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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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Salud refuerza la vacunación infantil contra el neumococo en Baleares con una vacuna más completa

11 abr. Baleares mejora desde este mes de abril el calendario vacunal infantil con la inclusión de la vacuna conjugada de 20 serotipos contra el neumococo. Hasta ahora, y desde el año 2016, se inmunizaba a los bebés contra 13 serotipos en tres dosis. A partir de este mes de abril, y tras la autorización de la Agencia Europea del medicamento del uso de la vacuna antineumocócica polisacárida conjugada de 20 serotipos, Baleares será la primera Comunidad Autónoma en incluir esta vacuna reforzada en el calendario vacunal infantil.

La directora general de Salud Pública, Elena Esteban, ha explicado esta mañana, en una presentación realizada en el centro de salud de Palmanova, todos los detalles de la vacuna recién incorporada al calendario vacunal infantil, que podrá alcanzar una protección hasta cuatro veces mayor que la vacuna anterior de 13 serotipos, teniendo en cuenta los serotipos circulantes.

Según ha explicado Elena Esteban, que ha estado acompañada de la coordinadora de la central de vacunación de Atención Primaria, Verónica Vega, la inmunización del nuevo fármaco a los bebés se realizará en cuatro dosis: a los 2, 4, y 6 meses con un refuerzo a los 11 meses.

Esta vacuna reforzada de 20 serotipos estaba incluida en el calendario de la población adulta en una dosis única desde el pasado mes de octubre. La vacunación contra el neumococo en adultos está indicada para personas de entre 65 y 75 años y personas con factores de riesgo de sufrir enfermedad neumocócica invasiva: trasplantados, enfermos de cáncer, personas inmunodeprimidas, con inmunodeficiencias, enfermedades cardiovasculares o respiratorias o personas institucionalizadas en residencias geriátricas.

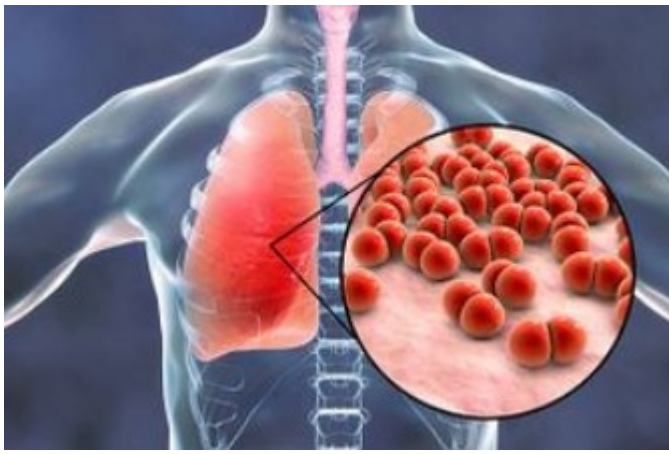
La dirección general de Salud Pública de la Conselleria de Salud ha adquirido, para el periodo comprendido entre el 31 de marzo de 2024 y el 30 de marzo de 2025, 40.000 dosis, con una inversión de 1.961.000 euros. De éstas, la previsión es que se administren 25.500 a la población infantil, que suele alcanzar una cobertura vacunal del 90%.

La neumonía pneumocócica y la enfermedad pneumocócica invasora (MPI) suponen un importante problema de salud, asociado sobre todo a la existencia de factores de riesgo y también relacionado con la edad. En España, en los últimos años, la red nacional de vigilancia epidemiológica (RENAVE) recoge entre 3.000 y 4.000 casos anuales y afecta principalmente a los niños menores de cinco años y a las personas de más edad.

La vacunación es una herramienta fundamental para prevenir la enfermedad invasora por neumococo y, por este motivo, en 2016 se incluyó la vacuna en el calendario infantil. En el caso de las personas de más edad, la vacuna ya se administraba a personas de grupos de riesgo y en 2018 la Comisión de Salud Pública aprobó la vacunación universal a los 65 años.

Fuente: Diario de Mallorca. Disponible en https://acortar.link/C9gAhu

Concluyó en Cuba vacunación contra el neumococo en edades pediátricas



12 abr. En la provincia cubana de Cienfuegos, a unos 250 kilómetros de La Habana, se mostraron los resultados finales del estudio de intervención contra el neumococo en edades pediátricas desarrollado por el Instituto Finlay de Vacunas.

La doctora María Felicia Casanova, investigadora del proyecto, declaró a la prensa que el candidato vacunal Quimi-Vio protege la población infantil contra neumonías, otitis y otros padecimientos causados por la bacteria.

La intervención comunitaria para la vacunación antineumocócica en población pediátrica del municipio de Cienfuegos tuvo como antecedentes varios ensayos clínicos y estudios de efectividad e impacto de vacunación, a los que han contribuido el Hospital Pediátrico Paquito González Cueto, la Atención Primaria de Salud, el Programa de Vacunación y otras instituciones del sector.

María Eugenia Toledo, investigadora principal del Instituto de Medicina Tropical Pedro Kourí, afirmó que Cienfuegos es la única provincia cubana con la población entre uno y 10 años protegida contra el neumococo, mediante estudios de intervención con este candidato vacunal.

Toledo señaló que ahora más del 95 por ciento de la población en ese rango de edad del territorio se encuentran protegidos ante esta afección y a partir de ahora podemos continuar con el proceso del registro de este candidato vacunal por el Centro para el Control Estatal de medicamentos en nuestro país.

La especialista explicó que este estudio y el consecuente registro y aplicación a gran escala de la vacuna va a contribuir a la reducción de la enfermedad neumocócica invasiva que tanto daño hacen a nuestros niños en términos de secuelas y de muerte.

El neumococo es un tipo de bacteria estreptocócica. Las infecciones neumocócicas pueden ser leves o graves.

Las vacunas previenen las infecciones por neumococo. En el mundo existen dos vacunas para prevenir estas enfermedades, una para recién nacidos y niños pequeños y otra para personas en riesgo, mayores de 65 años o que padecen de una enfermedad crónica.

La Organización Panamericana de la Salud estima que el continente americano la incidencia de la infección por el neumococo en el 2015 fue de 358 casos por 100 mil niños (301-441).

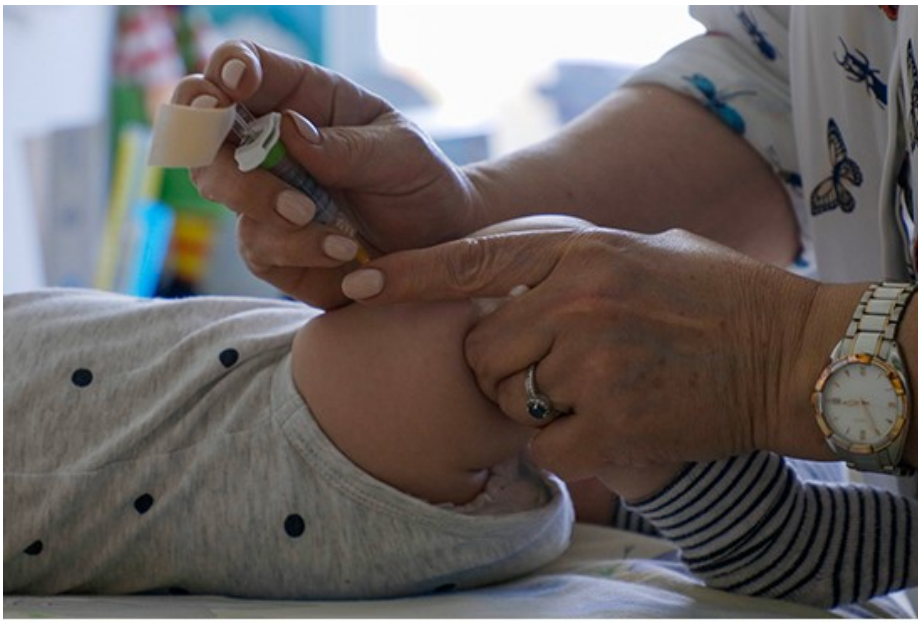
Fuente: Prensa Latina. Disponible en https://acortar.link/dhh1i5

Sanofi raising price of RSV immunization nirsevimab

Apr 12. Sanofi has raised the price of its respiratory syncytial virus (RSV) immunization nirsevimab (Beyfortus) by 5%.

The new list price per dose for the 50 milligram (mg) and 100 mg doses is $519.75. The price for the Vaccines for Children (VFC) program will stay the same at $395.

Sean T. O'Leary, M.D., M.P.H., FAAP, chair of the AAP Committee on Infectious Diseases, called the increase disappointing and said, "pediatricians and family physicians are already struggling to stock it because of the cost."



"We recognize the importance of this product and are excited to administer it to all infants," Dr. O'Leary said. "Unfortunately, the cost is the largest barrier to doing so, and now it's higher. I fear many infants won't have the opportunity to receive nirsevimab because of its extreme price tag."

RSV causes about 50,000 to 80,000 hospitalizations and 100 to 300 deaths per year in children under 5 years, according to the CDC. Nirsevimab is recommended for infants under 8 months during their first RSV season and high-risk toddlers 8-19 months.

A Sanofi spokesperson said "the (price) adjustment accounts for evolving market dynamics relevant to Beyfortus" and is consistent with the company's pricing principles. The spokesperson noted most families can access nirsevimab with no out-of-pocket cost through their insurance or the VFC program.

Clinicians participating in the company's new program to reserve nirsevimab doses for the 2024-'25 season can get a 2% discount on orders placed through VaccineShop.com between July 1 and Aug. 31 in addition to the standard 1% discount on orders placed through that site.

In order for a provider to be eligible for the program, they must forecast and submit their doses through Sanofi's Beyfortus forecast tool by April 30. They can do so by working with their Sanofi representative or they can visit www.beyfortus.com to request a representative.

During July and August, program participants will be able to reserve doses and will be eligible for priority shipping, preferred monthly shipping schedules, 90-day payment terms and cancellation up to 14 days prior to scheduled shipments. Returns will be accepted on expired products.

Customers would receive their reserved shipments beginning in late August or early September and throughout the season.

Clinicians are not required to participate in the reservation program. The normal ordering window for nonparticipants will be September 2024 through February 2025 via vaccineshop.com. Clinicians ordering during this time would have payment terms of 60 days and no ability to schedule future shipments.

Sanofi hopes the reservation program can mitigate some of the supply issues that plagued the rollout of the immunization last fall. Infectious disease experts hailed the August 2023 approval of nirsevimab as a major advancement to protect the youngest children, but demand quickly outpaced supply.

