VacCiencia

FINLAY EDICIONES

Boletín Científico

No. 12 (1-30 junio / 2024)

EN ESTE NÚMERO

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

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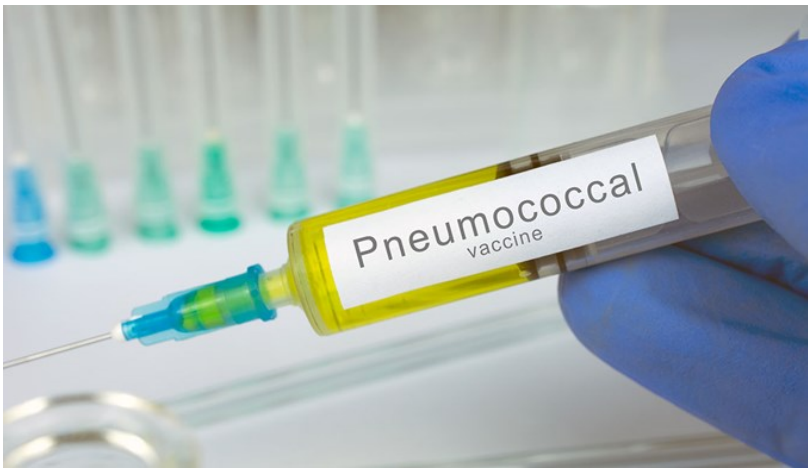
CUBA

Uso de las vacunas conjugadas contra neumococos en adultos



La enfermedad neumocócica (EN) es una causa importante de morbilidad y mortalidad en los adultos mayores. La prevención de la EN se basa fundamentalmente en la utilización de vacunas. Hasta hace algunos años sólo se disponía de la vacuna antineumocócica polisacárida 23-valente, con resultados controvertidos en cuanto a su eficacia y efectividad, y con limitaciones importantes por el tipo de respuesta inmune inducida. En los últimos años se ha realizado un importante progreso en la prevención de estas infecciones. La posibilidad actual de utilizar la vacuna conjugada 13-valente en el adulto abre expectativas importantes en la mejora de la prevención de la enfermedad neumocócica en estos grupos de edad.

No obstante, a pesar de que muchos países de ingresos altos (PIA) recomiendan la vacunación neumocócica en este grupo etario, incluso cuando existen políticas vigentes, la cobertura suele ser baja. Las vacunas utilizadas, es decir, PCV13 y PPV23, y la edad de vacunación varían según los países. Actualmente, muy pocos países de ingresos bajos y medianos brindan vacunación neumocócica a adultos mayores como parte de un programa de rutina.

A partir del año 2014, el Comité Asesor sobre Prácticas de Inmunización (ACIP) recomendó la vacuna antineumocócica conjugada de 13 valencias (PCV13) en serie con la vacuna de polisacáridos de 23 valencias (PPSV23) para todos los adultos de ≥ 65 años.

Posteriormente, sobre la base de una revisión de la evidencia acumulada, el ACIP cambió la recomendación para el uso de PCV13 en adultos, teniendo en cuenta que el uso de PCV13 en niños había provocado fuertes descensos en la enfermedad neumocócica entre adultos y niños. Es por ello que recomendó una dosis única de rutina de PPSV23 para adultos ≥ 65 años, así como la toma de decisiones clínicas compartida con respecto a la administración de PCV13 a personas de 65 años o más que no tuviesen una condición inmunocomprometida, fuga de líquido cefalorraquídeo o implante coclear y que no hubieran recibido previamente PCV13. En caso de que se tomara la decisión de administrar PCV13, se debía administrar PCV13 primero, seguido de PPSV23 al menos 1 año después.

Por su parte la OMS, de conformidad con su mandato de proporcionar orientación a los Estados Miembros sobre cuestiones de política sanitaria, publica una serie de documentos de posición actualizados periódicamente. Estos documentos se refieren principalmente al uso de vacunas en programas de inmunización en gran escala y concluye con la posición actual de la OMS sobre el uso de vacunas en todo el mundo.

En documentos de posición anteriores (2008) con relación al uso de medicamentos neumocócicos, se indicaba que, en entornos de recursos limitados donde existen muchas prioridades de salud en competencia, la evidencia no respaldaba la inmunización neumocócica de rutina de los adultos mayores y las poblaciones de alto riesgo con la vacuna polisacárida (PPV23). También afirmó que, debido a los efectos sustanciales de la inmunidad colectiva en los grupos de edad adulta después de la inmunización infantil sistemática con la

vacuna antineumocócica conjugada heptavalente (PCV7), se debería dar mayor prioridad a la introducción y el mantenimiento de una alta cobertura de lactantes con PCV7.

El Grupo Técnico Asesor (GTA) de la Organización Panamericana de la Salud (OPS) recomendó en el año 2013 incluir la vacuna antineumocócica conjugada (PCV) y mantener altas coberturas en el esquema rutinario de vacunación en niños no sólo para proteger a los niños vacunados, sino también proteger a otros grupos de edad como resultado de la inmunidad de rebaño. Por lo que se va considerando el efecto indirecto del uso de estas vacunas para otras poblaciones. Para ese entonces, el GTA no recomendó el uso de la PCV en adultos. La introducción de la PCV en adultos se debía basar en la evidencia y no en la disponibilidad de donaciones u otros factores.

Ya en el año 2014, el GTA planteó que la introducción de las vacunas conjugadas contra el neumococo en niños seguía siendo la prioridad para la reducción de la enfermedad neumocócica y que la introducción de la vacuna antineumocócica 13 valente en adultos sanos en los programas de Inmunización, dependería de los resultados de los estudios de efectividad, costo-efectividad y efecto rebaño. También que los países que hubiesen incorporado la vacuna polisacárida 23 valente para uso en adultos, podrían utilizar un esquema secuencial (conjugada-polisacárida) para población adulta de alto riesgo.

Además, los países que no utilizaran vacuna para neumococo en adultos de alto riesgo, y consideraran prioritaria la vacunación de esta población, podrían incluir la vacuna antineumocócica 13 valente en su calendario de vacunación, basado en los estudios de inmunogenicidad.

De acuerdo a una Declaración de Información sobre Vacunas de los Centros de Control y Prevención de Enfermedades (CDC, por sus siglas en inglés) publicada en 2023, los adultos de 65 años o más que no hayan recibido previamente la vacuna neumocócica conjugada deben recibirla. A algunas personas con determinadas afecciones médicas también se les recomienda recibir la vacuna neumocócica de polisacáridos (un tipo diferente de vacuna neumocócica, conocida como PPSV23). A algunos adultos que hayan recibido previamente una vacuna neumocócica conjugada se les puede recomendar que reciban otra más.

Según las órdenes permanentes para la administración de vacunas neumocócicas (PCV15, PCV20 y PPSV23) a adultos, publicadas en el sitio www.immunize.org se recomienda para adultos de 65 años o más, elegir entre dos opciones que se muestran en los siguientes calendarios según el historial de vacunación neumocócica del receptor:

PRIOR VACCINES	OPTION A	OPTION B
None, unknown, or PCV7 only	PCV20	PCV15 followed by PPSV23 in at least 1 year**
PPSV23 only (at any age)	PCV20 at least 1 year after PPSV23	PCV15 at least 1 year after PPSV23
PCV13 only (at any age)	PCV20 at least 1 year after PCV13	PPSV23 at least 1 year** after PCV13
PCV13 (at any age) & PPSV23 before age 65 years	PCV20 at least 5 years after last pneumococcal vaccine dose	PPSV23 #2 at least 5 years after previous PPSV23†
Complete series of PCV13 at any age & PPSV23 at age 65 years or older	May administer PCV20 at least 5 years after most recent pneumococcal vaccination	

**Considere un intervalo mínimo (8 semanas) para adultos con una condición inmunocomprometida, implante coclear o fuga de líquido cefalorraquídeo (LCR).

† Para adultos con una condición inmunocomprometida, implante coclear o fuga de LCR, el intervalo mínimo para PPSV23 es de

al menos 8 semanas desde la última dosis de PCV13 y al menos 5 años desde la última dosis de PPSV23; para otros, el intervalo mínimo para PPSV23 es al menos 1 año desde la última dosis de PCV13 y al menos 5 años desde la última dosis de PPSV23.

Según Margot L. Savoy (2024), especialista de la Facultad de Medicina Lewis Katz de la Universidad de Temple, sobre las vacunas neumocócicas, Los adultos de 65 años o más que no hayan recibido previamente una vacuna neumocócica conjugada o cuyo historial de vacunación se desconozca deben recibir 1 dosis de PCV20 o 1 dosis de PCV15 seguida de una dosis de PPSV23.

Recomendaciones de uso en edades de 65 años o más:

⇒ No haber recibido previamente una dosis de PCV13, PCV15 o PCV20 o cuyo historial de vacunación previo se desconoce: 1 dosis de PCV15 o 1 dosis de PCV20. Si se usa PCV15, esto debe ir seguido de una dosis de PPSV23 administrada al menos 1 año después de la dosis de PCV15.

- Se puede considerar un intervalo mínimo de 8 semanas entre PCV15 y PPSV23 para adultos con una condición inmunocomprometida, implante coclear o fuga de líquido cefalorraquídeo para minimizar el riesgo de enfermedad neumocócica invasiva causada por serotipos exclusivos de PPSV23 en estos grupos vulnerables.
- Las condiciones inmunocomprometidas incluyen insuficiencia renal crónica, síndrome nefrótico, inmunodeficiencia, inmunosupresión iatrogénica, neoplasia maligna generalizada, virus de inmunodeficiencia humana, enfermedad de Hodgkin, leucemia, linfoma, mieloma múltiple, trasplantes de órganos sólidos, asplenia congénita o adquirida, anemia de células falciformes u otras hemoglobinopatías.

⇒ Anteriormente sólo recibió PCV7: siga la recomendación anterior.

⇒ Anteriormente recibió sólo PCV13: 1 dosis de PCV20 al menos 1 año después de la dosis de PCV13 o complete la serie recomendada de PPSV23 como se describe a continuación:

Momento de la vacunación neumocócica en adultos

Adults ≥65 years old
Complete pneumococcal vaccine schedules

Prior vaccines	Option A	Option B
None*	PCV20	PCV15 → ≥1 year† → PPSV23
PPSV23 only at any age	≥1 year → PCV20	≥1 year → PCV15
PCV13 only at any age	≥1 year → PCV20	≥1 year† → PPSV23
PCV13 at any age & **PPSV23** at <65 yrs	≥5 years → PCV20	≥5 years§ → PPSV23

*También aplica para personas que recibieron PCV7 a cualquier edad y ninguna otra vacuna neumocócica.

† Considere un intervalo mínimo (8 semanas) para adultos con una condición inmunocomprometida, implante coclear o fuga de líquido cefalorraquídeo (LCR).

§ Para adultos con una condición inmunocomprometida, implante coclear o fuga de LCR, el intervalo mínimo para PPSV23 es ≥8 semanas desde la última dosis de PCV13 y ≥5 años desde la última dosis de PPSV23; para otros, el intervalo mínimo para PPSV23 es ≥1 año desde la última dosis de PCV13 y ≥5 años desde la última dosis de PPSV23.

Toma de decisiones clínicas compartida para quienes ya completaron la serie con PCV13 y PPSV23

Prior vaccines	Shared clinical decision-making option		
Complete series: PCV13 at any age & **PPSV23** at ≥65 yrs	≥5 years	**PCV20**	Together, with the patient, vaccine providers **may choose** to administer PCV20 to adults ≥65 years old who have already received PCV13 (but not PCV15 or PCV20) at any age and PPSV23 at or after the age of 65 years old.

⇒ Anteriormente recibió sólo PPSV23: 1 dosis de PCV15 o 1 dosis de PCV20 al menos 1 año después de la dosis de PPSV23. Si se usa PCV15, no es necesario que vaya seguida de otra dosis de PPSV23.

⇒ Recibió previamente tanto PCV13 como PPSV23, pero no recibió PPSV23 a la edad de 65 años o más: 1 dosis de PCV20 al menos 5 años después de su última dosis de vacuna neumocócica o completar la serie recomendada de PPSV23.

⇒ Recibió previamente tanto PCV13 como PPSV23, y PPSV23 se recibió a la edad de 65 años o más: los adultos de 65 años o más tienen la opción de recibir PCV20 si previamente completaron la serie de vacunas neumocócicas con PCV13 y PPSV23. Esto incluye una dosis de PCV13 a cualquier edad y todas las dosis recomendadas de PPSV23, incluida una dosis a los 65 años o después. La PCV20 no se recomienda de forma rutinaria para estas personas ya que su riesgo de enfermedad es menor debido a vacunas previas. En cambio, ACIP recomienda la vacuna PCV20 para personas de 65 años o más que hayan recibido PCV13 y PPSV23 sobre la base de una toma de decisiones clínica compartida. La toma de decisiones clínicas compartida se refiere a una recomendación de vacuna basada individualmente informada por un proceso de toma de decisiones entre el proveedor de atención médica y el paciente.

