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Chikungunya en América Latina: Una mirada epidemiológica

América Latina ha experimentado en los últimos años, cambios significativos en el comportamiento epidemiológico del chikungunya. Los datos muestran una disminución en el número total de casos durante 2025 en comparación con el año anterior, aunque con persistencia de brotes circunscritos a áreas específicas.

Entre finales del 2025 e inicios del 2026, se ha observado un aumento sostenido de casos de chikungunya en países y territorios de la región, así como la reanudación de la transmisión autóctona en áreas que no registraban la circulación del virus desde hace varios años.

Si bien la dinámica observada puede corresponder a patrones epidemiológicos esperados en contextos con presencia del vector, la reaparición de casos en determinados territorios refuerza la necesidad de mantener una vigilancia sensible y una respuesta oportuna.

Sobre el chikungunya

El chikungunya es un virus transmitido por los mosquitos *Aedes aegypti* y potencialmente *Aedes albopictus*, que también transmiten dengue, Zika y otras arbovirosis. Produce fiebre y dolor articular intenso, a menudo incapacitante, y puede causar dolor muscular, cefalea, fatiga, náuseas y sarpullido. También pueden presentarse otras manifestaciones no articulares que varían de leves a graves, con mayor riesgo en menores de 1 año, adultos mayores, personas con comorbilidades y embarazadas.

Además, puede generar cuadros crónicos con afectación articular que pueden durar desde semanas hasta varios meses en aproximadamente el 60 % de los casos. No existe tratamiento antiviral específico; los síntomas agudos se manejan con analgésicos y antipiréticos. Los grupos con mayor riesgo de formas graves de la enfermedad deben ser evaluados por personal de salud para valorar su hospitalización y monitoreo durante el curso de los síntomas, para prevenir complicaciones graves y mortalidad.

Este virus comenzó a propagarse por el continente americano en el año 2013. Sin embargo, luego de un período prolongado con niveles reducidos de transmisión, en la actualidad se evidencia un resurgimiento de la enfermedad, particularmente en la franja intertropical, área que reúne las condiciones ambientales, como temperaturas extremas y humedad, para la presencia permanente del vector *Aedes aegypti*.

Desde el punto de vista de su patrón estacional, el chikungunya mantiene un comportamiento estacional predecible:

Hemisferio Sur: Los casos predominan en la primera mitad del año, coincidiendo con la temporada de lluvias.

América Central, México y Caribe: La transmisión tiende a intensificarse en la segunda mitad del año.

Situación regional. Distribución geográfica y países más afectados

En 2025, entre las semanas epidemiológicas (SE) 1 y SE 53, 18 países y un territorio de la Región de las Américas notificaron a través de la Plataforma de Información de Salud para las Américas (PLISA) de la Organización Panamericana de la Salud (OPS) 313.132 casos, de los cuales 113.926 fueron confirmados, incluyendo 170 defunciones por chikungunya.

Según el reporte de la OPS "Chikungunya: análisis por país", desde finales del 2025 (SE 49) e inicios del 2026 (SE 4), se ha observado un aumento sostenido de casos de chikungunya en países y territorios de la región, así como la reanudación de la transmisión autóctona en áreas que no registraban la circulación del virus desde hace varios años. En este periodo, se documentó una circulación importante en las regiones centro-oeste y sudeste de Brasil, Sur de Bolivia y la reaparición de casos en la zona del Escudo Guayanés.

De hecho, Brasil concentró una buena parte de la carga mundial en 2025, con una tasa de incidencia significativa y la mayoría de las muertes en la región. Según las estadísticas actuales de la OPS, Brasil reportó 252.940 casos, Cuba 51.217 casos, Bolivia 6860 casos y Argentina 3712 casos. Otros países de la región reportaron más de 50 casos cada uno.

Se observó una disminución de casos en comparación con 2024; sin embargo, algunos países de Sudamérica y el Caribe notificaron un aumento de casos en determinadas localidades. Desde finales de 2025 e inicios de 2026, se ha observado un aumento sostenido de casos de chikungunya, así como la reanudación de la transmisión autóctona en áreas que no registraban circulación del virus desde hace varios años. En Guyana, Guayana Francesa y Surinam, las detecciones de 2025 y 2026 evidencian la reanudación de la transmisión después de una década sin casos notificados.

La transmisión del chikungunya en América Latina en 2025 mostró un patrón claramente concentrado en América del Sur:

Países con mayor carga: Bolivia, Brasil, Cuba y Paraguay concentraron los principales brotes en 2025, con más del 97% de los casos notificados en la región.

Brotes focalizados: Argentina, Costa Rica, El Salvador, Honduras y México han reportado casos esporádicos o de transmisión local limitada.

Reactivación en nuevas áreas: Países del Escudo Guayanés (Guyana, Guayana Francesa y Surinam) han reanudado la transmisión autóctona después de aproximadamente una década sin casos notificados.

Panorama de propagación de chikungunya en 2026

Hasta la semana epidemiológica 10 (8-14 marzo) de 2026, se han reportado 47.224 casos de chikungunya y 15 muertes asociadas en la región de las Américas. El área subcontinental más afectada sigue siendo Sudamérica, con Brasil registrando el mayor número de casos en 2026.

Argentina: En este año hasta la fecha se reportaron 1647 casos. No se reportaron casos autóctonos confirmados en el país; todos los casos confirmados estuvieron relacionados con viajes fuera de Argentina. La mayoría de estos casos se han reportado en las jurisdicciones de Buenos Aires y Córdoba.

Bolivia: Los casos de chikungunya han ido en aumento desde el inicio de 2026, hasta la fecha 17.378

y se han reportado en siete de los nueve departamentos: Santa Cruz, Beni, Pando, Chuquisaca, Cochabamba y Tarija. Estos departamentos se ubican en el este de Bolivia, en la región andina. Santa Cruz sigue siendo el departamento más afectado, registrando la mayoría de los casos de chikungunya en Bolivia, así como todas las muertes asociadas a esta enfermedad. Se han reportado 6 muertes asociadas.

Brasil: En el año 2026 hasta el 14 de marzo se reportaron 24.078 casos de chikungunya en todas las regiones con 7 muertes asociadas (Centro-Oeste, Nordeste, Norte, Sudeste y Sur) y en la mayoría de las unidades federales del país. Las regiones Centro-Oeste, Nordeste y Sudeste concentran el mayor número de casos, siendo Mato Grosso do Sul, Minas Gerais y São Paulo las unidades federales más afectadas. Este año, la mayoría de los casos se han reportado entre mujeres, y el grupo de edad de 20 a 29 años es el más afectado.

Centroamérica y México: En 2026 hasta el 14 de marzo se han reportado sólo 26 casos, de ellos 15 confirmados y ninguna muerte asociada, siendo México el de mayor cantidad con 12 casos de chikungunya.

Cuba: En 2026 hasta el 14 de marzo, se reportaron 1457 casos de chikungunya en el país, con 2 muertes asociadas.

Surinam: En 2026, se han notificado casos de chikungunya en el país. Los casos se registraron en las regiones de Paramaribo, Nickerie, Wanica y Commewijne. En Surinam, a finales de 2025, se notificó el primer caso autóctono de chikungunya desde 2016. Ya en 2026 hasta el 14 de marzo, se notificaron un total de 2579 casos sospechosos, de los cuales 327 fueron confirmados por laboratorio, incluyendo un fallecimiento.

Genotipos circulantes

La OPS indicó que los brotes de chikungunya están vinculados a un cambio en los genotipos circulantes. Desde 2014, los casos en la región de las Américas han involucrado principalmente el genotipo asiático, pero en 2025 los países más afectados también han experimentado la circulación del genotipo de África Oriental/Central/Meridional (ECSA), sin detección de la mutación A226V asociada a mayor transmisibilidad por *A. albopictus*.

La presencia del genotipo ECSA en al menos cuatro países es preocupante, ya que la cocirculación aumenta el riesgo de adaptación. Según esta agencia, comprender los linajes genéticos del chikungunya es esencial para predecir la dinámica de transmisión y adaptar las respuestas de salud pública.