Fuente: AAP News. Disponible en https://acortar.link/1GJ1kq

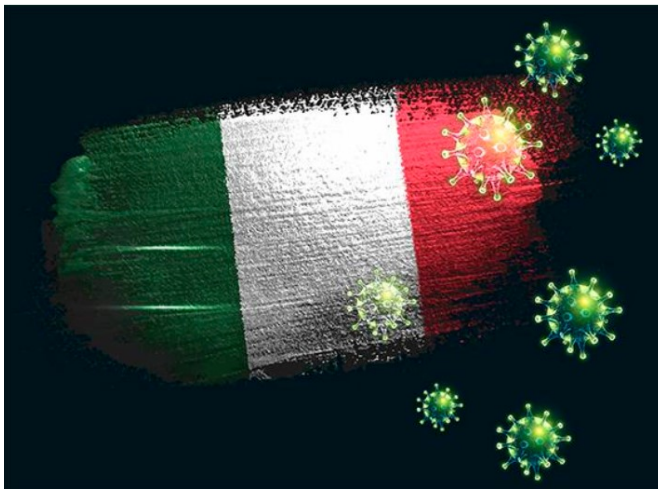
Superó en Italia el umbral epidémico la transmisibilidad de COVID-19

Mar 23. El índice de transmisibilidad (Rt) de COVID-19 en Italia es de 1,01, superior al umbral epidémico, mientras del 4 al 10 de abril sumaron 646 los casos, 28 por ciento más que la semana anterior, indica hoy un reporte.

En el último informe del Instituto Superior de Sanidad (ISS), se precisa que murieron en ese período como consecuencia de esa enfermedad 15 personas, para un descenso de 28,6 puntos porcentuales respecto a

los 21 fallecimientos de los siete días previos.

Se realizaron 119 mil 189 pruebas para detectar la presencia del virus SARS-CoV-2 y la tasa de positividad fue del 0,5 por ciento, sin cambios respecto a la semana anterior, mientras la incidencia de casos de Covid-19 diagnosticados se mantuvo en un caso por cada 100 mil habitantes.



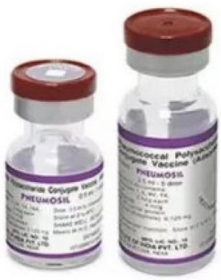
De acuerdo con los datos informados en ese último parte, en Italia se mantienen positivas a la enfermedad 157 mil 723 personas, de las cuales 156 mil 975 están aisladas en sus hogares, mientras 727 se encuentran ingresadas en salas generales de los hospitales y 21 en cuidados intensivos.

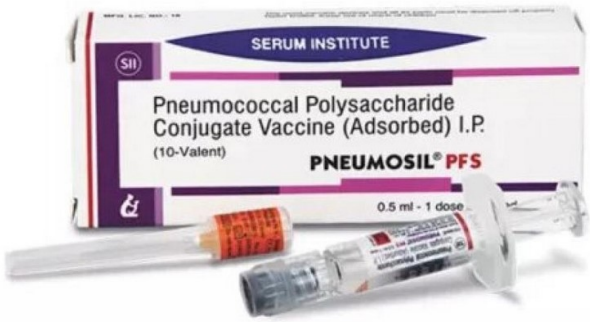
En Italia, con casi 59 millones de habitantes, se contagiaron con el virus SARS-CoV-2, desde el inicio de la pandemia de Covid-19, el 30 de enero de 2020, un total de 26 millones 723 mil 893 personas, de las cuales se recuperaron de esa enfermedad 26 millones 369 mil 668 y fallecieron 196 mil 502 infectados.

Fuente: Prensa Latina. Disponible en https://acortar.link/hwuCLZ

Iran receives pneumococcal conjugate vaccines with UNICEF support

Apr 14. Iran receives 564,000 doses of Pneumococcal Conjugate Vaccine (PCV) with UNICEF support





In support of the introduction of PCV in the national childhood immunization programme in the Islamic Republic of Iran, UNICEF supported the delivery of 564,000 doses of PCV for prevention of pneumococcal-related infections and deaths among children in the country.

The consignment is the first shipment of PCV to the country, using Iran's financial resources left over from the procurement of COVID-19 vaccines, and delivered in collaboration with the Ministry of Health and Medical Education of the Islamic Republic of Iran, through UNICEF procurement services. The shipment arrived from India and landed at Tehran's Imam Khomeini International Airport on Sunday, 17 March 2024.

The Ministry of Health and Medical Education intends to introduce two new vaccines into the national childhood immunization programme namely, PCV and Rotavirus vaccine. UNICEF will support the Ministry of Health throughout the introduction and delivery phases of these two new vaccines targeting pneumonia and diarrhea among children, the two infections that cause substantial childhood illness and deaths.

UNICEF Representative in Iran, Dr. Robin Nandy said: "This is an important first step in the introduction of two essential vaccines that were missing from the immunization schedule and will address childhood pneumonia and diarrhea, the two most important illnesses we see in children. UNICEF is pleased to play a role in the introduction of these vaccines along with key partners like WHO and the Gavi Secretariat".

Fuente: United Nations. Disponible en https://acortar.link/fFzEDf

Combination vaccines could be the future of immunization programs

Apr 16. Childhood immunization schedules are becoming increasingly crowded, expensive, and unsustainable. Combination vaccines could be the solution.

Infants in Nigeria are given three separate injectable vaccines at the ages of 14 weeks and 9 months. In the United States, babies may be given up to four injectable vaccines in a single health care visit. Most countries have similarly complex infant immunization regimens.

As more vaccines are developed and recommended for infants, children (and their parents) may be unwilling to handle any more injections during already packed immunization visits. Compounded with many countries' struggles to manage the cost and complexity of storing and administering multiple separate vaccines, combination vaccines seem like an obvious solution.

Yet, few new combinations are in development because, in addition to the scientific and manufacturing hurdles intrinsic to the co-formulation of individual vaccines, they face numerous regulatory, policy, and commercialization obstacles.

A recent health policy paper in The Lancet Global Health posits that national policymakers and public health agencies should prospectively identify and advocate for the development of new multi-pathogen combination vaccines. The authors also propose other tangible, innovative steps to mitigate the current hurdles faced by vaccine developers.

Immunization programs are saturated

Most of the new vaccines recommended by the World Health Organization (WHO) in the last decade have targeted specific high-burden regions and/or high-risk populations, such as dengue fever vaccine and typhoid conjugate vaccines. These, along with a few new vaccines with potentially global attraction (e.g., respiratory syncytial virus, tuberculosis) will increase the number of vaccines for young children in some low- and middle-income countries (LMICs), adding further to the number of injections and vaccination visits that they must bear.

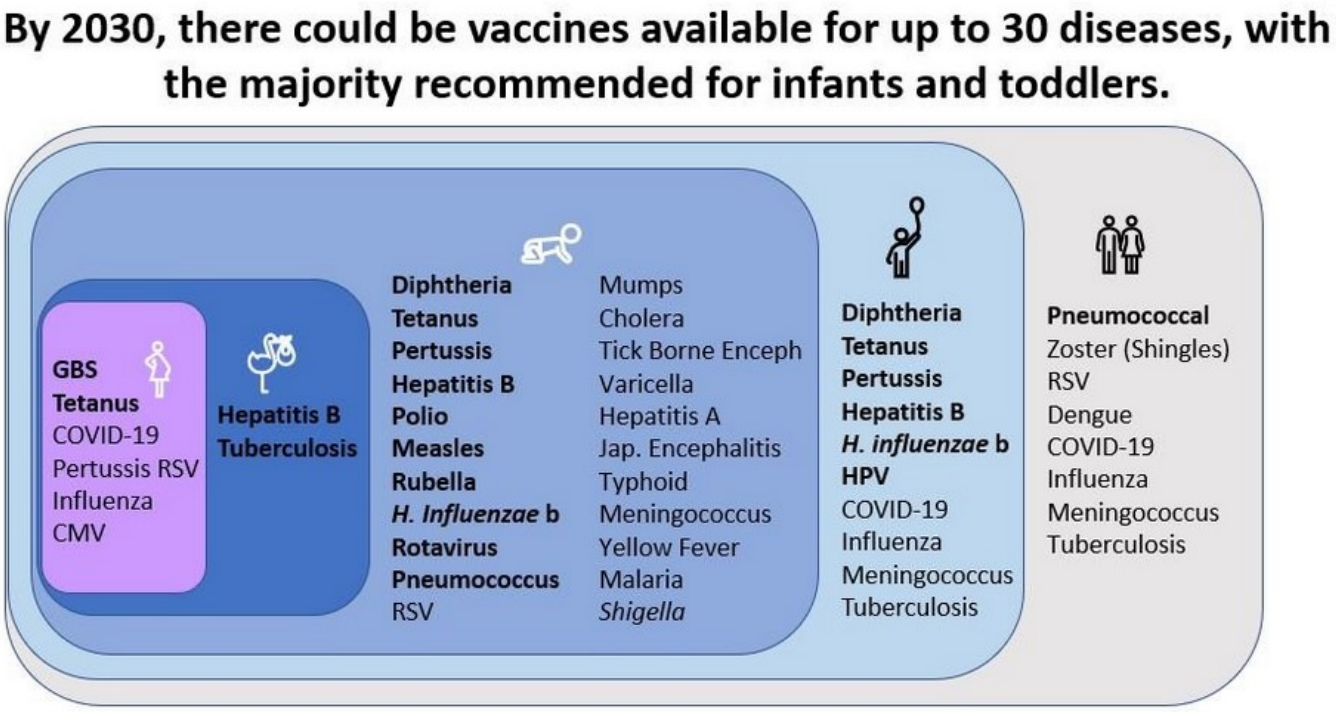
Some infant caregivers, when confronted with the expectation for multiple injections at a single health care visit, may decline a shot or opt to "come back later." Health care provider attitudes towards multiple injections may also affect uptake of recommended vaccines. But a missed or a delayed immunization leaves infants vulnerable to disease, and the deferred visit often will not occur at all in LMICs because of practical difficulties and costs incurred in returning to the health center.

Additional new vaccines for infectious diseases are still urgently needed, particularly in LMICs, and many promising vaccine candidates are in clinical trials. By 2030, there could be vaccines available for up to 30 diseases, with the majority recommended for infants and toddlers.

"Immunization programs worldwide are struggling with the practicalities of accommodating the growing number of vaccines being recommended and administering them in a limited number of health care visits," said Shabir A. Madhi, PhD, professor of vaccinology at the University of the Witwatersrand in South Africa and one of the co-authors of the policy paper.

"Furthermore, the increasing numbers of individual vaccines that need to be given can be financially prohibitive for many governments, particularly in LMICs," continued Dr. Madhi. "We urgently need to rethink how vaccines are recommended, developed, and delivered, or else we may not be able to maintain current

disease prevention levels or successfully prevent additional diseases with new vaccines as they become available."



A call for combination vaccines

Multi-pathogen combination vaccines—that is, more than one vaccine in the same injection to tackle multiple diseases all at once—could dramatically increase adherence to vaccination schedules through easier delivery and greater acceptability from both caregivers and providers. Combinations are also naturally attractive to immunization program decision-makers because they are more convenient to store and transport, and easier, quicker, and cheaper to administer.

PATH's recent value proposition projects on potential Shigella and next-generation rotavirus vaccine candidates queried key stakeholders in a number of LMICs regarding the relative importance of combination vaccine approaches. Both projects included multi-country feasibility and acceptability studies that involved interviewing country-level decision-makers and community health workers about these potential vaccines in Africa, Asia, and Latin America.

"Results from both studies found that the majority of national stakeholders and health care providers in LMICs had a strong preference for combination vaccines, as opposed to adding new standalone vaccines—even those targeting important pathogens—to the immunization schedule," said Bill Hausdorff, PhD, Lead of Public Health Value Propositions and Meningococcal Vaccine Development at PATH's Center for Vaccine Innovation and Access (CVIA) and the lead author of the policy paper.