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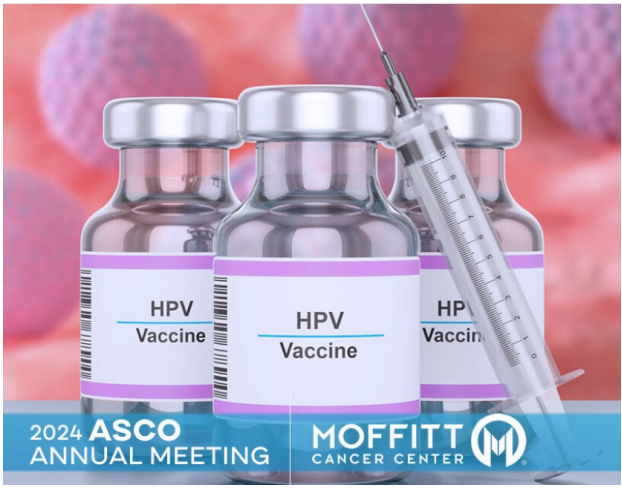
Noticias en la Web

New Study Reveals HPV Vaccine Benefits Men, Too



Jun 1. A new study featured at the 2024 American Society of Clinical Oncology Annual Meeting highlights the extensive benefits of the human papillomavirus (HPV) vaccine in reducing the risk of various cancers. The research, which analyzed data from over 3.4 million patients, reveals that the HPV vaccine significantly lowers the incidence of several cancers linked to the virus, particularly head and neck cancers in males.

The study found that vaccinated males had a notable decrease in all HPV-related cancers, with an incidence rate of 3.4 cases per 100,000 vaccinated individuals compared to 7.5 cases per 100,000 unvaccinated individuals. For head and neck cancers, the rate was 2.8 cases per 100,000 among vaccinated males versus 6.3 cases per 100,000 in unvaccinated males.

"This retrospective database analysis study reflects the prevalence of HPV in specific cancer sites. The results show a higher reduction of head and neck cancers in males because these cancers are more prevalent in males than females. Similarly, the significant reduction in cervical cancers aligns with the high prevalence of HPV-driven cervical cancers out of all HPV related cancers in females," said Monica Avila, MD, PhD, a medical oncologist in the Gynecologic Oncology Department at Moffitt Cancer Center.

The research also confirmed the vaccine's efficacy in females, showing a reduced incidence of cervical cancer among vaccinated women (7.4 cases per 100,000) compared to unvaccinated women (10.4 cases per 100,000). Overall, vaccinated females had lower rates of all HPV-related cancers (11.5 cases per 100,000) versus unvaccinated females (15.8 cases per 100,000).

"For cancers largely driven by HPV, such as cervical cancer, vaccination is highly effective. However, for other lower genital tract cancers like vulvar and vaginal cancers, the impact of HPV vaccination is less pronounced. This is likely due to the lower prevalence of HPV-driven cancers in these sites. For example, while over 90% of cervical cancers are due to HPV, only about 40% to 50% of vulvar cancers are HPV-related, which explains the limited impact of the vaccine on these cancers. The study evaluated cancers most commonly attributed to HPV, but it is unclear if in the database they were able to corroborate that each cancer documented was HPV-positive. " Avila noted.

The study, conducted by researchers at Thomas Jefferson University, emphasizes the critical role of HPV vaccination in cancer prevention. The team stresses the need for effective interventions that increase HPV vaccination rates, especially considering that less than 60% of teens aged 15 to 17 are vaccinated for HPV.

"The takeaway from this study is clear: HPV vaccination is extremely effective for preventing cancers that are predominantly caused by HPV," Avila said.

Future research will focus on the long-term outcomes of HPV vaccination, particularly in older populations, and will aim to identify demographics with lower vaccination rates to enhance public health strategies.

Fuente: MOFFITT CANCER CENTER en Español. Disponible en https://acortar.link/RF12xy

Asesores de la FDA revisarán vacunas de COVID-19 frente a nueva subvariante

3 jun. Los asesores de la Administración de Alimentos y Medicamentos de EU (FDA, por sus siglas en inglés) votarán si recomiendan que las vacunas contra la COVID-19 para 2024-25 se dirijan a la variante JN.1, la más dominante este año, según mostraron los documentos presentados el lunes.

Las acciones de Novavax se dispararon un 11% en las operaciones de la mañana, después de que se publicaran los documentos. La compañía había dicho el mes pasado que solo podría ofrecer una vacuna COVID-19 en Estados Unidos este otoño si los reguladores aceptan la inyección que comenzó a fabricar para atacar la variante JN.1.

El personal de la FDA en documentos separados dijo que los fabricantes de vacunas que desarrollan las nuevas inyecciones de refuerzo podrían necesitar considerar apuntar a una de las subvariantes JN.1, como KP.2, ya que una mayor evolución del virus podría alejarlo de la cepa más antigua.

Los documentos fueron publicados antes de la reunión de asesores. La reunión se pospuso del 16 de mayo porque la FDA buscó más tiempo para "obtener datos de vigilancia y otra información" sobre el virus en circulación.

Revisiones de la FDA difieren con las realizadas por la OMS

La revisión del personal de la FDA para actualizar las cepas virales para las vacunas en los EU difiere de la de los asesores de la Organización Mundial de la Salud (OMS), quienes en abril recomendaron centrarse solo en la cepa JN.1.

Desde entonces, la subvariante KP.2 se ha convertido en la cepa dominante en EU y se estima que representa alrededor del 28.5% de los casos durante un período de dos semanas que finalizó el 25 de mayo, según datos de los Centros para el Control y la Prevención de Enfermedades de EU.

"Este cambio en la epidemiología merece consideración", dijeron los revisores.

Una variación en la cepa de la vacuna con respecto a la norma mundial también podría representar un desafío para los fabricantes de vacunas COVID-19, especialmente Novavax, ya que fabrica una inyección más tradicional a base de proteínas que lleva más tiempo fabricar.

Las vacunas basadas en ARN mensajero, como las de Moderna o Pfizer y su socio BioNTech, se pueden desarrollar más rápidamente. En el pasado, Pfizer había dicho que podría fabricar las inyecciones en 100 días.

Fuente: Forbes México. Disponible en https://acortar.link/8V0NLe

COVID-19: Especialistas señalan importancia de basarse en la evidencia científica para tomar decisiones sobre la vacunación

4 jun. El Dr. Hernán Rodríguez, coordinador del Comité de Vacunas de la Asociación Panamericana de Infectología, informó que, según datos oficiales del Ministerio de Salud Pública y Bienestar Social de Paraguay, durante 2023 y lo que va de 2024 se registraron 385 fallecidos por COVID-19, dando énfasis en dos aspectos: el 99,7% no estaban vacunados y el 52% tenía 60 años en adelante.

Así también, destacó que los efectos adversos atribuibles a las vacunas son escasos, incluso insignificantes comparado con el enorme beneficio logrado en la prevención de cuadros graves y muertes por COVID-19.

El Dr. Rodríguez insistió en la necesidad de seguir construyendo evidencia científica y respaldarse en ella para determinar las recomendaciones de los esquemas de vacunación que se actualizan periódicamente.

Se refirió también al COVID prolongado, explicando que se trata de un proceso caracterizado por una serie de signos y síntomas que pueden afectar a diversos órganos, aparecen algunas semanas después de haber padecido COVID-19. El riesgo de desarrollar COVID prolongado es mayor en personas con antecedente de reinfecciones por el SARS-CoV-2 o con cuadros graves de COVID-19. Las personas con dos o más episodios de COVID-19 tienen más de 3 veces la probabilidad de desarrollar problemas pulmonares o cardíacos, y más de 1,5 veces más probabilidades de padecer un trastorno neurológico, por ejemplo: niebla mental o accidentes cerebrovasculares. Según estudios actuales, las personas vacunadas tienen menos incidencia de COVID prolongado en comparación con las no vacunadas.

El Dr. Virgilio Lezcano, presidente de la Sociedad Paraguaya de Infectología, añadió que los trastornos de conducta en adolescentes y niños después de 12 semanas post-COVID podrían ser indicativos de COVID prolongado, subrayando la importancia de prestar atención a estos síntomas. Además, hizo mención a los problemas crónicos como dolores articulares, caída del cabello y trastornos de la memoria en adultos.

La Dra. Fátima Ovando, coordinadora de Actividades Científicas de la Sociedad Paraguaya de Infectología, resaltó la importancia de que los médicos de las distintas especialidades recomienden y prescriban la vacuna contra el COVID-19 en sus consultas para no perder oportunidades de vacunación, especialmente al evaluar a pacientes mayores, inmunocomprometidos y crónicos con enfermedades de base como: diabetes, asma, hipertensión y cardiopatías.

La Dra. Desirée Almirón, especialista en Medicina Interna e Infectología clínica, recordó que desde el inicio de la pandemia hemos aprendido que la vacunación es la herramienta más importante contra el virus. “Aunque han surgido muchas variantes y subvariantes desde el inicio de la pandemia, ahora contamos con nuevas vacunas adaptadas a estas variantes. Las vacunas actuales (2023-2024) son diferentes a las de 2021, y es crucial que las personas se vacunen con estas nuevas formulaciones, ya que la vacuna actualizada permite estar mucho más protegido, previniendo cuadros graves, hospitalizaciones y muertes”, dijo. La Dra. Almirón insistió en que estas nuevas vacunas son seguras y efectivas, con un esquema similar al de influenza y se pueden aplicar en simultáneo el mismo día.

Estas declaraciones se realizaron durante el panel de expertos en infectología “Resolviendo Dudas sobre la Vacunación contra COVID-19, Mitos y Realidades sobre la Plataforma ARNm, Variantes y Vacunas Actualizadas”, realizado días atrás.

Vacunación gratuita en todo el país – Vacuna COVID Actualizada temporada 2024
La nueva vacuna monovalente XBB.1.5 de Moderna, posee la composición correspondiente a la temporada

2024 y está disponible de forma gratuita en los puestos de vacunación de todo el país a partir de los 6 meses de edad en adelante. Esta vacuna ofrece mayor protección contra las variantes del SARS-CoV-2 que actualmente están circulando a nivel local y mundial. La aplicación anual contra el COVID-19, formulada para ser más efectiva contra las variantes circulantes, brinda mejor protección sobre las consecuencias graves que el virus podría provocar, como hospitalización y muerte. Se recomienda especialmente a las poblaciones vulnerables, como embarazadas, adultos mayores, personal de salud, personas con patologías crónicas de base y personas inmunosuprimidas, quienes son grupos de alto riesgo.

Fuente: adn digital. Disponible en https://acortar.link/lXB0wW

CDSCO Panel Approves Continuation Of Phase-II Trials For SII's Dengue Vaccine

Jun 6. The Serum Institute conducted the phase-I, double-blind, randomised, placebo-controlled trial on 60 healthy individuals aged 18 to 45 years in Australia to assess safety and immunogenicity of the tetravalent live attenuated dengue vaccine.

An expert committee under the Central Drug Regulatory Authority has recommended continuation of phase-II clinical trial of the Serum Institute of India's vaccine against dengue after noting the promising results of the phase-I interim clinical trial. The Serum Institute conducted the phase-I, double-blind, randomised, placebo-controlled trial on 60 healthy individuals aged 18 to 45 years in Australia to assess safety and immunogenicity of the tetravalent live attenuated dengue vaccine. A tetravalent live attenuated dengue vaccine was manufactured in India after receipt of vaccine strains from NIAID, NIH, USA.

"A single dose of dengue vaccine was safe and well tolerated in adults. The vaccine was highly immunogenic with trivalent or tetravalent seroconversion and seropositivity in most of the participants," stated the study results published in Vaccine, a journal by Elsevier, last year in August.

In light of recommendation of the subject expert committee dated July 18, 2023, the SII presented phase-I interim clinical trial report of Dengue Tetravalent Vaccine (Live, Attenuated) which was discussed by the panel on May 31.

"After detailed deliberation, the committee noted the results of Phase I interim clinical trial and recommended for continuation of Phase II clinical trial as per approved protocol," the SEC recommendations stated.

