



EN ESTE NÚMERO

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

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

- Noticias más recientes en la Web sobre vacunas.
- Artículos científicos más recientes de Medline sobre vacunas.
- Patentes más recientes en PATENTSCOPE sobre vacunas.
- Patentes más recientes en USPTO.

Noticias en la Web

New reverse genetic system accelerates norovirus vaccine research

Dec 11. Norovirus is the leading cause of gastroenteritis worldwide and is responsible for hundreds of thousands of deaths every year. Despite its global impact, research into antiviral treatments and vaccines has been hampered by the lack of a robust 'reverse genetics' system. This has made it difficult for scientists to fully understand how the virus replicates and causes disease.

Now, a team at The University of Osaka has overcome this barrier, developing a simple and efficient system to study human norovirus. Their work promises to accelerate research into new therapies and vaccines to fight Norovirus.

Understanding reverse genetics

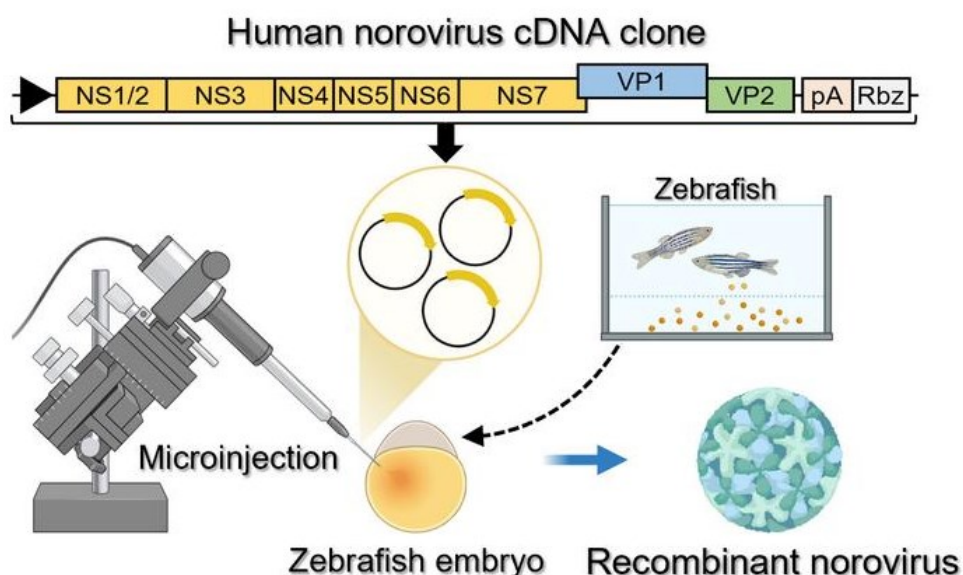
Reverse genetics systems allow scientists to study the function of individual genes by making targeted changes and observing the effects. These genetically engineered or 'recombinant' viruses provide crucial insights into viral replication and pathogenesis. Tools like these are essential for the development of antiviral drugs and vaccines.

The study applied virological techniques to a zebrafish model to create a novel reverse genetics system capable of producing infectious human noroviruses. This approach allows for direct manipulation of the virus in ways that were previously impossible.

A simple and efficient method

The system developed by the researchers involves the direct injection of norovirus cDNA clones into zebrafish embryos. This method is both straightforward and highly efficient, enabling the production of infectious human noroviruses in the laboratory.

To demonstrate the system's utility, the team generated genetically modified noroviruses, either incorporating specific mutations or tagged with 'reporter genes'. Reporter genes, such as chemiluminescent molecules, can label the virus and reveal its activity and location within host cells. This allows scientists to visualise viral behaviour in real time and study the mechanisms of replication and disease progression.



Outline of Recombinant Human Norovirus Generation Using Zebrafish Embryos. Credit: Takeshi Kobayashi

Implications for vaccine and drug development

"This will also allow the development of novel vaccines with controlled antigenicity and pathogenicity," said senior author Takeshi Kobayashi. By enabling precise genetic manipulation, the system provides a platform for designing vaccines that are both safer and more effective.

Beyond vaccine development, the reverse genetics system opens up new possibilities for antiviral screening. Researchers can now systematically test potential therapies in a controlled laboratory setting, accelerating the identification of promising candidates.

A transformative tool for public health

The introduction of this reverse genetics system fills a crucial gap in human norovirus research, supporting both vaccine development and antiviral testing. As this approach becomes more widely adopted, it could eventually lead to more effective public health strategies to help reduce the global impact of norovirus infection.

Looking ahead

By enabling precise genetic studies and providing a platform for rapid therapeutic development, this new research promises to accelerate progress towards effective treatments and vaccines, offering hope for millions affected by this pervasive pathogen.

Fuente: DRUG TARGET REVIEW. Disponible en <https://n9.cl/dw8fh>

WHO Rejects Claims Of Link Between Vaccines And Autism

Dec 12. A new analysis by the World Health Organization reaffirmed there is no link between vaccines and autism -- contrary to theories being propagated in the United States.

The US Centers for Disease Control and Prevention (CDC) last month revised its website with language that undermines its previous, scientifically-grounded position that immunisations do not cause the developmental disorder autism.

"A new analysis by the World Health Organization reaffirmed there is no link between vaccines and autism -- contrary to theories being propagated in the United States."

Years of research demonstrate that there is no causal link between vaccinations and autism or other neurodevelopmental disorders. But Robert F. Kennedy Jr, the nation's health chief, has long voiced anti-vaccine rhetoric and inaccurate claims connecting the two.

WHO chief Tedros Adhanom Ghebreyesus told a press conference in Geneva that autism was not a side-effect of vaccines.

"Today, WHO is publishing a new analysis by the Global Advisory Committee on Vaccine Safety that has found, based on available evidence, no causal link between vaccines and autism," the UN health agency chief said.

The committee looked at 31 studies in multiple countries over 15 years relating to vaccines containing thiomersal -- a preservative that prevents bacterial and fungal contamination in multidose vials -- and aluminium adjuvants.

"The committee concluded that the evidence shows no link between vaccines and autism, including vaccines containing aluminium or thiomersal," said Tedros.

"This is the fourth such review of the evidence, following similar reviews in 2002, 2004 and 2012. All reached the same conclusion: vaccines do not cause autism.

"Like all medical products, vaccines can cause side effects, which WHO monitors. But autism is not a side effect of vaccines."

Flawed 1998 study

A purported connection between the measles, mumps and rubella (MMR) vaccine and autism stems from a flawed study published in 1998, which was retracted for including falsified data. Its results have not been replicated and are refuted by voluminous subsequent research.

"The study was later shown to be fraudulent and retracted, but the damage had been done, and the idea has never gone away," said Tedros.

Kennedy has a long history of promoting dubious claims, many of which have become articles of faith among adherents to his "Make America Healthy Again" movement, a vital part of President Donald Trump's fractious Make America Great Again coalition.



The CDC website edits were met with anger and fear by career scientists and other public health figures, including from within the agency, who have spent years fighting against false information.

Tedros said that over the past 25 years, under-five mortality has plunged by more than half, from 11 million deaths a year to 4.8 million, with vaccination being a major reason behind the drop.

"Vaccines are among the most powerful, transformative inventions in the history of humankind," he said. "Vaccines save lives from about 30 different diseases, including measles, cervical cancer, malaria and more."

Fuente: NDTV WORLD. Disponible en <https://n9.cl/j3b6hp>

Valneva Reports Positive Final Phase 2 Antibody Persistence and Safety Results in Children for its Chikungunya Vaccine IXCHIQ®

Dec 12. Valneva SE (Nasdaq: VALN; Euronext Paris: VLA), a specialty vaccine company, today announced positive final antibody persistence and safety data for its Phase 2 clinical trial evaluating the safety and immunogenicity of two different dose levels of its single-shot chikungunya vaccine, IXCHIQ®, in 304 children, twelve months after vaccination.

- ♦ IXCHIQ® was well tolerated by children aged one to eleven years regardless of the dose or previous chikungunya infection (CHIKV).
- ♦ Antibody levels remained high after twelve months in both dose groups, although more robust with the full dose.
- ♦ Twelve-month data continues to support full dose selection for a future Phase 3 trial.



Partially funded by the Coalition for Epidemic Preparedness Innovations (CEPI), with support from the European Union, the trial results continue to support future Phase 3 development in children, which the Company plans to initiate after gathering additional real-world experience in the adolescent population.

Final VLA1553-221 results aligned with the initial data and six-month outcomes that the Company previously reported for this trial in January 2025 and June 2025 respectively. A full dose (licensed IXCHIQ® formulation and presentation) elicited a higher immune response in children aged one to eleven years at Day 360 post vaccination compared to a half dose. Overall, the immunological response profile was in line with what was previously observed in adults and adolescents.

The strong immune response was confirmed in CHIKV-naïve children with a 94.7% seroresponse rate (full dose) at Day 360. The vaccine was well tolerated in children aged one to eleven years regardless of the dose or previous CHIKV infection. No safety concerns were identified.

