

# VacCiencia

Boletín Científico

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VacCiencia es una publicación dirigida a investigadores y especialistas dedicados a la vacunología y temas afines, con el objetivo de serle útil. Usted puede realizar sugerencias sobre los contenidos y de esta forma crear una retroalimentación que nos permita acercarnos más a sus necesidades de información.

- Noticias más recientes en la Web sobre vacunas.
- Artículos científicos más recientes de Medline sobre vacunas covid-19.
- Patentes más recientes en Patentscope sobre vacunas.

## Noticias en la Web

### COVID-19: Vacuna bivalente se puede recibir sin vacunación previa

**18 jun.** El director del Programa Ampliado de Inmunizaciones (PAI) de Paraguay, Héctor Castro, señaló que la vacuna está habilitada para todas las personas desde los 6 años en adelante y que desde la próxima semana se podrán aplicar las dosis sin importar si cuenta o no con el esquema primario anticovid.

Las vacunas bivalentes son de dosis única y se aplican de forma anual, similar a las vacunas contra la influenza.

Su aplicación previene las formas graves de la enfermedad respiratoria, la internación y fallecimiento, especialmente en los grupos vulnerables y susceptibles, recordó Castro en conferencia de prensa este viernes.

En el caso de las embarazadas, habiendo cumplido 12 semanas de gestación, podrán recibir la vacuna, con indicación médica, mediante un certificado médico firmado y sellado por el profesional, de acuerdo al informe de IP.

#### Vacuna contra la influenza

Al igual que la vacuna contra la COVID-19, la Campaña Invierno del Ministerio de Salud aplica también dosis contra la influenza.

La vacuna cuadrivalente, que protege contra los diferentes tipos de influenza, es libre para toda la población, principalmente para quienes integran grupos de riesgo; como niños de 6 a 35 meses de edad, trabajadores de la salud, embarazadas, puérperas, personas con enfermedad de base, mayores de 60 años y más.

Fuente: RDN. Disponible en <https://cutt.ly/Bwuiik0l>



Foto: Ministerio de Salud .

### Update on Antigen Design for Universal Sarbecovirus Vaccine by Shionogi and KOTAI

**Jun 19.** Shionogi & Co., Ltd. (Head Office: Osaka, Japan; Chief Executive Officer: Isao Teshirogi, Ph.D.; hereafter "Shionogi") and KOTAI Biotechnologies, Inc. (Head Office: Osaka, Japan; Chief Executive Officer: Kazuo Yamashita, Ph.D.; hereafter "KOTAI") announced meeting the criteria set in advance for the companies' joint research effort to create a Universal Sarbecovirus Vaccine that can induce neutralizing antibodies against a wide range of sarbecovirus strains and variants. SARS-CoV-2 and SARS coronavirus belong to the subgenus Sarbecovirus.

The Universal Sarbecovirus Vaccine antigen is designed to selectively induce neutralizing antibodies against regions where viral mutations are unlikely to occur and which are conserved across coronaviruses. This vaccine is expected to help to prepare for future potential COVID-19 (SARS-CoV-2) mutant variants and

potential new coronavirus pandemics, avoiding the need to continually develop new vaccines against continually evolving and emerging coronavirus mutant variants.

Under the terms of the collaboration agreement, KOTAI will receive a milestone from Shionogi for the identification of an antigen meeting the predefined success criteria for the ability to induce neutralizing antibodies across a breadth of coronavirus virus variants and strains. This collaboration has been funded and included<sup>2</sup> in the vaccine / new modality research and development project, as part of a public solicitation by Strategic Center of Biomedical Advanced Vaccine Research and Development for Preparedness and Response (SCARDA) established within Japan Agency for Medical Research and Development (AMED).

Shionogi and KOTAI will continue to progress the research and development of a Universal Sarbecovirus Vaccine, with the support of SCARDA, to seek to bring this important advancement to patients around the world rapidly, through the synergistic combination of Shionogi's expertise in infectious diseases with KOTAI's capabilities in the analysis of immunity and protein structure using information technology.

### **About SCARDA**

SCARDA is an organization established within the Japan Agency for Medical Research and Development (AMED) in March 2022. Based on the "Vaccine Development / Production System Strengthening Strategy" decided by the Cabinet in June 2021, it was organized for the purpose of strengthening the R&D / production system during normal times so it will be ready in times of pandemic emergency. AMED boosts the funding capacity for strategically significant research, initiative for world-leading vaccine research and development centers and promotes the strengthening of the pharmaceutical startup ecosystem. Please see SCARDA website for details.

### **About KOTAI**

KOTAI is a biotechnology company established in 2016 based on research results from Osaka University. As a group of experts in the information analysis of immunity and protein structure, KOTAI conducts research and development in collaboration with many research institutes, universities and pharmaceutical companies. Please see the KOTAI website for details.

### **About Shionogi**

Shionogi is committed to the principle "Protecting people worldwide from the threat of infectious diseases" as our key focus, and is working on the realization of total care for infectious diseases. While contributing to the safety and security of society, we will be prepared for the swift provision of therapeutic drugs and vaccines as necessary depending on the situation, such as the emergence of new variants or the future prevalence of the disease.

**Fuente:** Shionogi. Disponible en <https://cutt.ly/FwuifAh0>

## **Instituto Finlay de Vacunas y Universidad de Uruguay firman Memorando de Entendimiento en VacciPharma2023**

**20 jun.** En el marco del evento internacional VacciPharma2023, el Instituto Finlay de Vacunas y el Departamento de Desarrollo Biotecnológico de la Universidad de Uruguay firmaron un Memorando de Entendimiento, con el objetivo de impulsar la cooperación entre ambas instituciones.

Los firmantes fueron, por la parte cubano el doctor Vicente Vérez Bencomo, director del IFV y José A.

Chabalgoity, director del Departamento de Desarrollo Biotecnológico de la casa de altos estudios de Uruguay.

En VacciPharma2023, delegados cubanos y extranjeros presentaron resultados y desarrollos de investigaciones, estrategias de control de la calidad y elementos tecnológicos en la producción de vacunas.

En este sentido, especialistas de Arabia Saudita, Estados Unidos, Uruguay, Argentina, Reino Unido, Alemania, España, Rusia, Suiza, Italia, India, Nicaragua y Cuba han compartido experiencias y conocimientos durante cuatro productivas jornadas.

VacciPharma2023 se celebra cada dos años en Cuba. El evento es organizado por la Sociedad Cubana de Farmacología y empresas de BioCubaFarma. Debido a la pandemia de la COVID-19 no se realizaron las dos últimas ediciones.

De ahí que VacciPharma2023 tiene una alta relevancia para la ciencia cubana, pues permitió retomar estos espacios de intercambio científico y académico.

**Fuente:** Cubadebate. Disponible en <http://www.cubadebate.cu/noticias/2023/06/20/instituto-finlay-de-vacunas-y-universidad-de-uruguay-firman-memorando-de-entendimiento-en-vaccipharma2023/>

## Icosavax announces initiation of Phase II pneumonia vaccine trial in adults

**Jun 21.** Icosavax has initiated a Phase II clinical trial of IVX-A12, a bivalent vaccine candidate, for the treatment of older adults with respiratory syncytial virus (RSV) and human metapneumovirus (hMPV).

IVX-A12 consists of two virus-like particle (VLP) vaccine candidates including IVX-121 and IVX-241.

The multi-centre, placebo-controlled, observer-blinded, randomised study intends to enrol nearly 250 healthy older adults aged 60 years and above to assess the immunogenicity and safety of a single dose of IVX-A12 with and without CSL Seqirus' adjuvant MF59.



A single dose of IVX-A12 includes 150µg of IVX-121 (RSV) and 150µg of IVX-241 (hMPV) that correspond to antigen content of 84µg RSV and 82µg hMPV, respectively.

Topline interim results from the trial are anticipated in the first quarter of next year.

Icosavax CEO Adam Simpson said: "The initiation of this Phase II trial for IVX-A12 marks another important milestone for Icosavax, as we advance this potential first-in-class combination vaccine candidate into mid-stage development."



*Los firmantes fueron, por la parte cubano el doctor Vicente Verez Bencomo, director del IFV y José A. Chabalgoity, director del Departamento de Desarrollo Biotecnológico de la casa de altos estudios de Uruguay. Foto: Twitter/Instituto Finlay de Vacunas.*

"We are highly encouraged by the recent findings from the Phase I study of IVX-A12 and believe that it has the potential to address an unmet need as the first bivalent vaccine candidate against both RSV and hMPV, two of the leading causes of pneumonia in adults."