Fuente: NDTV Profit. Disponible en https://acortar.link/igChGS

Un panel asesor de la FDA recomendó actualizar las vacunas contra la COVID-19 para el otoño boreal

7 jun. Un panel asesor de la Administración de Alimentos y Medicamentos (FDA) de Estados Unidos recomendó el miércoles actualizar la fórmula de las vacunas contra la COVID-19 antes de una campaña del otoño boreal que animará a los estadounidenses a vacunarse con las dosis más recientes.

La votación unánime recomienda que los fabricantes de vacunas adapten la próxima vacuna para que se dirija a la variante JN.1, que dominó las infecciones en Estados Unidos el invierno pasado, reportó el New

York Times . Sin embargo, JN.1 ha sido superado por los descendientes conocidos como KP.2 y KP.3 esta primavera.

Se espera que la FDA recomiende formalmente un nuevo objetivo de variante para los fabricantes de vacunas en las próximas semanas, reportó el Times.

El Dr. Peter Marks, que supervisa la división de vacunas de la FDA, instó al comité a considerar la posibilidad de animar a los fabricantes de vacunas de ARNm a que se centren en las versiones más recientes del virus, y no en la variante JN.1, reportó el Times.

“Siempre decimos que no deberíamos perseguir cepas, pero estamos pagando una prima increíblemente alta por las vacunas de ARNm para poder tener las vacunas más frescas”, dijo, refiriéndose a la tecnología utilizada por Moderna y Pfizer.

“Si esto evoluciona aún más en el otoño, ¿nos arrepentiremos de no haber estado un poco más cerca?”, preguntó Marks.

Pero la doctora Sarah Meyer, funcionaria sénior de vacunas de los Centros para el Control y la Prevención de Enfermedades (CDC) de EE.UU., dijo que apuntar a JN.1 era más apropiado porque estaba “más arriba en el árbol” en la evolución del coronavirus, lo que posiblemente permita que las vacunas cubran mejor las mutaciones futuras del virus, reportó el Times .

La decisión del panel refleja la orientación de un comité de expertos de la Organización Mundial de la Salud que recomendó en abril que las vacunas contra el COVID-19 cambiaran a una formulación JN.1.

Los representantes de Moderna y Pfizer dijeron que las compañías estarían listas para producir cualquiera de las dos versiones de la vacuna, reportó el Times .

Durante la reunión, las autoridades federales de salud informaron que los casos de COVID siguen siendo relativamente bajos, y los datos muestran que las enfermedades de JN.1 no fueron más graves que las de variantes anteriores, señaló el Times .

Recientemente se han registrado menos de 400 muertes por COVID-19 a la semana, por debajo de un pico de aproximadamente 2,500 a la semana durante el invierno.

Aun así, la tasa de vacunación contra la COVID-19 del año pasado fue marcadamente baja, y los investigadores de los CDC informaron que solo el 18 por ciento de los adultos inmunodeprimidos habían recibido la vacuna actualizada, mientras que poco más del 20 por ciento de todos los adultos habían recibido la inyección.

En cuanto a los residentes de hogares de ancianos, los más propensos a sufrir una enfermedad grave, los datos de los CDC muestran que alrededor del 30 por ciento de los residentes de hogares de ancianos están al día con sus vacunas, frente al 65 por ciento de hace dos años.

Fuente: INFOBAE. Disponible en https://acortar.link/RjQRXp

FDA approves first RSV vaccine for use in at-risk adults over 50

Jun 8. The Food and Drug Administration (FDA) recently approved an expansion of a respiratory syncytial virus (RSV) vaccine for use in at-risk adults over the age of 50.

GSK, the vaccine's maker, announced the approval Friday, making it the first vaccine rubber-stamped for adults ages 50-59 to protect against the virus.

"Today's approval reflects the importance of broadening the benefits of RSV immunization to adults aged 50-59 who are at increased risk," Tony Wood, GSK's chief scientific officer, said in a statement. "For those with underlying medical conditions, RSV can have serious consequences, so we are proud to be the first to help protect them from RSV-LRTD."

The pharmaceutical company requested the expansion in early February, saying their trial showed an immune response and acceptable tolerability profile in adults in their 50s. Now, GSK needs the vaccine to get a recommendation from the Centers for Disease Control and Prevention's (CDC) immunization advisory committee for those in that age group.

Other than GSK, Moderna and Pfizer also produce RSV vaccines that are approved for adults older than 60 years. The FDA approved Moderna's RSV vaccine late last month, making it the third vaccine greenlighted to fight against the disease, behind GSK's Arexvy and Pfizer's mRESVIA.

The CDC panel will also have to weigh the possibility of a need for RSV booster shots.

GSK has also filed a regulatory submission to extend the vaccine's use in adults aged 50-59 with increased risks in some European countries, Japan and others.

"When it comes to the risks associated with RSV, age is just a number, an important number, but not the only factor to consider," Ann R. Falsey, a professor at the University of Rochester School of Medicine, said in the statement.

"Many adults in this age group have underlying health conditions that place them at increased risk for serious illness with RSV infection compared with those without these conditions," Falsey added. "Now there is a vaccine approved that can help protect them."

Fuente: The Hill. Disponible en https://acortar.link/In2hIf

Insights into the 23-Valent Pneumococcal Polysaccharide Vaccine PPSV23: Protecting Older Adults Against Invasive Pneumococcal Disease

Jun 8. Researchers in Denmark aimed to assess the vaccine effectiveness (VE) of the 23-valent pneumococcal polysaccharide vaccine (PPSV23) against invasive pneumococcal disease (IPD) in individuals aged 65 and older. The study's findings indicate that PPSV23 vaccination protects IPD across most serotypes or serotype groupings, except for serotype 3. These results emphasize the ongoing need for research and potentially targeted vaccination approaches to mitigate specific serotype vulnerabilities among older populations.

The analysis unveiled a vaccine effectiveness of 32% for PPSV23 against all-type IPD and 41% against PPSV23-serotype IPD. These results, stemming from a study with enhanced statistical power compared to previous research, offer compelling evidence of PPSV23's protective efficacy in the specified age group. Furthermore, they enhance our understanding of PPSV23's effectiveness across different serotype groupings of IPD.

Pneumococcal vaccine - administration of antigenic material (vaccine) to stimulate an individual's immune system to develop adaptive immunity to a pathogen. Image credits: Unsplash

"Compared with our previous study on PPSV23 in Denmark, this follow-up study finds a lower VE against all-type IPD (42% vs. 32%) and PPSV23-vaccine type IPD (58% vs. 41%). This study covers the entire vaccination program and includes persons offered PPSV23 at the beginning of the program; that is, more vulnerable groups where the vaccine might not have the same effect. In this study, persons who received a vaccination were censored for 14 days after vaccination."

The researchers employed a Cox regression model to assess vaccine effectiveness, adjusting for crucial demographic factors like age, sex, and underlying health conditions. Utilizing nationwide data, they scrutinized the vaccine effectiveness of PPSV23 against both all-type IPD and PPSV23-serotype IPD. Furthermore, they broadened their analysis to estimate vaccine effectiveness against IPD caused by specific serotypes, excluding certain variations to achieve a more nuanced understanding.

The investigators explain," Our study shows that PPSV23 is effective against serotypes 8 and 22F and that a vaccination program might be an important factor in protecting persons >65 years of age against IPD caused by those serotypes."1

One limitation of this study is the scarcity of events in certain analyses, resulting in diminished statistical power and wider 95% confidence intervals, particularly notable for the PPSV23 non-PCV20 estimate. Additionally, the study lacked adequate follow-up time beyond 3 years to assess potential waning effects, although minor declines were observed. These limitations necessitate future follow-up studies to evaluate the long-term durability of protection. Another concern is the potential for healthy vaccine bias, despite similar age distributions and comorbidity profiles between vaccinated and unvaccinated groups. However, the increasing difference in influenza vaccination coverage over the study period might lead to an overestimation of PPSV23's effectiveness due to the protective effect of influenza vaccination against IPD.

In conclusion, this study highlights that PPSV23 vaccination effectively protects individuals aged over 65 against various forms of invasive pneumococcal disease, encompassing all-type IPD and specific serotype-related IPD, such as those linked to serotypes 8 and 22F, and PPSV23 non-PCV15/PCV20 serotypes. Nonetheless, it does not confer protection against IPD associated with serotype 3. Additionally, the vaccine's effectiveness has remained largely consistent over nearly 3 years, advocating for the continued implementation of PPSV23 vaccination programs for individuals in this age group.

Future VE against IPD

Anticipating the FDA's Priority Review decision on June 17, 2024, for V116, an Investigational Adult Specific Pneumococcal Conjugate Vaccine, designed for the prevention of IPD and pneumonia in adults aged 18 years and older, significant insights into its efficacy and safety have emerged.

In this population, whether they are vaccine-naive or experienced, with or without risk conditions, V116 has shown promising results. It stimulates robust immune responses against all 21 serotypes encompassed in the vaccine formulation. Moreover, compared to PCV20, it demonstrates noninferiority across common serotypes and superiority for 10 out of 11 unique serotypes, especially in individuals aged 50 years and above who have not received pneumococcal vaccination. V116 maintains its immunogenicity in individuals with prior pneumococcal vaccine exposure, regardless of the previous vaccine received. When administered concurrently with inactivated influenza vaccine, V116 retains its immunogenicity.

Fuente: Contagion Live. Disponible en https://acortar.link/h9fTxi

Argentina incorpora nueva vacuna al calendario nacional

11 jun. El Lic. Jorge Martínez, encargado del Vacunatorio Malargüe, en la provincia de Mendoza, Argentina, anunció la incorporación de una nueva vacuna al calendario nacional de inmunizaciones, lo que representa un avance significativo en la salud pública del país. La vacuna, conocida como «neumo», reemplaza a la anterior «neumo 13» y se administra en una única dosis.

«Es una vacuna que ya estaba aprobada hace tiempo en nuestro país en el ámbito privado. Ahora, el Gobierno Nacional la ha incorporado al calendario nacional, haciéndola obligatoria y gratuita,» explicó Martínez. Esta nueva vacuna está destinada principalmente a personas mayores de 65 años y a aquellos con comorbilidades, incluyendo pacientes diabéticos, cardiópatas, asmáticos moderados o graves, fumadores y personas con enfermedades crónicas.

Martínez subrayó la importancia de que las personas verificaran su carnet de vacunas, ya sea en el vacunatorio central, en centros de salud, o en hospitales. Además, destacó que junto con la nueva vacuna neumocócica, continúa la campaña de vacunación contra la gripe y el COVID-19. «La gente se ha vuelto a relajar con estas vacunas, pero es crucial recordar que nuestro cuerpo necesita tiempo para desarrollar la inmunidad deseada,» advirtió.

El encargado del vacunatorio explicó que se requieren al menos siete a diez días para que el sistema inmunitario esté preparado para defenderse contra virus y bacterias, especialmente durante el invierno. También destacó que la vacuna puede causar efectos secundarios leves como dolor en el sitio de la inyección, dolor de cabeza, muscular y articular, pero estos son comunes y menores comparados con los beneficios.

En relación con las medidas preventivas, Martínez enfatizó el uso del barbijo, el lavado de manos y el distanciamiento social. «Estas medidas, junto con la vacunación, son esenciales para estar preparados,» señaló.

Por otro lado, comentó que, debido a la alta incidencia de enfermedades respiratorias, muchos niños no están asistiendo a la escuela.

«Estamos cerca del 75% del objetivo de la población vacunada, y agradecemos a los docentes y padres por su compromiso en traer a los niños nacidos en 2013 y 2019 para recibir sus vacunas correspondientes,» agregó.

Finalmente, Martínez recordó los horarios de atención del Vacunatorio Central y de los centros de salud: «El Vacunatorio Central y los centros de salud atienden de 07:00 a 13:30, con excepciones en los centros de salud 25 y 129, que están abiertos hasta las 20:30. Los sábados, los tres establecimientos atienden hasta las 11:30 para poder controlar la temperatura de las heladeras antes de cerrar.»

Estas nuevas medidas y la incorporación de la vacuna neumo al calendario nacional representan un paso importante para mejorar la salud y el bienestar de la población, especialmente en tiempos de alta incidencia de enfermedades respiratorias.

Fuente: Ser y Hacer de Malargüe. Disponible en https://acortar.link/Y1u6Gq

Prepara Cienfuegos nuevo estudio de intervención contra la enfermedad neumocócica

12 jun. El nuevo candidato vacunal protegerá a los infantes menores de un año de 11 serotipos que producen la enfermedad neumococócica

La central provincia de Cienfuegos será el escenario de un estudio de intervención contra la enfermedad neumococócica en los menores de un año que se encuentren en proceso de lactancia, concretamente en aquellos que tengan con dos, cuatro y 11 meses.

