



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

Third Generation Vaccine Found 80% Effective Against Severe Dengue

Mar 13. In response to the serious health threat posed by Dengue fever in the Americas, the Pan American Health Organization has been actively working since 2003 to control and prevent the impact of this mosquito-borne disease.

"Butantan-DV vaccine targets all four Dengue virus types."

One key prevention strategy is vaccination, which the introduction of next-generation vaccines, such as Butantan-DV, has enhanced.

This live attenuated tetravalent vaccine is designed to target all four Dengue virus (DENV) serotypes. Heterotypic Dengue infections—those occurring with a different serotype after previous exposure—have been shown to increase the risk of severe disease, highlighting the necessity for broad, serostatus-independent protection.

The newly approved single-dose Dengue vaccine, developed by Brazil's Butantan Institute, has recently demonstrated sustained protection for 5 years in a large phase 3 clinical trial. The primary aim of the trial was to assess the vaccine's efficacy against symptomatic Dengue, confirmed by reverse transcription PCR, from any serotype.

During the five-year follow-up period (2016–2024), the overall vaccine efficacy was 65% (95% CI: 57.8–71.0%) starting 28 days post-vaccination, regardless of prior DENV infection.

Moreover, the vaccine's efficacy against severe outcomes was reported at 80.5% (95% CI: 50.8–92.4%) for Dengue cases that presented warning signs or severe Dengue.

Importantly, Butantan-DV safety data remained reassuring over the long term.

The results of this double-blind, placebo-controlled study were published in *Nature Medicine* on March 4, 2026, and involved over 16,000 participants aged 2 to 59 years in Brazil from 2016 to 2019.

Regarding access to this innovative vaccine, in February 2026, the Ministry of Health launched a vaccination campaign for healthcare professionals to protect 1.2 million frontline workers. General vaccinations in Brazil are expected to increase, stemming from a strategic partnership between Brazil and China that involves the transfer of national technology to WuXi Vaccines.

This cooperation could increase national vaccine production by up to 30 times, the researchers wrote.

In the United States, a first-generation vaccine has been offered in Puerto Rico, where Dengue has become endemic.

Fuente: VAX BEFORE TRAVEL. Disponible en <https://n9.cl/xq8d5>

La vacuna ya no es solo medicina: es geopolítica

13 mar. Durante décadas, la vacunación fue considerada principalmente una política de salud pública. Las vacunas son mucho más, una reflexión que viene al caso del sexto aniversario de la declaración por la OMS de la pandemia de COVID-19 en 2020.

"El *International Immunization Summit* de Toledo evidenció el giro de la política sanitaria europea: las vacunas pasan a formar parte de la arquitectura de seguridad estratégica del continente."

Las vacunas son instrumento clínico eficaz para prevenir enfermedades y reducir mortalidad. Sin embargo, la pandemia de COVID-19 alteró profundamente esa percepción. Desde entonces, las vacunas han pasado a ocupar un lugar distinto: el de las infraestructuras estratégicas de seguridad sanitaria.

Toledo, la cita anual

El reciente *International Immunization Summit* celebrado en Toledo ilustra bien ese cambio de paradigma. Más allá de las discusiones científicas o de las mesas dedicadas a la práctica clínica, el encuentro puso sobre la mesa una realidad política que se está consolidando en Europa: la inmunización forma ya parte de la arquitectura de resiliencia del continente.

La presencia en el encuentro de representantes de la Comisión Europea, en particular de HERA —la Autoridad Europea de Preparación y Respuesta ante Emergencias Sanitarias—, es significativa. HERA nació en 2021 como una respuesta directa a las debilidades que la pandemia dejó al descubierto: dependencia tecnológica, cadenas de suministro frágiles y una capacidad industrial europea insuficiente para responder con rapidez a crisis sanitarias globales.

En este contexto, el acuerdo entre HERA y la compañía Hipra adquiere un significado que va más allá del suministro de dosis para una campaña concreta. Europa busca reforzar su capacidad propia en vacunas, y eso exige contar con compañías capaces de innovar, producir y adaptarse con rapidez a la evolución del virus. Hipra es una de las opciones que hoy existen en ese ecosistema europeo, pero sin duda una que cumple sobradamente con esos requisitos de innovación, su dosis de autonomía estratégica y la capacidad de adaptación, como ha venido demostrando en los últimos años con el desarrollo de plataformas vacunales propias y su rápida respuesta a las nuevas variantes del SARS-CoV-2.

Europa toma nota

Durante los primeros meses de la pandemia, Europa tuvo que apoyarse en plataformas tecnológicas desarrolladas fuera de sus fronteras. Las vacunas de ARN mensajero, lideradas por compañías estadounidenses, marcaron el ritmo de la respuesta global. Aunque la Unión Europea logró asegurar el suministro para sus ciudadanos, la experiencia dejó una lección incómoda: la autonomía sanitaria también depende de la autonomía industrial.

Desde entonces, Bruselas ha empezado a construir una estrategia que va más allá de la regulación o la financiación de programas de vacunación. El objetivo es reforzar la capacidad europea para investigar, producir y distribuir vacunas en su propio territorio. No se trata únicamente de garantizar el acceso en el caso de futuras pandemias, sino de evitar que la seguridad sanitaria dependa de decisiones industriales o geopolíticas externas.



Vacunas y geopolítica

En este contexto, la vacunación adquiere una dimensión distinta. Ya no se trata solo de campañas de salud pública o calendarios vacunales, piezas esenciales de la salud pública y la prevención, sino de una pieza central en la política de preparación frente a crisis. La lógica que hoy guía muchas decisiones europeas es similar a la que se aplica en otros ámbitos estratégicos: energía, semiconductores o defensa. La salud también ha entrado en esa categoría.

Esto explica que el debate sobre vacunas se haya ampliado a cuestiones como la preparación ante pandemias, el enfoque Una Salud (*One Health*) o la coordinación internacional. Pero también ayuda a entender por qué la política industrial empieza a ocupar un lugar creciente en las discusiones sobre inmunización.

Europa quiere asegurarse de que, cuando llegue la próxima emergencia sanitaria —y los expertos coinciden en que llegará—, el continente no vuelva a depender exclusivamente de capacidades externas para proteger a su población.

En ese nuevo escenario, las vacunas dejan de ser únicamente una herramienta clínica para convertirse en una infraestructura estratégica. Y encuentros como el de Toledo muestran que el debate sobre inmunización ya no se limita a la medicina o la salud pública: se ha trasladado también al terreno de la geopolítica sanitaria y de la soberanía europea.

Fuente: EL GLOBAL FARMA. Disponible en <https://n9.cl/fd5ex>

New 25-Valent Pneumococcal Vaccine Shows Promise in Global Disease Coverage

Mar 13. The newly developed, 25-valent pneumococcal conjugate vaccine (PCV25) shows promise in addressing the global burden of pneumococcal disease, according to a study in *Vaccine*. With an acceptable safety profile and immunogenicity among healthy adults, PCV25 also has potential to specifically address burdens among infants and patients from low- and middle-income countries (LMICs).

“The first PCV—PCV7—containing 7 capsular polysaccharides individually conjugated to the carrier protein CRM197 (a nontoxic mutant of diphtheria toxin) was introduced for use in infants and young children in 2000 in the US and subsequently replaced by vaccines with higher valency,” wrote the authors of the study. “As of May 2025, 170 of 194 WHO member states have introduced PCVs for infant vaccination, and 15 more are planning to do so because of their significant reduction of morbidity and mortality in children and the indirect protection observed in the wider population.”

The development of a new pneumococcal conjugate vaccine, known as PCV25 or IVT PCV-25, recently reached a significant milestone with the completion of 2 randomized, double-blind clinical trials in Canada. These studies, designated CVIA 096 and CVIA 105, demonstrated that multiple formulations of PCV25 are both safe and immunogenic in healthy, vaccine-naive adults.

This vaccine candidate, developed by the biotechnology company Inventprise with support from the Bill & Melinda Gates Foundation, represents a vital effort to reduce the global burden of pneumococcal disease.



A New Territory for Pneumococcal Vaccines

Pneumococcus remains a leading cause of mortality, responsible for approximately 300,000 deaths annually in children under 5, particularly through life-threatening conditions like pneumonia, meningitis, and sepsis.^{3,4} Although existing vaccines approved for children and older adults currently cover between 10 and 20 serotypes, PCV25 expands this protection to include 7 additional emerging and deadly serotypes—including 2, 6C, 9N, 15A, 16F, 24F, and 35B.

For pharmacists, who are often the most accessible members of the health care team, understanding these clinical advancements is essential for improving public health outcomes. Research indicates that patients visit their local community pharmacist twice as often as their primary care physician, yet pharmacists continue to face significant barriers to increasing pneumococcal immunization rates.

A study involving South Carolina pharmacists revealed that many professionals have limited knowledge regarding complex and frequently changing vaccination guidelines, correctly identifying recommendations in only a fraction of patient cases.

PCV25 aims to address some of these challenges by utilizing a patented hydrazide-polyethylene glycol-hydrazide (Hz-PEG-Hz) linker technology. This innovative platform, which was originally explored during the development of a vaccine for *Haemophilus influenzae* type A, allows for an increased number of serotypes without the typical drop in potency or the immune interference often seen with carrier proteins like CRM197.

Furthermore, Inventprise has implemented highly automated manufacturing processes in Washington State to ensure this complex vaccine remains affordable for LMICs where the disease burden is most severe.

Details of the CVIA 096 and CVIA 105 Trials

The Canadian clinical trials, conducted in collaboration with organizations such as the Canadian Center for Vaccinology and the Vaccine Evaluation Center, compared PCV25 with the licensed PCV20 control.^{1,3} Results showed that PCV25 has a safety and tolerability profile similar to current standards, with common reactions including injection site pain, fatigue, and headache.

These findings are consistent with the safety information provided in CDC Vaccine Information Statements, which also remind providers to report adverse events to the Vaccine Adverse Event Reporting System (VAERS) and inform patients about the National Vaccine Injury Compensation Program.⁶ Although adult immunogenicity is not fully predictive of the response in infants, the robust antibody responses observed for all 25 serotypes support the next phase of development in pediatric populations.

Pharmacists can help bridge the current immunization gap by using tools like the PneumoRecs VaxAdvisor and addressing barriers such as patient eligibility and insurance coverage.⁵ By staying informed on the pipeline of vaccines, which has been known to confuse some professionals in the pharmacy space, pharmacists remain critical to the global mission of reducing preventable mortality.

The next step for IVT PCV-25 is reaching its target infant population.

“IVT PCV-25 had an acceptable safety profile and was immunogenic in healthy adults,” concluded the authors of the current study.¹ “Further development will include assessment of safety and immunogenicity of all current formulations in the target infant population with a goal to identify a well-

tolerated formulation likely to meet non-inferiority criteria for currently licensed strains in addition to providing expanded coverage against novel serotypes.”

Key takeaways



- ⇒ Two Canadian randomized, double-blind studies (CVIA 096/105) showed PCV25 safety/tolerability comparable to PCV20, with expected reactogenicity including injection-site pain, fatigue, and headache.
- ⇒ Expanded valency adds seven serotypes (2, 6C, 9N, 15A, 16F, 24F, 35B), aiming to mitigate serotype replacement and reduce persistent morbidity and mortality.
- ⇒ Hz-PEG-Hz linker technology is intended to support high-valency conjugation while minimizing carrier-related immune interference and preserving immunogenic potency across serotypes.
- ⇒ Manufacturing automation strategies are designed to improve scalability and affordability, aligning development priorities with high-burden LMIC implementation needs.
- ⇒ Next-phase development prioritizes infant studies to select a well-tolerated formulation expected to meet non-inferiority for licensed serotypes while providing incremental serotype coverage.

Fuente: Drug Topics. Disponible en <https://n9.cl/z6sjs>

Health expert warns 'disease X' could trigger next global pandemic

Mar 14. A medical professional has provided further insight into "disease X" - the potential trigger for a future worldwide pandemic.

Designated by the World Health Organisation (WHO), this condition represents the next theoretical pathogen "lurking around the corner".

In footage posted to social media platform TikTok, NHS doctor Suraj Kukadia offered additional details. Addressing his audience of over 300,000 followers, he stated: "What is disease X?"

"Have you ever heard of it? It's a term coined by the World Health Organisation, who imagine it as a big question mark on the global health map, symbolising the unknown infectious diseases that might just be lurking around the corner.

"Disease X is the name given to any as yet unknown pathogen which in theory has the potential to cause a global pandemic."

The designation was established in 2018, forming part of an initiative to promote international pandemic preparedness measures, reports the Express.

The thinking was that preparing for the emergence of an unidentified infectious disease could result in a swifter, more robust public health response.



Amesh Adalja, MD, a senior scholar at the Johns Hopkins Centre for Health Security, elaborated further on the John Hopkins website.

The infectious disease specialist stated: "With disease X, we're preparing for an unknown unknown. Disease X is a placeholder concept that refers to a pandemic pathogen that has not yet been characterised.

"Its purpose is to encourage proactive thinking about pathogens that could cause a pandemic. It represents a way to push people's thinking forward so that they're not wedded to lists of prior pandemic pathogens, like influenza."

He explained that a virus capable of spreading rapidly is the most probable scenario. "There are definitely characteristics that would be likely - not every pathogen can cause a pandemic," Dr Adalja said.

"In general, a few things need to be present. One, it's likely to be spread through respiration, because that's more efficient for a pathogen.

"People talking, laughing, coughing, sneezing - all of that is very hard for public health to intervene on, as we saw with COVID-19. It's likely to be a virus, not bacteria or fungus.

"It's likely to be something that could spill over from an animal species into a human. Or it could be a human pathogen that develops new characteristics or changes its genetics in such a way that makes it more conducive to causing a pandemic."

When speaking last year, Dr Adalja acknowledged that whilst we are "more prepared" now compared to before the COVID-19 pandemic struck, we remain not "fully prepared".

Fuente: IRISH MIRROR. Disponible en <https://n9.cl/c777d>

Prevención de Pandemias: ¿Qué es la Enfermedad X y el plan de 100 días?

14 mar. La comunidad sanitaria global está reconfigurando su enfoque para anticipar y mitigar futuras pandemias, no solo frente a agentes conocidos sino también ante lo que se ha denominado "Enfermedad X": un patógeno todavía desconocido que podría desencadenar una crisis sanitaria mundial. Este concepto, adoptado por la Organización Mundial de la Salud (OMS) como parte de su *Blueprint* de investigación y desarrollo, impulsa una visión estratégica centrada en sistemas de vigilancia más resilientes, cooperación científica y capacidad de respuesta global fortalecida para reducir el impacto inicial de brotes aún no identificados.

En paralelo, líderes sanitarios de las Américas están promoviendo una meta ambiciosa: tener vacunas eficaces listas para uso poblacional en un plazo máximo de 100 días desde la detección de un nuevo virus pandémico. Esta propuesta, impulsada por el director de la OPS, Jarbas Barbosa Jr., se sustenta en la experiencia acumulada durante la pandemia de COVID-19, cuando la falta de acceso oportuno a tecnologías sanitarias dejó en evidencia la



vulnerabilidad estructural de la región.

Barbosa destacó que esta meta de 100 días exige no solo cooperación internacional, sino también capacidades locales de producción tecnológica como motores clave para una respuesta ágil. En Argentina, la construcción de una planta de producción de vacunas con tecnologías de ARN mensajero (capaces de escalar rápidamente volúmenes de dosis), representa un paso estratégico hacia ese objetivo, permitiendo reducir la dependencia de importaciones y facilitar la disponibilidad regional de inmunizantes.

El impacto local es profundo. El país enfrenta desafíos sanitarios agudos, como frecuentes brotes de dengue y presión creciente sobre sus sistemas de salud, que muestran la importancia de contar con herramientas propias de respuesta rápida. Integrarse en marcos internacionales orientados a acelerar investigación, desarrollo y producción de vacunas no solo aumentaría la resiliencia sanitaria nacional, sino que también podría mejorar el posicionamiento científico y productivo regional. Asimismo, la adopción de tecnologías escalables permitiría una respuesta más eficaz frente a futuras amenazas biológicas.

Sin embargo, las discusiones sobre la adhesión nacional a tratados globales de pandemias y mecanismos de cooperación internacional, siguen siendo un factor crucial para determinar hasta qué punto el país podrá beneficiarse plenamente de estas iniciativas.

Fuente: SABER en SALUD. Disponible en <https://n9.cl/99j1o>

Viceprimer ministro chequea plan de producción de vacunas en Cuba

14 mar. El Viceprimer Ministro de la República, Eduardo Martínez, junto a la Presidenta de BioCubaFarma, Mayda Mauri Pérez, sostuvieron una reunión de trabajo para evaluar el cumplimiento de los planes de producción de vacunas en el Instituto Finlay de Vacunas (IFV) y el Centro de Ingeniería Genética y Biotecnología (CIGB).

El encuentro contó también con la participación del vicepresidente primero de BioCubaFarma, Eulogio Pimentel Vázquez, y el vicepresidente Luis Armando Alarcón Camejo.



Durante la reunión, se constató que, a pesar de las complejidades del contexto actual, se avanza en el cumplimiento de los cronogramas establecidos para garantizar el suministro de estos inmunógenos al Sistema Nacional de Salud y a otros países. Asimismo, los participantes intercambiaron sobre el estado de los proyectos de investigación en desarrollo, reafirmando el compromiso del sector con la innovación científica como pilar del sistema de salud cubano.

La industria biofarmacéutica cubana aporta actualmente 13 vacunas al programa nacional de inmunización, un pilar fundamental para la protección y la prevención de enfermedades. Estos encuentros forman parte del sistema de trabajo del Gobierno cubano, con el objetivo de asegurar la sostenibilidad de programas tan vitales como el de vacunación.

Fuente: BIOCUBAFARMA. Disponible en <https://n9.cl/4gc1wy>

Vacunas a lo largo de la vida: expertos redefinen el papel de la inmunización y el estrecho vínculo con el envejecimiento saludable

17 mar. La fuerza de un *paper* científico publicado a tiempo, orientado a acumular evidencia y actualizar el intercambio entre especialistas, aporta una contundencia única al debate público en temas de ciencia y salud.

Así sucedió con el estudio difundido recientemente en la prestigiosa revista *Vaccine*, donde un panel multidisciplinario de la Sociedad Latinoamericana de Vacunología (SLV), integrado por epidemiólogos, inmunólogos y referentes en políticas sanitarias, evaluó el impacto de la vacunación en la reducción del cáncer, las complicaciones cardiovasculares y el deterioro funcional, e impulsó a reconsiderar la inmunización más allá de la infancia.

La vacunación, considerada una de las herramientas más efectivas de la salud pública, adquiere en esta investigación evidencia de que su impacto va mucho más allá de prevenir enfermedades infecciosas inmediatas.

El nuevo paradigma

El documento publicado en *Vaccine* subraya que las vacunas no sólo aumentan la esperanza de vida, sino que también modelan trayectorias de salud para toda la población, influyendo en áreas como la prevención del cáncer, la protección cardiovascular, el control de la discapacidad y la promoción de una longevidad funcional.