La persistencia del virus en áreas endémicas y su reaparición en territorios previamente libres subraya la necesidad de vigilancia integrada y acciones preventivas continuas.

Recomendaciones clave para enfrentar el chikungunya

En este contexto, la OPS recomienda a los países intensificar la vigilancia epidemiológica mediante la evaluación clínica y pruebas confirmatorias de laboratorio, para detectar tempranamente casos y brotes, asegurando un manejo clínico adecuado, especialmente en grupos vulnerables como menores de 1 año, embarazadas y adultos mayores. De esta forma, se evitan posibles diagnósticos e informes erróneos, debido a la superposición en la distribución geográfica de los virus del dengue con los del chikungunya y zika.

Además, sugiere adecuar las unidades de salud y actualizar o fortalecer las capacidades del personal médico para asegurar un diagnóstico, clasificación y tratamiento oportunos y de calidad.

A los equipos a cargo del manejo de vectores se les recomienda intensificar las acciones para eliminar criaderos de mosquitos en áreas con mayor reporte de casos, así como dentro y alrededor de las unidades de salud que atienden pacientes por chikungunya y otras arbovirosis.

Uso de vacunas contra Chikungunya en América Latina

El uso de vacunas contra el chikungunya en América Latina se encuentra en una fase inicial, marcada por grandes avances en Brasil que contrastan con una realidad de acceso restringido prácticamente en el resto de la región.

Actualmente, la comunidad científica cuenta con dos vacunas preventivas principales:

Ixchiq (Valneva): Es una vacuna de virus vivos atenuados de dosis única que ha sido aprobada para personas a partir de los 18 años. Su principal distintivo es que se trata de la primera y, hasta la fecha, única vacuna contra el chikungunya aprobada para su uso en la región.

Vimkunya (Bavarian Nordic): Es una vacuna de partículas similares a virus (VLP) adyuvada, indicada para personas de 12 años en adelante. Si bien ha recibido aprobación regulatoria internacional, su disponibilidad en América Latina es aún muy limitada y se prevé que llegue a través de acuerdos de distribución específicos, como el firmado con la farmacéutica Eurofarma en Brasil.

La siguiente tabla resume sus principales características:

Característica	Ixchiq	Vimkunya
Desarrollador	Valneva	Bavarian Nordic
Tecnología	Virus vivo atenuado	Partícula similar a virus (VLP) adyuvada
Edad aprobada (FDA/EMA)	≥ 18 años	≥ 12 años
Dosis	Única	Dos dosis a evaluar

La introducción de estas vacunas es un proceso escalonado y Brasil es, con diferencia, el país más avanzado.

El 14 de abril de 2025, la agencia reguladora brasileña (ANVISA) otorgó el registro definitivo a Ixchiq, convirtiendo a Brasil en el primer país endémico del mundo en aprobar una vacuna contra el chikungunya. Un factor clave para su implementación lo constituye la transferencia tecnológica de Valneva al Instituto Butantan, renombrado productor de vacunas en Brasil. Este acuerdo permite la fabricación local del biológico, lo cual es fundamental para garantizar su suministro sostenible y asequible en América Latina a largo plazo.

El Ministerio de Salud de Brasil ha solicitado formalmente la incorporación de la vacuna al Sistema Único de Salud (SUS), lo que permitiría su distribución gratuita y masiva a la población. Esta decisión responde a una necesidad epidemiológica crítica: el país concentró el 98 % de los casos de chikungunya reportados en las Américas en 2024.

Dado el escenario descrito, las estrategias de cobertura son, por ahora, un caso de estudio casi exclusivo de Brasil.

Cobertura en Brasil: El país ha lanzado una campaña piloto de vacunación con Ixchiq, dirigida inicialmente a un objetivo claro y alcanzable. La meta es alcanzar una cobertura de vacunación del 20 % al 40 % dentro de su población objetivo (adultos de 18 a 59 años). Este rango se considera un punto de partida práctico para evaluar la logística y el impacto inicial de la vacuna en un entorno real.

Cobertura en el Resto de la Región: En el resto de América Latina, donde la vacuna aún no se ha introducido, la cobertura de vacunación es prácticamente nula. Las poblaciones siguen dependiendo exclusivamente de las medidas de prevención tradicionales, como el control del mosquito vector y el uso de repelentes.

Desafíos y Perspectivas Futuras

El camino hacia la inmunización generalizada enfrenta importantes desafíos:

1. Acceso y Financiamiento: El principal obstáculo es la distribución equitativa de las vacunas. Aunque Ixchiq fue aprobada en países de altos ingresos, su acceso sigue siendo extremadamente limitado en la mayoría de las naciones de ingresos medios y bajos de América Latina. Superar esta barrera requiere acuerdos de compra y transferencia de tecnología que hagan las dosis asequibles.
2. Grupos de Edad Óptimos: Aún no está completamente definido cuáles son los grupos de edad más adecuados para recibir la vacuna en el contexto endémico de la región. La población objetivo podría ir más allá de los 18 años e incluir a adolescentes, un grupo que también enfrenta una carga significativa de la enfermedad.
3. Necesidades de Producción Global: Las necesidades de producción son masivas. Estudios recientes indican que, en un escenario de brote, alcanzar una cobertura del 50 % de la población expuesta requeriría aproximadamente 132 millones de dosis al año. Esta cifra pone de manifiesto la magnitud del esfuerzo de producción y distribución necesario.
4. Expansión a otras poblaciones: Se están realizando ensayos en población pediátrica (1-11 años) en Honduras y República Dominicana.
5. Evaluación en embarazadas: Existen planes para evaluar la vacuna en mujeres embarazadas en países afectados como Brasil.

Es un futuro prometedor pero aún incierto. El acuerdo de transferencia tecnológica a Brasil es una señal esperanzadora para el futuro de la región, pero su materialización en un acceso generalizado, asequible y oportuno para todos los países que lo necesitan aún es un proceso que está en sus inicios y enfrenta grandes desafíos logísticos y financieros.

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Noticias en la Web

Vaxcyte Inc completa el reclutamiento de los ensayos de Fase 3 OPUS-1 y OPUS-2 que evalúan VAX-31 para la prevención de la enfermedad neumocócica invasiva y la neumonía en adultos

23 mar. Vaxcyte, Inc. ha anunciado la finalización del reclutamiento en el ensayo clínico fundamental de no inferioridad de Fase 3 VAX-31 OPUS-1, con aproximadamente 4,000 participantes, y en el ensayo de Fase 3 OPUS-2, que evalúa la administración concomitante de VAX-31 con una vacuna contra la gripe estacional en unos 1,300 participantes. El programa de Fase 3 que evalúa VAX-31, el candidato a vacuna neumocócica conjugada (PCV) 31-valente de próxima generación de la compañía, para la prevención de la enfermedad neumocócica invasiva (ENI) y la neumonía en adultos, se finalizó en consulta y consenso con la Administración de Alimentos y Medicamentos de EE. UU. (FDA). Su objetivo es generar un conjunto de datos amplio y sólido para respaldar la presentación prevista de una Solicitud de Licencia Biológica (BLA). Se esperan los datos preliminares de seguridad, tolerabilidad e inmunogenicidad del estudio de Fase 3 OPUS-1 para el cuarto trimestre de 2026.

Los resultados de los ensayos OPUS-2 y OPUS-3 se prevén para el primer semestre de 2027. El estudio fundamental de Fase 3 de VAX-31 ya cuenta con el reclutamiento completo de aproximadamente 4,000 adultos. Este ensayo aleatorizado, de doble ciego y controlado con principio activo evalúa la seguridad, tolerabilidad e inmunogenicidad de la dosis alta de VAX-31, la formulación para adultos que se analiza en el programa de Fase 3 OPUS, en adultos sanos de EE. UU. de 50 años o más que no han recibido vacunas neumocócicas previas, junto con una cohorte separada de adultos de entre 18 y 49 años.

