VacCiencia

FINLAY EDICIONES

Boletín Científico

No. 6 (1-12 abril / 2022)

EN ESTE NÚMERO

VacCiencia es una publicación dirigida a investigadores y especialistas dedicados a la vacunología y temas afines, con el objetivo de serle útil. Usted puede realizar sugerencias sobre los contenidos y de esta forma crear una retroalimentación que nos permita acercarnos más a sus necesidades de información.

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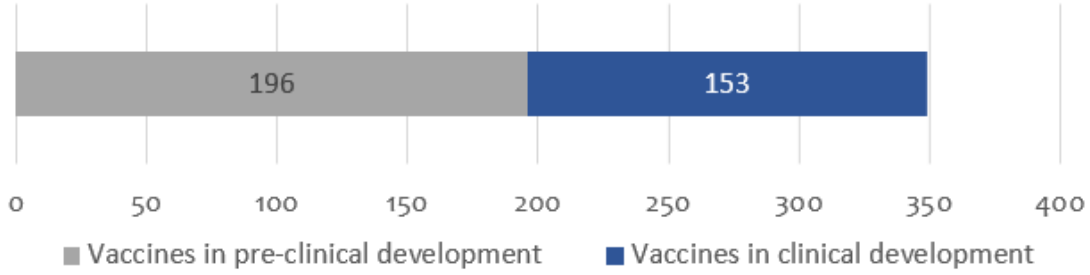
CUBA

Resumen de la información publicada por la OMS sobre los candidatos vacunales contra la COVID-19 en desarrollo a nivel mundial

Última actualización por la OMS: 12 de abril de 2022.

Fuente de información utilizada: World Health Organization; R&D Blueprint — Powering research to prevent epidemics

153 candidatos vacunales en evaluación clínica y 196 en evaluación preclínica



Candidatos vacunales en evaluación clínica por plataforma

Platform		Candidate vaccines (no. and %)	
PS	Protein subunit	51	34%
VVnr	Viral Vector (non-replicating)	21	14%
DNA	DNA	16	11%
IV	Inactivated Virus	21	14%
RNA	RNA	28	18%
VVr	Viral Vector (replicating)	4	3%
VLP	Virus Like Particle	6	4%
VVr + APC	VVr + Antigen Presenting Cell	2	1%
LAV	Live Attenuated Virus	2	1%
VVnr + APC	VVnr + Antigen Presenting Cell	1	1%
BacAg-SpV	Bacterial antigen-spore expression vector	1	1%
		153	

Candidatos vacunales mucosales en evaluación clínica

Desarrollador de la vacuna/fabricante/país	Plataforma de la vacuna	Vía de administración	Fase
University of Oxford/Reino Unido	Vector viral no replicativo	Intranasal	1
CanSino Biological Inc./Beijing Institute of Biotechnology/China	Vector viral no replicativo	Inhalación	3
Vaxart/Estados Unidos	Vector viral no replicativo	Oral	2
Univ. Hong Kong, Xiamen Univ./Beiging Wantai Biol. Pharm./China	Vector viral replicativo	Intranasal	3
Symvivo/Canadá	ADN	Oral	1
ImmunityBio, Inc./Estados Unidos	Vector viral no replicativo	Oral o SL	1/2
Codagenix/Serum Institute of India	Virus vivo atenuado	Intranasal	3
Center for Genetic Engineering and Biotechnology (CIGB)/Cuba	Subunidad proteica	Intranasal	1/2
Razi Vaccine and Serum Research Institute/India	Subunidad proteica	IM e IN	3
Bharat Biotech International Limited/India	Vector viral no replicativo	Intranasal	3
Meissa Vaccines, Inc./Estados Unidos	Virus vivo atenuado	Intranasal	1
Laboratorio Avi-Mex/México	Virus inactivado	IM o IN	2/3
USSF + VaxForm/Estados Unidos	Subunidad proteica	Oral	1
CyanVac LLC/Estados Unidos	Vector viral no replicativo	Intranasal	1
DreamTec Research Limited/Hong Kong	BacAg-SpV	Oral	NA
Sean Liu, Icahn School of Medicine at Mount Sinai	Vector viral replicativo	IN/IM	1
Hannover Medical School/Alemania	Vector viral no replicativo	Inhalación	1

Candidatos vacunales más avanzados a nivel global

Desarrollador de la vacuna/fabricante/país	Plataforma de la vacuna	Fase
Sinovac/China	Virus Inactivado	4
Sinopharm/Wuhan Institute of Biological Products/China	Virus Inactivado	4
Sinopharm/Beijing Institute of Biological Products/China	Virus Inactivado	4
University of Oxford/AstraZeneca/Reino Unido	Vector viral no replicativo	4
CanSino Biological Inc./Beijing Institute Biotechnology/China	Vector viral no replicativo	4
CanSino Biological Inc./Beijing Institute Biotechnology/China	Vector viral no replicativo (IH)	3
Gamaleya Research Institute/Rusia	Vector viral no replicativo	3
Janssen Pharmaceutical Companies/Estados Unidos	Vector viral no replicativo	4
Novavax/Estados Unidos	Subunidad proteica	3
Moderna/NIAID/Estados Unidos	ARN	4
Pfizer/BioNTech Fosun Pharma/Estados Unidos	ARN	4
Anhui Zhifei Longcom Biopharmac./Inst. Microbiol, Chin Acad Sci/China	Subunidad proteica	3
CureVac AG/Alemania	ARN	3
Institute of Medical Biology/Chinese Academy of Medical Sciences	Virus inactivado	3
Research Institute for Biological Safety Problems, Kazakhstan	Virus inactivado	3
Inovio Pharmac. + Intern. Vacc Inst. + Advaccine Biopharm Co., Ltd	ADN	3
Zydus Cadila Healthcare Ltd./India	ADN	3
Bharat Biotech International Limited/India	Virus Inactivado	3
Sanofi Pasteur + GSK/Francia/Gran Bretaña	Subunidad proteica	3
Shenzhen Kangtai Biological Products Co., Ltd./China	Virus Inactivado	3
Clover Biopharmaceuticals Inc./GSK/Dynavax/China/Reino Unido/EE.UU	Subunidad proteica	3
Vaxine Pty Ltd. + CinnaGen Co./Australia, Irán	Subunidad proteica	3
Medigen Vaccine Biol./Dynavax/NIAID/Taiwán/EE.UU	Subunidad proteica	4
Instituto Finlay de Vacunas/Cuba	Subunidad proteica	3
Federal Budget Res Inst State Res Cent Virol Biotechnol "Vector"/Rusia	Subunidad proteica	3
West China Hospital + Sichuan University/China	Subunidad proteica	3
Vaxxinity/EE.UU	Subunidad proteica	3
Univ. Hong Kong, Xiamen Univ. & Beijing Wantai Biological Pharm./China	Vector viral replicativo	3
Acad Milit Sci (AMS) Walvax Biotechnol, Suzhou Abogen Biosci/China	ARN	3
Medicago Inc./Canadá	Partícula similar a virus	3
Codagenix/Serum Institute of India	Virus vivo atenuado	3
Center for Genetic Engineering and Biotechnology (CIGB)/Cuba	Subunidad proteica	3
Valneva, National Institute for Health Research, Reino Unido	Virus inactivado	3
Biological E. Limited/India	Subunidad proteica	3
Nanogen Pharmaceutical Biotechnology/Vietnam	Subunidad proteica	3
Shionogi/Japón	Subunidad proteica	3
Erciyes University/Turquía	Virus inactivado	3
SK Bioscience Co., Ltd./CEPI/Corea del Sur/Noruega	Subunidad proteica	3
Razi Vaccine and Serum Research Institute/Irán, India	Subunidad proteica	3
Bharat Biotech International Limited/India	Vector viral no replicativo (IN)	3
Arcturus Therapeutics, Inc./Estados Unidos	ARN	3
Livzon Pharmaceutical/China	Subunidad proteica	3
Bagheiat-allah University of Medical Sciences/AmitisGen/Irán	Subunidad proteica	3
Laboratorios Hipra, S.A.	Subunidad proteica	3
Sinocelltech Ltd./China	Subunidad proteica	3

Informe de eventos adversos de algunas vacunas de subunidades proteicas, más avanzadas a nivel global contra la COVID-19

Las vacunas, aunque son más seguras que hace 40 años atrás, no están exentas del riesgo de presentar algún evento adverso, que varía desde leve hasta grave, que puede conducir a hospitalizaciones, discapacidades, secuelas y hasta la muerte. Afortunadamente, esto suele ocurrir en un pequeño número de personas.

