VacCiencia

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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.

- Resumen de la información publicada por la OMS sobre vacunas en desarrollo contra la COVID-19 a nivel mundial.
- Noticias más recientes en la Web sobre vacunas.
- Artículos científicos más recientes de Medline sobre vacunas.
- Patentes más recientes en Patentscope sobre vacunas.

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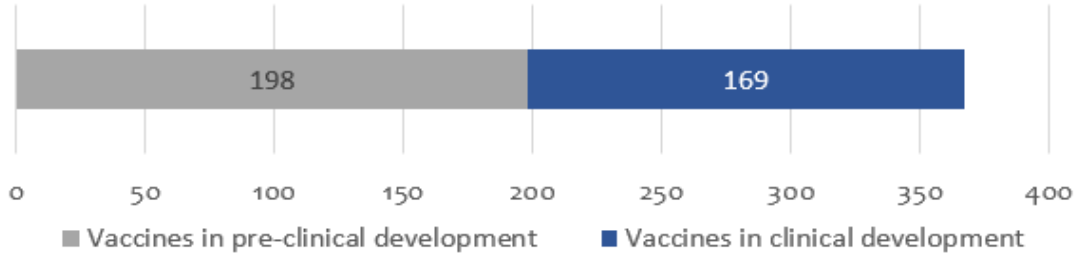
Resumen de la información publicada por la OMS sobre los candidatos vacunales contra la COVID-19 en desarrollo a nivel mundial

Última actualización por la OMS: 29 de julio de 2022.

Fuente de información utilizada: World Health Organization | R&DBlueprint Powering research to prevent epidemics

169 candidatos vacunales en evaluación clínica y 198 en evaluación preclínica



Candidatos vacunales en evaluación clínica por plataforma

Platform		Candidate vaccines (no. and %)	
PS	Protein subunit	54	32%
VVnr	Viral Vector (non-replicating)	21	13%
DNA	DNA	16	10%
IV	Inactivated Virus	22	13%
RNA	RNA	40	24%
VVr	Viral Vector (replicating)	4	2%
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%
		169	

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	4
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	2/3
Hannover Medical School/Alemania	Vector viral no replicativo	Inhalación	1
ACM Biolabs/Singapur	Subunidad proteica	IN/IM	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)	4
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	Particula 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/Turquia	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
Jiangsu Rec-Biotechnology/China	Subunidad proteica	3
Radboud University/Holanda	Particula similar a virus	3
Livzon Pharmaceutical/China	Subunidad proteica	3
KM Biologics Co., Ltd./Japón	Virus inactivado	2
Bagheiat-allah University of Medical Sciences/AmitisGen/Irán	Subunidad proteica	3
Laboratorios Hipra, S.A.	Subunidad proteica	3
Arcturus Therapeutics, Inc./Estados Unidos	ARN	3
Sinocelltech Ltd./China	Subunidad proteica	3
Chumakov Federal Scientific Center for Research/Rusia	Virus Inactivado	3
PT Biofarma/Indonesia	Subunidad proteica	3
AIM Vaccine and LiveRNA Therapeutics/China	ARN	3
CanSino Biologics Inc./China	ARN	3
Moderna TX/Estados Unidos	ARN	3
China National Biotec Group Company Limited	Virus inactivado	3

Noticias en la Web

WHO calls for higher levels of COVID-19 vaccination

Jul 23. "The global rollout of the COVID-19 vaccine is the largest and fastest in history, but many of those who are most at risk remain unprotected," a WHO statement stressed.

Only 28 percent of senior citizens and 37 percent of health care workers in low-income countries have received the first dose and most have not received the booster.

The international body pointed out that 27 of the agency's member States, 11 of which are low-income nations, have not started the booster program, WHO regretted.

The WHO strategy aims to use primary and booster doses to reduce deaths and serious diseases.

The agency noted that 19.8 million lives were saved in the first year of immunization.

The strategy also aims to accelerate development and ensure equitable access to improved vaccines to substantially reduce transmission as a top priority, but also to achieve long-lasting and broadly protective immunity.

The WHO called for research and development of more effective and easier-to-administer vaccines, such as nasal sprays.

Fuente: Escambray. Disponible en https://bit.ly/3zGTaHK

Monkeypox Outbreak Declared Health Emergency of International Concern

Jul 23. The WHO Director-General Tedros Adhanom Gebreyesus today transmitted the Report of the second meeting of the International Health Regulations Emergency Committee regarding the multi-country outbreak of the monkeypox virus (MPXV).

The Director-General declared a Public Health Emergency of International Concern (PHEIC) based on various inputs.

He stated today that not determining a PHEIC would not mean "business as usual." However, the WHO Committee Members were unable to reach a consensus regarding their advice to the Director-General regarding his PHEIC determination.

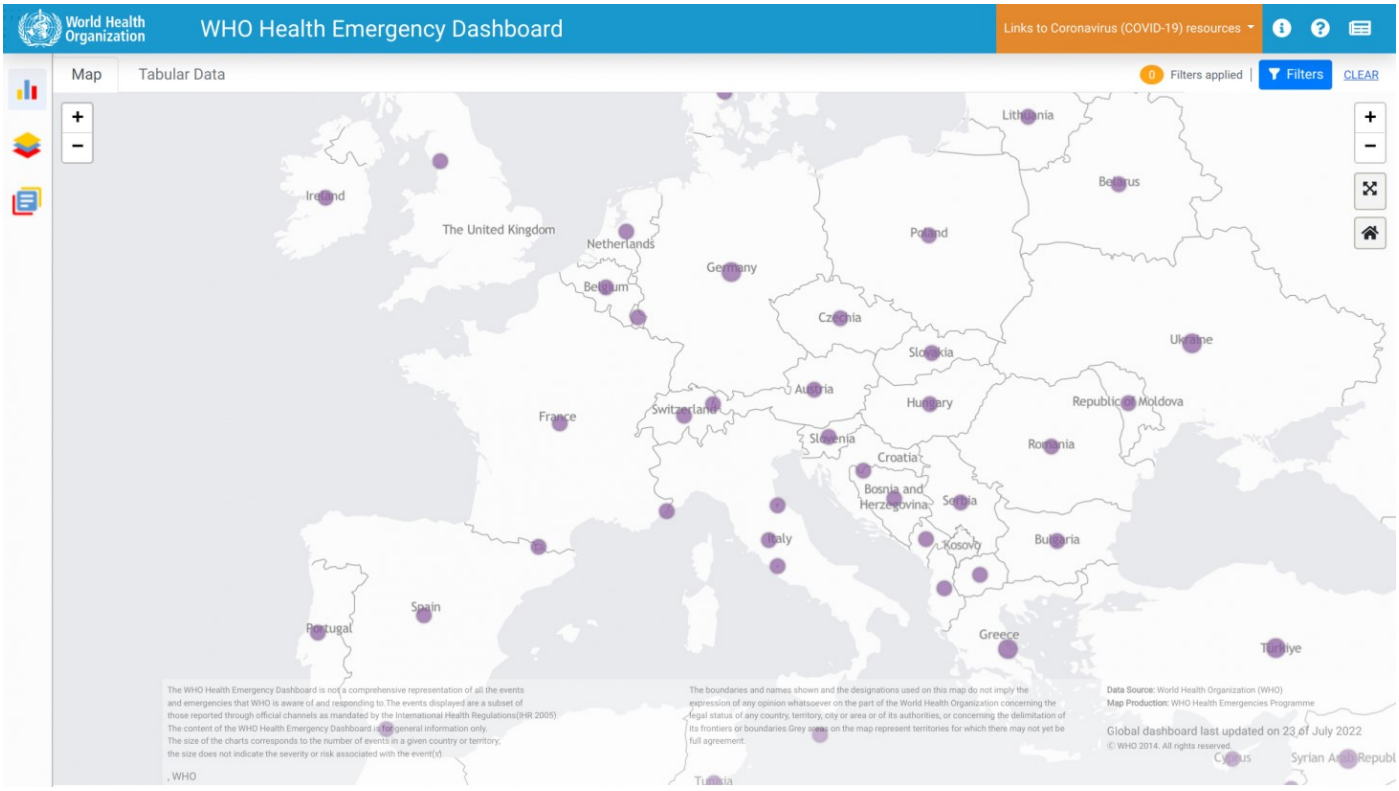
The Director-General also outlined the WHO response as of July 23, 2022, and the ongoing work to develop the WHO Strategic Readiness and Response Plan for monkeypox, being its overall goal to stop human-to-human transmission.