En esta formulación, todos los serotipos se dosifican a 3.3 µg, excepto los serotipos 1, 5 y 22F, que se dosifican a 4.4 µg. El estudio se lleva a cabo en aproximadamente 50 centros en todo Estados Unidos. Adultos de 50 años o más: los participantes de este grupo de edad fueron aleatorizados 1:1:1 para recibir una dosis única de VAX-31, Capvaxive (PCV21) o Prevnar 20 (PCV20) el día 1. Adultos de 18 a 49 años: los participantes de este grupo fueron aleatorizados 3:1 para recibir una dosis única de VAX-31 o PCV20 el día 1, actuando la PCV20 como comparador de seguridad.

Para todos los participantes, la seguridad y la tolerabilidad se evaluarán durante los seis meses posteriores a la vacunación inicial con VAX-31, PCV21 o PCV20. Objetivos primarios de inmunogenicidad: no inferioridad de VAX-31 en comparación con PCV21 y/o PCV20 para los 28 serotipos compartidos con una o ambas vacunas comparadoras en adultos de 50 años o más (criterio: el límite inferior (LI) del intervalo de confianza (IC) del 95 % bilateral de la media geométrica de los ratios (GMR) de la actividad opsonofagocítica (OPA) es >0.667). Superioridad de VAX-31 frente a PCV21 o PCV20 para los tres serotipos exclusivos de VAX-31 (2, 7C y 20C) y para el

serotipo 20B en adultos de 50 años o más (criterio: el LI del IC del 95 % bilateral de la GMR de la OPA es >2.0).

No inferioridad de las respuestas inmunitarias de VAX-31 en adultos de 18 a 49 años en comparación con las de adultos de 50 a 64 años (criterio: el LI del IC del 95 % bilateral de la GMR de la OPA es >0.667). Objetivos secundarios clave de inmunogenicidad: no inferioridad de VAX-31 frente a PCV21 y PCV20 para los 11 serotipos comunes a las tres vacunas en adultos de 50 años o más (criterio: el LI del IC del 95 % bilateral de la GMR de la OPA es >0.5). Respuestas inmunitarias estadísticamente superiores provocadas por VAX-31 en comparación con las de PCV21 o PCV20 para los 28 serotipos compartidos en adultos de 50 años o más (criterio: el LI del IC del 95% bilateral de la GMR de la OPA es >1.0).

Superioridad de VAX-31 frente a PCV20 para los ocho serotipos comunes a VAX-31 y PCV21 pero no incluidos en PCV20 en adultos de 50 años o más (criterio: el LI del IC del 95% bilateral de la GMR de la OPA es >2.0). Superioridad de VAX-31 frente a PCV21 para los nueve serotipos comunes a VAX-31 y PCV20 pero no incluidos en PCV21 en adultos de 50 años o más (criterio: el LI del IC del 95% bilateral de la GMR de la OPA es >2.0).

- Serotipos de VAX-31 (31): 1, 2, 3, 4, 5, 6A, 6B, 7C, 7F, 8, 9N, 9V, 10A, 11A, 12F, 14, 15A, 15B, 16F, 17F, 18C, 19A, 19F, 20C, 22F, 23A, 23B, 23F, 31, 33F, 35B.
- Serotipos comunes a VAX-31, PCV21 y PCV20 (11): 3, 6A, 7F, 8, 10A, 11A, 12F, 15B, 19A, 22F, 33F.
- Serotipos comunes a VAX-31 y PCV20 pero no en PCV21 (9): 1, 4, 5, 6B, 9V, 14, 18C, 19F, 23F.
- Serotipos comunes a VAX-31 y PCV21 pero no en PCV20 (8): 9N, 15A, 16F, 17F, 23A, 23B, 31, 35B.
- Serotipos exclusivos de VAX-31 (3): 2, 7C, 20C (también se está evaluando el 20B).

El estudio de Fase 3 OPUS-2, que ya ha completado su reclutamiento con unos 1,300 adultos, es un ensayo clínico aleatorizado, de doble ciego y controlado con placebo diseñado para evaluar la seguridad, tolerabilidad e inmunogenicidad de VAX-31 cuando se administra de forma concomitante o un mes después de una vacuna autorizada contra la gripe estacional en adultos sanos de EE. UU. de 50 años o más sin vacunación neumocócica previa. Los resultados de este estudio descriptivo pretenden orientar el diseño de un posible estudio de resultados post-comercialización que evalúe más a fondo el uso concomitante de VAX-31 con una vacuna antigripal y proporcionar evidencia de apoyo como parte del conjunto de datos más amplio de la Fase 3.

El estudio se realiza en aproximadamente 25 centros de Estados Unidos. Los participantes fueron aleatorizados 1:1 en uno de dos grupos: Grupo de Administración Concomitante: los participantes recibieron una vacuna contra la gripe estacional administrada de forma abierta y concomitante con VAX-31 administrada de forma ciega el día 1, seguida de una inyección de placebo ciego en el mes 1. Grupo de Administración Secuencial: los participantes recibieron una vacuna contra la gripe estacional administrada de forma abierta con una inyección de placebo ciego el día 1, seguida de VAX-31 administrada de forma ciega en el mes 1. Este enfoque de dosificación secuencial permite evaluar las respuestas inmunitarias a VAX-31 cuando se administra sola, manteniendo el cegamiento y controlando el cronograma de vacunación.

Para todos los participantes, se evaluará la seguridad y la tolerabilidad durante los seis meses posteriores a la vacunación inicial.

Objetivos primarios de inmunogenicidad: evaluación de las respuestas inmunitarias específicas por serotipo (títulos de media geométrica (GMT) de la actividad opsonofagocítica (OPA) y aumentos de la media geométrica (GMFR)) provocadas por VAX-31 en los 31 serotipos y el serotipo 20B en adultos de 50 años o más sin vacunación neumocócica previa. Comparación de las respuestas inmunitarias específicas por cepa (GMT de inhibición de la hemaglutinación (HAI)) provocadas por una vacuna contra la gripe estacional cuando se coadministra con VAX-31 frente a las provocadas por una vacuna contra la gripe estacional sola. Objetivo secundario de inmunogenicidad: comparación de las respuestas de anticuerpos de inmunoglobulina G (IgG) (concentraciones medias geométricas (GMC) de IgG) provocadas por VAX-31 en los 31 serotipos y el serotipo 20B cuando VAX-31 se coadministra con una vacuna contra la gripe estacional frente a las provocadas por VAX-31 sola.

Fuente: Market Screener. Disponible en https://n9.cl/jmr1x

MTBVAC moves toward its final stage: the vaccine candidate that could mark a turning point in the fight against tuberculosis

Mar 24. On the occasion of World Tuberculosis Day, the latest data from the European Region show that this disease continues to be a major public health challenge. According to the joint report by the World Health Organization (WHO) and the European Centre for Disease Prevention and Control (ECDC), 161,569 cases were reported in 2024 across 51 of the 53 countries in the European region, equivalent to 17.2 cases per 100,000 inhabitants. Despite progress made since 2015, the reduction in incidence and mortality remains below the set targets, jeopardizing the achievement of international goals for 2030.

One of the main challenges is the diagnosis gap: it is estimated that nearly one in five tuberculosis cases goes undetected in Europe. This means that thousands of people do not receive the necessary treatment and may continue transmitting the disease within their communities. In the European Union and the European Economic Area, although rates have stabilized, limitations in healthcare systems persist, hindering early diagnosis and proper patient follow-up.

Adding to this situation is the growing challenge of drug-resistant tuberculosis, whose prevalence in the European Region is well above the global average. In 2024, around 23% of new cases were multidrug-resistant, compared to 3.2% globally. These forms of the disease are more complex to treat, require longer treatment regimens, and have lower success rates, reinforcing the urgency to improve diagnostic, treatment, and control strategies.

The BCG vaccine (Bacillus Calmette-Guérin) has been used for more than a century to prevent tuberculosis. It is made from an attenuated strain of Mycobacterium bovis and is primarily administered in childhood. “BCG has been a fundamental tool in reducing severe forms of tuberculosis

in children, but its protection against pulmonary tuberculosis in adolescents and adults is variable. In addition, the disease is closely linked to socioeconomic factors, access to diagnosis, and the emergence of resistant strains," explains Rolando Pajón Feyt in an interview. He is an international expert in immunotherapy and vaccine development, Chief Medical and Scientific Officer of Biofabri, the human vaccines subsidiary of the biopharmaceutical group Zendal.

