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VacCiencia es una publicación dirigida a investigadores y especialistas dedicados a la vacunología y temas afines, con el ojetivo de serle útil.

Usted puede realizar sugerencias sobre los contenidos y de esa forma crear una retroalimentación que nos permita acercarnos más a sus necesidades de información.

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Qdenga: A Promising Dengue Vaccine, But Not a Complete Solution

Apr 1. As dengue cases continue to rise across tropical regions, the arrival of newer vaccines like Qdenga has generated optimism among public health experts. Developed as a next-generation dengue vaccine, Qdenga is being positioned as a significant tool in reducing infections and hospitalisations.

"A New Hope in the Fight Against Dengue."

However, experts caution that while the vaccine marks meaningful progress, it is not a "silver bullet" capable of eliminating dengue entirely.

What Is Qdenga and How It Works

Qdenga is a tetravalent dengue vaccine designed to protect against all four serotypes of the dengue virus. It uses weakened forms of the virus to stimulate the body's immune response without causing the disease itself.

Unlike earlier vaccines, Qdenga can be administered to individuals regardless of whether they have had dengue before, making it more versatile for widespread use in endemic regions.

The vaccine is typically given in two doses, spaced a few months apart, and has already been approved in multiple countries worldwide.

Effectiveness: Strong but Not Absolute

Clinical studies indicate that Qdenga offers moderate to strong protection against dengue, particularly in reducing severe cases and hospitalisations.

Around 60% effectiveness in preventing confirmed dengue cases over several years

Over 80% protection against hospitalisation in some studies

Overall efficacy ranging between 70% and 84% in broader analyses

These numbers highlight that while the vaccine significantly lowers risk, it does not guarantee complete immunity.

Protection levels can also vary depending on factors such as prior exposure to dengue and the specific virus strain.

Limitations and Uncertainties

Despite its promise, Qdenga has certain limitations that prevent it from being a standalone solution.

One key challenge is the complex nature of the dengue virus itself. With four different serotypes circulating, achieving uniform protection is difficult.

Evidence also suggests that the vaccine may offer uneven protection against all serotypes, particularly in individuals who have never been infected before.

Global health bodies have pointed out that more real-world data is needed to fully understand its long-term effectiveness across diverse populations.

Why It's Not a "Silver Bullet"

Public health experts emphasize that vaccines alone cannot control dengue for several reasons:

1. Mosquito Control Remains Critical

   Dengue is transmitted by Aedes mosquitoes, meaning infection risk persists unless mosquito populations are effectively managed.

2. Partial Protection

   Even vaccinated individuals may still contract dengue, though usually in less severe forms.

3. Urban and Climate Challenges

   Rapid urbanisation, water stagnation, and climate change are expanding mosquito habitats, increasing transmission risk.

4. Need for Integrated Strategy

   Vaccination must be combined with sanitation, awareness campaigns, and vector control measures to achieve meaningful impact.

India's Perspective and Preparedness

India, which faces seasonal dengue outbreaks, is closely monitoring the development and rollout of vaccines like Qdenga. Regulatory authorities are evaluating its potential inclusion in public health programmes.

The country is also exploring indigenous vaccine development alongside global collaborations to strengthen its response to mosquito-borne diseases.

With dengue posing a recurring public health challenge, especially during monsoon seasons, a multi-pronged strategy is becoming increasingly essential.

The Road Ahead for Dengue Prevention

The introduction of Qdenga represents a significant advancement in dengue prevention, offering a scientifically validated tool to reduce disease burden.

However, experts stress that its success will depend on:

- Careful rollout strategies
- Continuous monitoring of effectiveness
- Public awareness on proper usage
- Integration with broader disease-control measures

Vaccination campaigns must be supported by sustained efforts in urban planning, waste management, and healthcare infrastructure.

Conclusion

Qdenga marks an important milestone in the global fight against dengue, offering hope for reducing infections and saving lives. Yet, it is not a complete solution.

Dengue control will continue to depend on a combination of vaccination, mosquito control, and public health interventions. For policymakers and healthcare leaders, the focus must remain on building a comprehensive strategy rather than relying on a single breakthrough.

In the evolving battle against dengue, Qdenga is a powerful tool—but not the final answer.

Fuente: CEO INDIA MAGAZINE. Disponible en https://n9.cl/de4ad

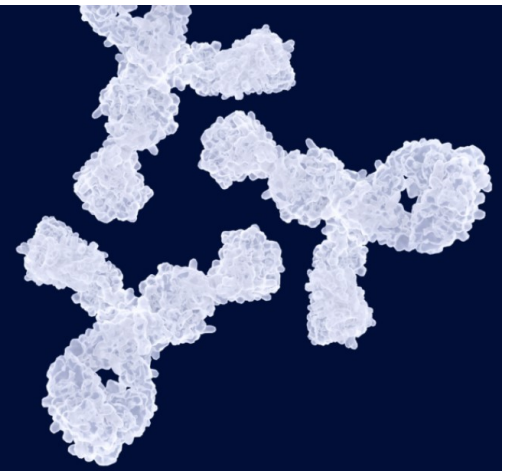
IAVI announces the onset of first-in-human Phase 1 clinical trial of broadly neutralizing antibodies (bnAbs) to prevent HIV transmission

Apr 1. IAVI is pleased to announce the use of its broadly neutralizing antibody (bnAb), ePGT121v1-LS, in a first-in-human, Phase 1 clinical trial that began on March 19, 2026. IAVI's HIV bnAbs program is designed to develop efficacious antibodies that can prevent HIV transmission. The program is specifically geared for eventual use to prevent HIV transmission to infants during the post-natal period. With 120,000 children newly acquiring HIV in 2024 alone, and 50 percent of infant HIV acquisition taking place in the breastfeeding period, there is a clear need for additional prevention tools developed to protect this vulnerable population. The onset of this clinical trial is a significant step in examining whether a combination of broadly neutralizing antibodies could be this new tool. With robust safety and dose data collected through this study, which has only adult participants, IAVI's team will have the necessary data to plan future studies in infants.

"The trial, run by the HIV Vaccines Trial Network (HVTN) and HIV Prevention Trials Network (HPTN), will evaluate the safety, dosing, pharmacokinetics, and ability of four bnAbs to neutralize HIV."

This clinical trial, HVTN 141/HPTN105, will use four antibodies that target different HIV receptors. Based on past studies, the antibodies together are expected to neutralize more strains of HIV than any antibody alone. IAVI's antibody will be given by itself and together with two of the three additional antibodies, VRC07-523LS and PGDM1400LS. The fourth antibody, PGT121.414.LS, will be given by itself and in combination with these same two antibodies. Doses will be delivered by IV, under the skin, and via intramuscular injection. This will allow for the study to examine the safety of the antibodies; dose; pharmacokinetics of the antibodies, which will allow investigators to see how long the antibodies last in the blood; and measurement of how effectively the antibodies neutralize HIV (serum neutralizing activity).

The study, which is sponsored by the Division of AIDS, National Institutes of Allery and Infectious Diseases (DAIDS) will enroll 118 adult participants without HIV in three groups. Group A will receive antibodies through intravenous infusion, and participants will be split further into groups to receive doses of either IAVI's antibody independently or in combination with the other two antibodies. Group B will also be split to receive either IAVI's antibody in isolation or in combination but will receive doses through injections just under the skin. Group C will receive the antibodies intramuscularly.

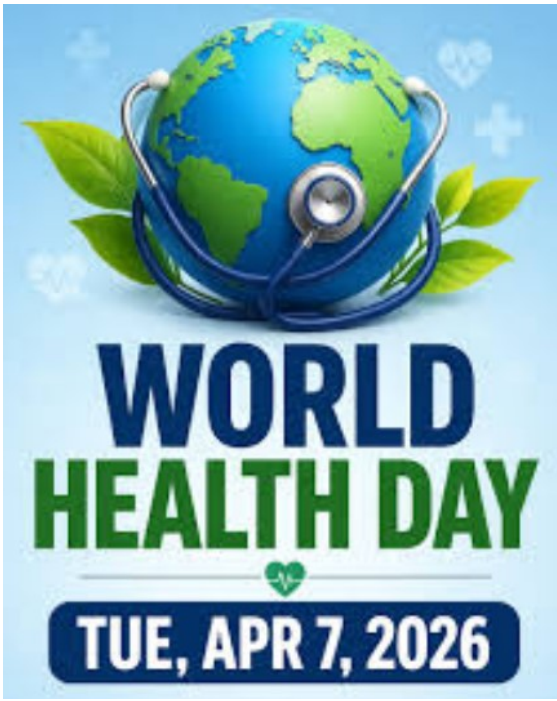


ePGT121v1-LS is an engineered version of the antibody PGT121 which was isolated by IAVI and partners from blood samples taken from IAVI's Protocol G. Protocol G was a cohort study run by IAVI that collected samples from HIV positive adult participants in Uganda, Zambia, Rwanda, Kenya, Nigeria, Cote d'Ivoire, South Africa, India, Thailand, Australia, the U.K., and the U.S. The engineering of PGT121 to create ePGT121v1-LS was conducted by IAVI and our partner, Scripps Research. This antibody was selected for further development following evidence of strong potency in pre-clinical trials.

The study is due to take place across ten sites in the U.S. and Peru. The sites in the U.S. include: Alabama CRS, in Birmingham, AL; Bridge HIV CRS in San Francisco, CA; George Washington University CRS in Washington D.C., the Ponce de Leon Center CRS in Atlanta, GA; Brigham and Women's Hospital CRS in Boston, MA; Penn Prevention CRS in Philadelphia PA; Vanderbilt Vaccine CRS in Nashville TN; and the Houston Advancing Research Team CRS in Houston TX. Research will also be conducted at two clinical trial sites in Peru: Via Libre CRS in Lima Cercado and Centro de Investigaciones Tecnológicas, Biomédicas y Medioambientales CRS (CITBM) in Bellavista, Provincia Constitucional del Callao, Peru.