La revisión, presentada y discutida en reuniones regionales en Bogotá y Santo Domingo con enfoque en América Latina y el Caribe, propone un nuevo paradigma: la inmunización debe asumirse como un eje transversal a lo largo de toda la vida, más allá del enfoque tradicional centrado en la infancia.

Lejos de limitarse a evitar el contagio de enfermedades agudas, las vacunas han permitido sumar años de vida y salud a millones de personas. Enfermedades como viruela, sarampión, difteria, polio, influenza, neumococo y meningococo han dejado de ser frecuentes, lo que ha contribuido a la transformación demográfica mundial. "Las campañas de vacunación han prevenido unos 154

"La vacunación, tradicionalmente asociada a la prevención de enfermedades infecciosas, surge como un factor determinante para mejorar la salud pública. Infobae tuvo acceso a un paper recientemente publicado en la prestigiosa revista Vaccine que invita a reconsiderarla más allá de la infancia."

millones de muertes en las últimas cinco décadas, siendo la mayoría niños menores de cinco años”, destacan los autores como uno de los datos más sólidos del documento.

“En los últimos 25 años, la vacuna contra el sarampión ha evitado más de 6 millones de muertes en las Américas, y se estima que ha prevenido alrededor de 15 millones de muertes en los últimos 50 años”, sostuvo en una nota reciente a Infobae, Roberto Debbag, vicepresidente de la Sociedad Latinoamericana de Vacunología (SLV).

La importancia de la vacunación materna

La vacunación materna –como la de tos ferina o Pertussis, influenza, COVID-19 y, recientemente, virus sincicial respiratorio (VSR)– protege tanto a la madre como al recién nacido durante el período de máxima vulnerabilidad que representa el embarazo.



“Toda infección representa un riesgo especial para la madre, el feto, bebé o RN con morbimortalidades asociadas. Existen vacunas que los protegen, son seguras y reducen la morbimortalidad materna e infantil. En ese dueto irremplazable entre madre e hijo hay 4 vacunas imprescindibles: difteria; tétanos; pertussis (es triple Tdap); influenza y COVID 19 para ambos; y la de VSR (Virus Sincicial Respiratorio) solo para el RN”, reforzó Debbag a Infobae.

Consultado por Infobae, sobre el estado actual de las inmunizaciones en América Latina, el doctor José Brea, presidente de la Sociedad Latinoamericana de Vacunología (SLV) aportó en una nota reciente con Infobae cifras contundentes: “En 2024, los niños no vacunados a nivel mundial sumaron 14,3 millones; son los que no recibieron ninguna vacuna. En las Américas, aproximadamente 1,2 millones de niños menores de un año siguen desprotegidos”.

Según remarcó el experto y presidente de la SLV, “las enfermedades con potencial de brote en la actualidad son sarampión, difteria, fiebre amarilla, rubéola, tos convulsa o Pertussis, influenza, polio, varicela, meningococo y dengue”.

La prevención de enfermedades graves y sus secuelas

Otro eje de análisis alrededor de las vacunas es la sucesión de beneficios secundarios tras la prevención de cuadros graves. El documento de *Vaccine* destaca cómo la inmunización frente a la influenza, neumococo y herpes zóster en adultos y mayores resulta relevante no solo en la reducción de infecciones, sino también en el menor número de complicaciones, hospitalizaciones y fallecimientos.

El impacto es especialmente notorio en estos tres frentes. En el caso de la influenza, existe un menor riesgo de eventos cardiovasculares mayores en población vulnerable, con una reducción de hasta 30% en infarto agudo de miocardio según metaanálisis. La protección incluye además a embarazadas y recién nacidos.

Para el neumococo, el desarrollo de nuevas vacunas conjugadas como PCV20, PCV21 y V116, que incorporan más serotipos relevantes para adultos, ha incrementado la protección frente a neumonía, bacteriemia y complicaciones sistémicas, incluyendo infartos y ACV.

En cuanto al herpes zóster, la vacuna recombinante adyuvada mantiene eficacia superior al 85% incluso en adultos mayores de 70 años e inmunocomprometidos. Los autores señalan que no sólo se evitan los cuadros agudos, sino también la neuralgia postherpética y el deterioro funcional, con una reducción del 90% en hospitalizaciones asociadas en los grupos más frágiles.

Incluso hay estudios que sugieren que vacunas como la de la influenza, zóster y COVID-19 se asocian a una menor incidencia de demencia, si bien la mayor parte de estos datos proviene de estudios observacionales.

Las vacunas como barrera contra el cáncer y enfermedades crónicas

La dimensión menos difundida, pero con gran proyección, es la de la vacunación como prevención directa del cáncer. Ejemplo de ello son las inmunizaciones contra el virus del papiloma humano (HPV) y hepatitis B.

En los países con alta cobertura de la vacuna frente al HPV, la incidencia de cáncer cervicouterino y otras neoplasias asociadas ha caído drásticamente en adolescentes y adultos jóvenes. Un fenómeno similar ocurre con la hepatitis B y el cáncer de hígado en regiones que implementaron la vacunación neonatal.

El documento de *Vaccine* precisa: “La infección perinatal por HPV conlleva un riesgo de 90% de hepatitis crónica y, por tanto, de carcinoma hepatocelular en décadas posteriores. La vacuna es la única barrera real”.

Las cifras de la Organización Mundial de la Salud reflejan que el acceso oportuno a la vacunación de nacimiento contra hepatitis B permite reducir la incidencia de hepatitis crónica a menos del 1% en menores de cinco años. El documento advierte, sin embargo, que aún existen brechas regionales relevantes, en especial en la cobertura de la dosis neonatal.



Protección sistémica: corazón, cerebro e inflamación

La comunidad científica aporta cada vez más pruebas sobre el vínculo entre infecciones, inflamación sistémica y agravamiento de enfermedades crónicas. Las infecciones agudas pueden actuar como desencadenantes de accidentes cardiovasculares, descompensación de enfermedades previas y, potencialmente, deterioro cognitivo.

El panel de expertos resalta que la inmunización podría disminuir esta carga inflamatoria y así ralentizar procesos de deterioro asociados al envejecimiento inmunológico y a la inflamación crónica vinculada a la edad (“*inflammaging*”).

La vacunación continua como clave para la salud integral

El informe sostiene la necesidad de abandonar el esquema limitado a la infancia. Se proponen esquemas integrados de vacunación continua, con recomendaciones periódicas para todas las etapas: hexavalentes y nuevas vacunas conjugadas y maternas en lactantes, refuerzos contra difteria, tétanos, tos ferina y HPV en adolescentes, y campañas de refuerzo contra influenza, COVID-19, neumococo, zóster y VSR en adultos y mayores.

El efecto trasciende la protección ante infecciones: “Prevenir eventos agudos en la vejez evita el deterioro funcional, la dependencia y el aumento de la demanda de servicios de cuidado”, señala el documento publicado en *Vaccine*.

Los expertos remarcan que cada enfermedad infecciosa grave en una persona mayor aumenta el riesgo de pérdida de autonomía, institucionalización y el costo económico para la familia y el sistema de salud.

En un comunicado reciente, la Sociedad Argentina de Pediatría (SAP) advirtió sobre una fragilidad inmunológica colectiva que, según sus expertos, afecta tanto a la inmunidad individual como a la salud pública de toda la población.

Según la SAP, la disminución de la percepción del riesgo obedece a que la mayoría de la población nunca ha convivido ni presenciado casos graves de enfermedades como poliomielitis, difteria o sarampión. El éxito de las campañas de vacunación hizo que estas patologías desaparecieran, y esto, paradójicamente, ha llevado a que muchas personas duden de la necesidad de continuar inmunizando a sus hijos.

La Sociedad Latinoamericana de Vacunología (SLV), a través del doctor Brea, aportó datos categóricos: “Entre los niños nacidos entre 1994 y 2023, las vacunaciones infantiles de rutina habrán prevenido aproximadamente 508 millones de casos de enfermedad; 32 millones de hospitalizaciones y 1.129.000 muertes”.

La magnitud del beneficio también se refleja en términos económicos. “Esto se traducirá en un ahorro directo de 540 mil millones de USD y un ahorro social de 2,7 mil millones de USD entre los diferentes eslabones del sistema de salud”, señaló el doctor Brea.

Fuente: INFOBAE. Disponible en <https://n9.cl/zl3j3>



Merck to Present New Data Reinforcing Long-Term Efficacy of GARDASIL®9 and GARDASIL® at the EUROGIN International Multidisciplinary HPV Congress 2026

Mar 17. Merck (NYSE: MRK), known as MSD outside of the United States and Canada, presented new clinical and real-world data reaffirming the long-term effectiveness of the company’s 9-valent Human Papillomavirus (HPV) vaccine, GARDASIL®9 (Human Papillomavirus 9-valent Vaccine, Recombinant) and its 4-valent HPV vaccine, GARDASIL® (Human Papillomavirus 4-valent Vaccine, Recombinant) against certain HPV-related cancers and diseases at the EUROGIN International Multidisciplinary HPV Congress 2026 in Vienna, Austria, held in March 18-21.

Data presented include results from studies evaluating the long-term effectiveness of HPV vaccination in women 16 to 26 years of age, showing vaccine effectiveness for at least 14 years following 3 doses of the 9-valent vaccine, and vaccine effectiveness up to 18 years after 3 doses of the quadrivalent vaccine against HPV 16/18-related high-grade cervical disease.

The company shared additional data on certain HPV-related oropharyngeal cancers, and adult- and juvenile-onset Recurrent Respiratory Papillomatosis (RRP) through studies done in the U.S., Denmark, Sweden, and the United Kingdom.

GARDASIL, Merck's 4-valent HPV Vaccine, is not marketed in the United States.

About Merck

At Merck, known as MSD outside of the United States and Canada, we are unified around our purpose: We use the power of leading-edge science to save and improve lives around the world. For more than 130 years, we have brought hope to humanity through the development of important medicines and vaccines. We aspire to be the premier research-intensive biopharmaceutical company in the world – and today, we are at the forefront of research to deliver innovative health solutions that advance the prevention and treatment of diseases in people and animals. We foster a diverse and inclusive global workforce and operate responsibly every day to enable a safe, sustainable and healthy future for all people and communities. For more information, visit www.merck.com and connect with us on X (formerly Twitter), Facebook, Instagram, YouTube and LinkedIn.

Fuente: MERCK. Disponible en <https://n9.cl/wx9ba>

New vaccine to stop deadly meningitis epidemics confirmed to be safe

Mar 18. A new vaccine designed to stop deadly meningitis epidemics in Africa is safe when used at scale, according to the first real-world safety study conducted during its roll-out.

The study analysed data from more than 4.8 million people vaccinated with the new pentavalent meningococcal vaccine, Men5CV, during outbreak-response campaigns in Nigeria and Niger in 2024.

The findings confirm clinical trial safety data gathered before the approval of the vaccine, giving further reassurance as countries across Africa begin deploying

the vaccine to tackle meningococcal disease, a fast-moving bacterial infection that can cause hearing loss, brain damage, limb amputations and death within hours.

What is meningococcal disease?

Neisseria meningitidis (meningococcus) is the leading cause of bacterial meningitis in Africa and a major cause of hearing loss, brain damage and limb amputations worldwide, despite the introduction of a highly effective vaccine.

A key reason is that there are around 12 different types or serogroups of this bacterium - with serogroups A, B, C, W, X and Y causing the greatest burden of disease globally.

People living in the African meningitis belt, which spans 26 sub-Saharan countries from Senegal in west Africa to Ethiopia in the east, have the highest rates of meningococcal disease, with major epidemics historically having swept through these countries every 5 to 12 years.

Since 2010, the introduction of a serogroup A meningococcal conjugate vaccine, MenAfriVac, has dramatically reduced meningitis in the African meningitis belt.



“MenACV mass preventive campaigns, supported by Gavi, across the belt have resulted in no *N. meningitidis* A outbreaks since 2017. We hope to do the same with other serogroups in the future to address the current drivers of disruptive epidemics. Unfortunately, funding constraints currently severely limit the ability to do this.”

- Dr Beth Evans, Meningitis Lead at Gavi, the Vaccine Alliance

Before its roll-out, serogroup A meningococcus accounted for 85– 90% of meningitis cases in the region. Mass vaccination campaigns have since saved millions of lives and virtually eliminated large epidemics caused by serogroup A.

Following this success, broader vaccines targeting serogroups A and C (MenACV), and serogroups A, C, W and Y (MenACWY) were introduced in some settings to protect against additional meningococcal serogroups.

Then, in July 2023, the World Health Organization prequalified a new meningococcal conjugate vaccine, Men5CV (MenFive), which protects against five serogroups (A, C, Y, W and X) responsible for almost all epidemic meningitis in sub-Saharan Africa.

By contrast, serogroup B meningococcus typically causes smaller, sporadic outbreaks, particularly in high-income countries, rather than large epidemics in the meningitis belt.

How is the Men5CV vaccine being used?

Since 2024, Gavi has helped meningitis belt countries to deploy Men5CV for outbreak response, routine immunisation and preventive mass vaccination campaigns in high-risk countries.

In March 2024, Nigeria became the first country to receive the Men5CV vaccine from the Gavi-funded global meningitis vaccine stockpile, in response to an outbreak of serogroup C and W meningococcus in northern Nigeria.

Niger followed with a reactive campaign a few months later, after an outbreak of meningococcal disease that eventually affected more than 2,600 people.

The vaccine was also used in the first nationwide preventive mass campaign in Niger in 2025.

“The Men5CV vaccine could be game-changing for countries in the meningitis belt that have experienced devastating *N. meningitidis* C, Y, W and X outbreaks in recent years,” said Dr Beth Evans, Meningitis Lead at Gavi, the Vaccine Alliance.

“MenACV mass preventive campaigns, supported by Gavi, across the belt have resulted in no *N. meningitidis* A outbreaks since 2017. We hope to do the same with other serogroups in the future to address the current drivers of disruptive epidemics. Unfortunately, funding constraints currently severely limit the ability to do this.”

Fuente: GAVI. Disponible en <https://n9.cl/1dlmc>

La OMS recomienda dos dosis anuales de vacuna COVID-19 para población de riesgo y al menos una para otros grupos

18 mar. El Grupo Asesor Estratégico de Expertos en Inmunización (SAGE) recomienda, tras su última reunión, la vacunación sistemática de COVID-19 en personas con mayor riesgo de enfermedad grave.

La Organización Mundial de la Salud (OMS) ha actualizado sus recomendaciones sobre vacunación frente a la COVID-19 y plantea reforzar las estrategias de inmunización periódica, especialmente en los grupos más vulnerables, ante la evidencia de que la protección frente a enfermedad grave disminuye a partir de los seis meses de la última dosis.



Las conclusiones proceden de la última reunión del Grupo Asesor Estratégico de Expertos en Inmunización

(SAGE), celebrada entre el 9 y el 12 de marzo, y servirán de base para un nuevo documento de posición global sobre vacunas frente al SARS-CoV-2 que se publicará este mismo año.

Aunque la carga mundial de COVID-19 grave ha descendido en los últimos años gracias a la inmunidad acumulada por la vacunación y las infecciones previas, la OMS subraya que el virus sigue teniendo un impacto relevante en salud pública.

En este sentido, el presidente del grupo de trabajo de SAGE, Anthony Scott, advirtió durante la rueda de prensa que «aunque la carga global de COVID-19 grave ha disminuido en todo el mundo gracias a la amplia inmunidad tanto por la vacunación como por infecciones previas, el virus sigue causando una enfermedad significativa y muertes», lo que justifica mantener estrategias activas de vacunación.

Recomendaciones de vacunación

En este contexto, el organismo recomienda que los países consideren la vacunación sistemática frente a la COVID-19 en los grupos con mayor riesgo de desarrollar enfermedad grave, como las personas mayores, aquellas con comorbilidades importantes, los residentes en centros sociosanitarios o las personas con inmunosupresión. Para estos colectivos, el SAGE propone una pauta reforzada que incluye hasta dos dosis al año separadas por seis meses.

Tal y como explicó Scott, «los países deberían considerar la vacunación rutinaria frente a la COVID-19 para los grupos con mayor riesgo de enfermedad grave» y, en estos casos, «el SAGE recomienda una pauta de al menos una dosis y preferiblemente dos dosis al año administradas con seis meses de diferencia». Esta recomendación se basa en la evidencia de que la protección frente a enfermedad grave disminuye de forma significativa medio año después de la última dosis.

Más allá de los grupos de mayor vulnerabilidad, la OMS abre la puerta a ampliar la vacunación a otros colectivos en función del contexto epidemiológico y de los recursos disponibles. Así, el SAGE plantea que los países puedan considerar la vacunación rutinaria en otros grupos como personas mayores sin comorbilidades, individuos con enfermedades de base o profesionales sanitarios, con una pauta de al menos una dosis anual.

En palabras del propio Scott, «los países también pueden considerar la vacunación rutinaria frente a la COVID-19 de grupos adicionales en función del contexto local y la viabilidad programática».

Uno de los aspectos más destacados de la actualización es la recomendación específica para mujeres embarazadas. La OMS aconseja administrar una dosis de vacuna frente a la COVID-19 en cada embarazo, independientemente del historial vacunal previo. «Para las mujeres embarazadas, el SAGE recomienda una dosis de la vacuna contra la COVID-19 durante cada embarazo en cualquier etapa, aunque idealmente durante el segundo trimestre», señaló Scott, con el objetivo de proteger tanto a la madre como al recién nacido frente a formas graves de la enfermedad.

En el caso de la población infantil sana, la OMS mantiene una estrategia más selectiva y limita la recomendación a contextos concretos. Según detalló el presidente del SAGE, «el último grupo son los niños sanos de entre 6 y 23 meses que no hayan sido vacunados previamente, pero solo si se documenta una carga significativa de enfermedad en este grupo de edad», sin que se recomiende la revacunación sistemática.

Las nuevas recomendaciones insisten en la necesidad de adaptar las decisiones a la realidad de cada país. En este sentido, Scott recordó que «los países deberían considerar el uso de la vacunación frente a la COVID-19 en función de la epidemiología local, las características de la población, el acceso a las vacunas, la rentabilidad y la viabilidad programática».

Un contexto global complejo



Kate O'Brien durante la rueda de prensa.

Este enfoque flexible se enmarca en un contexto global especialmente complejo para los programas de inmunización. La directora del Departamento de Inmunización de la OMS, Kate O'Brien, advirtió de que el mundo se encuentra en una fase de profundos cambios. «Estamos en 2026 en un mundo profundamente cambiante para las enfermedades infecciosas y para los programas de vacunación», señaló, destacando la presión que suponen la reducción de presupuestos sanitarios, la disminución de la ayuda internacional y la necesidad de

priorizar intervenciones. A ello se suma un reto creciente: «La confianza está siendo amenazada por la desinformación y las distorsiones de la información», lo que pone en riesgo los avances logrados en las últimas décadas.