The comparability of the vaccine doses tested in terms of safety and tolerability, along with the more pronounced immune response of the full dose observed for all age groups tested in children up to Day 360 post-vaccination, continues to support the selection of the full dose for use in this population. Juan Carlos Jaramillo M.D., Chief Medical Officer of Valneva, said, “The twelve months persistence and safety data in children are consistent with the robust antibody response and favorable safety profile previously observed in adolescents following a single vaccination. As safety is of the utmost importance, particularly when advancing into a Phase 3 pediatric study, we have decided, in alignment with the regulatory authorities, to continue gathering additional real-world experience in the adolescent population before initiating our planned Phase 3 study in children. We remain convinced, considering the significant risk chikungunya poses to individuals living in or traveling to endemic areas, that it is crucial to ensure a vaccine capable of potentially offering long-term protection from a single shot is accessible to people of all ages. This is especially important in Low- and Middle-Income countries (LMICs) where access to vaccines is often limited.”

Brazil has reported the highest number of chikungunya cases worldwide, with over one million cases between January 2019 and July 2024, followed by India with 370,000 cases during the same period. Reports of Chikungunya infection have expanded rapidly and globally in 2025, with six countries (Bangladesh, Cuba, China; Kenya, Madagascar, Somalia and Sri Lanka) currently experiencing CHIKV outbreaks.

About Chikungunya

Chikungunya virus (CHIKV) is a mosquito-borne viral disease spread by the bites of infected Aedes mosquitoes which causes fever, severe joint and muscle pain, headache, nausea, fatigue and rash. Joint pain is often debilitating and can persist for weeks to years.

In 2004, the disease began to spread quickly, causing large-scale outbreaks around the world. Since the re-emergence of the virus, CHIKV has now been identified in over 110 countries in Asia, Africa, Europe and the Americas. Between 2013 and 2023, more than 3.7 million cases were reported in the Americas and the economic impact is considered to be significant. The medical and economic burden is expected to grow with climate change as the mosquito vectors that transmit the disease continue to spread geographically. As such, the World Health Organization (WHO) has highlighted chikungunya as a major public health problem.

About Phase 2 Trial VLA1553-221

VLA1553-221 was a multi-center, randomized, observer-blinded, dose response Phase 2 clinical trial in 304 healthy children aged one to eleven years. The trial was performed at three trial sites in the Dominican Republic and Honduras. The primary and secondary objectives of the trial were to evaluate the safety and immunogenicity of two different dose levels of Valneva's single-shot chikungunya vaccine. Participants were randomized 2:2:1 to receive either a full dose (licensed IXCHIQ® formulation and presentation) or a half dose of the vaccine, or an active control (Nimenrix). Additional information, including a detailed description of the trial design, eligibility criteria and investigator sites, is available at [ClinicalTrials.gov](https://clinicaltrials.gov/ct2/show/study/NCT06106581) (Identifier: NCT06106581).

About Valneva SE

We are a specialty vaccine company that develops, manufactures, and commercializes prophylactic vaccines for infectious diseases addressing unmet medical needs. We take a highly specialized and targeted approach, applying our deep expertise across multiple vaccine modalities, focused on providing either first-, best- or only-in-class vaccine solutions.

We have a strong track record, having advanced multiple vaccines from early R&D to approvals, and currently market three proprietary travel vaccines.

Revenues from our growing commercial business help fuel the continued advancement of our vaccine pipeline. This includes the only Lyme disease vaccine candidate in advanced clinical development, which is partnered with Pfizer, the world's most clinically advanced Shigella vaccine candidate, as well as vaccine candidates against other global public health threats. More information is available at www.valneva.com

About Horizon Europe

Horizon Europe — #HorizonEU — is the European Union's flagship Research and Innovation programme, part of the EU-long-term Multiannual Financial Framework (MFF) with a budget of €95,5 billion to spend over a seven-year period (2021-2027). Under Horizon Europe, health research will be supported with the aim to find new ways to keep people healthy, prevent diseases, develop better diagnostics and more effective therapies, use personalised medicine approaches to improve healthcare and wellbeing, and take up innovative health technologies, such as digital ones.

Fuente: BioSpace. Disponible en <https://n9.cl/gblqh>

Encuentran la razón por la que la vacuna COVID-19 de ARNm puede causar miocarditis en hombres jóvenes

12 dic. “Las vacunas de ARN mensajero han realizado una labor extraordinaria para mitigar la pandemia de COVID-19”, dice el médico y radiólogo Joseph Wu; sin embargo, en ocasiones pueden provocar miocarditis, sobre todo en hombres menores de 30 años, y el equipo de Wu encontró la causa de este efecto y el posible remedio. que podría estar en tiendas naturistas.

Wu aclara que estas vacunas, que ya se han administrado miles de millones de veces, han sido sometidas a un riguroso análisis de



seguridad y han demostrado ser extremadamente seguras, además de que sin ellas más personas habrían enfermado, más personas habrían sufrido efectos graves y más personas habrían muerto durante la pandemia.

Aún así, como se comprobó desde 2021 en Israel, algunas personas padecieron la inflamación del músculo cardíaco —es literalmente lo que significa miocarditis— como consecuencia de la vacuna de ARN mensajero contra la Covid-19. Cabe añadir que la propia infección COVID-19 causa 10 veces más casos de miocarditis, además de otros problemas.

La miocarditis es leve, pero no siempre

Los síntomas de esta inflamación del músculo cardíaco causado por las vacunas son: dolor torácico, dificultad para respirar, fiebre y palpitaciones, y aparecen en ausencia de la infección viral entre uno y tres días después de la inyección.

De acuerdo con el equipo de Wu, quien es director del Instituto Cardiovascular de la Universidad de Stanford, la miocarditis asociada a la vacuna se presenta en aproximadamente una de cada 140 mil personas vacunadas después de la primera dosis y aumenta a uno de cada 32 mil después de la segunda dosis.

"Por razones que no están claras —señala un comunicado de Stanford—, la incidencia alcanza su punto máximo entre los hombres vacunados de 30 años o menos, con uno de cada 16 mil 750 vacunados" que padecen miocarditis.

Afortunadamente, la mayoría de estos casos "tienen una evolución favorable", afirma Wu, con la función cardíaca completamente conservada o restaurada. La recuperación suele ser rápida.

"Cuando los síntomas son leves y la inflamación no ha causado daño estructural al corazón, simplemente observamos a estos pacientes para asegurarnos de que se recuperen".

Sin embargo, Wu añade que, si la inflamación es grave, la lesión cardíaca resultante puede ser bastante debilitante y requerir hospitalizaciones, ingresos en unidades de cuidado intensivo para pacientes críticos y, en raras ocasiones, fallecimientos.

"Pero la COVID-19 es peor", añadió el investigador, pues padecerla implica aproximadamente 10 veces más probabilidades de inducir miocarditis que una vacuna de ARNm, afirmó Wu. Esto se suma a todos los demás problemas que causa.

La causa y las "gloriosas batallas"

Los extensos experimentos de Wu y su equipo, reportados este miércoles en la revista [Science Translational Medicine](#) incluyeron análisis bioquímicos y de biomoléculas; experimentos con diferentes tipos de células del sistema inmune; crecimiento y cultivo de tejido cardíaco, y pruebas con ratones.

Así pudieron detectar dos proteínas, del tipo de las citocinas —que son sustancias señalizadoras del sistema inmunitario—, "son las principales causas de la miocarditis".

Las citocinas provocar la llegada de macrófagos y neutrófilos, que son células de primera respuesta defensiva que usualmente mueren en "gloriosas batallas (generalmente contra patógenos bacterianos o fúngicos) y que son el principal componente del pus", explica el comunicado.

Del remedio natural al naturista

El propio cuerpo minimiza el daño potencial de macrófagos y neutrófilos bloqueando la actividad de las citocinas o, como se observó en los corazones de los ratones, aumentando las poblaciones de moléculas de la superficie celular que atrapan macrófagos, neutrófilos y otros tipos de glóbulos blancos.

Así, es posible administrar inhibidores de las dos citocinas a los pacientes, pero "Wu presentía que un suplemento dietético común podría ayudar a prevenir dicho daño", señala el comunicado, y dadas las mayores tasas de miocarditis en hombres y las conocidas propiedades antiinflamatorias del estrógeno, revisó un compuesto que había estudiado unos años antes.

"En un artículo publicado en la revista *Cell* en 2022, el equipo de Wu identificó la genisteína —añade la Stanford—, una sustancia suave similar al estrógeno derivada de la soya, con actividad antiinflamatoria y la capacidad de contrarrestar el daño inducido por la marihuana a los vasos sanguíneos y al tejido cardíaco".

"La genisteína se absorbe débilmente cuando se ingiere", afirmó Wu. "Nadie ha sufrido una sobredosis de tofu".

Así que el equipo de investigación hizo una serie de experimentos similares a los anteriores pero con genisteína, y ésta evitó gran parte de los efectos nocivos de las vacunas de ARNm y de las citocinas en los tejidos cardíacos; aunque cabe aclarar que la genisteína que utilizaron "era más pura y concentrada que el suplemento dietético disponible en tiendas naturistas".