Despite the potential benefits of combination vaccines and keen interest in this approach from national stakeholders, health care providers, and public health experts, there currently appears to be little commercial appetite to develop them. Only a handful are licensed and being used, with just a few currently in advanced stages of clinical development. This may indicate that vaccine developers perceive that the technical and commercial risks and costs of combination vaccine development outweigh the potential return on investment.

"A congruent and coordinated policy and recommendation apparatus for combination vaccines is currently lacking."

— Bill Hausdorff, Lead, Public Health Value Propositions for CVIA,

Dr. Hausdorff continued: “To better understand these barriers, we convened an independent panel of experts to explore the challenges associated with developing a Shigella-containing combination vaccine, which resulted in broader insights. While overcoming the biochemical and immunological obstacles to combination formulations is certainly necessary, the experts highlighted that addressing strategic, policy, and commercialization obstacles is also critically important. Unfortunately, a congruent and coordinated policy and recommendation apparatus for combination vaccines is currently lacking.”

Tangible steps to making more combination vaccines a reality

Given the potential gains to be had from developing new multi-pathogen combination vaccines, it’s critical that these barriers are addressed directly and systematically to smooth the pathway for their development and introduction.

The recent policy paper outlines several innovative steps to accelerate the availability of such vaccines. For example, the co-authors advocate for country and regional consultations to identify priority combination vaccine targets and utilization of WHO advisory committees to evaluate combination strategies and priorities. Furthermore, regulatory agencies and health economic evaluations, as well as agencies like Gavi, the Vaccine Alliance, and could give more weight to the overall clinical and programmatic benefit of combinations in their respective assessments versus focusing solely on the clinical effectiveness of each individual component.

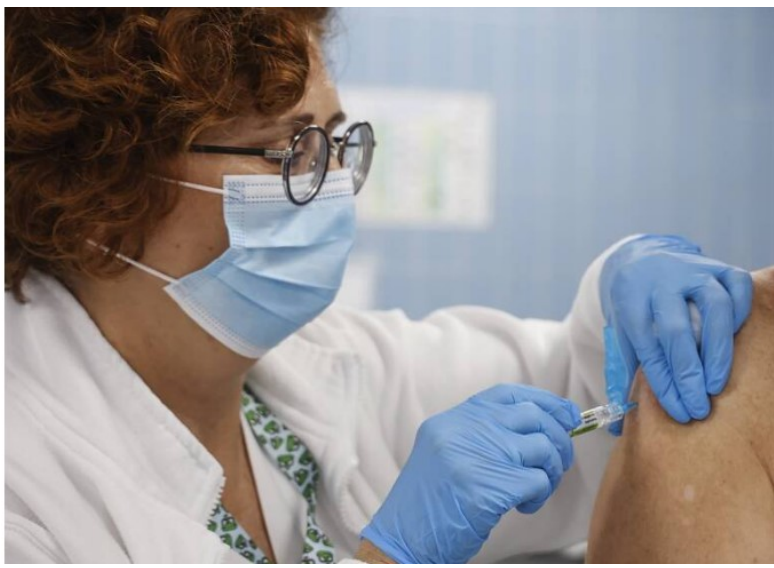
“Novel, proactively designed development, regulatory, and policy approaches are needed if we are to successfully deliver many of the vaccines in the current pipeline, and even to help sustain current programs,” said Birgitte Giersing, PhD, Team Lead, Vaccine Prioritization and Platforms at the WHO and another co-author of the policy paper.

“We need a paradigm shift in regulatory, policy, and financing perspectives that recognizes the intrinsic value of combinations, and away from considering them as essentially equivalent to the sum of their individual parts,” continued Dr. Giersing. “This shift will not be easy. But there may be little choice if we want to continue to rely on vaccine-based approaches to address some of the most significant health challenges of our time.”

Fuente: PATH. Disponible en https://acortar.link/8bwclU

El grupo asesor de la vacuna COVID-19 de la OMS revisará su composición dos veces al año

17 abr. El Grupo Asesor Técnico sobre la Composición de la Vacuna COVID-19 (TAG-CO-VAC) de a Organización Mundial de la Salud (OMS) ha afirmado acuerda reunirse al menos dos veces al año para revisar la composición de antígenos de la vacuna COVID-19 emitir una recomendación pública, la primera recomendación será a finales de abril.



La segunda reunión de toma de decisiones del TAG-CO-VAC será noviembre, señalan dentro de las conclusiones del taller organizado conjuntamente por la ICMRA y la OMS alineado para optimizar las recomendaciones oportunas sobre la composición de

los antígenos de las vacunas y la aprobación regulatoria de las vacunas con una composición actualizada a las cepas, así como cualquier estrategia que ayude a evitar una reactivación de la pandemia.

En septiembre de 2021, la Organización Mundial de la Salud (OMS) estableció el Grupo Asesor Técnico sobre la Composición de la Vacuna COVID-19 (TAG-CO-VAC) para evaluar las implicaciones para la salud pública de las variantes emergentes del SARS-CoV-2 en el desempeño de la COVID-19, evaluar las vacunas y emitir recomendaciones oportunas a la OMS, las autoridades reguladoras y los fabricantes de vacunas sobre las modificaciones propuestas a la composición de los antígenos de las vacunas.

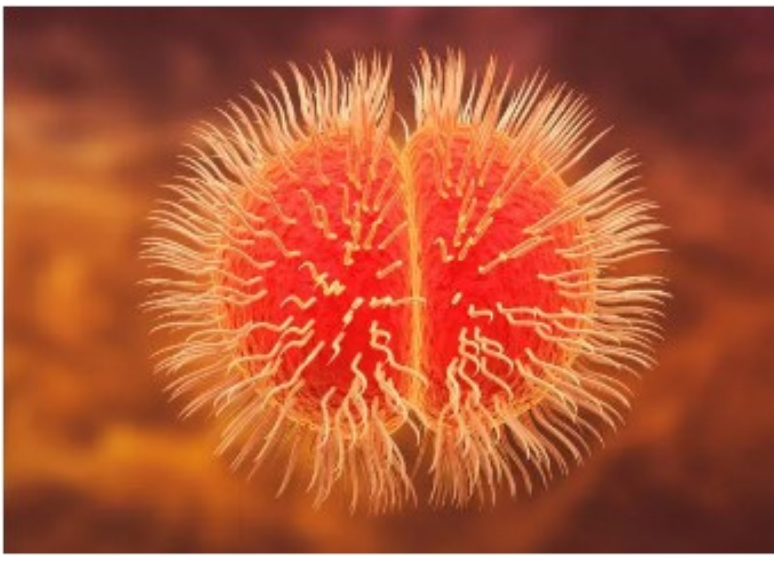
La OMS y sus grupos asesores, incluidos TAG-VE, TAG-CO-VAC y SAGE, seguirán monitoreando y evaluando la evolución de las variantes del SARS-CoV-2 y el desempeño de las vacunas COVID-19 autorizadas. Actualmente, la circulación de variantes y la situación epidemiológica no requieren decisiones sobre la composición de la vacuna COVID-19 más allá del nivel global (por ejemplo, para los hemisferios norte y sur, o por región de la OMS). Sin embargo, los reguladores de las diferentes regiones pueden considerar datos contextuales geográficos y adaptar las decisiones sobre la composición de las vacunas en consecuencia.

La OMS hace recomendaciones globales para la composición de antígenos de la vacuna COVID-19. En la actualidad no existen diferencias aparentes en la circulación y transmisión del SARS-CoV-2 en los hemisferios norte y sur. No obstante, el organismo seguirá vigilando la situación epidemiológica y virológica y revisará la necesidad de actualizar las vacunas al menos dos veces al año.

Fuente: Alicante Plaza. Disponible en https://acortar.link/caEoEe

Nigeria is the First Country to Implement the Men5CV Vaccine Recommended by WHO

Apr 18. Nigeria has taken a step forward in global health by being the first country to implement a new World Health Organization (WHO)-recommended vaccine, Men5CV, targeting 5 strains of the meningococcus bacteria. This initiative is part of a broader effort to combat meningitis, particularly in Africa's "Meningitis Belt" where Nigeria is among the 26 hyper-endemic countries. The roll-out began amid an outbreak that resulted in 153 deaths from over 1,700 suspected cases in several Nigerian states.



Meningococcus, Gramnegative Coccus Bacteria. Image Credits: Unsplash.

The vaccine campaign targets over a million people aged 1-29 in the affected regions, representing an advancement in the fight against a disease known for its rapid and severe consequences, including brain and spinal cord inflammation and potential death within 24 hours. Men5CV is expected to provide more comprehensive protection than the previous vaccine, which only targeted one strain, potentially reducing meningitis cases significantly across affected regions.

The development and deployment of Men5CV have been supported by international collaborations and funding, notably from Gavi, the Vaccine Alliance, and the UK government. This support is part of a larger

global strategy to eliminate meningitis by 2030, as outlined in the WHO's global meningitis roadmap launched in 2019. The roadmap includes goals such as reducing the number of vaccine-preventable bacterial meningitis cases and deaths by 50% and 70%, respectively, and decreasing disability resulting from the disease.

Previous reporting from *Contagion* states, According to the Centers for Disease Control and Prevention (CDC), this vaccine safeguards against the bacteria responsible for meningococcal disease, offering protection from infections affecting the brain and spinal cord lining, and bloodstream infections.

Additionally, it helps prevent long-term disabilities commonly associated with surviving meningococcal disease.

“Meningococcal meningitis and bloodstream infections can be very serious, even deadly. The infections progress quickly. Someone can go from being healthy to very ill in 48 hours or less,” according to the CDC. “Even if they get treatment, about 10 to 15 in 100 people with meningococcal disease will die from it. Up to 1 in 5 survivors will have long-term disabilities, including loss of limbs, deafness, nervous system problems, and brain damage.”

The recent vaccine campaign in Nigeria addresses immediate health crises and contributes to long-term global health security by aiming to eliminate bacterial meningitis epidemics. The success of this program could serve as a model for similar health initiatives worldwide, highlighting the critical role of innovation and international cooperation in global disease prevention and management.

3 Key Takeaways

1. Nigeria has become the pioneering country to roll out the Men5CV vaccine, which targets 5 strains of the meningococcus bacteria.
2. The vaccine campaign targets over a million people aged 1-29 in regions affected by meningitis.
3. The development and deployment of Men5CV is supported by international collaborations and funding from Gavi, the Vaccine Alliance, and the UK government.

Fuente: Contagion Live. Disponible en https://acortar.link/dpJYOf

Use of the Pfizer Pentavalent Meningococcal Vaccine Among Persons Aged ≥10 Years: Recommendations of the Advisory Committee on Immunization Practices — United States, 2023

Apr 18. Meningococcal disease is a life-threatening invasive infection caused by Neisseria meningitidis. The pentavalent meningococcal vaccine (MenACWY-TT/MenB-FHbp [Penbraya, Pfizer Inc.]) protects against N. meningitidis serogroups A, B, C, W, and Y and is licensed for use among persons aged 10–25 years.