Icosavax plans to explore the potential of IVX-121 protecting against hMPV infection in a nonclinical passive transfer model using the clinical samples from the Phase II study.

A Phase IIb proof-of-concept trial to assess the efficacy (hMPV human challenge) of IVX-121, along with the durability and longer-term safety of immune response, will also be initiated based on the selection of the formulation from the Phase II study.

**Fuente:** Clinical Trials Arena. Disponible en <https://www.clinicaltrialsarena.com/news/icosavax-phase-ii-pneumonia-adults/#catfish>

## Solicita Moderna a la FDA la autorización de su vacuna COVID-19 actualizada

23 jun. Moderna, Inc. (NASDAQ:MRNA), empresa biotecnológica pionera en terapias y vacunas de ARN mensajero (ARNm), anunció que ha completado el proceso de solicitud de autorización a la FDA para su vacuna actualizada COVID-19 que contiene proteínas de pico para el sublinaje XBB.1.5 del SARS-CoV-2 (ARNm-1273.815).

«La agilidad de nuestra plataforma de ARNm nos ha permitido actualizar la vacuna de mRNA (la vacuna COVID-19 de Moderna), para que se dirija a las variantes XBB con rapidez y rigor clínico», declaró Stéphane Bancel, director general de Moderna. «Llevamos meses trabajando diligentemente para conseguir un amplio suministro, con dosis listas a enviar a tiempo para la temporada de vacunación de otoño en el hemisferio norte.

Además, nuestras pruebas clínicas preliminares han demostrado que el ARNm-1273.815 es eficaz para generar una respuesta inmunitaria contra las variantes actuales del XBB que son motivo de preocupación. En los últimos tres años, la vacuna vacuna de mRNA contra COVID ha reducido sistemáticamente las hospitalizaciones y los resultados de enfermedades graves por COVID-19, por lo que invitamos a las personas a consultar con sus proveedores de atención médica sobre la posibilidad de recibir una vacuna actualizada».

La solicitud se basa en las recomendaciones de la FDA de Estados Unidos, que aconseja que las vacunas COVID-19 se actualicen a una composición monovalente XBB.1.5. Esta recomendación coincide con la de otros organismos reguladores y agencias mundiales de salud pública, que también han aconsejado una composición XBB monovalente. En la reciente reunión del Comité Consultivo de Vacunas y Productos Biológicos Relacionados (VRBPAC por sus siglas en inglés), Moderna fue la única compañía que presentó datos clínicos preliminares comparando vacunas monovalentes y bivalentes mostrando respuestas inmunitarias sólidas en humanos a través de múltiples sublíneas descendientes de XBB como XBB.1.5, XBB.1.16 y XBB.2.3.2.



El efecto adverso local más frecuente de la vacuna COVID-19 actualizada de Moderna fue el dolor en el lugar de la inyección. Las reacciones secundarias sistémicas más frecuentes incluyen dolor de cabeza, fatiga, mialgia y escalofríos.

La empresa ya se encuentra en proceso de presentar solicitudes adicionales a los organismos reguladores en todo el mundo y está preparada para suministrar las vacunas COVID-19 actualizadas a tiempo para la temporada de vacunación de otoño.

**Fuente:** Periódico Digital Centroamericano y del Caribe. Disponible en <https://newsinamerica.com/pdcc/boletin/2023/solicita-moderna-a-la-fda-la-autorizacion-de-su-vacuna-covid-19-actualizada/>

## **La vacuna hexavalente llegó para proteger a los niños de seis enfermedades**

**24 jun.** Con el objetivo de fortalecer la inmunización de niños y niñas de 2, 4, 6 y 18 meses, se inició en Paraguay, la vacunación con la vacuna pediátrica hexavalente acelular. La misma reemplazará a las vacunas pentavalente y antipolio.

La nueva vacuna pediátrica protege contra seis enfermedades como la difteria, tétanos, tos ferina o tos convulsa, poliomielitis, haemophilus influenza tipo b y hepatitis B.

Con la hexavalente, se reduce el número de inyecciones que los niños deben recibir, generando menos dolor para ellos gracias a sus componentes acelulares y menos estrés para sus padres.

Esta implementación representa un paso sin precedentes para mejorar el Plan Nacional de Vacunación del Ministerio de Salud Pública y Bienestar Social (MSPBS) y reemplazará a las vacunas pentavalente y antipolio.

Esta vacuna está disponible desde hace años a nivel privado y con este gran logro, todos los niños y niñas tendrán acceso a la misma vacuna de manera gratuita en todos los centros vacunatorios habilitados por el Ministerio de Salud.

Esta iniciativa cuenta con el apoyo de la Sociedad Paraguaya de Pediatría (SPP), a través de su campaña "Vacunarse es poder".

**Fuente:** RDN. Disponible en <https://www.rdn.com.py/2023/06/24/la-vacuna-hexavalente-llega-para-proteger-a-los-ninos-de-paraguay/>

## **Cuban central province applies booster vaccination against COVID-19**

**Jun 26.** The third booster vaccination against COVID-19 in Villa Clara is advancing with the application of a dose of the Cuban drug Abdala to several risk groups such as older adults, children and pregnant women. "We are working harder on two-year-old children and those aged between 11 and 18, as well as breastfeeding mothers, and those already in the third trimester of pregnancy, because we have seen that vaccination guarantees important immunity levels for each of these periods," explained Yarelyn Matos, deputy director of the Provincial Center of Hygiene and Epidemiology in Villa Clara. The province's health authorities are also prioritizing the vaccination of people over 70 years of age, an essential aspect in Cuban territory with the highest population aging rate, while the immunization of health workers is also continuing.

So far, Villa Clara has accumulated more than 3 million doses of the third booster applied with the Abdala drug, while the vaccination of patients with delays due to convalescence continues, with the aim of increasing the number of people with complete immunization schedules.

Fuente: Cuban News Agency. Disponible en <http://www.cubanews.acn.cu/science/21741-cuban-central-province-applies-booster-vaccination-against-covid-19>

## **La vacuna contra COVID se integrará al esquema nacional de vacunación en México: el SARS-CoV-2 llegó para quedarse**

**28 jun.** Las vacunas contra COVID-19 dejaron de ser universales, pero sí se incluirán en el esquema nacional de vacunación de manera que en México habrá dosis cada invierno, tal y como sucede con la influenza.

"Las personas no vacunadas conforman la mayoría de las defunciones observadas en las olas o picos más recientes", se lee en el informe de más de 150 páginas con la que serán las nuevas reglas para lidiar con el COVID-19 en México. A distancia de la aplicación de las primeras dosis, la Secretaría de Salud no asume que sigue vigente la protección de inmunidad que consiguieron todas las personas que recibieron vacunación contra COVID-19, así que recomienda que las vacunas sean aplicadas periódicamente.

Sin vacunas para los de prioridad baja

El nuevo plan de gestión establece que las vacunas contra SARS-CoV-2 estarán contempladas en esquemas de vacunación a partir de ahora, especialmente para grupos prioritarios. El plan prevé las recomendaciones de dosis hechas por el Grupo de Expertos en Asesoramiento Estratégico sobre Inmunización de la OMS, en donde se recomiendan aplicaciones cada 12 meses para adultos mayores y cada seis meses para el subgrupo de adultos más ancianos.

Para los casos de prioridad baja, es decir, niños y adolescentes sanos de seis meses a 17 años no habrá vacunación. "Considerando el beneficio y rentabilidad de la vacunación no se realizará la inmunización de los grupos con prioridad baja". En todo caso, la decisión final no puede ser tomada unilateralmente por Secretaría de Salud, sino que debe participar el Consejo Nacional de Vacunación, CONAVA, por sus siglas.

Todo parece indicar que México no estará incluyendo en el esquema de vacunación dosis que hayan sido creadas para variantes específicas. Basándose en las recomendaciones hechas por el panel de expertos de la OMS, en el plan se lee que "las vacunas actuales, basadas en el virus índice/ancestral, mantienen una alta efectividad vacunal contra enfermedades graves en el contexto de la variante Ómicron y sus sublinajes".