As he notes, the BCG vaccine has begun to lose effectiveness in some regions and "does not have a discernible impact in interrupting transmission or providing robust protection across all stages of life. That is why it is still necessary to develop more effective new vaccines."

MTBVAC, the promising vaccine candidate that could change the fight against tuberculosis

In this context, MTBVAC, a tuberculosis vaccine candidate developed by Biofabri, is in an advanced stage of clinical development. "MTBVAC is based directly on Mycobacterium tuberculosis, the human pathogen, whereas BCG is derived from Mycobacterium bovis. This means that MTBVAC retains key antigens present in the original pathogen and absent in BCG." Pajón notes that MTBVAC "more faithfully represents the pathogen that can attack us," providing more precise training for the immune system. "This could generate a broader and potentially more protective response against infection and disease progression."

Phase 2 trials have shown a favorable safety profile in both adults and newborns, comparable to that of BCG. In addition, superior immune responses have been observed against specific antigens of the human pathogen Mycobacterium tuberculosis. "These signals of increased immunogenicity, along with preclinical data, support the advancement toward large-scale efficacy studies," Pajón explains, emphasizing that "MTBVAC is also the only live attenuated vaccine based on M. tuberculosis that has reached Phase 3 clinical development."

The company began a Phase 3 trial in newborns in South Africa, Madagascar, and Senegal approximately one year ago, and it is still ongoing. "Phase 3 studies require several years, especially for diseases like tuberculosis, whose clinical progression is slow. Although we do not yet have final efficacy results, the study is progressing as planned with high standards of safety and clinical monitoring."

Biofabri is also evaluating MTBVAC in people with and without HIV, a population particularly vulnerable to tuberculosis. "Having specific clinical evidence in this group is essential. It is not enough to show that a vaccine works in the general population. In tuberculosis, we also need to understand how it performs in especially vulnerable individuals. This study may provide key information on safety and immunogenicity in people with HIV."

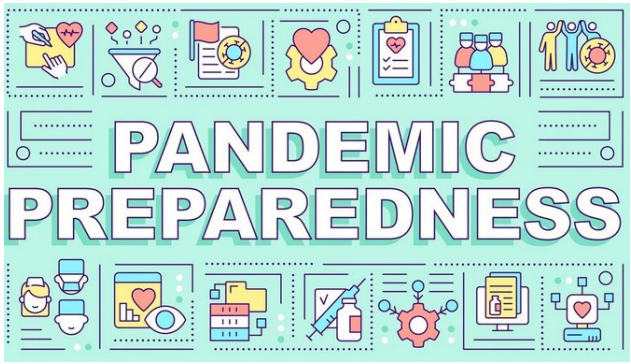
The interview concludes with a look toward a future in which MTBVAC demonstrates its efficacy and obtains regulatory approval. In that scenario, its availability could represent a significant advance in the fight against tuberculosis, especially in regions with the highest disease burden, helping to reduce incidence, mortality, and pressure on healthcare systems.

In addition, MTBVAC "has a global access program, with regional partners that would ensure its availability to all people who need it, at an appropriate price for the healthcare systems in those regions. This approach to accessibility from its conception makes this candidate very different. It is not a vaccine for 10 years from now, but a vaccine for the present, which is exactly what we need," he adds.

"Our vaccine, when it arrives, will be one more tool within what should be integrated and synergistic strategies: better health, better quality of life, better therapeutic options, and more effective prevention. And it is precisely in prevention where we aim to help change the course of the fight against tuberculosis, the deadliest pathogen in the world in terms of annual mortality," he concludes, noting that the WHO has stated that current progress remains insufficient to meet global targets, "which reinforces the urgent need for new preventive tools."

Fuente: BioTech. Disponible en https://n9.cl/s3fs0

The UK Government launches new Pandemic Preparedness Strategy



Mar 25. The UK Government has launched a new Pandemic Preparedness Strategy backed with £1bn funding to support the UK to manage PPE, equipment and testing stockpiles and other measures that enable a rapid response. The strategy considers pandemics caused by a range of pathogens and different forms of transmission (not only covering respiratory viruses).

The Strategy sets out an extensive programme of actions the Government will take between now and 2030. Some of the key actions specifically related to social care include:

During 2026/27

- A plan to ensure safe and timely hospital discharge in a pandemic.

2027-2028:

- An adult social care pandemic action plan, including how to improve the resilience and preparedness of the workforce (the Homecare Association has already begun working with DHSC on this action plan, alongside other organisations representing providers, people using care services, unpaid carers, local authorities and more).
- Look at mechanisms to provide targeted funding to social care in a pandemic.
- Improved infection prevention and control guidance and training for adult social care.
- Explore how DHSC and the NHS can work together with local systems to improve fit testing rates and capability (e.g. for FFP3 masks).

2028-2030:

- Enhance communication and data flows between the adult social care, public health and NHS systems, using new digital platforms and tools.
- Technology for digitally enabled care.

The plan recognises that surging NHS capacity could mean providing digital care and care-at-home and not just increasing hospital capacity. Adult Social Care could have a key role in this. We look forward to working further with the Department of Health and Social Care and the UK Health Security Agency on this Strategy as plans develop.

Fuente: Homecare Association. Disponible en https://n9.cl/furdo

Universal vaccine could protect against flu, COVID-19 and colds, say researchers

Mar 26. Early studies of a new single nasal spray vaccine suggest it could protect against all respiratory viruses, including COVID-19, influenza and the common cold, as well as bacterial lung infections and even allergies, according to researchers.

"A new nasal spray vaccine works by prepping the immune system's broadest defence system against a range of potential new threats."

The vaccine, tested in mice and published in the journal Science, represents what scientists have been chasing for decades: a universal shot that guards against multiple respiratory threats without needing updates every time a pathogen mutates.

If it works in humans, it could replace the annual cycle of flu shots and COVID-19 boosters and provide a ready defence against the next pandemic.

"I think what we have is a universal vaccine against diverse respiratory threats," said Bali Pulendran, a professor of microbiology and immunology at Stanford Medicine who led the research.

Breaking the cycle

What makes the team's approach revolutionary is that it abandons how vaccines have typically worked for more than two centuries.

Every vaccine since the 1790s has relied on antigen specificity: mimicking a distinctive piece of a pathogen to prepare the body to recognise that exact threat.

Pathogens and vaccine-makers have been at war ever since. The pathogen evolves to evade the immunity triggered by the vaccine, the vaccine is changed to attack the new version of the pathogen, the pathogen mutates again and so on.

This is why we need new flu shots every year and why COVID-19 vaccines need updating as the virus mutates.

Pulendran's team decided not to target specific pathogens. Instead, they wanted to imitate the way immune cells communicate with each other to ready the body's defences during an infection.

They developed a vaccine that amplifies the immune system's natural ability to respond to whatever threatens the lungs, whether viral, bacterial or allergic.

Two systems

Most vaccines target the adaptive immune system. This is the body's precision weapon, producing antibodies and specialised cells called T cells that are custom-built to attack specific invaders.

Adaptive immunity has an excellent memory; it can recognise a pathogen years after first exposure. But it's slow: mounting a full adaptive response typically takes two weeks, and it's specific to a single pathogen.

The innate immune system is different. It's made up of generalist cells such as macrophages, neutrophils and dendritic cells that attack anything they identify as dangerous. Innate immunity activates within minutes and can handle diverse threats, but was thought to be too short-lived for a vaccine.

> ***"Imagine getting a nasal spray in the fall months that protects you from all respiratory viruses including COVID-19, influenza, respiratory syncytial virus and the common cold, as well as bacterial pneumonia and early spring allergens. That would transform medical practice."***
>
> ***- Bali Pulendran, Professor of microbiology and immunology, Stanford Medicine***

Pulendran's team asked: what if innate immunity could be made to last?

The idea came from research Pulendran's team did in 2023 on the BCG tuberculosis vaccine, one of the world's most widely used shots. Studies had suggested it might protect infants against infections beyond TB, but no one understood how.

Pulendran's lab found that T cells recruited to the lungs as part of the adaptive response were sending chemical messages to innate immune cells, keeping them active for months instead of days.