Epílogo para el futuro

"Es razonable creer que la respuesta inflamatoria inducida por la vacuna de ARNm podría extenderse a otros órganos", afirma Wu en el comunicado. "Nosotros y otros investigadores hemos observado evidencia de esto en pulmones, hígado y riñones. Es posible que la genisteína también revierta estos cambios".

Fuente: LATINUS. Disponible en <https://n9.cl/8usa7m>

Biovac boosts vaccine capabilities with new lab, health tech park to open next door

Dec 12. Biopharmaceutical company the Biologicals and Vaccines Institute of Southern Africa (Biovac) has opened a product development laboratory at its Cape Town facility.

The company says the new laboratory will strengthen its vaccine product development capabilities, enabling it to produce vaccines for Africa from the early stages of product development to drug substance and drug product manufacturing, to the final product.

It will also aid in responding to the continent's high disease burden with locally driven solutions.



Biovac currently develops, formulates, fills, finishes and distributes vaccines used in South Africa's childhood vaccine programme.

At inception, Biovac initially focused on distributing imported childhood vaccines in partnership with South Africa's Department of Health, in support of its Expanded Programme for Immunisation.

It later progressed to collaborating with multinational companies to fill and finish vaccines and is now further advancing its vaccine development capability across more technology platforms, including mRNA, cell culture and bacterial technology platforms.

The new product development laboratory has been realised through the support of the Gates Foundation.

The lab should assist Biovac, South Africa and the African continent to develop their own vaccines across multiple platforms, and to be better able to respond to future pandemics or outbreaks.

The laboratory will allow multiple products to be developed simultaneously, and should foster innovation and intellectual property creation for vaccines targeting diseases prevalent in Africa.

The laboratory includes infrastructure for mRNA drug substance development, screening, evaluation and manufacturing.

It houses a specialised suite to formulate nanoparticles that safely encapsulate and protect mRNA, along with dedicated areas for bacterial and cell culture, cell bank storage and handling of sensitive medical materials.

The African Union Commission and the Africa Centres for Disease Control and Prevention committed in 2022 to ensuring that 60% of vaccines used on the continent are manufactured in Africa by 2040.

Currently, only about 1% are produced locally.

"The establishment of our new product development laboratory is a major milestone for Biovac and for African vaccines and vaccine innovation," says Biovac CEO Morena Makhoana.

"It gives us the capability to develop and test next-generation vaccines using the most advanced technology available, ensuring that Africa is not left behind in responding to current and future vaccine preventable diseases."

"Biovac's new product development laboratory represents a leap forward for vaccine innovation and manufacturing in Africa," notes Gates Foundation CEO Mark Suzman.

"For millions of people across the continent, it brings the promise of faster, more reliable access to life-saving vaccines – developed and produced in Africa, for Africa."

Biovac's Ambitions Boosted by New Health Technology Park
The City of Cape Town (CoCT) says it intends to transfer a section of city-owned land to Biovac for the development of the Cape Town Health Technology Park (CHTP).

The land, located in Ndabeni, is next door to Biovac.

According to CoCT, the CHTP will serve as a hub for high-tech medical and biotech enterprises, "creating an environment that stimulates innovation, supports new economic sectors and strengthens South Africa's position in global health technology industries".

The land will be developed into a mixed-use precinct made up of offices, laboratories, research centres and manufacturing facilities for medical and health-related products.

"The idea is to bring together businesses, researchers and manufacturers in one location, creating a dedicated space for innovation and production in the health sector," says CoCT Economic Growth MMC James Vos.

He adds that Biovac, with support from the Western Cape government, initiated the establishment of the tech park.

As Biovac aims to revitalise vaccine manufacturing in South Africa, it needs to build capacity in all aspects of vaccine development and manufacturing, from products for clinical trials to full-scale commercial production, for both local and international markets.

"The CHTP project was identified as a vital stimulus for the growth of the health technology industries in South Africa," says Vos.

"The envisaged CHTP aims to be a world-class innovation facility, which will culminate in the co-location and investment by innovative firms.

"This includes government, academia and innovation support organisations in a purpose-built facility.

"The key objective of the CHTP is to play a driving role in the establishment of a health technologies innovation and manufacturing hub in the Western Cape," notes Vos.

Fuente: ENGINEERING NEWS. Disponible en <https://n9.cl/wvxo5a>

GC Biopharma wins Korea support to fast-track pandemic-ready mRNA vaccine

Dec 15. GC Biopharma was selected by the Korea Disease Control and Prevention Agency as a corporation to receive support for a phase 1 clinical study under the "pandemic preparedness mRNA Vaccine development support project."

GC Biopharma said on the 15th that "it was ultimately included among the phase 1 clinical support targets, limited to only two of the four corporations selected at the nonclinical stage." The project is a government-led initiative to secure domestic mRNA Vaccine development capability in preparation for the next pandemic.

GC Biopharma is regarded as the only corporation in Korea capable of independently carrying out the entire process from discovering candidates to manufacturing and production based on its in-house mRNA-LNP (lipid nanoparticle) platform. In particular, it is cited as having strengths in possessing key enabling technologies across the board, including codon (the base sequence in mRNA that instructs protein production) optimization using artificial intelligence (AI), patents related to UTR (untranslated regions) that enhance the stability of gene expression, and LNP technology that improves delivery efficiency.



The company aims to obtain approval for an investigational new drug (IND) application within the year for a phase 1 clinical trial of its COVID-19 mRNA Vaccine candidate. After initiating phase 1, it plans to proceed quickly with the research and submit a phase 2 IND in the second half of 2026.

Jeong Jae-uk, head of research and development (R&D) at GC Biopharma, said, "Securing a homegrown mRNA Vaccine platform is a key task to strengthen the nation's disease control capabilities," adding, "with this government support as a springboard, we will further accelerate development and make a tangible contribution to the national disease control system."

Fuente: CEPI. Disponible en <https://n9.cl/1q5asr>

Argentina investiga vacunas contra pandemias del futuro en medio de brotes por baja vacunación

16 dic. Argentina atraviesa una paradoja sanitaria cada vez más evidente. Por un lado, el sistema científico nacional avanza en desarrollos tecnológicos de punta para anticiparse a futuras pandemias; por el otro, el país registra un retroceso alarmante en las tasas de vacunación que pone en riesgo la salud colectiva y reabre la puerta a enfermedades que estaban controladas o directamente erradicadas.

En ese contexto, investigadores argentinos trabajan en el desarrollo de una vacuna candidata con tecnología de ARN mensajero (ARNm) contra el virus de la Influenza Aviar



A(H5N1), considerado uno de los patógenos con mayor potencial pandémico a nivel global.

El proyecto es liderado por la empresa Sinergium Biotech junto al Instituto de Investigaciones en Microbiología y Parasitología Médica UBA-CONICET (IVMPAM), con apoyo de la Organización Mundial de la Salud (OMS), la Organización Panamericana de la Salud (OPS) y el Medicines Patent Pool (MPP).

La iniciativa busca fortalecer la soberanía sanitaria y posicionar a Argentina como referente regional en preparación pandémica. La tecnología de ARNm que se desarrolla en la planta de Garín es flexible y adaptable, lo que permitiría modificar rápidamente una vacuna ante la aparición de un nuevo patógeno.

El objetivo estratégico es ambicioso: lograr una vacuna contra una eventual "Enfermedad X" dentro de los 100 días posteriores a su detección. Los primeros resultados preclínicos, tras ensayos en ratones y hurones, se esperan para 2026 y los conocimientos serán compartidos con países de ingresos medios y bajos.

Sin embargo, este avance científico convive con una realidad sanitaria crítica. La gripe vuelve a convertirse en una amenaza concreta, con un inicio temprano de la temporada de influenza en el hemisferio norte y la circulación de una nueva variante de influenza A(H3N2) en más de 30 países.

Aunque las vacunas estacionales continúan siendo eficaces para reducir hospitalizaciones y cuadros graves, la OPS advirtió sobre la necesidad urgente de reforzar la vacunación y la vigilancia epidemiológica.

En Argentina, el problema es más profundo. El país atraviesa el peor derrumbe histórico de las coberturas

del Calendario Nacional de Vacunación. Datos recientes muestran que la vacuna triple viral cayó del 90% a apenas el 46% en 2024, mientras que la cobertura contra la poliomielitis se redujo al 47%, muy por debajo del 95% recomendado para garantizar la inmunidad colectiva.

Este escenario de fragilidad inmunológica ya tuvo consecuencias: reaparecieron casos de sarampión, coqueluche y hasta polio, enfermedades que se consideraban bajo control.

A este retroceso se suma la consolidación del discurso antivacunas, que dejó de ser marginal para instalarse incluso en ámbitos institucionales. Un encuentro impulsado en el Congreso de la Nación para cuestionar la seguridad y composición de las vacunas contra el COVID-19 fue duramente rechazado por el sistema de salud y por entidades médicas, que alertaron sobre el “enorme peligro social” de difundir información sin sustento científico. Especialistas advierten que estos mensajes erosionan la confianza pública y debilitan políticas sanitarias esenciales.



