compositions provided herein; and producing the butter,

cheese, caseinate, or yogurt using any of the composition provided herein as a starting material.

Methods for making butter, cheese, caseinate, or yogurt are well-known in the art. See, e.g., Scott, Cheesemaking Practice, Kluwer Academic/Plenum Publishers, New York, NY, 1998; U.S. Patent No. 4,360,535 (which describes methods of making creams); U.S 285,878 (which described methods of making butter);

**Kits**

Also provided are kits that include: (a) a mixture of one or more milk proteins (e.g., any of the milk proteins described herein, including any one or more of the β-casein proteins, κ-casein proteins, α-S1-proteins, α-S2-proteins, α-lactalbumin proteins, β-lactoglobulin proteins, lactoferrin proteins, transferrin proteins, and serum albumin proteins described herein), one or more lipids (e.g., any of one or more of the lipids described herein), and one or flavor compounds (e.g., any one or more of the flavor compounds described herein); and (b) a mixture of ash (e.g., any of the ash described herein) and at least one sweetening agent (e.g., any one or more of the sweetening agents described herein). In some examples of these kits, the one or more milk proteins are cow, human, sheep, goat, buffalo, camel, horse, donkey, lemur, panda, guinea pig, squirrel, bear, macaque, gorilla, chimpanzee, mountain goat, monkey, ape, cat, dog, wallaby, rat, mouse, elephant, opossum, rabbit, whale, baboons, gibbons, orangutan, mandrill, pig, wolf, fox, lion, tiger, echidna, or woolly mammoth milk proteins.

In some examples of these kits, the one or more fats are selected from the group of: sunflower oil, coconut oil, tributyrin, mono- and di-glycerides, free fatty acids, and phospholipids. The fatty acids present in the kit can include at least one fatty acid selected from the group of: butyric acid, caproic acid, caprylic acid, and capric acid. The phospholipids in the kit can be soy lecithin phospholipids, sunflower lecithin phospholipids, cotton lecithin phospholipids, or rapeseed lecithin phospholipids.

The flavor compounds in the kit can include at least one flavor compound selected from the group of: δ-decalactone, ethyl butyrate, 2-furyl methyl ketone, 2,3-pentanedione, γ-undecalactone, and δ-undecalactone.

In some embodiments of the kit, the mixture in (a) further includes one or more color balancing agent (e.g., any of the color balancing agents described herein, e.g., β-carotene or annatto).

In some examples of the kits, the one or more sweetening agents is a saccharide (e.g., glucose, mannose, maltose, fructose, galactose, lactose, sucrose, monatin, or tagatose) or an artificial sweetener (e.g., stevia, aspartame, cyclamate, saccharin, sucralose, mogrosides, brazzein, curculin, erythritol, glycyrrhizin, inulin, isomalt, ~~lacititol~~lactitol, mabinlin, ~~malititol~~maltitol, mannitol, miraculin, monatin, monelin, osladin, pentadin, sorbitol, thaumatin, xylitol, acesulfame potassium, advantame, alitame, aspartame-acesulfame, sodium cyclamate, dulcin, glucin, neohesperidin dihyrdochalcone, neotame, or P-4000).

The kits can include an ash including one or more of: calcium, phosphorus, potassium, sodium, citrate, and chloride. In some examples, the ash in the kit includes one or more (e.g., two or three) of $CaCl_2$, $KH_2PO_4$, and $Na_3$ citrate.

In some embodiments of the kits, the mixture in (a) is provided in a light-sealed and airtight package (e.g., a metal foil, e.g., an aluminum foil), and/or the mixture in (b) is provided in an airtight package (e.g., a sealed plastic bag).

Some examples of the kits further include instructions for making any of the compositions described herein.

Also provided herein are kits including at least one nucleic acid described herein.

**Modulating Flavor Profiles**

Sensory impressions such as “feed,” “barny,” or “unclean,” are described as flavor descriptions that are absorbed from the food ingested by the cow and from the odours in its surroundings. Others develop through microbial action due to growth of bacteria in large numbers. Chemical changes can also take place through enzyme action, contact with metals (such as copper), or exposure to sunlight or strong fluorescent light. Quality-control directors are constantly striving to avoid off-flavors in milk and other dairy foods. It is, therefore, an object of the invention to reduce, eliminate or even mask the undesirable flavors and odor of various dairy products.

In certain preferred aspects of the present invention, varying the fat content can alter the flavors and odor of various dairy substitute products. For example, increasing the butyric acid content can change a flavor profile of a non-dairy cheese to a flavor profile similar to parmesan cheese. In other embodiments, modulating the triglycerides such caproic, capric, and/or caprylic acid results in a flavor profile similar to goat cheese. Accordingly, modulating the triglycerides with the ratios of fatty acid components provides different flavor profiles that can be fine-tuned to resemble those of various desirable dairy-food products.

Similarly, the methods and compositions provide for minimizing one or more undesirable aromas by modulating various triglycerides incorporated into the dairy substitute products.

In certain aspects flavor profile is modulated by incorporating synthetic short-chain triglycerides combined with plant-based oils e.g., sunflower oil, in desired combinations. For example a mixture of [C18 C18 C6] and [C18 C6 C18] provides a different flavor profile than a mixture of [C18 C4 C4] and [C18 C10 C10].

**Dairy Substitute Products**

A wide variety of dairy substitute products can be made using the methods and compositions of the present invention. Such products include without limitation, milk, whole milk, buttermilk, skim milk, infant formula, condensed milk, dried milk, evaporated milk, butter, clarified butter, cream and various types of cheese.

The dairy substitute products can also be incorporated into various food applications as a replacement for dairy products, which include the following ice cream, frozen custard, frozen yogurt, cookies, cakes, cottage cheese, cream cheese, crème fraiche, curds and yogurt.

In certain aspects, the present invention provides one or more subunits of casein selected from α-s1-casein, α-s2-casein, β-casein and κ-casein for the milk protein component in a dairy substitute product. A select combination of casein subunits are used as the primary or at least a part of the milk protein component. In preferred embodiments, the casein composition comprises the following amounts of casein subunits

such that about 12-15g/L α-s1-casein, about 3-4g/L α-s2-casein, about 9-11g/L β-casein and about 2-4g/L κ-casein represent the total casein in a synthetic milk product..

In various embodiments, the casein compositions can comprise about 0.5% about 1%, about 1.5%, about 2%, about 2.5%, about 3%, about 3.5%, about 4%, about 4.5%, about 5%, about 6%, protein by dry weight or total weight. In some embodiments, the casein compositions can comprise about 0.5-2.5%, about 1-2%, about 2-3%, or about 4-10% casein protein by dry weight or total weight. In particular embodiments, the casein compositions can comprise about 1.5-10% protein by dry weight or total weight.

In certain aspects, the methods and compositions of the dairy substitute products are essentially free of one or more serum proteins. Serum proteins typically comprise, among other proteins, enzymes, hormones, growth factors, nutrient transporters and disease resistance factors. In additional embodiments, the methods and compositions of the dairy substitute products are essentially free of one or more immunoglobulins, which may induce an undesirable immune response.

In some embodiments, whey compositions can comprise about 0.001%, about 0.05%, about 0.1%, about 0.5%, about 1%, about 1.5%, about 2%, about 2.5%, about 3%, about 3.5%, about 4% whey protein by dry weight or total weight. In some embodiments, the compositions can comprise about 0.1-1%, about 1-2%, about 2-3%, or about 0.1-2.3% protein by dry weight or total weight. In particular embodiments, the compositions can comprise about 10-15% protein by dry weight or total weight.

In various embodiments, carbohydrates are incorporated into the dairy substitute products. These carbohydrates provide a bland sweetness to the flavor profile of the product and additionally serve as a fast-acting energy and nutrition source. Carbohydrates include but are not limited to sugars such as galactose, sucrose, glucose, fructose and maltose. Dairy-free sources of sugars include but are not limited to sugar beet and other plants such as celery, basil, honey, cherries, corn, spinach, plums, kiwis and peas.

Lactose intolerance is common for many milk consumers. Accordingly, in preferred embodiments, carbohydrates such as lactose are omitted from the dairy substitute composition. In preferred embodiments, methods and compositions of the dairy substitute composition essentially free of lactose.

In some embodiments, the carbohydrate compositions can comprise about 1%, about 1.5%, about 2%, about 2.5%, about 3%, about 3.5%, about 4%, about 4.5%, about 5% carbohydrate by dry weight or total weight. In some embodiments, the compositions can comprise about 1-3%, about 2-4%, or about 10-30% carbohydrate by dry weight or total weight. In particular embodiments, the compositions can comprise about 2-5% carbohydrate by dry weight or total weight.

Ash attributes to the structure and stability of casein micelles. Ash is important for holding the emulsion that is milk or cream together. The calcium and phosphate present in the ash interact with the fat globules and the casein micelles to maintain an emulsified mixture.

The ash also affects the sensory characteristics such as mouthfeel, consistency, and to a certain extent, the flavor of the milk.

In some embodiments, the ash compositions can comprise about 0.1%, about 0.2%, about 0.3%, about 0.4%, about 0.5%, about 0.6%, about 0.7%, about 0.8%, about 0.9%, about 1%, about 2% or about 3% ash by dry weight or total weight. In some embodiments, the compositions can comprise about 0.1-0.3%, about 0.5-0.7%, about 0.7-1%, or about 1-2% ash by dry weight or total weight. In particular embodiments, the compositions can comprise about 0.6-0.8% protein by dry weight or total weight.

Additional ingredients for various animal-free dairy products include vitamins, flavoring agents, natural or artificial sweeteners, coloring agents, salt, pH adjustment agents, binders, buffers, stabilizers, essential amino acids, anti-caking agents, anti-foaming agents, and mixtures thereof.

In some embodiments, the remaining ingredient compositions can comprise about 0%, about 0.01%, about 0.1%, about 0.5%, about 1%, about 2%, about 3%, about 4% or about 5% additives by dry weight or total weight. In some embodiments, the compositions can comprise about 0.001-0.01%, about 0.01-1%, about 0.01-2%, or about 1-5% additives by dry weight or total weight. In particular embodiments, the compositions can comprise about 0-10% additives by dry weight or total weight.

In some aspects, the present invention provides methods and compositions for dairy substitutes with fat comprising varying levels of triglyceride content. In preferred embodiments, isolated triglycerides from various plant sources are incorporated with milk

protein components, carbohydrates and ash. It is an object of the present invention to modulate the fatty acids isolated in plants and transesterified in a dairy substitute to resemble the percentage of fatty acids found in natural dairy products, and/or to develop novel flavor profiles with improved flavor not found in nature. In some embodiments, modulating specific short-to-medium chain fatty acids including but not limited to s butyric, capric, caprylic, caproic and lauric acids provides the desired flavor profile in a dairy substitute.

In some embodiments, the fat compositions in synthetic milk comprises about 0%, about 1%, about 2%, about 3%, about 3.5%, about 4% fat by dry weight or total weight. In some embodiments, the compositions can comprise about 1-2%, about 2-3%, about 3-4% fat by dry weight or total weight. In particular embodiments, the compositions can comprise about 3-4% fat by dry weight or total weight. In alternative embodiments, fat compositions in cream can comprise about 10%, about 20%, about 30%, about 40%, about 50% or even 60%. Preferably, fat compositions in cream is typically about 40 to about 50%.