Fuente: IAVI International AIDS Vaccine Initiative. Disponible en https://n9.cl/n79cd

World Health Day 2026: Standing with science through a One Health approach



Apr 1. This year's World Health Day, 7 April 2026, kick-starts a year-long campaign to celebrate the power of scientific collaboration to advance health, save lives and transform societies. This includes using science to protect the health of people, animals, plants and the planet.

Human health is inextricably linked and interdependent with that of domestic and wild animals, plants and the wider environment, necessitating an integrated approach to sustainably balance and optimize the health of all of these elements – a so-called One Health approach.

"Health security begins where humans, animals and the environment meet," explains Dr Ihor Perehinets, Health Security and Regional Emergency Director, WHO/Europe. "The COVID-19 pandemic taught us that it is not a question of if new health threats will emerge but when, so protecting human health requires strengthening all the systems that sustain life, through incorporating nature and biodiversity into health policy and investing in laboratories for disease surveillance, amongst other things. Each year, WHO/Europe analyses more than 240 000 potential signals of public health events, including disease outbreaks across the WHO European Region, drawing on data from all 53 Member States. We must take a One Health approach to prevent and prepare for future threats. By doing this and building bridges across sectors, we can better prevent, detect, respond and recover, while building a more resilient and collaborative approach to protecting health."

To prevent future pandemics, it's crucial to improve our understanding of the animal–human–environment connection. This requires collaboration, coordination, communication and capacity-building.

Collaboration on One Health

WHO is working with the World Organisation for Animal Health (WOAH), Food and Agriculture Organization of the United Nations (FAO) and United Nations Environment Programme (UNEP), forming a quadripartite for coordinated One Health action.

In practical terms, this means:

- integrated or interoperable surveillance systems linking human, animal and environmental health data;
- joint risk assessments between the health, agriculture and environment sectors;
- shared laboratory capacity and reporting systems;
- coordinated outbreak investigations;
- cross-border information exchange; and
- linking communities to regional, national and international prevention, preparedness and response efforts.

Collaborating centres key to global action

WHO's worldwide network of collaborating centres support the translation of the One Health approach into practical action at country and regional levels. This is done by focusing on strengthening evidence, fostering cross-sectoral collaboration and supporting the implementation of One Health strategies.

Dr Tony Holohan is the Director of the University College Dublin Collaborating Centre, in Ireland, the first collaborating centre on One Health to be established in the Region.

"One Health is important for health security, and it's important to understand the way in which threats to our security or health can arise from a variety of different sources, and we need to frame our response based on that understanding," he says.

He explains the work his centre does. "Our faculty is organized across 7 different clusters that cover things like antimicrobial resistance (AMR), pandemic preparedness, food security and food systems, governance, literacy, communications – all trying to increase understanding of the intersectoral nature of many of the threats that exist to human health, and to bring many people into the conversation."

Dr Holohan gives an example of this through the centre's work on tackling AMR. He believes that while the understanding of how antibiotics are used in human and animal populations is generally quite good, tackling the problem requires many different disciplines to come together as one.

"Scientists are not always as good as they would like to be in translating their knowledge into effective action – a much broader community of involvement is needed to include those who work in behavioural sciences, economics, the arts and the humanities, for instance, so that people can understand the issue and are willing to change their behaviour.

That's why we're building teaching programmes like a new Masters in One Health, new research programmes, and building capacity across the university generally to increase our ability to address these problems in a more coherent, transdisciplinary way."

Professor René S. Hendriksen coordinates the work of the WHO Collaborating Centre for Antimicrobial Resistance in Foodborne Pathogens and Genomics at the Technical University of Denmark in Copenhagen. He guides a multidisciplinary team supporting Member States to strengthen their AMR surveillance and whole genome sequencing capacity, while integrating One Health approaches.

"Our centre's work is firmly anchored in the One Health agenda, recognizing that AMR emerges and spreads across the interconnected systems of human health, animal health, food production and the environment," he explains. "We collaborate closely with WHO and agencies across Europe and the world; working together in this way allows us to harmonize laboratory methods, strengthen national reference laboratories and support the development of interoperable surveillance systems that reflect the true complexity of AMR."

Together for health

Prevention and preparedness for future health threats requires more than technical solutions – it depends on trust, transparency, collaboration and engagement with communities.

As Dr Holohan emphasizes, building resilience means working closely with populations, strengthening understanding and ensuring people are equipped to act on scientific advice.

"And without that trust in science, that togetherness and solidarity, we can't effectively implement the measures that, based on scientific research, we know are likely to work," he says.

A One Health approach brings these elements together, ensuring that science, systems and societies work as one to protect health.

Fuente: WHO. Disponible en https://n9.cl/qmbdq

China's Zhifei Revises MSD Agreement After Missing Vaccine Purchase Targets

Apr 2. Zhifei Biological Products said it has revised its vaccine procurement and distribution agreement with Merck Sharp & Dohme, removing minimum purchase commitments and shifting to a rolling demand-based model, as the Chinese firm seeks to reduce operating risks amid weaker vaccine demand.

The new agreement replaces a January 2023 deal and removes the previous minimum procurement requirement of CNY97.9 billion (USD13.6 billion) for 2024 through 2026, after Zhifei struggled to meet the targets due to slowing demand growth and intensifying

competition from domestic human papillomavirus vaccines.

Zhifei said in a regulatory filing yesterday that it has signed a new three-year vaccine distribution and joint marketing agreement with MSD, under which the previous agreement will automatically terminate once the new contract takes effect. Merck will continue to supply three products -- Gardasil 9, a nine-valent HPV vaccine; RotaTeq, a pentavalent rotavirus vaccine; and Pneumovax 23, a 23-valent pneumococcal polysaccharide vaccine.

Under the new agreement, Zhifei will retain exclusive rights to import, co-promote, distribute and sell the products in China's mainland. Instead of fixed procurement commitments, the two companies will determine supply plans based on market demand forecasts and actual vaccination volumes, with Zhifei making rolling purchases accordingly.

The adjustment will improve both parties' ability to respond to market changes, while easing Zhifei's operational pressure and lowering business risks, the company said. The agreement will run from its effective date through Dec. 31, 2028, and may be extended by another two years upon mutual agreement.

Zhifei has been MSD'S exclusive distributor in China's mainland since their vaccine partnership began in 2011. Under the previous agreement signed in January 2023, Zhifei committed to minimum purchases totaling CNY97.9 billion over three years, including CNY33.5 billion in 2024 and CNY27 billion in 2025.

However, overly optimistic projections for market demand, combined with the rapid launch of domestic HPV vaccines, made it difficult for Zhifei to meet those targets.

Company data show Zhifei's annual procurement value peaked at CNY34.8 billion in 2023 before falling to CNY26.4 billion in 2024 and plunging further to CNY2.2 billion in 2025.

The eased requirement failed to lift investor sentiment. Zhifei's shares [SHE: 300122] fell as much as 4.4 percent intraday today before briefly rebounding above the previous close. The stock eventually closed down 2.2 percent at CNY15.33 (USD2.10). Zhifei's share price has dropped almost 80 percent from the time when the previous agreement was signed in January 2023.

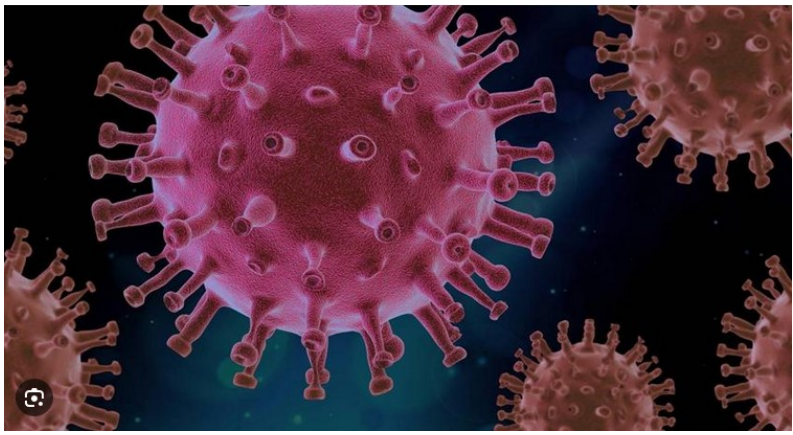
Fuente: Yicai Global. Disponible en https://n9.cl/suxo5o

Los niños pueden tener más probabilidades de contraer la nueva variante "cigarra" de COVID-19, dicen los científicos

3 abr. Una variante del virus que causa la COVID-19, con muchas mutaciones, parece estar afectando principalmente a los niños, dicen los científicos, aunque no está causando una enfermedad más grave, ni en los niños ni en los adultos.

Más bien, los expertos dicen que el hecho de que el virus esté rompiendo su patrón de ser una amenaza, principalmente, para los adultos mayores es un detalle revelador. Es algo que hay que estudiar y entender para que los científicos puedan predecir mejor el comportamiento de este virus en constante evolución.

Aunque la COVID-19 está circulando en un nivel muy bajo en este momento, EE.UU. apenas está empezando a lidiar con esta rama durmiente del árbol genealógico de ómicron, una variante llamada BA.3.2, que ha sido apodada "cigarra", por la capacidad del insecto de desaparecer y luego reaparecer tras años bajo tierra.



Esta variante se ha detectado en 23 países y en aguas residuales de 25 estados de EE.UU., según los Centros para el Control y la Prevención de Enfermedades de EE.UU. (CDC), que el mes pasado publicaron discretamente un informe sobre el virus. Parece estar circulando en EE.UU. en niveles bajos, aunque las pruebas se han reducido desde el punto más alto de la pandemia, por lo que podría estar más extendida de lo que se sabe actualmente.