The new vaccine that Pulendran's team tested, called GLA-3M-052-LS+OVA, mimics that messaging process synthetically. It contains compounds that directly stimulate innate immune cells in the lungs, putting them on high alert. It also includes a harmless protein antigen – ovalbumin, from eggs – that draws T cells into the lungs. Those T cells then sustain the innate response through their own cytokine signals.

Nasal protection

In this study, mice were given GLA-3M-052-LS+OVA as a nasal vaccine, with some getting multiple doses a week apart. Each mouse was then exposed to one type of respiratory virus. Three doses of the vaccine protected the animals against SARS-CoV-2 and other coronaviruses for at least three months.

Unvaccinated mice by contrast became very sick. They had severe lung inflammation, high viral loads and often died. Vaccinated mice all survived and their lungs were nearly clear of the virus.

Then the research team tested bacteria: Staphylococcus aureus and Acinetobacter baumannii, both major causes of hospital-acquired pneumonia. Again, vaccinated mice were protected.

Finally, they tried allergens. Mice exposed to house dust mite protein, a major asthma trigger, normally develop inflamed, mucus-clogged airways. Vaccinated mice's airways remained clear.

Dual effect

What makes the vaccine work is its dual effect on respiratory defenses. The innate response that's triggered causes a heightened state of alert in the lungs that slashes viral loads by 700-fold. Second, it accelerates the body's ability to mount a targeted counterattack, cutting response time from two weeks down to three days.

The researchers say that even if the virus "slips through the net" of the innate response, it will be met with a strong adaptive response.

The next step is human trials. Pulendran's team hopes to begin with safety testing, followed by controlled exposure studies if the vaccine proves safe. He estimates two nasal spray doses would probably be sufficient for humans.

"Imagine getting a nasal spray in the fall months that protects you from all respiratory viruses including COVID-19, influenza, respiratory syncytial virus and the common cold, as well as bacterial pneumonia and early spring allergens," Pulendran said. "That would transform medical practice."

Fuente: GAVI. Disponible en https://n9.cl/cs7ci

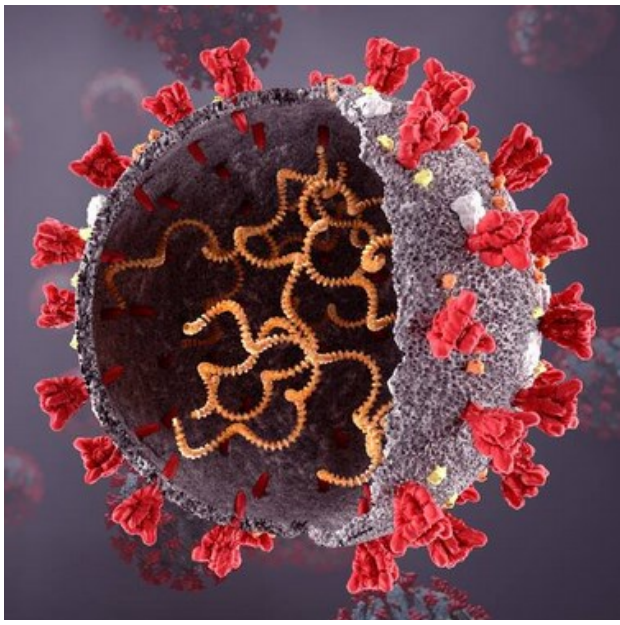
Una nueva variante de la COVID-19 detectada este 2026 alerta a los expertos

26 mar. Una nueva variante de la COVID-19 acecha en 2026. Se trata de la B.A.3.2., "descendiente directa" de la cepa Ómicron.

Si bien no parece una cepa más peligrosa, los expertos alertan de que presenta muchas mutaciones: algunas vacunas no parecen suficientes para frenarla. Hasta ahora, su propagación se ha dado en al menos 23 países, y el mundo sanitario estudia su evolución con atención.

B.A.3.2., la variante del COVID-19 que "escapa" al sistema inmunitario este 2026

Desde 2019, el virus SARS-CoV-2 ha manifestado diferentes variantes. Algunas más leves, otras no tanto. Pero los primeros datos de los Centros para el Control y la Prevención de Enfermedades (CDC) de Estados Unidos, apuntan a que la variante recién detectada no presenta síntomas muy distintos.



Se trata de la B.A.3.2., una nueva cepa que, al igual que la XFG o la JN.1., tiene una sintomatología similar a la gripe fuerte. Los primeros casos diagnosticados presentan dolor de garganta intenso, dolores de cabeza resistentes, tos y congestión nasal, y fatiga extrema e incluso dolor muscular.

De acuerdo a uno de sus recientes informes, la B.A.3.2. resulta "genéticamente distinta". Esto implica que los anticuerpos generados por infecciones previas podrían no reconocer esta cepa, por lo que podría haber reinfecciones incluso en casos de recuperación recientes.

Es más, las vacunas formuladas recientemente atacan específicamente al sublinaje de la cepa JN.1, una de las más prolíferas durante el año pasado. Por ahora, los investigadores aseguran que la B.A.3.2. muestra una menor neutralización de anticuerpos, probablemente por la acumulación de mutaciones.

Cómo protegerse de esta cepa

La CDC y la OMS apuntan a que, si bien resulta necesario fabricar vacunas reformuladas para esta variante de la COVID-19, las inyecciones disponibles en 2026 siguen siendo una protección fiable frente a la gravedad e incluso el fallecimiento. Al fin y al cabo, este es el objetivo de la inmunización en masa.

A falta de una mayor investigación sobre la nueva cepa, las autoridades sanitarias recomiendan, entre otras cosas, reunir las vacunaciones recomendadas hasta la actualidad. Las inoculaciones no evitan el contagio leve, pero el refuerzo puede evitar problemas de salud e incluso el llamado "COVID persistente".

Ante cualquier sospecha, también es oportuno considerar las pruebas de antígenos. Especialmente, en personas con condiciones crónicas o mayores de 65 años, o bien si los síntomas se dan en personas de su entorno. Siguen siendo el sector de la población de mayor riesgo.

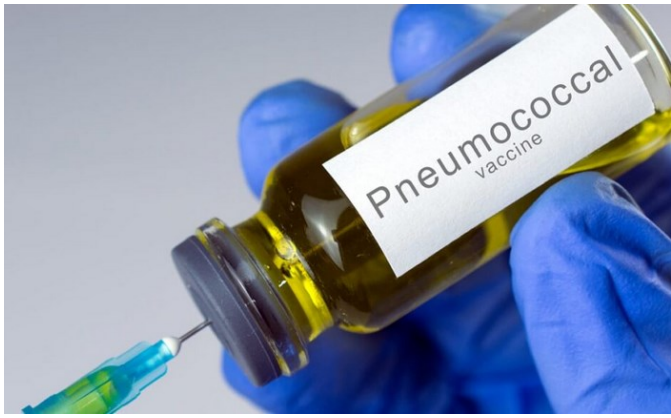
En esa línea, la ventilación y las mascarillas de alta filtración en espacios cerrados resultan unas buenas medidas de protección. La BA.3.2 también se transporta fácilmente en el aire, como sus predecesoras.

En definitiva, cabe tener presente que el SARS-CoV-2 sigue en constante evolución. Conviene seguir atentos a la situación de este y otros virus, y tomar las medidas oportunas para evitar los contagios. Especialmente, en aquellos casos de mayor riesgo.

Fuente: Artículo 14. Disponible en https://n9.cl/p7ue4

Data Suggest Resurgence of Pneumococcal Serotype Despite Vaccination

Mar 27. The unexpected resurgence of *Streptococcus pneumoniae* serotype 19F is presenting a significant challenge to public health, even as pediatric immunization programs with pneumococcal conjugate vaccines (PCVs) reach their 25th anniversary. Although these vaccines have historically succeeded in nearly eliminating many targeted serotypes, recent data suggests that 19F is staging a comeback, particularly among older populations.



"This phenomenon of resurgence of vaccine-targeted serotypes is not well understood," the study authors said. "Understanding the mechanism driving these patterns is critical to determine whether additional serotypes might resurge in the future and how such increases could be prevented."