On October 25, 2023, the Advisory Committee on Immunization Practices recommended that MenACWY-TT/MenB-FHbp may be administered to persons aged ≥10 years when both a quadrivalent meningococcal conjugate vaccine (MenACWY) and meningococcal B vaccine (MenB) are indicated at the same visit.

MenACWY-TT/MenB-FHbp is the first pentavalent meningococcal vaccine approved for protection against serogroups A, B, C, W, and Y. Different manufacturers’ MenB vaccines are not interchangeable; when MenACWY-TT/MenB-FHbp is administered, subsequent doses of MenB should be from the same manufacturer (Pfizer Inc.).

Meningococcal disease is a life-threatening invasive infection caused by Neisseria meningitidis. CDC's Advisory Committee on Immunization Practices (ACIP) recommends routine administration of a single dose of quadrivalent (serogroups A, C, W, and Y) meningococcal conjugate vaccine (MenACWY) to persons at age 11 or 12 years, with a booster dose at age 16 years. ACIP recommends a 2-dose serogroup B meningococcal vaccine (MenB) series for persons aged 16–23 years, based on shared clinical decision-making, to provide short-term protection against meningococcal disease caused by most serogroup B strains (1). ACIP also recommends routine vaccination with MenACWY (for persons aged ≥2 months) and MenB (for persons aged ≥10 years) who are at increased risk for meningococcal disease caused by the serogroups covered by each vaccine (Box) (1).

In October 2023, a pentavalent meningococcal vaccine (MenACWY-TT/MenB-FHbp [Penbraya, Pfizer Inc.]) was licensed for use in persons aged 10–25 years (2). MenACWY-TT/MenB-FHbp contains the same components as those in two existing meningococcal vaccines: 1) N. meningitidis polysaccharide groups A, C, W, and Y conjugated to tetanus toxoid carrier protein (MenACWY-TT* [Nimenrix, Pfizer Inc.], a non–U.S.-licensed vaccine), and 2) two recombinant lipidated factor H–binding protein (FHbp) variants from N. meningitidis serogroup B (MenB-FHbp [Trumenba, Pfizer Inc.]). This report summarizes evidence considered for these recommendations and provides clinical guidance for the use of MenACWY-TT/MenB-FHbp.

Methods

During June 2022–October 2023, the ACIP Meningococcal Vaccines Work Group held monthly conference calls to review meningococcal disease epidemiology and evidence regarding use of MenACWY-TT/MenB-FHbp in persons currently recommended to receive MenACWY and MenB (policy question 1), MenACWY only (policy question 2), or MenB only (policy question 3). To guide deliberations, ACIP used the Evidence to Recommendations framework and considered the importance of meningococcal disease as a public health problem, benefits, and harms of MenACWY-TT/MenB-FHbp, values of the target population, acceptability, resource use, equity, and feasibility.† ACIP evaluated the available evidence on the following prespecified benefits and harms (each with ranked importance), using the Grading of Recommendations, Assessment, Development and Evaluation (GRADE) approach (3): disease caused by serogroups A, B, C, W, and Y (critical); short-term immunity (critical); persistent immunity (important); serious adverse events (critical); nonserious adverse events (important); and interference with other recommended vaccines administered concurrently (important).

Summary of Evidence for Use of MenACWY-TT/MenB-FHbp in Persons Aged ≥10 Years.

Safety and Immunogenicity

The body of evidence comprised data from three randomized, quadruple-blinded multisite¶ clinical trials that assessed immunogenicity and safety** among healthy participants aged 10–25 years. Participants were randomized to 1) the pentavalent group (2 doses of MenACWY-TT/MenB-FHbp, administered 6 or 12 months apart††) or 2) the control group (MenACWY-CRM [Menveo, GSK, 1 dose] + MenB-FHbp [2 doses administered 6 months apart]) (4). The trials included ACWY-naive and ACWY-primed participants; all study participants were MenB-naive. The GRADE assessment focused on the 6-month pentavalent dosing interval for immunity outcomes; data on both 6- and 12-month pentavalent dosing intervals were assessed for safety outcomes.

Short-Term Immunity

Among both MenACWY-naive and MenACWY-primed participants, seroresponse§§ for serogroups A, C, W, and Y 1 month after the first trial dose of ACWY-containing vaccine was achieved as often or more often in

the pentavalent group than in the control group. On the basis of a composite measure, seroresponse for serogroup B 1 month after the second dose of serogroup B–containing vaccine was achieved more often in the pentavalent group than in the control group. The overall level of certainty for the critical outcome short-term immunity for all serogroups was moderate for healthy persons and low for persons at increased risk because of underlying medical conditions.

Persistent Immunity

Among ACWY-naive and ACWY-primed participants, seroprotection for meningococcal serogroups A, C, W, and Y occurred as often or more often in the pentavalent group (48 months after receipt of 2 doses MenACWY-TT/MenB-FHbp) compared with the control group (54 months after 1 dose MenACWY-CRM). Little or no difference was observed in the frequency of serogroup B strain–specific seroprotection*** 48 months after receipt of 2 doses of pentavalent vaccine when compared with those seen 48 months after receipt of 2 doses of MenB-FHbp + 1 dose MenACWY-CRM. The overall level of certainty for this important outcome was low for serogroups A, C, W, and Y for healthy persons, moderate for serogroup B for healthy persons, and low for all serogroups for those at increased risk because of underlying medical conditions.

Adverse Events

The proportion of participants who experienced serious adverse events††† was similar in the pentavalent group (0.6%) and the control group (0.5%; p = 0.7). No serious adverse events were deemed related to the vaccine by the study investigators. The pentavalent group had significantly fewer nonserious adverse events§§§ (24.6%) than did the control group (32.5%; p<0.001). The most common solicited adverse events within 7 days after receipt of either trial dose of MenACWY-TT/MenB-FHbp were injection site pain (84.4%–89.3%; mostly mild or moderate), fatigue (47.6%–52.1%; mostly mild or moderate), and headache (39.8%–46.8%; mostly mild or moderate) (5). For both serious and nonserious adverse events, the level of certainty was low for healthy persons and very low for those at increased risk because of underlying medical conditions.

Coadministration with Other Vaccines

No data exist on coadministration of MenACWY-TT/MenB-FHbp with other vaccines. Review of the interactions sections of the package inserts for the component vaccines Nimenrix (MenACWY-TT) and Trumenba (MenB-FHbp) did not identify any concerns for coadministration with other vaccines (6,7).

Resource Use

Findings from two economic models (CDC model and Pfizer Inc. model) that assessed the health benefits and cost-effectiveness of MenACWY-TT/MenB-FHbp for each policy question within the routine schedule were considered by ACIP (8). According to the CDC model, strategies likely to be societally cost-saving would use the pentavalent vaccine to 1) replace a single dose of MenACWY and MenB when both are indicated, or 2) replace MenACWY and MenB when both are indicated, followed by completion of the 2-dose MenB series with a second dose of pentavalent vaccine. The CDC model also illustrated that when immunization against serogroup B meningococcal disease is not indicated, replacing both doses of MenACWY with the pentavalent vaccine would be incrementally less cost-effective.

Despite differences in input values and assumptions, similar conclusions were reported by the Pfizer Inc. model.

Fuente: CDC. Disponible en https://acortar.link/z03zJe

Ampliación de franja de vacunación contra dengue descolló en Brasil

20 abr. La ampliación de la vacuna contra el dengue en la red pública ante la posibilidad de que los inmunizantes vencieran en determinados municipios, sobresalió en Brasil en la semana que termina.

«Estamos ampliando, de forma temporal, la franja etaria para las vacunas del dengue que vencen el 30 de abril en los municipios que estén en riesgo de perderlas. En un primer momento, aconsejamos que se extiendan a los niños y jóvenes de seis a 16 años», escribió en una red social la ministra de Salud, Nísia Trindade.

Ahora, niños y jóvenes de seis a 16 años pueden recibir la primera dosis. Anteriormente, el medicamento estaba liberado para infantes de 10 a 14 años.

Trindade también dejó abierta la posibilidad de ampliar la inoculación a otros grupos de edad, como por encima de cuatro años y por debajo de 60.

«En último caso, pueden ser ampliadas para todas las personas para las que Anvisa (Agencia Nacional de Vigilancia Sanitaria) aprobó la vacuna: en la franja etaria entre cuatro y menos de 60 años. La segunda dosis estará garantizada para todos los que se vacunen», agregó.

La medida fue adoptada por el Ejecutivo ante el riesgo de vencimiento de inmunizantes.

El Gobierno del Distrito Federal (DF), por ejemplo, debe aplicar este mes ocho mil dosis de la vacuna que están con fecha de caducidad próxima al término.

«Nuestro principal objetivo hasta el 30 de abril es garantizar la aplicación de ocho mil dosis de vacuna que están próximas al vencimiento», afirmó al portal R7 la secretaria de Salud del DF, Lucilene Florêncio.

Brasil registró el pasado lunes mil 385 muertes confirmadas por el dengue desde inicios de año, lo cual significa que, por tercer fin de semana seguido, creció el número de fallecidos.

Se investigan otros casi dos mil óbitos. El país registró tres millones 289 mil 639 casos probables de la enfermedad en 2024.

La secretaria de Vigilancia en Salud de la cartera de Sanidad, Ethel Maciel, vaticinó que, en el «peor de los casos», las notificaciones de dengue deben llegar a 4,2 millones.

Sao Paulo es la unidad de la federación con más muertes registradas, con 276, seguido por el DF (237), Minas Gerais (231), Paraná (153) y Goiás (110). Sumados, los cinco territorios acumulan el 72 por ciento del total de vidas perdidas por la dolencia.

Recientemente, Trindade refirió que los casos tienen relación con factores como el cambio climático y la circulación de más de un serotipo del virus.

Insistió en que resulta fundamental la participación de todos en el combate contra la enfermedad, en especial teniendo en cuenta que cerca del 75 por ciento de los focos del Aedes aegypti (mosquito transmisor) está dentro de las casas.

Fuente: Prensa Latina. Disponible en https://acortar.link/HlJqpj

OPS advierte riesgos por limitada cobertura de vacunación

21 abr. En el marco de la Semana de Vacunación en las Américas, el director de la OPS reconoce el poco interés de algunos grupos en aplicarse el biológico.

Mientras el Ministerio de Salud inauguraba la Semana de Vacunación de las Américas, en Santa Catarina Pinula, la Organización Panamericana de la Salud (OPS), advertía sobre la limitada cobertura de vacunación en el país, que podría dar paso a algún brote de enfermedades prevenibles y ya erradicadas.

El ministro de Salud, Óscar Cordón, el presidente del Seguro Social, José Adolfo Flamenco y el representante de la OPS en Guatemala, Gerardo Alfaro, participaron del evento protocolario donde se enfatizó en la importancia de la vacunación.

Cordón insistió en la necesidad de que la población acepte la vacunación, sobre todo del virus del papiloma humano, que se aplica a menores de 9 años.

Cobertura

Daniel Salas, de la OPS, dijo el pasado jueves en una conferencia virtual que Guatemala tiene "retos importantes" en la cobertura de vacunación, por lo que esta Semana de Vacunación de las Américas es importante para ampliar la cobertura.