En este escenario, la OMS insiste en la importancia de basar las decisiones en la evidencia científica. Tal y como recordó la experta Annelies Wilder-Smith, de la secretaría de la OMS en SAGE, «las vacunas son una de las herramientas más poderosas que tenemos para proteger la salud, prevenir enfermedades y salvar vidas, pero decidir cuáles usar, cuándo y cómo hacerlo requiere una toma de decisiones cuidadosa, transparente y basada en la evidencia».

Con estas nuevas directrices, la OMS consolida un cambio de enfoque en la gestión de la COVID-19, pasando de estrategias generalizadas a modelos de vacunación periódica centrados en el riesgo. El mensaje es claro: aunque la fase más aguda de la pandemia ha quedado atrás, el virus sigue representando una amenaza para los más vulnerables, y la vacunación continúa siendo la herramienta fundamental para reducir hospitalizaciones y muertes.

Fiebre tifoidea y polio

Más allá de la COVID-19, el Grupo Asesor Estratégico de Expertos en Inmunización también ha actualizado sus recomendaciones sobre otras enfermedades prevenibles por vacunación. En el caso de la fiebre tifoidea, el grupo respalda la introducción de la vacuna conjugada (TCV) en países con alta o muy alta incidencia o con elevada presencia de cepas resistentes a antimicrobianos. Además, plantea la posibilidad de administrar una dosis de refuerzo en torno a los cinco años en contextos de muy alta transmisión, ante la evidencia de que la protección puede disminuir con el tiempo, especialmente en niños vacunados a edades tempranas.

En relación con la polio, los expertos muestran preocupación por la persistencia de la transmisión del poliovirus salvaje en Pakistán y Afganistán, así como por la circulación de poliovirus derivados de la vacuna en varios países africanos. En este contexto, el SAGE insiste en la necesidad de reforzar la vacunación sistemática y alcanzar a los niños no inmunizados. Al mismo tiempo, recomienda que los países con bajo riesgo de importación que ya administran tres dosis de vacuna inactivada durante el primer año de vida puedan reducir de tres a dos las dosis de vacuna oral bivalente, manteniendo así la inmunidad de las mucosas sin comprometer la protección poblacional.

Fuente: GACETAS MÉDICA. Disponible en <https://n9.cl/7lv4t>

Vaxcyte publica resultados de estudio fase 1/2 de VAX-31 en Lancet

18 mar. Vaxcyte Inc. (NASDAQ:PCVX) anunció la publicación de los resultados de su estudio clínico fase 1/2 en adultos de VAX-31 en *The Lancet Infectious Diseases*. El estudio evaluó la vacuna conjugada antineumocócica 31-valente de la compañía en adultos sanos de 50 años o más. La empresa de biotecnología de \$7.8 mil millones ha visto su acción subir 66% en los últimos seis meses, reflejando el optimismo de los inversionistas sobre su cartera de vacunas.



El estudio aleatorizado y ciego para observadores inscribió a 1,015 participantes que recibieron VAX-31 en tres niveles de dosis diferentes o Prevnar 20, una vacuna estándar de atención actual. El ensayo evaluó la seguridad, tolerabilidad e inmunogenicidad del candidato a vacuna.

Según los resultados publicados, VAX-31 demostró un perfil de seguridad similar a Prevnar 20 en todas las dosis estudiadas durante el período de evaluación de seis meses. Las reacciones locales y sistémicas fueron generalmente leves a moderadas y se resolvieron en varios días. Ningún evento adverso grave se consideró relacionado con las vacunas del estudio.

La dosis alta de VAX-31 cumplió o superó los criterios de no inferioridad de respuesta de actividad opsonofagocítica para los 20 serotipos comunes con Prevnar 20. Para los 11 serotipos adicionales únicos de VAX-31, las tres dosis cumplieron los criterios de superioridad. La dosis alta mostró respuestas inmunes promedio mayores para 18 de 20 serotipos en comparación con Prevnar 20, con siete logrando respuestas inmunes estadísticamente más altas.

VAX-31 demostró actividad opsonofagocítica robusta y respuestas inmunes de inmunoglobulina G en los 31 serotipos en todas las dosis estudiadas. La compañía declaró que VAX-31 está diseñada para cubrir aproximadamente 95% de la enfermedad neumocócica invasiva y aproximadamente 88% de la neumonía neumocócica en adultos estadounidenses de 50 años o más.

Con base en estos resultados de fase 1/2, Vaxcyte avanzó la dosis alta de VAX-31 a su programa fase 3 en adultos OPUS. La compañía espera datos principales del ensayo pivotal de no inferioridad OPUS-1 en el cuarto trimestre de 2026. Aunque InvestingPro señala que la compañía aún no es rentable con una UPA de -\$5.63, mantiene un balance sólido con más efectivo que deuda y un ratio corriente de 7.91. Los analistas permanecen optimistas, con precios objetivo que van de \$67 a \$163.

Fuente: InvestingPro. Disponible en <https://n9.cl/um34fr>

AAA BIOTECH ADVANCES LIFE SCIENCE RESEARCH WITH CUTTING-EDGE REAGENT PORTFOLIO

Mar 18. The life sciences industry is experiencing transformative shifts driven by technological innovation and urgent global health needs. AAA Biotech, a leading provider of premium research reagents, is uniquely positioned to support scientists navigating these changes with its comprehensive portfolio of rigorously validated antibodies, high-purity recombinant proteins, and sensitive ELISA kits.

Global Demand for Recombinant Proteins Reaches New Heights

The pharmaceutical and biotechnology sectors are witnessing unprecedented demand for high-quality recombinant proteins as drug discovery programs accelerate worldwide. To address this, the company offers an extensive catalog of proteins with >90% purity by SDS-PAGE, available in multiple expression systems, including HEK293 cells, E. coli, and cell-free platforms.

“The expansion of biologics pipelines and protein-based therapeutics has created extraordinary opportunities,” a company spokesperson notes. “Our recombinant proteins serve critical roles in target validation, structural biology studies, and screening assays that drive pharmaceutical innovation.”

Available proteins include multiple tagged formats—FLAG, GST, His, and MBP—providing researchers with flexibility to integrate them seamlessly into diverse experimental workflows. This versatility supports applications ranging from drug screening to enzyme kinetic studies, helping to accelerate the path from basic research to therapeutic development.

Growth Factors and Cytokines: Essential Tools for Cell Biology Innovation

A diverse portfolio of biologically active proteins is empowering next-generation research in stem cell biology, immunology, and regenerative medicine. Growth factors and cytokines serve as molecular switches controlling cell fate, proliferation, and function, making them indispensable for modeling physiological conditions and generating reproducible results.

The active protein collection supports breakthrough research in cancer biology, where cytokines mediate complex interactions within the tumor microenvironment, and in stem cell differentiation studies, enabling the generation of specialized cells for disease modeling. With endotoxin-tested formulations and validated biological activity, these proteins deliver the consistency needed for reliable experimental outcomes.

Antibody Engineering Revolution Transforms Research Capabilities

Advances in recombinant antibody technology are reshaping biomedical research. An expanding recombinant antibody portfolio now addresses critical limitations of traditional hybridoma-derived antibodies by offering an unlimited supply, improved batch-to-batch reproducibility, and enhanced specificity through molecular engineering.

“Recombinant antibody technology represents the future of immunoreagent production,” the company states. “By combining molecular precision with rigorous validation across multiple applications—including Western blot, immunohistochemistry, immunofluorescence, and flow cytometry—we’re delivering antibodies that meet the demanding requirements of modern research while addressing sustainability concerns.”

These engineered antibodies enable advanced applications such as single-cell analysis, multiplex

immunoassays for simultaneous biomarker detection, and super-resolution imaging techniques that push the boundaries of cellular visualization.

Supporting Rapid Vaccine Development Against Emerging Threats

The COVID-19 pandemic demonstrated the critical importance of recombinant protein technology in accelerating vaccine timelines. High-purity recombinant proteins from this portfolio continue to support researchers developing next-generation vaccines against infectious diseases, cancers, and emerging biological threats.

Available reagents provide essential tools across the vaccine development pipeline—from antigen discovery and immunogenicity screening to serological assay development and vaccine characterization. Established expression systems enable rapid scale-up, helping research teams respond swiftly during public health emergencies while maintaining quality standards essential for reproducible results.

Next-Generation ELISA Technology for Precision Biomarker Detection

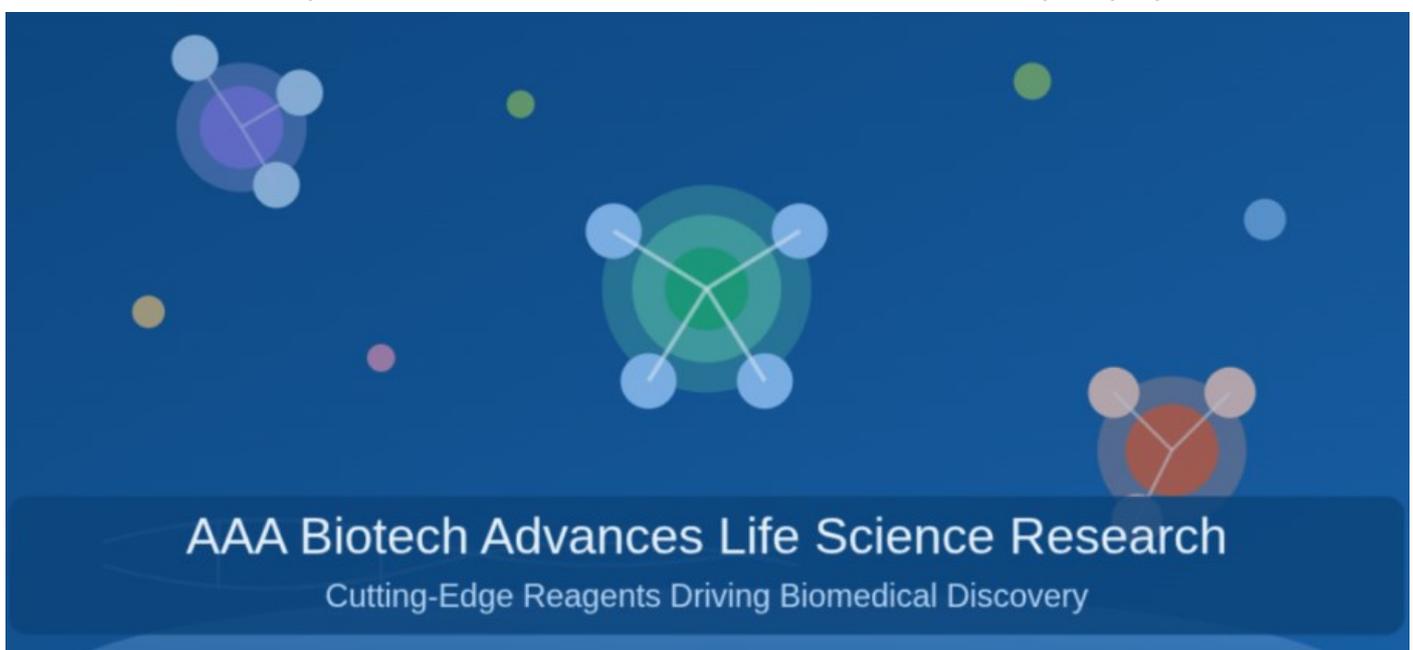
As precision medicine initiatives expand globally, a comprehensive ELISA kit portfolio enables sensitive, specific detection of disease biomarkers across research and preclinical applications. The kits support diverse areas, including cardiovascular disease markers, cancer biomarkers, neurological disorder indicators, and metabolic disease mediators.

A key differentiator is the availability of ELISA kits for less common research species, including hamster, canine, rabbit, and non-human primate models, which supports translational research across diverse experimental systems. Each kit undergoes validation for sensitivity, specificity, precision, and accuracy, enabling reliable biomarker discovery and characterization.

Commitment to Research Excellence

The catalog features only rigorously tested reagents, with ongoing efforts to expand capacity and develop new products that meet emerging scientific needs. The organization is committed to providing publication-backed, validated tools that accelerate scientific discovery.

With customers at leading universities, biotechnology companies, and government laboratories worldwide, this reagent provider continues its mission of delivering high-grade antibodies,



recombinant proteins, and ELISA kits that support breakthrough research across multiple disciplines.

About the Company

AAA Biotech continues to expand its catalog of life science reagents, including ELISA kits, antibodies, proteins, and related assay solutions. By aligning product development with the evolving needs of researchers, the company supports laboratories seeking dependable tools for biomarker detection and biological analysis.

As research moves toward increasingly data-driven and targeted approaches, next-generation ELISA kits remain essential components of experimental success. Through continued innovation and validation, AAA Biotech is contributing to more accurate, reproducible, and impactful life science research.

Fuente: USA TODAY. Disponible en <https://n9.cl/jsog4>

Producción de medicamentos impactada por bloqueo pero sin detenerse

20 mar. El arreciado bloqueo de Estados Unidos a Cuba impacta en la Empresa Laboratorio Farmacéutico Líquidos Orales (Medilip), pero no la detiene, aseguró su director general, Efrén Rodríguez Lora.

Dicha industria, enclavada en las afueras de Bayamo, provincia de Granma, tiene como misión principal producir y comercializar medicamentos líquidos, genéricos y naturales, con alta calidad y eficacia.

Para el desarrollo de sus procesos productivos necesita, además de servicio eléctrico, considerables cantidades de combustibles y lubricantes, pero en el reciente mes de febrero vio reducido al mínimo las asignaciones.

Ante esa realidad, la decisión es racionalizar, poner en práctica nuevas alternativas "para poder llevar a cabo las misiones cotidianas", enfatizó Rodríguez Lora en declaraciones exclusivas a la ACN.

Experiencia en enfrentar situaciones adversas hay en Medilip, donde debido a la escasez de materias primas para hacer medicamentos genéricos, a partir de 2019 se puso en práctica una estrategia de industrialización de productos naturales, refirió el directivo.

Se trabaja, además, en la obtención de extractos de diferentes especies de plantas medicinales.

Resaltó que para mantener la producción en las complejas circunstancias que vive el país, BioCubaFarma ha establecido alianzas estratégicas y encadenamientos productivos con varios actores económicos estatales y no estatales.

La presencia de medicamentos de Medilip en un punto de venta en la Avenida Antonio Maceo, próximo al mercado agropecuario Jesús Menéndez, en Bayamo, y la concurrencia de personas a comprarlos, demuestra que la industria continúa activa y con alto nivel de aceptación por la probada eficacia de sus productos.

Fuente: CubaSí. Disponible en <https://n9.cl/lzkkko>



UAlbany researchers develop new technique to test mRNA vaccines

Mar 20. Six years ago this month, New York declared a state of emergency due to COVID-19. With the pandemic, the use of mRNA technology for vaccines became more mainstream.

At UAlbany, researchers are now using a special laser to analyze mRNA therapeutics. The new technique can rapidly evaluate the integrity of mRNA vaccines, to make sure the vaccine someone gets is actually going to work.

As Igor Lednev, a UAlbany chemist and co-director of the Center for Biophotonic Technology and

Artificial Intelligence (CeBAI) noted, “mRNA is intrinsically unstable. You put it under normal conditions at room temperature at normal atmosphere and it will degrade quickly.”

Before mRNA can help fight disease, it’s packaged in a protective coating that keeps it from breaking down and acts as a delivery vehicle so the mRNA can effectively enter the body’s cells. But if the mRNA isn’t properly encapsulated, or if the vaccine isn’t properly stored, it can lose its efficacy.

“They are very dependent on the environment, so if the cooling change has been not completely committed, then there is an issue with these vaccines,” added Jurgen Popp, Lednev’s CeBAI co-director.

That’s where UAlbany’s special laser technique comes in.

“We just shine laser light on the sample, we don’t need to touch the sample. We don’t need to modify the sample,” Lednev explained.

They use a technique called Raman spectroscopy to determine whether the mRNA is viable by measuring the light that scatters off of it when the laser hits it.

“So we can use it in order to investigate the material, in order to investigate processes which occur or for identification purposes,” said Lednev.

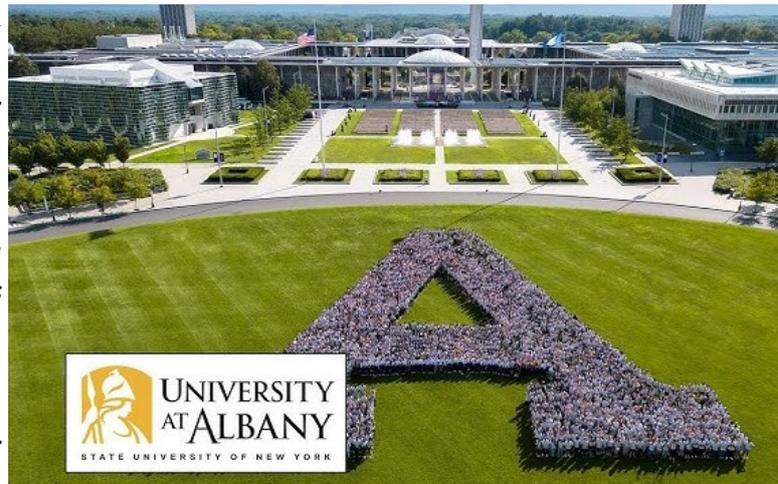
Unlike other testing methods that end up destroying vaccine samples, this method is non-destructive, so those vaccines can still be used. The goal is to make the technology portable so that it could be used where vaccines are administered, like the doctor’s office and pharmacies.

“So the idea is to get these very complicated devices into something that is small, miniaturized that can be used at the point of care or the point of use. So, this means directly before it’s being injected, that it’s being controlled,” Popp explained.

This technology also has potential to test for infections — distinguishing the difference between bacterial, fungal or viral — and for diseases like Alzheimer’s and Celiac.

“We believe that combination of Raman spectroscopy and machine learning is a universal tool for disease diagnostics,” Lednev said.

Fuente: NEWS10. Disponible en <https://n9.cl/a5jbp1>



Perú emite alerta epidemiológica ante brote de leptospirosis con más de 1.000 casos

21 mar. El Ministerio de Salud de Perú emitió una alerta epidemiológica ante el incremento del riesgo por leptospirosis, asociado a lluvias intensas en diferentes regiones del país andino, y que ya ha dejado cinco víctimas mortales y más de 1.000 casos.

La alerta epidemiológica, anunciada por el Centro Nacional de Epidemiología, Prevención y Control de Enfermedades, tiene ámbito de intervención en los 24 departamentos del país y se emitió para fortalecer la vigilancia epidemiológica, detección, tratamiento de casos y respuesta sanitaria en todos los establecimientos públicos y privados.

A través de esta medida, se fortalecerán las acciones de vigilancia e investigación epidemiológica, la notificación inmediata de casos probables y confirmados, se establecerá el estándar técnico y de monitoreo de procesamiento de muestras por leptospirosis, el cual no debe exceder las 24 horas desde su recepción.

También incluye el realizar diagnósticos moleculares mediante la técnica de PCR, a través del Laboratorio de Referencia Nacional de Metaxénicas y Zoonosis Bacterianas.

Además, brindará asistencia técnica para la organización y funcionamiento de los servicios de salud bajo mapas de flujos de referencia y contrarreferencia, fortalecerá las capacidades de profesionales de la salud, y garantizará el monitoreo oportuno y atención de los pacientes con leptospirosis.