Este trabajo exhibe los eventos adversos más frecuentes de algunas de las vacunas contra la COVID-19 desarrolladas en la plataforma de subunidad proteica, fundamentalmente de las que han llegado a las fases 3 y 4 de ensayos clínicos.

NVX-CoV2373

Es una vacuna desarrollada por la compañía estadounidense Novavax, Inc. Requiere dos dosis y se basa en la administración de nanopartículas formadas por subunidades de proteínas.

Entre los eventos adversos informados se encuentran:

En el estudio fase 1-2 los eventos adversos locales comúnmente notificados fueron sensibilidad o dolor en el lugar de la inyección después de la primera dosis (con 53,3% informando dolor a la palpación y 29,3% refirió dolor) y la segunda dosis (76,4% y 51,2%, respectivamente), siendo la mayoría de los eventos grado 1 (leve) o 2 (moderado) en severidad y de una duración media corta (2,3 días de dolor a la palpación y 1,7 días de dolor después de la primera dosis y 2,8 y 2,2 días, respectivamente, después de la segunda dosis).

Los eventos adversos sistémicos más frecuentes fueron dolor de cabeza, dolor muscular y fatiga después de la primera dosis (24,5%, 21,4% y 19,4%, respectivamente) y después de la segunda dosis (40,0%, 40,3% y 40,3%, respectivamente), siendo la mayoría de los eventos de grado 1 o 2 en severidad y de corta a media duración (1,6; 1,6 y 1,8 días, respectivamente, después de la primera dosis y 2,0; 1,8 y 1,9 días, respectivamente, después de la segunda dosis). Se informaron eventos de grado 4 en tres vacunados, dos de ellos con fiebre > 40 °C, uno después de la primera dosis y el otro después de la segunda dosis.[1]

En el estudio fase 3, los eventos adversos locales se informaron con más frecuencia en el grupo de vacunados que en el grupo de placebo después de la primera dosis (57,6% frente a 17,9%) y la segunda dosis (79,6% frente a 16,4%). Entre los vacunados, los eventos adversos locales notificados con mayor frecuencia fueron sensibilidad o dolor en el lugar de la inyección después de la primera dosis (53,3% informaron sensibilidad y 29,3% informaron dolor) y la segunda dosis (76,4% y 51,2%, respectivamente), siendo la mayoría de los acontecimientos de grado 1 (leve) o 2 (moderado) y de una duración media corta (2,3 días de sensibilidad y 1,7 días de dolor después de la primera dosis y 2,8 y 2,2 días, respectivamente, después de la segunda dosis). Los eventos adversos locales solicitados se notificaron con más frecuencia entre los vacunados más jóvenes (18 a 64 años) que entre los de mayor edad (≥65 años).

Se informó que los eventos adversos sistémicos solicitados fueron más frecuentes en el grupo de vacunados que en el grupo de placebo después de la primera dosis (45,7% frente a 36,3%) y la segunda dosis (64,0% frente a 30,0%). Entre los vacunados, los eventos adversos sistémicos notificados con mayor frecuencia fueron dolor de cabeza, dolor muscular y fatiga después de la primera dosis (24,5%; 21,4% y 19,4%, respectivamente) y la segunda dosis (40,0%, 40,3% y 40,3%, respectivamente), siendo la mayoría

de los acontecimientos de grado 1 o 2 en gravedad y de corta duración media (1,6; 1,6 y 1,8 días, respectivamente, después de la primera dosis y 2,0; 1,8 y 1,9 días, respectivamente, después de la segunda dosis). Se notificaron eventos adversos sistémicos de grado 4 en 3 vacunados. Dos participantes informaron fiebre de grado 4 (> 40 °C), uno después de la primera dosis y el otro después de la segunda dosis. Se encontró que un tercer participante había tenido resultados positivos para el SARS-CoV-2 en el ensayo de PCR al inicio del estudio. Cinco días después de la primera dosis, este participante fue hospitalizado por síntomas de COVID-19 y posteriormente tuvo seis eventos de grado 4: náuseas, dolor de cabeza, fatiga, dolor muscular, malestar y dolor articular. Los eventos adversos sistémicos fueron notificados con más frecuencia por los vacunados más jóvenes que por los de mayor edad y más a menudo después de la segunda dosis que después de la primera. Entre los vacunados, se informó fiebre (temperatura, ≥38 ° C) en un 2,0% después de la primera dosis y en un 4,8% después de la segunda dosis. Se notificó fiebre de grado 3 (39 °C a 40 °C) en un 0,4% después de la primera dosis y en un 0,6% después de la segunda dosis. Se informó fiebre de grado 4 (> 40 ° C) en 2 participantes, con un evento después de la primera dosis y otro después de la segunda dosis.[2]

Zifivax (ZF2001)

Es una vacuna desarrollada por Anhui Zhifei Longcom Biopharmaceutical Co. Ltd. Es una vacuna que usa la forma dimérica del RBD como antígeno y elaborada con células CHO.

Tanto en la fase 1 como en la 2, los eventos adversos informados dentro de los 30 días posteriores a la vacunación fueron leves o moderados (grado 1 o 2) en la mayoría de los casos.

En el ensayo fase 1, 14 (70%) de 20 en el grupo de 25 μg y 18 (90%) de 20 en el grupo de 50 μg informaron al menos un evento adverso dentro de los 30 días posteriores a la vacunación, sin diferencias significativas entre los grupos. Dentro de los 7 días posteriores a la vacunación, la mayor parte de la reactogenicidad local y sistémica fue leve o moderada (eventos adversos de grado 1 o 2).

Los eventos adversos locales más comunes fueron dolor, enrojecimiento y picazón en el lugar de la inyección.

Los eventos adversos sistémicos más comunes fueron tos, fiebre y dolor de cabeza. Se informaron dos (10%) eventos adversos de grado 3 o peores en el grupo de 50 μg. Uno estaba relacionado con la vacuna (hinchazón y enrojecimiento) y el otro era un evento adverso grave (rabdomiólisis: ruptura de los tejidos musculares que libera una proteína dañina en la sangre), pero los investigadores lo evaluaron como no relacionado con la vacuna.

En la fase 2, 18 participantes informaron eventos adversos de grado 3 o peores (cuatro [3 %] en el grupo de vacuna de dos dosis de 25 μg, dos [1 %] en el grupo de vacuna de dos dosis de 50 μg, dos [1 %]] en el grupo de placebo de tres dosis, cuatro [3 %] en el grupo de vacuna de 25 μg de tres dosis y seis [4 %] en el grupo de vacuna de 50 μg de tres dosis), y 11 se consideraron relacionados con la vacuna (dos [1 %] en el grupo de dos dosis de vacuna de 25 μg, uno [1 %] en el grupo de dos dosis de vacuna de 50 μg, uno [1 %] en el grupo de tres dosis de placebo, dos [1 %] en el grupo de tres dosis grupo de vacuna de 25 μg de dosis, y cinco [3%] en el grupo de vacuna de 50 μg de tres dosis); siete participantes informaron eventos adversos graves (uno [1 %] en el grupo de dos dosis de vacuna de 25 μg, uno [1 %] en el grupo de dos dosis de vacuna de 50 μg, dos [1 %] en el grupo de tres dosis de placebo, uno [1 %] en el grupo de vacuna de tres dosis de 25 μg y dos [1 %] en el grupo de vacuna de tres dosis de 50 μg), pero ninguno se consideró relacionado con la vacuna.[3]

VAT00008

Es una vacuna desarrollada por Sanofi Pasteur y Glaxo Smith Kline. Se obtiene combinando tecnologías innovadoras para producir una vacuna basada en proteínas recombinantes.