In some aspects, the short-chain triglycerides are combined with longer chain oil to produce transesterified fatty acid esters. Preferably, the longer chain oils are selected from: sunflower, corn, olive, soy, peanut, walnut, almond, sesame, cottonseed, canola, safflower, flax seed, palm, palm kernel, palm fruit, coconut, babassu, shea butter, mango butter, cocoa butter, wheat germ and rice bran oil. More preferably, the longer chain oils comprise engineered sunflower varieties, which overexpress oleic acid by 400%.

Longer chain oil can also provide to the flavor profile, for example, reduce or even remove sharpness and mellow out the overall flavor profile of the desired end product.

In some embodiments, the fat component of the dairy substitute comprises select triglycerides that are transesterified into longer chain oil such as high-oleic sunflower oil (Example 2). It is contemplated that the same four short chain fatty acids give milk and derivative products such as cheese their particular flavors such as robustness and richness. Various combinations of triglycerides and longer chain oils are incorporated to create a number of different flavor profiles. In one embodiment, triglyceride with three oleic acids and synthetic short-chain triglyceride with, in this case, one butyric, one

hexanoic, and one octanoic acid, yields a desired synthetic "milk fat" triglyceride. Additional embodiments include incorporating various short-chain triglycerides to tune slightly different flavor profiles, for instance, short-chain triglyceride comprising hexanoic acid; short-chain triglyceride comprising hexanoic acid and butyric acid; short-chain triglyceride comprising hexanoic acid and decanoic acid. Accordingly, methods and compositions provide for various combinations of synthetic short-chain triglycerides with the sunflower oil triglycerides resulting in different flavor profiles.

**Synthetic Milk**

An exemplary embodiment of synthetic milk formulation comprising microbially derived proteins of the present invention is illustrated in Example 4. For example, the present formulation incorporates all four subunits of bovine casein: α-s1-casein, α-s2-casein, β-casein and κ-casein and two whey proteins α-lactalbumin and β-lactoglobulin as the predominant milk protein components in the formulation. The exemplary synthetic milk formulation further comprises plant-based interesterified fats as shown in Figure 1. Additional components include carbohydrates and ash. The resulting milk substitute exhibits characteristics that looks, functions, tastes, smells, and feels like natural milk. As one of key facets of the present invention, modifying the formulations for synthetic milk can exhibit different sensory impressions such as flavoring by modulating the oil content, namely the types of triglycerides added to mimic milk of different flavors.

As described in Young W. Park, Bioactive Components in Milk and Dairy Products, Technology & Engineering, pp 60, 2009, sterols are a minor fraction of total lipids in milk, the main sterol being cholesterol (300 mg/100 g fat, equivalent to 10 mg/100 mL bovine milk) (Park et al., *Small Rumin. Res.* 68: 88-113, 2007). Goat milk has been shown to contain less cholesterol than other milk but generally contains higher total fat than cow milk. See, Posati et al., 1976. Composition of Foods. Agric. Handbook No. 8 - 1. ARS, USDA, Washington, D.C., 1976; Jenness, *J. Dairy Sci.* 63:1605 – 1630, 1980; and Juarez et al., Intl. Dairy Fed. Bull. No. 202. pp. 54-67, 1986, have shown that goat milk has greater palmitic and oleic acid fractions than cows. Cholesterol content was significantly varied among different breeds and most cholesterol in goat milk was in

free state, with only a small fraction in ester form 52 mg/100 g fat. See, e.g., Arora et al., Ind. J. Dairy Sci. 29: 191.

In certain embodiments, the methods and composition of the present invention provide synthetic milk product that has less cholesterol, or is cholesterol free or has the same cholesterol content in comparison to the dairy milk by modulating the oil content, namely the types of triglycerides. In other embodiments, the amount of saturated and unsaturated fats is also modulated in dairy substitutes to at least less or the same amount of fats in comparison to the dairy milk. In preferred embodiments the synthetic milk product of the present invention is very low in saturated fat but smells and tastes like dairy milk. The long chain fatty acids, which are typically saturated fatty acids in milk, are instead monounsaturated acids such as oleic acid, in the preferred embodiments of the invention.

The present invention may not require or at least minimizes pasteurization, as each component can be rendered sterile separately, before combining through the formulation process. In other embodiments of the invention, synthetic milk product of the present invention can undergo pasteurization.

Homogenization is optional for the methods and compositions of the present invention as is the case for natural milk. When sold as a standalone liquid beverage, the synthetic milk product of the present invention can be sold in homogenized form.

Differences between the milk substitute of the present invention with dairy milk include flavor, nutritional value and storage stability. Flavorings can be adjusted to a desired sensory impression based on triglycerides as well as other natural or artificial flavors that can impart in blandness or sharpness or a different aroma such as cow, goat, coconut, almond or soy.

**Synthetic Cheese**

In other aspects of the present invention, methods and compositions comprising one or more isolated milk protein components, fats, carbohydrates and ash are provided to produce various types of cheese products. Generally, the cheese is made from the milk protein components of the present invention. One or more sensory impressions are incorporated into the cheese product through modulating the triglycerides. Accordingly,

cheese with desired organoleptic characteristics with distinct appearance, aroma, taste and texture can be produced. For some cheese varieties, in addition to modulating the triglycerides, one or more bacteria is employed in the cheese making process for fermentation where fermentative products and by-products such as lactic acid, carbon dioxide, alcohols, aldehydes and ketones are produced. Types of cheese include whey cheese such as ricotta and mozzarella, semi-soft cheese include Havarti and Munster, medium-hard cheese such as Swiss and Jarlsberg, hard cheese such as Cheddar and soft ripened cheese such as Brie and Camembert.

**Synthetic Cream**

Directly usable cream substitutes should preferably comprise from about 50 to 90% by weight water, and more preferably from about 65 to 80% by weight water, with the base being dispersed within the water. The base for a substitute cream should advantageously contain (all percentages computed using the total weight of the base taken as 100%) from about 22 to 87% by weight carbohydrate (more preferably from about 30 to 64%), from about 12 to 70% by weight of particulate fat (most preferably from about 28 to 60%), and from about 0.4 to 8% by weight of a selected emulsifier or group thereof (most preferably from about 1 to 4%).

In preferred embodiments, the products of the invention are stable in aqueous emulsion. As used herein, a dried, liquid fat-containing non-dairy food product is said to be "stable" when the following minimum criteria are met: reconstituted emulsion stability, whitening capability, oiling or oil separation, feathering-precipitation. See U.S. Patent No. 4,310,561.

**Synthetic Butter**

Commercial butter is 80–82 % milk fat, 16–17 % water, and 1–2 % milk solids other than fat (sometimes referred to as curd).

**Advantages of Dairy Substitute Products or the Compositions Provided Herein**

Desirable advantages of the present invention are environmental in nature such as 8 times more energy efficient, 260 times more water efficient than conventional milk

product. Other environmental advantages include less water usage than conventional milk production, which is estimated to be about 1000 L/L and reduced land usage for conventional milk production typically requires grazing, crop land, ability to reduce the 600 billion kg of carbon dioxide per year that is emitted from conventional milk production. The present invention also provides reduction or elimination of costs of feed, operations, labor, animal and marketing. Preferably, substantially reduce feed cost by a factor of 8.

Advantages in food safety include reduction or removal of antibiotic residues, heavy metals, bacteria, adulterations. Accordingly, certain aspects of the present invention provide animal-free milk that is bacteria-free, requires no pasteurization or cold shipping yet has an increased shelf-life and exhibit a number of characteristics such as taste, appearance, handling and mouth feel properties which are identical or at least closely similar to their traditional dairy counterparts. Preferably, the dairy substitute products are essentially free of bacteria such as *Brucella, Camplyobacter, Listeria, Mycobacterium, Salmonella, Shigella, Yersinia, Giardia* and noroviruses, and, thus are safer for consumption. Further advantage include minimal or no pasteurization and/or homogenization. More preferably, the dairy substitute is shelf stable for relatively long periods (e.g., at least three weeks and preferably longer) for production and distribution. Even more preferably, the dairy substitute products has a lower environmental impact.

Several aspects of the invention are described below with reference to example applications for illustration. It should be understood that numerous specific details, relationships, and methods are set forth to provide a full understanding of the invention. One having ordinary skill in the relevant art, however, will readily recognize that the invention can be practiced without one or more of the specific details or with other methods.

## EXAMPLES

**Example 1**

Vectors

Protein sequences bovine α-S1 casein (UniProt accession #P02662), bovine α-2 casein (UniProt accession #P02663), bovine β-casein (UniProt accession #P02666), bovine κ-casein (UniProt accession #P02668), bovine α-lactalbumin (UniProt accession #B6V3I5) and bovine β-lactoglobulin (UniProt accession #P02754) were obtained on Uniprot.org and altered with the following changes: removed 15 or 21-residue signal peptide from N-terminal end; added *XhoI* (CTC GAG) endonuclease recognition sequence and KEX endopeptidase recognition sequence (AAA AGA) to 5' end of DNA; and added *SalI* (GTC GAC) endonuclease recognition sequence to 3' end of DNA. An additional combination sequence was made by combining the sequences for the four caseins in the order shown above, separating each sequence with the following DNA phrase:

**[0001]** GGC TCA GGA TCA GGG TCG AAA AGA GGC TCA GGA TCA GGG TCG (SEQ ID NO: 128).

**[0002]** Here the non-underlined segments encode a $(GS)_6$ linker sequence for adequate posttranslational spacing and accessibility to the KEX protease, and the underlined segment encodes the KEX endopeptidase sequence which cleaves the proteins apart post-translation. As above, the entire cassette is flanked on the 5' end by *XhoI* and on the 3' end by *SalI* for ligation into pKLAC2 (New England Biolabs, Beverly, MA). DNA was synthesized by either Gen9, Inc. (Cambridge, MA) or IDT (Coralville, IA). The plasmid used had, among other things, a multiple cloning site, a Lac promoter, an Acetamide based reporter gene and the alpha-mating factor gene, used as a fusion protein for secretion of exogenous proteins.

Yeast Transfection

Transfection of the yeast was accomplished by thawing a tube of 0.5 mL competent cells containing 25% glycerol on ice and adding 0.62 mL yeast transfection reagent. The mixture was then warmed at 30°C for 30 minutes, heat shocked at 37°C for 1 hour. The cells were then pelleted at 7000 rpm & washed twice with 1.0mL of YPGal medium. The cell mixture was then transferred to a sterile culture tube and incubated at

30°C for 3 hours, with constant shaking at 300 rpm. The cell mixture was then transferred to a sterile 1.5mL microcentrifuge tube and pelleted the cells at 7000 rpm for 2 minutes, and resuspended in 1 mL sterile 1X PBS. 10, 50 and 100 µL of the cell suspension was placed into separate fresh sterile 1.5 mL microcentrifuge tubes each containing 50 µL of sterile deionized water. Tubes were mixed briefly and spread onto separate yeast carbon base agar (YCB Agar) plates containing 5 mM acetamide for selection. Plates were then incubated, inverted, at 30°C for 4 days until colonies form. 15 individual colonies were then streaked onto fresh YCB Agar plates containing 5 mM acetamide and incubated at 30°C for 2 days.