Por otro lado, también impulsará la vigilancia de la calidad del agua para consumo humano, con énfasis en la desinfección del agua tanto en las empresas prestadoras de servicio y a nivel domiciliario e implementará campañas informativas.

El Ministerio de Salud informó que hasta la vigente semana epidemiológica ha registrado 1.045 casos y 5 defunciones (3 confirmados y 2 en investigación) pertenecientes a las regiones de Piura, San Martín, Tumbes y Junín, todas en el centro y norte de Perú y afectadas en las últimas semanas por inundaciones derivadas de fuertes lluvias.

La leptospirosis es una enfermedad silenciosa causada por bacterias, que puede entrar al cuerpo por una pequeña herida o incluso por la piel sana si se está en contacto con agua contaminada.

Fuente: NOTICIAS VENEVISIÓN. Disponible en <https://n9.cl/q6lgt>



OPS reporta avances en salud en las Américas durante 2025, pero alerta por sarampión y brotes regionales

20 mar. La Organización Panamericana de la Salud (OPS) presentó su Informe Anual 2025 con un balance que combina avances en eliminación de enfermedades, atención primaria, salud digital y acceso a vacunas, con alertas por el regreso de la transmisión del sarampión en la región y la persistencia de amenazas como dengue, fiebre amarilla y virus Oropouche.

El documento muestra una región con capacidad de respuesta, pero todavía bajo presión por brotes, desigualdades y limitaciones financieras.

En su Informe Anual 2025, titulado Impulsando la innovación, generando impacto, en el que resume los principales resultados de su cooperación técnica en las Américas. El documento destaca avances en seguridad sanitaria, eliminación de enfermedades, transformación digital y fortalecimiento de los sistemas de salud, en medio de un contexto internacional marcado por la reducción de fondos para salud.

Así mismo, durante el 2025 los países de la región lograron sostener acciones clave en salud pública gracias a la cooperación regional, la vigilancia epidemiológica y la implementación de modelos de atención más integrados.

“El año 2025 puso a prueba la resiliencia de los sistemas de salud y la cooperación internacional”, afirmó el Dr. Jarbas Barbosa, director de la OPS. “En un contexto de reducción de fondos para la salud internacional, la Organización Panamericana de la Salud demostró una vez más lo que ha demostrado durante más de 120 años: su capacidad para adaptarse, brindar servicios y promover la salud para todos en las Américas”.



La OPS destacó avances en malaria, VIH, hipertensión y atención primaria

Entre los principales hitos del año, la OPS señaló que Surinam se convirtió en el primer país de la cuenca amazónica certificado como libre de malaria, con lo que la región llegó a 20 países libres de esta enfermedad. El dato representa uno de los logros más relevantes del informe, por su impacto en salud pública y por tratarse de una zona históricamente afectada por enfermedades transmitidas por vectores.

El organismo también informó que Brasil eliminó la transmisión materno infantil del VIH, un resultado que refuerza el posicionamiento de las Américas en la eliminación de enfermedades transmisibles prevenibles mediante intervenciones oportunas en salud materna y perinatal.

En enfermedades no transmisibles, la OPS destacó la expansión de la iniciativa *Better Care for NCDs*, especialmente a través de la Iniciativa CORAZONES. Según el informe, más de 10.000 centros de atención primaria de salud en 28 países implementaron este modelo de atención estandarizada para hipertensión, beneficiando a más de 6 millones de personas.

Este avance muestra que la atención primaria siguió siendo uno de los pilares de la respuesta regional. En esa línea, Chile, Panamá y Paraguay se sumaron a la Alianza para la Atención Primaria de Salud en las Américas, una estrategia que busca fortalecer los sistemas de salud y movilizar inversiones del Banco Interamericano de Desarrollo y del Banco Mundial para ampliar servicios.

Salud digital y compras regionales ganaron peso en la estrategia sanitaria

La transformación digital también ocupó un lugar central en el balance de 2025. La OPS informó que 22 países se unieron a la Red Global de Certificación de Salud Digital, lo que permite emitir certificados de vacunación digitales seguros y facilita la interoperabilidad entre países.

Además, siete países implementaron la Plataforma de Telesalud Integral, una herramienta orientada a ampliar el acceso a especialistas en zonas remotas. El dato refleja cómo la región comenzó a consolidar soluciones digitales no solo para registro y certificación, sino también para ampliar cobertura y mejorar acceso a servicios especializados.

Otro de los puntos fuertes del informe fue el desempeño de los Fondos Rotatorios Regionales de la OPS. Durante 2025, estos mecanismos adquirieron más de 900 millones de dólares en vacunas, tecnologías y suministros sanitarios. También distribuyeron 234 millones de dosis de vacunas a 33 Estados Miembros y ampliaron su alcance a medicamentos de alto costo para cáncer y enfermedades raras, con ahorros importantes para los países.

A esto se sumó un acuerdo firmado en enero de 2025 entre el Gobierno de Argentina, Sinergium Biotech, Pfizer y la OPS para impulsar la producción regional de la vacuna neumocócica PCV20. Para la OPS, este acuerdo fortaleció la capacidad regional de fabricación y ofreció a los países una opción a precio más asequible.

El sarampión marcó el principal retroceso sanitario de la región

Aunque el informe tiene un tono de avance institucional, la OPS también advirtió sobre retrocesos importantes. El más grave fue la pérdida del estatus de eliminación del sarampión en la Región de las Américas, luego del restablecimiento de la transmisión en Canadá.

De acuerdo con el documento, en 2025 se notificaron más de 14.000 casos confirmados y 30 fallecimientos en 13 países. La OPS subrayó que el impacto fue desproporcionado en poblaciones indígenas, lo que volvió a poner en evidencia brechas persistentes en cobertura de vacunación, vigilancia epidemiológica y respuesta oportuna a brotes.

Este punto cambia el tono del informe y recuerda que los avances en eliminación de enfermedades no son irreversibles. La reaparición del sarampión en la región obliga a sostener coberturas altas de vacunación y sistemas de vigilancia más estrictos, especialmente en territorios con barreras de acceso.

La vigilancia regional detectó 157 eventos de salud pública en las Américas

En seguridad sanitaria, la OPS informó que su sistema regional de vigilancia analizó 2,1 millones de señales relacionadas con posibles amenazas para la salud. A partir de ese monitoreo, la organización detectó 157 eventos de salud pública en las Américas.

El organismo también apoyó a los países en la respuesta a brotes de fiebre amarilla, dengue y virus Oropouche, además de emergencias por desastres naturales, como el huracán Melissa en el Caribe.

“La seguridad sanitaria está en nuestro ADN”, afirmó Barbosa. “La OPS se creó para compartir información, basarse en la transparencia y proporcionar una plataforma donde los países puedan unirse para coordinar mejor sus esfuerzos comunes para contener brotes y epidemias”.

La frase resume uno de los mensajes más fuertes del informe: la seguridad sanitaria regional depende de la capacidad de compartir información a tiempo, coordinar respuestas y sostener cooperación técnica ante amenazas que cruzan fronteras.

La OPS movilizó 552 millones de dólares y amplió alianzas en la región

El informe también entregó un dato clave sobre financiación. La OPS movilizó 552 millones de dólares en contribuciones voluntarias durante el bienio 2024-2025, con corte al 31 de diciembre de 2025. La cifra representa un aumento del 111% frente a los niveles previos a la pandemia en 2019.

Para la organización, este crecimiento refleja una mayor diversificación de fuentes de financiamiento y una expansión de alianzas en la región. En palabras del director del organismo: “Hemos diversificado nuestras fuentes de financiación, ampliado nuestras alianzas y demostrado que podemos brindar cooperación técnica de alta calidad con mayor eficiencia”.

El Informe Anual 2025 deja así un balance mixto, pero claro. La región avanzó en eliminación de enfermedades, control de hipertensión, salud digital, acceso a vacunas y producción regional. Sin embargo, también enfrentó un retroceso importante con el sarampión y mantuvo una alta presión por brotes y amenazas emergentes. Para la OPS, el mensaje de fondo es que la resiliencia sanitaria en las Américas no depende solo de reaccionar a las crisis, sino de sostener cooperación, vigilancia e inversión de manera permanente.

Fuente: Consultor Salud. Disponible en <https://n9.cl/vzdwvd>

Meningococcal vax again fails to prevent gonorrhoea

Mar 23. Five hundred and eighty-seven gay and bisexual men were recruited as part of the GoGoVax trial, a double-blind, randomised and placebo-controlled trial. Participants received either two doses of the meningococcal vaccine (4CMenB) or two doses of placebo (normal saline), with the doses given three months apart. The men were then followed for 24 months to compare whether the rates of gonorrhoea development were different.

But the results of the trial, presented at the recent Conference on Retroviruses and Opportunistic Infections in Denver, Colorado, showed the 4CMenB vaccine had no effect.

“Across both arms, the gonorrhoea incidence was virtually the same – at around 48 per cent per year, indicating very clearly that the vaccine had no effect on preventing gonorrhoea,” Professor Kate Seib, a molecular microbiologist from Griffith University and lead researcher on the trial, said in a statement. “Our results support findings from the smaller DOXYVAC open-label trial that also showed no effect.”

“Taken together, these two studies provide strong evidence that the 4CMenB meningococcal vaccine is not effective at preventing gonorrhoea in gay and bisexual men who are at high risk of contracting it.”

Professor Seib explained that *Neisseria gonorrhoeae*, the bacteria that causes gonorrhoea, is extremely adept at adapting to and evading the human immune response. These characteristics could

contribute to why certain individuals – especially those with previous repeated cases of gonorrhoea – are less likely to benefit from vaccination.

“[The bacteria] has a lot of different mechanisms to do this. Either the bacterium changes the way it looks to our immune system, or it does something that dampens the ability of our immune system to make a protective response,” she told The Medical Republic.

The reduction modifiable protein (Rmp), a protein found on the outer membrane of *N. gonorrhoeae*, is believed to play a key role in this process.

“In certain situations, antibodies to the Rmp have been shown to decrease the ability of other antibodies to kill the bacteria,” Professor Seib said.

“If you’ve had a past infection and a previous immune response or antibodies to the bacteria, these existing antibodies may dampen the ability of the vaccine-induced immune response to do what it’s meant to do.

“The other side of it is that when you’re constantly exposed to [certain bacteria], it’s a bigger burden to completely prevent infection. It’s not a particularly scientific view, but I always think that with covid vaccines [for example], it’s harder to expect the vaccine to prevent infection if someone nearby has coughed and sneezed on you repeatedly compared to a more sporadic exposure.”

Fuente: WORLD ECONOMIC FORUM. Disponible en <https://n9.cl/jack5>

SK bioscience Partners with IDT Biologika for MSD’s Zaire Ebola Vaccine Production

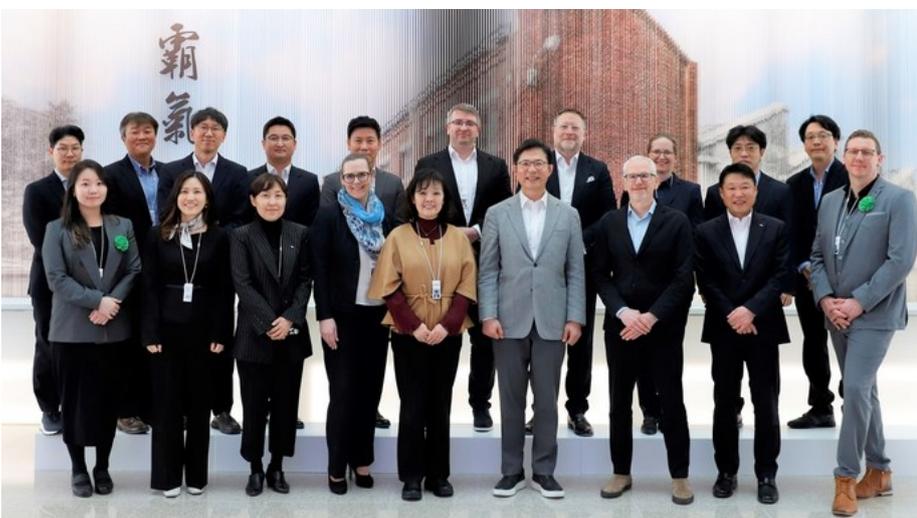
Mar 23. SK bioscience announced on March 23 that it has signed a contract with IDT Biologika (IDT) for the contract of developing and manufacturing the Zaire Ebola vaccine with an updated manufacturing process, which is being developed in collaboration with MSD (Merck & Co., Inc., Rahway, NJ, USA) and Hilleman Laboratories.

The agreement is part of a development project supported by approximately \$30 million funding from CEPI, the Coalition

for Epidemic Preparedness Innovations, which was announced in January.

The project focuses on addressing the manufacturing complexity and ultra-cold chain requirements associated with MSD’s existing Zaire Ebola vaccine. Key objectives are to enhance supply stability and accessibility by increasing manufacturing yield and improving thermal stability. Under the agreement, SK bioscience will produce drug substance, while IDT will leverage its CDMO expertise, know-how, and advanced facilities to undertake drug product development and manufacturing.

This collaboration reflects the broader integration strategy that has been progressively strengthened since SK bioscience acquired IDT. Following the acquisition of IDT, SK bioscience improved



manufacturing efficiency and optimized cost structures, leading to a turnaround in profitability.

Recently, SK bioscience and IDT were jointly selected for Phase 1 of a next-generation vaccine development initiative led by the European Health and Digital Executive Agency (HaDEA) under delegation from the European Health Emergency Preparedness and Response Authority (HERA). The project aims to develop a high-immunogenic seasonal influenza vaccine for older adults and a patch-based pandemic influenza vaccine, which is regarded as a strategic initiative to strengthen Europe's pandemic preparedness.

With the HaDEA project selection followed by this Zaire Ebola vaccine development and manufacturing agreement, IDT is expanding its role beyond that of a traditional CDMO to become a key hub within SK bioscience's global development and manufacturing network.

Dr. Sally Choe, CEO of IDT Biologika, added, "This collaboration reflects our strong partnership with SK bioscience and our shared ambition to build an integrated global manufacturing network." Jinseon Park, COO of SK bioscience, said, "Through this agreement, the combined development and manufacturing capabilities of SK bioscience and IDT will enhance the execution of global infectious disease response projects. We will continue to advance our integrated manufacturing platform to strengthen our ability to respond reliably to international public health needs."

SK bioscience continues to expand its global infectious disease portfolio and partnerships. In addition to the Zaire Ebola vaccine collaboration with MSD, the company is currently conducting a global Phase 3 trial of the 21-valent pneumococcal conjugate vaccine (PCV21), GBP410, in partnership with Sanofi, and is participating in pandemic preparedness initiatives with CEPI and the Korea Disease Control and Prevention Agency (KDCA). SK bioscience is also advancing next-generation infectious disease pipelines, including the RSV preventive monoclonal antibody RSM01 and research into broadly protective coronavirus vaccines, while further strengthening its global collaboration network.

Fuente: Business Korea. Disponible en <https://n9.cl/ngfzic>



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The recent news of discovering the mRNA cancer **vaccine**, Enteromix, in Russia, also points to the potential of the translation and the global trend of this technology, which is both effective in treatment and accessible in clinical practice. ...

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The growing insights into PFT biology have opened new avenues for therapeutic innovation, both by developing strategies to neutralize PFT-mediated pathogenesis and by engineering PFTs for **vaccine** development and cancer treatment. In this review, we provide a comprehensive ...

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It is imperative to develop and investigate next-generation vaccines such as chimeric Virus-Like Particles (chi-VLPs) vaccines for increased immunogenicity, ease of production, and scalability to supplement the worldwide **vaccine** supply. This study reports a novel bivalent ...

[Predictors of COVID-19 vaccine uptake and preferences for service delivery among people who inject drugs accessing a syringe service program.](#)

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[Addressing RSV infection in older adults: implications for public health policy.](#)

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[Vaccine effectiveness during an influenza B outbreak in a deployed military setting.](#)

Adeluola Y, Dyke GA, Pallett SJ, Arfield S, Macallan DC, Taylor H. *BMJ Mil Health*. 2026 Mar 13:e003212. doi: 10.1136/military-2025-003212. Online ahead of print. PMID: 41825939 Data were collected on diagnosis, symptoms, symptom duration, isolation periods and vaccination status. The difference in **vaccine** status between groups was assessed by chi(2), and the likelihood of infection in vaccinated or unvaccinated individuals was compared by OR.

[COVID-19 Vaccination Strategy and Evidence in Korea.](#)

Hwang YH, Park WB. *J Korean Med Sci*. 2026 Mar 23;41(11):e114. doi: 10.3346/jkms.2026.41.e114. PMID: 41873448 Free article. Review. As the epidemiological landscape of COVID-19 evolved and evidence on **vaccine** immunogenicity and safety accumulated, Korea adapted its vaccination strategies. During the 2024-2025 season, two mRNA vaccines (Pfizer-BioNTech and Moderna) and one recombinant protein **vaccine** ...

[Willingness to receive a COVID-19 booster vaccine: the role of health literacy and the 7Cs model.](#)

Falcon M, Rodríguez-Blázquez C, Fernández-Gutiérrez M, Forjaz MJ, Bas-Sarmiento P, Romay-Barja M. *Eur J Public Health*. 2026 Mar 14;36(2):ckag028. doi: 10.1093/eurpub/ckag028. PMID: 41847868 Vaccination is a modifiable behaviour resulting from a complex decision-making process influenced by a wide range of factors, including the '7Cs' model (confidence, complacency, constraints, calculation, collective responsibility, compliance, and conspiracy) and the ability to fi ...

[A cohort study of the duration of immunity to yellow fever after 4 years of primary vaccination in children and adults.](#)

Saucha CVV, de Oliveira RVC, Maia MLS, Sousa ESS, de Oliveira PMN, Xavier JR, de Castro TDM, Cruz RLS, Schwarcz WD, Pereira RC, Azevedo AS, de Filippis AMB, Ferroco CLV, Andrade MFS, Simões M, Neto JC, Martins-Filho OA, Campi-Azevedo AC, de Lima SMB, Camacho LAB. *Trans R Soc Trop Med Hyg*. 2026 Mar 14:trag026. doi: 10.1093/trstmh/trag026. Online ahead of print. PMID: 41830133 BACKGROUND: Lifelong protective immunity from a single dose of yellow fever (YF) **vaccine** remains controversial. We evaluated variations in YF neutralizing antibody titres over 4 years after primary vaccination. ...CONCLUSIONS: The evidence of waning immunity after a single ...

[Role of vaccination in the prevention of ECOPD.](#)

Sartori F, Crisafulli E, Cariqueo M, Di Chiara C, Sartori G, Fantin A, Torres A. *Semin Respir Crit Care Med*. 2026 Mar 23. doi: 10.1055/a-2837-8778. Online ahead of print. PMID: 41871621
Future perspectives include precision vaccination strategies, novel **vaccine** platforms, coadministration approaches, and interventions to improve **vaccine** uptake. ...