De los resultados interinos de la fase 2 de ensayo clínico se encontró una tolerabilidad aceptable. De 722 participantes, cuatro informaron eventos adversos inmediatos no solicitados, dos estaban relacionados con la vacuna. Cinco participantes informaron siete eventos adversos con asistencia médica relacionados con la vacuna. No se notificaron acontecimientos adversos graves relacionados con ella ni acontecimientos adversos de especial interés. Las reacciones solicitadas (locales y sistémicas) se informaron con frecuencias similares entre los grupos de estudio; estos fueron en su mayoría de leves a moderados y transitorios, con mayor frecuencia e intensidad después de la segunda inyección.[4, 5, 6]

SCB-2019 (Trimérica)

Desarrollada por Clover Biopharmaceuticals Inc./GSK/Dynavax. Está basada en una proteína de SARS-CoV-2 recombinante que conserva la estructura trimérica nativa de la proteína S en la forma de conformación de prefusión.

En el ensayo fase 1, no se informaron eventos adversos graves relacionados con la vacuna. La mayoría de los eventos adversos fueron leves y transitorios. La vacunación fue bien tolerada, con dos eventos adversos de grado 3 (dolor en los grupos de 9 µg con adyuvante de AS03 y 9 µg de CpG / adyuvante de alumbre). La mayoría de los eventos adversos locales fueron dolor leve en el lugar de la inyección y fueron más frecuentes con las formulaciones de SCB-2019 que contienen adyuvante AS03 (44-69%) que con las que contienen adyuvante CpG / Alum (6-44%) o sin adyuvante (3-13%). Los eventos adversos sistémicos fueron más frecuentes en adultos jóvenes (38%) que en adultos mayores (17%) después de la primera dosis, pero aumentaron a niveles similares en ambos grupos de edad después de la segunda dosis (30% en adultos mayores y 34% en adultos jóvenes).[7, 8]

MVC-COV1901

Desarrollada por Medigen Vaccine Biologics Corporation (MVC) , Dynavax y National Institute of Allergy and Infectious Diseases (NIAID). Para obtener la vacuna se utilizó el antígeno recombinante S-2P.

En el ensayo fase 1 participaron 148 sujetos, no se reportó ningún evento adverso severo, ni de interés especial.

Los eventos adversos locales informados con mayor frecuencia fueron dolor/sensibilidad (80,0%), mientras que malestar / fatiga (28,9%) fueron los síntomas sistémicos más comúnmente reportados entre todos los grupos de tratamiento. Todos los eventos adversos locales y sistémicos fueron leves, excepto por malestar/fatiga en el grupo de dosis de 25 mg.

Ningún participante tuvo fiebre. Los eventos adversos solicitados después de la primera y la segunda dosis fueron similares. Otros eventos adversos no solicitados no revelaron ninguna preocupación.[9]

En el ensayo fase 2 de 3,844 participantes, 2.510 (65,3%) informaron efectos adversos locales solicitados después de cualquier dosis del estudio. El grupo de vacunados (72,3 %) superó en número al grupo placebo (23,5). Se informó que los eventos adversos locales, fueron en su mayoría leves (Grado 1) a gravedad moderada (Grado 2). Después de cualquier dosis de la vacuna, el evento adverso local más común fue dolor en el lugar de la inyección (71,2%), mientras que el evento adverso sistémico más común fue fatiga (36.0%). Rara vez se informó fiebre (<1%).

La mayoría de los eventos adversos solicitados tuvieron una duración media de menos de tres días. La aparición de EA sistémicos solicitados después de cualquier dosis de la intervención del estudio en el grupo de edad ≥ 65 años (38,7%) fue ligeramente más bajo que en el conjunto general. El 28 % de los participantes informaron eventos adversos no solicitados. Ninguno de los eventos adversos severos se relacionó con la intervención del estudio. Se informó un evento adverso de especial interés en un participante (<0,1%) del grupo vacunado (parálisis facial temporal, posiblemente relacionado). No se reportaron muertes ni enfermedades asociadas a la vacuna.[10, 11]

EpiVacCorona

Desarrollada por Federal Budgetary Research Institution State Research Center of Virology and Biotechnology "Vector". La vacuna contiene inmunógenos peptídicos sintetizados químicamente correspondientes a epítopos protectores seleccionados de la proteína S del coronavirus SARS-CoV-2, conjugados con la proteína N recombinante del SARS-CoV-2, utilizada como portador. La vacuna no contiene el virus vivo y forma inmunidad debido a péptidos sintetizados artificialmente.

La vacuna se caracteriza por la ausencia de reactogenicidad y un nivel de seguridad suficientemente alto.

En la fase 1 del ensayo clínico, donde participaron voluntarios de 18-60 años de edad, se reportó como evento local, dolor en el lugar de la inyección en 14,3 % de los voluntarios, los síntomas fueron muy leves y transitorios (1 a 2 días). No se informaron reacciones inmediatas (alergias), ni síntomas sistémicos.

En la fase 2, (voluntarios de 18-60 años de edad) no se observaron reacciones inmediatas. El evento adverso local más común fue dolor en el lugar de la inyección (observado en 4 de 43 voluntarios después de la primera inyección y en 2 pacientes más después de la segunda inyección). Todas las reacciones locales fueron leves y transitorias (1 a 2 días). Solo un voluntario del grupo de vacunados tuvo un aumento moderado a corto plazo de la temperatura corporal 12 horas después de la primera inyección, acompañado de dolor de cabeza y dolor de oído. El voluntario fue colocado en aislamiento, donde permaneció durante 6 días. No se aisló ARN viral tras el examen diario de frotis nasofaríngeos. Se concertó una consulta con un otorrinolaringólogo y se diagnosticó otitis media con tratamiento prescrito.

Durante todo el período de observación, no se detectaron cambios significativos en términos de indicadores como la temperatura corporal (todos menos uno, atribuido principalmente a la otitis media), la presión arterial, la frecuencia cardíaca o la frecuencia respiratoria en ningún voluntario vacunado. Todos los indicadores vitales estuvieron dentro de las normas fisiológicas en todo el período.[13]

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Patentes registradas en Patentscope

Estrategia de búqueda: *Vaccine in the title or abstract AND 20220401:20220412 as the publication date 43 records.*

1.WO/2022/068922EB VIRUS VACCINE AND USE THEREOF
WO - 07.04.2022
Clasificación Internacional C12N 1/20 Nº de solicitud PCT/CN2021/122088 Solicitante FOUNDATION THERAPY LIMITED Inventor/a YANG, Xiao-Tian
The present invention relates to a vaccine, the use thereof and a method for preventing or treating infections with the EB virus or diseases or cancers induced thereby. In one aspect, the present invention relates to an EB virus vaccine comprising a bacterial ghost and an EB virus antigen, and is used for preventing or treating infections with the EB virus or diseases or cancers induced thereby. In another aspect, the present invention relates to the use of a composition comprising the bacterial ghost and the EB virus antigen in the preparation of a vaccine for preventing or treating infections with the EB virus or diseases or cancers induced thereby. In an additional aspect, the present invention relates to a method for preventing or treating infections with the EB virus or diseases or cancers induced thereby, the method comprising administering a prophylactically or therapeutically effective amount of the EB virus vaccine to a subject. In a further aspect, the present invention relates to a method for preparing a vaccine comprising the bacterial ghost and the EB virus antigen.