"Sabemos que las Américas por un gran esfuerzo que se hizo en la década de los 80 y 90 se pudo eliminar el polio, rubiola y sarampión, pero si comenzamos a descuidar los programas de vacunación y cobertura baja en forma constante, eso facilita que estas enfermedades puedan tener una transmisión y afectar a una mayor cantidad", dijo Salas.

Según el médico de la OPS, "este año estamos sintiendo un aumento en la transmisión del virus del sarampión en diferentes partes del mundo" por lo que es importante que la cobertura de la vacunación contra este virus se amplíe como mínimo al 95% para "blindar y dar un círculo de protección".

Vacunación ha disminuido

El director de la OPS, Jarbas Barbosa, dijo el jueves durante el anuncio de la Semana de Vacunación de las Américas, que "hace más de una década que la vacunación ha disminuido", entre otras razones, porque en la población "bajó en la lista de prioridades".

De esta cuenta, dijo Barbosa, es necesario alcanzar coberturas por encima del 91% para la primera dosis de la vacuna contra el tétanos, difteria y la tos ferina, y así evitar que haya brotes de estas enfermedades consideradas ya erradicadas.

De acuerdo con el director de la OPS, actualmente en el continente hay dos millones de niños parcialmente protegidos contra enfermedades fácilmente prevenibles con la vacunación, esto quiere decir que 15 de cada 100 menores están en riesgo.

También advirtió que los casos de sarampión van en aumento en el continente y "esto representa un riesgo", como también lo es la baja cobertura de la población a la vacuna contra el Virus del Papiloma Humano.

Fuente: Prensa Libre. Disponible en https://acortar.link/YMWNNJ

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Patentes registradas en Patentscope

Estrategia de búqueda: *Vaccine in the title or abstract AND 20240411:20240421 as the publication date 53 records*

1.20240123056MERS-CoV Vaccine
US - 18.04.2024
Clasificación Internacional A61K 39/215 Nº de solicitud 18476921 Solicitante The Trustees of the University of Pennsylvania Inventor/a David Weiner
Disclosed herein is a vaccine comprising a Middle East Respiratory Syndrome coronavirus (MERS-CoV) antigen. The antigen can be a consensus antigen. The consensus antigen can be a consensus spike antigen. Also disclosed herein is a method of treating a subject in need thereof, by administering the vaccine to the subject.

2.20240123053CORONAVIRUS VACCINE THROUGH NASAL IMMUNIZATION
US - 18.04.2024
Clasificación Internacional A61K 39/215 Nº de solicitud 17923415 Solicitante BHARAT BIOTECH INTERNATIONAL LIMITED Inventor/a Krishna Murthy ELLA
The invention generally discloses coronavirus vaccine for coronavirus disease. Particularly, the invention discloses coronavirus vaccine through nasal immunization. More particularly, the invention describes and develop a preventive vaccine against infection or disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) through nasal immunization in mammals. Specifically, the invention describes human adenovirus which is engineered to express SARS-CoV-2 spike protein or part/fragment thereof which elicit immune response against the SARS-CoV-2 in mammals, and it is also suitable for immunizing human subjects. Describes the method of production of novel adenovirus vectors, use thereof in vaccine composition, vaccine formulation, preparation, and method of treatment of COVID-19 using above said novel vectors and compositions thereof.

3.4351639KOMBINATIONSTHERAPIE-TUMORZELLENIMPFSTOFF
EP - 17.04.2024
Clasificación Internacional A61K 39/39 Nº de solicitud 22803511 Solicitante UNIV KINGSTON Inventor/a SEAVER KYLE
A cancer vaccine includes at least one tumour associated antigen (TAA), at least one Toll-like receptor (TLR) agonist, at least one cytokine, and a pharmaceutically acceptable vehicle. The at least one TAA may be provided by dead tumour cells, such as γ-irradiated tumour cells or lysis and UV treated tumour cells, the at least one TLR agonist may comprise 5 CpG-1826 and the at least one cytokine may comprise IL-27. When administered to a mammalian subject the cancer vaccine prevents, inhibits, or slows tumour development in the subject, and the vaccine may provide a long-term T cell activation and memory against tumour development in the subject. 0

4.WO/2024/077066SUPERANTIGEN VACCINE CONJUGATE FOR THE TREATMENT OF CANCER
WO - 11.04.2024
Clasificación Internacional A61K 47/68 Nº de solicitud PCT/US2023/075949 Solicitante MUSC FOUNDATION FOR RESEARCH DEVELOPMENT Inventor/a DOLLOFF, Nathan, G.
The present disclosure provides compositions comprising vaccine conjugates with a SMEZ-2 carrier. Further provided are methods for treating cancer comprising administering the vaccine conjugates provided herein.

5.20240123051ZIKA VIRUS VACCINE
US - 18.04.2024

Clasificación Internacional A61K 39/12 Nº de solicitud 18333837 Solicitante THE UNIVERSITY OF ADELAIDE Inventor/a Eric James Gowans
The present disclosure relates to vaccines and methods for the prevention and treatment of Zika virus infection. Particularly, the present disclosure relates to viral and DNA vaccine vectors which includes or encode for secreted immunogenic peptides of NS1 that eliciting a protective immune response and prevent Zika virus infection of a subject.

6.WO/2024/074571DC-TARGETING VACCINE AGAINST NIPAH VIRUS INFECTION
WO - 11.04.2024
Clasificación Internacional C07K 16/28 Nº de solicitud PCT/EP2023/077477 Solicitante INSTITUT NATIONAL DE LA SANTÉ ET DE LA RECHERCHE MÉDICALE Inventor/a LEVY, Yves
Nipah virus (NiV) is a recently emergent, highly pathogenic, zoonotic paramyxovirus. The inventors now designed an anti-CD40 mAb associated either with the Niv G ectodomain protein (Generation-1 vaccine), or the Niv G ectodomain protein and down-selected epitopes from the Niv F and N proteins (Generation-2 vaccine). Quality controls were performed on vaccine batches. The immunogenicity of both vaccines has been tested in hCD40Tg mice. A dose- dependent IFNg T cell response to the antigen was observed. Three weeks post-boost, specific IgG were detectable in groups immunized with 10ug of vaccine. B cell responses were markedly improved 1 week post-boost. All samples at week -4 showed a neutralization with an average titer at 1:500. The inventors also demonstrated the potency of an innovative DC-targeting vaccine candidate to prevent NiV-B infection in challenge experiments in an AGM model. Responses were showed to cross-neutralize multiple strains of NiV, but also HeV. Targeting Nipah virus antigens to professional APCs can be efficiently used as a prophylactic means against a Nipah virus challenge at a lethal dose. Accordingly, the present invention relates to antibodies that are directed against a surface antigen of an antigen presenting cell wherein the heavy chain and/or the light chain is conjugated or fused to the Nipah virus antigenic polypeptides.

7.WO/2024/078170DIPHTHERIA-TETANUS-PERTUSSIS COMPOUND ADJUVANT COMBINED VACCINE
WO - 18.04.2024
Clasificación Internacional A61K 39/00 Nº de solicitud PCT/CN2023/115711 Solicitante CHANGCHUN BCHT BIOTECHNOLOGY CO. Inventor/a WANG, Mengshu
Disclosed in the present invention is a compound adjuvant combined vaccine, comprising an immunogenic composition and a compound adjuvant. The immunogenic composition comprises a pertussis antigen, a diphtheria antigen and a tetanus antigen; and the compound adjuvant is composed of an aluminum adjuvant and a TLR9 receptor agonist. Further disclosed in the present invention is a use of the compound adjuvant in the preparation of the compound adjuvant combined vaccine for preventing pertussis, diphtheria and tetanus in a subject.

8.20240115675METHOD OF TREATING A TUMOR WITH A COMBINATION OF AN IL-7 PROTEIN AND A NUCLEOTIDE VACCINE
US - 11.04.2024
Clasificación Internacional A61K 39/00 Nº de solicitud 18251823 Solicitante NeoImmuneTech, Inc. Inventor/a Byung Ha LEE
The present disclosure relates to methods of treating a tumor with a nucleotide vaccine (e.g., DNA vaccine encoding a tumor antigen) in combination with an IL-7. In some aspects, the IL-7 is administered after the administration of the nucleotide vaccine (e.g., after the peak expansion phase of the tumor-specific T cell immune response) or concurrently with the nucleotide vaccine.

9.WO/2024/078631INFLUENZA VIRUS NEURAMINIDASE MUTANT, NUCLEIC ACID MOLECULE ENCODING INFLUENZA VIRUS NEURAMINIDASE MUTANT, VACCINE COMPOSITION COMPRISING

INFLUENZA VIRUS NEURAMINIDASE MUTANT, AND USE OF INFLUENZA VIRUS NEURAMINIDASE MUTANT IN PREPARATION OF INFLUENZA VIRUS VACCINE COMPOSITION
WO - 18.04.2024
Clasificación Internacional C12N 9/24 Nº de solicitud PCT/CN2023/124604 Solicitante WU, Suh-Chin Inventor/a WU, Suh-Chin
Provided are an influenza virus neuraminidase mutant, a nucleic acid molecule encoding the influenza virus neuraminidase mutant, a vaccine composition comprising the influenza virus neuraminidase mutant, and a use of the influenza virus neuraminidase mutant in the preparation of an influenza virus vaccine composition. Through various efficacy experiments, the vaccine composition achieves the effect of preventing influenza virus infection.

10.20240124532CHLAMYDIA TRACHOMATIS ANTIGENIC POLYPEPTIDES AND USES THEREOF FOR VACCINE PURPOSES
US - 18.04.2024
Clasificación Internacional C07K 14/295 Nº de solicitud 18274848 Solicitante Institut National de la Santé et de la Recherche Médicale (INSERM) Inventor/a Yves LEVY
Chlamydiae are intracellular bacterial pathogens responsible for a variety of infections. The inventors have set up candidate vaccines against *Chlamydia trachomatis*. In particular, the inventors have identified specific epitopes to be included in vaccine candidates thanks to in silico analysis of the amino-acid sequence of these proteins to map predicted MHC-I and -II epitopes by online software (NetMHC-4.0 and NetMHCII-2.3) and peptide binding prediction software. B cell epitopes were also mapped using online software (BepiPred-2.0 and Discotope). Finally, the inventors have generated some specific CD40 or Langerin antibodies comprising one or more identified epitope(s) of the present invention and that are suitable for vaccine purposes. Therefore, the present invention relates to *Chlamydia trachomatis* (Ct) antigenic polypeptides and uses thereof for vaccine purposes.