El impacto de la vacunación trasciende la salud individual. Mantener altas coberturas permite sostener la presencialidad laboral, educativa y social, evitando cierres de escuelas, restricciones a la movilidad y pérdidas económicas como las vividas durante la pandemia de COVID-19. El debilitamiento de los programas de inmunización no solo incrementa el gasto estatal para contener brotes, sino que amenaza derechos básicos y la vida cotidiana.

Así, mientras Argentina invierte en ciencia para evitar futuras cuarentenas, el retroceso en la vacunación expone una contradicción peligrosa: el conocimiento avanza, pero la protección colectiva retrocede. Resolver esa brecha es hoy uno de los desafíos sanitarios más urgentes del país.

Fuente: NEA HOY. Disponible en <https://n9.cl/3tcvl>

Nueva generación de vacunas contra la COVID-19: avances en seguridad cardíaca y eficacia frente a la cepa Frankenstein

Dec 16. En medio de la expansión de subvariantes de SARS-CoV-2, como la denominada XFG o “Frankenstein”, y la persistencia de dudas sobre efectos adversos de las vacunas COVID-19, equipos de investigación trabajan en nuevas formulaciones que prometen mejorar la seguridad y la eficacia de las dosis disponibles.

Esta información surge en momentos en que la cobertura de vacunación en Argentina ha sido baja en 2025 y la preocupación por variantes continúa.

Ajustes en vacunas de ARNm

Desde el lanzamiento de las vacunas basadas en ARN mensajero (ARNm), como la desarrollada por Pfizer-BioNTech, se han observado, en casos muy poco frecuentes, efectos inflamatorios del corazón —miocarditis y pericarditis— especialmente en varones jóvenes tras algunas dosis.



Estos eventos fueron identificados por los fabricantes y los organismos reguladores desde 2021 y están incluidos en los prospectos como posibles efectos adversos raros, no como una “prueba de daño generalizado”.

Las universidades, centros de investigación y la propia industria continúan evaluando cómo minimizar aún más estos riesgos sin sacrificar la respuesta inmunológica. Algunos grupos han reportado ajustes en las secuencias de ARNm o en las formulaciones que, en modelos preclínicos o ensayos iniciales, redujeron la incidencia de inflamación cardíaca sin disminuir la producción de anticuerpos.

Sin embargo, estos resultados aún no están validados por amplios estudios clínicos ni autorizaron cambios regulatorios universales. Por eso, cualquier afirmación de que una vacuna “logró no causar daño cardíaco” debe leerse con cautela y en contexto científico claro y documentado.

Los especialistas recuerdan que, aunque la miocarditis asociada a la vacunación puede presentarse, es muy rara y generalmente de curso leve y con buena recuperación con tratamiento adecuado. Además, las infecciones por COVID-19 mismas implican un riesgo más alto de complicaciones cardiovasculares graves que las observadas tras la vacunación.

Variantes emergentes

La subvariante XFG de SARS-CoV-2, apodada en algunos medios como “Frankenstein”, ha ganado terreno en varias regiones del mundo, aunque los organismos internacionales de salud la consideran parte de la evolución esperada del virus, no una forma dramáticamente diferente o más agresiva.

Los síntomas que causa son similares a los de otras variantes y su riesgo para la salud pública sigue clasificado como bajo a moderado, según reportes basados en vigilancia genómica y epidemiológica.

La respuesta científica a esta dinámica evolutiva incluye actualizaciones de vacunas. Al igual que cada año se ajustan las fórmulas de vacunas antigripales para enfrentar las cepas más circulantes, los desarrolladores de vacunas contra COVID-19 han diseñado dosis adaptadas a subvariantes específicas, con estudios que apuntan a ampliar la cobertura inmunológica.

Estas versiones buscan ser más eficaces contra variantes prevalentes, aunque no existe evidencia concluyente de que una sola vacuna detenga por completo la transmisión de todas las subvariantes.

En Argentina y otros países, la tasa de aplicación de refuerzos en 2025 ha sido muy baja: datos oficiales indicaron que menos del 1 % de la población recibió vacunas contra COVID este año, lo que podría dejar a gran parte de la población más vulnerable frente a la circulación viral.

Balance de riesgos y beneficios

Los organismos de salud pública, incluyendo la Organización Mundial de la Salud y agencias nacionales, sostienen que el perfil beneficio-riesgo sigue siendo claramente favorable para la vacunación contra COVID-19. Millones de dosis administradas globalmente han demostrado reducción significativa de hospitalizaciones y muertes por la infección grave.

Las reacciones adversas comunes —como dolor en el lugar de la inyección, fiebre o malestar transitorio— son bien conocidas y previstas en los prospectos autorizados.

Los eventos raros, como la miocarditis, se monitorizan de forma continua y están documentados en la información oficial de las vacunas, pero no constituyen una razón para descartar la vacunación en los grupos recomendados por las autoridades sanitarias.

Fuente: EL LITORAL. Disponible en <https://n9.cl/alhvno>

CEPI to Fund Pivotal Phase 3 Trial for Moderna's mRNA Pandemic Influenza Vaccine Candidate

Dec 18. The Coalition for Epidemic Preparedness Innovations (CEPI) will invest up to \$54.3 million to support a pivotal Phase 3 clinical trial that aims to help advance Moderna's investigational mRNA-based H5 pandemic influenza vaccine candidate, mRNA-1018, to licensure. The funding marks a significant step forward in global pandemic preparedness that could enable fast, equitable access to vaccines for one of the world's most pressing health threats.

This Phase 3 study would be the first mRNA-based vaccine targeting pandemic influenza to enter a pivotal trial. If the vaccine candidate is licensed, it would expand the current global portfolio of H5 vaccines with a rapid-response platform that could revolutionize future pandemic responses, making a significant contribution to CEPI's 100 Days Mission, a global goal to develop safe and effective vaccines within 100 days of a new pandemic threat being identified.

Dr Richard Hatchett, Chief Executive Officer of CEPI said:

"Pandemic influenza remains one of the greatest threats to global health security. With this partnership, we are not just advancing vaccine science, we are fundamentally changing the game. By harnessing the speed and adaptability of mRNA technology, we could shave months off the response time, deliver vaccines at scale, and enable equitable access for all. This is how we plan to protect the world from the next flu pandemic."

Stéphane Bancel, Chief Executive Officer of Moderna said:

"We are proud to have the support of CEPI to advance our pandemic influenza vaccine candidate, research that is critical to our commitment to pandemic preparedness. mRNA technology can play a vital role in addressing emerging health threats quickly and effectively, and we look forward to continuing our partnership with CEPI as we advance our health security portfolio, and in parallel, further the 100 Days Mission."

A potential first-in-class mRNA vaccine for pandemic influenza

Conventional influenza vaccines require virus growth in eggs or cell culture, a process that can take months. By contrast, an mRNA vaccine can be designed in hours or days as soon as the virus's genetic sequence is known and swiftly manufactured at scale. The combination of speed, adaptability and scalability offered by mRNA technology is a potential critical advantage when a new pandemic strain emerges and every day that passes could cost lives.

If licensure is granted, Moderna is committed to working to provide people around the world with rapid, equitable access to the resulting H5 vaccine in the event of a pandemic. As part of this agreement, Moderna will allocate 20% of its H5 pandemic vaccine manufacturing capacity for timely supply to low- and middle-income countries at affordable pricing.

The Phase 3 trial, set to begin early in 2026, will evaluate the safety and immunogenicity of Moderna's H5 vaccine candidate in populations in the UK and U.S. It will build upon positive Phase 1/2 results which showed rapid and persistent immune responses in healthy adults aged 18 years and older. Potential licensure of the vaccine will also leverage data from a pivotal Phase 3 trial of Moderna's investigational seasonal influenza vaccine, mRNA-1010.

This project is part of CEPI and Moderna's strategic partnership, which aims to harness Moderna's mRNA platform to accelerate epidemic and pandemic vaccine development.