2.3978014HERSTELLUNG VON RISEDRONAT-ZINK-MIKRONANO-ADJUVANS UND SEINE VERWENDUNG ALS IMPFSTOFFADJUVANS

EP - 06.04.2022
Clasificación Internacional A61K 39/25 Nº de solicitud 20814124 Solicitante UNIV XIAMEN Inventor/a ZHAO QINJIAN
The present invention pertains to the field of pharmaceutical technology. Specifically, the present invention relates to a zinc risedronate micro/nano adjuvant with sustained-release function formed by mineralization of zinc ions and risedronic acid as main components and its use as a vaccine adjuvant. The present invention also relates to a method for preparing zinc risedronate micro/nano adjuvant. The present invention also relates to a chemical composition, vaccine adjuvant and vaccine composition comprising zinc risedronate micro/nano adjuvant. The present invention also relates to a use of zinc risedronate micro/nano adjuvant as a vaccine adjuvant.

3.WO/2022/072622CRIMEAN-CONGO HEMORRHAGIC FEVER VIRUS M-SEGMENT NUCLEIC ACID VACCINE AND METHODS OF USE AND PRODUCTION
WO - 07.04.2022
Clasificación Internacional A61K 39/12 Nº de solicitud PCT/US2021/052860 Solicitante THE UNITED STATES GOVERNMENT, AS REPRESENTED BY THE SECRETARY OF THE ARMY Inventor/a SHOEMAKER, Charles, J.
Crimean-Congo hemorrhagic fever virus (CCHFV) is a tick-bome virus that causes severe hemorrhagic fever disease in humans. Currently, no licensed CCHF vaccines exist, and the protective epitopes remain unclear. Here, we tested a DNA vaccine expressing the M-segment glycoprotein precursor gene (GPC) of the laboratory CCHFV strain CCHFV-IbAr 10200 (CCHFV-M10200). Increasing the dose of CCHFV-M 10200 provides complete protection from homologous CCHFV challenge in mice, and significant (80%) protection from challenge with the clinically relevant, heterologous CCHFV- Afg09-2990 strain. We also report complete protection from CCHFV - Afg09-2990 challenge following vaccination with a CCHFV-Afg09-2990 GPC expressing DNA vaccine (CCHFV -M Afgog). Finally, we show that the non-stmctural M-segment protein, GP38, influences CCHF vaccine immunogenicity and provides significant protection from homologous CCHFV challenge. Our results demonstrate that M- segment DNA vaccines elicit protective CCHF immunity and further illustrate the immunorelevance of GP38.

4.WO/2022/071559ONCOLYTIC VACCINIA VIRUS HAVING LONG GENE DELETION
WO - 07.04.2022
Clasificación Internacional C12N 7/00 Nº de solicitud PCT/JP2021/036371 Solicitante NATIONAL UNIVERSITY CORPORATION TOTTORI UNIVERSITY Inventor/a NAKAMURA Takafumi
Provided are: a vaccinia virus which can be proliferated specifically in a cancer cell to injure the cancer cell; and a use of the virus in a cancer therapy. This vaccinia virus is an oncolytic vaccinia virus in which a region composed of 7000 to 9000 base pairs contained in the genome sequence for the vaccinia virus is deleted so that the vaccinia virus cannot proliferate in a normal cell but can proliferate specifically in a cancer cell to injure the cancer cell specifically.

5.20220105168GUT BACTERIA DERIVED MICROVESICLES FOR VACCINE DELIVERY
US - 07.04.2022
Clasificación Internacional A61K 39/112 Nº de solicitud 17309067 Solicitante Quadram Institute Bioscience Inventor/a Regis Stentz
The present invention relates to a vaccine suitable for immunisation against influenza, plague or *Y. pestis* infection said vaccine comprising outer membrane vesicles (OMVs) and the plague vaccine including the V and/or F1 antigens of *Y. pestis.*

6.3159357Sammensætning og fremgangsmåde til behandling og forebyggelse af enteriske bakterielle infektioner
DK - 04.04.2022

Clasificación Internacional C07K 16/04 Nº de solicitud 16020270 Solicitante Immuron Limited Inventor/a Robins-Browne, Roy Michael
The present invention provides a method of treatment or prophylaxis of enteric disease caused by Gram negative bacteria. The method includes the step of administering a vaccine or a hyperimmune material raised against said vaccine to an individual. The vaccine comprises one or more cell wall antigens reactive in a manner characteristic of O group serotypes, or reactive in a manner characteristic of lipopolysaccharide associated antigens, and at least some of said antigens are separated from bacterial cell walls or wall fragments. The invention also provides composition containing hyperimmune material as well as uses of the composition and vaccine.

7.20220106363CHIMERIC PROTEIN FOR CORONAVIRUS VACCINE
US - 07.04.2022
Clasificación Internacional C07K 14/005 Nº de solicitud 17382625 Solicitante Arlene I. Ramsingh Inventor/a Arlene I. Ramsingh
The disclosure relates to a polypeptide comprising, or consisting of, the amino acid sequence of SEQ ID NO: 1, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 9 or a sequence having at least 97%-100% sequence identity to one of SEQ ID NO: 1, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 9 for use as an immunogen for the purpose of eliciting an immune response in a subject susceptible to infection with a coronavirus. The disclosed polypeptide is further useful in reducing the severity of symptoms associated with a coronavirus infection. In addition to use in a protein-based vaccine, the polypeptide of the disclosure can be encoded by a nucleic acid/ribonucleic acid and used in a nucleic acid vaccine or viral vector vaccine.

8.WO/2022/068247ADENOVIRUS QUADRIVALENT VACCINE
WO - 07.04.2022
Clasificación Internacional A61K 39/235 Nº de solicitud PCT/CN2021/097796 Solicitante GUANGZHOU N BIOMED LTD. Inventor/a CHEN, Ling
Disclosed in the present invention is an adenovirus quadrivalent vaccine, comprising replication-deficient human adenovirus type 3, adenovirus type 4, adenovirus type 7 and adenovirus type 55, wherein E1 and E3 genes of the replication-deficient human adenovirus type 3, adenovirus type 4, adenovirus type 7 and adenovirus type 55 are deleted, and a portion of coding frames of the E4 gene thereof are replaced with corresponding coding frames of the E4 gene of the human adenovirus type 5. The adenovirus quadrivalent vaccine of the present invention can effectively stimulate the body to generate humoral immune responses and cellular immune responses, and generates high-titer specific neutralizing antibodies for preventing or treating pathogen infection.

9.20220105178LI VACCINE ADJUVANT
US - 07.04.2022
Clasificación Internacional A61K 39/39 Nº de solicitud 17503693 Solicitante UNIVERSITY OF COPENHAGEN Inventor/a Peter Johannes HOLST
The present invention relates to a vaccine comprising a nucleic acid construct such as a DNA construct especially a nucleic acid construct comprising sequences encoding invariant chain operatively linked to antigenic protein or peptide encoding sequences. The present vaccine stimulates an enhanced immune response.