[Real-world effectiveness of perinatal RSV immunoprophylaxis: protocol for a test-negative case-control study.](#)

Aparicio Llorente C, Wats A, Araujo BL, Moniz Ganem J, Oliva IO, Xu H, Brodsky NN, Lucas CL, Aronson PL, Grubaugh ND, Breban M, Redmond S, Shapiro ED, Niccolai LM, Weinberger DM, Oliveira CR. *BMJ Open*. 2026 Mar 19;16(3):e114524. doi: 10.1136/bmjopen-2025-114524. PMID: 41856594 Free PMC article.

Data will be obtained from electronic health records, structured caregiver surveys and state immunization registries to ensure accurate classification of exposures and covariates. **Vaccine** effectiveness will be estimated using multivariable logistic regression controlling f ...

[Optimizing global genomic surveillance for early detection of emerging SARS-CoV-2 variants.](#)

Gu H, Li J, Sun W, Li M, Leung K, Wu JT, Yuan HY, Wang MH, Yang B, McKay MR, Ning N, Poon LLM. *Nat Commun*. 2026 Mar 14. doi: 10.1038/s41467-026-70664-0. Online ahead of print. PMID: 41832161 Free article.

Practical "non-disruptive" strategies, such as prioritizing a small number of highly connected hubs, consistently outperformed baseline approaches and remained effective across a range of variant transmissibility and **vaccine** effectiveness scenarios. These results provide a ...

[A Systematic Review and Meta-Analysis of Pharmacological and Physical Interventions Directed at the Injection Site for Reducing Distress during Vaccine Injections.](#)

Taddio A, Shah V, McMurtry CM, Lang E, MacDonald NE, Constantin K, Logeman C, Uleryk E; HELPinKids&Adults Team. *Clin J Pain*. 2026 Mar 13. doi: 10.1097/AJP.0000000000001374. Online ahead of print. PMID: 41821515

Manual rubbing has insufficient evidence of benefit. For older **vaccine** recipients, topical anesthesia is preferred, followed by manual tapping. Vibration with an external device with or without cold, follows thereafter. ...Implementation should consider the strength of the ...

[HPV vaccine awareness and uptake among women attending cervical screening in health-resource-limited areas of China: A multicenter cross-sectional study.](#)

Jia X, Da X, Shi J, Duan R, Zhao Y, Li Z, Feng R, Yang C, Zhang T, Zhang H, Wang J, Hu S, Qiao Y. *Hum Vaccin Immunother*. 2026 Dec;22(1):2644020. doi: 10.1080/21645515.2026.2644020. Epub 2026 Mar 14. PMID: 41830505 Free PMC article.

Vaccination was associated with lower HPV16/18 infection (aPR 0.66, 95% CI 0.52-0.85) but not with overall hrHPV or CIN2+. HPV **vaccine** awareness and uptake were low among women aged 35-64 y in health-resource-limited areas, with strong age, educational and urban-rural grad ...

[High-risk human papillomavirus genotype distribution, cytological abnormalities, and associated factors among Ethiopian women: a multicenter study.](#)

Tadele S, Yilema A, Woldesemayat B, Zealiyas K, Admas A, Abebe T, Gebeyehu A, Tadesse G, Tollera G, Berhe N, Kebede N. *Microbiol Spectr*. 2026 Mar 16:e0315425. doi: 10.1128/spectrum.03154-25. Online ahead of print. PMID: 41837431 Free article.

Among hr-HPV cases, 65.6% of HPV types were not targeted by the current **vaccine**, and 30.9% of these non-targeted genotypes were detected in women with abnormal cytology. ...It documents the considerable burden of hr-HPV infection, identifies the most prevalent circulating ...

[Safety of a tetravalent live dengue virus vaccine in children responding to one serotype only.](#)

White LJ, Hein LD, Abad Fernandez M, Adams C, Adams E, Freeman E, Shah R, Premkumar L, Agrupis KA, Crisostomo MV, Daag JV, Ylade M, Deen J, Lopez AL, Katzelnick L, de Silva AM. *JCI Insight*. 2026 Mar 17:e200741. doi: 10.1172/jci.insight.200741. Online ahead of print. PMID: 41842965 Free article.

Dengue virus (DENV) vaccines should be designed to induce balanced protective immunity against all four dengue serotype to mitigate the risk of **vaccine**-mediated enhanced dengue disease. The first tetravalent **vaccine** (Dengvaxia) tested in humans was efficacious in ch ...

[Computational design of a multiepitope vaccine targeting VP1 and VP2 capsid proteins of simian virus 40 \(SV40\) for enhanced immune activation.](#)

Naveed M, Asim M, Aziz T, Amjad S, Majeed MN, Jamal SB, El Hadi Mohamed RA, Alwethaynani MS, Al-Joufi FA, Fallatah D, Alkhatib SN. *Open Med (Wars)*. 2026 Mar 18;21(1):20251284. doi: 10.1515/med-2025-1284. eCollection 2026 Jan. PMID: 41852706 Free PMC article.

OBJECTIVES: This study aimed to design and evaluate a computationally constructed multiepitope **vaccine** targeting Simian Virus 40 (SV40) by predicting and selecting immunogenic B-cell and T-cell epitopes derived from the VP1 and VP2 capsid proteins using bioinformatics appr ...

[Lysosome-targeting live attenuated influenza vaccines elicit robust and broad immunity in mice.](#)

Hao J, Wang P, Shen Q, Xi X, Tong L, Hou J, Li L, Wang Q, Liu C, Li J, Zhao H, Zhang Q, Plebani R, Chou D, Zhang L, Zhou D, Si L. *Nat Commun*. 2026 Mar 18;17(1):2021. doi: 10.1038/s41467-026-69920-0. PMID: 41851138 Free PMC article.

Here we describe two lysosome-targeting live attenuated **vaccine** approaches, LY TAR 1.0 and LY TAR 2.0, by harnessing the lysosome to conditionally degrade viral proteins of influenza virus. ...This study establishes a lysosome-targeting **vaccine** platform for developing ...

[Extreme Genetic Diversity and Signatures of Balancing Selection in Plasmodium vivax Blood-Stage Antigens.](#)

Bareng APN, Naung MT, Martin E, Mehra S, Munro JE, Takala Harrison S, Barry AE. *J Infect Dis*. 2026 Mar 17;233(3):e745-e755. doi: 10.1093/infdis/jiaf539. PMID: 41128014

Here we report the diversity of 14 additional *P. vivax* **vaccine** candidates to identify polymorphic domains and immune selection, to guide selection of alleles for **vaccine** development. ...Current **vaccine** formulations based on Sal-1 may have limited efficacy. Our ...

[Immune responses in chicken mucosal lymphoid tissues following oral and eye drop vaccination and revaccination with live modified vaccine of infectious laryngotracheitis virus \(ILTV\).](#)

Tran TT, Andronicos NM, Ketheesan N, Walkden-Brown SW, Gerber PF. Arch Virol. 2026 Mar 18;171(4):132. doi: 10.1007/s00705-026-06560-1. PMID: 41848937 Free PMC article.

In conclusion, the immune responses in the conjunctiva and trachea following the ED and OR primary vaccination with ILTV vaccine were tissue-specific, showing increased gene expression of markers related to the inflammatory response. ...

[NY-ESO-1 in Triple-Negative Breast Cancer: Systematic Review, Meta-Analysis, and Immunotherapeutic Implications.](#)

Nik Amirah Auni NMA, Mohd Redzwan N, Hussain FA, Yahya MM, Ab Hamid SS, Wong KK. Int Immunopharmacol. 2026 Mar 16;177:116459. doi: 10.1016/j.intimp.2026.116459. Online ahead of print. PMID: 41846058 Review.

[Systematic profiling of SARS-CoV-2 structural protein-specific T cell epitopes in Omicron infections following inactivated vaccination.](#)

Li Z, Cui M, Wu J, Hu T, Dan J, Chen X, Shen Q, Hou J, Wang Z, Yu Y, Liu S. iScience. 2026 Feb 3;29(3):114891. doi: 10.1016/j.isci.2026.114891. eCollection 2026 Mar 20. PMID: 41736866 Free PMC article.

Comprehensive identification of T cell epitopes is crucial for understanding SARS-CoV-2-specific T cell immunity and guiding vaccine development. Epitope-specific T cells primed by inactivated vaccination (IV)-widely administered in China-followed by Omicron breakthrough i ...

[Active immunization strategies in glioblastoma - clinical outcomes and effect modifiers for dendritic vaccines and adoptive cell therapies: a systematic review.](#)

Kunz EM, Foster DT, Durrani A, Kioutchoukova IP, Thakkar R, Davidson C, Foreman M, Lucke-Wold B. J Clin Neurosci. 2026 Mar 14;148:111983. doi: 10.1016/j.jocn.2026.111983. Online ahead of print. PMID: 41833230 Review.

CONCLUSIONS: Immunotherapy in high-grade glioma remains investigational, with randomized evidence to date demonstrating limited benefit for routine checkpoint inhibition in both newly diagnosed and recurrent disease. Selected vaccine and adoptive cellular strategies have s ...

[Accelerating research and development of new vaccines against tuberculosis: 5-year progress on the global roadmap.](#)

van Riet E, Corleis B, Giersing BK, Hatherill M, Burhan E, Jassat W, White RG, Lewinsohn D, Cobelens F. Lancet Infect Dis. 2026 Mar 18:S1473-3099(26)00019-8. doi: 10.1016/S1473-3099(26)00019-8. Online ahead of print. PMID: 41864213 Review.

In 2021, a global tuberculosis vaccine research and development roadmap proposed a series of actions to accelerate the development of new, effective, and affordable vaccines that are urgently needed to eliminate tuberculosis globally. ...However, the number of candidates i ...

[A Systematic Review and Meta-Analysis of the Effectiveness of Process Interventions for Reducing Distress during Vaccine Injections.](#)

Taddio A, Shah V, McMurtry CM, Lang E, MacDonald NE, Constantin K, Uleryk E, Abrams EM, Alexander S, Bucci LM, Comeau J, Cortes JM, Cranch J, Gallinger L, Girouard S, Golightly B, Guenther M, Halperin SA, Howitt L, Jensen C, Kolker S, Kryschuk E, Minhas R, Noel M, Riddell RP, Probst J, Rieder MJ, Ross K, Siamaki S; HELPinKids&Adults Collaborative. Clin J Pain. 2026 Mar 13. doi: 10.1097/AJP.0000000000001372. Online ahead of print. PMID: 41821507

Educating vaccine recipients may result in a large reduction in distress (SMD=-0.80; low certainty).
...CONCLUSIONS: Educating and implementing interventions across relevant user groups involved in vaccinations, including clinicians, support persons, vaccine recipients ...

[The US Advisory Committee on Immunization Practices Dismantled.](#)

Navin MC, Ross LF. JAMA Pediatr. 2026 Mar 16. doi: 10.1001/jamapediatrics.2026.0415. Online ahead of print. PMID: 41837986

This Viewpoint discusses the dismissal of vaccine recommendations from medical professional groups, including the US Advisory Committee on Immunization Practices....

[TLR9-activating cholesterol azetidine derivative-assisted therapeutic vaccines for cancer immunotherapy.](#)

Chen J, Su M, Yu B, Yang M, Wang H, Yang X, Wang J. Sci Adv. 2026 Mar 20;12(12):eaeb2465. doi: 10.1126/sciadv.aeb2465. Epub 2026 Mar 20. PMID: 41861020 Free PMC article.

However, weak coordination between innate immune activation and antigen delivery remains a major obstacle to vaccine efficacy. Here, we present a cholesterol azetidine derivative-assisted polymeric carrier, Aze-Chol NP, which stimulates innate immunity and primes tumor-spe ...

[Acute myocarditis and rhabdomyositis after coronavirus disease 2019 messenger RNA vaccination and intensive training: a case report.](#)

Wu J, Szakos A, Bozoky B, Szekely L. J Med Case Rep. 2026 Mar 13. doi: 10.1186/s13256-026-05948-6. Online ahead of print. PMID: 41827021 Free article.

BACKGROUND: Despite the reporting of myocarditis associated with coronavirus disease 2019 vaccination, the correlation between vaccine-related rhabdomyositis and myocarditis incidence remains undocumented. This case offers a new perspective on myocarditis, potentially asso ...

[Engineering the ADDomer Nanoparticle Vaccine Scaffold for Improved Assembly and Enhanced Stability.](#)

Balchin G, Kabasakal BV, Strofaldi A, Hall S, Fletcher C, Buzas D, Bufton JC, Yadav SKN, Shen D, Garzoni F, Bunzel HA, McManus JJ, Schaffitzel C, Berger I. ACS Synth Biol. 2026 Mar 16. doi: 10.1021/acssynbio.5c00757. Online ahead of print. PMID: 41840818

Differential scanning fluorimetry and dynamic light scattering demonstrated thermal stability and elevated aggregation onset temperatures in the disulfide-stabilized ADDomers, providing a scalable assay for screening ADDomer-based VLP constructs for vaccine development. In ...

[A multicomponent Fc-fused subunit vaccine induces cross-protective immunity against porcine reproductive and respiratory syndrome virus QYYZ-like and NADC30-like strains.](#)

Tian L, Lin Z, Pan M, Wen Y, Lu M, Liu S, Zhang C, Rong Z, Ma J, Zhou R, Cao N, Chen X, Zheng F, Wei L, Li X, Qian P. Vet Microbiol. 2026 Mar 19;316:110991. doi: 10.1016/j.vetmic.2026.110991. Online ahead of print. PMID: 41864112

In this study, GP4Fc, GP5Fc, and MFc fusion proteins were successfully expressed in the Chinese hamster ovary (CHO) cell expression system. The subunit vaccine based on these fusion proteins elicited PRRSV-specific humoral and cellular immune responses in piglets. Challeng ...

[Improving pharmacy-based HPV vaccine delivery through communication training: Findings from a pilot feasibility study.](#)

Shah PD, Schwartz J, Bacci JL, Calo WA, Ko LK, Glascock M, Li L, Watabayashi K. J Am Pharm Assoc (2003). 2026 Mar 20:103078. doi: 10.1016/j.japh.2026.103078. Online ahead of print. PMID: 41866129

Community pharmacies are highly accessible vaccination venues, but staff need to enhance practical skills to identify vaccine-eligible adolescents and communicate effectively with parents.

OBJECTIVES: To evaluate the acceptability and feasibility of a team-based HPV vac ...

[Rotavirus-associated disease burden and clinical severity in vaccine-naive Chinese infants: A synthesised Bayesian framework.](#)

Liu D, Zhang B, Shi C, Liu G, Luo Y, Lau E, Lu Y, Lin Y, Yang J, Dai Z. Int J Infect Dis. 2026 Mar 16:108550. doi: 10.1016/j.ijid.2026.108550. Online ahead of print. PMID: 41850625 Free article.

We aimed to quantify RV burden and clinical progression among unvaccinated Chinese infants using vaccine clinical trial data. METHODS: We pooled efficacy and immunogenicity data from placebo arms of RV clinical trials conducted in China. ...CONCLUSION: Natural RV infection ...

[Effectiveness of 13-valent Pneumococcal Conjugate Vaccine against Vaccine-type Invasive Pneumococcal Disease in Children under 5 Years Old in Zhejiang, China: a case-control study.](#)

Liu Y, Lu ZJ, Yang JH, Zhou MM, Yu Li X, Zhou JS, Zhu YY, Catusse J, Sun AL, Bender CM, Dunne EM, Yang JF, Fang C, Hua CZ. Int J Infect Dis. 2026 Mar 21:108584. doi: 10.1016/j.ijid.2026.108584. Online ahead of print. PMID: 41871737

OBJECTIVES: Pneumococcal disease burden remains substantial in settings where pneumococcal conjugate vaccine (PCV) uptake is low. In China, PCV13 (Prevenar 13, Pfizer) has been available since 2016 on the private market, however no studies to date have evaluated its effect ...

[Pediatric COVID-19 in Korea: Lessons and Strategies for Future Disease-X Preparedness.](#)

Choe YJ. J Korean Med Sci. 2026 Mar 23;41(11):e75. doi: 10.3346/jkms.2026.41.e75. PMID: 41873445 Free article. Review.

The healthcare system rapidly adjusted to pediatric needs by allowing home isolation for mild cases and by permitting caregiver accompaniment during pediatric hospital isolation. Vaccine rollout for adolescents began in 2021 and for ages 5-11 in 2022, with an initial polic ...

[Do vaccine mandates impair the voluntariness of informed consent?](#)

Smith MJ, Mackie E. J Med Ethics. 2026 Mar 20;52(4):215-219. doi: 10.1136/jme-2025-110950. PMID: 40659511

If this turns out to be the case, then this would count as a pro tanto reason to think **vaccine** mandates are unethical. Assuming **vaccine** mandates count as 'coercive', interrogating this question requires an account of consent under third-party coercion, since the pre ...

[Crosslinked ionizable lipids reprogram dendritic cell metabolism for potent mRNA vaccination.](#)

Kim D, Gong N, Alameh MG, Han EL, Wang H, Wang J, Feng E, Yoon IC, Murray AM, Shi Q, Moon SJ, Mrksich K, Weissman D, Mitchell MJ. Nat Mater. 2026 Mar 17. doi: 10.1038/s41563-026-02512-x. Online ahead of print. PMID: 41844984

Here we develop a lipid nanoparticle (LNP) capable of metabolic reprogramming of dendritic cells for mRNA **vaccine** applications. Using imidoester-based conjugation chemistry, we design a crosslinked ionizable lipid, C12-2aN, which possesses intrinsic metabolic modulatory pr ...

[Gender differences in HPV vaccine hesitancy among college students: Implications for targeted health education strategies.](#)

Wu Y, Fu Y, Zuo C, Chen C, Zhang L, Chen T. Vaccine. 2026 Mar 13;79:128471. doi: 10.1016/j.vaccine.2026.128471. Online ahead of print. PMID: 41830691

BACKGROUND: Male HPV **vaccine** hesitancy in China has been understudied, especially since the **vaccine's** 2025 introduction. This study aimed to explore gender-specific factors associated with HPV **vaccine** hesitancy among college students to inform targeted public ...

[Comprehensive Review on How Repurposed Drugs Modulate Antitumor Immunity: Harnessing Damage-Associated Molecular Patterns.](#)

Shaik R, Sappidi M, Vemula D, Munjala A, Syeda FS, Begum S, Khan H, Mandava K. Cancer Biother Radiopharm. 2026 Mar 18:10849785251389355. doi: 10.1177/10849785251389355. Online ahead of print. PMID: 41115696 Review.

This form of cell death, induced by specific chemotherapeutic agents, has been shown to elicit a "chemotherapy **vaccine** effect" in vivo, effectively stimulating an antitumor immune response. At the molecular level, "a collection of molecules" known as "damage-associated mol ...

[Genomic insights and vaccine evaluation of a virulent MLST ST234 Bacillus cereus infecting Asian sea bass \(Lates calcarifer\).](#)

Cheng LW, Huang QY, Pirarat N, Rajandran A, Poudyal S, Wang PC, Chen SC. Fish Shellfish Immunol. 2026 Mar 14;173:111273. doi: 10.1016/j.fsi.2026.111273. Online ahead of print. PMID: 41839302

Multilocus sequence typing assigned SB01 to B. cereus sequence type (ST) 234. Given that PA is a well-established **vaccine** target in Bacillus anthracis, its presence and characteristics were examined in ST234 strains. Several amino acid substitutions were identified within ...