Se cree que las vacunas actuales todavía ofrecen cierta protección, y los científicos dicen que la nueva variante es tan "meh" en términos de los problemas que ha estado causando que ni siquiera está claro si necesitamos actualizar las vacunas para proteger mejor contra ella.

"Es muy interesante desde el punto de vista de la evolución viral", dijo el doctor Alex Greninger, jefe de la División de Diagnóstico de Enfermedades Infecciosas del Departamento de Medicina de Laboratorio de la Universidad de Washington.

Señaló que, para una variante que apareció por primera vez en noviembre de 2024, sin duda se está tomando su tiempo para moverse, y puede que termine teniendo muy poco impacto en el mundo real.

"Ha sido alrededor de un año y medio que esto ha tenido para seguir su curso o aumentar", dijo Greninger, y no ha hecho gran cosa. "No es una nada, pero es como agregar cebollas a la parrilla a tu hamburguesa". Otros expertos coincidieron.

"No creo que deba incluirse en la próxima vacuna", dijo el doctor Tulio de Oliveira, quien dirige el Centro de Respuesta e Innovación ante Epidemias, afiliado a la Universidad de Stellenbosch en Sudáfrica. Ese país ha liderado al mundo en la identificación de nuevas variantes de ómicron, incluida esta.

"Por el momento, con la inmunidad previa y la vacunación previa, no observamos ninguna señal de aumento de hospitalizaciones y muertes" —y además de eso, dijo Oliveira, no parece que el público tenga mucho apetito por una nueva campaña de vacunación.

Cree que es más importante vigilarla y asegurarse de que no cambie de maneras que la conviertan en un problema.

La rutina de desaparición de esta variante

Los científicos que buscan variantes inusuales de COVID-19 esperaron para darle a esta un nombre coloquial, o común.

"Tiene que parecer que va a despegar o que será de interés más amplio… o si no, no vemos que un apodo sea útil", dijo el doctor T. Ryan Gregory, biólogo evolutivo de la Universidad de Guelph en Canada.

Él y un grupo de colegas cazadores de variantes comenzaron a discutir nombres para BA.3.2 alrededor del momento en que la Organización Mundial de la Salud la designó como una "variante bajo monitoreo" en diciembre. El mismo grupo ha dado a variantes notables anteriores nombres de criaturas mitológicas (Cerbero, Kraken), constelaciones (Eris) e incluso tipos de nubes (Stratus, Nimbus).

"Cigarra" parecía ser la opción adecuada para esta porque ha hecho el mismo tipo de rutina de desaparición.

Cuando ómicron se extendió por el mundo a finales de 2021, las pruebas genéticas detectaron cinco ramas principales de su árbol genealógico. Cuatro de esas ramas desde entonces han impulsado olas de infecciones en todo el mundo. Pero una, denominada BA.3, fue una excepción. Se detectó por primera vez en 2022, pero luego, misteriosamente, se quedó en silencio.

Los científicos creen que, durante dos años, BA.3 infectó a una sola persona que no tenía suficiente función inmunitaria como para combatirlo por completo, dijo Gregory. Este tipo de infecciones crónicas son una guerra prolongada entre el virus y el sistema inmunitario, en la que el cuerpo ejerce presión sobre el virus que hace que cambie constantemente. En algunos casos, después de una infección de largo plazo, el virus puede volver a emerger y empezar a circular otra vez, como parece haber ocurrido en este caso.

En noviembre de 2024, BA.3.2 apareció en un hisopado nasal de un niño de 5 años en Sudáfrica, y se veía muy diferente de su virus progenitor.

Normalmente, las nuevas ramificaciones de variantes pueden tener un puñado de cambios genéticos en comparación con el virus del que evolucionaron. BA.3.2 tiene 53 cambios en su espícula —la parte que se acopla a las células— en comparación con BA.3 y aproximadamente 70 mutaciones en comparación con el coronavirus original que surgió en 2019.

Se detectó por primera vez en EE.UU. el verano pasado, en un viajero procedente de los Países Bajos. En enero, la primera muestra clínica de un paciente enfermo resultó ser BA.3.2.

Sus numerosos cambios podrían ayudarle a eludir la inmunidad creada por infecciones previas y la vacunación, pero, a diferencia de otras variantes de SARS-CoV-2 con muchas mutaciones, esta no ha mostrado señales de dominio global.

En algún punto del camino, BA.3.2 perdió su capacidad de unirse con fuerza a los receptores ACE-2 en las células, las puertas por las que el virus necesita pasar para causar infecciones. Eso significa que ha sido un competidor intermedio en el escenario global y no ha impulsado nuevas olas de enfermedad.

BA.3.2 ni siquiera aparece actualmente en el panorama nacional, aunque está ganando impulso, según el doctor Marc Johnson, profesor de microbiología molecular e inmunología en la Facultad de Medicina de la Universidad de Missouri, que sigue de cerca la presencia del virus en las aguas residuales.

"Creo que hay una muy buena probabilidad de que BA.3.2 se convierta en la variante dominante, pero ciertamente no es una variante arrolladora como muchas que hemos visto antes", dijo Johnson. "Creo que si BA.3.2 estuviera a una mutación de convertirse en una variante más agresiva, ya la habría encontrado".

En Alemania, donde BA.3.2 ha representado un estimado del 30 % de todas las nuevas infecciones por COVID-19 de noviembre a enero, ahora está mostrando señales de descenso, dijo el doctor Florian Krammer, virólogo y profesor de vacunología en la Escuela de Medicina Icahn de Mount Sinai en Nueva York.

"Alemania tuvo muchos casos, y parecía que estaba subiendo y dominando, pero se ha estancado, y creo que en realidad está bajando un poco", afirmó.

Krammer y su equipo publicaron un estudio que analizó qué tan bien funcionaron, frente a varias variantes emergentes —incluida BA.3.2—, las vacunas contra la covid-19 que se actualizaron para el invierno de 2024-25 con el fin de apuntar específicamente a la cepa KP.2, otro descendiente de ómicron. Aunque los anticuerpos generados por las vacunas no neutralizaron algunas variantes, parecieron encargarse de BA.3.2 con bastante rapidez.

“Nuestros resultados pueden explicar por qué esta variante no ha alcanzado altas tasas de transmisión a nivel global”, escribieron los autores del estudio.

Infectando a los niños “con bastante eficiencia”

La falta de secuenciación genética de los virus de la COVID-19 dificulta interpretar los patrones de propagación. Pero algo interesante ha saltado a la vista en los datos: esta variante parece ser mejor para infectar a los niños que a los adultos.

“Una cosa que encontramos es que BA.3.2 parece infectar a los niños —no a los bebés, sino a menores de entre 3 y 15 años— con bastante eficiencia, lo cual aún no sabemos por qué”, dijo Oliveira, de Sudáfrica.

Un análisis de datos de la ciudad de Nueva York, del investigador de variantes Ryan Hisner, muestra que los niños tienen cerca de cinco veces más probabilidades de infectarse con BA.3.2 en comparación con otras variantes, aunque BA.3.2 todavía representa una minoría de las variantes en circulación allí.

Hay varias teorías sobre por qué. Oliveira dijo que cree que BA.3.2 es mejor para infectar a los niños porque su protección inmunitaria por vacunas e infecciones previas disminuye más rápido que la de los adultos.

Hisner dijo que cree que puede tener algo que ver con partes faltantes del genoma del virus. Los virus BA.3.2 carecen de partes de genes específicos que desempeñan un papel en la activación del sistema inmunológico. Otra variante, XBB, también carecía de estas mismas partes de su genoma, dijo Hisner, y también apareció con más frecuencia que otras variantes en los niños.

Greninger, de la Universidad de Washington, dijo que también puede tener algo que ver con la cantidad de exposiciones a COVID-19 que han tenido los niños.

Cada vacuna y cada infección ayudan a diversificar la respuesta inmunológica de una persona para que esté mejor preparada para enfrentar la siguiente variante del mismo virus, sin importar cuán diferente parezca.

“Los historiales inmunológicos, en cierto modo, protegen un poco mejor contra la evolución viral”, dijo. Los niños simplemente no tienen tanto historial inmunológico como los adultos, por lo que su caja de herramientas es más limitada cuando tienen que lidiar con ello la próxima vez.

Greninger también señala que los niños están en otra desventaja, especialmente si están en la escuela o en guardería: están rodeados de gérmenes todo el tiempo, por lo que son blancos fáciles.

Dice que la idea de que una variante de COVID-19 podría ser mejor para infectar a los niños solo significa que se está comportando como cualquier otro virus respiratorio, como la gripe, que clásicamente se propaga de los niños en edad escolar a sus padres y abuelos cada temporada.

Fuente: CNN Salud. Disponible en https://n9.cl/ksya3q

Comunidad científica cubana rechaza ataques a Instituto Pasteur en Irán

4 abr. Armando Rodríguez Batista, ministro de Ciencia, Tecnología y Medio Ambiente, destacó desde su perfil en la red social Facebook el rechazo de la comunidad científica cubana a los ataques de Israel y Estados Unidos contra instituciones científicas de Irán, entre ellas el Instituto Pasteur de Teherán.

Mensajes de Yury Valdés Balbín y Dagmar García Rivera, director general y vicedirectora de Investigación, Desarrollo y Evaluaciones Clínicas del Instituto Finlay de Vacunas, conmovieron a la comunidad científica nacional tras conocerse la destrucción de ese centro en Irán, donde se desarrollaban proyectos conjuntos relacionados con las vacunas Soberanas.

Varios especialistas cubanos habían realizado estancias en esos laboratorios y promovido investigaciones junto al Centro de Ingeniería Genética y Biotecnología (GIGB) y el Centro de Inmunología Molecular (CIM), según confirmaron fuentes del sector.