10.3700925HIDTIL UKENDT T-CELLERECEPTOR
DK - 04.04.2022
Clasificación Internacional A61K 38/00 Nº de solicitud 18795783 Solicitante University College Cardiff Consultants Ltd Inventor/a SEWELL, Andrew
The present disclosure relates to a new T-cell receptor (TCR), in particular at least one complementarity-determining region (CDR) thereof; a T-cell expressing said TCR; a clone expressing said TCR; a vector

encoding said TCR; a soluble version of said TCR; a pharmaceutical composition or immunogenic agent or bispecific or vaccine comprising said TCR, said cell, said clone or said vector; use of said TCR or said cell or said clone or said vector or said pharmaceutical composition or immunogenic agent or bispecific or vaccine to treat cancer; and a method of treating cancer using said TCR, said cell, said clone, said vector, said pharmaceutical composition, immunogenic agent, bispecific or vaccine comprising said TCR.

11.20220105169PNEUMOCOCCAL CONJUGATE VACCINE FORMULATIONS
US - 07.04.2022
Clasificación Internacional A61K 39/09 Nº de solicitud 17554354 Solicitante Merck Sharp & Dohme Corp. Inventor/a Ramesh V. Chintala
The present invention provides polysaccharide-protein conjugate vaccine formulations comprising a buffer, surfactant, sugar, alkali or alkaline salt, aluminum adjuvant, optionally a bulking agent, and optionally a polymer.

12.20220105170AFRICAN SWINE FEVER VACCINE
US - 07.04.2022
Clasificación Internacional A61K 39/12 Nº de solicitud 17554232 Solicitante Phibro Animal Health Corporation Inventor/a Avner Finger
Peptides predicted to be immunogenic against African swine fever virus (ASFV) and vaccine compositions that include the peptides are disclosed herein. In some embodiments, these compositions comprise or consist of one or more peptides comprising the amino acid sequence set forth in SEQ ID NOs: 2-2273. In other embodiments, the compositions comprise viral vectors or host cells, or combinations thereof, that comprise one or more of the peptides. In other embodiments, the compositions comprise nucleic acid molecules comprising one or more of the peptides. The compositions disclosed can include one or more additional components, such as, but not limited to, a carrier, an adjuvant, an additional therapeutic, or combinations thereof. Containers and kits that comprise the compositions are described. Uses of the compositions can include administration to an animal to induce an immune response in the animal, or to immunize the animal against ASFV. Administration can be accomplished using one or more of various methods as described herein, such as intramuscular or intranasal administration.

13.WO/2022/072495POTENT NEUTRALIZING ANTIBODIES FOR PREVENTION AND TREATMENT OF COVID-19
WO - 07.04.2022
Clasificación Internacional C07K 16/10 Nº de solicitud PCT/US2021/052650 Solicitante ACADEMIA SINICA Inventor/a WU, Han-Chung
Potent neutralizing antibodies for prevention and treatment of covid-19. Human chimeric antibodies (RBD-chAbs) specifically against SARS-CoV-2 Spike (S) receptor-binding domain (RBD) are disclosed. Antibody cocktails or vaccine compositions comprising the RBD-chAbs are also disclosed. The RBD-chAbs, the antibody cocktails, and the vaccine compositions are effective for protection and/or treatment of COVID-19 and are potent against COVID-19 variants including United Kingdom variant B.1.1.7 (Alpha), South African variant B.1.351 (Beta), Brazil variant P1 (Gamma), California variant B.1.429 (Epsilon), New York variant B.1.526 (Iota), Indian variants B.1.617.1 (Kappa) and B.1.617.2 (Delta).

14.WO/2022/068846NOVEL CORONAVIRUS MRNA VACCINE, PREPARATION METHOD THEREFOR AND USE THEREOF
WO - 07.04.2022
Clasificación Internacional A61K 39/215 Nº de solicitud PCT/CN2021/121536 Solicitante SHENZHEN RHEGEN BIOTECHNOLOGY COMPANY Inventor/a HU, Yong

The present invention provides a novel coronavirus mRNA vaccine, a preparation method therefor and use thereof. The present invention provides a protein of the following (a) or (b): (a) a protein consisting of the amino acid sequence as shown in SEQ ID NO: 1; and (b) a derivatized protein which is obtained by means of substitution, deletion and/or addition of one or more amino acids in the amino acid sequence as shown in SEQ ID NO: 1 and has the same function as the protein consisting of the amino acid sequence as shown in SEQ ID NO: 1. The present invention designs an S protein sequence of a pre-fusion conformation in a novel coronavirus (SARS-CoV-2), thereby achieving high-efficiency expression of human cells and increasing immunogenecity. The mRNA of the present invention can realize immunity against the novel coronavirus, and has wide applicability.

15.3976095LEBENDE ATTENUIERTE UNIVERSELLE INFLUENZAVIRUSVAKZINE, VERFAHREN UND VERWENDUNGEN DAVON
EP - 06.04.2022
Clasificación Internacional A61K 39/145 Nº de solicitud 20743248 Solicitante PENTAVALENT BIO SCIENCES PVT LTD Inventor/a PEDDAYELACHAGIRI BHAVANI VENKATASWAMACHARI
The present invention provides a modified influenza viruses comprising haemagglutininand a headless haemagglutinin. The haemagglutininis provided by a source exogenous to the virus and the headless haemagglutininis encoded by the viral genome. The present disclosure also provides modified influenza viruses comprising a headless haemagglutinin. The present disclosure also provides vaccine compositions comprising the modified influenza viruses. The vaccine compositions of the present disclosure can elicit broad neutralizing antibodies and provide cross-protection across various influenza strains. Methods, compositions and cells for propagating the modified influenza viral strains related to vaccines is also provided.

16.WO/2022/072654PARTICLE BASED FORMULATIONS OF SARS-COV-2 RECEPTOR BINDING DOMAIN
WO - 07.04.2022
Clasificación Internacional A61K 39/215 Nº de solicitud PCT/US2021/052907 Solicitante THE RESEARCH FOUNDATION FOR THE STATE UNIVERSITY OF NEW YORK Inventor/a LOVELL, Jonathan
Provided are vaccine compositions and methods for generation of immune response (including neutralizing antibodies) against SARS-CoV-2 virus. The vaccine compositions comprise a poly-histidine tagged receptor binding domain (RBD) of the SARS-CoV-2 virus incorporated into a liposome comprising cobalt-porphyrin-phospholipid conjugates, such that one or more histidines of the polyhistidine tag are coordinated to the cobalt of the cobalt- porphyrin and at least a portion of the RBD is exposed to the outside of the liposome.

17.3978013NEUARTIGER LEBENDER ABGESCHWÄCHTER SHIGELLA-IMPFSTOFF
EP - 06.04.2022
Clasificación Internacional A61K 39/02 Nº de solicitud 21194517 Solicitante EVELIQURE BIOTECHNOLOGIES GMBH Inventor/a NAGY GÁBOR
A live attenuated Shigella vaccine, which is based on a rough Shigella strain lacking LPS O-antigen which is non-invasive through a mutation of the invasion plasmid, specifically for use in the immunoprophylaxis of a subject to prevent infectious diseases, preferably enteral disease, and a Shigella strain, which is a S. flexneri 2a strain with a deletion of the rfbF, ipaB and/or ipaC genes, as well as a recombinant plasmid vector based on a mutated Shigella invasion plasmid comprising a nucleotide sequence encoding at least one heterologous antigen, wherein the plasmid is mutated in at least one of the ipaB and/or ipaC genes.

18.WO/2022/070210STABLE FORMULATIONS OF LOW ABUNDANCE ENTEROVIRUSES VACCINES AND PROCESS OF MANUFACTURE THEREOF

WO - 07.04.2022
Clasificación Internacional A61K 39/12 Nº de solicitud PCT/IN2021/050946 Solicitante BHARAT BIOTECH INTERNATIONAL LIMITED Inventor/a RAYCHOUDHURI, Amit
The invention discloses stable formulations of low abundance enteroviruses vaccines, process of manufacture thereof; and method of isolating the enteroviruses from the clinical sample by propagating in mammalian cell substrate. Low abundance enterovirus from clinical source was isolated by invitro passaging, formulated for enhanced thermal stability, and was used for establishing animal model to study pathogenicity for the purpose of vaccine and antiviral drug discovery. Further, the isolated virus was used for vaccine formulation and diagnostic purposes.