'MPXV transmission is occurring in many countries that had not previously reported cases of monkeypox. And the current risk of monkeypox is moderate globally, except in the European region where the risk is high.'

For example, mathematical models estimate the basic reproduction number (R0) to be above 1 in Men-Sex-Men (MSM) populations and below 1 in other settings. In Spain's urban centers, the estimated R0 is 1.8, in the United Kingdom 1.6, and in Portugal 1.4.

Globally, data sources indicate there are about 17,350 MPXV patients in over eighty countries, led by Spain and the USA, with 2,891. And in New York City, 839 people have been infected between late May and July 22, 2022.

These data indicate a significant expansion in new MPXV cases over the past week.



The current clinical presentation of monkeypox occurring in outbreaks outside Africa is generally that of a self -limited disease, with rash lesions localized to the genital, perineal/perianal or peri-oral area, that often appears prior to the development of lymphadenopathy, fever, malaise, and pain associated with lesions says the WHO.

Moreover, investigations so far have not identified MPXv cases of occupational transmission, although investigations are ongoing.

The genome sequence of the virus obtained in several countries shows some divergence from the West African clade. Work is ongoing to understand whether the observed genomic changes lead to phenotypic changes, such as the reduced impact of countermeasures, vaccines, and treatments.

And the mean incubation period among cases reported is estimated at 7.6 to 9.2 days (based on surveillance data from the Netherlands, the U.K., and the USA).

Modeling work conducted by European Center for Disease Prevention and Control (ECDC) and the European Commission's Health Emergency Preparedness and Response Authority (HERA) suggests that isolation of cases for 21 days and contact tracing could be effective in bringing the outbreak under control.

The modeling by ECDC and HERA is suggesting that the addition of vaccination-related interventions can increase the chances of controlling the outbreak, with pre-exposure prophylaxis of individuals at high risk of exposure appearing to be the most effective strategy to use vaccines when contact tracing is less effective, or impracticable.

However, the limited data on vaccine effectiveness against monkeypox constitutes one of the limitations of the modeling work conducted.

In the USA, the federal government recently confirmed it is aggressively expanding access to monkeypox vaccines (Jynneos) and treatments (TPOXX) from the Strategic National Stockpile (SNS).

On July 21, 2022, the U.S. HHS announced the government would have access to 786,000 additional government-owned doses that were physically inspected in Denmark during the week of July 4, 2022, and prepared for deployment by the end of July.

This announcement indicates more than 6.9 million Jynneos doses would be available by mid-2023.

Furthermore, prior to the start of the outbreak, the SNS held more than 1.7 million courses of TPOXX (tecovirimat) in its immediate holdings.

These treatments have and continue to be freely available to states and territories.

And since the CDC has worked with the FDA to clarify and simplify the process for accessing TPOXX, streamlining post-administration monitoring and data requirements.

And make clear to providers that the government's documentation necessary to access TPOXX can be completed after it is prescribed to patients.

Fuente: Precisión Vaccinations. Disponible en https://bit.ly/3SdCChK

La UE aprueba vacuna contra la viruela del mono tras ser declarada emergencia sanitaria mundial

25 jul. La Comisión Europea (CE) aprobó este 25 de julio la extensión de la vacuna Imvanex, del laboratorio danés Bavarian Nordic, que protege contra la viruela del mono. La decisión se produjo dos días después de que la Organización Mundial de la Salud (OMS) declarara la enfermedad como una emergencia sanitaria mundial.

Las autoridades internacionales se movilizan para prevenir los alcances de la viruela del mono, que amenaza a varios países.

La Comisión Europea aprobó la extensión de la vacuna Imvanex, del laboratorio Bavarian Nordic, que protege contra esa enfermedad, luego de que el sábado 23 de julio, la Organización Mundial de la Salud (OMS) declarara el brote como una emergencia sanitaria mundial.

Se trata de una prolongación de la inmunización ya autorizada desde 2013 en la (UE). Sin embargo, a principios de este mes de julio fue reportada la falta de dosis disponibles.

El antídoto, que ya ha sido aprobado por Estados Unidos y Canadá, recibe la luz verde para los 27 países de la UE, después de que fuera recomendada por la Agencia Europea de Medicamentos (EMA) el pasado viernes 22 de julio, para frenar los contagios.

"Esta aprobación de la vacuna contra la viruela del mono es un ejemplo de buena cooperación entre Bavarian Nordic y los reguladores europeos, una extensión de empleo que suele tomar entre seis y nueve meses", señaló el fabricante danés en un comunicado.

La autorización de la CE también se extiende a otros países de la región que no forman parte de la Unión Europea, como Islandia, Liechtenstein y Noruega, precisó el laboratorio escandinavo.

Según Bavarian Nordic, su inyección es una "vacuna contra la viruela que no se replica (…) El desarrollo de Imvanex fue posible gracias a importantes inversiones del Gobierno de EE. UU. durante las últimas dos décadas", indicó la compañía.

Anteriormente, el antídoto solo había sido aprobado en América del Norte para la viruela.

"La disponibilidad de una vacuna aprobada puede mejorar significativamente la preparación de las naciones para combatir enfermedades emergentes, pero solo a través de inversiones y una planificación estructurada de la preparación biológica", afirmó el presidente ejecutivo de Bavarian Nordic, Paul Chaplin.

La viruela del mono se ha extendido por más de 70 países

El brote de la viruela del mono, en expansión en más de 70 países, es una situación "extraordinaria", sostuvo el director de la OMS, Tedros Adhanom Ghebreyesus, el pasado sábado cuando declaró la enfermedad como emergencia sanitaria mundial.

El virus ha sido endémico durante mucho tiempo en África occidental y central. Fue descubierto en 1958, pero se extendió a países de todo el mundo a partir del pasado mes de mayo.

Desde entonces, se han confirmado en laboratorios más de 15.300 casos en 75 países, según la OMS, y el brote actual se centra en Europa.

La declaración de emergencia sanitaria, el nivel más alto de alerta de la OMS, podría estimular una mayor inversión en el tratamiento contra la enfermedad que alguna vez fue inusual en la mayor parte del mundo, pero también podría empeorar la lucha por las escasas dosis existentes.