Según explicó María Eugenia Toledo Romaní, investigadora Principal del Instituto de Medicina Tropical Pedro Kourí, IPK, se avanza en la elaboración de un nuevo candidato vacunal que protegerá a los infantes de 11 serotipos que producen la enfermedad neumococócica, proyecto que está a cargo del Instituto Finlay de Vacunas, indica la emisora Radio Ciudad del Mar.

La investigadora reconoció la labor de Cienfuegos como escenario clínico de la campaña de rescate de la vacuna anti-neumocócica cubana, en niños entre uno y cinco años; por lo que, hasta los diez años, la provincia tendrá más del 90 por ciento de cobertura.

Fuente: Granma. Disponible en https://acortar.link/fqpVlb

Crean una nueva vacuna contra el coronavirus que funciona con virus aún no descubiertos

15 jun. Un equipo de científicos de las universidades de Oxford, Cambridge y Caltech en California, ha creado una vacuna que protege de múltiples coronavirus e incluso variedades de virus que aún no se conocen. El proyecto tiene como objetivo construir "proactivamente" una vacuna un nuevo patógeno que podría desencadenar una pandemia se convierta en una amenaza para la humanidad.

Los científicos crean una vacuna con potencial para proteger contra futuros coronavirus (Pexels).

Por el momento, la inyección experimental ha sido probada en ratones y marca un cambio de estrategia hacia la 'vacunología proactiva', donde las vacunas se diseñan y preparan para su fabricación antes de que surja un virus potencialmente pandémico y no después, como ocurrió con el SARS-CoV-2 que condujo a una pandemia mundial de COVID-19 y dejó

al planeta entero en jaque y en el que se perdieron más de 15 millones de vidas solo entre 2020 y 2021, según la Organización Mundial de la Salud (OMS). Algo que, para el director general de esta agencia de la ONU, Tedros Adhanom Ghebreyesus, "también subraya la necesidad urgente de que todos los países inviertan en sistemas de salud más resilientes que puedan sostener los servicios de sanidad esenciales durante las crisis, incluidos sistemas de información sólidos".

Una vacuna revolucionaria

En esa línea destaca esta vacuna que se elabora uniendo proteínas inofensivas de diferentes coronavirus a minúsculas nanopartículas que luego se inyectan para preparar las defensas del cuerpo que se encargarán de combatir los virus en caso de que alguna vez lo invadan. Por supuesto, los estudios con ratones no siempre dan resultados en humanos, pero el primer autor del estudio e investigador graduado en farmacología de Cambridge, Rory Hills, es optimista.

"Nuestro objetivo es crear una vacuna que nos proteja contra la próxima pandemia de coronavirus y tenerla lista incluso antes de que comience la pandemia", afirmó Hills, en un comunicado de prensa de la universidad.

Lo más llamativo de este anuncio es, precisamente, su factor de prevención, con la intención de desarrollar una vacuna que nos proteja contra cepas virales que aún no existen, pero es que es probable que aparezcan en el futuro. La clave es tener lista la vacuna antes de que empiece una pandemia

"No tenemos que esperar a que surjan nuevos coronavirus. Sabemos lo suficiente sobre los coronavirus y las diferentes respuestas inmunes a ellos, que ahora podemos comenzar a desarrollar vacunas protectoras contra coronavirus desconocidos", aclaró el profesor de farmacología de Cambridge, Mark Howarth, también coautor de la investigación que publica la revista *Nature Nanotechnology*.

¿Cómo funciona?

Las tradicionales funcionan entrenando al sistema inmunológico para atacar un solo tipo específico de virus, como la vacuna contra la gripe. Pero esta nueva vacuna, 'dispara' a varios objetivos. La innovadora vacuna funciona entrenando al sistema inmunológico del cuerpo para que reconozca regiones específicas de ocho coronavirus diferentes, incluidos el SARS-CoV-1, el SARS-CoV-2 y varios que actualmente circulan en murciélagos y que tienen potencial para saltar a los humanos (lo que conocemos como zoonosis) y causar una pandemia. Al entrenar al sistema inmune para que ataque estas regiones, ofrece protección contra otros coronavirus no representados en la vacuna, incluidos aquellos que ni siquiera han sido identificados todavía. Es decir, podríamos estar protegidos de múltiples coronavirus con una sola dosis.

Las pruebas de laboratorio evidenciaron que la inyección ayudó a los ratones a combatir el SARS-Cov-1, el patógeno que causó el brote de SARS en 2003. Esto es relevante porque la actual vacuna no incluye ninguna muestra de este virus específicamente. Los investigadores esperan comenzar los ensayos clínicos de su nueva vacuna a principios de 2025. Si se descubriera que la vacuna es segura y eficaz en humanos, podría incluso ser empleada como refuerzo de COVID-19 con el beneficio adicional de proteger contra otros coronavirus.

"Necesitamos descubrir cómo podemos hacerlo aún mejor en el futuro, y un componente poderoso de eso es comenzar a fabricar las vacunas con anticipación", dicen los investigadores, refiriéndose a cómo se enfrentó la medicina al surgimiento del SARS-CoV-2.

Fuente: Alimente+. Disponible en https://acortar.link/JmHuXT

La FDA pide a los fabricantes de vacunas contra la Covid-19 que se centren ahora en la cepa KP.2

17 jun. El regulador sanitario estadounidense (FDA) ha modificado su recomendación sobre cepas para las vacunas Covid-19 de 2024-25 y pide a los fabricantes que actualicen las nuevas vacunas para que actúen contra la variante KP.2, si es factible, en lugar del linaje JN.1, variante a la que se dirigía la petición de la agencia anteriormente.

Fuente: Canva.

El cambio de recomendación de la FDA (Food and Drug Administration), se produce cuando Moderna (MRNA.O), y Novavax (NVAX.O), -fabricantes de dos de las tres vacunas Covid-19- habían presentado solicitudes a la agencia para actualizar las vacunas para la temporada de otoño de 2024 con la cepa JN.1.

Novavax ha anunciado que su fabricación de una vacuna para la cepa JN.1 está en marcha y no puede tener viales este otoño para otra cepa. No obstante, la compañía, que solicitó la autorización el viernes, afirma que su vacuna ha mostrado disponer de anticuerpos neutralizantes cruzados contra múltiples variantes, entre ellas la KP.2 y KP.3, al tiempo que anunciaba que su vacuna JN.1 podría estar lista a mediados de julio. La compañía no ha hecho comentarios sobre la preferencia de la FDA por la vacuna KP.2.

Novavax afirma que su vacuna ha mostrado disponer de anticuerpos neutralizantes cruzados contra múltiples variantes, entre ellas la KP.2 y KP.3

Según informa la agencia de noticias Reuters, el nuevo consejo de la FDA difiere de las recomendaciones de sus propios asesores y del regulador europeo y la Organización Mundial de la Salud, que abogaban por centrarse en la cepa JN.1 con las vacunas actualizadas. Sin embargo, Peter Marks, director del Centro de Evaluación e Investigación Biológica de la FDA, durante la reunión del panel asesor a principios de este mes, ha apuntado que quería dar a la gente la opción de una vacuna dirigida a KP.2, contando con las actualizaciones rápidas posibles con inyecciones de ARN mensajero de Moderna y Pfizer y su socio BioNTech.

"Siempre decimos que no deberíamos estar persiguiendo cepas, pero estamos pagando una prima increíblemente alta por las vacunas de ARNm para poder tener las vacunas más frescas", ha afirmado Marks. Las vacunas de ARNm pueden desarrollarse más rápidamente que la vacuna de Novavax, basada en proteínas.

La cepa JN.1 era la dominante en EE.UU. a principios de este año. Aunque ya no es tan prevalente, se calcula que fue la causante del 3,1% de los casos en un periodo de dos semanas que finalizó el 8 de junio, según los datos de los Centros para el Control y la Prevención de Enfermedades.

Fuente: ConSalud.es. Disponible en https://acortar.link/fJ8ySe

FDA aprueba la nueva vacuna de Merck, Capvaxive, contra 21 tipos de bacterias

19 jun. En un significativo avance para la prevención de la enfermedad neumocócica, la Administración de Alimentos y Medicamentos (FDA) de Estados Unidos ha aprobado una nueva vacuna desarrollada por Merck & Co. llamada Capvaxive. Esta innovadora vacuna protege contra 21 tipos de bacterias, incluidos ocho serotipos que no están cubiertos por otras vacunas como Prevnar de Pfizer.

Capvaxive ha sido autorizada para su uso en adultos mayores de 18 años y promete una amplia cobertura contra la enfermedad neumocócica, que puede provocar infecciones graves en los pulmones, sangre y médula espinal, conocida como meningitis. Esta condición es especialmente peligrosa para los adultos mayores de 65 años y personas con sistemas inmunológicos comprometidos.

La vicepresidenta de desarrollo clínico de vacunas en Merck, Paula Annunziato, destacó la capacidad de la vacuna para cubrir los serotipos responsables de aproximadamente el 84% de los casos de enfermedad neumocócica invasiva en adultos de 50 años o más. En comparación, la vacuna Prevnar 20 de Pfizer cubre el 52% de estos casos, según Merck. Los ocho serotipos únicos cubiertos por Capvaxive representan más de una cuarta parte de los casos de enfermedad neumocócica invasiva en adultos de 50 años o más.

Disponibilidad y recomendaciones de Capvaxive

Merck espera que Capvaxive esté disponible a finales de julio, sujeto a las recomendaciones de los asesores de los Centros para el Control y la Prevención de Enfermedades (CDC), quienes se reunirán a finales de este mes para evaluar la inclusión de esta vacuna en las directrices nacionales de vacunación.

Louise Chen, analista de Cantor Fitzgerald, señaló que una recomendación preferencial del Comité Asesor sobre Prácticas de Inmunización (ACIP) podría impulsar significativamente las ventas de Capvaxive. El ACIP se reunirá el 27 de junio para discutir las recomendaciones.

Comparación con otras vacunas

Merck ya comercializa dos vacunas neumocócicas: Pneumovax 23 y Vaxneuvance. Pneumovax 23 está destinada a adultos mayores de 50 años y a niños mayores de dos años con alto riesgo de infección, mientras que Vaxneuvance es adecuada para personas mayores de seis semanas. Sin embargo, Prevnar 20 de Pfizer ha dominado el mercado desde su aprobación en 2021, cubriendo 20 serotipos.

Capvaxive, con su cobertura de 21 serotipos, podría tener una ventaja competitiva significativa al abordar serotipos que no están incluidos en otras vacunas disponibles. Esta característica única puede posicionar a Capvaxive como una opción preferida para la inmunización contra la enfermedad neumocócica en adultos.

Merck ha fijado el precio de Capvaxive en 287 dólares por dosis única. La compañía ha asegurado que la mayoría de las personas en Estados Unidos tendrán acceso a esta vacuna sin costo de bolsillo si el panel de los CDC la recomienda para su uso rutinario.

Esta medida podría facilitar una amplia adopción de la vacuna, mejorando la prevención de enfermedades neumocócicas en poblaciones vulnerables.

La comunidad médica y los pacientes ahora esperan las recomendaciones del ACIP y la disponibilidad de Capvaxive en el mercado. Con la implementación de esta nueva vacuna, Merck refuerza su compromiso con la innovación en salud y la mejora de la calidad de vida de las personas a través de la prevención de enfermedades graves.

Este avance también subraya la importancia de la colaboración entre agencias reguladoras, fabricantes de vacunas y proveedores de salud para asegurar que las mejores opciones de prevención estén disponibles para el público.

Fuente: Consultor Salud. Disponible en https://acortar.link/MT0AeS

Biovac, EuBiologics partner to boost Africa meningitis vaccine

Jun 21. South African biopharmaceutical manufacturer, Biovac, has signed a technology transfer agreement with global South Korean based manufacturer EuBiologics, for the technology transfer of a *Meningococcal Meningitis* pentavalent conjugate vaccine.

This agreement will fill a significant gap in the prevention and treatment of meningitis in sub-Saharan Africa, particularly in the meningitis belt stretching from Senegal in the west to Ethiopia in the east, where there are unique circulating serotypes particularly, serotype X.

The collaboration between the two companies was initially announced in September 2023 when a memorandum of understanding was signed.

Meningococcal meningitis is a bacterial form of meningitis, a serious infection of the thin lining that surrounds the brain and spinal cord. Meningococcal meningitis is associated with high fatality (up to 50% when untreated). Meningococcal meningitis is observed worldwide; however, each region of the world has differing circulating serotypes.

CEOs praise historic agreement

Morena Makhoana, Biovac chief executive officer, states, “We are pleased to sign this agreement with EuBiologics especially on the sidelines of a very important launch of the African Vaccine Manufacturing Accelerator.