In the United States, the frequency of adult invasive pneumococcal disease (IPD) cases caused by 19F has now reached or exceeded levels recorded in 1998, prior to the introduction of the first 7-valent vaccine. This phenomenon is particularly striking because 19F is included in all current vaccine formulations, yet it continues to persist and resurge in multiple geographic regions, including Australia and the United Kingdom.

For pharmacists on the front lines of immunization, understanding the biological hurdles associated with serotype 19F is essential for patient counseling and advocate efforts. Unlike many other serotypes, 19F is uniquely difficult to protect against, requiring higher antibody concentrations to prevent both colonization in the nasopharynx and progression to invasive disease.

Furthermore, research indicates that 19F generates weaker memory B cell responses compared to other serotypes, potentially leading to a shorter duration of effective protection. This biological toughness may be related to the thickness or composition of its bacterial capsule, which can make it more resistant to the immune system's primary defenses.

The resurgence of this serotype is likely driven by a combination of factors, including shifts in vaccination strategy and ecological competition. One leading hypothesis suggests that as higher-valency vaccines like 13-valent pneumococcal conjugate vaccine (PCV13), PCV15, and PCV20 eliminate more serotypes, they reduce competition in the nasopharynx, which allows serotype 19F to expand. Additionally, the timing of serotype 19F increase in the US coincided with changes in adult vaccination policies, including the transition to a sequential schedule of PCV13 followed by the 23-valent polysaccharide vaccine (PPSV23). Some researchers speculate that certain vaccination strategies or a decline in the natural boosting of immunity through community exposure may have left older adults more susceptible to transmission and disease.

Beyond biological persistence, pharmacists should be aware of emerging genetic variants that complicate the clinical landscape. Evidence from Brazil has uncovered a predominant lineage of 19F variants that can lead to misinterpretation in capsular typing. These variants possess minor modifications in the *wzy* gene, a common target for PCR-based identification, which can result in false-negative results during surveillance and diagnostics.

Although many of these variant isolates remain susceptible to most antibiotics, some multidrug-resistant lineages have been reported globally, highlighting the continued need for vigilance regarding antimicrobial resistance in 19F strains.

The persistence of 19F underscores the critical importance of adhering to recommended vaccination schedules, particularly regarding booster doses. In pediatric populations, infants and young children typically require a 4-dose series at 2, 4, 6, and 12 to 15 months of age to ensure robust protection. Communities with lower uptake of the booster dose have shown slower elimination of vaccine-targeted serotypes, suggesting that pharmacists can play a pivotal role in ensuring children complete the full series. For adults, current recommendations emphasize PCV15 or PCV20 for those 50 years and older, or younger adults with specific risk factors like chronic lung disease or immunocompromising conditions.

Looking forward, the arrival of next-generation vaccines, including a 21-valent formulation designed specifically for adults, offers hope for addressing the remaining burden of pneumococcal disease. However, the 19F experience serves as a reminder that the population dynamics of *S. pneumoniae* are highly fluid.

Pharmacists must remain informed about these shifts to provide accurate guidance on the risks of pneumonia, meningitis, and bacteremia, and to help patients navigate the evolving landscape of pneumococcal prevention. High-quality surveillance and a focus on maintaining high vaccination coverage across all age groups remain the most effective tools for mitigating the resurgence of these resilient pathogens.

“There are still many key questions that need to be answered to understand this phenomenon,” the study authors concluded. “Many of these questions can be addressed through high-quality surveillance and analysis of existing data.”

Fuente: DRUG TOPICS. Disponible en https://n9.cl/f3tdk

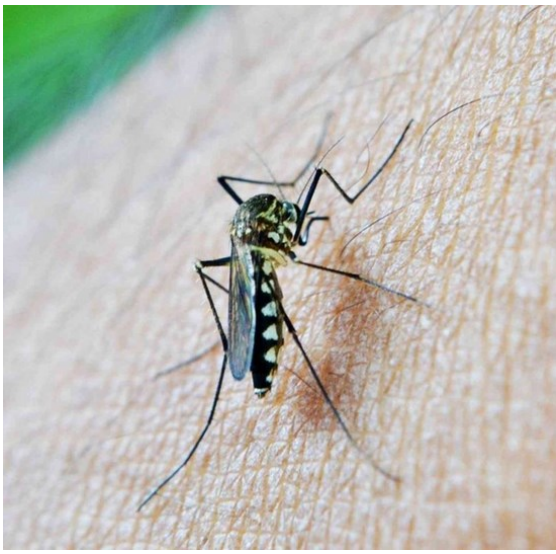
Scientists discover a clue in the skin that could change the future of dengue vaccines

Mar 28. The search for better vaccines against dengue fever has taken a new direction due to the results of new research.

Scientists have found that dengue patients with milder illness carried stronger, virus-killing immune responses in skin than patients who were sick enough to need hospital care.

This finding pushes the search for better dengue vaccines toward the place where infection begins and where protection may be decided earliest.

Evidence under skin



Inside fluid-filled blisters raised on volunteers' forearms in Singapore, the clearest signs of dengue's immune fight appeared in skin rather than blood.

Working with matched samples from 73 patients, Laura Rivino at the University of Bristol found that the most active T-cell responses were concentrated at that surface site.

Those skin-based cells looked especially prominent during the phase of illness when the body's defense was peaking, and they were strongest in people who avoided admission.

The pattern does not settle every reason that dengue turns severe, but it sharply narrows where the next answers are likely to emerge.

Skin matters in dengue vaccines

Dengue infection begins in the skin, not the bloodstream, when an infected mosquito deposits the virus during a bite.

Cells stationed there can react before infection spreads, and those local defenders include T-cells, white blood cells that recognize infected targets.

Blood tests have dominated dengue research for years, yet blood can miss the tissue fight that is already underway.

By moving the search to skin, the new work changed where scientists look for protection.

Cells that stay

Many of the activated cells in the skin looked ready to stay there within seven to ten days after fever began.

Immunologists call that group tissue-resident memory T-cells. These long-lived defenders stay in tissue instead of constantly recirculating.

Markers on those skin cells suggested they were settling in place while loading destructive proteins that help destroy infected cells.

If vaccines can build more of them at the bite site, protection against dengue might start faster during the next encounter.

Protection and severity

Protection showed up most clearly when clinicians compared people sent home with patients sick enough to need admission.

Those CD8+ T-cells – immune cells that kill infected cells – were more abundant in skin and blood among people sent home.

“As dengue spreads worldwide, there is an urgent need to identify the immune responses that protect against infection and severe disease,” said Dr. Rivino.

Her team’s comparison does not settle every cause of severe dengue, but it narrows one part of the mystery.

Signals in blisters

Blister fluid from people sent home also held more cytokines, chemical messages that help immune cells coordinate attacks.

Among them were signals strongly linked to T-cell growth, tissue memory, and local recruitment during illness.

Signal levels were highest in people sent home, lower in later-admitted patients, and even lower in those hospitalized earlier.

That gradient made the skin response look less like a side effect and more like useful protection.

Blood and skin link

Links between skin and blood appeared in the cells’ receptor patterns, not just in their sheer numbers.

Some shared clonotypes – T-cells with the same receptor pattern – appeared in skin and blood from two patients.

Researchers could not tell whether those matching groups moved between places or grew from a common starting pool.

Either possibility helps explain why blood tracked part of the skin response instead of telling a completely separate story.

Dengue vaccine problem today

One estimate puts dengue infections worldwide near 390 million a year, which keeps the vaccine challenge enormous.

Right now, the only World Health Organization-recommended vaccine for dengue is limited to use in children ages six through 16 in high-transmission settings.

“The findings could have significant implications for vaccination, and eliciting dengue-specific skin-resident CD8+ T-cells could improve vaccine effectiveness,” said Rivino.

Such a strategy points toward vaccines or delivery routes designed to build strong defenders exactly where mosquitoes deposit the dengue virus.

Earlier clue in dengue skin returns

That trail did not come out of nowhere, because earlier work had already hinted that dengue-fighting cells were skin-bound.

Back in 2015, Rivino’s group found a skin-targeting surface marker on dengue-specific blood T-cells.