DNA encoding alpha-lactalbumin and beta-lactoglobulin, two key whey proteins, was designed in-house and ordered for synthesis from IDT and was transfected into competent *K. lactis* cells from the New England Biolabs kit (Catalog #E1000S) according to the vendor-supplied protocol.

High-Throughput Transfectant Selection

From each YCB Agar plate, once the colonies had grown sufficiently, each of the 30 plates was tested for successful integration of the vector plasmid. This was followed by PCR analysis of each plate to test for special cells with multiple integrants of the vector. Once isolated, the highest producing individual culture was used for scale up. This process can be iterated with successively higher concentrations of selective pressure in order to force colonies to develop higher copy numbers of our engineered plasmid.

Five transfection events were performed and plated on 5 separate plates consisting of nitrogen-free yeast carbon base medium. (Any observed growth on these plates therefore implied successful uptake of the plasmid, if not uptake of the exogenous DNA itself). Of these 5 plates, 100% showed positive growth. 30 individual colonies from the 5 plates were chosen for scale-up, and each was grown in a separate YCB agar plate to create a homozygous culture plate to allow for easy characterization and management. After a 3 day growth period, a single colony from each plate was initially added to a 10 ml glass culture tube, containing 2ml YPGal media, to test for protein expression. After a growth period of two days, the cells were pelleted out and the supernatant was run on an SDS PAGE gel to check for protein expression. The strains which provided the best protein expression were scaled up to a 10 ml, 100 ml, 500 ml,

and ultimately 1L culture vessel. From each whey protein, two liters of culture were grown. Approximately one gram of protein was harvested from the total, suggesting a non-optimized yield/productivity of 0.5 g/L.

Scale-Up in 1L Shake Flask Culture

Cultures are scaled up and seeded in a 1L shake flask at split ratios of at least 1:10. Prior to seeding, inoculation flasks are grown for 24 hours in production media without acetamide supplementation. On the starting day of a fedbatch production run, the reactor is charged with 90% of the target starting volume and heated to the run temperature. For now, the temperature is set at 30°C in order to save on energy costs associated with heating the reactor. Additional parameters can be explored in the process optimization phase. When the reactor reaches 30°C, the inoculation flask is added to the reaction vessel dropwise using a peristaltic pump. The reactor is maintained using vendor supplied software at a target pH. Twice daily samples are taken of the reactor broth in order to quantify the amount of glucose and electrolyte usage by the cells, and as a doublecheck for the reactor's pH and dissolved gas measurements. After each measurement, bolus glucose is added to maintain a target glucose concentration 10% to start, although this may also be altered in process development. When cells reach maximum density, protein production is triggered by the addition of galactose, which triggers the promoter on our pKLAC2 plasmid. Galactose is supplemented until the end of the run. Optimum run length can be determined in process development as well, but is set as a 5-day fedbatch. After a full run, yeast cells are removed from the reactor and the proteins are purified as discussed below.

Casein Protein Purification

The following casein proteins α-s1casein, α-s2casein, and β-casein are inherently hydrophobic, which precipitate out when secreted from the yeast and come into contact with water. Purification from the reactor media involves collection of the protein from the surface of the media, followed by drying to isolate pure protein. Kappa-casein is inherently hydrophilic and purification of the κ-caseins involves the change in pH of the solution to 4.6, followed by centrifugation at 10,000 rcf. Combined casein cassette works the same way as κ-casein.

Whey Protein Purification

Alpha-lactalbumin: The isoelectric point of alpha-lactalbumin is 4.2. When the pH of the bioreactor media solution is lowered to 4.2, the solubility of the protein is at its lowest. This knocks the protein out of solution and allows for collection by centrifugation. Beta-lactoglobulin: Similar to the purification of the alpha-lactalbumin, the pH of the solution is lowered to 5.2 the isoelectric point of beta-lactoglobulin. This neutralizes the charge of the protein and allows its collection by centrifugation at 14,000 rcf.

Protein Purification

The 2L of culture media was spun at 3,000g in a floor centrifuge to pellet out the yeast cells. The pellet was discarded, and the supernatant was transferred into a new vessel & the pH of the solution was lowered to 4.2 for the alpha-lactalbumin and 5.2 for the beta-lactoglobulin (Figure 2A). This was followed by incubation of the supernatant at 35°C for 30 mins in a shaker flask, centrifugation at 14,000g in a floor centrifuge to pellet out the protein mixture (Figure 2B).

Protein Characterization

After separation of the protein by centrifugation, the solid pellet and the supernatant solution were run on a 14% SDA-PAGE gel to check for protein expression. A positive band was observed at 14 kDa and at 18 kDa (Figure 3), which correlates to the size of alpha-lactalbumin and beta-lactoglobulin of bovine origin, respectively. Further characterization is done to confirm equivalence in terms of primary sequence, glycosylation and phosphorylation.

**Example 2**

Triglyceride Synthesis

Milk fat triglycerides were made by transesterifying short-chain triglycerides into high oleic sunflower oil, the oil from a custom engineered variant of sunflowers which express the following ratios of fatty acid esters as described in Table 1:

Table 1:

| Fatty Acids | Sunflower† | NuSun Mid-Oleic Sunflower‡ | High-Oleic Sunflower† |
|---|---|---|---|
| C6:0 | ND | ND | ND |
| C8:0 | ND | ND | ND |
| C10:0 | ND | ND | ND |
| C12:0 | ND-0.1 | ND | ND |
| C14:0 | ND-0.2 | 0.4-0.8 | ND-0.1 |
| C16:0 | 2.0-7.6 | 4.0-5.5 | 2.6-5.0 |
| C16:1 | ND-0.3 | ND-0.05 | ND-0.1 |
| C17:0 | ND-0.2 | ND-0.05 | ND-0.1 |
| C17:1 | ND-0.1 | ND-0.06 | ND-0.1 |
| C18:0 | 1.0-6.5 | 2.1-5.0 | 2.9-6.2 |
| C18:1 | 14-39.4 | 43.1-71.8 | 75-90.7 |
| C18:2 | 48.3-74.0 | 18.7-45.3 | 2.1-17.0 |
| C18:3 | ND-0.3 | ND-0.1 | ND-0.3 |
| C20:0 | 0.1-0.5 | 0.2-0.4 | 0.2-0.5 |
| C20:1 | ND-0.3 | 0.2-0.3 | 0.1-0.5 |
| C20:2 | ND | ND | ND |
| C22:0 | 0.3-1.5 | 0.6-1.1 | 0.5-1.6 |
| C22:1 | ND-0.3 | ND | ND-0.3 |
| C22:2 | ND-0.3 | ND-0.09 | ND |
| C24:0 | ND-0.5 | 0.3-0.4 | ND-0.5 |
| C24:1 | ND | ND | ND |
| ND=not detectable (ND defined as <0.05%) | | | |

† From Codex Alimentarius (2001)
‡ From Table 3

www.sunflowernsa.com/uploads/resources/51/warner_.pdf

Short-chain triglyceride preparation

The short-chain fatty acids which are principally responsible for rich flavor in milk and cream are the molecules with even numbers of carbons between 4 and 10, and are mixed in the following ratios as described in Table 2:

Table 2:

*Table 1.* Fatty acid composition expressed as percent by weight of total fatty acids in Swedish dairy milk in 2001, given as weighted means with standard deviations (SD) and as the minimum and maximum weighted means. The estimation of the weighted mean values was based on the proportion of milk delivered to each dairy or dairy company at each sampling occasion (seven dairies at four sampling occasions during 2001). The lowest and highest values observed and *p*-values for geographical and seasonal variation are also given

| Fatty acid | Weighted mean 2001 | SD | Lowest value observed | Highest value observed | Seasonal variation |
|---|---|---|---|---|---|
| 4:0 | 4.4 | 0.1 | 4.0 | 5.1 | n.s. |
| 6:0 | 2.4 | 0.1 | 2.1 | 2.9 | n.s. |
| 8:0 | 1.4 | 0.1 | 1.2 | 1.9 | n.s. |
| 10:0 | 2.7 | 0.2 | 2.4 | 3.5 | * |
| 12:0 | 3.3 | 0.2 | 3.0 | 4.1 | ** |
| 14:0 | 10.9 | 0.5 | 10.0 | 12.1 | *** |
| 15:0 | 0.9 | 0.0 | 0.8 | 1.1 | n.s. |
| 16:0 | 30.6 | 0.9 | 28.7 | 34.1 | ** |
| 17:0 | 0.4 | 0.0 | 0.4 | 0.5 | ** |
| 18:0 | 12.2 | 0.4 | 10.3 | 13.3 | n.s. |
| 20:0 | 0.2 | 0.0 | 0.2 | 0.2 | n.s. |
| *Saturated fatty acids total* | *69.4* | *1.7* | *67.1* | *74.4* | *** |
| 10:1 | 0.3 | 0.0 | 0.2 | 0.4 | n.s. |
| 14:1 | 0.8 | 0.4 | 0.4 | 1.3 | ** |
| 16:1 | 1.0 | 0.0 | 0.9 | 1.8 | n.s. |
| 17:1 | 0.1 | 0.0 | <0.1 | 0.3 | n.s. |
| 18:1 | 22.8 | 1.0 | 19.7 | 24.7 | *** |
| *Mono-unsaturated faty acids, cis, total* | *25.0* | *1.0* | *22.2* | *26.7* | ** |
| 18:2 | 1.6 | 0.1 | 1.4 | 1.8 | n.s. |
| 18:3 | 0.7 | 0.0 | 0.6 | 0.9 | ** |
| *Poly-unsaturated fatty acids, cis, total* | *2.3* | *0.1* | *2.0* | *2.5* | n.s. |
| 16:1t | 0.4 | 0.1 | 0.3 | 0.4 | *** |
| 18:1t | 2.1 | 0.7 | 2.0 | 3.3 | *** |
| 18:2t | 0.2 | 0.0 | 0.1 | 0.5 | n.s. |
| *Trans fatty acids total* | *2.7* | *0.7* | *0.6* | *3.9* | *** |
| CLA | 0.4 | 0.1 | 0.3 | 0.5 | *** |

n.s.: Not significant; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

www.ncbi.nlm.nih.gov/pmc/articles/PMC2596709/pdf/FNR-52-1821.pdf

Table 3:

| Chain Length | Names | Mass Fraction in Mixture (%) |
|---|---|---|
| 4 | Butanoic / butyric acid | 40 |
| 6 | Hexanoic / caproic acid | 26 |
| 8 | Octanoic / caprylic acid | 11 |
| 10 | Decanoic / capric acid | 22 |

The fractions in Table 3 are based upon the relative prevalence of these species in cow's milk, but can be altered during process development both in order to design a better tasting product and in order to design milks of other species, such as buffalo or goat. Short-chain fatty acids in the mass ratios shown above are combined with toluene, paratoluenesulfonic acid, and glycerol in a Dean-Stark water trap, commonly used for esterification reactions in order to remove water produced in the condensation reaction. The reaction is carried out in a fume hood for several hours, until the level of water entering the water trap is observed as unchanging for more than 30 minutes. The vessel is allowed to cool and the mixture is removed from the reaction flask. The mixture is washed twice with a 5% sodium carbonate solution and five times with plain water. Brine (a 10% solution of NaCl in water) is added periodically in order to disrupt an emulsion which forms in the separating funnel. The washed mixture of short-chain triglycerides, water, toluene, and impurities is dried in a rotary evaporator at 90°C and under a 54 mbar atmosphere for one hour, until it has proceeded well past excess in order to minimize the chance of food contamination.