"This initiative, coupled with the signing of the agreement, will align and ensure that the peoples of Africa benefit from not only a vaccine that is designed for them, but it also ensures that African vaccine manufacturing is sustainable. We look forward to a long and lasting relationship with EuBiologics.”

Baik Yeong-ok, EuBiologics chief executive officer, expressed his enthusiasm stating: “We are pleased to have signed an agreement for technology transfer and supply with Biovac for the pentavalent meningococcal conjugate vaccine.

"This collaboration between the two companies will serve as a good model, and I am hopeful it will lead to improved global public health, capacity building for an African manufacturer, and, most importantly, a positive impact on people's lives against meningococcal diseases in Africa."

The agreement was signed in Paris, where Biovac and EuBiologics are attending the Global Forum for Vaccine Sovereignty and Innovation, hosted by France, alongside the African Union and Gavi, at which GAVI's innovative financing instrument, the African Vaccine Manufacturing Accelerator (AVMA) was recently launched.

AVMA is designed to disburse up to $1bn to African vaccine manufacturers over the next 10 years. It aims to act as a catalyst for an ecosystem reset, enabling sustainable vaccine manufacturing on the continent in line with the African Union's goal for 60% of Africa's vaccine requirements to be met by African manufacturers by 2040.

Fuente: BIZCOMMUNITY. Disponible en https://acortar.link/I6JHxM

Korea's Blockbuster Vaccine, SK Bioscience 'Pneumococcus' Vaccine Enters Global Phase 3

Jun 24. Joint development with Sanofi, first global IND approved in Australia President Ahn Jae-Yong "Strengthening the position for growth as a global vaccine manufacturer".

With the global approval of the Phase 3 clinical trial plan, dosing is anticipated to begin as early as the fourth quarter of this year, bringing the success of a vaccine developed by Korea's technology within reach.

According to SK Bioscience (SK Bio) on the June 24th, the Human Research Ethics Committee (HREC) granted final approval for the Phase 3 clinical trial plan (IND) of GBP410, a 21-valent pneumococcal conjugate vaccine candidate developed in collaboration with Sanofi.

This marks the first approval of a multi-country Phase 3 trial plan for GBP410, with Phase 3 IND still awaiting approval in the U.S., Europe, Korea, and Honduras.

With this initial global approval, SK Bio and Sanofi plan to swiftly advance GBP410 into Phase 3 clinical trials.

The two companies will conduct global Phase 3 clinical trials to evaluate the immunogenicity and safety of GBP410 after administering up to four doses in approximately 8,000 healthy infants, children, and adolescents aged 6 weeks to 17 years.

The companies are planning to administer the first dose in Australia in the fourth quarter of this year, aiming to complete all Phase 3 studies by 2027 and subsequently begin license applications with the U.S. Food and Drug Administration (FDA) and the European Medicines Agency (EMA).

GBP410 is a protein-conjugate vaccine candidate prepared by conjugating specific proteins to the coat polysaccharides of pneumococcus that causes pneumonia and invasive disease. The protein conjugate approach has been shown to enhance immunogenicity by triggering a T-cell immune response, leading to the superior protection among pneumococcal vaccines developed to date.

In terms of safety, no serious vaccine-related adverse effects were reported from the GBP410 vaccination group.

The immunogenicity and safety of GBP410 were equivalent to those of the control vaccines when administered in combination with other vaccines recommended for infants and children, including tetanus, diphtheria, pertussis, polio, and Haemophilus influenzae type b vaccines.

In preparation for the commercialization of GBP410, SK Bio also started the expansion of L-House, its vaccine plant in Andong, Gyeongbuk, in March.

The vaccine production wing of L-House will be raised from the one floor to the three floor facility to create a new space of 4,200 square meters (1,300 pyeong) to prepare for the commercial production of GBP410.

"Having already obtained successful Phase 2 clinical results, we are confident that Phase 3 will also be successful," said Mr. Ahn Jae-Yong, President of SK Bio, "We will actively cooperate with Sanofi to bring a blockbuster vaccine developed in Korea to the world and further strengthen our position to grow as a global vaccine company."

Fuente: WIKI KOREA. Disponible en https://acortar.link/5RZEGG

Health experts call for FDA's approval of dengue vaccine, collaboration for zero casualty

Jun 27. Leaders of some doctor organizations called on the Food and Drug Administration (FDA) to approve the 2nd generation dengue vaccine, as the country continues to trail behind other Southeast Asian nations, in so far as inoculation against the mosquito-borne disease is concerned.

"The study that is being done in the Philippines started in 2016, and I'm one of the principal investigators. Together with Thailand and Sri Lanka, [the] Philippines has one of the biggest number of subjects in this, and I do not really understand why we are still lagging behind in terms of licensure," Philippine Foundation for Vaccination Executive Director

Dr. Lulu Bravo said in a presscon during the First Dengue Summit organized by the Philippine Medical Association (PMA), together with the Philippine College of Physicians (PCP) and the Philippine Pediatric Society, at the Diamond Hotel in Manila last June 25, 2024.

Japanese drugs manufacturer Takeda Pharmaceuticals applied last year for the FDA registration of its dengue vaccine named QDENGA, according to her. Its approval, however, is still pending while this was already licensed in Indonesia in August 2023, followed immediately by Thailand that year, Malaysia in February 2024, and Vietnam just last month.

"This is why we have to tell our government, [through] FDA, to license [it] because the Philippines has the biggest number of dengue cases, and we are lagging behind. And if we don't do it, tourists will not come, even if we have the most beautiful country," she said.

While it's understandable that the FDA has to go through a process in approving QDENGA, PMA President

Dr. Hector Santos hopes it considers the history of licensing the vaccine from other markets abroad.

"I don't think our criteria are more stringent than other countries. And presenting the data, millions are already vaccinated in other countries with the safety as well," he said. "We would like to request. But we cannot, of course, push the government. We will have them go through the due process."

Being a vaccine investigator herself, Bravo guaranteed the safety of QDENGA. She said: "We have been doing it for eight years now since 2016, and we did see no safety signal at all. It can be given for those who have not had previous dengue, which is what is different from the previous first generation dengue vaccine that it was meant to be given only to those who had previous dengue."

The first and last dengue vaccine the Philippines approved was Dengvaxia of Sanofi Pasteur in 2016.

The country was the pioneer in Asia to license this first-ever antidote in the world.

Due to the 2017 controversy faced by the manufacturer after it announced that Dengvaxia might result to "severe" symptoms for those who have never been afflicted by dengue prior to inoculation. Because of that, the FDA ordered suspension of its sale, distribution and marketing nationwide, as well as its withdrawal from the market. It happened at the time the dengue vaccination program was implemented under then Department of

Health (DOH) Secretary Janette Garin.

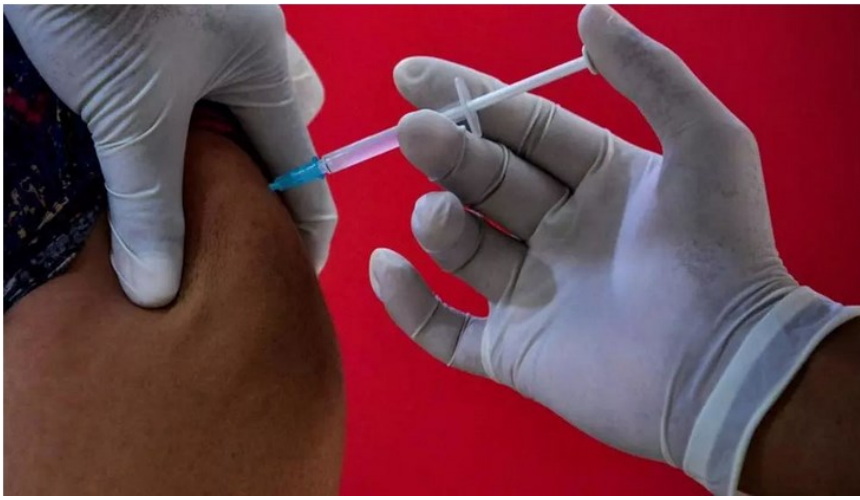
Constant surge

BASED on the recent data from the DOH, the number of dengue cases aggregated to 67,874 from January 1 to May 25, 2024, with 189 related deaths. Of the totality, 60 percent show no symptoms, 39 percent with warning signs, and one percent severe condition.

"The Philippines is one of those countries that's known to be endemic for dengue. So there is a continuous possible transmission of the virus—the disease itself," Dr. Santos said.

Fuente: BUSINESS MIRROR. Disponible en https://acortar.link/Q17M8G

UE aprueba su primera vacuna contra el Chikungunya



28 jun. La Comisión Europea (CE) autorizó hoy la primera vacuna en el bloque comunitario contra el Chikungunya, un virus que se transmite a través de la picadura de mosquitos.

El inmunizante estará permitido para mayores de 18 años, según informó la institución en un comunicado.

El Ejecutivo comunitario aseguró que el Chikungunya no es endémico en la Unión Europea (UE), pero señaló que el cambio climático causa un aumento de los mosquitos que transmiten serias enfermedades.

En tal escenario un reciente informe del Centro Europeo para la Prevención y el Control de Enfermedades (ECDC) confirmó la presencia en 13 países del mosquito tigre, capaz de portar el virus.

Bruselas autorizó la comercialización de la vacuna con el visto bueno de los Veintisiete países de la UE, después de que la Agencia Europea del Medicamento diera su visto bueno, y ahora corresponderá a los gobiernos decidir las condiciones para su administración.

La CE anunció además que financiará con 500 mil euros un programa piloto para erradicar el mosquito del dengue en Chipre, actualmente el único país de la UE en el que se ha encontrado.

En concreto, el programa usará la técnica del insecto estéril, que consiste en criar y liberar un gran número de insectos machos esterilizados a la naturaleza con el objetivo de que con las hembras de su especie mueran sin reproducirse.

Fuente: PRENSA LATINA. Disponible en https://acortar.link/5TVsPh

mRNA RSV Vaccine Recommended in Europe

Jun 30. Moderna, Inc. today announced that the European Medicines Agency's (EMA) Committee for Medicinal Products for Human Use (CHMP) has adopted a positive opinion recommending the granting of marketing authorization in the European Union (EU) for mRESVIA® (mRNA-1345), an mRNA respiratory syncytial virus (RSV) vaccine, to protect older adults.

Following the CHMP's positive opinion, the European Commission will decide on the authorization of mRESVIA.

In the EU, RSV is estimated to cause approximately 160,000 hospital admissions in adults each year.

"The positive opinion from the EMA CHMP for mRESVIA highlights the innovation and adaptability of our mRNA platform," said Stéphane Bancel, Chief Executive Officer of Moderna, in a press release on June 28, 2024. "mRESVIA safeguards older adults against severe RSV outcomes and is uniquely offered in a pre-filled syringe to enhance ease of administration...."

In May 2024, the U.S. Food and Drug Administration (FDA) approved mRESVIA, which uses the same lipid nanoparticles as the Moderna COVID-19 vaccines.

As of June 30, 2024, the FDA has approved three vaccines and one monoclonal antibody (Beyfortus) to prevent RSV in people.

As of May 22, 2024, the CDC's RSVVaxView reported that the overall RSV vaccination rate among pregnant women was about 17.8%, and an estimated 24.4% of adults 60 years and older reported receiving an RSV vaccine.

Fuente: PRECISIÓN VACCINATIONS. Disponible en https://acortar.link/xidvfT

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Patentes registradas en Patentscope

Estrategia de búqueda: *Vaccine in the title or abstract AND 20240601:20240630 as the publication date 156 records.*

WO/2024/115785VACCINE

WO - 06.06.2024

Int.Class A61K 39/12Appl.No PCT/EP2023/084025Applicant THE VACCINE GROUP LIMITEDInventor JARVIS, Michael

A recombinant viral-based vaccine for Lassa fever, comprising a mastomys rat cytomegalovirus with a LASV NP gene inserted in a defined locus.

2.4380615HPV VACCINE

EP - 12.06.2024

Int.Class A61K 39/12Appl.No 22765291Applicant MERCK SHARP & DOHME LLCInventor BETT ANDREW

The present disclosure provides, among other things, a single-dose vaccine composition that includes a chitosan adjuvant and HPV virus-like particles (VLPs) of at least one type of human papillomavirus (HPV) selected from the group consisting of HPV types: 6, 11, 16, 18, 26, 31, 33, 35, 39, 45, 51, 52, 53, 55, 56, 58, 59, 66, 68, 73, and 82, where the single-dose vaccine composition provides enhanced or comparable HPV vaccine response in comparison to a similar multiple-dose vaccine formulated without such chitosan adjuvant.