José Alberto Gómez, especialista de Calidad del CIM, expresó que los científicos iraníes mantenían estrechos vínculos con Cuba, pues muchos se entrenaron en el CIGB y colaboraron en proyectos de salud.

El investigador relató que durante su estancia en Teherán recibió apoyo inmediato de colegas iraníes cuando enfermó, lo cual evidenció la solidaridad y profesionalismo de ese colectivo.

La comunidad científica cubana manifestó su pesar por la pérdida de instituciones académicas y docentes en Irán, y recordó que el primer día de los bombardeos fueron asesinadas 168 de niñas en su colegio, así como una decena de sus profesores y otro personal.

Los especialistas coincidieron en que la humanidad posee capacidad para generar adelantos científicos y tecnológicos, pero actos de esa naturaleza constituyen una barbaridad que atenta contra la paz y el desarrollo.

En sus declaraciones, científicos cubanos expresaron la voluntad de reconstruir cada uno de los proyectos científicos impulsados con Irán en función de la salud de ambos pueblos, pese a la agresión sufrida.

Desde el Instituto Finlay de Vacunas, expresamos nuestra más profunda consternación e indignación por la destrucción en el Instituto Pasteur de Irán, centro de referencia con más de un siglo de trayectoria al servicio de la humanidad.

Y concluyó que el ataque contra la infraestructura científica no es solo un crimen contra Irán: es un atentado contra el conocimiento acumulado, contra la salud pública global y contra los principios más sagrados de la comunidad científica internacional.

El conocimiento no se destruye. Se multiplica en la solidaridad -acotó-.

Fuente: ACN. Disponible en https://n9.cl/9ddbt

OMS recomienda vacunación contra el Covid cada seis meses para grupos de alto riesgo

4 abr. Sobre la COVID-19, se subrayó que el impacto de la enfermedad que causó una pandemia en 2020 se ha reducido gracias a la inmunización de muchas poblaciones por la vacunación, aunque continúa causando mortalidad en algunos grupos de riesgo.

La Organización Mundial de la Salud (OMS) recomendó a los países miembros que establezcan jornadas de vacunación contra la COVID-19 rutinarias, cada seis meses, para grupos de alto riesgo, tales como personas mayores, especialmente con patologías significativas o altos índices de obesidad.

Personas en residencias de mayores y centros de cuidados prolongados y aquellas inmunodeprimidas de forma moderada o grave también podrían ser incluidas en estas vacunaciones semestrales, indicó la OMS tras la reunión de su Grupo Asesor Estratégico de Expertos de la OMS en vacunas (SAGE).

Según estos expertos, que se reunieron del 9 al 12 de marzo para analizar las campañas de vacunación globales, los países miembros también deberían considerar campañas adicionales de inmunización, con carácter anual, para trabajadores sanitarios y personas con patologías significativas de distintas edades, incluidos niños y adolescentes.

En mujeres embarazadas, se recomienda una dosis de la vacuna contra la COVID-19 por embarazo, preferiblemente durante el segundo trimestre.

Impacto de la COVID-19, reducido por las vacunas

Sobre la COVID-19, SAGE subrayó que el impacto de la enfermedad que causó una pandemia en 2020 se ha reducido gracias a la inmunización de muchas poblaciones por la vacunación y por infecciones previas, aunque advirtió que continúa causando mortalidad en algunos grupos de riesgo.

En sus reuniones, el SAGE también recomendó la introducción de la vacuna conjugada contra la fiebre tifoidea (TCV) en países con altos niveles de incidencia de la enfermedad.

Fuente: Emisoras Unidas. Disponible en https://n9.cl/ekn7j

Scientists are working on a vaccine for cancer. Here's how it would work

Apr 5. An advance in vaccine technology is showing promise toward fighting the second-most common cause of death in the United States, cancer.

Scientists are working on developing mRNA vaccines that would work to fight cancer once it's detected, said Andrew Pekosz, professor and vice chair at the Johns Hopkins Bloomberg School of Public Health, in a recent briefing.

From a technological sense, they would work similar to the Pfizer and Moderna vaccines that were developed to fight COVID-19.

These vaccines would be considered "therapeutic vaccines" rather than preventative ones, he explained.

"So once you develops the cancer, you can then design a vaccine that targets some of the unique proteins and other things that the cancer cells are showing to your body, and therefore your immune system can get ramped up and target those very specific cancer antigens that the cells are showing."

While some cancers have common antigens, mRNA technology could make personalized vaccines a reality. A physician could take a sample from a patient's cancer cells and design a vaccine that targets their specific cancer.

"The speed in which you can make them is really unparalleled," Pekosz said.

The vaccines are in early development, but are incredibly promising Pekosz said.

"I think the future there is really bright," agreed Gigi Gronvall, an immunologist and professor at Johns Hopkins.

Gronvall reminded the audience there are currently two vaccines that do work to prevent cancer: the hepatitis B vaccine given to babies and the HPV vaccine for preteens and teenagers. "There is every reason to think that mRNA will be used as a platform to prevent both of those cancers and possibly others."

Another promising advance in the fight against cancer is being studied at the University of Texas at Austin and the University of Texas MD Anderson Cancer Center, reports Nexstar's KXAN. Researchers there at working on a chemotherapy drug that tricks the body into fighting cancer like it fights off a virus.

Fuente: MSN. Disponible en https://n9.cl/vx4yz

With Sanofi and Pfizer deals, Novavax bets on 'amplification strategy' to drive vaccines engine

Apr 6. Beginning in 2023, Novavax embarked on an identity shift, moving away from the fully integrated business ambitions once fueled by a pandemic-era gold rush in vaccines toward a leaner structure built on an "amplification strategy." After shedding expensive commercial infrastructure and pivoting to a partnership model, the company is now positioning its Matrix-M vaccine adjuvant as a versatile, license-ready asset for other biopharma companies like Sanofi and Pfizer.

"The best way to increase access to our technology platform is to put it in the hands of partners, right?" Silvia Taylor, Novavax's chief corporate affairs officer and head of Sweden operations, said in a recent interview with Fierce on the sidelines of the World Vaccines Congress Washington 2026. "It's like an amplification strategy."

Novavax once had grander plans. The COVID-19 pandemic presented a rare opportunity for the biotech to become a fully integrated commercial player like BioNTech and Moderna.

From commercial aspirer to R&D partner

Following an emergency use authorization for its adjuvanted protein-based COVID-19 vaccine in mid-2022, the FDA fully approved the shot, called Nuvaxovid, in May 2025.

However, being third in a shrinking market proved a tall task for the newcomer. The commercial infrastructure required was simply too expensive to be supported by the thinning financial returns of a competitive space—especially one occupied by larger players.

"Usually, you've got like six months to really prove yourself," Taylor said. "We needed a couple of years because we were behind [...] when you are also commercial-stage and you're small, you're putting all your efforts in that basket. You can't afford to […] put them into the R&D basket."

In 2023, newly minted CEO John Jacobs initiated a restructuring of Novavax focused on reducing R&D and other expenses initially to channel resources to the COVID program. But moving into 2024, with the signing of Sanofi as a collaborator for Nuvaxovid and future combo shots, Novavax officially transitioned to a partnership model.

"Sanofi is a major global vaccine player. They have a very established flu franchise," Taylor recalled. "We're trying to get to know retail. We're trying to get our vaccine placed. We're trying to get them to trust us […] They already have that."

The realization prompted the shift to the partnership model so that Novavax "could do what we do best, which is focus on the science and the expertise that we have in the nanoparticle technology platform, as well as the adjuvant, [and] continue to generate new science."

The strategy bore fruit at the beginning of 2026, when Pfizer paid $30 million up front and committed up to $500 million in milestones to use Novavax's Matrix-M for two programs.

Licensing the future

More pharma companies have signed material transfer agreements (MTAs) so that they can experiment with Matrix-M before committing to a formal licensing deal, according to Taylor.

Matrix-M is a saponin-based adjuvant that enhances vaccine immune responses. It doesn't contain aluminum, a popular vaccine adjuvant that has been targeted by U.S. Health Secretary Robert F. Kennedy Jr. in his elaborate campaign against vaccines.

Besides Nuvaxovid, the Matrix-M technology is also used in an affordable malaria vaccine developed by the University of Oxford and Serum Institute of India. Between the two shots, Matrix-M has been used in tens of millions of people, Taylor noted.

The new operating model has drastically reshaped Novavax's balance sheet. In 2025, the cost of sales dropped to $73 million compared with $203 million in 2024; non-GAAP R&D expenses, taking into account reimbursement payments from Sanofi, decreased by 33% year over year; selling, general and administrative expenses decreased by 53% to $157 million.

Further slimdowns are expected as Novavax targets non-GAAP R&D and SG&A expenses of $325 million this year, $225 million in 2027 and $200 million in 2028.

While the commercial team is gone, Novavax has kept a strategy team alongside its business development function to elucidate the market landscape. And an R&D team is still necessary to explore new possibilities.

Novavax and Pfizer had been engaged in discussions for some time. Novavax generated data showing the value of Matrix-M across multiple disease areas, which led Pfizer to conduct their research under an MTA, according to Novavax. The New York pharma ultimately decided to obtain a non-exclusive license to use the adjuvant in up to two disease areas.

The R&D team is tasked with experimenting with the adjuvant, understanding whether it would work with mRNA or in a new formulation approach, such as dry powders, and potentially making improvements to create next-generation technologies, Taylor noted.

And the technology is showing promise beyond prophylactic vaccines for infectious diseases. “A couple of potential partners in the oncology space” have expressed interest in applying Matrix-M to their work, Taylor said.

Oncology could be a massive opportunity, but the Novavax exec noted that development on that front is at very early stages and that the company is still learning and identifying the areas where Matrix-M could be useful.