No obstante, los expertos señalan que la designación no significa necesariamente que una enfermedad sea letal. Se hicieron declaraciones similares para el virus del Zika, en 2016, en América Latina, y el esfuerzo en curso por erradicar la poliomielitis. Además del brote de ébola de 2014, en África Occidental, y la pandemia del Covid-19.

¿Cuáles son los síntomas de la viruela del mono?

De acuerdo con la Organización Mundial de la Salud, quienes contraen la enfermedad presentan fiebre alta, dolor de cabeza intenso e inflamación de los ganglios linfáticos, así como dolor de espalda y dolencias musculares.

Además, una erupción cutánea y lesiones suelen aparecer de 1 a 3 días después de iniciar la fiebre. La lesión en la piel suele aparecer en el rostro, pero también en las palmas de las manos y las plantas de los pies.

La OMS indica que las personas que contraen la viruela del mono pueden contagiar a otros mientras tienen síntomas, lo que ocurre normalmente entre las primeras dos y cuatro semanas.

También es una vía de contagio el contacto con ropa, ropa de cama, toallas u objetos utilizados para comer que estén infectados.

No obstante, los expertos en salud piden calma y aseguran que la mayoría de las personas se recuperan en cuestión de semanas.

Fuente: France 24. Disponible en https://bit.ly/3JI57WG

Viruela del mono: ¿Cuáles son los países en América Latina con mayor número de casos confirmados?

26 jul. La Organización Mundial de la Salud (OMS) reporta más de 16 000 casos de viruela del mono, brote al que recientemente declaró como "una emergencia de salud pública de importancia internacional".

De acuerdo a un informe publicado el lunes, pero con datos actualizados hasta el 22 de julio, hasta esa fecha se habían registrado al menos 16 016 casos de esta enfermedad en 75 países a nivel mundial, con mayor concentración en Europa; y solo cinco muertos, tres en Nigeria y dos en la República Centroafricana.

En el continente americano, el mayor número de casos lo concentran EE.UU. y Canadá, con 2 316 y 615 casos, respectivamente. Todos los países de Latinoamérica y el Caribe juntos no alcanzan esas cifras registradas al norte de América.

En la región, el país con más casos es el gigante Brasil. El pasado sábado el Ministerio de Salud confirmó 696 casos. El estado con mayor número de infectados es Sao Paulo, con 506 casos; seguido de Río de Janeiro con 102.

A este le sigue Perú, que ya ha actualizado la cifra el lunes y acumula 208 casos, un aumento significativo en referencia a los casos reportado en el informe de la OMS, en el que publica 126 confirmados.

De acuerdo con el Ministerio de Salud de ese país, los casos se han registrados en ocho regiones. Lima Lima Metropolitana es la de mayor incidencia con 175.

En México, el Comité Nacional de Vigilancia Epidemiológica (Conave) confirmó 59 casos de pacientes con viruela del mono hasta el domingo. Estos casos están distribuidos en 11 entidades federativas. Ciudad de México (35) y Jalisco (12) son los que mayor número de infectados reporta.

Hasta el sábado pasado, el Ministerio de Salud de Chile informó sobre 39 casos en este país suramericano; así como un caso probable, 55 casos descartados y 16 dados de alta.

Argentina reporta 18 casos confirmados, según el Boletín Epidemiológico Nacional del Ministerio de Salud de la Nación. Estos casos están en Ciudad de Buenos Aires (10), la provincia de Buenos Aires (4), Córdoba (3) y Mendoza (1).

El lunes, la Secretaría de Salud de Cundinamarca y el Instituto Nacional de Salud de Colombia confirmaron el primer caso de viruela del mono en ese departamento. Con ello, la cifra de casos en Colombia aumentó a 12. Los 11 restantes están en Bogotá (10) y Medellín (1).

En el resto de América Latina y el Caribe se han confirmado pocos casos.

Según ese último informe de la OMS y la información de los propios ministerios de Salud, los países de la región que han reportado enfermos son: República Dominicana (3), Ecuador (3), Bahamas (1), Barbados (1), Costa Rica (1), Jamaica (1), Panamá (1) y Venezuela (1).

Fuente: Cubadebate. Disponible en https://bit.ly/3SatNVY

Bielorrusia aprueba uso de vacuna anticovid-19 cubana Soberana Plus

Jul 27. El Centro de peritaje y pruebas del Ministerio de Salud bielorruso aprobó este miércoles el uso de Soberana Plus, una de las vacunas cubanas anticovid-19.

La República de Belarús o de Bielorrusia se convirtió en el primer país de Europa que registra la vacuna.

Durante el acto de aprobación del fármaco, el director del centro, Dmitry Vladimirovich, señaló que la fecha de registro de la vacuna es el 26 de julio como un homenaje al Día de la Rebeldía Nacional de Cuba.

El funcionario bielorruso entregó uno de los documentos de la aprobación de la vacuna a la directora del Centro para el Control Estatal de Medicamentos, Equipos y Dispositivos Médicos de la isla caribeña, Olga Jacobo, y al director del Instituto Finlay de Vacunas, Vicente Verez.

El embajador de Cuba en Belarús, Santiago Pérez, también recibió un documento como constancia de la aprobación de Soberana Plus.

Pérez afirmó que el registro de la vacuna es una muestra de la confianza y el desarrollo mutuo en la ciencia y la economía.

"El registro de Soberana Plus responde a uno de los principales objetivos de las acciones bilaterales, el de potenciar la salud y el bienestar de los pueblos bielorruso y cubano, con una mirada especial en nuestros niños", dijo.

El martes, el ministro de Salud, Dmitry Pinevichs, conversó con científicos cubanos sobre temas como la cooperación en la circulación de medicamentos y productos médicos, en particular la localización de medicamentos y vacunas de la nación caribeña en el territorio de Bielorrusia, y la posibilidad de exportar productos farmacéuticos de esa nación europea a Cuba.

Fuente: Cubadebate. Disponible en https://bit.ly/3oOj8Tz

OPS: Un tercio de la población de las Américas carece de vacunas contra la COVID-19

28 jul. La Organización Panamericana de la Salud (OPS) señaló este jueves que un tercio de la población de las Américas carece de vacunas contra el SARS-CoV-2, mientras 10 países y territorios permanecen actualmente con una cobertura inferior al 40%.

De acuerdo con declaraciones de la directora de la OPS, Carissa Etienne, esta situación acarrea obstáculos en la lucha por detener la enfermedad.

Al igual que ocurre en Europa, dijo, los sublinajes de mayor transmisibilidad BA.4 y BA.5 de Ómicron se convierten en las cepas predominantes en la región.

Consideró, sin embargo, que la alta cobertura de inmunización en Europa lleva a que la mayoría de los pacientes con COVID-19 pueden manejar con seguridad sus síntomas en casa, pero no pasa lo mismo en la zona americana.

Instó entonces a los países a aplicar medidas de salud pública, como el distanciamiento físico y el uso de mascarillas, y aconsejó a los hospitales de las zonas con baja cobertura de vacunación a prepararse para una afluencia de personas portadoras del virus.

A pesar de un descenso general de la COVID-19 en la región, Etienne advirtió que la cifra se mantiene elevada con un reporte de 1 600 000 nuevas infecciones en los últimos siete días.

Canadá, señaló, tuvo un aumento del 20% en los diagnósticos, algunos países de Centroamérica y Sudamérica también notificaron incrementos, mientras en el Caribe las hospitalizaciones siguen ascendiendo.