11.20240115694HBV VACCINE
US - 11.04.2024
Clasificación Internacional A61K 39/29 Nº de solicitud 18206249 Solicitante Oxford University Innovation Limited Inventor/a Eleanor BARNES
The invention relates to a multi-HBV immunogen viral vector vaccine comprising: a viral vector comprising an immunogen expression cassette, wherein the expression of a protein encoded by the expression cassette is arranged to be driven by a promoter, wherein the immunogen expression cassette encodes: a) HBV Core; b) a modified HBV polymerase (P_{mut}), wherein the modification is a mutation to wild-type HBV polymerase to substantially remove polymerase function; c) HBV surface antigen (HbsAg); and d) an intergenic sequence that is arranged to cause expression of at least the HBV surface antigen (HbsAg) as a separate protein from the HBV core and the modified HBV polymerase (P_{mut}), wherein the intergenic sequence is downstream (3') of the sequences encoding the HBV core and the modified HBV polymerase (P_{mut}) and upstream (5') of the sequence encoding the HBV surface antigen (HbsAg); and related compositions, vaccination methods and methods of treatment or prophylaxis of HBV infection.

12.WO/2024/080637VIRUS-LIKE PARTICLE COMBINATION VACCINE COMPRISING INFLUENZA A VIRUS ANTIGEN PROTEIN HA, NA OR M2E5X
WO - 18.04.2024
Clasificación Internacional C12N 7/00 Nº de solicitud PCT/KR2023/014922 Solicitante UNIVERSITY-INDUSTRY COOPERATION GROUP OF KYUNG HEE UNIVERSITY Inventor/a JEON, Bok Sil
The present invention relates to a virus-like particle combination vaccine comprising influenza A virus antigen protein HA, NA or M2e5x. A recombinant universal influenza-virus-like particle vaccine for protection against infection by influenza A virus (H1N1, H3N2 and H5N1) and influenza B virus (B/Victoria

lineages) has been developed by preparing a virus-like particle vaccine expressed by a combination of: hemagglutinin (HA) and neuraminidase (NA) antigen proteins of 2020/2021 influenza viruses of A/Guangdong-Maonan/SWL1536/2019 (H1N1) and A/Hong Kong/2671/2019 (H3N2), which were recently predicted by the World Health Organization (WHO); and heterologous tandem M2e repeat (M2e5x) antigen proteins of conventional human, swine, and avian influenza viruses. The virus-like particle vaccine having high efficacy against various influenza, obtained by developing, on the basis of the present invention, a vaccine exhibiting high immunogenicity, can reduce infection and mortality caused by influenza A and B viruses during a global pandemic.

13.WO/2024/081863USE OF DENGUE VACCINE IN PREGNANT AND/OR BREASTFEEDING SUBJECTS
WO - 18.04.2024
Clasificación Internacional A61K 39/12 Nº de solicitud PCT/US2023/076810 Solicitante TAKEDA VACCINES, INC. Inventor/a KLAS, Sheri Denét
A dengue vaccine for use in a method of protecting against dengue disease in a pregnant and/or breastfeeding human subject.

14.20240115674VACCINE AND METHODS FOR PREVENTING FILARIASIS AND DIROFILARIASIS
US - 11.04.2024
Clasificación Internacional A61K 39/00 Nº de solicitud 18275463 Solicitante THE BOARD OF TRUSTEES OF THE UNIVERSITY OF ILLINOIS Inventor/a Ramaswamy KALYANASUNDARAM
The present invention is a multivalent immunogenic composition for immunizing an animal against filariasis. In some aspects, the antigens of the multivalent immunogenic composition are protein-based, DNA-based, or a combination thereof. This invention also provides a method and kit for detecting a filarial nematode and determining vaccine efficacy.

15.WO/2024/076960NOVEL CHIMERIC MULTI-PROTEIN BASED RECOMBINANT VACCINE ANTIGENS FOR PREVENTION OF LYME DISEASE IN ANIMALS AND HUMANS
WO - 11.04.2024
Clasificación Internacional A61K 39/02 Nº de solicitud PCT/US2023/075794 Solicitante VIRGINIA COMMONWEALTH UNIVERSITY Inventor/a MARCONI, Richard, T.
A vaccine formulation for humans or other mammals (including dogs, horses, and cats) is provided. The vaccine formulation includes two chimeric proteins designed to elicit antibodies that bind to several targets on the surface of Lyme disease spirochetes during their residence in ticks and in mammals, and act synergistically to kill the bacteria through both antibody-mediated complement dependent and complement-independent mechanisms.

16.20240123064CUSTOM AUTOLOGOUS VACCINE COMPOSITION, AND A METHOD FOR ITS MANUFACTURE
US - 18.04.2024
Clasificación Internacional A61K 39/39 Nº de solicitud 17965257 Solicitante Joseph CHALIFOUX Inventor/a Joseph CHALIFOUX
An immunogenic composition forming a vaccine includes an autologous cell medium, wherein producing the autologous cell medium further comprises producing the autologous cell medium using at least a call collected from a subject, therein the cell medium includes immune system stem cells, combining an oligonucleotide-based adjuvant with the autologous cell medium and combining an antigen with the autologous cell medium and the oligonucleotide-based adjuvant.

17.20240115695Method of Obtaining Betulin as an Adjuvant in a Vaccine Against Coronavirus SARS-COV-2

US - 11.04.2024
Clasificación Internacional A61K 39/39 Nº de solicitud 18270390 Solicitante BETUVAKS LIMITED LIABILITY COMPANY Inventor/a Artur Alexandrovich ISAEV
The invention relates to biotechnology, and specifically to a method for creating the adjuvant betulin, suitable for preparing a vaccine against coronavirus SARS-CoV-2. The method consists in sterilizing filtration of a solution of betulin in tetrahydrofuran through a nylon membrane with a pore diameter of 0.22 μm, decreasing the tetrahydrofuran content by adding a 25-fold volume of sterile 0.01 M tris-buffer (pH 9.0+0.1), and subsequently homogenizing by ultrasound until a homogeneous suspension results, forming spherical amorphous homogeneous particles suitable for binding proteins of the SARS-CoV-2 virus. The proposed technique makes it possible to produce betulin with high sterility and immunogenicity, which improves the quality of the vaccine against the coronavirus.

18.20240123050Nucleoside-modified mRNA-lipid nanoparticle lineage vaccine for hepatitis C virus
US - 18.04.2024
Clasificación Internacional A61K 39/12 Nº de solicitud 18310066 Solicitante The Trustees of the University of Pennsylvania Inventor/a Drew Weissman
The present invention relates to compositions and methods for inducing an adaptive immune response against Hepatitis C virus (HCV) in a subject. In some embodiments, the present invention provides a composition comprising a nucleoside-modified nucleic acid molecule encoding a HCV antigen, adjuvant, or a combination thereof. For example, in some embodiments, the composition comprises a vaccine comprising a nucleoside-modified nucleic acid molecule encoding a HCV antigen, adjuvant, or a combination thereof.

19.20240115690MDCK SUSPENSION CELL LINES IN SERUM-FREE, CHEMICALLY-DEFINED MEDIA FOR VACCINE PRODUCTION
US - 11.04.2024
Clasificación Internacional A61K 39/145 Nº de solicitud 18143547 Solicitante NATIONAL HEALTH RESEARCH INSTITUTES Inventor/a Jenny BANG
Disclosed is an adapted Madin-Darby canine kidney cell line capable of suspension culture in the absence of serum, and a chemically-defined medium for culture of the adapted MDCK cell line. Further disclosed are culture methods for growing the adapted MDCK cell line and methods for producing a vaccine from the adapted MDCK cell line grown in the chemically-defined medium.

20.WO/2024/077509PHARMACEUTICAL COMPOSITION FOR PREVENTING AND TREATING POXVIRUS INFECTIONS AND DISEASES CAUSED THEREBY AND USE THEREOF
WO - 18.04.2024
Clasificación Internacional A61K 38/21 Nº de solicitud PCT/CN2022/124795 Solicitante SHANGHAI SINOBAY BIOTECHNOLOGY CO., LTD. Inventor/a XU, Jianqing
Provided in the present invention are a pharmaceutical composition for preventing and treating poxvirus infections and diseases caused thereby and the use thereof. The pharmaceutical composition comprises: (1) interferon-β and interferon-γ; or (2) an encoding gene of interferon-β, an encoding gene of interferon-γ and a vector. The pharmaceutical composition can inhibit the replication of vaccinia viruses and can be used for preventing and treating new and sudden diseases caused by poxviruses such as vaccinia viruses and monkeypox viruses.

21.20240123048ATTENUATED AFRICAN SWINE FEVER VIRUS AND ITS USE AS A VACCINE
US - 18.04.2024
Clasificación Internacional A61K 39/12 Nº de solicitud 18264040 Solicitante AGENCE NATIONALE DE SECURITE SANITAIRE DE L'ALIMENTATION DE L'ENVIRONNEMENT ET DU TRAVAIL Inventor/a Marie-Frédérique BLOT LE POTIER

The present invention relates to an attenuated African Swine Fever (ASF) virus, wherein: ·genes MGF 360-12L, 360-13L, 360-14L, 505-2R, 505-3R are deleted or are interrupted or mutated such that the genes are not transcribed and/or translated, · ORF of ASFV_G_ACD_00520 is deleted or is interrupted or mutated such that it is not transcribed and/or translated, and · genes MGF 505-1 R et 505-4R are truncated, compared to the genome of the corresponding unattenuated virus. The present invention also refers to a vaccine comprising the attenuated ASF virus, and its use in preventing African Swine Fever in a subject. The present invention also relates to an in-vitro method for obtaining the attenuated ASF virus, which comprises at least one step of thermal-attenuation of a virulent ASFV virus strain selected among Georgia 2007/1, Pig/HLJ/2018, a strain of ASF virus of genotype II or a genetically close ASF virus strain, and amplification by inoculation of Specific-Pathogen-Free pigs and selecting said attenuated ASF virus. The present invention refers to an in vitro method for the differential detection of the attenuated ASF virus and of the corresponding non-attenuated ASF virus as well.

22.WO/2024/077601PEPTIDE VACCINES AGAINST GLIOMA AND USES THEREOF
WO - 18.04.2024
Clasificación Internacional A61K 39/07 Nº de solicitud PCT/CN2022/125413 Solicitante GUANGDONG TCRCURE BIOPHARMA TECHNOLOGY CO., LTD. Inventor/a ZHANG, Lifeng
A peptide vaccine pharmaceutical composition and a method of use for stimulating immune responses against the glioma H3K27M mutation are provided. Having a length of at least 12 amino acid residues, the peptide vaccine is capable of stimulating CD4 T cell response, and optionally CD8 T cell response as well, after administration.

23.4351534SELBSTANORDNENDE VIRALE SPIKE-EABR-NANOPARTIKEL
EP - 17.04.2024
Clasificación Internacional A61K 9/51 Nº de solicitud 22820975 Solicitante CALIFORNIA INST OF TECHN Inventor/a HOFFMANN MAGNUS AG
Disclosed herein include methods, compositions, and kits suitable for use in vaccination. There are provided, in some embodiments, nucleic acid compositions (e.g., mRNA vaccine, DNA vaccine) comprising a polynucleotide encoding a fusion protein. The fusion protein can comprise an antigenic polypeptide (AP) and an endosomal sorting complex required for transport (ESCRT)-recruiting domain (ERD). A plurality of fusion proteins can be capable of self-assembling into an enveloped nanoparticle (ENP) secreted from a cell in which the fusion proteins are expressed. There are provided, in some embodiments, populations of ENPs.