Transesterification

The short-chain triglyceride mixture is combined with high-oleic sunflower oil at a volumetric ratio of 1:8. A mass of sodium methoxide equal to 1% of the oil mixture mass is added in order to catalyze the transesterification, and the reaction vessel is heated to 65°C, stirring continuously, under an inert Argon atmosphere, for six hours. A 5% acetic acid mixture is added to quench the reaction, then the oil is washed five times with deionized water and dried in a rotary evaporator for one hour at >90°C. The finished milk

fat is autoclaved to ensure sterility and is thence suitable for use in milk or cream as described above.

**Example 3**

Milk Formulation

One non-limiting milk composition formulation is described below.

Table 4:

| Components | % (w/v) Range | Amount (g/L) |
|---|---|---|
| Casein proteins | 1 – 10 | 10 – 100 |
| Whey proteins | 0 – 1 | 0 – 10 |
| Plant-based milk fats | 0 – 8 | 0 – 80 ml/L |
| Sugar | 0 – 5 | 0 – 50 |
| Ash | 0.1 – 1 | 1 – 10 |
| Calcium | 0.1 – 0.5 | 1 – L |
| X (Functional additive) | 0 - 1 | 0 – 10L |

Following Table 4, milk formulation is achieved through the following procedure, per 1 liter of milk. 26 grams of casein, 3.5 grams of whey and 5 grams of ash are combined and mixed well. 40 mL of triglycerides are thawed & heated to 55°C. Protein mixture is poured slowly into triglycerides and vortexed at high speed for five minutes. In the meantime, 3.5 grams of whey and 24 grams of galactose are added to 850 mL deionized water; mixture is heated to 37°C. Triglyceride/protein/ash mixture is moved into Waring commercial blender and blended at low speed. Whey/galactose/water mixture is poured slowly into blender; cap placed on blender. Mixture is blended at high speed for ten minutes. Deionized water is added to a final volume of 1000 mL. Milk can optionally be homogenized using existing methods. The above protocol can be altered for cream or arbitrary milk formulations by altering the ratios of solids; however, our preliminary research suggests that the presence of ash in the protein mixture and the separation of a significant proportion of the whey can greatly affect the quality of the emulsion.

**Example 4**

Synthetic Milk Formulation

As a preliminary proof of concept, in order to determine whether the key components of milk could be recombined to form milk, dry food-grade purified casein and research grade whey was purchased. Irish cream was obtained from a local source and pure fat was isolated from it by centrifuging the cream at 14,000g. Finally, all minerals used were purchased from Sigma Aldrich.

Terms:

C-roux= roux made by mixing casein proteins & fat together while maintaining the temperature of the mixture at 37°C.

W-roux= roux made by mixing whey proteins & fat together while maintaining the temperature of the mixture at 37°C.

CW-roux= roux made by mixing casein & whey proteins together in a mixture first, adding fat and mixing at 37°C.

Table 5:

| Experiment | Result |
|---|---|
| Casein + Fat + Water | A pale yellow liquid with bad taste, precipitation of protein, and bad mouthfeel (watery). |
| Casein + Water + Fat | A pale yellow liquid with bad taste, precipitation of protein, and bad mouthfeel (watery). |
| (Casein + Fat) to make a roux.<br><br>roux + Water | A pale yellow liquid with average taste and bad mouthfeel (watery). Low protein precipitation was observed. |

Hypothesized that the bad mouthfeel (e.g., wateriness) was due to the lack of whey protein.

Table 6:

| Experiment | Result |
|---|---|

| | |
|---|---|
| Casein + Whey + Fat + Water | Pale yellow-white liquid with bad taste, precipitation of protein, and bad mouthfeel. |
| C-roux + Whey + Water | Pale yellow-white liquid with average taste, low precipitation of protein, and bad mouthfeel |
| W-roux + Casein + Water | Pale yellow-white liquid with average taste, low precipitation of protein, and bad mouthfeel. |
| CW-roux + Water | Pale yellow-white liquid with average taste and bad mouthfeel. Zero protein precipitation. |

Hypothesized that bad mouth feel was because of bad casein micelle formation, that addition of Ca would allow the micelle to reform.

Table 7:

| **Experiment** | **Result** |
|---|---|
| CW-roux + Water + Calcium phosphate (optimum amount of Ca was figured out by trial & error) | White liquid with normal mouth feel. Zero protein precipitation. Average taste |

To improve taste, different sugars were added in different concentrations to the above mixture.

Table 8:

| **Sugar** | **2.4%** | **3.0%** | **3.6%** | **4.2%** | **4.8%** |
|---|---|---|---|---|---|
| Glucose | Good | Too Sweet | Too Sweet | Too Sweet | Too Sweet |
| Galactose | Bland | Excellent | Average | Excellent | Too Sweet |
| Sucrose | Bad | Bad | Bad | Bad | Bad |
| Maltose | Bland | Excellent | Excellent | Too Sweet | Too Sweet |

All additional ions found in cow milk was incorporated to recreate the ionic environment found in nature.

Reference: R. Rosmaninho, L.F. Melo / Journal of Food Engineering 73 (2006) 379–387

Table 9:

| Reagent | Composition (mM) |
|---|---|
| $KH_2PO_4$ | 11.60 |
| $K_3$ Citrate $H_2O$[a] | 3.7 |
| $Na_3$ Citrate $2H_2O$ | 6.1 |
| $K_2SO_4$ | 1.03 |
| $K_2CO_3$ | 2.17 |
| KCL | 8.0 |
| $CaCL_2$. $2H_2O$ | 8.98 |

End result was a liquid which was bright white in color, likely because the ionic environment kept the solids present in milk from joining together and increased the overall refractive index of the solution. Taste was excellent, but it had an average mouthfeel (e.g., a certain amount of chalkiness was observed in the liquid). Exact mineral composition as described in Table 9 can provide excellent mouthfeel.

Milk Fat Synthesis

Synthetic milk fat was made by interesterifying short-chain fatty acids among the large-chain fatty acids present in high-oleic sunflower oil triglycerides. The four short-chains used were:

**40%** C4: Butyric acid. found in milk, especially goat, sheep and buffalo milk, butter, Parmesan cheese, and as a product of anaerobic fermentation (including in the colon and as body odor). It has an unpleasant smell and acrid taste, with a sweetish aftertaste (similar to ether). Butyric acid is present in, and is the main distinctive smell of, human vomit.

**26%** C6: Caproic acid. a colorless oily liquid with an odor that is fatty, cheesy, waxy, and like that of goats or other barnyard animals.

**11%** C8: Caprylic acid. It is an oily liquid that is minimally soluble in water with a slightly unpleasant rancid-like smell and taste.

**22%** C10: Capric acid. Not much said about the flavor, and with longer carbon chains you start to get less flavors. This is in coconut oil so it is not a milk fat flavor *per se* as much as the other ones.

Iterations include lauric acid (C12), as it is present at 2.9% of total fatty acid content in cow's milk (Beare-Rogers, J.; Dieffenbacher, A.; Holm, J.V. (2001). "Lexicon of lipid nutrition (IUPAC Technical Report)". Pure and Applied Chemistry 73 (4): 685–744. doi:10.1351/pac200173040685.)

The following procedure as described Yu et al., The modification an analysis of vegetable oil for cheese making. *J. Am. Oil Chem. Soc*., 77:911 (2000) was followed in, at quarter of the amounts specified below:

A mixture of butyric, caproic, caprylic, and capric acids (Sigma Chemical Co., St. Louis, MO) at the same ratios found for a milk fat sample [see above] and totaling 7.26 mol, 21.42 g of p-toluenesulfonic acid (Sigma Chemical Co.), 2.305 mol of glycerol (Sigma Chemical Co.), and 458 mL of toluene (Fisher Scientific) was refluxed with a Dean-Stark water trap for 6 h. The reaction was considered complete when no more water dripped into the trap. The SCTG were washed once with 5% sodium carbonate solution and several times with water. Then, the SCTG were heated at 85°C in a rotary evaporator to remove water and toluene.

SCTG from both commercial and natural sources are interesterified with HOSO (Trisun 80, RBD; AC Humko, Memphis, TN) at a SCTG/HOSO ratio of 1:8.82 in order to produce a fat that has the same percentage of SCFA as that of milk fat. SCTG from the commercial source are also interesterified at a SCTG/HOSO ratio of 1:7.19 to produce a fat that has a level of SCFA equal to 120% of that in milk fat. Sodium methoxide (Aldrich Chemical Company, St. Louis, MO) is used as a catalyst at 0.5% of total oil weight. The reaction is carried out at 65°C under nitrogen with stirring for 6 h. Next, 5% acetic acid (Fisher Scientific) is added to neutralize the catalyst, and the oil is then washed several times with distilled water and dried on a rotary evaporator for 30 min at 90°C.

A pilot-scale continuous deodorizer similar to the one described by Smouse (Smouse, T.H., A Laboratory Continuous Deodorizer, inform 8:1176–1181 (1997).) is used to deodorize the interesterified oils. The oil flow rate is 600 mL/h, the column

temperature is 180°C, pressure at 0.5 Torr, and the steam rate 12.6 mL/h. Each batch of deodorized oil is tasted by to ensure the flavor. The deodorized oil is stored at 4°C until used for cheese making.

**Example 5**

Modulation of Fatty Acids

Sunflower oil triglycerides with three oleic acids are transesterified with four short chain fatty acids containing one butyric acid, one hexanoic acid, and one octanoic acid as part of the fat composition in a mixture of synthetic milk product. This array or combination of fat is expected to result in a synthetic milk fat providing its rich flavor as compared to natural dairy milk. The ability to control the composition of one or more triglycerides is likely to enhance or change flavor profiles of synthetic dairy products. Accordingly, a matrix of long-chain and short-chain can yield in flavor profiles including, but not limited to, multiple aromatic compounds associated with buttery, nutty, sweet, sour, fruity, floral, bitter, woody, earthy, beany, spicy, metallic, sweet, musty, oily and vinegary sensory impressions. Additionally, increase in texture such as creaminess, improvements in melting characteristics or tolerance and increase in stretching ability relative to a corresponding dairy product can be exhibited.

**Example 6. Recombinant Production of Milk Proteins**

Alpha-lactalbumin, β-lactoglobulin, α-S1-casein, α-S2-casein, β-casein, and κ-casein were produced in recombinant yeast strain (*Pichia pastoris*) strains. As the glycosylation enzymes in yeast are different than mammalian cells, the proteins producted by the yeast will either be non-glucosylated or have a non-mammalian glycosylation pattern. The produced proteins can be used as a component in any of the compositions described herein.

***Plasmids***

Plasmids were constructed for the expression of each protein. Each plasmid included the following components: an inducible promoter (e.g., AOX1 promoter) or a constuitive (GAP promoter or PGK promoter) promoter, for each protein being

expressed; a sequence encoding a signal peptide for each protein being expressed, derived either from the native bovine protein sequence or one from a yeast protein sequence (alpha mating factor or OST1); a sequence encoding the milk protein(s) to be expressed; a yeast transcription terminator sequence (e.g., AOX1, AOD, or CYC1) for each protein being expressed; a bacterial origin of replication from pUC19 to enable replication of the plasmid in *E. coli*; and a selectable marker cassette (e.g., kanR or zeocinR) to enable selection in bacteria and yeast with antibiotics.