3.4384604VACCINE ANTIGEN

EP - 19.06.2024

Int.Class C12N 7/00Appl.No 22854801Applicant MACFARLANE BURNET INSTITUTE FOR MEDICAL RES AND PUBLIC HEALTH LIMITEDInventor POUMBOURIOS PANTELIS

The field of the specification relates broadly to SARS-CoV-2 vaccine spike protein antigens and methods of using and manufacturing these antigens. The invention also relates to vectors and polynucleotides encoding the SARS-CoV-2 vaccine antigens and vaccines, kits, devices and strips comprising the coronavirus vaccine antigen. The spike protein from SARS-CoV-2 has prolines substituted at positions 986, 987 (2P or S-2P) and additional alanine cavity filling mutations at positions A1016 and A1020.

4.20240194310VACCINE MANAGEMENT DEVICE AND VACCINE MANAGEMENT SYSTEM INCLUDING THE SAME, OPERATING METHOD OF VACCINE MANAGEMENT DEVICE AND METHOD FOR PROVIDING VACCINE HEALTHCARE SOLUTIONS

US - 13.06.2024

Int.Class G16H 10/60Appl.No 18554245Applicant Real Time Medi Check Corp.Inventor Hee KIM

An operating method of a vaccine management device of the present invention includes: waiting, by the identification code recognition unit, recognition of an identification code; determining, when a first identification code is recognized in the first waiting step, whether the first identification code is a subject person identification code of a vaccine inoculation subject person; waiting, when the first identification code is the subject person identification code, recognition of a vaccine identification code; determining, when a second identification code is recognized in the second waiting step, whether the second identification code is the vaccine identification code; and transmitting, when the second identification code is the vaccine identification code, data obtained by merging subject person identification information

corresponding to the subject person identification code and vaccine identification information corresponding to the vaccine identification code, to a management server.

5.20240181033NANOGEL-COATED VACCINE

US - 06.06.2024

Int.Class A61K 39/12Appl.No 18285148Applicant The University of TokyoInventor Hiroshi KIYONO

It is an object of the present invention to provide: a complex of an antigen that is not encapsulated in a nanogel, and a nanogel; and a vaccine preparation comprising the complex. Specifically, the present invention provides a complex of a nanogel and a vaccine antigen, in which the vaccine antigen is coated with the nanogel

6.4382183METHODS OF PRODUCING AND CHARACTERIZING VIRUS VACCINE AND VIRUS VACCINE COMPOSITION

EP - 12.06.2024

Int.Class B01D 15/36Appl.No 24158124Applicant GUANGZHOU REALBENEFITSPOT PHARMACEUTICAL CO LTDInventor LIU DIANLIAN

Provided are methods of isolating virus particles and producing virus vaccine composition comprising subject a biological sample to an anion exchange chromatography and a hydroxyapatite chromatography. Also provided are rabies virus vaccine compositions and methods of assessing suitability of a virus vaccine composition or releasing commercial batch of virus vaccine composition for clinical use.

7.4387592VACCINE COMPOSITIONS

EP - 26.06.2024

Int.Class A61K 9/00Appl.No 22857142Applicant UNIV MONASHInventor AL-WASSITI HARETH BASIM ALI

The invention relates to vaccine compositions for inducing an immune response to a coronavirus in a subject, and uses thereof. In particular, the vaccine comprises of a chimeric or fusion protein comprising a) a N-terminal secretion signal peptide; b) an amino acid sequence of the receptor binding domain (RBD) of a spike protein of a coronavirus; and c) a C-terminal domain comprising a transmembrane region and a cytoplasmic region. In a preferred embodiment, the signal peptide, RBD, transmembrane region, and cytoplasmic region are derived from SARS-CoV-2, and that the vaccine composition is formulated as a lipid nanoparticle (LNP).

8.WO/2024/121203VACCINE FOR VACCINATING A CANINE

WO - 13.06.2024

Int.Class A61K 39/235Appl.No PCT/EP2023/084455Applicant INTERVET INTERNATIONAL B.V.Inventor PEARCE, Jacqueline

The present invention relates to a vaccine for use in a method of inducing an immune response in a canine against infectious canine hepatitis and/or infectious tracheobronchitis. To combine a convenient way of administering the vaccine and a good protection against ICH and infectious tracheobronchitis, the vaccine is

a first vaccine comprising a canine adenovirus type 2, and the method comprises - administration of an immunologically effective dose of the first vaccine, - subcutaneous administration of an immunologically effective dose of a second vaccine comprising a canine adenovirus type 2 7-42 days after the first vaccine, and - oral administration of an immunologically effective dose of a third vaccine comprising a canine adenovirus type 2 10-14 months after the first vaccine.

9.20240180890VACCINE ADJUVANT

US - 06.06.2024

Int.Class A61K 31/454Appl.No 18283158Applicant Celleron Therapeutics LimitedInventor Nicholas La Thangue

The present invention relates to the therapeutic use of the HDAC inhibitor compound, N-(2-aminophenyl)-4-(1-[(1,3-dimethyl-1H-pyrazol-4-yl)methyl]piperidin-4-yl)benzamide, or a pharmaceutically acceptable salt or solvate thereof, as a vaccine adjuvant. The present invention also relates to the combination of N-(2-aminophenyl)-4-(1-[(1,3-dimethyl-1H-pyrazol-4-yl)methyl]piperidin-4-yl)benzamide and a vaccine and the therapeutic uses thereof.

10.20240181027CANINE LYME DISEASE VACCINE

US - 06.06.2024

Int.Class A61K 39/02Appl.No 18539997Applicant Intervet Inc.Inventor Rhonda LaFleur

The present invention provides a vaccine for canine Lyme disease and methods of making and using the vaccine alone, or in combinations with other protective agents.

11.4384212UNDIRECTED MUTATED MRNA VACCINE

EP - 19.06.2024

Int.Class A61K 39/12Appl.No 22858980Applicant BURTON DENNIS RInventor HORNBY DAVID P

We claim vaccines and a method of making vaccines targeted against diseases caused by viruses, including influenza virus and SARS CoV-2, against cancer, and diseases caused by bacteria, fungi, and other biomaterials/diseases that are combatted with an immune response. The mRNA vaccine is injected into the body whereupon the injected mRNA hijacks the translational machinery of the cells to produce an antigen such as a virus spike protein or surface protein (or part thereof) and stimulates an immune response. The mRNA in the vaccine is a mixture of mRNAs and where at least one or more of the RNAs are undirected mutant variants of the parent mRNA. The vaccine is a poly vaccine and provides protection against multiple variants. The vaccine may comprise mRNA species encoding several random undirected mutations directed against unknown variants.

12.WO/2024/118234RATIONALLY DESIGNED MYCOPLASMA GALLISEPTICUM SUBUNIT VACCINE

WO - 06.06.2024

Int.Class A61K 38/16Appl.No PCT/US2023/070600Applicant UNIVERSITY OF CONNECTICUTInventor GEARY, Steven J.

A novel recombinant subunit vaccine composition against avian Mycoplasma infection is described. The vaccine includes VlhA early phase antigens chosen based on their expression profile during the first 7 days of infection. The vaccine composition is shown to induce a protective immune response in chickens. Vaccine compositions and methods of making and using the vaccine compositions are described.

13.4378473HER2 VACCINE COMPOSITION

EP - 05.06.2024

Int.Class A61K 39/00Appl.No 22849791Applicant ASTON SCI INCInventor JUNG HUN

The present invention relates to an HER2-ICD DNA vaccine composition. The vaccine composition according to the present invention can effectively inhibit growth of gastric cancer without serious side effects in an animal model transplanted with a human gastric cancer cell line that expresses HER2, and thus may be usefully used in treatment of gastric cancer.

14.4388536VACCINE DESIGN PIPELINE

EP - 26.06.2024

Int.Class G16B 35/10Appl.No 22762108Applicant INTOMICS ASInventor LUNDEGAARD CLAUS

Herein are provided computer implemented methods for designing sets of peptides, such as for use in a vaccine. Also provided are computer-readable media, computer program products and sets of propagated signals for designing sets of peptides, such as for use in a vaccine. Further provided are methods of treatment, uses and kits comprising peptides designed according to the computer implemented methods.

15.WO/2024/128201MRNA VACCINE

WO - 20.06.2024

Int.Class A61K 48/00Appl.No PCT/JP2023/044270Applicant KYOTO PREFECTURAL PUBLIC UNIVERSITY CORPORATIONInventor UCHIDA Satoshi

Provided is an mRNA vaccine that includes mRNA encoding an antigen, at least one RNA oligomer hybridized to the mRNA, and a cationic polymer encapsulating the mRNA. The RNA oligomer includes (a) an RNA sequence comprising a sequence of 12-40 bases that are complementary to the mRNA sequence or (b) an RNA sequence that has at least 90% identity with a sequence of 12-40 bases that are complementary to the mRNA sequence and hybridizes to the mRNA. The RNA oligomer includes a polyethylene glycol modification. Through said configuration, the present invention provides a novel mRNA vaccine.

16.WO/2024/116096PNEUMOCOCCAL CONJUGATE VACCINE FORMULATIONS

WO - 06.06.2024

Int.Class A61K 9/08Appl.No PCT/IB2023/062031Applicant PFIZER INC.Inventor DIOP, Awa

The present invention relates to new vaccine formulations comprising conjugated *Streptococcus pneumoniae* capsular saccharide antigens (glycoconjugates) and uses thereof. Vaccine formulations of the

present invention will typically comprise at least one glycoconjugate from a *S. pneumoniae* serotype in a formulation designed to facilitate resuspension.

17.20240181034HUMAN METAPNEUMO VIRUS VACCINE

US - 06.06.2024

Int.Class A61K 39/12Appl.No 18285416Applicant Valneva SEInventor Urban Lundberg

The present invention relates to a vaccine composition for preventing and/or treating a respiratory system infection such as a human metapneumovirus infection of the respiratory system. This vaccine composition comprises one, two or more modified human metapneumovirus (hMPV) F proteins or variants thereof provided in a pre-fusion -fusion conformation form.

18.4380609? ? ?CLOSTRIDIUM CHAUVOEI? ? ? ? ?VACCINE AND METHOD OF MAKING

EP - 12.06.2024

Int.Class A61K 39/08Appl.No 22762234Applicant ZOETIS SERVICES LLCInventor CAMERON ANTHONY JAMES

The invention provides a vaccine against *C chauvoei*, the vaccine comprising a *C chauvoei* component and additional cctA protein. The methods of making and using said vaccine are also provided.

19.4380617MULTIVALENT PAN-INFLUENZA VACCINE

EP - 12.06.2024

Int.Class A61K 39/145Appl.No 22757808Applicant NAJIT TECH INCInventor AMANNA IAN J

Provided are highly immunogenic multivalent pan-influenza vaccines, comprising a viral haemagglutinin (HA) protein, or HA1-containing portion thereof, of/corresponding to a virus strain from each of any three of, or from all four of component virus strain groups (H1-CVG1 - H1-CVG-4) as defined herein. Additionally provided are highly immunogenic multivalent pan-influenza vaccine, comprising a viral haemagglutinin (HA) protein, or HA1-containing portion thereof, of/corresponding to a virus strain from each of any three of, or from all four of component virus strain groups (H3-CVG-1 – H3-CVG-4) as defined herein. Further provided are highly immunogenic multivalent pan-influenza vaccine, comprising a viral haemagglutinin (HA) protein, or HA1-containing portion thereof, of/corresponding to a virus strain from each of two component virus strain groups Influenza B-CVG-1 and Influenza B-CVG-2 as defined herein. Yet further provided are methods for making the immunogenic vaccine compositions, and methods for eliciting an immune response, comprising administering the immunogenic vaccine compositions.

20.WO/2024/131726BROAD-SPECTRUM INFLUENZA MRNA VACCINE

WO - 27.06.2024

Int.Class C12N 15/62Appl.No PCT/CN2023/139522Applicant STEMIRNA THERAPEUTICS CO., LTD.Inventor FANG, Yi

The present invention relates to the field of biological pharmaceuticals and virology, and in particular, to an mRNA vaccine for preventing or treating influenza virus infection. Provided is a polynucleotide, such as

mRNA, encoding influenza virus NP and M2e, which is optimized by means of a human cell preferred codon sequence. Further provided are a composition and a vaccine comprising the polynucleotide, and a method for treating or preventing influenza virus infection using the polynucleotide, the composition, or the vaccine.