Playing the long game

A small unit of Novavax’s R&D team is still developing new vaccines, but not for future commercialization for the Maryland company. These include a preclinical C. difficile candidate, which Novavax hopes could enter the clinic in 2027 and eventually be partnered up.

As part of its pandemic-era ambitions, Novavax also developed a COVID-flu combination vaccine built on a flu program that had previously generated phase 3 data. Novavax has since paused development of the combo vaccine and is envisioning a potential partner would run their own phase 3.

Large pharma companies have been keen on the potential of a COVID-flu combo shot. Pfizer and its partner BioNTech, Moderna, GSK through a deal with CureVac, and Sanofi are all working on such candidates.

Rather than taking on Novavax’s combo, Sanofi is combining the biotech’s Nuvaxovid with its own flu shots and is looking to move into phase 3 trials. During the J.P. Morgan Healthcare Conference in January, the French pharma highlighted the combination vaccines as one of three growth drivers that could help replace Dupixent when the immunology megablockbuster loses patent protection in the early 2030s.

Sanofi is still investing in vaccines despite a rough policy environment in the U.S., having recently acquired Dynavax Technologies for $2.2 billion.

As a public company, Novavax would be open to M&A offers, but Taylor suggests that now may not be the right time for a buyout.

“If a company is going to transact, you want it to be at maximum value,” she said. “We’re not even near getting the maximum value.”

While the Sanofi and Pfizer deals offer upfront and milestone payments, “the real money,” Taylor said, comes in the form of royalties when the products reach the market.

As vaccine development takes time, companies with vaccine portfolios have expressed their commitment to the long run despite recent regulatory headwinds. And Matrix-M stands to benefit from this “fertile hunting ground,” so that’s why Novavax is sticking to its partnership strategy for now, she added.

“Three years is what this administration has left, and the need for vaccines endures,” Taylor said.

"Unfortunately, there is a lot of damage to the vaccine policy environment, the infrastructure, and that will take time to recover from," Taylor said. "But we are dependent on there be a need for vaccines, which there is."

Fuente: FIERCE Pharma. Disponible en https://n9.cl/6ib3d

R&D roadmaps for pathogen families to reduce uncertainty about the next pandemic and boost coordinated global R&D

Apr 7. In support of efforts to have safe and effective diagnostics, treatments and vaccines ready for distribution before the next pandemic strikes, WHO launched today, together with partners, research and development roadmaps for 10 viral families and a group of bacteria.

The roadmaps were launched at an event, co-hosted by ANRS Emerging Infectious Diseases, the Coalition for Epidemic Preparedness Innovations (CEPI), the World Health Organization (WHO), and partners held during the One Health Summit in Lyon, France.

The event highlighted how a One Health and Pathogen Family-based approach can strengthen epidemic and pandemic preparedness, including through WHO's Collaborative Open Research Consortia (CORCs), which bring together global research communities around priority viral families and core bacterial threats.

"CORCs are turning global scientific collaboration for pandemics into a more durable decentralized and inclusive R&D preparedness architecture," said Dr Sylvie Briand, Chief Scientist of WHO. "By organizing efforts around pathogen families and embedding One Health, we can better anticipate risks and accelerate the R&D of countermeasures before the next crisis. "WHO thanks the CORC leads for their invaluable scientific leadership and for coordinating the development of the Family R&D Roadmaps that we are launching today."

Partners emphasized the importance of translating the Family R&D research roadmaps released today into concrete actions, to support faster responses to emerging threats, and even to meetCEPI's goal of developing safe and effective vaccines in as little as 100 days.

"We don't know what the next pandemic threat will be, or when it will strike," said Dr Richard Hatchett, Chief Executive Officer at CEPI. "That's why focusing on entire pathogen families can help us stay ahead of both known risks and emerging threats. That concept is at the heart of CEPI's work, which aligns with and supports the World Health Organization CORCs. CEPI actively feeds into the CORC's roadmaps to advance collaboration and target the viral families most likely to spark a pandemic, turning R&D priorities into real-world plans that stop outbreaks early."

The event also showcased work led by ANRS Maladies infectieuses émergentes on the filoviridae family, illustrating how national and regional leadership can reinforce global preparedness.

"France is committed to advancing pandemic preparedness through science, solidarity and long-term partnership," said Professor Yazdan Yazdanpanah, Director of ANRS Maladies infectieuses émergentes. "Work on entire pathogen families that global institutions are leading, among which the filoviridae roadmap coordinated by ANRS MIE, shows how national efforts can contribute to stronger international capacity to detect threats earlier and prepare more effectively."

The CORCs Leads and other speakers at the event called for sustained political commitment, financing and international cooperation to maintain momentum behind One Health-informed R&D roadmaps and their implementation in countries and regions worldwide.

About the Family R&D Roadmaps

Each CORC has led the development of Family-specific research and development roadmaps through structured scientific OPEN consultations covering pathogen biology, animal reservoirs and vectors, epidemiology and surveillance, basic and translational research, medical countermeasure development with regulatory considerations, and evaluation of candidate medical countermeasures in outbreak or pandemic contexts.

The Collaborative Open Research Consortia (CORCs)

To implement the pathogen-family prioritization approach to epidemic and pandemic preparedness, WHO and several leading research institutions worldwide have launched the Collaborative Open Research Consortia (CORC) as international research network of networks organized around priority pathogen families. Each CORC is coordinated by leading institutions acting as hubs and conveners.

These consortia represent a major progress in the scientific approach, shifting from a centralized, pathogen-specific model to a decentralized, collaborative framework designed to anticipate emerging threats and accelerate the research and development of medical countermeasures.

The CORC are the primary mechanism for developing and executing the R&D Roadmaps. They provide a structured way to close major knowledge gaps across regions and science disciplines. The governance structure of CORC, especially their emphasis on open and equitable participation and representation, offers reflections for the design of more inclusive and transparent mechanisms.

The CORC, hosted by public institutions worldwide already involve thousands of scientists and stakeholders across the globe, and exemplifies a non-extractive, partnership-based approach that supports the principles underpinning the Pandemic Agreement aims.

ANRS Maladies infectieuses émergentes (ANRS MIE)

A French national agency dedicated to research on HIV, viral hepatitis, sexually transmitted infections and emerging infectious diseases. Hosted by Inserm, it supports and coordinates multidisciplinary research, fosters international collaborations and contributes to strengthening scientific and operational preparedness for epidemics and pandemics, including through work on pathogen family roadmaps and One Health–oriented approaches.

Fuente: WHO. Disponible en https://n9.cl/xspq8z

Nanoparticles have been designed to address the specific challenges of vaccines

Apr 7. Vaccines represent one of the most significant advancements in public health. While conventional vaccines have been highly successful, global health scenario demands more efficient and safer vaccine platforms. In this context, nanoparticles (NPs) have emerged as transformative players in vaccine delivery, acting as “tiny transporters” that enhance immune responses and ensure targeted delivery.

A wide range of nanoparticles have been designed to address the specific challenges of vaccines namely antigen stability, cellular uptake, immune activation, and manufacturing scalability. As a result,

some of the world's biggest pharmaceutical companies and research institutes are shaping these tiny transporters in vaccines.

For instance, Moderna and BioNTech/Pfizer used the lipid nanoparticle technology to develop the COVID-19 mRNA vaccines, proving that these nanocarriers can deliver fragile genetic material safely and effectively. GlaxoSmithKline (GSK) has used liposome-based platforms in vaccines such as Mosquirix for malaria, while Merck has deployed the virus-like particles (VLPs) for HPV and hepatitis B vaccines.

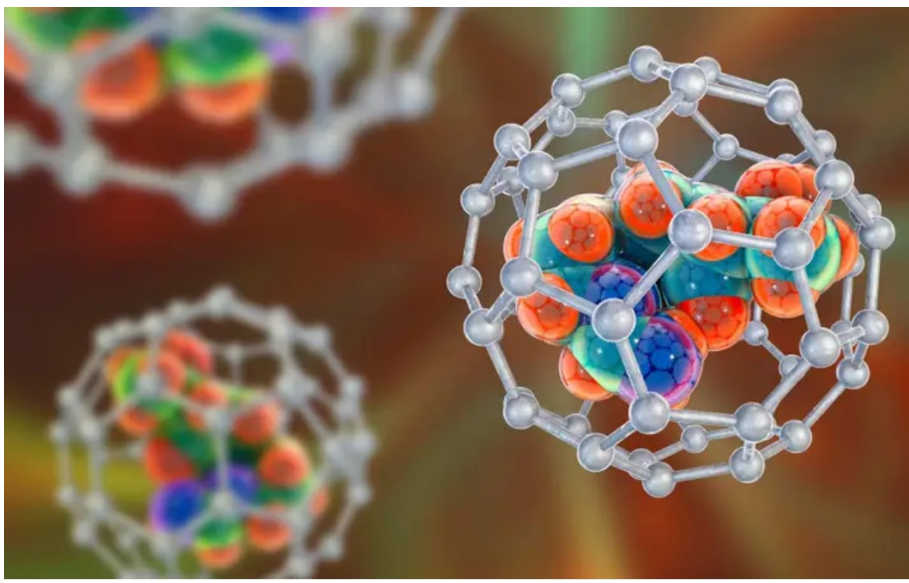
Moderna and BioNTech are also using nanoparticle-based vaccine technology for several infectious diseases including respiratory syncytial virus (RSV), Zika virus, rabies, and herpes simplex virus.

On the other hand, Altamira Therapeutics is collaborating with Univercells Group to test its SemaPhore nanoparticle platform designed to deliver RNA safely and effectively. Next generation lipid particles developed by researchers at the Massachusetts Institute of Technology (MIT) have achieved similar antibody responses in animal studies using one-hundredth of the conventional dose that would lower the cost and toxicity.