The different plasmids used to produce the different proteins are listed in Table 10 below.

**Table 10. Expression Plasmids (SEQ ID NO)**

| Plasmid name | Selectable marker | Promoter 1 | Signal peptide 1 | ORF 1 | Terminator 1 | Promoter 2 | Signal peptide 2 | ORF 2 | Terminator 2 |
|---|---|---|---|---|---|---|---|---|---|
| pJAG-nat-LAA | Amp (bacteria), G418 (yeast) (159)[1] | P_AOX1 (153) | SP_lactalbumin (156) | α-lactalbumin (157) | TT_AOX1 (158) | | | | |
| pJAG-MFa-LAA | Ampicillin (bacteria), G418 (yeast) (159) | P_AOX1 (153) | SP_MFα (154) | α-lactalbumin (157) | TT_AOX1 (158) | | | | |
| pJAG-OST-LAA | Ampicillin (bacteria), G418 (yeast) (159) | P_AOX1 (153) | SP_OST (155) | α-lactalbumin (157) | TT_AOX1 (158) | | | | |
| pLH37 | Zeocin (151) | P_AOX1 (129) | SP_MFαT (132) | β-lactoglobulin (143) | TT_AOX1 (149) | | | | |
| pLH0044 | Zeocin (151) | P_GAP1 (130) | SP_MFαT (132) | β-lactoglobulin (143) | TT_AOX1 (149) | | | | |
| pLH0045 | Zeocin (151) | P_PGK1 (131) | SP_MFalphaT (132) | β-lactoglobulin (143) | TT_AOX1 (149) | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| pLH46 | Zeocin (151) | P_GAP1 (130) | SP_β_casein (135) | β-casein (144) | TT_CYC1 (150) | P_PGK1 (131) | SP_αS1_casein (137) | αS1-casein (147) | TT_AOX1 (149) |
| pLH47 | Kanamycin (bacteria), G418 (yeast) (152) | P_GAP1 (130) | SP_αS2_casein (133) | αS2-casein (145) | TT_CYC1 (150) | P_PGK1 (131) | SP_κ_casein (138) | κ-casein (148) | TT_AOX1 (149) |
| pLH48 | Zeocin (151) | P_GAP1 (130) | SP_OST (134) | β-casein (144) | TT_CYC1 (150) | P_PGK1 (131) | SP_OST (134) | αS1-casein (147) | TT_AOX1 (149) |
| pLH49 | Kanamycin (bacteria), G418 (yeast) (152) | P_GAP1 (130) | SP_OST (136) | αS2-casein (145) | TT_CYC1 (150) | P_PGK1 (131) | SP_OST (134) | κ-casein (148) | TT_AOX1 (149) |
| pLH50 | Zeocin (151) | P_GAP1 (130) | SP_OST (136) | β-casein (144) | TT_CYC1 (150) | P_PGK1 (131) | SP_αS1_casein (137) | αS1-casein (147) | TT_AOX1 (149) |
| pLH51 | Zeocin (151) | P_GAP1 (130) | SP_β_casein (135) | β-casein (144) | TT_CYC1 (150) | P_PGK1 (131) | SP_OST (134) | αS1-casein (147) | TT_AOX1 (149) |
| pLH52 | Kanamycin (bacteria), G418 (yeast) (152) | P_GAP1 (130) | SP_αS2_casein (133) | αS2-casein K113E (146) | TT_CYC1 (150) | P_PGK1 (131) | SP κ_casein (138) | κ-casein (148) | TT_AOX1 (149) |
| pLH53 | Kanamycin (bacteria), G418 (yeast) (152) | P_GAP1 (130) | SP_OST (136) | αS2-casein K113E (146) | TT_CYC1 (150) | P_PGK1 (131) | SP_OST (134) | κ-casein (148) | TT_AOX1 (149) |
| pLH54 | Kanamycin (bacteri | P_GAP1 (130) | SP_OST (136) | αS2-casein (145) | TT_CYC1 (150) | P_PGK1 (131) | SP_κ_casein (138) | κ-casein | TT_AOX1 (149) |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | a), G418 (yeast) (152) | | | | | | | (148) | |
| pLH55 | Kanamycin (bacteria), G418 (yeast) (152) | P_GAP1 (130) | SP_αS2_casein (133) | αS2-casein (145) | TT_CYC1 (150) | P_PGK1 (131) | SP_OST1 (134) | κ-casein (148) | TT_AOX1 (149) |

[1]SEQ ID NO: 159 (Synthetic)

```
ATGGGTAAGGAAAAGACTCACGTTTCCAGACCAAGATTGAACTCTAACATGGACGCTGACTTGTA
CGGTTACAAGTGGGCTAGAGACAACGTTGGTCAATCTGGTGCTACTATTTACAGATTGTACGGTA
AGCCAGACGCTCCAGAGTTGTTCTTGAAGCACGGTAAGGGTTCTGTTGCTAACGACGTTACTGAC
GAGATGGTTAGATTGAACTGGTTGACTGAGTTCATGCCATTGCCAACTATTAAGCACTTCATTAG
AACTCCAGACGACGCTTGGTTGTTGACTACTGCTATTCCAGGTAAGACTGCTTTCCAAGTTTTGG
AGGAGTACCCAGACTCTGGTGAGAACATTGTTGACGCTTTGGCTGTTTTCTTGAGAAGATTGCAC
TCTATTCCAGTTTGTAACTGTCCATTCAACTCTGACAGAGTTTTCAGATTGGCTCAAGCTCAATC
CAGAATGAACAACGGTTTGGTTGACGCTTCTGACTTCGACGACGAGAGAAACGGTTGGCCAGTTG
AGCAAGTTTGGAAGGAGATGCACAAGTTGTTGCCATTCTCTCCAGACTCTGTTGTTACTCACGGT
GACTTCTCTTTGGACAACTTGATTTTCGACGAGGGTAAGTTGATTGGTTGTATTGACGTTGGTAG
AGTTGGTATTGCTGACAGATACCAAGACTTGGCTATTTTGTGGAACTGTTTGGGTGAGTTCTCTC
CATCTTTGCAAAAGAGATTGTTCCAAAAGTACGGTATTGACAACCCAGACATGAACAAGTTGCAA
TTCCACTTGATGTTGGACGAGTTCTTCTAA
```

These plasmids were then integrated into wildtype *P. pastoris* for expression. The production of the proteins was detected by SDS-PAGE, ELISA, and Western blot.

**Alpha-Lactalbumin**

***Strain Construction***

Three plasmids were created, placing the expression of bovine alpha-lactalbumin (bvLAA) under the control of the methanol-induced promoter $P_{AOX1}$, with either the native LAA signal peptide (pJAG-nat-LAA), the full length alpha mating factor signal peptide (pJAG-aMF-LAA), or the OST1 signal peptide (pJAG-OST-LAA).

Prior to transformation, 20 µg each plasmid was linearized by digestion with the restriction enzyme SacI. The digested plasmids were then concentrated by ethanol precipitation, and resuspended in 10 µl distilled water.

Competent *Pichia pastoris* cells were prepared as follows: A culture of *P. pastoris* was grown to log phase (OD600 ~1.0) in YPD media (10 g/L yeast extract, 20

g/L peptone, 20 g/L dextrose). A 1.5 mL aliquot was harvested by centrifugation, then resuspended in 1 mL of a 1:1 mixture of YPD+20 mM HEPES (pH 8):1M lithium acetate. After adding 10 µL 1 M dithiothreitol, the cells were incubated for 15 min at 30°C in a shaker at 300 rpm. The cells were pelleted by centrifugation and washed three times in 1 mL ice cold 1 M sorbitol. After the final wash, the cells were resuspended in 50 µL 1 M sorbitol.

The cells were combined with the linearized plasmid DNA in a chilled 2 mm electroporation cuvette, and subjected to a 1.5 kV pulse (25 µF, 200 Ω). The cells were transferred to a culture tube with 200 µL cold 1:1 YPD:1 M sorbitol, and allowed to recover for 2 hours at 30°C (300 rpm). Finally, the cells were plated onto YPD agar plates containing zeocin and grown for two days at 30°C.

***Protein Expression***

Colonies were picked from the agar plates and grown in 750 µL BMD1% (0.2M Potassium Phosphate buffer, 13.4 g/l Yeast Nitrogen Base, 0.4 mg/ml biotin, 1.1% glucose) at 30°C, 300 rpm. After 48 hours, 900 µL of culture was used to inoculate 750 µL BMM2 (0.2M Potassium Phosphate buffer, 13.4 g/l Yeast Nitrogen Base, 0.4 mg/ml Biotin, 1% methanol). After 24 hours, 150 µL BMM10 (BMM10: 0.2M Potassium Phosphate buffer, 13.4 g/l Yeast Nitrogen Base, 0.4 mg/ml Biotin, 5% methanol), and samples were harvested for analysis after one additional day.

***Analysis***

Protein expression was analyzed in samples of culture that were centrifuged to remove the cell mass. The clarified supernatant was then evaluated by SDS-PAGE, ELISA, and western blot.

To visualize total protein via SDS-PAGE, cell-free supernatant was treated with SDS-PAGE sample buffer, boiled, and run on a 10% polyacrylamide gel. The gel was stained with SYPRO Ruby stain (Life Technologies). The resulting gel shows that secretion of α-lactalbumin occurs using the OST1 or the native lactalbumin signal peptide (Figure 4).

To measure protein titers via ELISA, 25 µL of each sample were placed in a half-area 96 well microtiter plate, and allowed to bind overnight at 4°C. After removing the samples, the binding surface was blocked by filling each well with 1% (w/v) bovine serum albumin (BSA) dissolved in Tris Buffered Saline (50 mM Tris, pH 7.6, 150 mM NaCl) and incubating for 1 hour at room temperature. The samples were then incubated for 1.5 hr in primary antibody that was diluted in 1% BSA/TBS + 0.1% (v/v) Tween-20. Following three washes in TBS + Tween, the samples were incubated with secondary antibody conjugated with horseradish peroxidase (HRP) for an additional hour. After three final washes in TBS + Tween, a chromogenic substrate (TMB Single Solution, Life Technologies) was added, and the absorbance at 650 nm was measured. The resulting data show that α-lactalbumin was secreted using the native α-lactalbumin signal peptide or the OST1 signal peptide (Figure 5).

To analyze samples via Western blot, one volume of sample was combined with an equal volume of SDS-PAGE sample buffer and run on a 10% polyacrylamide gel. The proteins were transferred to a nitrocellulose membrane, which was blocked by treating with 1% BSA/TBS for 1 hr. After incubating for 1.5 hr with primary antibody diluted in 1% BSA/TBS+Tween, the blot was washed three times in TBS+Tween. The blot was then incubated with secondary antibody conjugated with horseradish peroxidase (HRP) for an additional hour. After three final washes in TBS + Tween, a chromogenic substrate (1-Step Ultra TMB Blotting Solution, Thermo Fisher) was added. After staining was completed, the blot was washed in distilled water.