Exhortó la funcionaria a hacer uso de todas las herramientas necesarias para mantener a las poblaciones sanas.

Fuente: Cubadebate. Disponible en https://bit.ly/3OPETNl

Confirman la primera muerte por viruela símica en Brasil

29 jul. El ministerio de Salud de Brasil confirmó este viernes la primera muerte por viruela símica en el país suramericano. Se trata de un hombre de 41 años con problemas de inmunidad que había sido internado en un hospital de Minas Gerais.

Con más de mil casos confirmados de viruela símica, Brasil es el país más afectado y preocupante de América Latina.

Brasil creará un Comité Técnico de Emergencia para vigilar la evolución de los contagios de la viruela del mono en ese país, coordinar las investigaciones clínicas y el desarrollo de vacunas específicas, informó el jueves la Agencia Nacional de Vigilancia Sanitaria (Anvisa).

Según confirmó Anvisa, el comité gestionará la coordinación y sinergia entre las áreas técnicas de investigación clínica, buenas prácticas de fabricación, registro, farmacovigilancia y terapias avanzadas.

Todos los elementos deben sincronizarse con los especialistas de la salud sobre el terreno y la comunidad científica que tributa a esta línea de investigación, recalca el informe.

Esperan que el órgano a diseñar aglutine las mejores experiencias disponibles entre las autoridades reguladoras para proveer de una vía expresa al desarrollo de soluciones clínicas, investigaciones, medicamentos y vacunas.

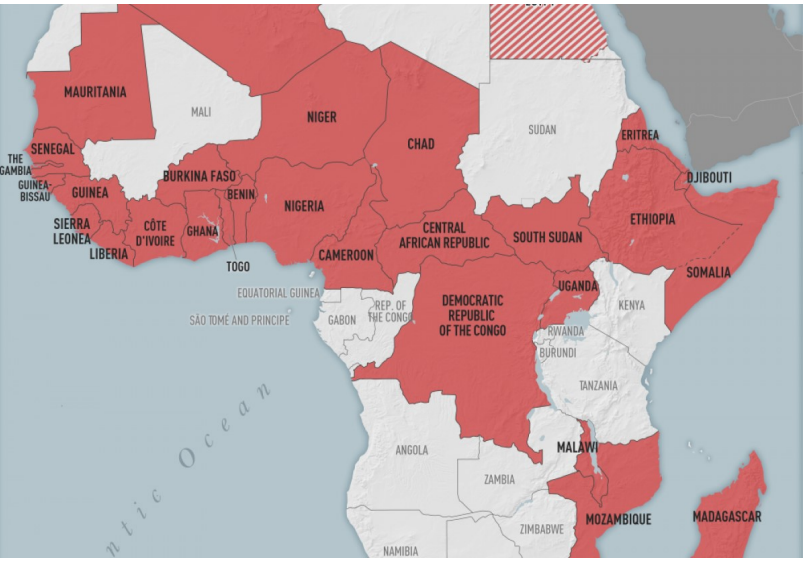
El futuro equipo técnico orientará sobre los protocolos para ensayos clínicos, y mediará entre estos y los fabricantes de medicamentos para tratar, prevenir o diagnosticar la enfermedad en cuestión.

Así, asegura Anvisa, evitarán la duplicación de estudios y recursos, además de permitir la validación de datos consistentes para la toma de decisiones y una rápida aprobación de ensayos supervisados por ellos en todo momento.

Fuente: Cubadebate. Disponible en https://bit.ly/3vy8yUx

New York's Recent Polio Case is a Rare Occurrence

Jul 30. When the State of New York recently confirmed an unvaccinated resident was diagnosed with polio, it was the first case of polio in the U.S. since 2013.



Announced on July 21, 2022, the Rockland County, NY, patient reportedly contracted a form of polio that can be traced back to the live, but weakened, poliovirus used in the oral polio vaccine (OPV).

NY health officials said the version of poliovirus affecting the male patient, who has muscle weakness and paralysis, likely originated somewhere overseas, where oral vaccines are still administered.

Following the NY detection, the Global Polio Laboratory Network confirmed on July 29, 2022, that the VDPV2 isolated was genetically linked to two Sabin-like type 2 isolates, related to environmental samples collected in New York, Israel, and London, UK, during June 2022.

This polio vaccine version has not been used in the U.S. since 2000.

With more than 10 billion doses of the OPV administered since 2000, there have been about 800 cases of vaccine-derived polio reported.

The eradication of polio in the Americas has been accomplished solely through the use of the live oral vaccine.

The U.S. CDC has endorsed the inactivated polio vaccine (IPV), which offers nearly complete protection from paralytic polio.

Most children receive the IPV at 2, 4, and 6 months of age.

William Petri, the chair of the WHO's Polio Research Committee, explained to The Conversation on July 22, 2022, what vaccine-derived poliovirus is and why the IPV vaccine can't cause it.

The weakened form of the live virus in the oral vaccine cannot cause disease.

However, because the vaccine is given orally, the weakened virus is excreted in the feces and can spread from someone vaccinated.

If the weakened virus circulates person to person for long enough, it can mutate and regain its ability to cause paralysis.

The mutated virus can then infect people in communities with poor sanitation and low vaccination rates, causing disease and even paralysis.

This is an exceedingly rare occurrence.

However, as a precaution, Israel vaccinated about five million children in April 2022.

The good news is a safer oral polio vaccine engineered not to mutate is now replacing the earlier live-virus vaccine in targeted countries.

Approximately 370 million doses of nOPV2 have been administered across 21 countries under its WHO Emergency Use Listing to date.

To alert international travelers of their polio risks, the CDC stated on July 27, 2022, 'before any international travel to Africa, Asia, or Eastern Europe, anyone unvaccinated, incompletely vaccinated, or with an unknown polio vaccination status should complete the routine polio vaccine series.'

Fuente: Precision Vaccinations. Disponible en https://bit.ly/3Jo6xjj

Científicos cubanos desarrollan candidato vacunal contra la variante Ómicron

30 jul. El Centro de Ingeniería Genética y Biotecnología de Cuba (CIGB) informó hoy que cuenta con un candidato vacunal que contiene el antígeno contra la variante Ómicron del virus SARS-CoV-2, causante de la COVID-19.

La noticia la dio a conocer la directora general de la CIGB, Marta Ayala, durante una visita que realizó el presidente y el vicepresidente de BioCubaFarma, según precisa un mensaje de la entidad en Twitter.

"Estudios en modelos animales demuestran altos niveles de inmunogenicidad", subraya el centro.

Según Eduardo Martínez, presidente de BioCubaFarma, el antígeno se produjo a nivel de laboratorio y pasará por la evaluación preclínica y en humanos.

Anteriormente, subrayó, se obtuvieron antígenos de las cepas Beta y Delta, pero tener esta vacuna nos acercará más a Ómicron, considerada hasta el momento la más contagiosa.

Igualmente, a otras variantes de ella, en un contexto en el que las vacunas iniciales diseñadas contra la COVID-19, se van alejando de las cepas que aparecen, agregó.

Entre las derivadas de Ómicron está la BA.5, causante de un nuevo rebrote de la COVID -19 en el mundo, y de una tendencia al incremento de los casos en Cuba durante las últimas semanas, señaló Martínez, citado por el diario Granma.