Hopewell Therapeutics and Foxcroft Therapeutics are evaluating tissue-targeting lipid nanoparticles for cancer vaccines. Scientists at the National Center for Nanoscience and Technology in China have used artificial intelligence (AI) to develop an ionizable lipid based on three-dimensional shape that showed markedly higher mRNA delivery efficiency and prominent anti-tumour effects in preclinical models.

Self-assembling polymer nanoparticles that form at room temperature designed by researchers at the University of Chicago Pritzker School of Molecular Engineering can simplify manufacturing and improve protein vaccine delivery.

Nanoparticles are also being investigated in therapeutic cancer vaccines. For example, nanoparticle formulation of doxorubicin (Doxil by Janssen Pharmaceuticals) is being used for ovarian cancer, Kaposi sarcoma, and multiple myeloma. It allows preferential accumulation in tumour cells allowing enhanced efficacy and reducing cardiotoxicity. mRNA cancer vaccines (e.g. mRNA-4157 by Moderna and Merck & Co.) have also been used in melanoma immunotherapy where lipid nanoparticles are used to deliver tumours specific antigens.



Although large-scale manufacturing, long-term stability, regulatory approval, and cost of nanoparticles pose significant challenges, nanoparticles mark a paradigm shift in vaccine delivery. With continued research and innovation, nanoparticles can play a crucial role in shaping preventive medicine.

Fuente: BIOSPECTRUM INDIA. Disponible en https://n9.cl/8n9m1

Updated Pneumococcal Vaccine Strategies Target Evolving Adult Risks

Apr 8. Pneumococcal vaccination guidelines for at-risk adults are updating to keep pace with evolving bacterial strains and new high-potency vaccines, according to the *Journal of Microbiology, Immunology, and Infection*.

"Pneumococcal infections, caused by *Streptococcus pneumoniae* (commonly known as pneumococcus or [*S. pneumoniae*]), remain a major public health concern. Pneumococcus commonly colonizes the human respiratory tract and spreads from person to person through direct contact with saliva or respiratory secretions," wrote the authors of the study. "These infections vary in severity, ranging from non-invasive conditions such as sinusitis, otitis media, and non-bacteremic pneumonia to invasive pneumococcal diseases (IPD), which include bacteremia, bacteremic pneumonia, empyema, and meningitis."

The landscape of adult immunization is undergoing a transformative shift as clinicians and pharmacists respond to the evolving threat of IPD. Leading this transition, 8 national academic societies in Taiwan recently collaborated to release comprehensive guidance for adult pneumococcal vaccination, emphasizing the need for strategies tailored to local epidemiology and individual risk factors.

This effort reflects a broader global urgency, as research indicates that the incidence of IPD nearly doubled between 2012 and 2024, underscoring the limitations of older vaccine formulations in the face of emerging nonvaccine serotypes. For pharmacists, who serve as frontline educators and immunizers, staying current with these updates is essential for protecting vulnerable populations, according to *U.S. Pharmacist*.

Pneumococcal infections, caused by the gram-positive bacterium *S. pneumoniae*, range from common conditions like sinusitis to life-threatening syndromes, including bacteremia and meningitis. Although routine pediatric vaccination has successfully lowered the overall disease burden through herd immunity, the persistence of specific strains like serotype 19A and the rise of multidrug-resistant strains such as 15A and 23A continue to challenge public health.

In response to these dynamics, both Taiwanese and US authorities have expanded routine vaccination recommendations to include all adults 50 years and older—a significant change from the previous threshold of 65 years. This expansion is particularly crucial for individuals with chronic medical conditions like diabetes, heart disease, or chronic obstructive pulmonary disease, as well as those with immunocompromising conditions such as HIV, multiple myeloma, or those undergoing organ transplants.

The introduction of higher-valency pneumococcal conjugate vaccines (PCVs), specifically PCV20 and PCV21, has simplified the clinical approach by offering robust protection often achievable in a single dose. In Taiwan, these vaccines are proposed as effective alternatives to complex sequential strategies that previously required multiple doses of different vaccine types spaced a year apart.

PCV21 is of particular interest because it targets 8 emerging strains not covered by previous vaccines, though its use is most appropriate in regions where older serotypes are already well-controlled. Pharmacists utilizing digital tools to navigate these complex recommendations—such as the CDC's PneumoRecs VaxAdvisor app—must ensure they are accessing information through

secure, verified platforms, occasionally managing technical requirements like browser security checks to maintain the integrity of patient guidance.

Pharmacists must also remain vigilant regarding local serotype variations; for example, though PCV21 offers broad coverage for emerging strains, it lacks the original serotypes found in earlier vaccines like PCV7, which may still circulate in certain regions or among international travelers. Furthermore, in the US, specific concerns have been raised about serotype 4, which has reemerged in certain western regions and among specific risk groups, potentially influencing the choice between different conjugate vaccines.

Pharmacists can further optimize patient outcomes by co-administering pneumococcal vaccines with seasonal influenza or COVID-19 shots, a practice that has been shown to be safe and effective in reducing the risk of severe coinfections during respiratory seasons.

By moving toward a shared decision-making model that considers an individual's age, health status, and prior vaccination history, pharmacists can ensure that adult patients receive the most effective protection against the shifting landscape of pneumococcal disease.

"The recommendations in this guidance are based on current epidemiological data and available clinical evidence and are intended to give health care providers clear guidance for selecting an optimal vaccine strategy for protecting at-risk adults against pneumococcal disease," concluded the authors of the study.1 "Ongoing surveillance and periodic reassessment and updates of these recommendations are necessary to ensure that adult pneumococcal vaccination strategies remain optimal and provide the broadest and most effective protection for vulnerable populations."

Fuente: DRUG TOPICS. Disponible en https://n9.cl/vfkn9

First-ever WHO Forum unites 800+ Collaborating Centres for stronger scientific collaboration

Apr 9. The World Health Organization (WHO) has convened the historic first Global Forum of Collaborating Centres—one of the world's largest and most diverse public health networks—bringing together representatives from over 800 institutions designated as WHO Collaborating Centres (CCs) across more than 80 countries.

At the meeting, scientists highlighted the health threats emerging in today's fragmented world—challenges that not only create an urgent need for action but also open new opportunities to mobilize efforts toward better health solutions. The Forum concluded today with a renewed sense of commitment across the broad network, moving beyond rigid scientific projects toward more dynamic and integrated partnerships.

Rooted in one of WHO's core constitutional functions, the Collaborating Centres network has enhanced the Organization's scientific foundations since its earliest years. In 1949, the Second World Health Assembly affirmed that WHO should advance health research not by creating its own institutions, but by coordinating, supporting, and leveraging existing expertise across the world.

Over the past 77 years, the WHO CC network has expanded to include many of the world's leading public health, academic, research, and technical institutions. Today, it remains a powerful asset—strengthening WHO's global norms and standards, supporting innovation, collaborative research and capacity building—helping turn scientific knowledge into life-saving action worldwide.

"WHO's network of collaborating centres is an immensely valuable but under-utilized resource for global health," said Dr Tedros Adhanom Ghebreyesus, WHO Director-General. "It brings together the world's leading institutions to translate evidence into action to support countries, strengthen health systems, and protect populations. Collaborating centres are a powerful demonstration of international cooperation, and what it means to stand with science."

The Global Forum leverages the momentum and is aligned with the international One Health Summit, which gathers leaders from across human, animal, and environmental health disciplines. It is also a central event of the World Health Day 2026 campaign under the theme "Together for health. Stand with science."

"Science is at the heart of everything we do to protect and improve health," said Dr Sylvie Briand, WHO Chief Scientist. "The global network of WHO collaborating centres represents an extraordinary concentration of scientific expertise and public health leadership. Together, they form a powerful force for knowledge, innovation, and action. At a time of growing global health challenges, this spirit of trusted scientific collaboration is not only valuable — it is indispensable to protecting lives and shaping a healthier future for all."

WHO is also expanding its global community of CCs to confront emerging health threats with greater strength and unity. A key initiative is the creation of the CORC (Collaborative Open Research Consortia)—networks of leading research institutions that bring together thousands of scientists worldwide.

Their mission is bold and essential: to accelerate the development of vaccines, diagnostics, and treatments for Disease X — the unknown pathogen that could spark the next pandemic. By joining forces, the networks aim to build the scientific readiness the world will rely on when that moment comes.

The Global Forum participants emphasized that strong international cooperation remains essential, particularly amid reductions in global health financing. Coordinated global responses, collective investment and collaboration are critical in preventing local health crises from becoming global emergencies.

WHO has announced the next Global Forum will be held in 2027 to further strengthen this historic collaborative platform.

Fuente: WHO. Disponible en https://n9.cl/q8b18

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Patentes registradas en Patentscope

Estrategia de búsqueda: *(Vaccine) AND DP:([01.04.2026 TO 09.04.2026]) as the publication date 24 records.*

1.WO/2026/066223ENGINEERED BIOMIMETIC DENDRITIC CELL VESICLE-COUPLED ANTIGENIC PEPTIDE TUMOR VACCINE, PREPARATION METHOD THEREFOR, AND USE THEREOF

WO - 02.04.2026

Clasificación Internacional A61K 39/00Nº de solicitud PCT/CN2025/099356Solicitante SHANGHAI SKIN DISEASE HOSPITALInventor/a ZHU, Quangang

Provided are an engineered biomimetic dendritic cell vesicle-coupled antigenic peptide tumor vaccine, a preparation method therefor, and use thereof, which belong to the technical field of biomedicine. The provided engineered biomimetic dendritic cell vesicle is internally loaded with an agonist of a stimulator of interferon genes, and an outer membrane surface of said vesicle is coupled with a melanoma antigenic peptide gp100. Also provided are a preparation method for the engineered biomimetic dendritic cell vesicle, and use of the engineered biomimetic dendritic cell vesicle or the preparation method in the preparation of a melanoma vaccine. Further provided is a melanoma vaccine, which comprises the engineered biomimetic dendritic cell vesicle.