The new work places those cells inside skin itself, where they appear active, abundant, and tied to milder illness.

It closes part of the gap between what blood hinted at years ago and what tissue now plainly shows.

Limits that matter

Some gaps still matter before vaccine makers bet heavily on skin-focused strategies for large public health programs.

The deepest gene and receptor sequencing came from only three patients, and the most precise tracking of virus-specific cells involved eight.

Researchers also could not separate cell movement from shared ancestry, and they did not compare protection across all four viral types.

Those limits keep the result promising rather than final, while making the next round of studies easy to define.

Where this leads

Dengue looked less like a disease explained by blood alone and more like one decided partly in skin.

A vaccine that reaches that tissue response will still need larger proof, but the target is finally clearer.

The study is published in *Science Advances*.

Fuente: EARTH NATURE SCIENCE LIFE. Disponible en https://n9.cl/se613b

Meiji Seika Pharma Invests in Centivax to Develop Next Generation Universal Vaccine Platform

Mar 30. Meiji Seika Pharma Co., Ltd. (Head Office: Chuo-ku, Tokyo, President and Representative Director: Toshiaki Nagasato) today announced a strategic investment in Centivax, Inc. (Head Office: South San Francisco, CA, USA), a biotechnology company developing next-generation vaccines and therapies for universal protection against highly diverse targets.

Centivax's lead program includes a universal seasonal influenza vaccine (Centi-Flu 01) currently in a Phase 1 clinical study. Unlike conventional seasonal flu vaccines, which must be manufactured annually based on recommended candidate vaccine viruses, Centivax's platform focuses both antibody and cellular immune responses on conserved regions of the influenza virus that cannot mutate and are shared across strains and distant subtypes. This approach aims to generate broad, consistent, and durable immunity against both seasonal and pandemic influenza.

Meiji's strategic investment aims to accelerate the advancement of Centi-Flu 01 and further advance its growing pipeline, which spans a pan-herpes Alzheimer's preventative, a broad oncology treatment, a malaria vaccine, and a universal antivenom.

"We are excited to support Centivax as they work toward a future where vaccines no longer need seasonal updating," said Toshiaki Nagasato, President and Representative Director of Meiji Seika Pharma."Their universal immunity platform represents a promising direction for global infectious-disease preparedness and aligns with Meiji's mission to improve public health through innovation."

"We are honored to partner with Meiji and deeply appreciate their confidence in our work. Japan has long been a global leader in scientific excellence and public health and these priorities closely align with our mission to develop broadly protective vaccines that can improve resilience against infectious diseases. Meiji's long-standing leadership in healthcare, combined with their thoughtful and collaborative approach, makes them an exceptional partner as we work together to advance next-generation solutions for influenza and beyond. We look forward to building a lasting partnership that contributes meaningfully to patients in Japan and around the world." said Jacob Glanville, CEO of Centivax.

About Centivax

Centivax is a universal immunity company, deploying a proprietary computational immune-engineering platform to create vaccines and therapies that deliver universal protection against entire classes of diverse targets. The lead clinical candidate for influenza - featured in The New Yorker, the Netflix docuseries Pandemic: How to Prevent an Outbreak, and other outlets - addresses a greater than $7 billion global flu market, with follow-on programs spanning a growing pipeline for Alzheimer's disease, oncology, malaria and a universal antivenom. This growing portfolio underscores the technology's broad potential not only to protect against a wide array of infectious diseases, including viral, bacterial, protozoan, fungal, parasitic and man-made bioterror threats, but also to improve healthspan by reducing the long-term complications these pathogens can trigger, such as neurodegenerative disease, cancer, cardiovascular disease, and autoimmune conditions. Centivax is headquartered in South San Francisco, California.

For more information, please visit https://www.centivax.com

About Meiji Seika Pharma

Meiji Seika Pharma, since it launched penicillin in 1946, has been providing efficacious and high-quality pharmaceutical products including therapeutics and vaccines for infectious diseases, therapeutics for central nervous system diseases and hematologic disorders and generic drugs, to meet various medical needs. The company continues to advance global health by investing in next-generation innovation and strategic cross-border partnerships.

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Patentes registradas en Patentscope

Estrategia de búqueda: *(Vaccine) AND DP:([24.03.2026 TO 31.03.2026]) as the publication date 15 records.*

1.20260083837COMBINATION CONTAINING AN MRNA VACCINE OR AN MRNA ENCODED THERAPEUTIC PROTEIN AND AN IMMUNE MODULATING MRNA FOR IMPROVED OR REDUCED IMMUNOGENICITY TO INCREASE EFFICACY

US - 26.03.2026

Clasificación Internacional A61K 39/215Nº de solicitud 19488438Solicitante IMGEN-T SRLInventor/a Emanuele SASSO

The present invention pertains to a combination comprising two or more mRNA molecules, or a single mRNA molecule encoding a first molecule, which is a therapeutic or immunogenic protein or peptide, and a second molecule, which is a protein or a peptide having the ability to modulate an immune response against the first molecule and/or the translation product of the first molecule, wherein the combination comprises at least one first mRNA molecule encoding a first molecule, which is a therapeutic or immunogenic protein or peptide, and at least one second mRNA molecule encoding a second molecule, which is a protein or a peptide having the ability to modulate an immune response against the first molecule and/or the translation product of the first molecule. The invention also relates to a host cell comprising a combination or the single mRNA molecule according to the present invention, a pharmaceutical composition comprising the combination, the single mRNA molecule, or the host cell of the present invention, and a vaccine comprising the combination, the single mRNA molecule, the host cell, or the pharmaceutical composition according to the present invention. Further provided is a kit comprising the combination, the single mRNA molecule, the host cell, the

pharmaceutical composition, or the vaccine according to the present invention. The invention also pertains to the combination, the single mRNA molecule, the host cell, the pharmaceutical composition, the vaccine, or the kit according to the present invention, for use in medicine. Finally, the invention also relates to the combination, the single mRNA molecule, the host cell, the pharmaceutical composition, the vaccine, or the kit according to the present invention, for use in a method of prevention, and/or treatment of an infectious, a genetic, or a proliferative disease.

2.WO/2026/062391PRRSV VACCINE STRAIN

WO - 26.03.2026

Clasificación Internacional A61K 39/12Nº de solicitud PCT/GB2025/052060Solicitante BLACK CAT BIO LIMITEDInventor/a REN, Jingqiang

The present invention relates to a porcine reproductive and respiratory syndrome virus (PRRSV) vaccine strain, the methods of producing such vaccine strains, vaccine compositions comprising such vaccine strains and their use thereof in the prevention or reduction of porcine reproductive and respiratory syndrome (PPRS) in pigs.

3.WO/2026/064582MRNA VACCINE FOR RHODOCOCCAL FOAL PNEUMONIA

WO - 26.03.2026

Clasificación Internacional A61K 39/02Nº de solicitud PCT/US2025/047092Solicitante THE TEXAS A&M UNIVERSITY SYSTEMInventor/a COHEN, Noah D.

The present invention pertains to a ribonucleic acid (RNA)-based vaccine for immunizing equine subjects, particularly foals, against *Rhodococcus equi* (*RE*) pneumonia (referred to herein as a *RE* vaccine). More specifically, the present invention provides for a mRNA vaccine that contains an open reading frame (ORF) encoding an immunogenic or antigenic bacterial peptide or polypeptide, such as virulence-associated protein A (VapA), which, when administered to an equine subject, will induce a humoral response and/or a cell-mediated immune (CMI) response against the respiratory pathogen *RE*.

4.WO/2026/064577MRNA VACCINE FOR EQUINE ROTAVIRUS INFECTION

WO - 26.03.2026

Clasificación Internacional A61K 39/15Nº de solicitud PCT/US2025/047086Solicitante THE TEXAS A&M UNIVERSITY SYSTEMInventor/a COHEN, Noah, D.

The present invention pertains to a ribonucleic acid (RNA)-based vaccine for immunizing equine subjects, particularly foals, against equine rotavirus. More specifically, the present invention provides for a mRNA vaccine that contains an open reading frame (ORF) encoding an immunogenic or antigenic viral peptide or polypeptide, such as virulence-associated protein A (VapA), which, when administered to an equine subject, will induce a humoral response and/or a cell-mediated immune

(CMI) response against a pathogenic equine rotavirus.