Fuente: MORNINGSTAR. Disponible en <https://n9.cl/smrsq>

Moderna Korea wins approval for mRNA RSV vaccine to protect older adults

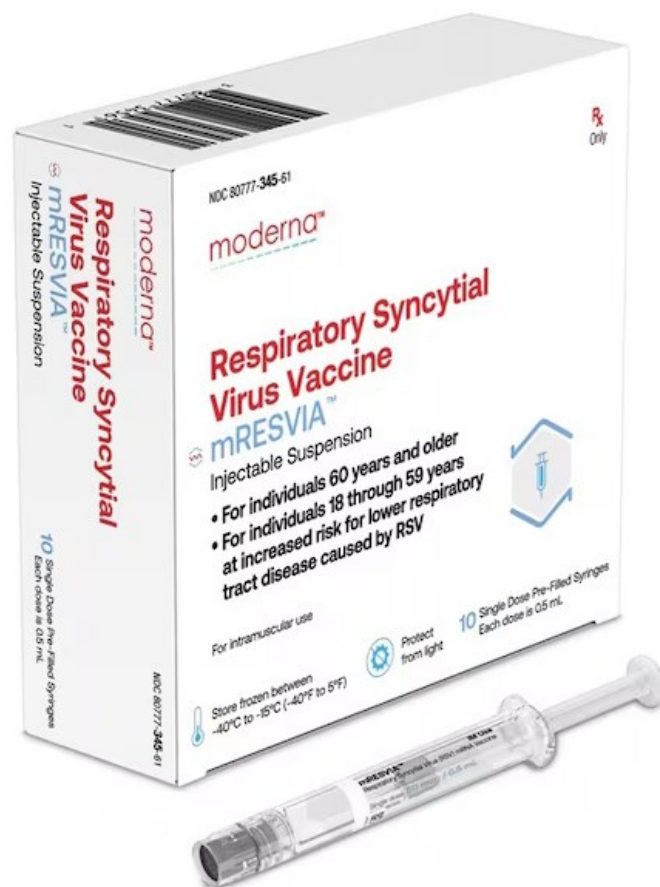
Dec 19. Moderna Korea said on the 19th that the respiratory syncytial virus (RSV) messenger ribonucleic acid (mRNA) vaccine "mRESVIA pre-filled syringe (PFS)" has been approved by the Ministry of Food and Drug Safety. It is the first mRNA platform vaccine in Korea for RSV prevention.

The mRESVIA pre-filled syringe was approved to prevent lower respiratory tract disease (LRTD) caused by RSV in adults 60 and older and in high-risk adults ages 18 to under 60. RSV can range from cold-like symptoms to severe lower respiratory tract infections such as pneumonia, and the disease burden is known to be particularly high among older adults and adults with underlying conditions.

The approval was based on results from a phase 3 clinical trial of about 37,000 adults ages 60 and older in 22 countries, including Korea. No significant safety concerns were identified in the trial.

Kim Sang-pyo, head of Moderna Korea, said, "RSV is a major respiratory disease that can lead to hospitalization and severe complications among older adults and adults with underlying conditions," adding, "The mRESVIA pre-filled syringe is Moderna's second product approved in Korea, following the COVID-19 vaccine, and it is meaningful that mRNA technology can now contribute to public health by preventing RSV."

Fuente: Chosun Biz. Disponible en <https://n9.cl/5xf94>



Moderna respiratory syncytial virus (RSV) messenger RNA (mRNA) vaccine MRESVIA pre-filled syringe (PFS).
Courtesy of Moderna Korea

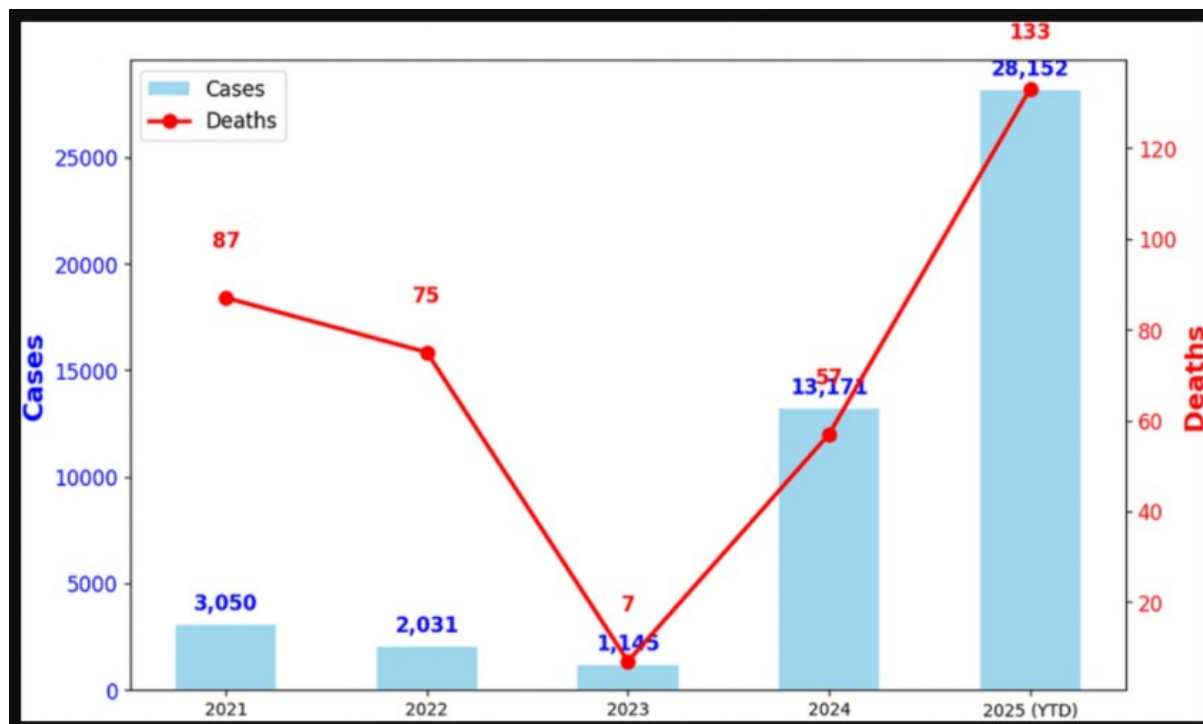
Mpox Vaccine Donations Help Curtail Outbreaks in Africa

Dec 20. Mpox cases in Africa surged in 2025, driven by circulating Clade Ib and Clade I viruses, with more than 42,000 confirmed cases by late November, according to the World Health Organization (WHO).

On December 5, 2025, the WHO reported community transmission of the mpox virus persists in Burundi, the Democratic Republic of the Congo, Kenya, Malawi, Mozambique, the Republic of Congo, Rwanda, South Africa, the United Republic of Tanzania, Uganda, and Zambia. To help reduce these outbreaks, mpox vaccine donations have continued in late 2025.

UNICEF Supply recently posted on X that 20,000 MVA-BN (JYNNEOS) mpox vaccine doses arrived in the African country of Liberia, part of a 32,000-dose donation from Bavarian Nordic. As of December 15, 2025, this shipment marks the first phase of a total donation of 32,000 doses to UNICEF, supporting Bavarian Nordic's commitment to protecting communities and ensuring vaccines reach those at risk.

Bavarian Nordic wrote, 'We are grateful to be part of this collective effort and thank everyone working to bring protection to communities affected by mpox. We will share further updates as the remaining doses reach their destinations.'



Previously, the Africa CDC received a donation of 110,000 doses of mpox vaccines to support the ongoing response to the mpox outbreak across the continent. During October 2025, the vaccines were allocated to Uganda, one of the countries most affected.

Paul Chaplin, President and CEO of Bavarian Nordic, commented in a press release, "Mpox remains a health emergency in Africa as evidenced by the continued spread across the continent and increase in the number of cases."

In the United States, the number of mpox cases has been reduced in most states. A factor in this positive trend is that the JYNNEOS vaccine is offered at health and travel clinics as of December 20, 2025.

The U.S. CDC says at-risk travelers should get their first monkeypox vaccine at least six weeks before traveling to outbreak areas in Africa if possible.

Fuente: VAX BEFORE TRAVEL. Disponible en <https://n9.cl/wa7gba>

La OMS recomienda cambiar la composición de la vacuna de la COVID-19 a un nuevo antígeno

20 dic. La Organización Mundial de la Salud (OMS) ha recomendado un cambio de composición antigénica de las vacunas contra la COVID-19. El Grupo Técnico Asesor sobre la Composición de la Vacuna (TAG-CO-VAC, por sus siglas en inglés) ha aconsejado el uso de LP.8.1. monovalente.

A pesar de las sugerencias de cambio, la OMS ha indicado que los antígenos del linaje JN.1, los recomendados anteriormente, siguen siendo alternativas adecuadas. Así, la organización busca que la vacunación no se retrase en previsión del acceso a vacunas con una composición LP.8.1. Además, ha señalado que se podrían considerar otros enfoques que demuestren respuestas eficaces contra las variantes del SARS-CoV-2 que circulan actualmente.

Para tomar estas decisiones, el TAG-CO-VAC ha monitoreado de cerca la evolución genética y antigénica de las variantes del SARS-CoV-2, las respuestas inmunitarias a la infección por SARS-CoV-2 y la vacunación contra la COVID-19. El objetivo, de esta manera, pasa por mejorar las respuestas inmunes inducidas por la vacuna a las variantes circulantes del SARS-CoV-2.

A partir de la evidencia analizada, el grupo asesor de la OMS ha afirmado que LP.8.1 como antígeno de vacuna ofrece respuestas de anticuerpos cruzados mayores en comparación con las vacunas monovalentes JN.1 o KP.2. Aún así, el TAG-CO-VAC ha reconocido limitaciones de la evidencia sobre la que se derivan las recomendaciones ofrecidas para la composición de las vacunas y ha pedido la generación de distintos tipos de información.

"LP.8.1 como antígeno de vacuna ofrece respuestas de anticuerpos cruzados mayores en comparación con las vacunas monovalentes JN.1 o KP.2."