*Tabla 1. Promedio semanal de casos estimados y defunciones por COVID-19, México, 2020-2023.*

Año	Casos	Defunciones	Letalidad
2020	38,033	3,292	8.7%
2021	49,882	2,937	5.9%
	62,812	527	0.8%
*2023	17,749	133	0.7%

*Curva epidémica, casos y defunciones por COVID-19, del 2020 a mayo del 2023.*

Aunque la vacuna 'Patria' todavía no recibe permiso de Cofepris, el plan sí prevé que sea utilizada en grupos vulnerables. Según el documento, México invertirá en la fabricación de "dosis necesarias" para la vacunación entre 2023 y 2024.

**Fuente:** Xataka. Disponible en <https://www.xataka.com.mx/medicina-y-salud/vacuna-covid-se-integrara-al-esquema-nacional-vacunacion-mexico-sars-cov-2-llego-para-quedarse>

## SK bioscience-Sanofi Announce Positive Results from Phase II Study of 21-Valent Pneumococcal Conjugate Vaccine Candidate

**Jun 29.** SK bioscience, an innovative vaccine and biotech company committed to promoting human health from prevention to cure, today announced positive results from its Phase II clinical trials in infants of its 21-valent pneumococcal conjugate vaccine candidate, 'GBP410' (also known as SP0202), evaluating its safety and immunogenicity.

GBP410, jointly developed by SK bioscience and Sanofi, is a pneumococcal conjugate vaccine that combines specific proteins with the polysaccharide capsule of *Streptococcus pneumoniae*, which causes pneumococcal diseases such as pneumonia and invasive pneumococcal disease. The pneumococcal conjugate vaccine is well known to provide the effective protection against pneumococcal infections among the pneumococcal vaccines developed to date.

Given that GBP410 includes 21 serotypes, it is anticipated to offer broader serotype coverage than the existing pneumococcal conjugate vaccines that currently dominate the global market. If successfully commercialized, GBP410 is expected to rapidly increase market share by leveraging Sanofi's marketing expertise as the industry leader in the pediatric vaccine market.

The Phase II study, which enrolled 140 toddlers aged 12 to 15 months and 712 infants aged 42 to 89 days, demonstrated comparable immunogenicity of GBP410 compared to the control vaccine, following the primary vaccination at 2, 4, and 6 months of age as well as the booster vaccination for ages of 12 to 15 months. This study was conducted in the United States, Canada, and Honduras and it commenced in May 2020.

The data also showed a well-tolerated safety profile, with comparable reactogenicity profile to the control vaccine and no vaccine-related serious adverse events. Furthermore, GBP410 did not interfere with the immunogenicity and safety profile of the co-administered recommended pediatric vaccines, such as tetanus, diphtheria, pertussis, polio, and *Haemophilus influenzae* type b vaccines.

Based on the positive safety and immunogenicity data from the Phase II clinical trial, SK bioscience and Sanofi plan to start Phase III in H1 2024, expecting to secure the final data in 2027.

In preparation for the commercialization of GBP410, SK bioscience intends to enter the U.S. and European markets with Sanofi by making significant investments in manufacturing facilities. The company will establish production facilities at L HOUSE, its vaccine manufacturing plant in Andong, Korea, ensuring compliance with the FDA's current Good Manufacturing Practice (cGMP) standards.

Jean-Francois Toussaint, Global Head of Vaccines R&D at Sanofi said, "We are pleased with our very productive partnership with SK bioscience as we work to raise the bar in pneumococcal disease. With an innovative carrier that breaks the glass ceiling of serotype compositions, our 21-valent pneumococcal conjugate vaccine is designed to offer expanded protection against this devastating disease. We believe that today's results offer us a strong path to Phase 3 and then to licensure."

Jaeyong Ahn, CEO of SK bioscience said, "The successful Phase II clinical trials of pneumococcal conjugate vaccine signifies that SK bioscience's technology and capability in vaccine development can deliver best in class vaccine candidates," adding, "We're so proud to collaborate with an excellent partner, Sanofi, and we continue to be committed to developing and manufacturing vaccines based on the global partnership with major pharmaceutical companies."

SK bioscience is accelerating to expand the global market through various global partnerships. The company seeks the key technologies for mRNA vaccine development under the contracts with domestic and international companies to expand its vaccine portfolio by securing next-generation vaccine platform. In May 2023, SK bioscience signed a manufacturing agreement with MSD for the next-generation Zaire Ebola vaccine candidate. In addition, the company is close to signing its first contract for the 'Glocalization' project, which transfers vaccine R&D and manufacturing capabilities to foreign countries with insufficient vaccine infrastructure.

#### About SK bioscience

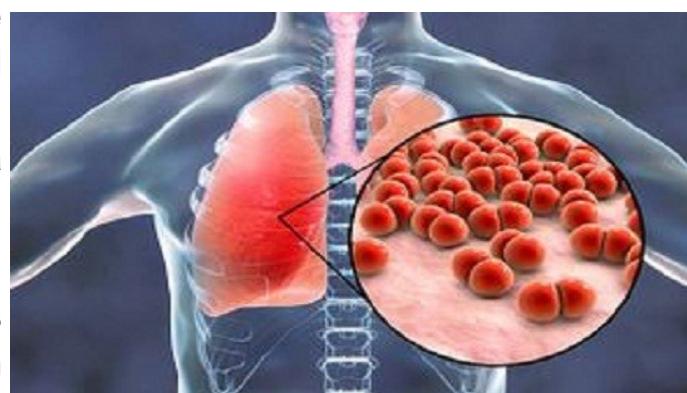
SK bioscience is an innovative vaccine and biotech company, standing committed to global pandemic preparedness in vaccine development and manufacturing to create more equitable access to vaccines. In leveraging strengths on cutting-edge vaccine development technologies, SK bioscience has been dedicated to promoting human health from prevention to cure across the globe. Under collaborations of domestic and international governments, regulatory agencies, healthcare providers, doctors and medical experts, SK bioscience has firmly established globally certified R&D and manufacturing technologies. All of the SK colleagues are passionately committed to providing high-quality vaccines to those who need them and better public healthcare solutions.

**Fuente:** Cision PR Newswire. Disponible en <https://www.prnewswire.com/news-releases/sk-bioscience-sanofi-announce-positive-results-from-phase-ii-study-of-21-valent-pneumococcal-conjugate-vaccine-candidate-301867294.html>

## Concluyó en Cienfuegos taller de Red de Vigilancia de la enfermedad neumocócica

**29 jun.** Científicos e investigadores del Instituto Finlay de Vacunas de conjunto con la Dirección Provincial de Salud presentaron este jueves en Cienfuegos las conclusiones del estudio de la intervención de QuimiVio, vacuna cubana multivalente contra el neumococo.

La intervención con el candidato vacunal comenzó desde el año 2017 en los 12 mil niños de cero a cinco años de todas las áreas de Salud del municipio Cienfuegos, única provincia en lograr la vacunación al 90 por ciento de sus infantes sin reportes adversos serios.



Según María Eugenia Toledo, una de las investigadoras principales, el objetivo del taller resultó evaluar el efecto temprano de la vacunación anti-neumocócica en campaña sobre la carga hospitalaria y poblacional de la enfermedad que provoca neumonía severa, meningitis y sensible infecciosa ocasionando la muerte infantil.



También destacó la importancia de la Red de Vigilancia, establecida en Santiago de Cuba, Cienfuegos y La Habana porque la enfermedad neumocócica es de la comunidad; por ello recomenzará la vacunación en Cienfuegos para rescatar y mantener los valores que sugieren una reducción significativa de la enfermedad y los ingresos hospitalarios.