19.20220105172HERPES SIMPLEX VIRUS NANOEMULSION VACCINES AND METHODS OF USING THE SAME
US - 07.04.2022
Clasificación Internacional A61K 39/245 Nº de solicitud 17503575 Solicitante BlueWillow Biologics, Inc. Inventor/a Ali I. Fattom
The present application relates to the field of human immunology, in particular, a herpes simplex virus (HSV) vaccine. The subunit vaccine composition comprises isolated surface glycoproteins from herpes simplex viruses, fusion proteins or fragments thereof mixed in varied combination with a nanoemulsion, which is a potent immune enhancer.

20.20220106574PRODUCTION OF VIRUSES IN CELL CULTURE
US - 07.04.2022
Clasificación Internacional C12N 7/02 Nº de solicitud 17499509 Solicitante Commonwealth Scientific and Industrial Research Organisation Inventor/a Andrew Bean
The present invention relates to methods of replicating viruses in vitro. In particular, the invention relates to a genetically modified population of cells, and/or a population of cells treated with an exogenous compound, wherein the cells are capable of producing more virus than cells lacking the genetic modification and/or lacking treatment with the exogenous compound. The invention also relates to methods of producing populations of such cells, as well as the use of the viruses obtained to prepare vaccine compositions.

21.WO/2022/072877BCG BASED VACCINE COMPOSITIONS AND METHODS OF USE THEREOF
WO - 07.04.2022
Clasificación Internacional A61K 35/74 Nº de solicitud PCT/US2021/053234 Solicitante THE JOHNS HOPKINS UNIVERSITY Inventor/a SINGH, Alok
The present disclosure relates to a BCG based therapeutic agent using a BCG strain that overexpresses the STING agonist, c-di-AMP. This BCG strain, called BCG-disA-OE, enhances the elevated trained immunity of macrophages and promotes early anti-viral Type I interferon responses in a subject, providing protection against viral infections such as primary respiratory infections and SARS-CoV-2 infection.

22.2599572Compositions and methods of manufacturing trivalent filovirus vaccines
GB - 06.04.2022
Clasificación Internacional A61K 39/00 Nº de solicitud 202118425 Solicitante SOLIGENIX INC Inventor/a OREOLA DONINI
Disclosed is a stable immunogenic composition capable of eliciting a robust and durable immune response, comprising at least one antigen consisting of a filovirus glycoprotein and at least one nano-emulsion adjuvant which are co-lyophilized and can be reconstituted immediately prior to use. Also disclosed is a vaccine composition comprising at least two antigens, wherein each antigen is specific to a different genus of filovirus and which also comprises at least one nano-emulsion adjuvant.

23.20220105165NOVEL PEPTIDES AND COMBINATION OF PEPTIDES AS TARGETS OR ACTIVE INGREDIENTS FOR USE IN IMMUNOTHERAPY AGAINST AML AND OTHER CANCERS
US - 07.04.2022
Clasificación Internacional A61K 39/00 Nº de solicitud 17345344 Solicitante Immatics Biotechnologies GmbH Inventor/a Andrea MAHR
The present invention relates to peptides, proteins, nucleic acids and cells for use in immunotherapeutic methods. In particular, the present invention relates to the immunotherapy of cancer. The present invention furthermore relates to tumor-associated T-cell peptide epitopes, alone or in combination with other tumor-associated peptides that can for example serve as active pharmaceutical ingredients of vaccine compositions that stimulate anti-tumor immune responses, or to stimulate T cells ex vivo and transfer into patients. Peptides bound to molecules of the major histocompatibility complex (MHC), or peptides as such, can also be targets of antibodies, soluble T-cell receptors, and other binding molecules.

24.20220106370VARIANT SURVIVIN VACCINE FOR TREATMENT OF CANCER
US - 07.04.2022
Clasificación Internacional C07K 14/47 Nº de solicitud 17451176 Solicitante H. LEE MOFFITT CANCER CENTER AND RESEARCH INSTITUTE, INC. Inventor/a FREDERICK L. LOCKE
The invention concerns a variant (double mutant form) of the survivin polypeptide; nucleic acid molecules encoding the survivin variant; antigen presenting cells (APCs) such as dendritic cells, or APC precursors, comprising the variant survivin polypeptide or encoding nucleic acid sequence; and methods for treating a malignancy, such as myeloma, or for inducing an immune response, utilizing a variant survivin polypeptide, nucleic acid molecule, or APC.

25.20220105174RECOMBINANT GALLID HERPESVIRUS 3 VACCINES ENCODING HETEROLOGOUS AVIAN PATHOGEN ANTIGENS
US - 07.04.2022
Clasificación Internacional A61K 39/255 Nº de solicitud 17493643 Solicitante The Pirbright Institute Inventor/a Yashar Sadigh The invention relates to a recombinant Gallid herpesvirus 3 vector encoding heterologous avian pathogen antigens comprising one or more heterologous polynucleotide(s) inserted into the intergenic loci UL3/UL4 and/or UL21/UL22. The invention further relates to vaccines comprising said recombinant Gallid herpesvirus 3 vector and optionally a further Marek's disease virus vector and to a use of the vaccine for protecting an avian species against one or more avian pathogens. Further methods for treating an avian species for protection against one or more diseases caused by avian pathogens and a method for producing the recombinant Gallid herpesvirus 3 vector encoding heterologous avian pathogen antigens is provided.

26.3978628PROGNOSTISCHE PFADE FÜR VIRUSINFEKTIONEN
EP - 06.04.2022
Clasificación Internacional C12Q 1/6883 Nº de solicitud 20199615 Solicitante KONINKLIJKE PHILIPS NV Inventor/a VAN DE STOLPE ANJA
The invention relates to a method for determining whether a subject with an infection has a viral infection. The invention further relates to method for determining the cellular immune response to a viral infection or a vaccine. The methods may be performed on a blood sample obtained from a subject, and is based on the finding that specific cellular signaling pathways are active. The invention further relates to components for performing the methods and use of those components in a method of diagnosis.

27.3976827GEWINNUNG VON INFORMATION AUS EINER BIOLOGISCHEN PROBE IN EINER DURCHFLUSSZELLE
EP - 06.04.2022

Clasificación Internacional C12Q 1/6869 Nº de solicitud 20814537 Solicitante ILLUMINA INC Inventor/a KHURANA TARUN
Methods are used for obtaining, cataloguing, and/or storing data derived from a biological source using a flow cell body, electrodes, and an imaging assembly. The data may include DNA and/or RNA obtained from a biological source, such as from the cells of an organism. The methods may be used to obtain, catalog, and/or store data such as DNA or RNA sequence from a pathogen such as a virus and/or a bacteria, human health data over time, and immune system information from an individual. The data obtained using the disclosed methods may be used for a variety of different purposes, including the manufacture of vaccine compositions, and for restoring the immune system of an individual who has undergone an immune system depleting event. The methods may be used for storage of biological cells, which may be used for the screening of compounds, such as small molecules with potential for therapeutic indications.

28.3976089VIRALER VEKTOR
EP - 06.04.2022
Clasificación Internacional A61K 39/00 Nº de solicitud 20727630 Solicitante VALO THERAPEUTICS OY Inventor/a CERULLO VINCENZO
The invention concerns a viral vector with modified viral capsid or viral envelope; a pharmaceutical composition or immunogenic agent or vaccine comprising same; a target cell transformed or transfected with same; a combination therapeutic comprising same; use of same in treatment of cancer, and a method of treating cancer using same.