Con todo, ha indicado que continuará con su monitorización del SARS-CoV-2 y el rendimiento de las vacunas. Asimismo, seguirá evaluando las implicaciones para la composición antigénica de la vacuna contra la COVID-19 y emitiendo las recomendaciones correspondientes.

Fuente: ConSalud.es. Disponible en <https://n9.cl/pxjuj>

WHO: Inside Global Vaccine Manufacturing & Supply Chains

Dec 21. Just 10 manufacturers are responsible for 78% of all vaccine doses produced worldwide, according to the World Health Organization (WHO).

This finding forms part of the WHO's 2025 'Global Market Landscape of Vaccine Manufacturing and Procurement' report, which challenges the notion of vaccine self-sufficiency.

The landscape analysis reveals that no single country can meet its immunisation requirements using only vaccines produced within its own borders or even its own region, suggesting that global public health is very much dependent on cross-border collaboration.



Across all WHO regions, countries purchase vaccines that involve production stages located in multiple territories.

Traditional and innovative production methods

Most vaccine producers continue to rely on traditional technology platforms for vaccine production. These include live attenuated or inactivated virus, polysaccharide and toxoid approaches.

However, innovative platforms such as messenger RNA (mRNA) or viral vectors remain concentrated primarily in the US and Europe.

According to the WHO, manufacturers in other regions face significant barriers including intellectual property complexity, high upfront research and development costs and a lack of regulatory readiness.

The report highlights that lyophilisation, or freeze-drying, is often used to enhance vaccine stability and prolong shelf life, but this technology can create bottlenecks at the finishing stage.

Producers in the Western Pacific region lyophilise more doses than producers in other regions, including the Americas and the Eastern Mediterranean.

Manufacturing capabilities and infrastructure gaps

While vials remain the main container used for vaccines, fewer than half as many producers possess the capability to fill into pre-filled syringes. This creates a niche for technologically advanced facilities.

The WHO's analysis indicates that supply security will require investments in Drug Substance (DS) production, not just fill-finish capacity.

All WHO regions demonstrate interdependence with other regions for vaccine supply.

The report notes that vaccine production often occurs within the same region from end to end, with many, or sometimes all, stages of production in a single, integrated location.



The WHO European Region and the WHO Region of the Americas are exceptions to this pattern, as vaccines manufactured in these areas are more likely to involve production steps across both regions.

According to the report, domestic manufacturing capacity can strengthen a country's supply security and regional manufacturing can serve as an important source of supply for countries in the region.

However, having vaccine production capacity in a country does not guarantee supply security in emergencies. Ensuring the availability of raw materials and capacity for all stages of manufacturing is needed to secure supply during health emergencies.

Addressing Africa's supply dependency

Africa relies on vaccines from other WHO regions for 99% of its supply.

The Platform for Harmonised African Health Products Manufacturing (PHAHM) aims to reduce this reliance to 40% by 2040.

In June 2024, vaccine alliance Gavi launched the African Vaccine Manufacturing Accelerator (AVMA), a financing instrument originally designed in consultation with the African Union and Africa Centres for Disease Control and Prevention (Africa CDC).

AVMA uses a 'pull financing' model by providing downstream incentives to manufacturers to help offset initial costs of development and production.

The initiative aims to strengthen and expand Africa's vaccine manufacturing capability with up to US\$1.2bn committed over 10 years.

More than US\$9bn has been committed to Gavi by a variety of organisations in 2025, including the European Commission and the Gates Foundation.

Ursula von der Leyen, President of the European Commission, says: "Investing in health is investing in our shared future. Our work with Gavi saves lives. Millions still need this vital protection."

Elsewhere, Bill Gates, Chair of the Gates Foundation, says: "In a constrained budget environment, it's even more important to focus aid funding on the investments that really work. And Gavi is exactly that.

"I don't know of anything with a higher impact per dollar in terms of saving and improving lives."

Fuente: Healthcare.DIGITAL. Disponible en <https://n9.cl/mrk3u>

A partir de 2026 se proporcionará vacunación gratuita contra el VPH a niñas de 11 años

21 dic. Según información del Programa Nacional Ampliado de Inmunización, las vacunas contra el cáncer de cuello uterino en mujeres y algunos cánceres en hombres causados por el virus VPH se incluirán en el programa a partir de 2026, para niñas de 11 años.

En consecuencia, entre 2026 y 2028, institutos especializados han seleccionado cuatro provincias (Tuyen Quang, Quang Ngai, Dak Lak y Vinh Long) para poner a prueba el programa de vacunación gratuita contra el VPH para niñas de 11 años.

Actualmente, el Instituto Nacional de Higiene y Epidemiología está estimando las necesidades de vacunas y recopilando estadísticas sobre el número de niños que implementarán este programa piloto. La expansión a otros grupos de edad o la vacunación en niños aún se encuentra en fase de investigación, tras su implementación en las cuatro provincias mencionadas.

La vacuna contra el VPH es una de las cuatro nuevas vacunas que se incluirán en el programa ampliado de inmunización entre 2024 y 2030, incluida la vacuna contra el rotavirus, la vacuna neumocócica, la vacuna contra el VPH y la vacuna contra la gripe estacional.

Antes del VPH, la vacuna contra el rotavirus se implementó a pequeña escala a partir de fines de 2024 y se espera que se implemente más ampliamente en 2026.

Según los expertos, gracias a la vacunación contra el VPH y a la detección temprana, muchos países del mundo han reducido el número de casos y tienen posibilidades de eliminar el cáncer de cuello uterino.

De estos países, Australia implementó esta vacuna tempranamente y tiene una alta cobertura (el 85,9 % de las niñas y el 83,4 % de los niños han recibido al menos una dosis de la vacuna contra el VPH antes de los 15 años), con la mayor efectividad en la prevención de enfermedades del mundo. Se proyecta que Australia eliminará el cáncer de cuello uterino para 2035.

En Europa, los países que implementaron la vacunación temprana contra el VPH han visto una reducción significativa de las lesiones precancerosas en los grupos vacunados, así como una marcada disminución de la prevalencia de los tipos 16 y 18 del VPH (los dos tipos principales que causan cáncer de cuello uterino) en la comunidad.

Las vacunas contra el VPH se han utilizado en Vietnam desde antes de 2010; sin embargo, la tasa de vacunación infantil sigue siendo baja debido a la limitada disponibilidad de la vacuna en clínicas privadas y a su costo relativamente alto. Un estudio de 2021 mostró que solo el 12 % de las mujeres y niñas de entre 15 y 29 años habían recibido esta vacuna.

Sin embargo, incluir la vacuna contra el VPH en el programa gratuito de inmunización brindará una oportunidad de prevenir y eventualmente eliminar las enfermedades causadas por este virus, la más común de las cuales es el cáncer de cuello uterino, en Vietnam, similar a otras enfermedades comunes que han sido erradicadas, eliminadas o controladas mediante vacunación en el pasado, como el tétanos neonatal, la polio, el sarampión y la tos ferina.



Según el Departamento de Prevención de Enfermedades del Ministerio de Salud, la nueva Ley de Prevención de Enfermedades 2025, aprobada recientemente por la Asamblea Nacional, agrega varias regulaciones nuevas sobre la vacunación, como la exigencia de una revisión del historial de vacunación durante los controles de salud de los niños al comienzo del año escolar, regulaciones sobre la equidad en la vacunación y disposiciones tanto para la vacunación obligatoria como voluntaria.

La agencia también indicó que está organizando un programa de educación y comunicación en salud sobre prevención de enfermedades a través de la vacunación, con el tema "Vacunación para todos", en respuesta a la Ley de Prevención de Enfermedades de 2025.

Fuente: VIETNAM.VN. Disponible en <https://n9.cl/jja28g>



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Estrategia de búsqueda: (Vaccine) AND DP:([11.12.2025 TO 21.12.2025]) as the publication date 21 records.

1. [WO/2025/252927](#) **VACCINE** COMPOSITIONS AND METHODS AND USES THEREOF

WO - 11.12.2025

Clasificación Internacional **A61K 39/02N**º de solicitud PCT/EP2025/065749 Solicitante THE PROVOST, FELLOWS, FOUNDATION SCHOLARS & THE OTHER MEMBERS OF BOARD, OF THE COLLEGE OF THE HOLY & UNDIVIDED TRINITY OF QUEEN ELIZABETH NEAR DUBLIN Inventor/a JAZAYERI, Seyed Davoud

The present invention relates to vaccines and **vaccine** compositions, in particular vaccines and **vaccine** compositions inactivated with antibiotics or antibacterial compounds. In particular, the invention extends to a bacterial **vaccine** or **vaccine** composition wherein the bacteria has been inactivated by an antibiotic or an antibacterial compound. The invention further extends to the use of the **vaccine** and **vaccine** compositions as a therapeutic or as part of a **vaccine** in the prevention of infection with a bacterial infection, such as *Bordetella pertussis*, and the treatment and/or prophylaxis of bacterial

diseases, such as pertussis disease (whooping cough).