**Beta-Lactoglobulin**

***Strain Constructions***

Three plasmids were assembled, placing the expression of bovine beta-lactoglobulin (bvLGB) under the control of either a methanol-induced promoter ($P_{AOX1}$ in pLH37) or one of two constitutive promoters ($P_{GAP}$ in pLH44, or $P_{PGK}$ in pLH45).

Prior to transformation, 20 µg pLH37 was linearized by digestion with the restriction enzyme SacI. The same amounts of pLH44 and pLH45 were linearized with

the enzyme ApaLI. The digested plasmids were then concentrated by ethanol precipitation, and resuspended in 10 µl distilled water.

Competent *Pichia pastoris* cells were prepared as follows: A culture of *P. pastoris* was grown to log phase (OD600 ~1.0) in YPD media (10 g/L yeast extract, 20 g/L peptone, 20 g/L dextrose). A 1.5 mL aliquot was harvested by centrifugation, then resuspended in 1 mL of a 1:1 mixture of YPD+20 mM HEPES (pH 8):1M lithium acetate. After adding 10 µL 1 M dithiothreitol, the cells were incubated for 15 min at 30°C in a shaker at 300 rpm. The cells were pelleted by centrifugation and washed three times in 1 mL ice cold 1 M sorbitol. After the final wash, the cells were resuspended in 50 µL 1 M sorbitol.

The cells were combined with the linearized plasmid DNA in a chilled 2 mm electroporation cuvette, and subjected to a 1.5 kV pulse (25 µF, 200 Ω). The cells were transferred to a culture tube with 200 µL cold 1:1 YPD:1 M sorbitol, and allowed to recover for 2 hours at 30°C (300 rpm). Finally, the cells were plated onto YPD agar plates containing zeocin and grown for two days at 30°C.

***Protein Expression***

To evaluate expression in clones transformed with the plasmid containing a methanol-inducible promoter (pLH37), individual clones were grown in 750 µL BMD1% (0.2M Potassium Phosphate buffer, 13.4 g/l Yeast Nitrogen Base, 0.4 mg/ml biotin, 1.1% glucose) at 30°C, 300 rpm. After 48 hours, 900 µL of culture was used to inoculate 750 µL BMM2 (0.2M Potassium Phosphate buffer, 13.4 g/l Yeast Nitrogen Base, 0.4 mg/ml Biotin, 1% methanol). After 24 hours, 150 µL BMM10 (BMM10: 0.2M Potassium Phosphate buffer, 13.4 g/l Yeast Nitrogen Base, 0.4 mg/ml Biotin, 5% methanol), and samples were harvested for analysis after one additional day.

To evaluate expression in clones transformed with a plasmid supporting constitutive expression (pLH44 or pLH45), individual clones were grown overnight in PG media (20 g/L peptone, 2% glycerol) at 30°C with shaking at 300 rpm. The cultures were diluted 1:10 in minimal sulfate media:

| |
|---|
| Glucose 20 g/L |
| Calcium Chloride (CaCl2) 1 g/L |

| |
|---|
| Sodium phosphate (Na2PO4) 24 g/L |
| Potassium sulfate (K2SO4) 18.2 g/L |
| Magnesium sulfate (MgSO4-7H2O) 14.9 g/L |
| Ammonium sulfate (NH4)2SO4 9 g/L |
| EDTA (Ethylenediaminetetraacetic acid) 65.25 mg/L |
| FeSO4-7H2O (Iron Sulfate heptahydrate) 12.18 g/L |
| ZnSO4-7H2O (Zinc sulfate heptahydrate) 25.0125 g/L |
| CaCl2-2H2O (Calcium chloride dihydrate) 12.615 g/L |
| CuSO4-5H2O (Copper sulfate pentahydrate) 2.175 g/L |
| NaMoO4-2H2O (Sodium molybdate dihydrate) 2.088 g/L |
| CoCl2-6H2O (Cobalt chloride hexahydrate) 2.0445 g/L |
| MnCl2-4H2O (Manganese chloride tetrahydrate) 1.392 g/L |
| Biotin 0.2175 g/L |

After 48 hours, samples were harvested for analysis.

***Analysis***

Protein expression was analyzed in samples of culture that were centrifuged to remove the cell mass. The clarified supernatant was then evaluated by ELISA and Western blot.

To measure protein titers via ELISA, 25 µL of each sample were placed in a half-area 96 well microtiter plate, and allowed to bind overnight at 4°C. After removing the samples, the binding surface was blocked by filling each well with 1% (w/v) bovine serum albumin (BSA) dissolved in Tris Buffered Saline (50 mM Tris, pH 7.6, 150 mM NaCl) and incubating for 1 hour at room temperature. The samples were then incubated for 1.5 hr in primary antibody that was diluted in 1% BSA/TBS + 0.1% (v/v) Tween-20. Following three washes in TBS + Tween, the samples were incubated with secondary antibody conjugated with horseradish peroxidase (HRP) for an additional hour. After three final washes in TBS + Tween, a chromogenic substrate (TMB Single Solution, Life Technologies) was added, and the absorbance at 650 nm was measured. The resulting data show the secretion of β-lactoglobulin (Figure 6).

To analyze samples via western blot, one volume of sample was combined with an equal volume of SDS-PAGE sample buffer and run on a 10% polyacrylamide gel. The proteins were transferred to a nitrocellulose membrane, which was blocked by treating with 1% BSA/TBS for 1 hr. After incubating for 1.5 hr with primary antibody

diluted in 1% BSA/TBS+Tween, the blot was washed three times in TBS+Tween. The blot was then incubated with secondary antibody conjugated with horseradish peroxidase (HRP) for an additional hour. After three final washes in TBS + Tween, a chromogenic substrate (1-Step Ultra TMB Blotting Solution, Thermo Fisher) was added. After staining was completed, the blot was washed in distilled water. The resulting Western blot shows that β-lactoglobulin was secreted from the recombinant yeast (Figure 7).

**Bovine Caseins**

Dual expression plasmids were built, to support expression of α-S1-casein with β-casein in one plasmid, and α-S2-casein with kappa-casein in another plasmid. These pairings were chosen because the molar ratio of α-S1:α-S2:β:κ in fluid milk is approximately 5.5 : 1.5 : 4.0 : 1.5; it is therefore desirable to have a similar number of copies of α-S1-casein and beta-casein, and a similar number of copies of α-S2-casein and kappa-casein.

Beta-casein and α-S2-casein were placed under the control of the constitutive PGAP promoter in their respective plasmids, while α-S1-casein and κ-casein were placed under the control of the constitutive PPGK promoter.

In order to direct the proteins into the secretory pathway, the proteins were expressed with either their native signal peptide (pLH46 and pLH47), or the OST1 signal peptide (pLH48 and pLH49). In addition, plasmids were made in which one protein was expressed with its native signal peptide, and the other protein with the OST1 signal peptide:

| | |
|---|---|
| pLH0050 | OST1-beta, native-α-S1 |
| pLH0051 | native-β, OST1-α-S1 |
| pLH0054 | OST1-α-S2, native-κ |
| pLH0055 | native-α-S2, OST1-κ |

To generate strains expressing all four casein proteins, yeast cells were first transformed with the plasmid encoding beta-casein and α-S1-casein. Prior to transformation, 20 μg of each plasmid was linearized with the enzyme ApaLI. The

digested plasmids were then concentrated by ethanol precipitation, and resuspended in 10 µl distilled water.

Competent *Pichia pastoris* cells were prepared as follows: A culture of P. pastoris was grown to log phase (OD600 ~1.0) in YPD media (10 g/L yeast extract, 20 g/L peptone, 20 g/L dextrose). A 1.5 mL aliquot was harvested by centrifugation, then resuspended in 1 mL of a 1:1 mixture of YPD+20 mM HEPES (pH 8):1M lithium acetate. After adding 10 µL 1 M dithiothreitol, the cells were incubated for 15 min at 30°C in a shaker at 300 rpm. The cells were pelleted by centrifugation and washed three times in 1 mL ice cold 1 M sorbitol. After the final wash, the cells were resuspended in 50 µL 1 M sorbitol.

The cells were combined with the linearized plasmid DNA in a chilled 2 mm electroporation cuvette, and subjected to a 1.5 kV pulse (25 µF, 200 Ω). The cells were transferred to a culture tube with 200 µL cold 1:1 YPD:1 M sorbitol, and allowed to recover for 2 hours at 30°C (300 rpm). Finally, the cells were plated onto PG agar (20 g/L peptone, 2% (v/v) glycerol, 2% agar) plates containing zeocin and grown for two days at 30°C.

Six clones from the beta+alphaS1 plates were then grown in culture, and made competent for DNA uptake using the procedure described above. They were then transformed with the linearized alphaS2+kappa plasmids, and grown for two days at 30°C on PG plates containing G418.

***Expression***

To evaluate the production of bovine casein proteins, five clones expressing casein and a wildtype yeast negative control were grown overnight in PG media (20 g/L peptone, 2% glycerol) at 30°C with shaking at 300 rpm. All five of the casein-expressing clones expressed alphaS2- and κ-casein with the respective native casein signal peptides. Clones sLH115, 116, 117, and 118 expressed β-casein and α-S1-casein with the respective native signal peptides; clone sLH122 expressed beta-casein and α-S1-casein with the OST1 signal peptide. The cultures were diluted 1:10 in minimal sulfate media:

| |
|---|
| Glucose 20 g/L |
| Calcium Chloride (CaCl2) 1 g/L |

| |
|---|
| Sodium phosphate (Na2PO4) 24 g/L |
| Potassium sulfate (K2SO4) 18.2 g/L |
| Magnesium sulfate (MgSO4-7H2O) 14.9 g/L |
| Ammonium sulfate (NH4)2SO4 9 g/L |
| EDTA (Ethylenediaminetetraacetic acid) 65.25 mg/L |
| FeSO4-7H2O (Iron Sulfate heptahydrate) 12.18 g/L |
| ZnSO4-7H2O (Zinc sulfate heptahydrate) 25.0125 g/L |
| CaCl2-2H2O (Calcium chloride dihydrate) 12.615 g/L |
| CuSO4-5H2O (Copper sulfate pentahydrate) 2.175 g/L |
| NaMoO4-2H2O (Sodium molybdate dihydrate) 2.088 g/L |
| CoCl2-6H2O (Cobalt chloride hexahydrate) 2.0445 g/L |
| MnCl2-4H2O (Manganese chloride tetrahydrate) 1.392 g/L |
| Biotin 0.2175 g/L |

After 48 hours, samples were harvested for analysis.

***Analysis***

Protein expression was analyzed in samples of culture that were centrifuged to remove the cell mass. The clarified supernatant was then evaluated by ELISA and western blot.

To measure protein titers via ELISA, 25 µL of each sample were placed in a half-area 96 well microtiter plate, and allowed to bind overnight at 4°C. After removing the samples, the binding surface was blocked by filling each well with 1% (w/v) bovine serum albumin (BSA) dissolved in Tris Buffered Saline (50 mM Tris, pH 7.6, 150 mM NaCl) and incubating for 1 hour at room temperature. The samples were then incubated for 1.5 hr in primary antibody that was diluted in 1% BSA/TBS + 0.1% (v/v) Tween-20. Following three washes in TBS + Tween, the samples were incubated with secondary antibody conjugated with horseradish peroxidase (HRP) for an additional hour. After three final washes in TBS + Tween, a chromogenic substrate (TMB Single Solution, Life Technologies) was added, and the absorbance at 650 nm was measured. The ELISA data show that the different yeast strains can secrete α-S1 casein and β-casein into the culture medium (Figure 8).