Fuente: Cubadebate. Disponible en https://bit.ly/3ByEdsP

Tinnitus relacionado con la vacuna de AstraZeneca y nuevos datos sobre los casos de infarto y embolismo pulmonar

31 jul. Desde que se autorizó la comercialización en la UE de la vacuna de AstraZeneca (Vaxzevria) hasta el 26 de junio de 2022, se han administrado alrededor de 69 millones de dosis en adultos. La aparición de casos de trombosis venosas cerebrales tras la inoculación de esta profilaxis originó una gran alarma social e incluso en España se optó por la administración de otras fórmulas de ARNm en aquellas personas que recibieron una primera dosis de AstraZeneca y estaban pendientes de completar su pauta de vacunación contra la COVID-19.

Ahora, la Agencia Española de Medicamentos y Productos Sanitarios (AEMPS) acaba de publicar nuevos datos sobre la posibilidad de que la administración de esta profilaxis también esté relacionada con el aumento del riesgo de sufrir un infarto de miocardio o una embolia pulmonar. El 16 Informe de Farmacovigilancia sobre las vacunas COVID-19 recoge que, a raíz de la publicación de un estudio epidemiológico realizado en el Sistema Nacional de Salud francés que sugería esta posible vinculación, el Comité Europe de Medicamentos inició una evaluación y ha concluido que no se han encontrado evidencias suficientes que apoyen la existencia de una relación causal entre estos casos y la administración de Vaxzevria. Argumenta que el diseño de los estudios que avalaban esta causalidad «presentan ciertas limitaciones».

Pero el Comité Europeo de Medicamentos va más allá al afirmar que los resultados de otros estudios, entre los que se incluyen grandes ensayos clínicos, tampoco indican un mayor riesgo de trombosis en general.

Tinnitus y otras reacciones adversas

Lo que sí se ha registrado como una posible reacción adversa tras la administración de la vacuna de AstraZeneca es el tinnitus o acúfeno. Se trata de una dolencia descrita habitualmente por quienes lo padecen como un zumbido, timbre o silbido persistente en los oídos. La Aemps aclara que el tinnitus no es una enfermedad, sino un síntoma derivado de un problema de salud que afecta a la audición o de un efecto adverso a un medicamento.

No obstante, se trata de un efecto secundario poco frecuente de esta vacuna ya que se puede dar con una frecuencia de menos de 1 de cada 100 personas vacunadas. En España, hasta el 10 de julio de 2022, se habían recibido 119 notificaciones de tinnitus tras la administración de casi 10 millones de dosis de Vaxzevria.

Además del tinnitus, la Aemps habla de otras reacciones adversas que pueden darse tras recibir esta vacuna, concretamente, parestesia y hipoestesia. La parestesia es un trastorno de la sensibilidad que se manifiesta con sensaciones anormales sin estímulo previo, como el hormigueo, mientras que la hipoestesia consiste en una disminución de la sensibilidad de la piel.

La Agencia Española de Medicamentos señala que, en base a la nueva información procedente de en un ensayo clínico en marcha y los casos notificados a nivel mundial, se han identificado ambas afecciones como posibles reacciones adversas que pueden aparecer en menos de 1 de cada 100 personas vacunadas con Vaxzevria. En España, hasta el 10 de julio de 2022, se habían registrado 765 notificaciones de parestesia o hipoestesia tras la inoculación.

Fuente: Diario Sur. Disponible en https://bit.ly/3SkG1LZ

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Patentes registradas en Patentscope

Estrategia de búqueda: *Vaccine in the title or abstract AND 20220723:20220731 as the publication date 33 records*

1.20220233687PREPARATION OF ZINC RISEDRONATE MICRO/NANO ADJUVANT AND USE THEREOF AS VACCINE ADJUVANT
US - 28.07.2022
Clasificación Internacional A61K 39/39 Nº de solicitud 17615493 Solicitante XIAMEN UNIVERSITY Inventor/a Qinjian ZHAO
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.

2.20220233662NOVEL PEPTIDE
US - 28.07.2022
Clasificación Internacional A61K 39/00 Nº de solicitud 17646562 Solicitante University College Cardiff Consultants Ltd. Inventor/a Andrew SEWELL
The present disclosure relates to a new peptide; a new fusion polypeptide, a polynucleotide or vector encoding same; a pharmaceutical composition or immunogenic composition or vaccine comprising said peptide; use of said peptide, vector, pharmaceutical composition, immunogenic composition or vaccine to treat cancer; a method of treating cancer using said peptide, fusion polypeptide, polynucleotide, vector, pharmaceutical composition, immunogenic composition or vaccine; an ex vivo method of stimulating and/or amplifying T-cells; and a combination therapeutic for the treatment of cancer comprising said peptide fusion polypeptide, polynucleotide, vector, pharmaceutical composition, immunogenic composition or vaccine.

3.20220233671SUBUNIT VACCINE OF CONTAGIOUS CAPRINE PLEUROPNEUMONIA AND PREPARATION METHOD AND USE THEREOF
US - 28.07.2022
Clasificación Internacional A61K 39/02 Nº de solicitud 17335573 Solicitante Lanzhou Veterinary Research Institute, Chinese Academy of Agricultural Sciences Inventor/a Yuefeng CHU
The present disclosure provides a subunit vaccine of contagious caprine pleuropneumonia and preparation method and use thereof, belonging to the technical field of preparation of animal infectious disease vaccine. The combination of Mycoplasma capricolum subsp. capripneumoniae immunoproteins comprises Mycoplasma capricolum subsp. capripneumoniae immunoproteins A, B, C, D and E; the mass ratio of Mycoplasma capricolum subsp. capripneumoniae immunoproteins A, B, C, D and E is (0.5-1.5): (0.5-1.5): (0.5-1.5): (0.5-1.5): (0.5-1.5). The subunit vaccine of contagious caprine pleuropneumonia comprises the combination of Mycoplasma capricolum subsp. capripneumoniae immunoproteins and

adjuvant; the subunit vaccine has the advantages of high safety, good immunization effect, high stability and minor adverse effects.

4.4032548KOMBINATIONSIMPFSTOFF GEGEN INFEKTIONEN MIT DEM RESPIRATORISCHEN SYNZYTIALVIRUS UND VERFAHREN ZUR INDUKTION EINER IMMUNANTWORT DAVON
EP - 27.07.2022
Clasificación Internacional A61K 39/295 Nº de solicitud 21860139 Solicitante UNIV BEIJING JIAOTONG Inventor/a HE JINSHENG
The present disclosure provides a combined vaccine against human respiratory syncytial virus (RSV) infection and a method thereof for inducing immune response. The combined vaccine includes: a first composition including an immunologically effective dosage of a replication-deficient human adenovirus type 26 vector and a pharmaceutically acceptable vector, wherein the replication-deficient human adenovirus type 26 vector contains a nucleotide encoding an antigenic protein of RSV; and a second composition including an immunologically effective dosage of a replication-deficient chimpanzee adenovirus type 63 vector and a pharmaceutically acceptable vector, wherein the replication-deficient chimpanzee adenovirus type 63 vector contains a nucleotide encoding an antigenic protein of RSV. The first composition is a primary immunization composition and the second composition is a booster immunization composition; alternatively, the first composition is the booster immunization composition the second composition is the primary immunization composition. In the present disclosure, the combined vaccine is used for inducing a protective immunity against RSV infection, and a method is provided for generating the protective immunity against RSV infection.