2. WO/2025/251935 HLA-A02-TARGETING LIVER CANCER **VACCINE**, AND PREPARATION METHOD THEREFOR AND USE THEREOF

WO - 11.12.2025

Clasificación Internacional A61P 35/00Nº de solicitud PCT/CN2025/096839 Solicitante ZHONGSHAN HOSPITAL, FUDAN UNIVERSITY Inventor/a GAO, Qiang

An HLA-A*02-targeting liver cancer **vaccine**, and a preparation method therefor and a use thereof. First, neoantigen targets having sequences as shown in SEQ ID NO: 1 to SEQ ID NO: 20 are obtained by means of screening, then the neoantigen targets are modified and then used for constructing an mRNA sequence, mRNA-lipid nanoparticles are prepared by using microfluidic technology, and the active ingredients of the **vaccine** are encapsulated in the lipid nanoparticles, thereby being conducive to transferring a viral protein into cells, and protecting the cells from being damaged by a destructive enzyme. Provided is an mRNA tumor **vaccine** for an HLA-A*02:01 liver cancer patient. The mRNA tumor **vaccine** is an mRNA **vaccine** that contains an ultra-broad spectrum antigen with tumor-specific alternative splicing, and is designed strictly on the basis of the HLA typing of a patient and has high-coverage and high-immunogenic tumor neoantigens.

3. WO/2025/251934 HLA-A11-TARGETED LIVER CANCER **VACCINE**, AND PREPARATION METHOD THEREFOR AND USE THEREOF

WO - 11.12.2025

Clasificación Internacional C07K 14/47Nº de solicitud PCT/CN2025/096819 Solicitante ZHONGSHAN HOSPITAL, FUDAN UNIVERSITY Inventor/a GAO, Qiang

Disclosed in the present invention are an HLA-A*11-targeted liver cancer mRNA **vaccine**, and a preparation method therefor and a use thereof. The mRNA **vaccine** of the present invention is an mRNA **vaccine** designed on the basis of the HLA-A*11:01 typing of a patient and having high-coverage and high-immunogenic tumor neoantigens, and is formed by transcribing DNA having a nucleotide sequence shown in SEQ ID NO: 32 to form an mRNA, and encapsulating the mRNA in lipid nanoparticles.

4. WO/2025/255622 METHOD OF **VACCINE** PROTOTYPING

WO - 18.12.2025

Clasificación Internacional C12P 21/02Nº de solicitud PCT/AU2025/050623 Solicitante UNIVERSITY OF TECHNOLOGY SYDNEY Inventor/a CARE, Andrew

Disclosed herein is a method of preparing an antigen. The method comprises preparing an encapsulin comprising an antigenic peptide by cell-free protein synthesis. It also describes a method of selecting one or more suitable antigens for a **vaccine** prototype. In this method, a plurality of different antigens are prepared as described and one or more suitable antigens are selected based on one or more of yield, occurrence of aggregation, subunit expression and encapsulin assembly.

5. WO/2025/255312 NITRATED INVASION PLASMID ANTIGEN D AND DERIVATIVES FOR ENHANCING

IMMUNE RESPONSES

WO - 11.12.2025

Clasificación Internacional A61K 39/02Nº de solicitud PCT/US2025/032398Solicitante SUDDUTH, EmmaInventor/a SUDDUTH, Emma

The present invention provides an antigenic nitrated recombinant polypeptide derived from invasion plasmid antigen D (IpaD) of *Shigella flexneri*. Also provided is a vaccine composition comprising the antigenic nitrated recombinant polypeptide and preparation thereof. Further provided is a method for inducing an immune response in a subject, comprising administering the vaccine composition to the subject.

6.20250375509VACCINE FOR PROTECTION AGAINST LEPTOSPIRA SEROVAR ICTEROHAEMORRHAGIAE

US - 11.12.2025

Clasificación Internacional A61K 39/02Nº de solicitud 18873753Solicitante INTERVET INC.Inventor/a Henricus Leo Bernardus Maria KLAASEN

The present invention is directed to providing a canine with protective immunity against *Leptospira* serovar Icterohaemorrhagiae with a vaccine that comprises non-Icterohaemorrhagiae *Leptospira* serovar.

7.20250375510VACCINE FOR PROTECTION AGAINST LEPTOSPIRA SEROVAR GRIPPOTYPHOSA

US - 11.12.2025

Clasificación Internacional A61K 39/02Nº de solicitud 18873754Solicitante INTERVET INC.Inventor/a Henricus Leo Bernardus Maria KLAASEN

The present invention is directed to providing a canine with protective immunity against *Leptospira* serovar Grippotyphosa with a vaccine that comprises a non-Grippotyphosa *Leptospira* serovar.

8.20250375515RECOMBINANT VACCINE AGAINST COVID-19 TO PRODUCE CELLULAR RESPONSE IN INDIVIDUALS WITH PRE-EXISTING IMMUNITY

US - 11.12.2025

Clasificación Internacional A61K 39/215Nº de solicitud 18693472Solicitante LABORATORIO AVI-MEX, S.A. DE C.V.Inventor/a Bernardo LOZANO DUBERNARD

A recombinant vaccine is described, which comprises an active Newcastle disease viral vector (NDV) having inserted an exogenous nucleotide sequence of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), without adjuvant, capable of generating a significant cellular response in T cells (CD4+ or CD8+) when stimulated with the S protein of the SARS-CoV-2 virus or proteins derived from it in individuals with previous immunity.

9.WO/2025/255319METHODS FOR SPECIES-SPECIFIC QUANTITATION OF EIMERIA OOCYSTS IN MIXED VACCINE SAMPLES

WO - 11.12.2025

Clasificación Internacional C12Q 1/6893Nº de solicitud PCT/US2025/032408Solicitante HUVEPHARMA INC.Inventor/a CALJON, Guy

The disclosure provides a hybrid protocol for identifying and quantitating viable *Eimeria* oocysts, such as in a mixed industrial scale vaccine sample. The hybrid protocol comprises the combination of a volumetric viability assessment, which allows for quantifying the number of viable oocysts, and a digital PCR (dPCR) assay, which allows for quantitative determination of the species composition of a mixed sample.

10. 2025271089 MAMMALIAN MHC PEPTIDE DISPLAY AS AN EPITOPE SELECTION TOOL FOR VACCINE DESIGN

AU - 11.12.2025

Clasificación Internacional N° de solicitud 2025271089 Solicitante ETH Zürich Inventor/a KISIELOW, Jan

11. 20250375512 USE OF MATRIX BOUND VESICLES (MBV) AS VACCINE ADJUVANTS

US - 11.12.2025

Clasificación Internacional A61K 39/09 N° de solicitud 18877090 Solicitante University of Pittsburgh - Of the Commonwealth System of Higher Education Inventor/a Stephen Francis Badylak

Disclosed herein are extracellular matrix (ECM) compositions, specifically to compositions comprising matrix bound nanovesicles (MBV) and an immunogen, and the use of these compositions, e.g., in vaccination.

12. WO/2025/254371 LIPID COMPOUND HAVING ASYMMETRIC STRUCTURE AND LIPID NANOPARTICLE COMPOSITION COMPRISING SAME

WO - 11.12.2025

Clasificación Internacional C07C 323/12 N° de solicitud PCT/KR2025/007074 Solicitante SML BIOPHARM CO., LTD. Inventor/a NAM, Jae Hwan

In some embodiments, a lipid compound has aliphatic chain-containing tail moieties that have an asymmetric structure. The lipid compound can be used as an ionizable lipid compound and stabilizes a pharmaceutically active substance, such as a nucleic acid-based therapeutic agent or vaccine. The expression efficiency of a target molecule encoded in a nucleic acid molecule is improved by using the ionizable lipid compound. The lipid compound can be applied to nucleic acid-based therapeutic agents or vaccines.

13. 20250378916 VIRAL ESCAPE INSPIRED FRAMEWORK FOR PRECISION STRUCTURE-GUIDED DUAL BAIT PROTEIN BIOSENSOR DEVELOPMENT

US - 11.12.2025

Clasificación Internacional G16B 40/20 N° de solicitud 19229639 Solicitante Iowa State University Research Foundation, Inc. Inventor/a Ratul Chowdhury

Platforms, systems, and methods for the simulation and identification of future escape variants of viruses that via a protein receptor on the host and/or dual bait biosensors are provided. The platforms and workflows leverage computer tools and artificial intelligence to quickly and reliably identify future escape variants and proteins optimal for dual bait biosensors, thereby reducing the lead time of vaccine development and allowing for preemptive and predictive antibody design.

14. 20250378904 PREDICTION OF FUTURE VIRAL ESCAPE VARIANTS

US - 11.12.2025

Clasificación Internacional G16B 15/30Nº de solicitud 19229362Solicitante Iowa State University Research Foundation, Inc.Inventor/a Ratul Chowdhury

Platforms, systems, and methods for the simulation and identification of future escape variants of viruses and/or biosensor designs are provided. The platforms and workflows leverage computer tools and artificial intelligence to quickly and reliably identify future escape variants and biosensor design, thereby reducing the lead time of **vaccine** development and allowing for pre-emptive and predictive antibody design. The biosensors can have numerous uses for studies and research.