To analyze samples via western blot, one volume of sample was combined with an equal volume of SDS-PAGE sample buffer and run on a 10% polyacrylamide gel.

The proteins were transferred to a nitrocellulose membrane, which was blocked by treating with 1% BSA/TBS for 1 hr. After incubating for 1.5 hr with primary antibody diluted in 1% BSA/TBS+Tween, the blot was washed three times in TBS+Tween. The blot was then incubated with secondary antibody conjugated with horseradish peroxidase (HRP) for an additional hour. After three final washes in TBS + Tween, a chromogenic substrate (1-Step Ultra TMB Blotting Solution, Thermo Fisher) was added. After staining was completed, the blot was washed in distilled water.

The data in this Example show that the different expression vectors described herein can be used to generate transgenic yeast strains that secrete the different milk proteins.

**Example 7. Method of Making a Composition**

An exemplary composition described herein was generated using the specific method described below. A schematic diagram of this method is shown in Figure 9.

To prepare the milk product, laboratory equipment such as mixers, stirring plates, and sonicators are employed. For large scale production, standard fluid milk processing equipment should be used.

As Figure 9 shows, there are three main components to this method of making a composition. These steps include:

A. Preparation of the protein solution
B. Preparation of the oil mixture
C. Reconstitution of the milk solids

In step A, powdered micellar casein protein and whey protein are combined and blended (step 1) and subsequently mixed with deionized (DI) water (step 2) to obtain the protein solution **1**. Typically, this contains 2.8% powered micellar casein, 0.7% powered whey protein, and 85.5% water in this solution. The mixing vessel is covered to prevent evaporation of water. This mixing is performed by mixers, stirring plates, or a sonicator in a sufficient period of time (approximately 30 minutes). This mixing time ensures all

proteins are dispersed in the water. The mixing speed has been optimized as medium which provides enough force to disperse the proteins and avoids the entrapment of air in the solution. The water content can be adjusted according to the usage of other ingredients.

In step 3, separate solutions of $CaCl_2$, $KH_2PO_4$, and $Na_3$ citrate in water are the mineral sources utilized to prepare similar mineral profile as native bovine milk. In a typical instance, $CaCl_2$ solution concentration is 0.1 g/mL, $KH_2PO_4$ is 0.27 g/mL, and $Na_3$citrate solution is 0.21 g/ml $Na_3$citrate. The water used to prepare $KH_2PO_4$ with $Na_3$citrate solution is usually warm to make sure the complete dissolution of $KH_2PO_4$. During the mixing of protein solution **1**, 0.015% $CaCl_2$ is added slowly (step 4). The volume of $CaCl_2$ solution used is adjusted according to the weight percent of $CaCl_2$ needed. The mixing continues for approximately 30 minutes to allow the complete interaction between proteins and $Ca^{2+}$ ions. Subsequently, 0.27% $KH_2PO_4$ and 0.21% $Na_3$citrate are divided to 5 portions and each portion is added slowly into the mixing solution at an interval time of 5 to 10 minutes (step 5). 0.085% $CaCl_2$ is divided to 4 portions and each portion is added slowly into the mixing solution at an interval time of 5-10 minutes (step 6). The mixing continues for at least 30 minutes, preferably 1-2 hours, to obtain the protein solution 2.

In the process B, low speed mixing is sufficient to achieve the homogeneous mixing of different oil ingredients. The percent of each component used below for preparing the oil mixture 1 is based on the total oil mixture 1 weight. Initially, 65% sunflower oil, 29% coconut oil, and 2% tributyrin are mixed together form the oil base (step 7). The sunflower oil and coconut oil is deodorized to prevent an unwanted aroma. The combination of sunflower oil, coconut oil, and tributyrin can mimic a similar fatty acid profile as the native milk. The oil base ingredient and its content can be adjusted according to different needs (different types of products). The aroma mixture is prepared by mixing different the aroma components in the sunflower oil (step 8). The compounds used to mimic the aroma contain, but are not limited to ethyl butyrate, δ-decalactone, 2-furyl methyl ketone, 2,3-pentanedione, γ-undecalactone, δ-undecalactone, acetoin, furfuryl alcohol, furfural, 2-methylfurfural, and 2-methylpyrazine. Their contents can be adjusted by different applications and preference. 2.5% mono- and di-glycerides, 0.6%

free fatty acids, 0.5% phospholipids, and 0.4% aroma mixture are added to prepare the oil mixture **1** with mixing (step 9). In a typical instance, free fatty acids contain 0.15% butyric acid and 0.45% hexanoic acid. Soy lecithin is used as the phospholipid source. Soy lecithin is readily available and is inexpensive. A β-carotene solution is prepared in sunflower oil at a concentration of 0.5 mg/g (step 10). 4% of oil mixture 1 and 0.06% the β-carotene solution are mixed together to obtain the oil mixture 2 (step 11). The usage of β-carotene is adjusted to achieve different color levels of the milk. The usage of oil mixture 1 can also be adjusted according to different milk product applications.

In the process C, oil mixture 2 is added slowly to protein solution 2 and mixed thoroughly to prepare product mixture 1 (step 12). The mixing can be performed by mixers or sonicators. In a typical instance, oil mixture 2 and protein solution 2 are mixed under medium to high speed to ensure sure the oil is uniformly dispersed in the aqueous solution. Subsequently, sonication is applied to break down the oil globules into smaller size, which leads to an increase of their stability in the solution. It is necessary to prevent the entrapment of air bubbles in the solution during mixing. A mixing time of least 20 minutes is utilized to stir the oil mixture 2 into the aqueous solution and allow the thorough dispersion. A 4% maltose solution is added into product mixture 1 and was mixed continuously for an additional 30 minutes to yield product mixture 2 (step 13). The sweetness can be adjusted by the sugar content according to different applications. The source of the sugar can also be adjusted according to requests. Extra DI water may be required to make up the final total weight to 100%.

No intensive homogenization, pasteurization, and sterilization is included in this process. However, it will be necessary to apply these steps to prepare the product mixture in the process C for a scale-up production.

***Equipment Used***

Mixer: IKA-Labortechnik RW16 Basic, speed level (4-6)
Tip sonicator: Qsonica Model CL-188, Amplitude 70%
Water bath sonicator: Bransonic Model 1510R-MT

**Example 8. Example Formulations**

Example formulations compositions that have a similar taste and texture profile as whole milk, cream, high protein milk, fat-free milk, and sugar-free milk are provided in Tables 11-15 below.

As can be appreciated in the art, the compositions listed in Tables 11-15 are made by making the necessary modifications to the process described in Example 7.

**Table 11. Composition like Whole Milk**

Total Sample Weight 100 g

| Protein Component 3 g | Wt% | Amount in Section | Weight Percent in 100 g Sample |
|---|---|---|---|
| Micellular Casein | 80% | 2.4 g | 2.40% |
| Whey Protein | 20% | 0.6 g | 0.60% |
| **Fat 3.9 g** | | | |
| Sunflower Oil | 65% | 2.54 g | 2.54% |
| Coconut Oil | 29% | 1.13 g | 1.13% |
| Tributyrin | 2% | 0.08 g | 0.08% |
| Mono and Di Glycerides | 2.50% | 0.098 g | 0.098% |
| Free fatty acids (butyric and hexanoic acid) | 0.60% | 0.023 g | 0.023% |
| Phospholipids | 0.50% | 0.020 g | 0.02% |
| Aroma Compounds 0.4 % | 0.40% | 0.016 g | 0.016% |
| **Minerals 0.54 g** | | | |
| Calcium | | 0.1005g | 0.1005% |
| Phosphorus | | 0.09 g | 0.090% |
| Potassium | | 0.078 g | 0.078% |
| Sodium | | 0.0545 g | 0.0545% |
| Citrate | | 0.1493 g | 0.1493% |
| Chloride | | 0.064 g | 0.064% |
| **Sugar 4 g** | | | |
| Maltose | | 4 g | 4% |
| **Water** | | 88.56 g | 88.56% |

**Aroma Compounds List**

δ–Decalactone
Ethyl butyrate
2-furyl methyl ketone
2,3-pentanedione
γ–Undecalactone
δ–Undecalactone

5

**Table 12. Composition like Cream**

**Total Sample Weight 100 g**

| **Protein Component 3 g** | **Wt%** | **Amount in Section** | **Weight Percent in 100 g Sample** |
|---|---|---|---|
| Micellular Casein | 80% | 2.4 g | 2.40% |
| Whey Protein | 20% | 0.6 g | 0.60% |
| **Fat 40 g** | | | |
| Sunflower Oil | 65% | 26 g | 26.0% |
| Coconut Oil | 29% | 11.6 g | 11.6% |
| Tributyrin | 2% | 0.8 g | 0.8% |
| Mono and Di Glycerides | 2.50% | 1 g | 1.0% |
| Free fatty acids (butyric and hexanoic acid) | 0.60% | 0.24 g | 0.24% |
| Phospholipids | 0.50% | 0.2 g | 0.2% |
| Aroma Compounds 0.4 % | 0.40% | 0.16 g | 0.16% |
| **Minerals 0.54 g** | | | |
| Calcium | | 0.1005g | 0.1005% |
| Phosphorus | | 0.09 g | 0.090% |
| Potassium | | 0.078 g | 0.078% |
| Sodium | | 0.0545 g | 0.0545% |
| Citrate | | 0.1493 g | 0.1493% |
| Chloride | | 0.064 g | 0.064% |
| **Sugar 4 g** | | | |
| Maltose | | 4 g | 4% |
| **Water** | | 52.46 g | 52.46% |

**Aroma Compounds List**

δ–Decalactone
Ethyl butyrate
2-furyl methyl ketone
2,3-pentanedione
γ–Undecalactone
δ–Undecalactone

**Table 13. Composition like Protein Rich Milk**

**Total Sample Weight 100 g**

| Protein Component 6 g | Wt% | Amount in Section | Weight Percent in 100 g Sample |
|---|---|---|---|
| Micellular Casein | 80% | 4.8 g | 4.80% |
| Whey Protein | 20% | 1.2 g | 1.20% |
| **Fat 3.9 g** | | | |
| Sunflower Oil | 65% | 2.54 g | 2.54% |
| Coconut Oil | 29% | 1.13 g | 1.13% |
| Tributyrin | 2% | 0.08 g | 0.08% |
| Mono and Di Glycerides | 2.50% | 0.098 g | 0.098% |
| Free fatty acids (butyric and hexanoic acid) | 0.60% | 0.023 g | 0.023% |
| Phospholipids | 0.50% | 0.020 g | 0.02% |
| Aroma Compounds 0.4 % | 0.40% | 0.016 g | 0.016% |
| **Minerals 0.54 g** | | | |
| Calcium | | 0.1005g | 0.1005% |
| Phosphorus | | 0.09 g | 0.090% |
| Potassium | | 0.078 g | 0.078% |
| Sodium | | 0.0545 g | 0.0545% |
| Citrate | | 0.1493 g | 0.1493% |
| Chloride | | 0.064 g | 0.064% |
| **Sugar 4 g** | | | |
| Maltose | | 4 g | 4% |
| **Water** | | 85.56 g | 85.56% |