5.20220233681LIVE ATTENUATED ORAL VACCINE AGAINST COVID-19 AND TYPHOID FEVER
US - 28.07.2022
Clasificación Internacional A61K 39/215 Nº de solicitud 17566901 Solicitante Protein Potential, LLC Inventor/a Betty Kim Lee SIM
Disclosed herein are transgenic *Salmonella typhi* Ty21a comprising a chromosome with one or more heterologous nucleic acid regions, wherein the heterologous nucleic acid regions encode one or more viral antigens and are integrated into the *Salmonella typhi* Ty21a chromosome, and wherein the transgenic *Salmonella typhi* Ty21a stably expresses the one or more viral antigens. Also disclosed herein are compositions and vaccines comprising the transgenic *Salmonella typhi* Ty21a. Also disclosed herein are methods of eliciting an immune response in a subject against a SARS-CoV-2 viral antigen and/or a *Salmonella typhi* antigen comprising administering one or more doses of the composition or the vaccine to the subject. Also disclosed herein are methods of treating, preventing or reducing the incidence of COVID-19 and/or typhoid fever in a subject comprising administering one or more doses of the composition or the vaccine to the subject.

6.4032545IMMUNOGENE ZUSAMMENSETZUNG UND IMPFSTOFF MIT CHLAMYDIA SSP. OBERFLÄCHENANTIGENE UND IHRE VERWENDUNG
EP - 27.07.2022
Clasificación Internacional A61K 39/118 Nº de solicitud 21153496 Solicitante MEDIZINISCHE HOCHSCHULE HANNOVER Inventor/a KLOS ANDREAS
The present invention relates in a first aspect to an immunogenic composition comprising at least three Chlamydia ssp. surface antigens selected from the group of PmpA, PmpD, PmpG, PmpH in combination with the antigen Ctad1. Further, the present invention relates to the immunogenic composition comprising CDN as adjuvant, in particular, c-diAMP. Moreover, a pharmaceutical composition comprising the immunogenic composition according to the present invention is provided as well as a vaccine comprising said immunogenic composition. The vaccine is particularly useful in eliciting an immune response against Chlamydia ssp. in an animal, in particular, for use in treating or preventing the infection by Chlamydia ssp.

The vaccine, pharmaceutical composition or immunogenic composition may be administered mucosally, preferably is administered at least three times.

7.20220233661METHOD OF DETERMINING ELIGIBILITY OF CANCER PATIENT FOR PEPTIDE VACCINE THERAPY
US - 28.07.2022
Clasificación Internacional A61K 39/00 Nº de solicitud 17610300 Solicitante Kyogo ITO Inventor/a Kyogo ITO
The disclosure provides a method comprising determining whether a cancer patient is eligible for a peptide vaccine therapy on the basis of a level of neutrophil percentage and/or a level of lymphocyte percentage in a blood sample obtained from the patient about 7 to 35 days before a scheduled administration date of a peptide vaccine composition.

8.WO/2022/158453WSSV VACCINE
WO - 28.07.2022
Clasificación Internacional A61K 39/00 Nº de solicitud PCT/JP2022/001638 Solicitante NATIONAL UNIVERSITY CORPORATION SHIZUOKA UNIVERSITY Inventor/a PARK Enoch Y.
The invention of the present application addresses the problem of providing a vaccine which has a protection effect against the infection with a white spot syndrome virus (WSSV). A vaccine for preventing or treating the infection with a white spot syndrome virus (WSSV) according to the present invention comprises an antigenic peptide which comprises the amino acid sequence represented by SEQ ID NO: 7 or an amino acid sequence having such a structure that 1 to 3 amino acid residues are deleted, substituted or inserted in the amino acid sequence represented by SEQ ID NO: 7 and which is composed of 8 to 30 amino acid residues.

9.20220233675VACCINE TO PROTECT A PIG AGAINST ACTINOBACILLUS PLEUROPNEUMONIAE
US - 28.07.2022
Clasificación Internacional A61K 39/102 Nº de solicitud 17721115 Solicitante Intervet Inc. Inventor/a Maarten Hendrik Witvliet
The present invention pertains to a vaccine to protect a pig against an infection with *Actinobacillus pleuropneumoniae*, the vaccine comprising an RTX toxin of *Actinobacillus pleuropneumoniae* recombinantly expressed by a baculovirus, and a pharmaceutically acceptable carrier.

10.20220233668GLYCOPEPTIDE VACCINE
US - 28.07.2022
Clasificación Internacional A61K 39/015 Nº de solicitud 17609641 Solicitante VICTORIA LINK LTD. Inventor/a Dale Ian GODFREY
The present invention generally relates to a glycopeptide conjugate compound of Formula (I):, as described herein, compositions comprising the conjugate compound and to the use of such a compound to as a vaccine.

11.20220238188METHOD FOR DETERMINING RESPONSIVENESS TO AN EPITOPE
US - 28.07.2022
Clasificación Internacional G16B 40/20 Nº de solicitud 17421420 Solicitante UNIVERSITEIT ANTWERPEN Inventor/a Pieter Meysman
Method (**100**) for determining an immune responsiveness to a query epitope (**126**) comprising: receiving sequence data (**122**) comprising TCR sequences of at least a part of a TCR repertoire of a subject; selecting a predictive model (**160**) generated or trained using a dataset comprising TCR sequences known to bind specifically to a model epitope, said predictive model selected according to a sequence match between the model epitope and query epitope; querying (**130**) the selected predictive model (**160**) with the sequence data (**122**); determining (**140**) from outputs of the selected predictive model (**160**) a

Responsiveness Score indicative of the immune responsiveness. The immune responsiveness can be used to predict and optimal vaccine composition and/or evaluate efficacy of a vaccine in a subject or population.

12.20220233679UNIVERSAL INFLUENZA VACCINE COMPOSITIONS
US - 28.07.2022
Clasificación Internacional A61K 39/145 Nº de solicitud 17646227 Solicitante Emergex Vaccines Holding Limited Inventor/a Ramila Philip
The invention provides a vaccine composition comprising an influenza virus peptide comprising a CD8+ T cell epitope and an influenza virus peptide comprising a B cell epitope, wherein each peptide is attached to a nanoparticle.

13.4031558CHIMÄRES HÄMAGGLUTININ-PROTEIN UND DIESES ENTHALTENDE IMPFSTOFFZUSAMMENSETZUNG
EP - 27.07.2022
Clasificación Internacional C07K 14/005 Nº de solicitud 20865319 Solicitante ACADEMIA SINICA Inventor/a CHAO YU-CHAN
Provided is a chimeric hemagglutinin (HA) protein including an HA1 subunit and an HA2 subunit, in which the HA1 subunit is composed of a first domain derived from a parental HA1 subunit of a first subtype influenza virus and a second domain derived from a parental HA1 subunit of a second subtype influenza virus. The chimeric HA protein has improved thermal stability and can be used in a vaccine composition for preventing influenza virus infection. Also provided is a method of inducing an immune response against an influenza virus in a subject in need thereof that includes administering the chimeric HA protein to the subject, thereby conferring protection against the influenza virus infection on the subject.