24.WO/2024/081774SAPONIN DMLT ADJUVANTS AND RELATED USES
WO - 18.04.2024
Clasificación Internacional A61K 39/00 Nº de solicitud PCT/US2023/076673 Solicitante Q-VANT BIOSCIENCES, INC. Inventor/a NORTON, Elizabeth
A composition, preferably an immune adjuvant system, for vaccines containing a saponin component and a dmLT component. The combination of the saponin component and the dmLT component shows a synergistic effect in the treatment of various conditions, illnesses and diseases. The methods of use for prophylactic use or therapeutic treatment are disclosed. Exemplary adjuvant compositions include a double-mutant heat-labile toxin adjuvant derived from an *Escherichia coli* enterotoxin and a saponin, optionally with an additional vaccine component (e.g., an antigen), particularly when used in a vaccine.

25.20240123070EPITOPE PEPTIDE OF RAS G13D MUTANT AND T CELL RECEPTOR RECOGNIZING RAS G13D MUTANT
US - 18.04.2024
Clasificación Internacional A61K 39/00 Nº de solicitud 18276816 Solicitante SHANGHAI GENBASE BIOTECHNOLOGY CO., LTD. Inventor/a Nan Mou

The present invention provides an epitope peptide of a RAS G13D mutant, an antigen presenting cell expressing the epitope peptide, a tumor vaccine containing the antigen presenting cell, and a use of the tumor vaccine in the prevention or treatment of a tumor having RAS G13D mutation. The present invention also provides a T cell receptor (TCR) specifically recognizing a RAS G13D mutant, a conjugate and a fusion protein containing the TCR, an immune cell expressing the TCR, a T cell drug containing the immune cell, and a use of the T cell drug in the prevention or treatment of a tumor having RAS G13D mutation.

26.WO/2024/081936METHODS FOR ASSEMBLING PROTEIN-CONJUGATED NANOCARRIER VACCINES
WO - 18.04.2024
Clasificación Internacional A61K 9/127 Nº de solicitud PCT/US2023/076919 Solicitante NORTHWESTERN UNIVERSITY Inventor/a KAMAT, Neha, Prashant
Provided herein are vaccine compositions for preparing nanocarriers comprising NiVF and NiVG virus proteins. Methods for preparing and using the nanocarriers for eliciting neutralizing antibodies or treating a Nipah virus infection are also described herein.

27.WO/2024/077025POULTRY VACCINES AND METHODS OF PROTECTING POULTRY
WO - 11.04.2024
Clasificación Internacional A61K 39/12 Nº de solicitud PCT/US2023/075890 Solicitante ZOETIS SERVICES LLC Inventor/a AOKI, Sergio Moraes
A method of protecting an offspring of a hen against infectious bronchitis infection is provided, the method comprising administering to said hen a vaccine comprising an inactivated infectious bronchitis virus and adjuvanted with water-in-oil emulsion and an immunostimulatory oligonucleotide.

28.WO/2024/077238SYNTHETIC MULTIVALENT TUBERCULOSIS VACCINE
WO - 11.04.2024
Clasificación Internacional A61K 39/04 Nº de solicitud PCT/US2023/076240 Solicitante THE WISTAR INSTITUTE OF ANATOMY AND BIOLOGY Inventor/a PARZYCH, Elizabeth
Compositions comprising a nucleic acid molecule that encodes TB proteins are disclosed. Methods of inducing an immune response against TB in an individual are disclosed. Method of treating an individual who has been diagnosed with TB are disclosed. Method of preventing TB infection in an individual are disclosed.

29.20240123007HLA-RESTRICTED VCX/Y PEPTIDES AND T CELL RECEPTORS AND USE THEREOF
US - 18.04.2024
Clasificación Internacional A61K 36/17 Nº de solicitud 18332076 Solicitante BOARD OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM Inventor/a Cassian YEE
Provided herein are tumor-antigen VCX/Y specific peptides and engineered VCX/Y specific T cell receptors. Also provided herein are methods of generating VCX/Y-specific immune cells and their use for the treatment of cancer. In addition, the VCX/Y-specific peptides may be used as a vaccine.

30.20240124530RNA CONSTRUCT
US - 18.04.2024
Clasificación Internacional C07K 14/005 Nº de solicitud 18257698 Solicitante Imperial College Innovations Limited Inventor/a Robin Shattock
The present invention relates to RNA constructs, and particularly, although not exclusively, to mRNA constructs and saRNA replicons and to nucleic acids and expression vectors encoding such RNA constructs. The invention extends to the use of such RNA constructs in therapy, for example in treating

diseases and/or in vaccine delivery. The invention extends to pharmaceutical compositions comprising such RNA constructs, and methods and uses thereof.

31.2024202005Formulation of a peptide vaccine
AU - 11.04.2024
Clasificación Internacional Nº de solicitud 2024202005 Solicitante ISA Pharmaceuticals B.V. Inventor/a MULDER, Gwenn Eveline

32.20240115691CORONAVIRUS VACCINE COMPOSITIONS AND METHODS
US - 11.04.2024
Clasificación Internacional A61K 39/215 Nº de solicitud 18345893 Solicitante Arcturus Therapeutics, Inc. Inventor/a Sean Michael SULLIVAN
Provided herein are nucleic acid molecules encoding viral replication proteins and antigenic coronavirus proteins or fragments thereof. Also provided herein are compositions that include nucleic acid molecules encoding viral replication and antigenic proteins, and lipids. Nucleic acid molecules provided herein are useful for inducing immune responses.

33.4353257VERFAHREN ZUR HERSTELLUNG VON RNA-ZUSAMMENSETZUNGEN
EP - 17.04.2024
Clasificación Internacional A61K 39/12 Nº de solicitud 23218680 Solicitante CUREVAC MFG GMBH Inventor/a MUTZKE THORSTEN
The present invention relates to a method for producing a liquid composition comprising a nanoparticle comprising at least one RNA and at least one cationic or polycationic compound, advantageously on a large scale suitable for pharmaceutical applications. The present invention further concerns the use of the inventive method in the manufacture of a medicament or a vaccine. Furthermore, the invention relates to compositions containing the RNA-comprising nanoparticle, and to pharmaceutical compositions comprising the same.

34.20240123062BIVALENT DENGUE/HEPATITUS B VACCINES
US - 18.04.2024
Clasificación Internacional A61K 39/295 Nº de solicitud 18471955 Solicitante University of Massachusetts Inventor/a Daniel H. Libraty
The present invention relates to the construction of and immunization with viral vaccines. In particular, bivalent vaccines that are capable of providing simultaneous virus infection protection for two or more different viruses. Furthermore, the bivalent vaccines contemplated herein are contemplated as being effective in a neonatal mammal. One such bivalent viral vaccine comprises two antigenic epitopes against the dengue viruses and at least one antigenic epitope against hepatitis B virus. Immunization cross-reactivity may also provide infection protection against other viruses as well.

35.4351638IMPFSTOFF MIT VIRUSÄHNLICHEN PARTIKELN FÜR CORONAVIRUS
EP - 17.04.2024
Clasificación Internacional A61K 39/215 Nº de solicitud 22820815 Solicitante ICOSAVAX INC Inventor/a KANESA-THASAN NIRANJAN
The present disclosure relates to targeting SARS-CoV-2, in particular, prevalent strains of SARS-CoV-2, and methods of using such vaccines to induce neutralizing antibody levels against SARS-CoV-2.

36.WO/2024/074676ARTIFICIAL POLYNUCLEOTIDES FOR EXPRESSING PROTEINS
WO - 11.04.2024
Clasificación Internacional C12N 15/67 Nº de solicitud PCT/EP2023/077704 Solicitante CERTEST BIOTEC, S.L. Inventor/a BROSET BLASCO, Esther

The present invention provides a polynucleotide comprising, in the 5' to 3' direction, a 5' untranslated region (5'-UTR) and an open reading frame (ORF), wherein the 5'-UTR comprises at least two tandem repeats of sequence 5'-GCCNCC-3' operatively linked to the ORF, and wherein N is any nucleotide. The invention also provides a composition comprising a lipid nanoparticle and the polynucleotide and a pharmaceutical composition, and their use in medicine, particularly for use as a vaccine or for use in gene therapy.

37.20240115666COMPOSITIONS AND METHODS FOR REDUCING GAMMA-GLUTAMYLTRANSFERASE LEVELS
US - 11.04.2024
Clasificación Internacional A61K 38/39 Nº de solicitud 18370922 Solicitante Lile Method Research, LLC Inventor/a Laura Lile
Glutathione support compositions and methods for increasing glutathione levels, especially intracellular glutathione levels, and/or methods for improving vaccine therapy and reducing gamma-glutamyltransferase (GGT) levels in an individual. In addition, the disclosure describes methods for boosting immunity, treating and preventing infectious diseases such as tuberculosis and MRSA, and combating the effects of aging and age-related stress, oxidative stress, and inflammation. The glutathione support compositions include a collagen source, a glutamate source, a cysteine source, and a selenium source, and, optionally, a boron source.

38.20240116962PYRIDINE-2-AMINE DERIVATIVE AND PHARMACEUTICAL COMPOSITION AND USE THEREOF
US - 11.04.2024
Clasificación Internacional C07F 9/58 Nº de solicitud 18259762 Solicitante TSINGHUA UNIVERSITY Inventor/a Xuebin LIAO
Disclosed in the present invention are a pyridine-2-amine derivative and a pharmaceutical composition and use thereof. The pyridine-2-amine derivative can be used as a TLR8 selective agonist, has the characteristics of high selectivity, strong activity and high safety, can be used for preventing and/or treating diseases related to TLR activity, for example, diseases caused by or related to pathogen infection, immunological diseases, inflammation, and tumors, can also be used for preparing a vaccine adjuvant to enhance immune response, and has better application prospects and research and development value.

39.20240123044PEPTIDES AND COMBINATION OF PEPTIDES FOR USE IN IMMUNOTHERAPY AGAINST NON-SMALL CELL LUNG CANCER AND OTHER CANCERS
US - 18.04.2024
Clasificación Internacional A61K 39/00 Nº de solicitud 18490581 Solicitante Immatics Biotechnologies GmbH Inventor/a Toni WEINSCHENK
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.

40.4353321KOC1-ABGELEITETES PEPTID UND IMPFSTOFF DAMIT
EP - 17.04.2024
Clasificación Internacional A61P 35/00 Nº de solicitud 24159394 Solicitante ONCOTHERAPY SCIENCE INC Inventor/a TSUNODA TAKUYA

The present invention provides KOC1-derived epitope peptides having the ability to induce cytotoxic T cells. The present invention further provides polynucleotides encoding the peptides, antigen-presenting cells presenting the peptides, and cytotoxic T cells targeting the peptides, as well as methods of inducing the antigen-presenting cells or CTLs. The present invention also provides compositions and pharmaceutical compositions containing them as an active ingredient. Further, the present invention provides methods of treating and/or preventing cancer, and/or preventing postoperative recurrence thereof, using the peptides, polynucleotides, antigen-presenting cells, cytotoxic T cells or pharmaceutical compositions of the present invention. Methods of inducing an immune response against cancer are also provided.