2.20260091105METHOD OF VACCINATION WITH AN ATTENUATED RSV VACCINE FORMULATION

US - 02.04.2026

Clasificación Internacional A61K 39/155Nº de solicitud 18898953Solicitante THE UNITED STATES OF AMERICA, AS REPRESENTED BY THE SECRETARY, DEPARTMENT OF HEALTH & HUMAN SERVICESInventor/a Peter L. COLLINS

Respiratory syncytial virus (RSV) infection may lead to severe respiratory illness in young children. Thus, there is a need for a live attenuated vaccine, which would mimic the natural course of infection without causing illness; however, restricting viral replication also reduces the immune response. Reported herein is a method of vaccination using a single dose of a recombinant RSV lacking the M2-2 protein that surprisingly induced a stronger immune response to RSV than previous vaccine candidates despite being more restricted in replication.

3.WO/2026/068728A KLEBSIELLA PNEUMONIAE VACCINE

WO - 02.04.2026

Clasificación Internacional A61K 39/108Nº de solicitud PCT/EP2025/077659Solicitante UNIVERSITY COLLEGE DUBLINInventor/a MCCLEAN, Siobhan

A Klebsiella pneumoniae vaccine. A composition comprising one or more immunogens is provided. The composition is for use in vaccine therapy to treat or prevent K. pneumoniae infection in subject.

4.20260091101BUNYAVIRALES VACCINE

US - 02.04.2026

Clasificación Internacional A61K 39/12Nº de solicitud 19290290Solicitante CureVac SEInventor/a Benjamin PETSCH

The present invention is directed to an artificial nucleic acid, particularly to an artificial RNA, and to polypeptides suitable for use in treatment or prophylaxis of an infection with a virus of the order Bunyavirales, particularly Severe fever with thrombocytopenia syndrome virus (SFTSV), Rift Valley fever virus (RVFV), or Crimean-Congo hemorrhagic fever virus (CCHFV), or a disorder related to such an infection. The present invention further concerns a Bunyavirales vaccine, particularly a SFTSV, RVFV, or CCHFV vaccine. The present invention is directed to an artificial nucleic acid, polypeptides, compositions and vaccines comprising the artificial nucleic acid or the polypeptides. The invention further concerns a method of treating or preventing a disorder or a disease, first and second medical uses of the artificial nucleic acid, polypeptides, compositions and vaccines. Further, the invention is directed to a kit, particularly to a kit of parts, comprising the artificial nucleic acid, polypeptides, compositions and vaccines.

5.WO/2026/073053NANOPARTICLE THERAPEUTIC VACCINES THAT SIMULTANEOUSLY CO-DELIVER MHC CLASS I AND MHC CLASS II ANTIGENS AND AN ADJUVANT

WO - 02.04.2026

Clasificación Internacional A61K 39/00Nº de solicitud PCT/US2025/048321Solicitante THE REGENTS OF THE UNIVERSITY OF CALIFORNIAInventor/a WANG, Szu-Wen

Provided is a nanoparticle vaccine delivery7 platform that simultaneously co-delivers MHC class I and II restricted antigens and an adjuvant. Also provided is the use of the nanoparticle vaccine delivery platform to is elicit a targeted immune response in a subject having or suspected of having or suspected of having cancer, an autoimmune disease, or an autoimmune state. Additionally provided are methods for immunizing a subject having or suspected of having a cancer, an autoimmune disease, or an autoimmune state with the nanoparticle vaccine delivery platform.

6.WO/2026/069378HEMAGGLUTININ BASED IMMUNOGENIC POLYPEPTIDES, COMPOSITIONS AND METHODS THEREOF

WO - 02.04.2026

Clasificación Internacional A61K 39/145Nº de solicitud PCT/IN2025/051571Solicitante MYNVAX PRIVATE LIMITEDInventor/a VARADARAJAN, Raghavan

The present disclosure relates to immunogenic polypeptides for eliciting an immune response against influenza. These polypeptides are suitable for use in combination with hemagglutinin (HA)-containing influenza vaccine formulations. Also disclosed are polynucleotides encoding the polypeptides, DNA constructs, recombinant vectors, and recombinant bacterial host cells for expression. The disclosure further provides vaccine compositions comprising the immunogenic polypeptides and pharmaceutically acceptable carriers. Methods for producing the vaccine composition and eliciting an immune response against influenza infection in a subject are also described.

7.20260091100NADC34-LIKE PRRSV-2 VACCINE CANDIDATE STRAIN AND APPLICATION THEREOF

US - 02.04.2026

Clasificación Internacional A61K 39/12Nº de solicitud 19256185Solicitante YANGZHOU UNIVERSITYInventor/a Nanhua Chen

Disclosed are an rBJ-VVL plasmid, a mutant strain of NADC34-like PRRSV-2 and a preparation method therefor and application thereof. Further disclosed is an NADC34-like PRRSV-2-specific vaccine. In the present disclosure, a modified strain rBJ-VVL with tropism for Marc-145 cells is obtained by precisely mutating an amino acid at positions 91/97/98 of GP2a; the modified virus constructed in the present disclosure can be propagated in Marc-145 cells, cause cytopathic effects and form plaques when inoculated into Marc-145 cells for serial passage; the resulting Marc-145 cell-passaged viruses have an extremely viral load, and a large number of new progeny viruses can be obtained in a short time; and the Marc-145-adapative modified strain cultured in the present disclosure is used to create a first NADC34-like PRRSV-2-specific vaccine.

8.20260091112VACCINE COMPRISING PERIPHERAL BLOOD MONONUCLEAR CELLS LOADED WITH NATURAL KILLER T CELL LIGAND AND ANTIGEN

US - 02.04.2026

Clasificación Internacional A61K 40/11Nº de solicitud 19112216Solicitante CELLID CO.,

LTD.Inventor/a Chang-Yuil Kang

The present invention relates to an immunoprophylactic and therapeutic vaccine comprising peripheral blood mononuclear cells loaded with a natural killer T cell ligand and an antigen, and specifically, to an immunotherapeutic vaccine comprising peripheral blood mononuclear cells loaded with alpha-galactosylceramide, a natural killer T cell ligand and a type of glycolipid. A composition of the present invention is easy to obtain because there is no need to separate specific cells from peripheral blood mononuclear cells. In addition, immunization of peripheral blood mononuclear cells loaded with a natural killer T cell ligand and an antigen not only induces significant levels of activation of natural killer cells and natural killer T cells and cytotoxic T lymphocyte responses, but also has a synergistic effect in the treatment of malignant tumors and thus can be helpfully used as an anticancer immunotherapeutic agent.

9.WO/2026/067524HERPES SIMPLEX VIRUS (HSV) VACCINE

WO - 02.04.2026

Clasificación Internacional C12N 15/38Nº de solicitud PCT/CN2025/123929Solicitante SHENZHEN SHENXIN BIOTECHNOLOGY CO., LTD.Inventor/a LI, Linxian

The present invention relates to a herpes simplex virus (HSV) vaccine. The herpes simplex virus vaccine comprises one or more of the following nucleic acids containing polynucleotides that encode HSV glycoproteins or immunogenic fragments thereof: a nucleic acid containing a polynucleotide that encodes HSV glycoprotein D or an immunogenic fragment thereof, a nucleic acid containing a polynucleotide that encodes HSV glycoprotein C or an immunogenic fragment thereof, and a nucleic acid containing a polynucleotide that encodes HSV glycoprotein E or an immunogenic fragment thereof.

10.WO/2026/064873VACCINES AND METHODS FOR THE TREATMENT OF HAEMOPHILUS INFLUENZAE CAUSED DISEASES

WO - 02.04.2026

Clasificación Internacional A61K 39/102Nº de solicitud PCT/CA2025/051266Solicitante ENGINEERED ANTIGENS INC.Inventor/a EWASECHKO, Nikolas Frederik

Disclosed are novel vaccine compositions comprising modulated Transferrin Binding Protein B (TbpB) polypeptides or immunogenic portions thereof. The vaccine compositions may be used to prevent, treat, or ameliorate pathogenic infections in humans caused by pathogenic H. influenzae strains. Related methods and uses are also disclosed.

11.WO/2026/067038COMBINED VACCINE FOR PREVENTING OR TREATING TETANUS

WO - 02.04.2026

Clasificación Internacional A61K 39/40Nº de solicitud PCT/CN2025/120350Solicitante ZHUHAI

TRINOMAB PHARMACEUTICAL CO., LTD.Inventor/a WANG, Wanmei

Disclosed in the present invention is a pharmaceutical combination comprising an adsorbed tetanus vaccine and an antibody or an antigen-binding fragment thereof against tetanus toxin. The pharmaceutical combination is used for preventing and/or treating tetanus.

12.WO/2026/067879TRITERPENOID SAPONIN VACCINE ADJUVANT HAVING HIGH EFFICIENCY, LOW TOXICITY AND GOOD STABILITY, PREPARATION METHOD THEREFOR, AND USE THEREOF

WO - 02.04.2026

Clasificación Internacional C07H 13/02Nº de solicitud PCT/CN2025/129915Solicitante LANZHOU UNIVERSITYInventor/a WANG, Xiaolei

The present invention aims to provide a novel triterpenoid saponin vaccine adjuvant. By means of molecular design, synthesis, activity evaluation, and other means, the adjuvant significantly improves immunostimulatory activity thereof while reducing the potential toxicity thereof and significantly enhancing the stability of a product. Specifically, the adjuvant of the present invention can induce a Th1/Th2 mixed immune response, effectively improve the ability of an antigen presenting cell (such as a dendritic cell) to uptake, treat, and present an antigen (including but not limited to a microbial pathogen, a cancer cell, etc.), thereby enhancing the cellular immune efficacy and exhibiting great potential for preventing and treating a disease caused by a related pathogen.