14.20220233666CANCER VACCINE
US - 28.07.2022
Clasificación Internacional A61K 39/00 Nº de solicitud 17264469 Solicitante University of Southampton Inventor/a Natalia SAVELYEVA
The present invention relates to nucleic acid vaccines which encode at least a MAGED4B protein, for use in the treatment of cancer in particular. Synergistic combinations with other anti-cancer agents are described, particularly immune checkpoint inhibitors. The cancer vaccine may further comprise an immunologically active fragment to enhance the immune response, and an additional cancer antigen, such as FJX1. Particular combination therapies of interest include immunotherapies, radiotherapy, targeted therapies and chemotherapies.

15.WO/2022/158373PROTEIN, HEMOLYTIC STREPTOCOCCUS VACCINE, DNA, VECTOR, TRANSFORMANT, METHOD FOR PRODUCING PROTEIN, BACULOVIRUS, AGROBACTERIUM, LATEX PARTICLE, KIT, AND METHOD FOR MEASURING ANTI-STREPTOLYSIN O ANTIBODY
WO - 28.07.2022
Clasificación Internacional C12N 15/31 Nº de solicitud PCT/JP2022/000954 Solicitante DENKA COMPANY LIMITED Inventor/a NISHIMURA Jun
The present invention discloses any protein selected from among: (a) a protein comprising an amino acid sequence represented by SEQ ID NO: 3; (b) a protein comprising an amino acid sequence represented by SEQ ID NO: 2; (c) a protein comprising an amino acid sequence represented by SEQ ID NO: 4; (d) a protein comprising an amino acid sequence represented by SEQ ID NO: 2, wherein some of the amino acid residues at positions 1-48 are deleted; (e) a protein comprising an amino acid sequence represented by SEQ ID NO: 4, wherein some of the amino acid residues at positions 380-490 are deleted; (f) a protein that comprises an amino acid sequence having at least 90% identity to the amino acid sequence of any

one of the proteins (a)-(e) and that binds to an anti-streptolysin O antibody; and (g) any one of the proteins (a)-(f) wherein a tag is added to at least one of the C-terminal and the N-terminal thereof.

16.4031668HERSTELLUNG UND FUNKTIONALISIERUNG VON NANOTEILCHEN AUS PHAGE T5 UND THERAPEUTISCHE VERWENDUNGEN
EP - 27.07.2022
Clasificación Internacional C12N 15/62 Nº de solicitud 20785815 Solicitante CENTRE NAT RECH SCIENT Inventor/a BOULANGER PASCALE
The present invention relates to phage T5 capsids that are devoid of genomic DNA from the phage and exposing, on their surface, at least one fusion protein of interest. The invention relates in particular to a phage T5 capsid that is deprived of genomic DNA from the phage and on its surface exposes at least one fusion protein, the fusion protein comprising: - at least one peptide fragment or protein fragment with at least 80% identity with a fragment of a decoration protein pb10; and - at least one functional fragment of an antigen, or at least one functional fragment of a toxin, or at least one receptor fragment, or at least one functional fragment of an addressing or targeting or transportation signal, or at least one functional fragment of an enzyme, or at least one functional fragment of a hormone, or at least one functional fragment of an antibody, or at least one antigen, or at least one toxin, or at least one receptor, or at least one addressing or targeting or transportation signal, or at least one enzyme, or at least one hormone, or at least one antibody, or any combination of these. The present invention also relates to methods for producing such a capsid and to vectors that enable the production thereof. The invention further relates to the fusion proteins of interest that are exposed on the capsid and to the nucleic acids encoding them. The invention also relates to nanoparticles comprising such functionalized capsids, pharmaceutical compositions comprising such nanoparticles and/or such functionalized capsids, and to therapeutic uses thereof, particularly as a medication and/or vaccine.

17.20220233674AN IMMUNOGENIC SEROTYPE 35B PNEUMOCOCCAL POLYSACCHARIDE-PROTEIN CONJUGATE AND CONJUGATION PROCESS FOR MAKING THE SAME
US - 28.07.2022
Clasificación Internacional A61K 39/09 Nº de solicitud 17614865 Solicitante Merck Sharp & Dohme Corp. Inventor/a Jian He
The present invention provides a process improvement related to the conjugation of capsular polysaccharides from *Streptococcus pneumoniae* (*S. pneumoniae*) serotype 35B to a carrier protein. The serotype 35B polysaccharide-protein conjugate, prepared by the disclosed process, is, among other things, more immunogenic than similar conjugates made by prior art methods. *S. pneumoniae* serotype 35B polysaccharide-protein conjugates prepared using the processes of the invention can be included in multivalent pneumococcal conjugate vaccine compositions.

18.20220235095SAPONIN PURIFICATION
US - 28.07.2022
Clasificación Internacional C07J 63/00 Nº de solicitud 17615254 Solicitante GLAXOSMITHKLINE BIOLOGICALS SA Inventor/a Carine Berthe Ghislaine DE KESEL
Saponin extracts containing at least 88% QS-21 main peak and >3% to 10% 2018 component by UV absorbance at 214 nm, methods for making said extracts, their use as vaccine adjuvants and related aspects.

19.WO/2022/159511MODIFIED ALPHAVIRUS VECTORS
WO - 28.07.2022
Clasificación Internacional C12N 15/86 Nº de solicitud PCT/US2022/013004 Solicitante GRITSTONE BIO, INC. Inventor/a HONG, Sue-Jean

Disclosed herein are vaccine compositions that include alphavirus derived vectors having multiple expression cassettes driven by multiple subgenomic promoters.

20.2022205166Recombinant modified vaccinia virus Ankara (MVA) Foot and mouth disease virus (FMDV) vaccine
AU - 28.07.2022
Clasificación Internacional Nº de solicitud 2022205166 Solicitante Bavarian Nordic A/S Inventor/a Kalla, Markus

21.20220233664PEPTIDES AND T CELLS FOR USE IN IMMUNOTHERAPEUTIC TREATMENT OF VARIOUS CANCERS
US - 28.07.2022
Clasificación Internacional A61K 39/00 Nº de solicitud 17711855 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.

22.20220233663PEPTIDES AND T CELLS FOR USE IN IMMUNOTHERAPEUTIC TREATMENT OF VARIOUS CANCERS
US - 28.07.2022
Clasificación Internacional A61K 39/00 Nº de solicitud 17710573 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.

23.WO/2022/157169METHODS FOR OPERATING A SYRINGE AND RELATED DOSE EXTRACTION AID
WO - 28.07.2022
Clasificación Internacional A61M 5/178 Nº de solicitud PCT/EP2022/051075 Solicitante ROBINTECH APS Inventor/a LARSEN, André
The invention relates to a method of performing injections of a liquid substance and how to achieve a high dosing accuracy and low loss due to dead spaces, providing higher yield and more uniform dosing. When used with vaccination programs, the method reduce costs and increase availability of the vaccine by allowing more doses to be extracted from a vial. The invention suggests calibrating the scale of a syringe and how to virtually eliminate loss from dead spaces by use of a flushing fluid and how to introduce said flushing fluid in a syringe. The present invention also relates to a dose extraction aid for use in extracting a liquid from a vial, comprising: a base unit, a vial holder defining a vial axis, an extraction unit holder and a ventilation unit holder, wherein the vial axis is inclined in relation to a base surface of the base unit, the vial holder is configured for holding the vial in a position where an opening of the vial is further from the

base surface than an exterior bottom surface of the vial. The invention further relates to a method for extracting a dose of a liquid from a vial using a syringe and a dose extraction aid.