**Fuente:** Radio Ciudad del Mar. Disponible en <https://www.rcm.cu/2023/06/29/cienfuegos-enfermedad-neumococica/>



### Síganos en redes sociales



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**SeCiMed**

# Artículos científicos publicados en Medline

*Filters activated: Publication date from 2023/06/16 to 2023/06/30. "COVID-19 vaccine" (Title/Abstract) 260 records.*

## [COVID-19 Vaccine Evolution and Beyond.](#)

Brice Y, Morgan L, Kirmani M, Kirmani M, Udeh MC. *Neurosci Insights.* 2023 Jun 19;18:26331055231180543. doi: 10.1177/26331055231180543. eCollection 2023. PMID: 37351483

## [Myocarditis post-COVID-19 vaccination.](#)

Bansal M, Mehta A, Pandey M. *Postgrad Med J.* 2023 Jun 19:qgad030. doi: 10.1093/postmj/qgad030. Online ahead of print. PMID: 37334983

## [COVID-19 vaccine safety inquiries to the centers for disease control and prevention immunization safety office.](#)

Miller ER, Moro PL, Shimabukuro TT, Carlock G, Davis SN, Freeborn EM, Roberts AL, Gee J, Taylor AW, Gallego R, Suragh T, Su JR. *Vaccine.* 2023 Jun 19;41(27):3960-3963. doi: 10.1016/j.vaccine.2023.05.054. Epub 2023 May 24. PMID: 37248099

## [COVID-19 Vaccine Decision-Making Among Black Pregnant and Postpartum Women.](#)

Avorgbedor F, Gondwe KW, Aljarrah A, Bankole AO. *J Racial Ethn Health Disparities.* 2023 Jun 19. doi: 10.1007/s40615-023-01675-6. Online ahead of print. PMID: 37335424

## [Promises and challenges of mucosal COVID-19 vaccines.](#)

Rathore APS, St John AL. *Vaccine.* 2023 Jun 19;41(27):4042-4049. doi: 10.1016/j.vaccine.2023.04.013. Epub 2023 Apr 10. PMID: 37045682

## [COVID-19 pandemic and adrenals: deep insights and implications in patients with glucocorticoid disorders.](#)

Cozzolino A, Hasenmajer V, Newell-Price J, Isidori AM. *Endocrine.* 2023 Jun 20. doi: 10.1007/s12020-023-03411-w. Online ahead of print. PMID: 37338722

## [Role and clinical implication of autophagy in COVID-19.](#)

Shan T, Li LY, Yang JM, Cheng Y, Virol J. 2023 Jun 16;20(1):125. doi: 10.1186/s12985-023-02069-0. PMID: 37328875

## [COVID-19 vaccination-related myocarditis: a Korean nationwide study.](#)

Cho JY, Kim KH, Lee N, Cho SH, Kim SY, Kim EK, Park JH, Choi EY, Choi JO, Park H, Kim HY, Yoon HJ, Ahn Y, Jeong MH, Cho JG. *Eur Heart J.* 2023 Jun 25;44(24):2234-2243. doi: 10.1093/eurheartj/ehad339. PMID: 37264895

## [Trajectory of COVID-19 vaccine hesitancy post-vaccination and public's intention to take booster vaccines: A cross-sectional analysis.](#)

Salman M, Mallhi TH, Khan YH, Mustafa ZU, Khan MT, Khan FU, Butt MH, Shehzadi N, Farrukh MJ, Waheed M, Azmat F, Saeed A, Mazhar SA, Ali A, Ashfaq A, Hussain K. *Hum Vaccin Immunother.* 2023 Jun 23:2225990. doi: 10.1080/21645515.2023.2225990. Online ahead of print. PMID: 37350298

[The development of DNA vaccines against SARS-CoV-2.](#)

Khalid K, Poh CL. Adv Med Sci. 2023 Jun 24;68(2):213-226. doi: 10.1016/j.advms.2023.05.003. Online ahead of print. PMID: 37364379

[Efficacy of Vaccine Protection Against COVID-19 Virus Infection in Patients with Chronic Liver Diseases.](#)

Cheung CKM, Law KWT, Law AWH, Law MF, Ho R, Wong SH. J Clin Transl Hepatol. 2023 Jun 28;11(3):718-735. doi: 10.14218/JCTH.2022.00339. Epub 2023 Jan 16. PMID: 36969905

[Barriers and facilitators to COVID-19 vaccine uptake among Australian health professional students during the pandemic: a nationwide study.](#)

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# Patentes registradas en Patentscope

Estrategia de búsqueda: *Vaccine in the title or abstract AND 20230616:20230630 as the publication date 43 records*

## 1. [WO/2023/113094](#) COVID-19 VACCINE COMPOSITION WITH INCREASED IMMUNOGENICITY

WO - 22.06.2023

Clasificación Internacional [A61K 39/215](#) Nº de solicitud PCT/KR2021/095130 Solicitante CTC VAC CO.,LTD Inventor/a JUNG, Ho Kyoung

The present invention relates to a COVID-19 vaccine composition with increased immunogenicity, and more specifically, to an antigen composition comprising a Spike 1 (COVID-19) recombinant antigen protein and a receptor binding domain (RBD) recombinant antigen protein of the SARS-CoV-2 virus, and a COVID-19 vaccine composition with increased immunogenicity, the vaccine composition containing Montanide Gel as an immunostimulating agent. The COVID-19 vaccine composition according to the present invention was found to have increased antibody-forming ability (immunogenicity) compared to vaccine compositions not containing Montanide Gel, and vaccination with the COVID-19 vaccine composition according to the present invention was found to activate CD4<sup>+</sup>IL-5<sup>+</sup> T cells and CD4<sup>+</sup>IL-17<sup>+</sup> T cells and increase IFN-γ and IL-5 cytokine production. In addition, the vaccine composition according to the present invention was found to also exhibit high immunogenicity against South African variants and British variants of the COVID-19 virus, and thus can be utilized as a vaccine composition for preventing or treating COVID-19.

## 2. [WO/2023/122731](#) A LIVE ATTENUATED MUMPS VIRUS-BASED SARS-COV-2 VACCINE

WO - 29.06.2023

Clasificación Internacional [A61K 39/215](#) Nº de solicitud PCT/US2022/082244 Solicitante OHIO STATE INNOVATION FOUNDATION Inventor/a LI, Jianrong

Disclosed herein are live attenuated recombinant mumps virus (rMuV)-based SARS-CoV-2 vaccines and methods for vaccinating a subject for COVID-19 using the disclosed vaccines. Advantages of MuV-based SARS-CoV-2 vaccine include a great safety record, ideal for infants and children, overcomes the pre-existing MuV immunity, no integration to host DNA, high expression level, high efficacy, long term (life-long) immunity, excellent genetic stability, well-established GMP vaccine manufacture, a quadrivalent vaccine for SARS-CoV-2, MeV, MuV, and rubella virus, protection against SARS-CoV-2 variants, human clinical trial experience, and the MMR vaccine is lyophilized and stored at refrigerator temperatures both before and after it is reconstituted, greatly reducing its cost.

## 3. [WO/2023/109740](#) INHALATION ADMINISTRATION DELIVERY SYSTEM OF RECOMBINANT ADENOVIRUS VECTOR VACCINE

WO - 22.06.2023

Clasificación Internacional [A61K 35/761](#) Nº de solicitud PCT/CN2022/138331 Solicitante CANSINO BIOLOGICS INC. Inventor/a SHAO, Juan

Disclosed is an inhalation administration delivery system of a recombinant adenovirus vector vaccine. In the delivery system, an adenovirus vector is reformed and matched with a specific preparation prescription, and after being administered by means of inhalation, the vaccine can reach the lungs by means of nasal inhalation or mouth inhalation, so that a protective immune response including mucosal immunity is generated, the effective utilization rate of the vaccine is increased, the pre-existing immunity of an adenovirus is solved, and an effect of the vaccine is improved.

## 4. [WO/2023/114639](#) METHODS AND COMPOSITIONS RELATED TO VIRAL VACCINES WITH IMPROVED PROPERTIES

WO - 22.06.2023

Clasificación Internacional [A61K 39/12](#) Nº de solicitud PCT/US2022/080688 Solicitante THE SCRIPPS RESEARCH INSTITUTE Inventor/a HE, Linling

The present invention provides methods for producing scaffolded (e.g., nanoparticle presented) or non-scaffolded vaccines that are based on viral immunogenic proteins with a glycan shielded (e.g., HIV-1 Env). The vaccines thus generated demonstrate enhanced immunogenicity and responder frequency. The methods entail (1) enzymatic digestion of glycan chain on the surface of a viral trimer protein immunogen or a self-assembling nanoparticle vaccine displaying the viral immunogen (e.g., an HIV-1 UFO trimer), or (2) expression of a construct encoding the vaccine in an expression system lacking normal glycosylation function for human proteins. The methods can include an additional step of purifying the glycan shortened protein and/or formulating the protein into a vaccine composition. Also provided in the invention are vaccine compositions produced with the described methods. The invention further provides methods of using the vaccine compositions described herein (e.g., scaffolded or non-scaffolded HIV-1 vaccines) in various therapeutic applications, e.g., for preventing or treating viral infections.