21.20240189414ENGINEERED HEARTLAND VIRUS MRNA VACCINE

US - 13.06.2024

Int.Class A61K 39/12Appl.No 18530861Applicant Vernagen, LLCInventor Baek KIM

Provided herein are a Heartland virus vaccine composition including a messenger ribonucleic acid (mRNA) including an open reading frame (ORF) encoding Gn or Gc of Heartland virus, a Heartland virus vaccine composition comprising a messenger ribonucleic acid (mRNA) comprising an open reading frame (ORF) encoding Gn or Gc of Heartland virus fused with human collagen type I alpha 1 (COL1A1) signal peptide, and a method of inducing immune response against Heartland virus by administering an effective amount of the Heartland virus vaccine composition to a subject in need thereof.

22.WO/2024/128746VACCINE MANAGEMENT SYSTEM FOR PREVENTING VACCINATION ACCIDENT DUE TO INCORRECT VACCINATION AND MISREGISTRATION OF VACCINE, AND VACCINATION SERVICE PROVISION METHOD PERFORMED BY MEANS OF VACCINE MANAGEMENT SYSTEM

WO - 20.06.2024

Int.Class G16H 40/20Appl.No PCT/KR2023/020388Applicant REAL TIME MEDI CHECK CORP.Inventor KIM, Hee

A vaccine management system for preventing a vaccination accident due to incorrect vaccination and misregistration of a vaccine, and a vaccination service provision method are disclosed. The disclosed vaccine management system comprises: an on-site vaccination information recognition device for recognizing a subject identification code of a subject to be vaccinated, and vaccination vaccine information printed on a syringe or a vial; and an on-site terminal for displaying, on a screen, verification information which should be verified, on the basis of the subject identification code and the vaccination vaccine information transmitted from the on-site vaccination information recognition device, for vaccination of the subject to be vaccinated. Here, the screen of the on-site terminal includes a first display area for displaying, from the verification information, identification information of the subject to be vaccinated corresponding to the subject identification code, and a second display area for displaying, from the verification information, vaccination information corresponding to the vaccination vaccine information.

23.20240189411MONOVALENT VACCINE FORMULATION AND A METHOD FOR PREPARATION THEREOF

US - 13.06.2024

Int.Class A61K 39/02Appl.No 18510385Applicant AIMST UNIVERSITYInventor Guruswamy PRABHAKARAN

The present invention discloses a vaccine formulation in accordance with an illustrative embodiment. The formulation including a live attenuated cholera vaccine strain VCUSM14P; a vaccine medium having starch, cellulose, dextrose, and yeast extract; and a phosphate buffer saline.

24.WO/2024/128804SARS-COV-2 VIRUS VACCINE

WO - 20.06.2024

Int.Class A61K 39/215Appl.No PCT/KR2023/020554Applicant KHAV CO., LTD.Inventor KIM, Deok-Hwan

The present invention relates to: a virus in which a spike gene of the SARS-CoV-2 beta variant is inserted into a pK148/08 vector made of K148/08, which is a Newcastle disease virus; and a vaccine including same. When a vaccine composition according to the present invention is used, it is possible to activate the immune function of a subject against the SARS-CoV-2 virus and Newcastle virus.

25.WO/2024/131664HERPES SIMPLEX VIRUS VACCINE AND USE THEREOF

WO - 27.06.2024

Int.Class A61K 39/245Appl.No PCT/CN2023/139118Applicant NANJING AURORNA BIOTECHNOLOGY COMPANY LIMITEDInventor ZHU, Bing

Provided are a herpes simplex virus mRNA vaccine and use thereof. The herpes simplex virus vaccine is an mRNA vaccine and comprises an mRNA sequence coding any one or more of a glycoprotein B, a glycoprotein C, a glycoprotein D, or a glycoprotein E. The mRNA vaccine is prepared in a manner of combining antigens. The involved antigens were all in the form of a truncated protein, and sequence optimization is carried out on corresponding nucleic acid coding sequences, such that the protein expression efficiency and mRNA stability are improved, the mutation rate of mRNA and the difficulty in wrapping with LNP are reduced, the mRNA stability is improved, and the immunogenicity is reduced.

26.20240207388METHODS FOR PROVIDING A VACCINE

US - 27.06.2024

Int.Class A61K 39/215Appl.No 17913822Applicant Wolfgang WÜRFELInventor Wolfgang WÜRFEL

Methods for producing and providing a vaccine for immunizing an individual against an illness caused by a virus are provided, including viruses from the family of coronaviruses. The method includes obtaining a sample of the virus; inactivating the virus by destroying or removing nucleic acids carrying genetic information for the virus; and preparing the inactivated virus in order to obtain an administrable vaccine to be administered. Vaccines provided in such a manner and the use thereof are also provided.

27.0002821917PLANT VIRUS RECOMBINANT ANTHRAX VACCINE

RU - 27.06.2024

Int.Class A61P 31/04Appl.No 2023105282ApplicantInventor АРХИПЕНКО Марина Владимировна (RU)

FIELD: biotechnology. SUBSTANCE: described is a group of inventions which includes a vaccine for preventing anthrax and a method for preparing it. Vaccine contains rPA83m, that is modified recombinant protective antigen of Bacillus anthracis, structurally modified particles formed during heating of tobacco

mosaic virus (TMV), and phosphate-salt buffer with pH 7.2–7.6. EFFECT: invention extends the range of anthrax vaccines in which the recombinant protective anthrax antigen will not lose its immunogenic and protective properties during storage. 3 cl, 10 dwg, 5 ex

28.20240181039INFLUENZA VACCINE FOR INTRANASAL ADMINISTRATION

US - 06.06.2024

Int.Class A61K 39/145Appl.No 18285124Applicant DENKA COMPANY LIMITEDInventor Ryotaro MITSUMATA

An influenza vaccine composition to be intranasally administered, including an influenza antigen to which TGDK is linked via a chemical bond.

29.20240207387A VACCINE ADJUVANT FOR INFECTIOUS DISEASES

US - 27.06.2024

Int.Class A61K 39/145Appl.No 18555940Applicant University of CincinnatiInventor Georg F. Weber

Provided herein is a vaccine adjuvant containing an N-terminal domain of osteopontin or a fragment thereof. Also provided are conjugates and fusion proteins containing the N-terminal domain of osteopontin conjugated to a pathogen or a protein derived therefrom. A method for potentiating an immune response to an immunizing antigen is also provided, the method including administering to a subject an effective amount of a vaccine adjuvant containing an N-terminal domain of osteopontin. Also provided is a method of vaccinating a subject against SARS-CoV-2, the method including administering to a subject a fusion protein containing the N-terminal domain of osteopontin and the receptor binding domain of SARS-CoV-2 spike glycoprotein. Cellular vaccines and methods of vaccinating a subject with a cellular vaccine are also provided herein.

30.WO/2024/118740LARGE-SCALE FLAVIVIRAL VACCINE PRODUCTION AND MANUFACTURE

WO - 06.06.2024

Int.Class B01D 15/36Appl.No PCT/US2023/081551Applicant TAKEDA VACCINES, INC.Inventor SANTANGELO, Joseph, David

The present invention provides methods for large-scale flaviviral vaccine production and manufacture. The methods provided herein are specifically contemplated for large-scale production and manufacture of live, attenuated flaviviral vaccines such as live, attenuated, dengue virus vaccines. Further, the methods provided herein pertain to formulation of live, attenuated, monovalent, divalent, trivalent, or tetravalent viral vaccine products.

31.20240183856HER2 VACCINE COMPOSITION

US - 06.06.2024

Int.Class G01N 33/574Appl.No 18286027Applicant ASTON SCI. INC.Inventor Mary L. DISIS

The present disclosure relates to a method for predicting reactivity of a HER2-ICD DNA vaccine composition, that is, the acquisition of immunogenicity and the therapeutic efficacy thereof, by measuring immunogenicity

against a HER2-ICD antigen before vaccination. Additionally, by using the method for predicting reactivity, according to the present disclosure, a DNA vaccination target may be selected.

32.20240189420PSEUDORABIES VIRUS VACCINE

US - 13.06.2024

Int.Class A61K 39/245Appl.No 18555626Applicant Zoetis Services LLCInventor QiaoRan LIU

This disclosure provides an attenuated suid herpesvirus 1 (a Pseudorabies virus) wherein the TK, gI and gE genes thereof are modified relative to a parent field strain, such that the resultant virus is safe and effective for use as a live vaccine that protects swine animals from challenge with a virulent Pseudorabies virus.

33.20240181042SARS-COV-2 VACCINE COMPOSITION AND USE THEREOF

US - 06.06.2024

Int.Class A61K 39/215Appl.No 18284732Applicant National Tsing Hua UniversityInventor Suh-Chin Wu

The present disclosure provides a SARS-CoV-2 vaccine composition and use thereof. The SARS-CoV-2 vaccine composition includes a mutant SARS-CoV-2 spike protein with N-linked glycosylation in N-terminal domain or receptor binding domain, and can effectively elicit an immune response in an individual against different SARS-CoV-2 variants.

34.WO/2024/123730ACINETOBACTER VACCINE AND METHOD OF USE THEREOF

WO - 13.06.2024

Int.Class A61K 39/104Appl.No PCT/US2023/082426Applicant WASHINGTON UNIVERSITYInventor HULTGREN, Scott

The present disclosure provides for a vaccine comprising an Acinetobacter adhesin protein or fragment thereof and a pharmaceutically acceptable carrier or adjuvant. The vaccine may be used for treating or preventing a urinary tract infection (UTI) in a subject in need thereof, particularly a catheter-associated UTI (CAUTI). In some embodiments, the Acinetobacter adhesin protein or fragment thereof is an isolated Acinetobacter chaperone-usher pathway (CUP) adhesin protein or immunogenic fragment thereof.

35.WO/2024/124232NUCLEIC ACID BASED CANCER VACCINE AND METHODS THEREOF

WO - 13.06.2024

Int.Class C12N 15/62Appl.No PCT/US2023/083348Applicant ADVANCED RNA VACCINE (ARV) TECHNOLOGIES, INC.Inventor ZHU, Huabin

Described herein are composition and methods of using thereof. The compositions described herein can include a single chain trimer nucleic acid encoding a first T cell epitope, a β2-microglobulin, and a MHC class I heavy chain sequence. The methods described herein can be used to activate and/or expand an antigen-presenting cell. The methods described herein can also be used to treat or prevent a viral infection, bacterial infection, parasitic infection and/or a cancer in a subject.

36.20240207389METHODS FOR IMPROVING COVID VACCINE IMMUNOGENICITY

US - 27.06.2024

Int.Class A61K 39/215Appl.No 18308349Applicant Northwestern UniversityInventor Pablo Penaloza-MacMaster

The present disclosure provides an improved vaccine compositions and methods for eliciting an immune response against SARS-COV-2 and providing broader protection against SARS-COV-2 variants.

37.20240207394TOLL-LIKE RECEPTOR AGONIST-NANOPARTICLE VACCINE ADJUVANT

US - 27.06.2024

Int.Class A61K 39/39Appl.No 18287444Applicant The Board of Trustees of the Leland Stanford Junior UniversityInventor Qian Yin

Compositions and methods are provided relating to TLR agonist nanoparticle vaccine adjuvant formulations.

38.20240189418VIRUS VACCINE BASED ON VIRUS SURFACE ENGINEERING PROVIDING INCREASED IMMUNITY

US - 13.06.2024

Int.Class A61K 39/215Appl.No 18553277Applicant THE INDUSTRY & ACADEMIC COOPERATION IN CHUNGNAM NATIONAL UNIVERSITY (IAC)Inventor Hyun-Jin SHIN

The present disclosure relates to an immune-enhanced virus vaccine based on virus surface engineering. A linker peptide according to one aspect has the property of being attachable to a virus, and may be used as a linker that may effectively bind an immune-enhancing substance, which activates the immune system, to the surface of the virus, and thus may improve the immunogenicity of the vaccine. By incorporating the linker peptide into virus surface engineering technology, an immune-enhancing substance may be attached to the surface of the virus, which may be useful in an immune-enhanced vaccine platform.

39.4384210IPSC-BASED VACCINE AS A PROPHYLACTIC AND THERAPEUTIC TREATMENT FOR CANCER

EP - 19.06.2024

Int.Class A61K 39/00Appl.No 22765320Applicant KHLORIS BIOSCIENCES INCInventor KOOREMAN NIGEL

In one embodiment, the application discloses a method for the treatment of cancer in a patient, the method comprises a vaccination of the patient with a vaccine, wherein the vaccine comprises an effective amount of mammalian pluripotent stem cells obtained from an embryonic source or obtained by reprogramming of somatic cells from the patient, wherein the vaccination comprising the step of administering a mammalian pluripotent stem cells to the patient in need thereof; and vaccine formulations for use in the treatment of cancer.