24.20220235101Compositions and Methods for Regulation of Chronic Toxoplasma Infection
US - 28.07.2022
Clasificación Internacional C07K 14/45 Nº de solicitud 17595894 Solicitante Whitehead Institute for Biomedical Research Inventor/a Ben Waldman

The present disclosure provides genetically altered protozoan parasites comprising a mutation in a bradyzoite formation deficient 1 (BFD1) gene, wherein the mutation inhibits differentiation of the parasite into a bradyzoite. The genetically altered protozoan parasites can be utilized in vaccine compositions and in methods of treating apicomplexan parasite infection.

25.20220233682VACCINE COMPOSITIONS FOR THE TREATMENT OF CORONAVIRUS
US - 28.07.2022
Clasificación Internacional A61K 39/215 Nº de solicitud 17573806 Solicitante Variation Biotechnologies Inc. Inventor/a David Evander Anderson
The present disclosure provides compositions and methods useful for preventing and/or treating coronavirus infection. As described herein, the compositions and methods are based on development of immunogenic compositions that include virus-like particles (VLPs) which comprise one or more Moloney Murine leukemia virus (MMLV) core proteins and include a spike protein from the Beta variant of SARS-Cov-2.

26.4031251ANAPLASTISCHE LYMPHOMKINASE (ALK)-KREBSIMPFSTOFF UND VERWENDUNGSVERFAHREN
EP - 27.07.2022
Clasificación Internacional A61P 35/00 Nº de solicitud 20864504 Solicitante CHILDRENS MEDICAL CENTER Inventor/a CHIARLE ROBERTO
Provided herein are isolated anaplastic lymphoma kinase (ALK) peptides that are fragments of the cytoplasmic portion of an ALK protein shared by cancers having an ALK rearrangement and cancers expressing the ALK protein, that bind a human leukocyte antigen (HLA), and elicit an immune response against one or more ALK-positive cancers. Also provided are isolated ALK peptides that are modified with an amphiphilic conjugate to increase T-cell expansion and greatly enhance anti-tumor efficacy. The invention also provides polynucleotides encoding isolated ALK peptides, vaccines comprising an isolated ALK peptide or polynucleotide, immunogenic compositions thereof, and kits for administering the same. Methods of treatment and methods of generating an immune response in a subject by administering the ALK-specific peptide antigens, immunogens, vaccines, or immunogenic compositions thereof are provided.

27.20220235107NOVEL PEPTIDES AND COMBINATION OF PEPTIDES FOR USE IN IMMUNOTHERAPY AGAINST LUNG CANCER, INCLUDING NSCLC, SCLC AND OTHER CANCERS
US - 28.07.2022
Clasificación Internacional C07K 14/47 Nº de solicitud 17693316 Solicitante Immatics Biotechnologies GmbH Inventor/a Colette SONG
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.

28.20220233678ZIKA VIRUS CHIMERIC POLYEPITOPE COMPRISING NON-STRUCTURAL PROTEINS AND ITS USE IN AN IMMUNOGENIC COMPOSITION
US - 28.07.2022
Clasificación Internacional A61K 39/12 Nº de solicitud 17694440 Solicitante INSTITUT PASTEUR Inventor/a Claude ROTH
The present invention is directed to a Zika virus (ZIKV) chimeric polyepitope comprising non-structural proteins and its use in an immunogenic composition. The present invention provides means, in particular polynucleotides, vectors and cells expressing said chimeric polyepitope. The present invention also relates to a composition or a vaccine comprising at least one of said polyepitope, polynucleotide, vector or host cell for use in the prevention of a ZIKV infection in a human subject, or for use in the prevention of ZIKV and dengue virus (DENV) infections in a human subject.

29.20220233603DENDRITIC CELL-BASED CANCER VACCINES AND PREPARATION METHOD THEREOF
US - 28.07.2022
Clasificación Internacional A61K 35/33 Nº de solicitud 17614992 Solicitante KINKO CAPITAL CO., LTD. Inventor/a Sadatoshi SAKUMA
The present invention is directed to methods for preparing a recombinant cell and a fusion cell for a dendritic cell-based cancer vaccine, wherein the recombinant cell and the fusion cell comprise DNA of a cancer cell. The present invention is also directed to the fusion cells comprising genomic DNA of a tumor cell, a method for fusing human dendritic cells and fibroblast cells, a pharmaceutical composition comprising the fusion cell, and a method of preventing cancer comprising administering to a cancer patient an effective amount of the fusion cells.

30.4031562NACHWEIS VON ANTIKÖRPERN GEGEN RAN-PROTEINE AUS SERUM UND GEWEBELYSATEN
EP - 27.07.2022
Clasificación Internacional C07K 14/47 Nº de solicitud 20865149 Solicitante UNIV FLORIDA Inventor/a RANUM LAURA
Aspects of the disclosure relate to methods and compositions (e.g., kits) for detecting anti-repeat-associated non-ATG (RAN) protein antibodies in a subject (e.g., a subject that has been administered a therapeutic anti-RAN protein antibody or a vaccine against a disease or disorder associated with RAN protein expression, translation, and/or accumulation, for example amyotrophic lateral sclerosis (ALS) and/or frontotemporal dementia (FTD)). In some embodiments, methods described by the disclosure comprise detecting one or more anti-RAN protein antibodies in a biological sample obtained from a subject by an electrochemiluminescence-based immunoassay using one or more target di-amino acid repeat peptides. In some embodiments, the disclosure relates to kits comprising one or more di-amino acid repeat peptides and an electrochemiluminescence-based immunoassay plate and/or reagents.

31.WO/2022/157155THERAPEUTIC VIRAL VACCINE
WO - 28.07.2022
Clasificación Internacional A61K 39/245 Nº de solicitud PCT/EP2022/051032 Solicitante GLAXOSMITHKLINE BIOLOGICALS SA Inventor/a MOLS, Johann
The present invention relates to a HSV2 Fc receptor or immunogenic fragment or variant thereof for use in generating a cross reactive immune response against HSV1 in a subject. Also provided is a HSV1 Fc receptor or immunogenic fragment or variant thereof for use in generating a cross reactive immune response against HSV2 when administered to a subject.

32.4032546THERAPEUTISCHER VIRALER IMPFSTOFF
EP - 27.07.2022
Clasificación Internacional A61K 39/12 Nº de solicitud 21152601 Solicitante GLAXOSMITHKLINE BIOLOGICALS SA Inventor/a
The present invention relates to a nucleic acid encoding a HSV2 Fc receptor or immunogenic fragment or variant thereof for use in generating a cross reactive immune response against HSV1 in a subject. Also provided is a nucleic acid encoding a HSV1 Fc receptor or immunogenic fragment or variant thereof for use in generating a cross reactive immune response against HSV2 when administered to a subject.

33.WO/2022/157153THERAPEUTIC VIRAL VACCINE
WO - 28.07.2022
Clasificación Internacional A61K 39/12 Nº de solicitud PCT/EP2022/051030 Solicitante GLAXOSMITHKLINE BIOLOGICALS SA Inventor/a MOLS, Johann
The present invention relates to a nucleic acid encoding a HSV2 Fc receptor or immunogenic fragment or variant thereof for use in generating a cross reactive immune response against HSV1 in a subject. Also provided is a nucleic acid encoding a HSV1 Fc receptor or immunogenic fragment or variant thereof for use in generating a cross reactive immune response against HSV2 when administered to a subject.

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