#### 5.[WO/2023/118603](#) IMPROVED VACCINIA VIRUS VECTORS

WO - 29.06.2023

Clasificación Internacional [C07K 14/005](#) Nº de solicitud PCT/EP2022/087815 Solicitante STRATOSVIR LIMITED Inventor/a ULLMAN, Christopher

Disclosed herein are polynucleotides encoding fusion proteins, the fusion proteins comprising a vaccinia virus envelope protein, such as A13 or part thereof and at least one complement regulatory protein, such as CD35, CD55, CD59, CD46, CR1, Factor H, VCP, MOPICE, SPICE and CCPH, or a functional fragment thereof. Modified vaccinia virus vectors and vaccinia virus virions are also disclosed, as are therapeutic uses and methods for treatment of cancers and/or proliferative diseases or disorders.

#### 6.[WO/2023/118553](#) STABLE EMULSIONS OF ANTIGENS

WO - 29.06.2023

Clasificación Internacional [A61K 39/39](#) Nº de solicitud PCT/EP2022/087692 Solicitante INTERVET INTERNATIONAL B.V. Inventor/a PIEST, Martin

The present invention relates to the field of vaccinology, more specifically of veterinary vaccinology. In particular, the invention relates to an adjuvant composition comprising an emulsion of water, tocopherol or a pharmaceutically acceptable ester thereof, and a polyethoxyethylene cetostearyl ether as an emulsifier. Said adjuvant composition can be used for formulating a vaccine, particularly an emulsion vaccine, comprising a bacterial, parasitic, or viral antigen. The resulting vaccine composition can be used in a method of protecting a human or animal target against infection and/or disease caused by a pathogen, particularly caused by a bacterium, parasite or virus. The invention further relates to methods for the manufacture of such adjuvant compositions and for the manufacture of such vaccine composition.

#### 7.[WO/2023/109469](#) PREPARATION METHOD FOR ALUMINUM OXYHYDROXIDE NANO ADJUVANT HAVING CONTROLLABLE SURFACE ENERGY

WO - 22.06.2023

Clasificación Internacional [A61K 39/39](#) Nº de solicitud PCT/CN2022/134210 Solicitante DALIAN UNIVERSITY OF TECHNOLOGY Inventor/a SUN, Bingbing

A preparation method for an aluminum oxyhydroxide nano adjuvant having controllable surface energy, which is on the basis of a hydrothermal synthesis method. A specific orientation of crystal growth is controlled by changing a pH value of a precipitation system, and finally a purpose of controlling surface free energy of an AlOOH nanomaterial is achieved. The method is simple to operate, low in raw material price, and good in reaction product stability and repeatability. A prepared aluminum oxyhydroxide nano material is uniform in morphology and uniform in dispersion, and has a good prospect in vaccine

preparation and production. An AIOOH adjuvant-based vaccine formulation and an immune effector verification method are simple and high in operability, and a good policy is provided for engineering development and further clinical conversion of a vaccine preparation.

8.[WO/2023/118426](#) STABILISED LIQUID VACCINES OF LIVE VIRUSES

WO - 29.06.2023

Clasificación Internacional [A61K 39/12](#) Nº de solicitud PCT/EP2022/087464 Solicitante INTERVET INTERNATIONAL B.V. Inventor/a KETS, Edwin

The present invention relates to liquid vaccine composition comprising a live virus and a natural deep-eutectic solvent (NADES) as the carrier. The carrier additionally comprises an additive selected from methionine and (hydroxy)ectoine. The additive is able to reduce the loss of virus titre over time, upon storage in a NADES-based liquid vaccine composition having up to 50 % w/w of water. Such compositions are less viscous which is favourable for the manufacture of the carrier, and the formulation and use of the liquid vaccine.

9.[WO/2023/118394](#) DNA VACCINE AGAINST LEISHMANIASIS

WO - 29.06.2023

Clasificación Internacional [A61K 39/002](#) Nº de solicitud PCT/EP2022/087392 Solicitante INTERVET INTERNATIONAL B.V. Inventor/a ARAMUNI GONCALVES, Luciana

The present invention relates to the fields of veterinary medicine and virology and provides a vaccine against leishmaniasis. In particular, the invention relates to an isolated polynucleotide comprising (i) a first expression cassette comprising a nucleic acid encoding heat shock protein (hsp) 65, and (ii) a second expression cassette comprising a nucleic acid encoding LACK (Leishmania homologue of receptors for activated C kinase). In other embodiments, the invention relates to a DNA plasmid comprising the polynucleotide, a DNA vaccine for use in the treatment of leishmaniasis, and a method of immunizing a subject against an infection with leishmaniasis.

10.[WO/2023/121264](#) VACCINE COMPOSITION FOR SARS-COV-2 VARIANT, AND USE THEREOF

WO - 29.06.2023

Clasificación Internacional [A61K 39/215](#) Nº de solicitud PCT/KR2022/020898 Solicitante EYEGENE INC. Inventor/a CHO, Yang Je

The present disclosure relates to a vaccine composition for preventing a SARS-CoV-2 variant, the composition comprising mRNA encoding an S antigen of a SARS-CoV-2 variant virus. A vaccine for preventing the SARS-CoV-2 variant according to the present disclosure exhibits excellent stability and high immunogenicity in vivo and is thus easy to store and use, and is expected to have an excellent preventive effect against COVID-19.

11.[WO/2023/116413](#) METHOD OF DEVELOPING A PEPTIDE-BASED VACCINE CONJUGATED WITH 1V209

WO - 29.06.2023

Clasificación Internacional [A61K 39/39](#) Nº de solicitud PCT/CN2022/136832 Solicitante VERSITECH LIMITED Inventor/a HUANG, Jiandong

Provided are a composition comprising a peptide conjugated to a TLR agonist, including TLR7 agonist 1v209, and methods of using the composition. The methods comprise administering the peptide-based vaccine conjugate to a subject. The peptide-based vaccine conjugate inhibits tumor growth and induces antigen-specific B and T cell responses in a subject.

12.[WO/2023/111262](#) LYME DISEASE RNA VACCINE

WO - 22.06.2023

Clasificación Internacional [A61P 31/04](#) Nº de solicitud PCT/EP2022/086341 Solicitante SANOFI Inventor/a PAVOT, Vincent

The present disclosure provides a Lyme disease vaccine, comprising a messenger RNA (mRNA) comprising an open reading frame (ORF) encoding at least one antigenic polypeptide derived from at least one bacteria of the genus *Borrelia*, and methods of eliciting an immune response by administering said vaccine.

13. [WO/2023/110422](#) VACCINE PREPARATION

WO - 22.06.2023

Clasificación Internacional [A61K 39/12](#) Nº de solicitud PCT/EP2022/084011 Solicitante GRABUSCHNIG, Stefan Inventor/a GRABUSCHNIG, Stefan

A vaccine preparation to be administered intramuscularly without or at least minor adverse effects comprises in addition to a mRNA-vaccine at least one vasoconstrictive agent, such as epinephrine, levonorderfrine and norepinephrine.

14. [WO/2023/120535](#) VACCINE ADJUVANT AGENT CONTAINING POLYACRYLIC ACID POLYMER AND USE OF SAME

WO - 29.06.2023

Clasificación Internacional [A61K 39/39](#) Nº de solicitud PCT/JP2022/046937 Solicitante TOKO YAKUHIN KOGYO CO., LTD. Inventor/a KAMISHITA, Taizou

The present disclosure provides a vaccine adjuvant agent which contains a high molecular weight polymer that comprises an acrylic acid as a constituent unit, while having a carboxyl group content of 60.0% by mass to 62.5% by mass.

15. [WO/2023/109835](#) VEGF-CRM197 RECOMBINANT FUSION PROTEIN VACCINE, AND PREPARATION METHOD THEREFOR AND USE THEREOF

WO - 22.06.2023

Clasificación Internacional [C07K 1/22](#) Nº de solicitud PCT/CN2022/138799 Solicitante SHANGHAI HUIMMUTECH BIOTECHNOLOGY CO., LTD Inventor/a ZHANG, Wenyao

Provided in the present invention are a VEGF-CRM197 recombinant fusion protein vaccine, and a preparation method therefor and the use thereof. Specifically, provided in the present invention is that truncated VEGF, namely a VEGF1-107 antigen fragment, which loses the biological activity of VEGF but retains its immunogenicity, is fused with diphtheria toxin mutant CRM197 for recombinant expression to form a VEGF recombinant fusion protein. After being used in combination with a liquid adjuvant, the VEGF recombinant fusion protein can induce mice and rhesus monkeys to produce high-titer antibodies and block the binding of VEGF-A to a receptor thereof, thereby inhibiting the promotion effect of VEGF-A on the proliferation of vascular endothelial cells.