[Identification and evaluation of novel intergenic sites in the vaccinia virus genome for transgene insertion.](#)

Bueno-Merino C, Del Canizo A, Conesa M, Barcia M, Sallent I, Manils J, Forcales SV, Soler C, Rojas JJ. Mol Ther Oncol. 2026 Jan 19;34(1):201131. doi: 10.1016/j.omton.2026.201131. eCollection 2026 Mar 19. PMID: 41675688 Free PMC article.

Vaccinia virus (VACV) is widely used as a **vaccine** and oncolytic vector due to its safety profile and its capacity to accommodate exogenous DNA. ...

[A Retrospective Cross-Sectional Study \(2009-2023\): Exploring Influenza A\(H1N1\)pdm09 Antibody Time Series in Humans and Swine and Vaccine Coverage in Two Target Groups.](#)

Jore S, Tønnessen R, Grøntvedt CA, Rydland K, Hauge AG, Hungnes O, Kristoffersen AB, Fossum E. Zoonoses Public Health. 2026 Mar 19. doi: 10.1111/zph.70051. Online ahead of print. PMID: 41857313

[Why We Must Vaccinate US Dairy Cattle Against HPAI H5N1.](#)

Gray GC, Warren CJ, Webby RJ, Bowman AS. J Infect Dis. 2026 Mar 20;jjag183. doi: 10.1093/infdis/jjag183. Online ahead of print. PMID: 41856169 No abstract available.

[The Role of Pectin in Optimizing Cationic Liposomes for Oral Delivery.](#)

Lutta A, Martínez-Navarrete M, Tollemeto M, Andresen AK, Pedersen GK, Guillot AJ, Zhang Z, Grohgan H, Melero A, Schmidt ST, Nielsen LH. ACS Appl Bio Mater. 2026 Mar 16;9(6):2815-2826. doi: 10.1021/acsabm.5c01824. Epub 2026 Feb 28. PMID: 41762665

Liposomes are valuable in drug and **vaccine** delivery. However, due to limited stability in the gastric environment, there is a need to optimize liposomes for oral delivery. ...Overall, pectins demonstrated potential as excipients for mucosal delivery systems. In the context ...

[Humoral correlates of protection in a mouse model of echovirus infection.](#)

Creisher PS, Abell JW, Cooley KA, Coyne CB. J Immunol. 2026 Mar 17;215(3):vkag009. doi: 10.1093/jimmun/vkag009. PMID: 41861097

These findings establish hFc mice as a robust translational model for dissecting echovirus adaptive immunity, define the humoral response to infection, and identify correlates of protection to guide future **vaccine** development and preclinical evaluation....

[Safety and Immunogenicity of Varicella-Zoster Vaccination in Pediatric Heart Transplant Recipients.](#)

Zhang D, Rosenthal LM, Seifert-Hansen M, Scavuzzo L, Marrato A, Dipchand AI. J Heart Lung Transplant. 2026 Mar 18;S1053-2498(26)01776-6. doi: 10.1016/j.healun.2026.03.010. Online ahead of print. PMID: 41862039

BACKGROUND: Pediatric heart transplant recipients are at increased risk of morbidity and mortality from **vaccine**-preventable infections due to long-term immunosuppression. Although live vaccines have traditionally been contraindicated post-transplant, emerging evidence supp ...

[Determinants of COVID-19 vaccine hesitancy across 186 countries: a multifaceted analysis using structural equation modeling.](#)

Van Truong L, Van Nguyen T, Trang VTT, Le TTT, Thum CC, Nguyen D, Wong YJ, Jain N, Binh MNL, Anh DH, Marzouk S, Sabet C, El Idrissi FE, Thuy LT, Huynh KLA, Makram AM, Pham HH, Lesmana E, Simadibrata DM, Abbas AM, Kudsi MA, Minh NA, Ngoc NT, Binh NH, Nam NT, Ali IA, Gurav JS, Tri NHM, Tin PT, Makki A, Albakkar M, Naji MH, Jouini JA, Anand A, Al-Moughales AAAR, Tuyen PB, Kashyap A, Mohamed MHN, Alhosni H, MohamedAhmed BBA, Ramanarayanan S, Menna C, Ramzi A, Arnaout M, James JM, Van Pham M, Mokhtar FMB, Mani E, Kumari U, Fathima SS, Rampengan DDCH, Pham Thi Cam H, Elhadidy AMAM, Okeh DU, Soetomo CT, Latti P, Babu P, Ghanam AK, Osman MOA, Putrinata NPMH, George G, Alhumrani ZAK, Kwaah PA, Saad MA, Ibrahim AID, Mohamed MAS, Dinh XT, Salim J, Bouey J, Huy NT; TMGH Online Research Club Global Team. *Vaccine*. 2026 Mar 17;78:128196. doi: 10.1016/j.vaccine.2026.128196. Online ahead of print. PMID: 41849972

BACKGROUND: COVID-19 vaccine hesitancy (CVH) remains a global challenge to controlling the COVID-19 pandemic. ...Conversely, those with higher education and hesitancy related to vaccine reactions (HRVR) expressed increased concerns about COVID-19 vaccine info ...

[Primary immune trajectories following a single BNT162b2 vaccination scheme in SARS-CoV-2-naïve individuals.](#)

Méndez Rodríguez ML, Ponciano-Gómez A, Campos-Aguilar M, Tapia-Sánchez WD, Duarte-Martínez CL, Romero-Herrera JS, Olivas-Quintero S, Saucedo-Campos AD, Lopez-Sanchez JI, Méndez-Cruz AR, Jiménez-Flores R, Romero-Ramírez H, Santos-Argumedo L, Rosales-García VH, Ortiz-Navarrete V. *Eur J Microbiol Immunol (Bp)*. 2026 Jan 13;16(1):1-11. doi: 10.1556/1886.2025.00058. Print 2026 Mar 19. PMID: 41528345 Free PMC article.

We conducted a longitudinal study in SARS-CoV-2-naïve adults who received two doses of the BNT162b2 vaccine. Peripheral blood was analyzed by flow cytometry to quantify monocyte, NK, T, and B cell subpopulations, and serum cytokines were measured by multiplex assays. ...

[Parental Attitudes Toward Inpatient Pediatric Vaccination.](#)

Gayle T, Webber K, Finstuen-Magro K, Groussis M, Lazerov J, Rush M. *Hosp Pediatr*. 2026 Mar 20:e2025008386. doi: 10.1542/hpeds.2025-008386. Online ahead of print. PMID: 41856363

The most common concerns related to the child's current illness and potential vaccine side effects. Most parents surveyed agreed that they would feel comfortable with the administration of routine and seasonal vaccines during their child's hospitalization. ...

[Caregiver and healthcare professional perspectives on drivers of routine immunisation uptake in East New Britain, Papua New Guinea: a qualitative study.](#)

Dalton M, Pomat W, Sanderson B, Melepia P, James HA, Burangat D, Duwaba L, Willie D, Paivu B, Kiromat P, Stanley E, Waramin E, Laman M, Walker S, Homer C, Robinson LJ, Scoullar MJL, Vaccher S, Danchin M. *BMJ Public Health*. 2026 Mar 18;4(1):e003553. doi: 10.1136/bmjph-2025-003553. eCollection 2026. PMID: 41878585 Free PMC article.

Healthcare professional enablers included increased operational funds and working with community leaders, while barriers were focused on service delivery including costs, non-functioning aid posts and **vaccine** stockouts. Strategies suggested by participants for improving ...

[Hematologic and coagulation responses to Johnson & Johnson COVID-19 vaccination in the Amhara region, Ethiopia.](#)

Bazezew A, Woldu B, Getawa S, Adane T, Tajebe F, Belete D, Abebe W, Ayenew GM, Alemu BB, Yimer MA, Worede A, Aynalem M. Sci Rep. 2026 Mar 16. doi: 10.1038/s41598-026-42484-1. Online ahead of print. PMID: 41840051 Free article. No abstract available.

[Stability-centric Development of mRNA Vaccines: A Comprehensive Review of Design, Delivery, and Regulatory Considerations.](#)

Sharma N, Sharma M, Sharma A, Anam, Bhardwaj S. Rev Recent Clin Trials. 2026 Mar 17. doi: 10.2174/0115748871396452251203154434. Online ahead of print. PMID: 41863227

INTRODUCTION: Messenger RNA (mRNA) **vaccine** technology has recently emerged as a revolutionary platform in modern immunology and vaccinology. ...It also compares mRNA vaccines to traditional **vaccine** platforms and highlights their advantages and future prospects. METH ...

[The 100 Days Mission: a perspective on accelerating vaccine manufacturing for future pandemics.](#)

Williams BA, Fitzsimmons PM, Lewis LM, Tornos J, Kimmel L, True JM, Siwik PJ, Ryall M, Mullett K. BMC Glob Public Health. 2026 Mar 20;4(1):29. doi: 10.1186/s44263-026-00262-1. PMID: 41857693 Free PMC article. Review.

Here, we present insights from Pfizer leaders involved in the COVID-19 **vaccine** effort on key enablers for rapid large-scale manufacture of pandemic vaccines to achieve this ambitious goal. ...By addressing these critical factors, the global community can better prepare for ...

[Molecular epidemiology of rotavirus causing diarrhea among under-five children after the introduction of rotavirus vaccines, Rotavac and Rotasiil, into the national immunization program of India.](#)

Varghese T, Machathi A, Khakha SA, Nair NP, Samarasimha RN, Chaudhary VS, Kharat N, Samuel P, Giri S, Mohan VR, Kang G. Virol J. 2026 Mar 14. doi: 10.1186/s12985-026-03126-0. Online ahead of print. PMID: 41832515 Free article.

G3P[8] remained consistently dominant across regions, **vaccine** types, and years. Regional and **vaccine**-specific differences were evident, but trends suggest natural viral evolution may outweigh **vaccine**-driven selection. Sustained surveillance is essential to de ...

[Evaluating Lactococcus lactis as a novel antiparasitic vaccine delivery platform: A scoping review of immunization routes and immunological outcomes.](#)

Rihs JB, Cirilo TM, Grossi de Oliveira AL, Amorim CCO, de Brito Duval I, Cardozo ME, de Carvalho Azevedo VA, Bueno LL, Magalhães LMD, Dos Santos JSC, Fujiwara RT. Vaccine. 2026 Mar 17;79:128431. doi: 10.1016/j.vaccine.2026.128431. Online ahead of print. PMID: 41849895 Review. The immunization route critically shapes the immune profile and protection, emphasizing the need to tailor **vaccine** strategies to pathogen type, infection site, and desired immune outcome. This review provides a comprehensive overview of current preclinical approaches and q ...

[Digital Dissemination Strategies for Health Promotion Videos in Indigenous Communities in California: Protocol for a Three-Arm Comparative Study.](#)

Abascal Miguel L, Epperson AE, Comfort AB, León D, Garcia ME, Riley AR, Diamond-Smith N. JMIR Res Protoc. 2026 Mar 17;15:e84674. doi: 10.2196/84674. PMID: 41843796 Free PMC article. OBJECTIVE: This protocol describes a three-arm dissemination study designed to compare the effectiveness of different strategies for distributing COVID-19 and flu **vaccine** promotion videos among Indigenous Peoples residing in California, including American Indian and Alaska ...

[Adapting covid-19 vaccination through targeted approaches: FDA-approved vaccines for the 2025-2026 season.](#)

Begum RF, Mathew M, Doshi PP, Suresh S. Immunol Res. 2026 Mar 14;74(1):26. doi: 10.1007/s12026-026-09757-3. PMID: 41831154 Review. No abstract available.

[HPVoice: a single-blind three-arm RCT on social media communication strategies among adolescents in Tuscany, Italy.](#)

Menicagli D, Casigliani V, Panizza F, Gandolfi S, Betti E, Petrone D, Di Nino MG, Bonaldo L, Torrissi M, Mammolenti E, Cecconi L, Macri E, Tavoschi L, Cevolani G. Vaccine. 2026 Mar 18;79:128466. doi: 10.1016/j.vaccine.2026.128466. Online ahead of print. PMID: 41855647 Free article. INTRODUCTION: Cervical cancer is the first cancer potentially eliminable through widespread HPV vaccination. In Italy, despite free access, **vaccine** coverage among adolescents remains low. Psychological factors such as information avoidance (IA), the tendency to ignore the ...

[RIPK1 as a potential target to augment DC efficacy in tumor immunotherapy.](#)

Mao L, Ou Y, Zhang Y, Wang M, Dong G, Khanniche A, Wang H, Wu Z, Zhang H, Hu L, Kong X. Cancer Immunol Immunother. 2026 Mar 17;75(4):106. doi: 10.1007/s00262-026-04356-5. PMID: 41843169 Free PMC article. Dendritic Cell (DC)-based **vaccine** is a tumor immunotherapy approach with great potential, and improving the efficacy is an urgent problem to be solved. ...The efficacy of DC-specific Ripk1 knockout was also validated in in vitro experiments, revealing the function of the R ...

[SARS-CoV-2 Spike-specific T Cell Responses Following COVID-19 Vaccination in Japanese People Living with HIV.](#)

Ndubi M, Toyoda M, Ngare I, Motozono C, Minami R, Ueno T. Jpn J Infect Dis. 2026 Mar 23;79(2):49-55. doi: 10.7883/yoken.JJID.2025.086. Epub 2025 Jun 30. PMID: 40582888 Free article. In this study, we investigated SARS-CoV-2 **vaccine**-induced CD4+ and CD8+ T cell responses in 26 PLWH on ART following third-dose mRNA vaccination. ...Our results highlight the heterogeneous immune functionality of **vaccine**-induced, SARS-CoV-2 spike-specific CD4+ and C ...

[The evolving landscape of RSV immunization: Current policies and practices across Europe.](#)

Franck Z, Hofstraat S, Jonker L, Kragten L, Messina C, Fernandes RM, Bruijning-Verhagen P; PIPELINE National Coordinators. Vaccine. 2026 Mar 19;76:128222. doi: 10.1016/j.vaccine.2026.128222. Epub 2026 Feb 14. PMID: 41690867 Free article.

BACKGROUND: Following approval of the first Maternal RSV **vaccine** (MV) and long-acting monoclonal RSV antibody (la-mAbs) in Europe, several countries have begun integrating the products into their infant RSV immunization programs. ...

[Postviral Anti-PF4 Immunothrombosis in Children: A Narrative Review with Practical Guidance.](#)

Uzun G, Olivieri M, Bakchoul T. *Hamostaseologie*. 2026 Mar 13. doi: 10.1055/a-2791-8607. Online ahead of print. PMID: 41825487 Free article.

It shares immunopathologic features with **vaccine**-induced immune thrombotic thrombocytopenia but arises after natural infection, most often adenoviral infection. ...

[Characterization of a conserved outer-membrane protein in non-typeable *Haemophilus influenzae* with an unidentified impact on phenotype.](#)

Fraser AJ, Cooper O, Forde BM, Murphy TF, Jennings MP, Attack JM. *Microbiol Spectr*. 2026 Mar 16:e0280125. doi: 10.1128/spectrum.02801-25. Online ahead of print. PMID: 41837429 Free article.

IMPORTANCE: Non-typeable *Haemophilus influenzae* (NTHi) is a major human pathogen for which there is no **vaccine**. Subunits for a rationally designed **vaccine** need to be conserved and present in almost all strains of an organism, be stably expressed, and be surface-located ...

[Association of COVID-19 vaccines and antibody response in individuals with prior Coronavirus infection.](#)

Shyamkumar RM, Madiyal M, Bhuvanagiri G, Pinto MR, Nayak P, Chopra A. *Sci Rep*. 2026 Mar 13. doi: 10.1038/s41598-026-42177-9. Online ahead of print. PMID: 41839990 Free article.

To evaluate the efficacy of COVID-19 vaccines in increasing serum and salivary IgA antibody levels and how they are correlated to patients' demographics, medical conditions, and previous history of coronavirus infection in the Udupi district, Karnataka, India. 127 participants wh ...

[Video-based interventions to promote HPV vaccination among individuals aged 9 to 26: a systematic review and meta-analysis.](#)

Liu C, Ng TJ, Mansuri S, Ghonaim N, Roy D, Moshi U, Chen AC. *BMC Public Health*. 2026 Mar 14. doi: 10.1186/s12889-026-26759-w. Online ahead of print. PMID: 41826914 Free article. No abstract available.

[Timing of the fourth dose of RTS,S/AS01 malaria **vaccine** in perennial settings: a modelling study.](#)

Figueroa-Downing D, Kelly SL, Cavelan A, Penny MA, Malinga J. *Malar J*. 2026 Mar 13. doi: 10.1186/s12936-026-05848-6. Online ahead of print. PMID: 41827013 Free article.

As countries introduce the RTS,S/AS01 **vaccine**, there is an interest in exploring vaccination schedules that align with existing routine health touchpoints and to optimize **vaccine** coverage. ...Additionally, a fourth dose of the **vaccine** in this transmission set ...

[Biosynthesis of a Polysaccharide-based Glycoconjugate **Vaccine** against Neonatal Meningitis-Causing *Escherichia coli* O45.](#)

Wang Y, Liu H, Wang Y, Wang B, Fang X, Wang H, Liu L, Tan H. *ACS Synth Biol*. 2026 Mar 20;15(3):1140-1152. doi: 10.1021/acssynbio.5c00829. Epub 2026 Mar 4. PMID: 41779879

Herein, we developed a glycoengineered *E. coli* strain for efficient biosynthesis of O45 O-polysaccharide (OPS45) and the OPS45-based glycoconjugate **vaccine**. Systematic optimization enhanced the production of OPS45, a polysaccharide containing the rare sugars 6-deoxy-l-talo ...

[BCG Infection Following Therapy of Infant Acute Lymphoblastic Leukemia.](#)

Lemeshev M, Laberko A, Shelikhova L, Fominykh V, Khachatryan L, Solopova G, Myakova N, Balashov D. *Pediatr Blood Cancer*. 2026 Mar 15:e70212. doi: 10.1002/1545-5017.70212. Online ahead of print. PMID: 41834323

BACKGROUND: The *Bacillus Calmette-Guerin* (BCG) **vaccine** is widely administered in tuberculosis-endemic regions. BCG infection (BCGitis) is a rare **vaccine** adverse event seen in immunocompromised patients. ...All received BCG vaccination with the Russian BCG strain ...

[Application of the CPER reverse genetics system for genetic engineering of rabies virus.](#)

Itakura Y, Kawaguchi N, Tabata K, Gonzalez G, Konishi K, Ohnuma A, Furuta I, Ito N, Saito S, Hall WW, Orba Y, Sawa H, Sasaki M. *J Virol*. 2026 Mar 13:e0187225. doi: 10.1128/jvi.01872-25. Online ahead of print. PMID: 41823415 Free article.