41.WO/2024/077130METHODS AND COMPOSITIONS FOR TREATING BLADDER CANCER
WO - 11.04.2024
Clasificación Internacional A61K 35/13 Nº de solicitud PCT/US2023/076063 Solicitante THOMAS JEFFERSON UNIVERSITY Inventor/a ANDREWS, David
The present disclosure relates to compositions and methods for treating bladder cancer. In some embodiments the compositions and methods involve using antisense (AS) nucleic acids directed against Insulin-like Growth Factor 1 Receptor (IGF-1R). The AS may be administered to the patients systemically, or may be used to produce an autologous cancer cell vaccine. In embodiments, the AS are provided in an implantable irradiated biodiffusion chamber comprising tumor cells and an effective amount of the AS. The chambers are irradiated and implanted in the abdomen of subjects and stimulate an immune response that attacks tumors distally. The compositions and methods disclosed herein may be used to treat many different kinds of bladder cancer, including metastatic breast cancer.

42.20240115676SILICIFIED TUMOR CELL COMPOSITIONS AND METHODS
US - 11.04.2024
Clasificación Internacional A61K 39/00 Nº de solicitud 18267878 Solicitante Rita E. Serda Inventor/a JIMIN GUO
In one aspect, a method generally includes obtaining a dried silicified cell that has been stored for at least 24 hours without cryopreservation and rehydrating the dried silicified cell in a pharmaceutically acceptable carrier. The method can further include surface modifying the silicified cell with at least one immunogenic molecule. The method can further include administering the rehydrated silicified cell to a subject. In some embodiment, the dried silicified cell has been stored for at least 14 days without cryopreservation. In another aspect, a method of treating a tumor in a subject generally includes administering to the subject a chemotherapeutic agent effective to treat the tumor and administering to the subject a silicified cell vaccine effective to treat the tumor.

43.WO/2024/081906A MAPS VACCINE TARGETING GROUP B STREPTOCOCCUS (GBS)
WO - 18.04.2024
Clasificación Internacional A61K 39/02 Nº de solicitud PCT/US2023/076878 Solicitante THE CHILDREN'S MEDICAL CENTER CORPORATION Inventor/a THOMPSON, Claudette
Technologies for the prevention and/or treatment of GBS infections. The technology relates to compositions, including vaccines compositions and methods comprising an immunogenic complex that is a GBS multiple antigen presenting system (MAPS-GBS), where two or more biotinylated GBS polysaccharide antigens are joined together by non-covalent associations with one or more bifunctional fusion proteins comprising, in any order, (i) a sialic acid binding protein (SBD), a GBS polypeptide antigen and (iii) a biotin-binding moiety (BBD), thereby facilitating the linking of multiple GBS polysaccharide antigens together in the complex to form a MAPS-GBS immunogenic complex. The polysaccharide antigens that are linked can be on the same polysaccharide macromolecule or on distinct polysaccharide macromolecules.

44.4352078PSEUDOVIRIONEN DES TOBAMOVIRUS ZUR STABILISIERUNG VON EINZELSTRÄNGIGER RNA
EP - 17.04.2024
Clasificación Internacional C07K 14/005 Nº de solicitud 22735995 Solicitante UNIV CAPE TOWN Inventor/a MEYERS ANN ELIZABETH
Provided herein is a method for stabilising a single stranded RNA (ssRNA) by encapsidation of the ssRNA with a tobamovirus coat protein to obtain a pseudovirion (PsV), the method comprising expressing a tobamovirus coat protein and the ssRNA comprising a tobamovirus encapsidation origin (*OriA*), wherein the expressed tobamovirus coat protein interacts with the *OriA* sequence on the ssRNA to initiate encapsidation of the ssRNA by the tobamovirus coat protein, thereby forming a pseudovirion. The PsVs produced according to the method can be used as a diagnostic control composition, where the ssRNA is a sequence detected by a molecular diagnostic assay. The pseudovirions may also be used as a vaccine to elicit an immune response in a subject, and in pharmaceutical compositions to be administered to a subject.

45.20240117010BINDING PROTEIN SPECIFIC FOR THE SPIKE PROTEIN OF SEVERE ACUTE RESPIRATORY SYNDROME CORONA VIRUS 2 (SARS-COV-2)
US - 11.04.2024
Clasificación Internacional C07K 16/10 Nº de solicitud 18012284 Solicitante Navigo Proteins GmbH Inventor/a Mathias Kahl
The present invention relates to novel proteins that specifically bind to the spike protein or domains thereof of the severe acute respiratory syndrome corona virus 2 (SARS-Cov-2) or variants of SARS-Cov-2. The proteins of the present invention represent advanced and powerful tools, for example for the purification of the virus or a vaccine for the virus, by virtue of said binding affinity for spike protein or domains of the spike protein of SARS-Cov-2 or variants thereof. Thus, the novel proteins of the present invention are particularly advantageous because they allow precise capturing of proteins or particles comprising spike proteins, S1 domain, and/or RBD in affinity chromatography. Further, the novel proteins of the present invention can be used in medical applications caused by or related to SARS-Cov-2 or variants thereof.

46.WO/2024/081696COMPOSITIONS CONTAINING PHASE CHANGE MATERIALS, METHODS FOR FORMING OBJECTS USING THE SAME, AND METHOD FOR USING THE SAME
WO - 18.04.2024
Clasificación Internacional A61L 31/14 Nº de solicitud PCT/US2023/076543 Solicitante PHASE CHANGE ENERGY SOLUTIONS, INC. Inventor/a SAWAFTA, Reyard, I.
A PCM-containing composition described herein includes at least the following components: a PCM-containing plasticizer component; and a scaffold component, which may or may not contain a PCM. The latent heat of fusion of the scaffold component used in these compositions is from 50 J/g to 250 J/g less, or from 75 J/g to 250 J/g less, than a latent heat of fusion of the PCM-containing plasticizer component. Also described herein is a method of forming extruded objects that includes extruding an extrusion mixture of a PCM-containing plasticizer component and a scaffold component. The PCM-containing compositions, or extruded objects formed from the composition may be used for controlling temperature and/or storing thermal energy at a desired temperature for a particular end-use, e.g., vaccine storage or transport, pharmaceutical storage or transport, food storage or transport, etc.

47.4352247FREISETZUNGSTEST ZUR BESTIMMUNG DER WIRKSAMKEIT EINES SELBSTVERSTÄRKENDEN RNA-WIRKSTOFFPRODUKTS UND VERFAHREN ZUR VERWENDUNG
EP - 17.04.2024

Clasificación Internacional C12Q 1/6804 Nº de solicitud 22747112 Solicitante GLAXOSMITHKLINE BIOLOGICALS SA Inventor/a KONG QIONGMAN
A potency release assay for measuring the potency of drug product composition comprising self-amplifying mRNA (SAM) that encodes at least one immunogenic polypeptide or at least one therapeutic peptide and a non-viral delivery system is described. In one embodiment the drug product is a vaccine comprising SAM and a non-viral delivery system such as SAM/lipid nanoparticle (LNP) delivery system, a Cationic Nanoemulsion (CNE) delivery system, or another SAM delivery system. It is demonstrated that the potency of a SAM drug product can be assessed in an in vitro system, at the RNA amplification stage (agnostic assay), by measuring the amount of double-stranded RNA (dsRNA) in cells which have been transfected with the SAM in the drug product. Thus, dsRNA can be used as a surrogate endpoint for potency. It is demonstrated that there is a very high correlation between total dsRNA in a cell culture transfected with the SAM and the potency of the SAM based drug product.

48.WO/2024/073860STABILIZATION OF VIRUS-BASED THERAPEUTIC AGENT
WO - 11.04.2024
Clasificación Internacional A61K 47/26 Nº de solicitud PCT/CA2023/051334 Solicitante ELAREX INC. Inventor/a IWASHKIW, Jeremy Andrew
A virus-based active agent is mixed with trehalose and water and dried. The mixture may also contain one or more of pullulan and albumin. The mixture may be dried to a moisture content of 0.1-10%. The drying may be under vacuum sufficient to produce a foam. Some or all of the drying may be at a temperature in the range of 15-40oC, or at a temperature in the range of 1-15oC, or both. The active agent may be based on a vesicular stomatitis virus (VSV) or an adenovirus (AdV). The dried mixture may be stored at a temperature in the range of 1-55oC. A composition includes a virus, which may be a derived or modified form of a virus such as VSV or AdV. The composition also includes trehalose and optionally one or more of pullulan, and albumin. The composition may be used for a virus-based vaccine.

49.20240123059Kaposi's Sarcoma Associated Herpesvirus Vaccine and Methods of Making and Using Thereof
US - 18.04.2024
Clasificación Internacional A61K 39/245 Nº de solicitud 18487526 Solicitante The Regents of the University of California Inventor/a Ting-Ting Wu
Disclosed herein are compositions and methods for inducing and/or enhancing complement-mediated neutralization of a herpesvirus.

50.20240123061Therapeutic Vaccine for Hepatitis B Virus (HBV) using the HBV Core Antigen
US - 18.04.2024
Clasificación Internacional A61K 39/29 Nº de solicitud 18533676 Solicitante University of Washington Inventor/a Edward A. CLARK
Provided herein are compositions of CD1280 binding proteins and a Hepatitis B virus core antigen (HBcAg) and/or a Hepatitis B virus E antigen (HBeAg), or antigenic fragments or mutants thereof, attached to the CD180 binding protein, and methods for using the compositions to treat or limit the development of hepatitis-B virus (HBV)-related disorders.

51.WO/2024/075067CANCER VACCINE COMPOSITION THAT COMPRISES A HOST CELL EXPRESSING GLYPICAN-1 (GPC-1)
WO - 11.04.2024
Clasificación Internacional A61P 35/00 Nº de solicitud PCT/IB2023/060036 Solicitante CENTRO DI RIFERIMENTO ONCOLOGICO Inventor/a TOFFOLI, Giuseppe

The present invention relates to a compound selected from a polynucleotide coding for Glypican-1, a vector, and a host cell genetically engineered so as to express Glypican-1 The present invention further relates to the use of the compound for the prevention or treatment of a tumour.

52.WO/2024/077288IMMUNOGENIC COMPOSITIONS AGAINST THE OMICRON VARIANT OF SEVERE ACUTE RESPIRATORY SYNDROME CORONAVIRUS 2 (SARS-COV-2)
WO - 11.04.2024
Clasificación Internacional A61K 39/215 Nº de solicitud PCT/US2023/076336 Solicitante MEDIGEN VACCINE BIOLOGICS CORPORATION Inventor/a CHEN, Charles
The present invention relates to immunogenic compositions against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), especially to immunogenic compositions having recombinant SARS-CoV-2 S proteins derived from Omicron subvariants.

53.20240124560HUMAN BROADLY NEUTRALIZING ANTIBODIES AGAINST THE MEMBRANE-PROXIMAL EXTERNAL REGION OF HIV ENV FOR VACCINE DESIGN AND INTERVENTION
US - 18.04.2024
Clasificación Internacional C07K 16/10 Nº de solicitud 17768701 Solicitante The Scripps Research Institute Inventor/a Michael ZWICK
The present disclosure relates to anti-HIV antibodies and their use in the treatment or prevention of HIV/AIDS and in the development of HIV vaccines.

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