16. [WO/2023/121036](#) VACCINE COMPOSITION COMPRISING INACTIVATED PNEUMOCOCCAL MUTANT STRAIN

WO - 29.06.2023

Clasificación Internacional [A61K 39/09](#) Nº de solicitud PCT/KR2022/019299 Solicitante ILDONG PHARMACEUTICAL CO., LTD. Inventor/a LEE, Dong Kwon

The present application relates to a vaccine composition comprising an inactivated pneumococcal mutant strain for prevention or treatment of pneumonia, wherein the inactivated pneumococcal mutant strain has a part or the entirety of the pep27 gene deleted.

17. [WO/2023/113016](#) EFFICIENT VACCINE

WO - 22.06.2023

Clasificación Internacional [C12N 15/62](#) Nº de solicitud PCT/JP2022/046430 Solicitante VLP THERAPEUTICS JAPAN, INC. Inventor/a AKAHATA, Wataru

Provided herein is an isolated polynucleotide, which encodes structural proteins nsp1, nsp2, nsp3 and nsp4 and a polypeptide comprising an antigenic protein fused to a signal sequence, a transmembrane

domain and at least one peptide selected from CD4+ T cell epitopes and CD8+ T cell epitopes. The polynucleotide is useful for manufacturing a vaccine against virus infection, especially, COVID-19 infection, the treatment of a cancer and/or an inflammatory disease.

18.[WO/2023/117742](#)VACCINE COMPOSITIONS AND THEIR USE

WO - 29.06.2023

Clasificación Internacional [A61K 39/12](#) N° de solicitud PCT/EP2022/086304 Solicitante OSIVAX

Inventor/a LE VERT, Alexandre

The invention relates to immunogenic compositions and their use as a vaccine for the prevention of coronavirus disease in a human subject. More specifically, the invention relates to methods of use of an immunogenic composition in the prevention of coronavirus disease in a human subject in need thereof, said immunogenic composition comprising: a fusion protein comprising (i) a SARS-CoV2 nucleocapsid N antigen and, (ii) a carrier protein comprising a self-assembling polypeptide derived from C4bp oligomerization domain and a positively charged tail.

19.[WO/2023/114273](#)METHODS OF TREATING CANCER AND MONITORING ANTI-CANCER

IMMUNITY

WO - 22.06.2023

Clasificación Internacional [A61K 39/00](#) N° de solicitud PCT/US2022/052802 Solicitante ZHANG, Lurong

Inventor/a ZHANG, Lurong

The invention relates to induced neoantigen vaccines and a method of using same to treat cancer by enhancing a patient's anti-cancer immunity. The method involves application of an induction radiation to the patient to generate an "in situ vaccine" in vivo, subsequent removal of the tumor, subjecting its cells to a survival pressure for further production of neoantigens in vitro, and processing of the cells to obtain a self-tumor vaccine. The invention provides comprehensive mobilization of individualized anti-cancer active immunity via sequential combination of means of cancer treatments (e.g., radiotherapy, surgery, chemotherapy). Another aspect of the invention relates to an immunoassay protocol to monitor parameters indicative of the cellular and humoral anti-cancer immunity of a patient.

20.[WO/2023/116374](#)HERPES ZOSTER VACCINE COMPOSITION

WO - 29.06.2023

Clasificación Internacional [A61K 39/25](#) N° de solicitud PCT/CN2022/135376 Solicitante SHANGHAI ZERUN BIOTECHNOLOGY CO., LTD. Inventor/a ZHANG, Chao

Provided is a herpes zoster vaccine composition. The composition comprises a varicella-zoster virus antigen and a composite adjuvant, wherein the composite adjuvant comprises a CpG oligodeoxynucleotide, QS-21 and a liposome, and the CpG oligodeoxynucleotide is CpG 7909. The composition can induce a strong antibody reaction and T cell immune response, and is used for preventing varicella-zoster virus infections.

21.[WO/2023/115676](#)DENDRITIC CELL CANCER VACCINE AND USE THEREOF

WO - 29.06.2023

Clasificación Internacional [C12N 5/0784](#) N° de solicitud PCT/CN2022/073141 Solicitante SUZHOU ERSHENG BIOMEDICAL CO., LTD. Inventor/a LIU, Mi

Provided is a dendritic cell cancer vaccine, which is obtained by delivery particles loaded with cell components activating dendritic cells in vitro, wherein the delivery particles are nanoparticles and/or microparticles, the cell components are derived from water-soluble components and/or non-water-soluble components of cancer cells and/or tumor tissue cells, and activation is a process in which the delivery particles loaded with the cell components and the dendritic cells are co-incubated.

22.[4198052](#) PEPTIDE UND ANTIGENBINDENDE PROTEINE ZUR VERWENDUNG IN DER IMMUNTHERAPIE GEGEN FIBROLAMELLARES HEPATOZELLULÄRES KARZINOM (FL-HCC) UND ANDERE KREBSARTEN  
EP - 21.06.2023

Clasificación Internacional [C07K 14/705](#) Nº de solicitud 21214728 Solicitante UNIV TUEBINGEN MEDIZINISCHE FAKULTAET Inventor/a WALZ JULIANE

The present invention relates to peptides, antigen binding proteins, nucleic acids and cells for use in immunotherapeutic methods. In particular, the present invention relates to the immunotherapy of cancer, especially of fibrolamellar hepatocellular carcinoma (FL-HCC). The present invention furthermore relates to tumor-associated T-cell peptide epitopes and recombinant T-cell receptors that can for example serve as active pharmaceutical ingredients of vaccine compositions that stimulate anti-tumor immune responses, or to stimulate T cells ex vivo and transfer into patients.

23.[WO/2023/121960](#) COMPOSITIONS AND METHODS FOR DELIVERY AND PRODUCTION OF ANTIBODIES USING AN RNA-CONTAINING NANOPARTICLE PLATFORM  
WO - 29.06.2023

Clasificación Internacional [C07K 16/18](#) Nº de solicitud PCT/US2022/053132 Solicitante THE REGENTS OF THE UNIVERSITY OF COLORADO, A BODY CORPORATE Inventor/a KEDL, Ross

Embodiments of the instant disclosure relate to novel complexes, compositions, and methods for generating and delivering antibodies to induce a pathway in a subject. Other embodiments relate to generating antibodies for treating a health condition or inducing a pathway for inducing a cellular immune response to treat a health condition. In accordance with these embodiments, nanoparticle complexes disclosed herein include antibody-encoding mRNA transcripts, encapsulated into a lipid nanoparticle. In other embodiments, complexes disclosed herein can be administered to a subject in combination with administration of a vaccine to a subject.

24.[WO/2023/111182](#) PEPTIDES AND ANTIGEN BINDING PROTEINS FOR USE IN IMMUNOTHERAPY AGAINST FIBROLAMELLAR HEPATOCELLULAR CARCINOMA (FL-HCC) AND OTHER CANCERS  
WO - 22.06.2023

Clasificación Internacional [C07K 14/705](#) Nº de solicitud PCT/EP2022/086159 Solicitante EBERHARD KARLS UNIVERSITAET TUEBINGEN MEDIZINISCHE FAKULTAET Inventor/a WALZ, Juliane

The present invention relates to peptides, antigen binding proteins, nucleic acids and cells for use in immunotherapeutic methods. In particular, the present invention relates to the immunotherapy of cancer, especially of fibrolamellar hepatocellular carcinoma (FL-HCC). The present invention furthermore relates to tumor-associated T-cell peptide epitopes and recombinant T-cell receptors that can for example serve as active pharmaceutical ingredients of vaccine compositions that stimulate anti-tumor immune responses, or to stimulate T cells ex vivo and transfer into patients.