29.3976092ZUSAMMENSETZUNG UND VERFAHREN ZUM SPRÜHTROCKNEN EINER ADJUVANS-IMPFSTOFF-EMULSION
EP - 06.04.2022
Clasificación Internacional A61K 39/04 Nº de solicitud 20733881 Solicitante INFECTIOUS DISEASE RES INST Inventor/a KRAMER RYAN
The invention provides for thermostable spray dried formulations including vaccines and pharmaceutical compositions for inducing or enhancing an immune response and methods of use thereof. The spray dried formulations are a dry powder generally comprising an antigen and/or an adjuvant, a metabolizable oil, and one or more excipients.

30.WO/2022/072946COMPOSITION FOR PREVENTING AND TREATING MICROBIAL DISEASE
WO - 07.04.2022
Clasificación Internacional A61K 31/10 Nº de solicitud PCT/US2021/053435 Solicitante BOULRIS, Craig Inventor/a BOULRIS, Craig
This invention relates to a composition for preventing and treating microbial diseases. Previously, therapeutics were unable to effectively manage symptoms in patients who experience Covid-19 vaccine breakthrough or in the many unvaccinated individuals who acquire SARS-CoV-2. Embodiments of the present invention use dimethyl sulfide (DMS), dimethyl sulfoxide (DMSO) and elemental sulfur in order to prevent and treat microbial disease.

31.3976627SAPONINKONJUGAT UND VAKZIN ODER PHARMAZEUTISCHE ZUSAMMENSETZUNG DAMIT
EP - 06.04.2022
Clasificación Internacional C07H 15/20 Nº de solicitud 20818336 Solicitante LIANG PI HUI Inventor/a LAI YEN-HSUN
Provided are novel chemical compounds in which a lipophilic moiety such as a lipid, fatty acid, polyethylene glycol or terpene is covalently attached to a non-acylated or desacylated triterpene saponin via a carboxyl group present on the 3-O-glucuronic acid of the triterpene saponin. The attachment of a

lipophile moiety to the 3-O-glucuronic acid of a saponin such as Quillaja desacylsaponin, lucyoside P, or saponin from Gypsophila, Saponaria and Acanthophyllum enhances their adjuvant effects on humoral and cell mediated immunity. Additionally, the attachment of a lipophile moiety to the 3-O-glucuronic acid residue of non-or des-acylsaponin yields a saponin analog that is easier to purify, less toxic, chemically more stable, and possesses equal or better adjuvant properties than the original saponin.

32.WO/2022/072821COMPOSITIONS COMPRISING INACTIVATED MICROBES, AND METHODS FOR USE AND PRODUCTION THEREOF
WO - 07.04.2022
Clasificación Internacional A61K 31/525 Nº de solicitud PCT/US2021/053160 Solicitante COLORADO STATE UNIVERSITY RESEARCH FOUNDATION Inventor/a GOODRICH, Raymond P.
Provided herein are methods for inactivating a microbe, the methods comprising contacting the microbe with UV light in the presence of riboflavin. In some embodiments, the microbe is a Mycobacterium tuberculosis. Vaccine compositions comprising inactivated microbes, and methods of use thereof, are also provided.

33.WO/2022/070496SARS-COV-2 PROTEIN-DERIVED PEPTIDE AND VACCINE CONTAINING SAME
WO - 07.04.2022
Clasificación Internacional A61K 39/215 Nº de solicitud PCT/JP2021/017159 Solicitante ONCOTHERAPY SCIENCE, INC. Inventor/a KIYOTANI, Kazuma
The present invention provides a SARS-CoV-2 protein-derived epitope peptide capable of inducing cytotoxic T cells. The present invention also provides: a polynucleotide encoding the peptide; an antigen-presenting cell presenting the peptide; a cytotoxic T cell (CTL) targeting the peptide; and a method for inducing the antigen-presenting cell or the CTL. The present invention further provides a composition or a pharmaceutical composition containing the foregoing as an active ingredient. Furthermore, the present invention provides a method for treating and/or preventing the corona virus infectious disease, and/or a method for suppressing the aggravation of the disease, using the peptide, the polynucleotide, the antigen-presenting cells, the cytotoxic T cells, or the pharmaceutical composition according to the present invention. Also provided is a method for an inducing an immune response to coronavirus infection.

34.WO/2022/071435SARS-CoV-2 PROTEIN-DERIVED PEPTIDE AND VACCINE CONTAINING SAME
WO - 07.04.2022
Clasificación Internacional C12N 15/50 Nº de solicitud PCT/JP2021/035967 Solicitante ONCOTHERAPY SCIENCE, INC. Inventor/a KIYOTANI, Kazuma
The present invention provides a SARS-CoV-2 protein-derived epitope peptide that has an ability to induce cytotoxic T cells. The present invention also provides a polynucleotide encoding the peptide, an antigen-presenting cell presenting the peptide, a cytotoxic T cell (CTL) targeting the peptide, and a method of inducing the antigen-presenting cell or the CTL. The present invention further provides a composition and a pharmaceutical composition comprising the same as an active ingredient. Furthermore, the present invention provides a method of treating and/or preventing the coronavirus disease and/or reducing the severity of the disease using the peptide, the polynucleotide, the antigen-presenting cell, the cytotoxic T cell or the pharmaceutical composition according to the present invention. Also provided is a method of inducing an immune response to the coronavirus infection. Also provided is a method of checking the history of the coronavirus infection by detecting a TCR sequence in a target.

35.3976072POCKENIMPFSTOFF UND STAMMZELLEN ZUR BEHANDLUNG VON KRANKHEITEN
EP - 06.04.2022
Clasificación Internacional A61K 35/74 Nº de solicitud 20817898 Solicitante IMMUNOLUX INT CORP Inventor/a SZALAY ALADAR

Described herein are methods and compositions for treating an inflammatory disease or infectious disease in a subject in need thereof by administering to the subject a poxvirus and a stem cell, wherein the disease is not a cancer. The disease may be, for example, a chronic inflammatory disease (e.g., an autoimmune disease).

36.3976756NEUE IMMUNOGENE ZUSAMMENSETZUNGEN
EP - 06.04.2022
Clasificación Internacional C12N 1/20 Nº de solicitud 20727688 Solicitante ETH ZUERICH Inventor/a WETTER EMMA
The present invention relates to an immunogenic composition for Proteobacteria protection and reduced transmission. We have identified Proteobacteria serovar variant combinations that generate an immune response capable of robustly driving bacterial enteropathogens into an evolutionary dead end and reducing the transmission of the bacterium. These inactivated immunogenic compositions and typically oral vaccines are easy to apply, cheap to produce, and can be stored long-term without cold-chain requirements making them ideal for application in livestock, or in resource-poor areas. They are believed to be the only immunogenic compositions and vaccine formulations capable of breaking the chain of transmission for these types of pathogen.

37.20220106380NOVEL PEPTIDES AND COMBINATION OF PEPTIDES FOR USE IN IMMUNOTHERAPY AGAINST ESOPHAGEAL CANCER AND OTHER CANCERS
US - 07.04.2022
Clasificación Internacional C07K 14/74 Nº de solicitud 17554329 Solicitante Immatics Biotechnologies GmbH Inventor/a Andrea MAHR
The present invention relates to peptides, proteins, nucleic acids and cells for use in immunotherapeutic methods. In particular, the present invention relates to the immunotherapy of cancer. The present invention furthermore relates to tumor-associated T-cell peptide epitopes, alone or in combination with other tumor-associated peptides that can for example serve as active pharmaceutical ingredients of vaccine compositions that stimulate anti-tumor immune responses, or to stimulate T cells ex vivo and transfer into patients. Peptides bound to molecules of the major histocompatibility complex (MHC), or peptides as such, can also be targets of antibodies, soluble T-cell receptors, and other binding molecules.