5.202631090A METHOD OF VACCINATING SALMONIDS AGAINST P SALMONIS

DK - 26.03.2026

Clasificación Internacional A61K 39/02Nº de solicitud PA 2026 31090Solicitante ZOETIS Services LLCInventor/a Glenn Gjermundsen BUENE

Provided is a method of protecting a salmonid against P salmonis infection, the method comprising: obtaining a sample of a P salmonis vaccine; determining viability of P salmonis in said sample thereby confirming that said P salmonis vaccine contains modified live P salmonis; and administering the vaccine that contains modified live P salmonis to the salmonid in need of said protection.

6.20260083835MODULAR BACTERIOPHAGE T4 NANOPARTICLE PLATFORM ENABLES RAPID DESIGN OF DUAL COVID-19-FLU MUCOSAL VACCINES

US - 26.03.2026

Clasificación Internacional A61K 39/145Nº de solicitud 19337994Solicitante The Catholic University of AmericaInventor/a Venigalla B. Rao

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

7.20260083832VACCINE COMPOSITION FOR STIMULATION OF BROAD SPECTRUM MEMORY B CELL EXPANSION

US - 26.03.2026

Clasificación Internacional A61K 39/00Nº de solicitud 19124995Solicitante Nant Holdings IP, LLCInventor/a Patrick Soon-Shiong

Provided herein are vaccine compositions for use in the stimulation of broad-spectrum memory B cell expansion in a patient that has been exposed or is at risk of exposure to an infectious agent of unknown etiology. The composition comprises IL-15 or an IL-15 analog and at least two toll-like receptor (TLR) agonists, wherein the agonists are targeted to different members of the TLR family. Further contemplated herein are compositions and methods of stimulating germinal B cell expansion in a patient, the composition comprising IL-15 or an IL-15 analog and a nucleic acid, wherein the nucleic acid encodes at least one immunogenic peptide, and wherein the composition is administered either subcutaneously or directly into a lymph node.

8.WO/2026/064791MULTIVALENT NANOPARTICLE COMPOSITIONS AND USES THEREOF

WO - 26.03.2026

Clasificación Internacional A61K 9/1271Nº de solicitud PCT/US2025/047573Solicitante VIRGINIA

TECH INTELLECTUAL PROPERTIES, INC.Inventor/a ZHANG, Chenming

Described herein are multivalent nanoparticles. In some embodiments, the multivalent nanoparticles contain a programmable stochiometric amount of three or more polypeptides attached to a lipid shell of the multivalent nanoparticles. In some embodiments, one or more of the polypeptides is an antigenic polypeptide. Also described herein are formulations, such as vaccine formulations, that can contain a multivalent nanoparticle described herein. Also described herein are methods of using the multivalent nanoparticles described herein, such as in a vaccine or drug delivery.

9.P20260167TRI-SEGMENTED ARENAVIRUSES AS VACCINE VECTORS

HR - 27.03.2026

Clasificación Internacional C12N 15/86Nº de solicitud P20260167TSolicitante Université de GenèveInventor/a Daniel David Pinschewer

10.20260083836MODIFIED CORONAVIRUS SPIKE ANTIGEN PROTEIN AND USES THEREOF

US - 26.03.2026

Clasificación Internacional A61K 39/215Nº de solicitud 18872553Solicitante RpexBio, Inc.Inventor/a Jong-Won OH

There is a modified coronavirus spike antigen protein and uses therefor. The spike antigen protein of coronavirus exhibits suppression of cell membrane fusion ability and improves safety by modifying two protein cleavage sites present in the coronavirus spike protein. In addition, inoculation with a vaccine having the antigen protein induces production of a large number of neutralizing antibodies to inhibit invasion of coronavirus into cells, thereby suppressing viral proliferation.

11.WO/2026/064628TEMPERATURE-RESPONSIVE MICROCARRIERS FOR ADHERENT CELL CULTURE

WO - 26.03.2026

Clasificación Internacional Nº de solicitud PCT/US2025/047182Solicitante LIFE TECHNOLOGIES CORPORATIONInventor/a HOLMBERG, Angela

A method of culturing cells for vaccine production comprises culturing cells in the presence of microcarriers with cell culture media and infecting the cells with a virus. The microcarrier comprises a bead and a coating. The coating comprises a thermo-responsive polymer having a lower critical solution temperature (LCST) of between about 20 °C and about 34 °C. The cells adhere to the coating of the microcarrier at a temperature above the LCST. The microcarrier comprises a polymeric bead, and a hydrophobic polymer. The hydrophobic polymer is a block copolymer which is connected to the bead by a covalent bond or by physical adsorption. The block copolymer comprises at least one hydrophobic block and at least one thermo-responsive block.

12.WO/2026/062056METHOD FOR THE INSTALLATION OF A SPRAYING DEVICE FOR

SPRAYING A FLUID

WO - 26.03.2026

Clasificación Internacional B05B 9/04Nº de solicitud PCT/EP2025/076536Solicitante BOEHRINGER INGELHEIM VETMEDICA GMBHInventor/a PORCHER, Ludovic

Method for the installation of a spraying device (10) for spraying a fluid (F), in particular a liquid vaccine solution, towards boxes (20) being conveyed past the spraying device, the boxes preferably containing animals, in particular chickens or chicks, to be vaccinated by spray vaccination, the method comprising: - receiving sensor signals (SS) in a sensor device (21) for detecting boxes (20) being conveyed past the spraying device (1), - receiving box size data (BS), the box size data representing a size of the boxes (20), - automatically determining, based on the box size data and the sensor signals (SS), the speed (S) of the boxes being conveyed past the spraying device (1), and - automatically determining a type (T) and/or number of nozzles (6) to be used for spraying the fluid and/or an, in particular vertical, nozzle position (P) to be set.

13.WO/2026/062053SPRAYING DEVICE, SYSTEM AND METHOD FOR SPRAYING A FLUID

WO - 26.03.2026

Clasificación Internacional A01K 13/00Nº de solicitud PCT/EP2025/076531Solicitante BOEHRINGER INGELHEIM VETMEDICA GMBHInventor/a PORCHER, Ludovic

The present invention relates to a spraying device for spraying a fluid, in particular a liquid vaccine solution, the spraying device having a spray unit, the spray unit having an inlet through which the fluid can be supplied to the spray unit, a pump with a pump chamber, and a nozzle for spraying the fluid, wherein the inlet is connected to the pump chamber and the pump chamber is connected to the nozzle, so that fluid can flow from the inlet to the pump chamber and from the pump chamber to the nozzle. According to the invention, the spray unit comprises an inlet valve arranged between the inlet and the pump chamber and an outlet valve arranged between the pump chamber and the nozzle, wherein the outlet valve is a controllable valve.

14.20260083833IMMUNOGENIC PROTEINS FROM BORDETELLA PERTUSSIS

US - 26.03.2026

Clasificación Internacional A61K 39/02Nº de solicitud 19111155Solicitante OHIO STATE INNOVATION FOUNDATIONInventor/a Purnima DUBEY

Recent evidence accumulating over the last decade demonstrates that generation of CD4+ T cells is critical for sustained immunity against *Bordetella pertussis. B. pertussis* contains hundreds of antigens that are processed and presented on MHC Class II and recognized by CD4'T cells. The present disclosure relates to a vaccine comprising *Bordetella pertussis* antigen peptides to prevent infection of the *Bordetella pertussis* bacterium.

15.3060626PREPARATION INCLUDING VACCINE ADJUVANT

ES - 27.03.2026

Clasificación Internacional A61K 9/19Nº de solicitud 19905802Solicitante Sumitomo Pharma Co., Ltd.Inventor/a ONITA, Maiko

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Edición: Annia Ramos Rodríguez aramos@finlay.edu.cu
Randelys Molina Castro rmolina@finlay.edu.
Claudia Camejo Salas ccamejo@finlay.edu.cu
Yamira Puig Fernández yamipuig@finlay.edu.cu

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