Our work establishes CPER as a versatile platform for engineering recombinant RABVs, facilitating rapid generation and genetic manipulation of RABV with potential applications for research on other mononegaviruses. IMPORTANCE Reverse genetics systems allow researchers to generate r ...

[Reconstruction of native cellular microanatomy in a novel bioengineered full thickness human nasal mucosal construct.](#)

Bradbury S, Dickson B, Curtis N, Bunton D, Goncalves K, Przyborski S. *J Anat*. 2026 Mar 16. doi: 10.1111/joa.70130. Online ahead of print. PMID: 41839648

Such technology will be of value to a wide range of applications, most notably, undertaking basic research and in vitro pharmaceutical screening, of which nasal mucosal models have become increasingly applicable due to the popularity of intranasal drug and **vaccine** delivery ...

[Coverage, Effectiveness and Sero-positivity of Measles-Containing Vaccines in Low- and Lower Middle-Income Countries: An Umbrella Review of Systematic Reviews and Meta-analyses.](#)

Mohammed Y, Olowo-Okere A, Bawa S, Onah JO, Saad A, Oteri A, Yusufari YA, Wonodi C, Umar ZA, Kolawole AF, Hassan S, Garba AR. *Int J Infect Dis*. 2026 Mar 18:108569. doi: 10.1016/j.ijid.2026.108569. Online ahead of print. PMID: 41862080 Free article.

This study provides a comprehensive synthesis of measles-containing **vaccine** (MCV) coverage trends, effectiveness, and uptake determinants to inform strategic realignment. ...

[Impact of GM-CSF and two-site vaccination on clinical outcomes after multi-peptide vaccination for melanoma: long-term analysis of a randomized phase II trial.](#)

Ninmer EK, Zhu H, Sarkar A, Chianese-Bullock KA, Ross MI, Haas NB, von Mehren M, Boisvert ME, Kirkwood JM, Slingluff CL. *Clin Cancer Res*. 2026 Mar 18. doi: 10.1158/1078-0432.CCR-25-4606. Online ahead of print. PMID: 41849224

The trial was powered to detect differences in immunogenicity by **vaccine** groups defined by GM-CSF status (Arms B+D vs A+C) and **vaccine** sites (Arms A+B vs C+D). ...CONCLUSIONS: These results challenge the use of GM-CSF as a local **vaccine** adjuvant and support t ...

[Designing a novel and effective multi-epitope subunit **vaccine** against human astrovirus using reverse vaccinology approach.](#)

Khan S, Khan I, Ali SS, Hussain Z, Ali S, Iqbal A. Braz J Microbiol. 2026 Mar 23;57(1):90. doi: 10.1007/s42770-026-01885-0. PMID: 41870802

Therefore, it is imperative to produce an effective **vaccine** to address this illness. The primary aim of our ongoing research is to formulate and construct a multi-epitope **vaccine** via immunoinformatics approach. ...Importantly, the physicochemical characteristics, an ...

[Strategies for developing multi-epitope subunit vaccines against tick-borne protozoa and bacteria.](#)

Ben Said M, Kratou M, Quiroz-Castañeda RE, Tayeh G, Belkahia H. Vet J. 2026 Mar 20:106656. doi: 10.1016/j.tvjl.2026.106656. Online ahead of print. PMID: 41865865 Review.

Building on these findings, the integration of epitope mapping with molecular docking and stability prediction analyses allows rational **vaccine** design with enhanced potential efficacy. Complementary strategies, including the use of lipid nanoparticles and adjuvants, have b ...

[Comparative evaluation of cell lines and their serum-free adapted derivatives for H1N1 influenza A virus propagation: bridging laboratory research and industrial **vaccine** production application.](#)

Demirden SF, Kimiz-Gebologlu I, Oncel SS. Vaccine. 2026 Mar 19;79:128489. doi: 10.1016/j.vaccine.2026.128489. Online ahead of print. PMID: 41863182

Based on these results, their suitability for bioprocessing in the production of a potential influenza **vaccine** was assessed....

[Genomic evolution of SARS-CoV-2 delta variants pre- and post-omicron emergence using alignment-free machine learning models.](#)

Sankar S, Anandharaman K, Selvam P, Jayaraman A, Jayakumar D, Balakrishnan P, Larsson M, Velu V, Raju S, Shankar EM. PLoS One. 2026 Mar 19;21(3):e0345259. doi: 10.1371/journal.pone.0345259. eCollection 2026. PMID: 41855150 Free PMC article.

The SARS-CoV-2 Delta variant (B.1.617.2), initially classified as a variant of concern due to its enhanced transmissibility and **vaccine**-escape mutations, underwent further genomic changes following the emergence of the Omicron variant (B.1.1.529). ...The methodology and in ...

[Comment on: "Mucosal and Systemic Antibody Responses After Boosting With a Bivalent Messenger RNA Severe Acute Respiratory Syndrome Coronavirus 2 **Vaccine**".](#)

Persson C. J Infect Dis. 2026 Mar 20:jjag180. doi: 10.1093/infdis/jjag180. Online ahead of print. PMID: 41869879 No abstract available.

[Understanding parental HPV vaccination decision in China through the lens of vaccine hesitancy and preference heterogeneity: a discrete choice experiment.](#)

Lu Y, Tang C, Xu S, Hussain I, Zhao W, Dong Y, Lin J, Mu R, Ren X, Feng D, Li S, Fang Y, Chang J. *Vaccine*. 2026 Mar 19;76:128307. doi: 10.1016/j.vaccine.2026.128307. Epub 2026 Feb 10. PMID: 41666789

Five **vaccine** attributes were evaluated: protection efficacy, duration of protection, possibility of minor side effects, **vaccine's** country of manufacture, and price. The HPV **Vaccine** Hesitancy Scale was used to measure participants' degree of **vaccine** hes ...

[Hepatitis B Vaccination Rates and Risk Factors Affecting Vaccine Response in People Living with HIV in Turkey.](#)

Mirza A, Çabalak M, Gunal O, Candevir A, Kayaaslan B, Karaoğlan İ, Çerik HÖ, Özer D, Erdem İ, Çakırca TD, Bulut D, Topal Ş, İnal AS, Mete AÖ, Çakır Y, Eser F, Cesur C, Akbulut A, Bekçibaşı M, Yıldız İE, Aşan MA, Çakmak P. *Curr HIV Res*. 2026 Mar 16. doi: 10.2174/011570162X411549251129074829. Online ahead of print. PMID: 41863124

Following the HBV vaccination schedule, **vaccine** response (Anti-HBs 10 IU/L) was observed in 73.4% of individuals. Hypertension and chronic obstructive pulmonary disease (COPD) were identified as independent risk factors affecting **vaccine** response ($p = 0.016$ and $p = ...$

[Seroprevalence of diphtheria, tetanus, pertussis among healthcare workers \(HCWs\) - A cross-sectional study at the National Centre for Infectious Diseases and Tan Tock Seng Hospital, Singapore.](#)

Lim DW, Au AJH, Chavatte JM, Mohamed Ashar MZ, Tan CCY, Lim DRX, Tang HL, Gao Q, Yuen PJX, Thein TL, Lin RTP, Toh MPHS, Sadarangani SP. *Hum Vaccin Immunother*. 2026 Dec;22(1):2641318. doi: 10.1080/21645515.2026.2641318. Epub 2026 Mar 17. PMID: 41841365 Free PMC article.

Immunization in healthcare workers (HCWs) is important to minimize VPD (**vaccine**-preventable diseases) outbreaks in the healthcare setting, including diphtheria and pertussis, in the context of the global resurgence of VPD. ...High immunization coverage along with infection ...

[Predictors of SARS-CoV-2 anti-Spike IgG antibody levels following two COVID-19 vaccine doses among children and adults in the Canadian CHILD Cohort.](#)

Azeez R, Ames SR, Lotoski LC, Winsor GL, Arnold CR, Galipeau Y, Pelchat M, Goguen S, Simons E, Moraes TJ, Mandhane PJ, Turvey SE, Bolotin S, Patrick DM, Bullard J, Lix LM, Doucas N, Rodriguez N, Brinkman FSL, Subbarao P, Langlois MA, Azad MB. *Vaccine*. 2026 Mar 19;79:128342. doi: 10.1016/j.vaccine.2026.128342. Online ahead of print. PMID: 41863181 Free article.

There were no antibody level differences among study sites, ethnicities, household essential worker status, education levels, immunosuppressive comorbidity presence, or when comparing a 3-8 vs. 9-16-week interval between **vaccine** doses. INTERPRETATION: We identified key fac ...

[Progress and Innovation in Japanese Encephalitis Vaccines: Toward Global Immunization.](#)

Shaikh MS, AISHammari TM, Kumar D, Faiyazuddin M. *Recent Adv Antiinfect Drug Discov*. 2026 Mar 17. doi: 10.2174/0127724344413950251212043612. Online ahead of print. PMID: 41863503

JE directly impacts economic development because disease patterns are influenced by factors such as healthcare infrastructure, surveillance, **vaccine** availability, and agricultural trends across low-, middle-, upper-, and high-income countries. ...Global initiatives by orga ...

[Koalas first: lessons from a wildlife Chlamydia vaccine.](#)

Pollak NM, Phillips S, Timms P. Trends Microbiol. 2026 Mar 23:S0966-842X(26)00029-6. doi: 10.1016/j.tim.2026.02.003. Online ahead of print. PMID: 41876294 Review.

Koalas are the first wildlife species with a conditionally approved Chlamydia pecorum **vaccine**, offering a natural-host system for a pathogen whose human counterpart, Chlamydia trachomatis, lacks a licensed **vaccine**. Human **vaccine** efforts are slowed by uncertai ...

[Adapting lessons from the Indian subcontinent to accelerate elimination of visceral leishmaniasis as a public health problem in East Africa.](#)

Iniguez E, Masiga D, Bern C, Srikantiah S. PLoS Negl Trop Dis. 2026 Mar 13;20(3):e0014088. doi: 10.1371/journal.pntd.0014088. eCollection 2026 Mar. PMID: 41824476 Free PMC article. Review.

This viewpoint draws lessons from the elimination of visceral leishmaniasis (VL) as a public health problem in the Southeast Asia region (SEAR) to inform efforts in East Africa (EA), now the global epicenter of Leishmania donovani transmission. VL is fatal and there is no license ...

[Construction and characterization of recombinant duck enteritis virus expressing duck hepatitis A virus 3 immunogenic genes.](#)

Jia W, Wang A, Wu Z, Shi L, Xie J, Zhou Q, Cheng Y, Lei X, Liu L, Tian L, Zhu S. Poult Sci. 2026 Mar 13;105(6):106780. doi: 10.1016/j.psj.2026.106780. Online ahead of print. PMID: 41850054 Free article.

Duck enteritis virus (DEV) is considered an ideal vector for waterfowl **vaccine** development due to its favorable safety profile and multiple genomic sites that accommodate foreign gene insertion. ...The HDR-CRISPR/Cas9 strategy employing dual sgRNAs provides an efficient ap ...

[Precision Oncology Meets Nanotechnology: AI-Driven Liposomal Nanocarriers for Enhanced Cancer Immunotherapy.](#)

Muhammad S, Zhai J, Zhong W, Siddiqui H, Wang J, Zhao Y. Crit Rev Oncol Hematol. 2026 Mar 21:105291. doi: 10.1016/j.critrevonc.2026.105291. Online ahead of print. PMID: 41871725 Review.

These AI-engineered nanomaterials enable targeted drug delivery, controlled release, and improved modulation of the tumor microenvironment, thereby overcoming immunosuppressive barriers and enhancing immune checkpoint therapy, **vaccine** responses, and combination chemotherap ...

[Mechanistic insights and emerging applications of human metapneumovirus \(HMPV\) treatment: From molecular design to translational immunity.](#)

Abuhassan Q, Aldulaimi A, Waleed OS, Ganesan S, Kavitha V, Maharana L, Sharma R, Albadr RJ, Abilkasimov A, Latipova M, Smerat A. Folia Microbiol (Praha). 2026 Mar 13. doi: 10.1007/s12223-026-01441-1. Online ahead of print. PMID: 41824232 Review. No abstract available.

[Knowledge and awareness of HPV vaccination uptake and recommendations in gulf cooperation council countries 2009-2025: a systematic review.](#)

Al Khaldi S, Tabche C, Atwan Z, Rawaf S. Arch Public Health. 2026 Mar 13. doi: 10.1186/s13690-026-01875-6. Online ahead of print. PMID: 41827053 Free article. No abstract available.

[Immunisation program managers' experiences of implementing the change from a two dose to a single dose course of HPV vaccination in Australia's school-based program.](#)

Steffens M, Bolsewicz K, Prokopovich K, Beard F, Brotherton JML. Vaccine. 2026 Mar 19;76:128300. doi: 10.1016/j.vaccine.2026.128300. Epub 2026 Feb 6. PMID: 41653573 Free article.

This resulted in frustration, a need to retrospectively adapt consent forms and **vaccine** oversupply. Current challenges in the school-based immunisation programs include declining school attendance, staffing, competing priorities in schools, evolving consent processes in th ...

[Early rheumatic heart disease is a recognized intermediate on the pathway to advanced rheumatic heart disease.](#)

Marangou J, Wirth SH, Zühlke L, Rwebembera J, Mwita JC, Kim J, Kraus AA, Karron R, Carapetis J, Steer A, Beaton A. Int J Cardiol. 2026 Mar 14;453:134432. doi: 10.1016/j.ijcard.2026.134432. Online ahead of print. PMID: 41833866 Free article. Review.

This shift in understanding has important clinical and research implications, including introducing a new and more pragmatic target for Streptococcus pyogenes **vaccine** trials for the indication of rheumatic heart disease prevention....

[Herpes zoster vaccination coverage and associated factors among individuals aged ≥50 years in Zhejiang, China: A population-based cross-sectional study.](#)

Yan X, Hu X, Xu Y, Zhang X, Zhao Y, Xu J. Vaccine. 2026 Mar 19;76:128301. doi: 10.1016/j.vaccine.2026.128301. Epub 2026 Feb 10. PMID: 41653572 Free article.

The main non-vaccination reason for adults with monthly income of 10,000 yuan was "lack of **vaccine** knowledge", while "Unnecessary to get vaccinated" was the primary reason for the >10,000 yuan group. Television (64.64%), doctor (59.81%), and family member (50.92%) were ...

[Interest of adjuvant and neoadjuvant vaccination in the early stages of cancer.](#)

Damon M, Clairet AL, Eberst G, Adotévi O. Crit Rev Oncol Hematol. 2026 Mar 21:105290. doi: 10.1016/j.critrevonc.2026.105290. Online ahead of print. PMID: 41871723 Review.

Recent advances in identifying neoantigens arising from genomic mutations in tumor cells, along with progress in **vaccine**-platform engineering, particularly in messenger RNA technologies, have revitalized the clinical development of cancer vaccines. ...

[Exploring rural-urban disparities in HPV vaccine initiation: new insights from the 2022 national health interview survey.](#)

Semprini J, Brandt H. Vaccine. 2026 Mar 19;76:128334. doi: 10.1016/j.vaccine.2026.128334. Epub 2026 Feb 10. PMID: 41672029

Analyzing nationally representative data from the 2022 National Health Interview Survey (NHIS), we evaluated rural-urban differences in HPV vaccination among individuals aged 9-29 years (all of whom were recommended to receive the HPV vaccine during adolescence since 2006) ...

[Tim-3-targeted vaccines overcome tumor immunosuppression and reduce cDC1 dependence to elicit potent anti-tumor immunity.](#)

Fu C, Ma T, Clausen BE, Mellman I, Jiang A. Proc Natl Acad Sci U S A. 2026 Mar 24;123(12):e2518080123. doi: 10.1073/pnas.2518080123. Epub 2026 Mar 19. PMID: 41855265 Free PMC article.

In Batf3(-/-) mice lacking cDC1s, anti-Tim-3-based vaccines still elicited significant CD8 T cell cross-priming and tumor control-albeit both were reduced compared to wild-type mice- demonstrating that cDC1s contribute to but are not essential for Tim-3-targeted vaccine-in ...

[Influenza vaccination in patients with heart failure: comprehensive review of evidence, challenges, and clinical implications.](#)

Khan A, Khan M, Hammadeh BM, Ishaq MU, Naveed H, Allana S, Fudim M, Mentz RJ, Fonarow GC, Biering-Sørensen T. Heart Fail Rev. 2026 Mar 14;31(1):36. doi: 10.1007/s10741-026-10605-7. PMID: 41831072 Review. No abstract available.

[Engineering lipid nanoparticle-stabilized emulsions for spatiotemporal mRNA delivery and enhanced T cell immunity.](#)

Zhou Y, Gao W, Huang X, Yan Y, Wu S, Shan X, Chen S, Qiu M, Ma G, Xia Y. Cell Rep Med. 2026 Mar 17;7(3):102667. doi: 10.1016/j.xcrm.2026.102667. PMID: 41850240

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[Corrigendum to "Safety and immunogenicity of SpiN-Tec, a T-cell based RBD-Nucleocapsid chimeric vaccine for COVID-19" \[Vaccine 64 \(2025\) 127756\].](#)

Almeida GG, Pinto JA, Pinto PM, da Silva LB, Andrade LAF, Valiate BVS, Zini N, Bagno FF, Rivelli GG, Lourenço KL, Souza JPC, Gomes IP, de Castro NS, Maia ALC, de Carvalho AF, Alves JC, de Castro JT, Li G, Hojo-Souza NS, da Rocha Fernandes G, Alves PA, Diniz RC, Daher AB, de Souza RP, Teixeira SMR, Fernandes APSM, Gazzinelli RT, da Costa Santiago H. Vaccine. 2026 Mar 19;76:128316. doi: 10.1016/j.vaccine.2026.128316. Epub 2026 Feb 11. PMID: 41678919 Free article. No abstract available.

[Vaccine mandates impair voluntariness, even if consent-receivers do not.](#)

Saunders B. J Med Ethics. 2026 Mar 20;52(4):220. doi: 10.1136/jme-2025-111463. PMID: 41443994 No abstract available.

[Developing a Next-Generation Vaccine Adjuvant System through Rational Design to Alleviate AS01 Adjuvant Deficiency.](#)

Luo Z, Zhou S, Wang H, Ge W, Liu Z, He M, Zhong T, Wang Y, Li X, Wang S, Wang X. J Med Chem. 2026 Mar 19. doi: 10.1021/acs.jmedchem.6c00135. Online ahead of print. PMID: 41855509

[Hitting the hidden: arming the immune system for the next zoonotic coronavirus spillover.](#)

Fricke C, Perlman S. J Clin Invest. 2026 Mar 16;136(6):e203781. doi: 10.1172/JCI1203781. eCollection 2026 Mar 16. PMID: 41837282 Free PMC article.

[Economic evaluation of 22 HPV vaccination strategies to minimize the risk of penile, anal, and oropharyngeal cancers in Chinese males: A Markov model analysis.](#)

Wang D, Luo W, Qin R, Xu G, Chai P, Liu B, Zhou L, Zhang X. Hum Vaccin Immunother. 2026 Dec;22(1):2646398. doi: 10.1080/21645515.2026.2646398. Epub 2026 Mar 20. PMID: 41860356 Free PMC article.