15.WO/2025/257397LIVE ATTENUATED BORDETELLA VACCINES CAPABLE OF PRODUCING AND SECRETING HETEROLOGOUS ANTIGENS

WO - 18.12.2025

Clasificación Internacional A61K 39/02Nº de solicitud PCT/EP2025/066593Solicitante INSTITUT NATIONAL DE LA SANTÉ ET DE LA RECHERCHE MÉDICALEInventor/a LOCHT, Camille

The inventors have investigated the use of an attenuated B. pertussis strain as a live vehicle for the expression of heterologous antigens (e. g. SARS-CoV-2 N-protein) through the auto-transporter SphB1 secretion machinery. The passenger domain of Sph1 was replaced by N- protein in an expression cassette containing the pertactin signal peptide coding region and promoter region. The chimeric protein was successfully produced and secreted to the extracellular medium. Nasal administration of the live recombinant strains triggered a specific systemic cell-mediated response against N-protein. These results support the use of live attenuated B. pertussis strains as a potential **vaccine** platform for heterologous antigen delivery.

16.WO/2025/259919COMPOSITIONS AND METHODS FOR THE PREVENTION AND TREATMENT OF PATHOGENS

WO - 18.12.2025

Clasificación Internacional A61K 31/7004Nº de solicitud PCT/US2025/033419Solicitante UNIVERSITY OF SOUTHERN CALIFORNIAInventor/a SPELLBERG, Brad

An optimized protein-free tripartite **vaccine** protects against lethal blood and lung infections caused by a variety of nosocomial pathogens across taxonomic kingdoms, including Gram- positive bacteria, Gram-negative bacteria, and fungi is provided as well as method for using same.

17.WO/2025/255344COMPOSITIONS AND METHODS FOR ENGINEERING TREGS FOR TREATMENT OF DIABETES

WO - 11.12.2025

Clasificación Internacional C07K 14/725Nº de solicitud PCT/US2025/032441Solicitante BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASONInventor/a CEROSALETTI, Karen

Binding proteins and high affinity recombinant T cell receptors (TCRs) specific for novel Islet-specific glucose-6-phosphatase catalytic subunit-related protein (IGRP) epitope presented by the class II DRB4 neoantigens are provided herein. Compositions and recombinant host cells encoding and/or expressing the binding proteins and/or high affinity recombinant TCRs are also provided. The compositions and recombinant host

cells may be used to treat a subject having Type 1 diabetes, wherein an IGRP neoantigen is a therapeutic target, or an indication wherein IGRP neoantigen is a therapeutic target. Related vaccines, vaccine therapies, and vaccination regimens are also provided.

18. 2025905811 STABILIZED VACCINE CONSTRUCT AND USES THEREOF

AU - 11.12.2025

Clasificación Internacional N° de solicitud 2025905811 Solicitante The University of Melbourne Inventor/a

19. WO/2025/259866 COMBINATION OF CHEMOTHERAPY, CANCER CELL VACCINE AND ADOPTIVE CELL THERAPY

WO - 18.12.2025

Clasificación Internacional A61K 40/11 N° de solicitud PCT/US2025/033332 Solicitante ELIAS ANIMAL HEALTH Inventor/a REYES, Noe

The present disclosure is generally directed to methods of treating cancer in a subject using chemotherapy, cancer cell vaccines, and adoptive cell therapy. The cancer can be osteosarcoma, particularly appendicular osteosarcoma.

20. WO/2025/251149 SELF-ADJUVANTING VESICULAR VACCINE

WO - 11.12.2025

Clasificación Internacional C12N 15/62 N° de solicitud PCT/CA2025/050774 Solicitante ESPHERA SYN BIO INC. Inventor/a LICHTY, Brian

A self-adjuvanting extracellular vesicle (SAEV) is provided comprising an antigen and a STING activator, wherein the SAEV comprises a recombinant polypeptide which comprises the antigen and the STING activator, or the SAEV comprises a recombinant polypeptide comprising one of the antigen and the STING activator and the other of the antigen or the STING activator is co-loaded in the vesicle independently of the recombinant polypeptide. Methods of vaccination with a SAEV are also provided.

21. 2025905871 VACCINE ADJUVANTS

AU - 11.12.2025

Clasificación Internacional N° de solicitud 2025905871 Solicitante Royal Melbourne Institute of Technology Inventor/a Given, Not

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

Estrategia de búsqueda: vaccine.ti. AND @PD>="20251211"<=20251221 20 records

Document ID	Title	Inventor	Applicant Name
US 20250381258 A1	EPSILON TOXIN FROM CLOSTRIDIUM PERFRINGENS AS A VACCINE	TITBALL; Richard William et al.	One Health Ventures Limited
US 20250381281 A1	METHODS OF MANUFACTURING PEPTIDE-BASED VACCINES	Lynn; Geoffrey Martin et al.	Barinthus Biotherapeutics North America, Inc., The United States of America, as represented by the Secretary, Department of Health and Human Service
US 20250381261 A1	ZIKA VACCINES AND IMMUNOGENIC COMPOSITIONS, AND METHODS OF USING THE SAME	Acosta; Camilo et al.	Takeda Vaccines, Inc.
US 20250381264 A2	HTLV-1 NUCLEIC ACID LIPID PARTICLE VACCINE	ISHII; Ken et al.	NATIONAL INSTITUTES OF BIOMEDICAL INNOVATION, HEALTH AND NUTRITION, UNIVERSITY OF THE RYUKYUS, DAICHI SANKYO COMPANY, LIMITED
US 20250381257 A1	VACCINE	BRAUN; Martin Edward et al.	GLAXOSMITHKLINE BIOLOGICALS SA
US 20250381262 A1	FLAVIVIRUS IMMUNOGENS AND VACCINE COMPOSITIONS AND METHODS OF USING THE SAME	DUSSUPT; Vincent et al.	THE HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE, INC.
US 20250381256 A1	SUBLINGUAL NANOFIBER VACCINES AND METHODS OF MAKING AND USING SAME	Collier; Joel et al.	Duke University
US 20250381260 A1	FAP2-DERIVED ANTIBODIES AND VACCINES AGAINST FUSOBACTERIUM	HOLT; Robert et al.	PROVINCIAL HEALTH SERVICES AUTHORITY
US 12496335 B2	Zika virus vaccine	Petsch; Benjamin	CureVac SE, Sanofi Pasteur

		et al.	
US 12496333 B2	Vaccine compositions comprising C-C motif chemokine 22 (CCL22) or fragments thereof	Andersen; Mads Hald	IO BIOTECH APS
US 12496339 B2	Therapeutic vaccine for hepatitis b virus (HBV) using the HBV core antigen	Clark; Edward A. et al.	University of Washington, ABACUS BIOSCIENCE, INC.
US 12496177 B2	Liquid applicator for delivering vaccines	de Malibrán-Santibañez; Aurelie et al.	Boehringer Ingelheim Animal Health USA Inc.
US 12497429 B2	Saponin-based vaccine adjuvants	Wang; Pengfei	THE UAB RESEARCH FOUNDATION
US 12496337 B2	Oncolytic virus vaccine and drug for treating tumors by combining oncolytic virus vaccine with immune cells	Zhou; Guoqing et al.	JOINT BIOSCIENCES (SH) LTD.
US 12496336 B2	Peptide vaccine based on a new universal influenza a hemagglutinin head domain epitope and human monoclonal antibodies binding thereto	Crowe, Jr.; James E. et al.	VANDERBILT UNIVERSITY, THE SCRIPPS RESEARCH INSTITUTE
US 12496340 B2	Vaccine adjuvants based on TLR receptor ligands	Bazin-Lee; Helene et al.	THE UNIVERSITY OF MONTANA
US 20250375510 A1	VACCINE FOR PROTECTION AGAINST LEPTOSPIRA SEROVAR GRIPPOTYPHOSA	KLAASEN; Henricus Leo Bernardus Maria et al.	INTERVET INC.
US 20250375509 A1	VACCINE FOR PROTECTION AGAINST LEPTOSPIRA SEROVAR ICTEROHAEMORRHAGIAE	KLAASEN; Henricus Leo Bernardus Maria et al.	INTERVET INC.
US 20250375515 A1	RECOMBINANT VACCINE AGAINST COVID-19 TO PRODUCE CELLULAR RESPONSE IN INDIVIDUALS WITH PRE-EXISTING IMMUNITY	DUBERNARD; Bernardo LOZANO et al.	LABORATORIO AVI-MEX, S.A. DE C.V., CONSEJO NACIONAL DE HUMANIDADES, CIENCIAS Y TECNOLOGÍAS, ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI
US 20250375512 A1	USE OF MATRIX BOUND VESICLES (MBV) AS VACCINE ADJUVANTS	Badylak; Stephen Francis et al.	University of Pittsburgh - Of the Commonwealth System of Higher Education

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