25.[4196157](#) ZUSAMMENSETZUNGEN ZUR BEHANDLUNG VON GASTROINTESTINALEN ADENOKARZINOMEN DURCH VERÄNDERUNG DER TUMORMIKROUMGEBUNG  
EP - 21.06.2023

Clasificación Internacional [A61K 39/12](#) Nº de solicitud 21765592 Solicitante NORDIC SCIENCE GROUP APS Inventor/a UTTENTHAL LARS OTTO

The present invention provides compositions comprising a vaccine against the SARS-CoV-2 virus for promoting an antitumor immune response in a subject with an accessible adenocarcinoma tumor who has previously been exposed to said virus by infection or vaccination, by the direct injection of the composition into the tumor.

26.[WO/2023/109979](#) FUSION PROTEIN DISPLAYING SARS-COV-2 S PROTEIN, RECOMBINANT VIRION, AND USE OF FUSION PROTEIN AND RECOMBINANT VIRION

WO - 22.06.2023

Clasificación Internacional Nº de solicitud PCT/CN2023/076443 Solicitante ZHEJIANG DIFFERENCE BIOLOGICAL TECHNOLOGY CO., LTD Inventor/a CHEN, Ruiting

Provided in the present invention are a fusion protein displaying a SARS-COV-2 S protein, a recombinant virion, and the use of the fusion protein and the recombinant virion, which belong to the technical field of biological products. Provided in the present invention are a fusion gene expressing a SARS-COV-2 S protein, and a fusion protein, wherein the fusion gene or fusion protein contains the sequence of an extracellular domain of a SARS-COV-2 S protein and the sequences of a transmembrane domain and an intracellular domain of an Avian paramyxovirus (APMV) F protein. Meanwhile, a recombinant NDV virus containing the sequences has a strong ability to neutralize an antibody. It can be seen that the fusion gene or protein formed by means of fusing a sequence encoding an extracellular domain of an S protein with sequences encoding a transmembrane domain and an intracellular domain of an APMV (excluding NDV) F protein has great potential to be an excellent candidate antigen for a SARS-COV-2 vaccine.

27.[WO/2023/121131](#)CORONAVIRUS VACCINE

WO - 29.06.2023

Clasificación Internacional [C12N 15/63](#) Nº de solicitud PCT/KR2022/020354 Solicitante HANMI PHARM. CO., LTD. Inventor/a HAN, Seung Su

Provided are: a non-natural 5'-untranslated region and 3'-untranslated region nucleotide; and a use thereof.

28.[WO/2023/121050](#)COMPOSITION FOR PREVENTING OR TREATING ISCHEMIA-REPERFUSION INJURY AND USE THEREOF

WO - 29.06.2023

Clasificación Internacional [A61K 48/00](#) Nº de solicitud PCT/KR2022/019524 Solicitante NA VACCINE INSTITUTE Inventor/a KIM, Dong Ho

Provided are a composition for preventing or treating ischemia-reperfusion injury and a use thereof.

29.[WO/2023/109535](#)ANTI-MAREK'S DISEASE VIRUS MONOCLONAL ANTIBODY, HYBRIDOMA CELL STRAIN THEREOF, AND USE OF ANTI-MAREK'S DISEASE VIRUS MONOCLONAL ANTIBODY IN DETECTION KIT

WO - 22.06.2023

Clasificación Internacional [C07K 16/08](#) Nº de solicitud PCT/CN2022/136408 Solicitante SHANGHAI VETERINARY RESEARCH INSTITUTE, CHINESE ACADEMY OF AGRICULTURAL SCIENCE (CHINA ANIMAL HEALTH AND EPIDEMIOLOGY CENTER SHANGHAI BRANCH) Inventor/a LI, Zejun

Disclosed in the present invention is an anti-Marek's disease virus monoclonal antibody. Further disclosed in the present invention are a detection kit for Marek's virus antibody and the use of the monoclonal antibody in the preparation of a product for diagnosing or treating Marek's disease. A blocking ELISA kit for detecting the Marek's virus antibody prepared by using the anti-Marek's virus monoclonal antibody in the present invention has strong specificity and high sensitivity, and has good application prospects in epidemiological investigation of Marek's virus, vaccine immune efficacy evaluation and diagnosis of Marek's disease.

30.[4197551](#)ADOPTIVER ZELLTRANSFER UND ONKOlytische VIRUS-KOMBINATIONSTHERAPIE EP - 21.06.2023

Clasificación Internacional [A61K 39/00](#) Nº de solicitud 22208589 Solicitante UNIV MCMASTER Inventor/a WAN YONGHONG

The present invention describes a method for treating cancer comprising adoptive transfer of tumor antigen specific CD8+ T cells and an oncolytic virus vaccine targeting the same antigen.

31.[4196155](#)LYOPHILISIERTE LEBENDE BORDETELLA-IMPFSTOFFE

EP - 21.06.2023

Clasificación Internacional [A61K 39/10](#) Nº de solicitud 21856843 Solicitante ILIAD BIOTECHNOLOGIES LLC Inventor/a THALEN MARCEL

Formulations of lyophilized *Bordetella* bacteria which are stable for at least two years when stored at temperatures between -20° and 22.5°C, and which exhibit sufficient bacterial viability and potency to be used as a live vaccine are made by harvesting *Bordetella* bacteria from a culture at an OD600 between 0.4 and 1.6; mixing the harvested *Bordetella* bacteria with a lyophilization buffer comprising 5-65% by weight a cryoprotectant sugar and having a temperature between 2-35°C, wherein the ratio of harvested *Bordetella* bacteria to lyophilization buffer is between 5:1 and 1:5 by volume; lyophilizing the mixture of the *Bordetella* bacteria and the lyophilization buffer; wherein the hold time between the harvesting and lyophilizing steps is less than 48 hours; and collecting the lyophilized *Bordetella* bacteria.

32.[4198043](#) VERFAHREN ZUR HERSTELLUNG EINES DEM INAKTIVIERTEN SARS-COV-2-VIRUS ENTSPRECHENDEN ANTIGENS, DEM INAKTIVIERTEN SARS-COV-2-VIRUS ENTSPRECHENDE ANTIGENZUSAMMENSETZUNG, KITS UND VERWENDUNGEN DAVON

EP - 21.06.2023

Clasificación Internacional [C07K 14/165](#) Nº de solicitud 21786080 Solicitante INST BUTANTAN Inventor/a OLIVEIRA RICARDO DAS NEVES

The present invention relates to techniques and processes for the production, purification, inactivation and analysis of SARS-CoV-2. The present invention refers to the process to produce an antigen, corresponding to SARS-CoV-2 virus, inactivated by gamma irradiation. The process to produce an antigen, corresponding to SARS-CoV-2 viruses inactivated by gamma irradiation, is to be used in the production of a new vaccine, antigen for the production of hyperimmune plasma in horses for serum therapy, and in different animal species for the production of antibodies/inputs for research and establishment of serodiagnostic techniques. The present invention refers to the antigenic composition in which it comprises the antigen, corresponding to the inactivated SARS-CoV-2 virus, and a pharmaceutically acceptable vehicle, excipient, diluent. It also relates to a Process for producing anti-SARS-CoV-2 immunoglobulin using the SARS-CoV-2 virus inactivated by gamma irradiation

33.[WO/2023/111861](#) PROSTATE CANCER VACCINES AND USES THEREOF

WO - 22.06.2023

Clasificación Internacional [A61K 39/00](#) Nº de solicitud PCT/IB2022/062162 Solicitante JANSSEN BIOTECH, INC. Inventor/a WILKINSON, Patrick

Disclosed herein are methods of treating or preventing prostate cancer in a subject, the methods comprising administering to the subject a treatment regimen comprising two or more vaccines comprising a great ape adenovirus serotype 20 (GAd20) virus that, in turn, comprises a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 1 and one or more vaccines comprising a Modified Vaccinia Ankara (MVA) virus that, in turn, comprises a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 3 to thereby treat or prevent the prostate cancer.

34.[WO/2023/122774](#) IMMUNOGENICITY OF A CPG-ADJUVANTED HERPES ZOSTER VACCINE

WO - 29.06.2023

Clasificación Internacional [A61K 39/12](#) Nº de solicitud PCT/US2022/082311 Solicitante DYNAVAX TECHNOLOGIES CORPORATION Inventor/a JANSSEN, Robert S.

The present disclosure relates to methods for increasing cell-mediated immunity against varicella zoster virus (VZV) in a human subject in need thereof by administration of an immunogenic composition comprising effective amounts of a VZV glycoprotein E antigen and an oligonucleotide comprising an unmethylated cytidine-phospho-guanosine (CpG) motif. The immunogenic compositions are suitable for prevention of herpes zoster and/or postherpetic neuralgia.