[Vaccination under sedation in children with needle phobia or behavioural difficulties: A retrospective study.](#)

Brogan D, Prabhu PS, Deng L, Sharma K, Dunn A, Sharp E, David C, Leacey L, Sterling K, Hooker A, Ong N, Wood N, Macartney K, Kandasamy R. Vaccine. 2026 Mar 19;76:128352. doi: 10.1016/j.vaccine.2026.128352. Epub 2026 Feb 13. PMID: 41690288

[TOI-IGRA: A Fingertip Blood Biosensing Technology for Decentralized Quantification of Pathogen-Specific T-Cell Responses.](#)

Xu Y, Zhang B, Huang Z, Mou M, Zhao T, Zhang B, Yang H, Huang H, Qu H, Wu W, Wang P, Zhao Q, Dai C, Zhang J, Xie L, Zhong S, Cao R, Li H, Yang H, Chai Y, Tan X. Anal Chem. 2026 Mar 16. doi: 10.1021/acs.analchem.5c07520. Online ahead of print. PMID: 41837561

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Patentes registradas en Patentscope

Estrategia de búsqueda: *FP:(vaccine) AND DP:([13.03.2026 TO 23.03.2026]) as the publication date*
24 records.

1.4709413A COMBINATION VACCINE AGAINST ERYSIPELOTHRIX RHUSIOPATHIAE, PORCINE PARVO VIRUS AND LEPTOSPIRA BACTERIUM

EP - 18.03.2026

Int.Class [A61K 39/02](#) Appl.No 24725415 Applicant INTERVET INT BV Inventor JACOBS ANTONIUS ARNOLDUS CHRISTIAAN

The invention pertains to a combination of a first vaccine comprising a non-replicating immunogen of *Erysipelothrix rhusiopathiae* and a non-replicating immunogen of porcine parvo virus, and a second vaccine comprising a non-replicating immunogen of a *Leptospira* bacterium, for use in prophylactically treating a pig against an infection with *Erysipelothrix rhusiopathiae*, an infection with porcine parvo virus and an infection with *Leptospira* bacterium, by associated separate injection of the first vaccine and the second vaccine into the dermis of the pig at a first and a second injection site of that pig respectively.

2.4710936COMBINATION VACCINE FOR PREVENTION OF INFLUENZA AND CORONAVIRUS INFECTIONS

EP - 18.03.2026

Int.Class [A61K 39/145](#) Appl.No 24803524 Applicant UNIV HOKKAIDO NAT UNIV CORP Inventor SHINGAI MASASHI

Disclosed is a combination vaccine for prevention of influenza and novel coronavirus infections. The combination vaccine for vaccination against influenza and novel corona viruses was obtained by inactivating all influenza virus particles and all novel coronavirus particles respectively, thereby inducing the antibodies to each virus without affecting each vaccine effect, so that the defensive effects were obtained against the attacks of each virus. In addition, the combination vaccine with this combination exhibited favorable neutralizing antibody induction and defensive effects to the attacks of these viruses even without addition of an adjuvant.

3.WO/2026/060312MRNA VACCINES FOR HERPES SIMPLEX 1 AND 2 VIRUS

WO - 19.03.2026

Int.Class [A61K 39/245](#) Appl.No PCT/US2025/046270 Applicant ADVANCED RNA VACCINE (ARV) TECHNOLOGIES, INC. Inventor ZHU, Huabin

Described herein are compositions and methods for treating or preventing HSV in a subject.

4.WO/2026/057765A RECOMBINANT SARS-COV-2 S GLYCOPROTEIN TRIMER, PROTEOLIPOSOMES COMPRISING SUCH A TRIMER AND THEIR USE AS A VACCINE

WO - 19.03.2026

Int.Class [A61K 49/00](#) Appl.No PCT/EP2025/075999 Applicant UNIVERSITE GRENOBLE ALPES Inventor WEISSENHORN, Winfried

The present invention concerns a recombinant SARS-CoV-2 S glycoprotein trimer stabilized in a conformation that is anterior to the post-fusion conformation, as well as a proteoliposome comprising such a recombinant trimer and a vaccine based on such a proteoliposome. The invention also relates

to a method of treating or preventing a SARS-CoV-2 infection in a subject using such a vaccine.

5.4709417POLYNUCLEOTIDES ENCODING NOROVIRUS VP1 ANTIGENS AND USES THEREOF
EP - 18.03.2026

Int.Class [A61K 39/12](#) Appl.No 24728000 Applicant MERCK SHARP & DOHME LLC Inventor AUSTIN LAUREN A

The present invention is directed to nucleic acids and related immunogenic polypeptides for the prevention or treatment of infectious diseases. In particular, the nucleic acids and immunogenic polypeptides provide utility for the prophylactic prevention of norovirus infections in a mammal. The invention is further directed to nucleic acid-based vaccine compositions and a kit of parts comprising the vaccine compositions, as well as methods of treatment and medical uses relating to the nucleic acids, vaccine compositions, and kit of parts.

6.4710948A RECOMBINANT SARS-COV-2 S GLYCOPROTEIN TRIMER, PROTEOLIPOSOMES COMPRISING SUCH A TRIMER AND THEIR USE AS A VACCINE

EP - 18.03.2026

Int.Class [A61K 49/00](#) Appl.No 24306514 Applicant UNIV GRENOBLE ALPES Inventor WEISSEHORN WINFRIED

The present invention concerns a recombinant SARS-CoV-2 S glycoprotein trimer stabilized in a conformation that is anterior to the post-fusion conformation, as well as a proteoliposome comprising such a recombinant trimer and a vaccine based on such a proteoliposome. The invention also relates to a method of treating or preventing a SARS-CoV-2 infection in a subject using such a vaccine.

7.4709414A VACCINE AGAINST ERYSIPELOTHRIX RHUSIOPATHIAE AND PORCINE PARVO VIRUS

EP - 18.03.2026

Int.Class [A61K 39/02](#) Appl.No 24725416 Applicant INTERVET INT BV Inventor JACOBS ANTONIUS ARNOLDUS CHRISTIAAN

The invention pertains to the use of a vaccine comprising a non-replicating immunogen of *Erysipelothrix rhusiopathiae* and a non-replicating immunogen of porcine parvo virus, in prophylactically treating a pig against an infection with *Erysipelothrix rhusiopathiae* and an infection with porcine parvo virus, by injection of the first vaccine into the dermis of the pig.

8.4709415A VACCINE AGAINST LEPTOSPIRA BACTERIUM

EP - 18.03.2026

Int.Class [A61K 39/02](#) Appl.No 24725417 Applicant INTERVET INT BV Inventor JACOBS ANTONIUS ARNOLDUS CHRISTIAAN

The invention pertains to a vaccine comprising a non-replicating Leptospira immunogen, for use in prophylactically treating a pig against an infection with a Leptospira bacterium, by injection of the first vaccine into the dermis of the pig.

9.WO/2026/060236COMPOSITIONS AND METHODS FOR PREVENTING INFECTION

WO - 19.03.2026

Int.Class [C07K 14/21](#) Appl.No PCT/US2025/046145 Applicant THE CURATORS OF THE

UNIVERSITY OF MISSOURI Inventor PICKING, Wendy
 Methods of treating preventing and/or substantially reducing a *Pseudomonas aeruginosa* (PA) infection and/or a *Staphylococcus aureus* (SA) infection by administration of a bivalent protein subunit-based vaccine are described. The vaccine can protect subjects with a prior history of exposure to SA from a new exposure to PA or SA, including methicillin resistant SA (MRSA), as well as being able to protecting with no prior exposure to a SA infection. Vaccine formulations are also described.

10.WO/2026/060311MRNA VACCINES FOR EPSTEIN-BARR VIRUS (EBV) AND DISEASES CAUSED BY EBV INFECTION

WO - 19.03.2026

Int.Class [A61K 39/245](#) Appl.No PCT/US2025/046269 Applicant ADVANCED RNA VACCINE (ARV) TECHNOLOGIES, INC. Inventor CUI, Xinle

Described herein are compositions and methods for treating or preventing EBV infection in a subject, and treating or preventing a disease or disorder caused by EBV infection in a subject.

11.20260077034MULTIVALENT CARRIERS AND RELATED VACCINE COMPOSITIONS

US - 19.03.2026

Int.Class [A61K 39/215](#) Appl.No 19298144 Applicant California Institute of Technology Inventor Alexander A. Cohen

Disclosed herein include multivalent carriers comprising a plurality of heterologous coronavirus proteins antigens derived from different coronaviruses. The multivalent carriers herein described can elicit heterologous binding and neutralization properties against coronaviruses that differ from the coronaviruses from which the coronavirus antigens are derived to produce the multivalent carriers. Also provided herein include vaccine compositions comprising the multivalent carriers and related methods using the vaccine compositions in various therapeutic and prophylactic applications.

12.WO/2026/056860LIPID NANOPARTICLE USED FOR DELIVERING HPV NUCLEIC ACID VACCINE

WO - 19.03.2026

Int.Class [C12N 15/88](#) Appl.No PCT/CN2025/120083 Applicant BEIJING JITAI LIFE SCIENCES LTD Inventor CAO, Beibei

A lipid nanoparticle used for delivering an HPV nucleic acid vaccine, a preparation method therefor, a composition, an immunogenic composition and a pharmaceutical composition which include the lipid nanoparticle, and a use of the lipid nanoparticle, the immunogenic composition and the pharmaceutical composition in disease treatment.

13.WO/2026/056841HPV VACCINE AND USE THEREOF

WO - 19.03.2026

Int.Class [C12N 15/62](#) Appl.No PCT/CN2025/119948 Applicant HANGZHOU JITAI LIFE SCIENCES LTD Inventor CAO, Beibei

Provided are an HPV vaccine containing a nucleic acid molecule encoding an HPV antigen and an immune costimulatory factor, and the use thereof.

14.4709420COMBINATION VACCINE

EP - 18.03.2026

Int.Class [A61K 39/295](#) Appl.No 24803185 Applicant SEQIRUS INC Inventor CHANG CHENG

The present disclosure relates to compositions comprising multiple antigens of interest for use in vaccine formulations. The compositions comprise (a) a polynucleotide (such as an RNA) comprising a nucleotide sequence encoding an antigen and (b) an antigen polypeptide. The compositions can be used in inducing an immune response in a subject and/or in the treatment or prevention of a disease, such as a respiratory viral infection.

15.WO/2026/055729RNA-LNP FORMULATIONS DELIVERED BY HD-MAP

WO - 19.03.2026

Int.Class [A61K 9/51](#) Appl.No PCT/AU2025/051004 Applicant VAXXAS PTY LIMITED Inventor PASCOE CARSWELL, Deborah

The present invention relates to stable nucleic acid LNP vaccine formulations for administration via a microprojection array in which the microprojections are densely packed and in which the vaccine formulations are rapidly sprayed or layered on to the microprojections in relatively small amounts such that the formulations dry rapidly. The present invention relates in particular to stabilized RNA-LNP vaccines delivered by high density micro-array patches (HD-MAPs).

16.WO/2026/056096LMP2 ANTIGEN-ENHANCED MRNA DESIGN METHOD AND USE

WO - 19.03.2026

Int.Class [A61K 39/245](#) Appl.No PCT/CN2024/132398 Applicant WEST CHINA HOSPITAL OF SICHUAN UNIVERSITY Inventor PENG, Xingchen

Provided are an LMP2 antigen-enhanced mRNA, a design method therefor, and use thereof, a targeted nano-formulation carrier, a preparation method therefor, and use thereof, as well as an LMP2mRNA liposome vaccine, a preparation method therefor, and use thereof. The design uses intracellular sequences of MHC-I molecules, which can significantly improve the efficiency of presenting expressed antigens by MHC-I and MHC-II. The method is applicable to general purposes, and the designed LMP2 antigen-enhanced mRNA exhibits strong immunogenicity. The prepared mRNA vaccine can be used for treating a series of cancers and tumors, exemplified by nasopharyngeal cancer, caused by an infection with the virus.

17.20260077031NUCLEIC ACIDS ENCODING HUMAN ENDOGENOUS RETROVIRUS K (HERV-K) ENVELOPE PROTEINS CONTAINING MODIFIED IMMUNOSUPPRESSIVE DOMAINS (ISD) AND USES THEREOF

US - 19.03.2026

Int.Class [A61K 39/21](#) Appl.No 19266325 Applicant INPROTHER APS Inventor Peter HOLST

A vaccine for use in the prophylaxis and/or treatment of a disease

The present invention relates to an adenoviral vector capable of encoding a virus-like particle (VLP), said VLP displaying an inactive immune-suppressive domain (ISD). The vaccine of the invention shows an improved immune response from either of both of the response pathways initiated by CD4 T cells or CD8 T cells.

18.4709394VACCINE ADJUVANTS

EP - 18.03.2026

Int.Class [A61K 31/7105](#) Appl.No 24806747 Applicant SEQIRUS INC Inventor WIDMAN DOUGLAS G

The present disclosure relates to RNAs and other polynucleotides encoding an antigen, which can be used in vaccine compositions. In some examples, the RNA or polynucleotide also encodes an adjuvant, such as cathelicidin or a fragment thereof. The present disclosure also relates to use of the RNAs, polynucleotides or compositions in methods of inducing an immune response in a subject.

19.20260077027 PEPTIDE AND NUCLEIC ACID METHODS TO MODULATE DELIVERY OF NUCLEIC ACID STRUCTURES, POLYPEPTIDES, AND THEIR CARGOES

US - 19.03.2026

Int.Class [A61K 39/00](#) Appl.No 19105977 Applicant Ohio State Innovation Foundation Inventor Niksa ROKI

Disclosed herein are methods and compositions for enhancing delivery and function of vaccine components, immunotherapy Agents, and improved delivery of nucleic acid nanostructures, nucleic acids, peptides, polypeptides, and other types of cargoes. These methods and compositions utilize design components suitable for rapid and cost-effective manufacturing, and are designed to exclusively use the process of self-assembly to form nanotherapeutics requiring no purification in many instances.

20.20260077035 IMMUNIZATION METHOD AGAINST INFECTION BY SARS-CoV-2

US - 19.03.2026

Int.Class [A61K 39/215](#) Appl.No 19397109 Applicant Imam Abdulrahman Bin Faisal University Inventor Iman ALMANSOUR

A pDNA-based vaccine against SARS-CoV-2 and methods for preventing or treating COVID-19 using it.

21.WO/2026/060208 HYDROGELATED CELLS AND THEIR USE AS VACCINES

WO - 19.03.2026

Int.Class [A61K 39/02](#) Appl.No PCT/US2025/046095 Applicant THE REGENTS OF THE UNIVERSITY OF CALIFORNIA Inventor TAN, Cheemeng

Described herein are cells that contain a synthetic polymer network which renders the cells incapable of dividing and allows the cells to remain metabolically active. Also described herein are methods for making the metabolically-active cells, and related methods for using the metabolically-active cells to induce an immune response in a subject, such as a vaccine.

22.20260077037 CATIONIC LIPID BASED COMPOSITION, FORMULATION AND USE FOR NUCLEIC ACID VACCINE DELIVERY AND PREPARATION THEREOF

US - 19.03.2026

Int.Class [A61K 39/385](#) Appl.No 18881055 Applicant BHARAT BIOTECH INTERNATIONAL LIMITED Inventor Namita Santosh MAHADIK

The present invention discloses a cationic lipid-based formulation for in vivo delivery of nucleic acid. The present invention describes the development of a lipid system that can induce efficient non-viral delivery of nucleic acid, especially RNA, for the purpose of efficient nucleic acid transfection toward eliciting vaccination in vivo. Present invention provides a lipid/RNA complex (lipoplex) formulation having sufficiently long shelf life that performs without any compromise in its transfection output. The

present invention further provides cationic lipid-based formulations for RNA delivery with maximum nucleic acid complexation ability and with comparatively lesser amount of cationic lipid having higher stability.

23.WO/2026/056856LIPID NANOPARTICLES FOR DELIVERING NUCLEIC ACID MOLECULES
WO - 19.03.2026

Int.Class [A61K 9/51](#) Appl.No PCT/CN2025/120053 Applicant BEIJING JITAI LIFE SCIENCES LTD
Inventor LI, Lei

Lipid nanoparticles for delivering nucleic acid molecules, compositions comprising the same, and uses of the lipid nanoparticles and compositions in the preparation of a drug or vaccine for treating diseases.

24.4709418RESPIRATORY SYNCYTIAL VIRUS VACCINE AND METHODS OF USE

EP - 18.03.2026

Int.Class [A61K 39/12](#) Appl.No 24731156 Applicant SANOFI PASTEUR INC Inventor CARAYOL SEBASTIEN

Disclosed herein are respiratory syncytial virus vaccines and methods of immunization to deliver respiratory syncytial virus vaccines in subjects.

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

Estrategia de búsqueda: *vaccine.ti. AND @PD>="20260313"<=20260323* 10 records

| Document ID | Title | Inventor | Applicant Name |
|-------------------|---|--------------------------------|---|
| US 20260077034 A1 | MULTIVALENT CARRIERS AND RELATED VACCINE COMPOSITIONS | Cohen; Alexander A. et al. | California Institute of Technology |
| US 20260077037 A1 | CATIONIC LIPID BASED COMPOSITION, FORMULATION AND USE FOR NUCLEIC ACID VACCINE DELIVERY AND PREPARATION THEREOF | MAHADIK; Namita Santosh et al. | Bharat Biotech International Limited, Council of Scientific And Industrial Research |
| US 20260076905 A1 | COMPOSITIONS AND METHODS COMPRISING LIPID NANOPARTICLE VACCINES THAT ELICIT A MODULATED IMMUNE RESPONSE | Hunter; Christopher A. et al. | The Trustees of The University of Pennsylvania |

| | | | |
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| US 20260077030 A1 | MEMBRANE VESICLES COMPRISING MULTIPLE INFLUENZA ANTIGENS FOR VACCINES | LOCHER; Christopher et al. | Versatope Therapeutics, Inc. |
| US 12576143 B2 | Teleost invariant chain cancer vaccine | Nicosia; Alfredo et al. | Nouscom Ag |
| US 12576144 B2 | Vaccines against Powassan virus, and methods of using same | Muthumani; Kar et al. | The Wistar Institute of Anatomy And Biology |
| US 12577279 B2 | Influenza virus vaccines and uses thereof | Brandenburg; Boerries et al. | Janssen Vaccines & Prevention B.V. |
| US 12577589 B2 | Vaccines and uses thereof to induce an immune response to SARS-CoV2 | Hauser; Mary Jo et al. | GeoVax, Inc. |
| US 12576145 B2 | Crimean-Congo hemorrhagic fever virus M-segment nucleic acid vaccine and methods of use and production | Garrison; Aura R. et al. | The Government of The United States As Represented By The Secretary Of The Army |
| US 12576029 B2 | Noncompetitive receptor-targeted vaccine delivery to plasmacytoid dendritic cells | Rudra; Shiva Kumar Jai Simha et al. | Washington University |

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