13.20260091107CORONAVIRUS VACCINE

US - 02.04.2026

Clasificación Internacional A61K 39/215Nº de solicitud 19317057Solicitante CureVac SEInventor/a Susanne RAUCH

The present invention is directed to a nucleic acid suitable for use in treatment or prophylaxis of an infection with a coronavirus, preferably with a Coronavirus SARS-CoV-2, or a disorder related to such an infection, preferably COVID-19. The present invention is also directed to compositions, polypeptides, and vaccines. The compositions and vaccines preferably comprise at least one of said nucleic acid sequences, preferably nucleic acid sequences in association a lipid nanoparticle (LNP). The invention is also directed to first and second medical uses of the nucleic acid, the composition, the polypeptide, the combination, the vaccine, and the kit, and to methods of treating or preventing a coronavirus Infection, preferably a Coronavirus infection.

14.20260092089RECOMBINANT VACCINE AGAINST HELMINTHS IN PICHIA PASTORIS AND METHODS FOR PRODUCING AND PURIFYING PROTEINS FOR USE AS VACCINES AGAINST HELMINTHS

US - 02.04.2026

Clasificación Internacional C07K 14/435Nº de solicitud 19403587Solicitante Fundação Oswaldo

CruzInventor/a Miriam TENDLER

The present invention is related to the recombinant production of proteins by using a synthetic gene for high protein expression in *Pichia pastoris*. More specifically, the invention describes the production of Sm14 *Schistosoma mansoni* recombinant protein, where a synthetic gene was created to promote high expression of such protein, a gene which was cloned under control of two types of *Pichia pastoris* promoters: methanol-inducible promoter (AOXI) and constituent promoter (GAP). With these constructions, *Pichia pastoris* strains were genetically manipulated to efficiently produce vaccine antigen Sm14. The processes to produce and purify this protein from *P. pastoris* cells, which can be escalated for their industrial production, were also improved.

15.WO/2026/065994NOVEL MRNA ELEMENT, SYSTEM, AND USE

WO - 02.04.2026

Clasificación Internacional C12N 15/113Nº de solicitud PCT/CN2025/085460Solicitante FUDAN UNIVERSITY SHANGHAI CANCER CENTERInventor/a HUANG, Shenglin

The present invention provides an mRNA element, a system, and a use. A UPA-containing uncapped linear mRNA of the present invention can be efficiently and stably expressed without adding a 5' cap or adding a nucleic acid modification in an in vitro transcription synthesis process, and can be used as an infectious disease vaccine or tumor vaccine expression system.

16.WO/2026/069177A MODULAR BACTERIOPHAGE T4 NANOPARTICLE PLATFORM ENABLES RAPID DESIGN OF DUAL COVID-19-FLU MUCOSAL VACCINES

WO - 02.04.2026

Clasificación Internacional A61K 39/00Nº de solicitud PCT/IB2025/059647Solicitante THE CATHOLIC UNIVERSITY OF AMERICAInventor/a RAO, Venigalla B.

A non-infectious bacteriophage T4 nanoparticle vaccine composition includes a bacteriophage capsid and at least one antigen displayed on the surface of the capsid or packaged in its interior. The vaccine is administered intranasally and is free of an adjuvant. The antigen is selected from respiratory viruses including coronavirus and influenza.

17.WO/2026/064872VACCINES AND METHODS FOR THE TREATMENT OF HAEMOPHILUS INFLUENZAE CAUSED DISEASES

WO - 02.04.2026

Clasificación Internacional C12N 15/63Nº de solicitud PCT/CA2025/051264Solicitante ENGINEERED ANTIGENS INC.Inventor/a EWASECHKO, Nikolas Frederik

Disclosed are novel vaccine compositions comprising modulated Transferrin Binding Protein B (TbpB) polypeptides or immunogenic portions thereof. Notably, the TbpB polypeptides are modulated with respect to domains known as loop domains located in the C-terminal lobe of TbpB polypeptides. The vaccine compositions may be used to ameliorate, treat or prevent pathogenic infections in

humans caused by pathogenic *H. influenzae* strains. Related methods and uses are also disclosed.

18.WO/2026/071026INFLUENZA VIRUS VACCINE

WO - 02.04.2026

Clasificación Internacional C07K 14/11Nº de solicitud PCT/JP2025/033973Solicitante GREEN BIOMED, INC.Inventor/a SEKIKAWA, Kenji

The present invention provides a modified protein of influenza A matrix 1 (M1), the modified protein inducing a humoral immune reaction and a cellular immune reaction against influenza A virus. The modified protein has the following characteristics: (a) at least one region of the M1 protein is substituted by a membrane fusion peptide derived from influenza A virus hemagglutinin; and (b) at least one T cell epitope in the M1 protein is preserved.

19.WO/2026/073226DOUBLE AND TRIPLE KNOCK-OUT VACCINE COMPOSITIONS AGAINST TUBERCULOSIS

WO - 02.04.2026

Clasificación Internacional C07K 14/35Nº de solicitud PCT/US2025/048716Solicitante TEXAS BIOMEDICAL RESEARCH INSTITUTEInventor/a KAUSHAL, Deepak

Provided here are nucleic acid constructs containing a Mycobacterium tuberculosis genome comprising a mutation (such as a deletion) of the sigH gene (AsigH) and a mutation (such as a deletion) of at least one additional gene, and mutant Mycobacterium tuberculosis encoded by the nucleic acid constructs. Also provided are methods of making such nucleic acid constructs and Mycobacterium tuberculosis mutants, and uses thereof. The construct can stimulate an immune response against Mycobacterium tuberculosis in a subject, and can be used as live attenuated vaccines.

20.WO/2026/067859ANTI-TLR7 ANTIBODY OR ANTIGEN-BINDING FRAGMENT THEREOF, PHARMACEUTICAL COMPOSITION AND USE THEREOF

WO - 02.04.2026

Clasificación Internacional C07K 16/28Nº de solicitud PCT/CN2025/126052Solicitante BEIJING SYNTHETIC VACCINE BIOSCIENCES CO., LTD.Inventor/a LIAO, Xuebin

Provided in the present invention are an anti-TLR7 antibody or an antigen-binding fragment thereof, and a pharmaceutical composition thereof. The antibody or the antigen-binding fragment thereof can specifically bind to a human or simian TLR7 antigen and does not bind to murine TLR7, exhibits significant TLR7 antigen-binding activity, and can effectively inhibit various inflammatory cytokines produced upon TLR7 activation. The anti-TLR7 antibody or the antigen-binding fragment thereof can be used, either as a monotherapy or in combination with other drugs, for treating and/or preventing diseases pathologically associated with the TLR7 target, including immune inflammation-related

diseases, allergic diseases, infectious diseases, cancers, etc.

21.WO/2026/073199DNA ENCODED Q23-BASED ENV IMMUNOGENS AND METHODS OF USE THEREOF AS AN HIV VACCINE

WO - 02.04.2026

Clasificación Internacional C07K 14/005Nº de solicitud PCT/US2025/048658Solicitante THE WISTAR INSTITUTE OF ANATOMY AND BIOLOGYInventor/a KULP, Daniel

Disclosed are HIV immunogens. Also disclosed are nucleic acids encoding these immunogens and methods of producing these antigens. Methods for generating an immune response in a subject are also disclosed. In some embodiments, the method is a method for treating or preventing a human immunodeficiency type 1 (HIV-1) infection in a subject.

22.20260091102UNIVERSAL T CELL-BASED, CMV-VECTORED VACCINE FOR INFLUENZA

US - 02.04.2026

Clasificación Internacional A61K 39/145Nº de solicitud 19111143Solicitante Oregon Health & Science UniversityInventor/a Jonah SACHA

The invention relates to methods of generating an immune response for the treatment or prevention of a pathogenic infection. The invention also relates to methods of generating MHC-I, MHC-II, and/or MHC-E restricted CD8+ and/or CD4+ T cells for the treatment or prevention of a pathogenic infection.

23.WO/2026/072910ANTI-MENINGOCOCCAL ANTIBODIES FOR IN VITRO IMMUNOASSAY

WO - 02.04.2026

Clasificación Internacional C07K 14/22Nº de solicitud PCT/US2025/048115Solicitante SANOFI PASTEUR INC.Inventor/a AZIZI, Ali

The present disclosure relates to monoclonal antibodies targeting a *Neisseria meningitidis* serogroup B (MenB) antigen and their use for *in vitro* assay of the potency of MenB antigen for the manufacture of vaccine for preventing meningococcal infection.

24.WO/2026/069375AN ENGINEERED POLYPEPTIDE COMPLEX FOR GENERATING PROTECTIVE IMMUNE RESPONSES AGAINST MONKEY POX(MPOX)

WO - 02.04.2026

Clasificación Internacional A61K 39/12Nº de solicitud PCT/IN2025/051568Solicitante TRANSLATIONAL HEALTH SCIENCE AND TECHNOLOGY INSTITUTEInventor/a SAMAL, Sweety

The present invention relates to the development of an engineered polypeptide complex, aimed at inducing protective antibody responses against the Monkey pox virus. The polypeptide complex is structured with antigenic domains connected via specific linkers to a nanocage vehicle. When expressed in a suitable bacterial expression system, the complex generates a recombinant soluble

protein that, upon administration in vivo, elicits an immune response that provides protection against Mpox virus infection. The invention also covers the method for producing this engineered polypeptide complex, as well as a vaccine formulation comprising the complex along with pharmaceutically acceptable excipients.

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

Estrategia de búsqueda: *vaccine.ti. AND @PD>="20260401"<=20260409 20 records*

Document ID	Title	Inventor	Applicant Name
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