38.20220106379NOVEL PEPTIDES AND COMBINATION OF PEPTIDES FOR USE IN IMMUNOTHERAPY AGAINST ESOPHAGEAL CANCER AND OTHER CANCERS
US - 07.04.2022
Clasificación Internacional C07K 14/74 Nº de solicitud 17554283 Solicitante Immatics Biotechnologies GmbH Inventor/a Andrea MAHR
The present invention relates to peptides, proteins, nucleic acids and cells for use in immunotherapeutic methods. In particular, the present invention relates to the immunotherapy of cancer. The present invention furthermore relates to tumor-associated T-cell peptide epitopes, alone or in combination with other tumor-associated peptides that can for example serve as active pharmaceutical ingredients of vaccine compositions that stimulate anti-tumor immune responses, or to stimulate T cells ex vivo and transfer into patients. Peptides bound to molecules of the major histocompatibility complex (MHC), or peptides as such, can also be targets of antibodies, soluble T-cell receptors, and other binding molecules.

39.3978524DICKKOPF2(DKK2)-INHIBITION ZUR UNTERDRÜCKUNG DER TUMORBILDUNG
EP - 06.04.2022
Clasificación Internacional C07K 16/18 Nº de solicitud 21208628 Solicitante UNIV YALE Inventor/a WU DIANQING
The present invention relates to the discovery that inhibition of Dickkopf2 (DKK2) increases CD8+ cytotoxic T lymphocyte (CTL) activity, attenuates tumor angiogenesis, and hence suppresses tumor

formation. Thus, in various embodiments described herein, the methods of the invention relate to methods of treating cancer by administering to a patient an effective amount of DKK2 gene depleting agent, methods for providing anti-tumor immunity and anti-tumor angiogenesis in a subject, methods of stimulating a T cell mediated immune response to a cell population or a tissue and suppressing tumor angiogenesis in a subject. Additionally, the current invention includes methods of diagnosing a cancer or a predisposition of developing a cancer or a metastasis and methods for determining the use of immunotherapy treatment or cancer vaccine for treating cancer. Furthermore, the invention encompasses a pharmaceutical composition for treating cancer as well as a kit for carrying out the aforementioned methods.

40.WO/2022/071513IMPROVED DNA VACCINE FOR SARS-CoV-2
WO - 07.04.2022
Clasificación Internacional A61K 39/215 Nº de solicitud PCT/JP2021/036255 Solicitante OSAKA UNIVERSITY Inventor/a NAKAGAMI, Hironori
Provided is DNA that: encodes a coronavirus (SARS CoV-2) spike protein or a fragment thereof; and has been optimized to partially or fully exhibit a codon included in a DNA sequence.

41.WO/2022/071903THE METHOD OF IMPROVING FLOTATION EFFICIENCY IN CARBONATED MINERALS WITH THE USE OF BIOTOATER
WO - 07.04.2022
Clasificación Internacional Nº de solicitud PCT/TR2021/050839 Solicitante ESKİŞEHİR OSMANGAZİ ÜNİVERSİTESİ Inventor/a ÖZ AKSOY, Derya
The present invention relates to the fields of ore enrichment, flotation, enrichment of carbonated ores/calcite-magnesite, biotechnology, microbiology, bioflotation. Flotation of carbonate minerals with the mining companies, who can enrich the use of sodium/potassium oleate chemical and chemicals, including chemicals that are produced by replace engaged in the production of flotation and flotation, especially to increase the efficiency characterized the chemical structure of a biological surface-active reagents to improve the use is whether the collector of property; nutrient agar (G/L meat extract 1 g, peptone 5 g, Sodium Chloride 5 g, yeast extract 2 g, agar 15 g and passivation of stock cultures of bacteria Bacillus subtilis (10), 24-hour, 35 °C, 150 rpm in nutrient agar enviroment (G/L meat extract 1, peptone 5 g, Sodium Chloride 5 g, yeast extract 2 g release the incubation (20), sterilized mineral salt medium (G/L; ammonium chloride 15 g, potassium dihydrogen phosphate 4.3 g, dipotassium hydrogen phosphate 3.4 g, potassium chloride 1.1 g, Sodium Chloride 1.1 g, yeast extract 0.5 g, Calcium Chloride 0.24 g, zinc sulfate synthesis 0.29 g, manganese sulfate monohydrate 0.17 g, magnesium sulfate synthesis 0.5 g, glucose 20 g of culture vaccine 2% to be inoculated with (30), 35°C and at 150 rpm release for at least 72 hours incubation (20) the preparation of raw bioreactive the result (40), after incubation of microorganisms growing in a mineral salt environment at +4 °C and supernatant was removed from the enviromet by centrifugation at 10,000 rpm for 15 minutes at least obtained (50), supernatant 's 2N HCL be reduced to PH 2 (60), and were transferred to centrifuge tubes at +4 °C for 10 minutes and centrifuged at 10,000 rpm (70), and pellets discharged on supernatantin the addition of ethyl acetate (80), pellets vortexation till it dissolves thoroughly up to (90), and were transferred to centrifuge tubes at +4°C can be centrifuged at 10,000 rpm for 10 minutes (70), separate a tube of dried supernatant taken into centrifuge concentrator (100), Fourier transform infrared spectroscopy analysis of the obtained alternately biosurfectan (110), followed by nuclear magnetic resonance analysis obtained biosurfectan (120), calcite/carbonate flotation the flotation of the samples used in the experiments suitable for size (0.150 mm) milling with grinding closed circuit (130), calcite of a sample of X-ray diffraction analysis (140), x- ray fluorescence spectrometry, element analysis of the samples by minor calcite (150), adding the produced bioreactive to

the calcite (CaC03) flotation pulp as a collector (160) consists of the process steps of collecting the floating product (170) by giving air for a sufficient.

42.20220105259ADMINISTRATION OF A VACCINE OR EMERGENCY ADMINISTRATION OF A MEDICAMENT USING A DENTAL CARPULE
US - 07.04.2022
Clasificación Internacional A61M 5/00 Nº de solicitud 17060983 Solicitante Ken Marenco Inventor/a Ken Marenco
An illustrated view of an exemplary emergency kit for use in an emergency medical condition and a method for automating the ordering of the emergency kits for dentist is presented. The emergency kit is useful for providing short-term medical relief in an emergency while waiting for ambulance or other emergency medical personnel to arrive at the scene. The emergency kit provides a useful medical syringe for use by a dentist in a mouth of a patient experiencing an emergency medical condition.

43.WO/2022/073003SMALL MOLECULE ANTAGONISTS OF PF4
WO - 07.04.2022
Clasificación Internacional A61K 49/14 Nº de solicitud PCT/US2021/071635 Solicitante NEW YORK BLOOD CENTER, INC Inventor/a ZHOU, Yuhang
The present application provides a compound of Formula (I) or a pharmaceutically acceptable salt thereof, wherein Y, R1, R2, R3 and R4 are described herein. The methods of using these compounds to inhibit tetramerization of PF4 and to treat the associated diseases and conditions, such as heparin-induced thrombocytopenia and thrombosis (HITT) and vaccine-induced immune thrombotic thrombocytopenia (VITT), methods of making these compounds, and pharmaceutical compositions containing these compounds are also disclosed.

Patentes registradas en la United States Patent and Trademark Office (USPTO)

Results Search in US Patent Collection db for: (ABST/vaccine AND ISD/2022401->20220412), 3 records.

	PAT. NO.	Title
1	11,292,821	Peptides and combination of peptides for use in immunotherapy against lung cancer, including NSCLC, SCLC and other cancers
2	11,291,722	Vaccine composition comprising cyclic peptides, antibodies to the cyclic peptides or an anticancer composition comprising the same
3	11,291,714	Recombinant antigen derived from Zika virus E protein and use thereof

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