35.[WO/2023/114418](#) IMPLANTABLE SCAFFOLDS FOR IMMUNOTHERAPEUTIC AND OTHER USES  
WO - 22.06.2023

Clasificación Internacional [A61K 39/12](#) Nº de solicitud PCT/US2022/053040 Solicitante THE REGENTS OF THE UNIVERSITY OF CALIFORNIA Inventor/a HASANI-SADRABADI, Mohammad Mahdi An implantable or injectable scaffold comprising an antigen, a T memory cell inducer, and other optional components is provided for use in enhancing the immune response to the antigen, in particular for subjects who are elderly, immunosenescent and/or immunocompromised, or undergoing cancer therapy. Coronavirus SARS-CoV-2 has caused millions of confirmed cases and hundreds of thousands of deaths. However, there is no effective drug treatment, and vaccine is in great need to control the spread of such highly infectious virus.

36.[WO/2023/111728](#) PÉPTIDOS INMUNOGÉNICOS CONTRA EL VIRUS DISTEMPER CANINO (CDV)  
WO - 22.06.2023

Clasificación Internacional [A61K 39/175](#) Nº de solicitud PCT/IB2022/061236 Solicitante UNIVERSIDAD COOPERATIVA DE COLOMBIA Inventor/a RENDON MARÍN, Santiago

El presente desarrollo se refiere a péptidos inmunogénicos contra el Virus Distemper Canino (CDV) que tienen la secuencia X<sub>1</sub>-X<sub>2</sub>-X<sub>3</sub>-X<sub>4</sub>-X<sub>3</sub>-X<sub>5</sub>-X<sub>6</sub>-X<sub>7</sub>-X<sub>8</sub>, diseñados mediante herramientas computacionales y composiciones inmunogénicas que comprenden dichos péptidos, útiles como una alternativa de vacuna universal para prevenir el contagio por CDV en fauna silvestre y doméstica.

37.[4023755](#) KUNSTIGE NUKLEINSYREMOLEKYLER TIL FORBEDRET PROTEINUDTRYKKELSE  
DK - 19.06.2023

Clasificación Internacional [C12N 15/67](#) Nº de solicitud 21209125 Solicitante CureVac SE Inventor/a Schlake, Thomas

The invention relates to an artificial nucleic acid molecule comprising an open reading frame and a 3'-UTR comprising at least one poly(A) sequence or a polyadenylation signal. The invention further relates to a vector comprising the artificial nucleic acid molecule comprising an open reading frame and a 3'-UTR comprising at least one poly(A) sequence or a polyadenylation signal, to a cell comprising the artificial nucleic acid molecule or the vector, to a pharmaceutical composition comprising the artificial nucleic acid molecule or the vector and to a kit comprising the artificial nucleic acid molecule, the vector and/or the pharmaceutical composition. The invention also relates to a method for increasing protein production from an artificial nucleic acid molecule and to the use of a 3'-UTR for a method for increasing protein production from an artificial nucleic acid molecule. Moreover, the invention concerns the use of the artificial nucleic acid molecule, the vector, the kit or the pharmaceutical composition as a medicament, as a vaccine or in gene therapy.

38.[4196160](#) [SARS-COV-)2-VIRUS-ÄHNLICHER PARTIKEL IMPFSTOFF: ZUSAMMENSETZUNGEN, ABGABESTRATEGIEN, VERFAHREN UND VERWENDUNGEN  
EP - 21.06.2023

Clasificación Internacional [A61K 39/215](#) Nº de solicitud 21858993 Solicitante TECHNOVAX INC Inventor/a GALARZA JOSE M

The present application relates to SARS-CoV-2 virus-like particles (VLP) and related plasmids, compositions, and methods. The VLP can comprise a modified spike glycoprotein, a matrix protein, a nucleoprotein N and an envelope protein of SARS-CoV-2, where the modified spike glycoprotein comprises an S1 domain and an S2 domain, and includes one or more modifications. These modifications can include: linking the S1 and S2 domains via generation of disulfides bonds between the S1 and S2 domains; linking intra-polypeptide and inter-polypeptide S2 helices of the S2 domain; and substitution of one or more non-cysteine residues with a cysteine residue to generate one or more disulfide bonds. The

modifications can stabilize a prefusion conformation of the spike glycoprotein and prohibit a transition to a post-fusion structure.

39. [4196158](#) SALMONELLA-IMPFSTOFF ZUR BEHANDLUNG DES CORONAVIRUS

EP - 21.06.2023

Clasificación Internacional [A61K 39/12](#) Nº de solicitud 21769894 Solicitante UNIV WUERZBURG J MAXIMILIANS Inventor/a RUDEL THOMAS

The present invention provides live-attenuated bacterium of the genus Salmonella comprising a recombinant plasmid encoding a fusion protein, wherein the fusion protein comprises a coronavirus antigen and an adjuvant peptide.

40. [WO/2023/121483](#) IMMUNOSTIMULATORY COMPOSITIONS

WO - 29.06.2023

Clasificación Internacional [A61K 39/39](#) Nº de solicitud PCT/NZ2022/050178 Solicitante VICTORIA LINK LIMITED Inventor/a PAINTER, Gavin Frank

The present application is directed to immunomodulatory compositions comprising invariant NKT cell (iNKT cell) agonist compounds that induce expansion of tissue resident memory T-cells (Trm Cells) in combination with an immune stimulator agent that enhances an immune response to a target antigen or a polynucleotide encoding the immune stimulator. The iNKT agonists are a-GalCer analogue compounds modified at the 6 position of the galactose ring. The immune stimulator is an antigen or an mRNA encoding an antigen to create a vaccine formulation. These combinations are used in the treatment of infection or cancer in a subject, or to enrich the number of Trm cells in the liver of a subject.

41. [WO/2023/111592](#) RNA CONSTRUCT

WO - 22.06.2023

Clasificación Internacional [C12N 15/86](#) Nº de solicitud PCT/GB2022/053275 Solicitante IMPERIAL COLLEGE INNOVATIONS LIMITED Inventor/a MCKAY, Paul

The invention relates to RNA constructs, and particularly, although not exclusively, to mRNA constructs and saRNA replicons and to nucleic acids and expression vectors encoding such RNA constructs. The invention extends to the use of such RNA constructs in therapy, for example in treating diseases and/or in vaccine delivery. The invention extends to pharmaceutical compositions comprising such RNA constructs, and methods and uses thereof.

42. [WO/2023/114727](#) BACTERIOPHAGE LAMBDA-VACCINE SYSTEM

WO - 22.06.2023

Clasificación Internacional [C07K 14/005](#) Nº de solicitud PCT/US2022/081383 Solicitante THE UNITED STATES OF AMERICA, AS REPRESENTED BY THE SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES Inventor/a ADHYA, Sankar L.

Bacteriophage λ are disclosed herein that include a head, a tail, and a lambda genome comprising a nucleic acid sequence encoding a fusion protein comprising a D protein linked to heterologous antigen, wherein the nucleic acid sequence is inserted into a native gene D locus adjacent to gene E, in the lambda genome, and wherein expression of the fusion protein results in the head of the bacteriophage λ comprising the fusion protein. Host bacterial cells also disclosed herein that are infected with the bacteriophage λ. In addition, immunogenic compositions are disclosed that include an effective amount of the bacteriophage λ. Methods also are disclosed for inducing an immune response to the heterologous antigen in a subject. Furthermore, methods are disclosed for preparing these bacteriophage λ.

43. [WO/2023/118033](#) VACCINE

WO - 29.06.2023

Clasificación Internacional [A61K 39/108](#) Nº de solicitud PCT/EP2022/086835 Solicitante GLAXOSMITHKLINE BIOLOGICALS SA Inventor/a BRAUN, Martin Edward

The present invention relates to the field of immunogenic compositions and vaccines, their manufacture, host cells which can be used in their manufacture and the use of such immunogenic compositions and vaccines in medicine. More particularly, it relates to Klebsiella pneumoniae O-antigens, conjugates comprising a K. pneumoniae O-antigen, host cells suitable for their production and immunogenic compositions or vaccines containing at least one Klebsiella pneumoniae O-antigen. The present invention particularly relates to a form of Klebsiella pneumoniae O1v1 O-antigen polysaccharide or O1v2 O-antigen polysaccharide which is produced in the absence of a wbbZ gene.

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