**Aroma Compounds List**

δ–Decalactone
Ethyl butyrate
2-furyl methyl ketone
2,3-pentanedione
γ–Undecalactone
δ–Undecalactone

5

**Table 14. Composition like Fat-Free Milk**

**Total Sample Weight 100 g**

| **Protein Component 3 g** | **Wt%** | **Amount in Section** | **Weight Percent in 100 g Sample** |
|---|---|---|---|
| Micellular Casein | 80% | 2.4 g | 2.40% |
| Whey Protein | 20% | 0.6 g | 0.60% |
| **Minerals 0.54 g** | | | |
| Calcium | | 0.1005g | 0.1005% |
| Phosphorus | | 0.09 g | 0.090% |
| Potassium | | 0.078 g | 0.078% |
| Sodium | | 0.0545 g | 0.0545% |
| Citrate | | 0.1493 g | 0.1493% |
| Chloride | | 0.064 g | 0.064% |
| **Sugar 4 g** | | | |
| Maltose | | 4 g | 4% |
| **Water** | | 92.46 g | 92.46% |

**Aroma Compounds List**

δ–Decalactone
Ethyl butyrate
2-furyl methyl ketone
2,3-pentanedione
γ–Undecalactone
δ–Undecalactone

**Table 15. Composition like Sugar Free Milk**

**Total Sample Weight 100 g**

| Protein Component 3 g | Wt% | Amount in Section | Weight Percent in 100 g Sample |
|---|---|---|---|
| Micellular Casein | 80% | 2.4 g | 2.40% |
| Whey Protein | 20% | 0.6 g | 0.60% |
| **Fat 3.9 g** | | | |
| Sunflower Oil | 65% | 2.54 g | 2.54% |
| Coconut Oil | 29% | 1.13 g | 1.13% |
| Tributyrin | 2% | 0.08 g | 0.08% |
| Mono and Di Glycerides | 2.50% | 0.098 g | 0.098% |
| Free fatty acids (butyric and hexanoic acid) | 0.60% | 0.023 g | 0.023% |
| Phospholipids | 0.50% | 0.020 g | 0.02% |
| Aroma Compounds 0.4 % | 0.40% | 0.016 g | 0.016% |
| **Minerals 0.54 g** | | | |
| Calcium | | 0.1005g | 0.1005% |
| Phosphorus | | 0.09 g | 0.090% |
| Potassium | | 0.078 g | 0.078% |
| Sodium | | 0.0545 g | 0.0545% |
| Citrate | | 0.1493 g | 0.1493% |
| Chloride | | 0.064 g | 0.064% |
| **Sugar 4 g** | | | |
| Stevia | | 4 g | 4% |
| **Water** | | 88.56 g | 88.56% |

**Aroma Compounds List**

δ–Decalactone
Ethyl butyrate
2-furyl methyl ketone
2,3-pentanedione
γ–Undecalactone
δ–Undecalactone

5

**Example 9. Exemplary Composition**

An exemplary composition made by the presently described methods is shown in Figure 10. The composition in Figure 10 has a similar look (color), viscosity, foaming property, flavor, and nutritional value as a mammal-produced milk. The composition shown in Figure 10 comprises mammal-derived proteins.

CLAIMS

1. A food composition, other than a cottage cheese or a hard cheese, that is suitable as a dairy substitute, said food composition comprising:

(i) a recombinant β-lactoglobulin protein and a recombinant α-lactalbumin protein, wherein ~~one or~~ both of the recombinant β-lactoglobulin protein and the recombinant α-lactalbumin protein comprises a sequence that is at least 90% identical to the bovine protein amino acid sequence and has been produced by a fungal cell;

(ii) one or more sweetening agents;

(iii) ash; and

(iv) optionally, one or more lipids,

wherein:

the food composition has one or more characteristics of a dairy food product selected from the group consisting of: taste, aroma, appearance, handling, mouthfeel, density, structure, texture, elasticity, springiness, coagulation, binding, ~~leavening,~~ aeration, foaming, creaminess, and emulsification; and the food composition does not comprise any other milk proteins than those in (i).

~~2. The food composition of claim 1, wherein:~~

~~the recombinant β-lactoglobulin protein comprises a sequence that is at least 90% identical to the bovine protein amino acid sequence and has been produced by a fungal cell; and~~

~~the recombinant α-lactalbumin protein comprises a sequence that is at least 90% identical to the bovine protein amino acid sequence and has been produced by a fungal cell.~~

~~3~~2. The food composition of claim 1 ~~or 2~~, wherein the composition comprises:

a final concentration of α-lactalbumin protein of about 0.4 weight % to about 2.5 weight %; and

a final concentration of β-lactoglobulin protein of about 2.5 weight % to about 4.5 weight %.

~~4~~3. The food composition of claim 1, wherein the fungal cell is selected from the group consisting of: a strain of *Aspergillus nidulans*, a strain of *Aspergillus niger*, a strain of *Aspergillus oryzae*, a strain of *Candida albicans*, a strain of *Trichoderma reesei*, a strain of

*Chrysosporium lucknowense*, a strain of *Fusarium gramineum*, a strain of *Fusarium venenatum*, a strain of *Physcomitrella patens*, a strain of *Neurospora crassa*, a strain of *Pichia pastoris*, a strain of *Pichia flnlandica*, a strain of *Pichia trehalophila*, a strain of *Pichia koclamae*, a strain of *Pichia membranaefaciens*, a strain of *Pichia minuta* (*Ogataea minuta*, *Pichia lindneri*), a strain of *Pichia opuntiae*, a strain of *Pichia thermotolerans*, a strain of *Pichia salictaria*, a strain of *Pichia guercuum*, a strain of *Pichia pijperi*, a strain of *Pichia stiptis*, a strain of *Pichia methanolica*, and a strain of *Hansenula polymorpha*.

~~5~~4. The food composition of claim 1, wherein one or both of the recombinant β-lactoglobulin protein and the recombinant α-lactalbumin protein has been secreted by a fungal cell.

~~6~~5. The food composition of claim 1, wherein the food composition does not include an animal-derived compound.

~~7~~6. The food composition of claim 1, wherein the food composition does not include any compound isolated from a milk produced by a mammal.

~~8~~7. The food composition of claim 1, wherein the food composition does not include at least one compound otherwise present in a mammal-produced milk.

~~9. The food composition of claim 1, wherein the food composition comprises a plurality of micelles.~~

~~10. The food composition of claim 8, wherein the plurality of micelles comprises one or both of the recombinant β-lactoglobulin protein and the recombinant α-lactalbumin protein.~~

~~11~~8. The food composition of claim 1, wherein the food composition comprises one or more lipids selected from the group consisting of: plant-derived oils, plant-derived monoglycerides, plant-derived diglycerides, plant-derived triglycerides, plant-derived free fatty acids, and plant-derived phospholipids.

~~12~~9. The food composition of claim ~~11~~8, wherein the total concentration of one or more lipids is up to about 45 weight %.

~~13~~10. The food composition of claim 1, wherein the one or more sweetening agents are saccharides selected from the group consisting of: glucose, mannose, maltose, fructose, galactose, lactose, sucrose, monatin, and tagatose.

~~14~~11. The food composition of claim 1, wherein the one or more sweetening agents are artificial sweeteners selected from the group consisting of: stevia, aspartame, cyclamate, saccharin, sucralose, mogrosides, brazzein, curculin, erythritol, glycyrrhizin, inulin, isomalt, ~~lacititol~~lactitol, mabinlin, ~~malititol~~maltitol, mannitol, miraculin, monatin, monelin, osladin, pentadin, sorbitol, thaumatin, xylitol, acesulfame potassium, advantame, alitame, aspartame-acesulfame, sodium cyclamate, dulcin, glucin, neohesperidin dihydrochalcone, neotame, and P-4000.

~~15~~12. The food composition of claim 1, wherein the ash comprises one or more of: calcium, phosphorous, phosphate, potassium, sodium, citrate, sulfate, carbonate, chloride, magnesium, iron, copper, zinc, manganese, selenium, iodine, retinol, carotene, vitamins, vitamin D, vitamin E, vitamin B12, thiamin, and riboflavin, or a salt(s) thereof.

~~16~~13. The food composition of claim 1, wherein the ash has a final concentration in the food composition of about 5% w/w to about 7% w/w.

~~17~~14. The food composition of claim 1, wherein the ash comprises one or more of:
$CaCl_2$ at a final concentration of about 0.005% w/w to about 0.02% w/w;
$KH_2PO_4$ at a final concentration of about 0.02% w/w to about 0.04% w/w; or
$Na_3$citrate at a final concentration of about 0.01% w/w to about 0.03% w/w.

~~18~~15. The food composition of claim 1, wherein the food composition is a dairy substitute selected from the group consisting of: a yogurt, a whey cheese, a milk, a butter, a cream, an infant formula, an ice cream, a frozen custard, ~~a cottage cheese,~~ a cream cheese, a crème fraiche, and a curd.

~~19~~16. The food composition of claim 1, wherein the food composition is a powder

composition.

~~20~~17. The food composition of claim ~~18~~ 15, wherein the food composition is a yogurt.

~~21~~18. The food composition of claim ~~18~~15, wherein the food composition is a butter.

~~22~~19. The food composition of claim ~~18~~15, wherein the food composition is a cream.

~~23~~20. The food composition of claim ~~18~~15, wherein the food composition is an ice cream.

~~24~~21. The food composition of claim ~~18~~15, wherein the food composition is a frozen custard.

~~25. The food composition of claim 18, wherein the food composition is a cottage cheese.~~

~~26~~22. The food composition of claim ~~18~~15, wherein the food composition is a cream cheese.

~~27~~23. The food composition of claim ~~18~~15, wherein the food composition is a crème fraiche.

~~28~~24. The food composition of claim ~~18~~15, wherein the food composition is a curd.

~~29~~25. The food composition of claim 7~~8~~, wherein the food composition does not include lactose.

~~30~~26. The food composition of claim ~~8~~7, wherein the food composition does not include a hormone.

~~31~~27. The food composition of claim ~~18~~15, wherein the food composition is a milk.

~~32~~28. The food composition of claim ~~18~~15, wherein the food composition is a whey cheese.

~~33~~29. The food composition of claim 1, wherein the α-lactalbumin protein comprises an amino acid sequence that is at least 90% identical to SEQ ID NO: 92.

~~34~~30. The food composition of claim 1, wherein the β-lactoglobulin protein comprises an amino acid sequence that is at least 90% identical to SEQ ID NO: 100.

~~35~~31. The food composition that is a dairy substitute according to claim ~~2~~1, wherein:

the recombinant α-lactalbumin protein comprises a sequence that is at least 90% identical to SEQ ID NO: 92; and the recombinant β-lactoglobulin protein comprises a sequence that is at least 90% identical to SEQ ID NO: 100;

the composition comprises one or more lipids; and

the dairy substitute is selected from the group consisting of: a yogurt, a whey cheese, a milk, a butter, a cream, an infant formula, an ice cream, a frozen custard, ~~a cottage cheese,~~ a cream cheese, a crème fraiche, and a curd.