40.WO/2024/123558ENGINEERED LASSA VIRAL IMMUNOGENS AND VACCINE COMPOSITIONS

WO - 13.06.2024

Int.Class C07K 14/01Appl.No PCT/US2023/081252Applicant THE SCRIPPS RESEARCH INSTITUTEInventor HE, Linling

The present invention provides engineered immunogenic proteins that are derived from Lassa virus (LASV) glycoprotein complex (GPC), and related vaccine compositions.

41.20240207396OLIGOSACCHARIDE VACCINE FOR SPECIFIC PREVENTION OF FUNGAL INFECTIONS AND METHOD FOR PREPARING SAME

US - 27.06.2024

Int.Class A61K 39/39Appl.No 18557597Applicant SHANDONG ACADEMY OF PHARMACEUTICAL SCIENCESInventor Fei LIU

An oligosaccharide vaccine for specific prevention of fungal infections and a method for preparing the same are provided. The vaccine is formed by conjugating a sulfhydrylated protein with oligosaccharide. The sulfhydrylated protein is formed by introducing a sulfhydryl group (—SH) to a carrier protein containing a primary amino group (—NH2), and then is conjugated with the oligosaccharide to form the oligosaccharide vaccine under the binding action of a bridging agent. The carrier protein is a non-humanized protein, and the oligosaccharide is a chitosan oligosaccharide mixture and/or chitin oligosaccharide mixture. The vaccine has strong immunogenicity, can activate Th17 cell immunity, and can recognize and protect infections caused by fungi.

42.WO/2024/125100BIVALENT INACTIVATED EV71-CA16 VACCINE, METHOD FOR PREPARING SAME, AND USE THEREOF

WO - 20.06.2024

Int.Class A61K 39/125Appl.No PCT/CN2023/126963Applicant AIM ACTION BIOPHARM CO., LTD.Inventor LIU, Biyun

The present invention relates to the technical field of vaccine preparation, and particularly, to a bivalent inactivated EV71-CA16 vaccine, a method for preparing same, and use thereof. The present invention implements the preparation by means of separately adsorbing a monovalent viral stock solution containing an EV71 antigen and a monovalent viral stock solution containing a CA16 antigen with an adjuvant and then mixing same, thereby improving the content of the EV71 antigen and the CA16 antigen in the vaccine substance and greatly improving the adsorption rate and recovery rate of EV71 and CA16 antigens. Moreover, the bivalent EV71-CA16 viral antigen can cause positive seroconversion and up-regulation of the corresponding neutralizing antibody and induce a higher serum antibody level, thus facilitating the preparation of the bivalent inactivated EV71-CA16 vaccine and preventing hand-foot-and-mouth disease.

43.WO/2024/131929RECOMBINANT POLIOVIRUS-LIKE PARTICLE VACCINE, PREPARATION METHOD THEREFOR AND USE THEREOF

WO - 27.06.2024

Int.Class A61K 39/00Appl.No PCT/CN2023/140931Applicant CANSINO BIOLOGICS INC.Inventor YAN, Qiaoling

Provided in the present invention are a recombinant poliovirus-like particle vaccine preparation, a preparation method therefor and the use thereof. The vaccine comprises recombinant virus-like particle antigens of three serotypes, and comprises an adjuvant. Preferably, the adjuvant is an aluminum adjuvant. Preferably, the adjuvant is aluminum phosphate (AP), aluminum hydroxide treated with different concentrations of phosphates (PTAH), and aluminum hydroxide.

44.4380612A VACCINE FOR PROTECTION AGAINST STREPTOCOCCUS SUIS OF VARIOUS SEROTYPES

EP - 12.06.2024

Int.Class A61K 39/09Appl.No 22741194Applicant INTERVET INT BVInventor JACOBS ANTONIUS ARNOLDUS CHRISTIAAN

The present invention pertains to a vaccine for protection against a pathogenic infection with *Streptococcus suis*, the vaccine comprising a whole IgM protease antigen of *Streptococcus suis*, the antigen comprising in its amino acid sequence less than four repeats, and a pharmaceutically acceptable carrier. The invention also pertains to this antigen for use in a method to protect a pig against such an infection, and to a method to protect such a pig.

45.WO/2024/130254A MULTI-ANTIGENIC RNA SARS-COV-2 VACCINE AND ASSOCIATED METHODS

WO - 20.06.2024

Int.Class A61K 39/12Appl.No PCT/US2023/084666Applicant GENEIUS BIOTECHNOLOGY, INC.Inventor RYAN, David James

The present technology provides multivalent vaccine compositions and Tcell compositions comprising viral antigens and associated methods. In some embodiments, the viral antigens are SARS-CoV-2 antigens. The vaccine compositions and the T cell compositions may comprise each of a Spike (S) peptide, a VME1 (M) peptide, an NCAP (N) peptide, an ORF7a (7a) peptide, an ORF3a (3a) peptide, an ORF8 (8) peptide, and an Nsp6 peptide.

46.WO/2024/114650RECOMBINANT HERPES ZOSTER VACCINE AND PREPARATION THEREFOR AND USE THEREOF

WO - 06.06.2024

Int.Class C07K 19/00Appl.No PCT/CN2023/134838Applicant BEIJING GENEVAX BIOTECHNOLOGY CO., LTDInventor WANG, Xiliang

A herpes zoster vaccine, comprising an antigen and an adjuvant. The antigen is a fusion protein containing VZV-gE protein and human IgG4 Fc, and the adjuvant is an aluminum adjuvant, a CpG adjuvant or a combination of the both. The vaccine uses the combination of a conventional aluminum adjuvant and a CpG adjuvant or a novel CpG adjuvant, which have low prices and are readily available. The antigen and the adjuvant can be directly mixed and thus injectors can be prefilled with same so as to package preparations.

47.20240197863LIQUID SIX COMBINED VACCINE COMPOSITION

US - 20.06.2024

Int.Class A61K 39/29Appl.No 18287248Applicant KM Biologics Co., Ltd.Inventor Shun YAMASHITA

Provided is a liquid formulation of a six combined vaccine containing DPT-IPV-Hib-HBs, in which a HBs antigen is stably adsorbed and retained to an aluminum adjuvant, and PRP as a Hib antigen is stably coupled and retained to a carrier protein. A method for producing a stable liquid formulation of a six combined vaccine against diphtheria, pertussis, tetanus, polio, *Haemophilus influenzae* type b (Hib), and hepatitis B (HepB), the method comprising the following steps of: (1) mixing diphtheria toxoid (D) and tetanus toxoid (T) with an aluminum adjuvant to produce a DT adjuvant; (2) mixing a hepatitis B surface (HBs) antigen with the DT adjuvant obtained in step (1) to produce a DT-HBs adjuvant; (3) mixing a pertussis antigen (P) with the DT-HBs adjuvant obtained in step (2) to produce a DPT-HBs adjuvant; (4) mixing inactivated poliovirus (IPV) with the DPT-HBs adjuvant obtained in step (3) to produce a DPT-IPV-HBs adjuvant; (5) adding a succinate phosphate buffer to the DPT-IPV-HBs adjuvant obtained in step (4), and then adding PRP (PRP-T conjugate) as a Hib antigen to produce a mixture of DPT-IPV-Hib-HBs adjuvant and PRP-T conjugate; and (6) adjusting pH of the mixture of DPT-IPV-Hib-HBs adjuvant and PRP-T conjugate obtained in step (5) to 5.4 to 5.9.

48.20240197848THERAPEUTIC VACCINE FOR TREATMENT OF DIABETES TYPE 1 IN CHILDREN, APPLICATION OF THE CELL SORTER AND THE METHOD OF MULTIPLYING TREG CELLS TO PRODUCE THERAPEUTIC VACCINE FOR TREATMENT OF DIABETES TYPE 1

US - 20.06.2024

Int.Class A61K 39/00Appl.No 18588535Applicant Gdanski Uniwersytet MedycznyInventor Piotr Trzonkowski

The gist of the invention consists in the therapeutic vaccine for treatment of diabetes type 1 in children, which contains

-
    - Treg cells CD3(+)CD4(+)CD25(high)CD127(−). Claimed too is the cell sorter used to produce the vaccine and the method of multiplying Treg cells in vitro.

49.4387739CORONAVIRUS VACCINE FORMULATIONS INCORPORATING PRIME AND BOOST

EP - 26.06.2024

Int.Class A61P 37/04Appl.No 22859444Applicant CORONAVAX LLCInventor LYDAY BRUCE

Disclosed herein are vaccine components for prevention of *Coronavirus* infection through a combination Prime-Boost design. The prime components are viral vectors of the *Alphavirus* family carrying a transgene coding for the receptor-binding domain (RBD), of a coronavirus. The boost components are modified proteins coding for Coronavirus Spike (S) proteins from various strains, mixed with an adjuvant.

50.4381082ADENOVIRAL VECTOR-BASED VACCINE FOR EMERGING VIRUSES

EP - 12.06.2024

Int.Class C12N 15/861Appl.No 22854113Applicant THERAVAX INCInventor MAGGINI NORBERTO JULIÁN

Provided herein is an adenoviral vector-based vaccine for inducing immune responses against viruses, such as coronaviruses. The adenoviral vector comprises a hybrid promoter, a nucleic acid sequence encoding a viral antigen operatively linked to the hybrid promoter; a post-transcriptional regulatory element; and a modified fiber protein. Also provided is a method of inducing an immune response against a coronavirus using a composition containing the adenoviral vector.

51.20240207393USE OF ENDOGENOUS VIRAL VACCINE IN CHIMERIC ANTIGEN RECEPTOR T CELL THERAPY

US - 27.06.2024

Int.Class A61K 39/245Appl.No 18346677Applicant City of HopeInventor John C. Williams

Provided herein are, inter alia, methods and compositions including T cells expressing (i) a recombinant CAR protein which includes a peptide binding site and is capable of specifically binding cancer-specific antigens and (ii) a T cell receptor specific for a viral antigen (e.g., a CMV pp65 protein). The engineered T cells provided herein may be used in combination with a viral vaccine (e.g. cytomegalovirus (CMV) Triplex Vaccine) to treat a variety of cancers. The methods described herein also permit in vivo expansion of CMV-specific CAR T cells, instead of or in addition to ex vivo expansion, avoiding excessive T cell exhaustion that results in some cases from ex vivo manufacturing.

52.20240207277METHODS FOR TREATING DRUG AND VACCINE INDUCED IMMUNE THROMBOCYTOPENIA BY ADMINISTERING SPECIFIC COMPOUNDS

US - 27.06.2024

Int.Class A61K 31/519Appl.No 18555388Applicant Principia Biopharma Inc.Inventor Christopher W. Smith

Methods for treating and/or preventing drug-induced thrombocytopenia (DITP) and vaccine-induced thrombosis and thrombocytopenia syndrome (VITT) with certain BTK inhibitors and/or pharmaceutically acceptable salts thereof are provided.

53.20240197851A VACCINE FOR PROTECTION AGAINST STREPTOCOCCUS SUIS SEROTYPE 9, SEQUENCE TYPE 16

US - 20.06.2024

Int.Class A61K 39/09Appl.No 17909917Applicant Intervet Inc.Inventor Antonius Arnoldus Christiaan Jacobs

The present invention pertains to a vaccine comprising in combination an IgM protease antigen of *Streptococcus suis* and a *Streptococcus suis* bacterin of serotype (9), sequence type (16), for use in a method for protecting pigs against a pathogenic infection with *Streptococcus suis* serotype (9), sequence type (16).

54.WO/2024/131862RSV VACCINE AS WELL AS PREPARATION METHOD THEREFOR AND USE THEREOF

WO - 27.06.2024

Int.Class C07K 14/135Appl.No PCT/CN2023/140371Applicant BEIJING GENEVAX BIOTECHNOLOGY CO., LTD.Inventor WANG, Xiliang

Provided are an RSV vaccine as well as a preparation method therefor and the use thereof. A Pre-F related sequence of an RSV and ferritin nanoparticles are subjected to mutation design, and a Pre-F mutant protein and a ferritin mutant are fused and expressed in eukaryotic cells, so as to obtain ferritin-PreF fusion protein nanoparticles having multiple Pre-F displayed on the surfaces in a centralized manner, and the amino acid sequence of the ferritin-PreF fusion protein nanoparticles is any one of SEQ ID No. 20-27. Experiments show that: injecting the ferritin-PreF fusion protein prepared in the present invention into mice may produce serum having a high protective titer, the mouse serum can generate a relatively high neutralizing titer for euviruses, and stability experiments and safety experiments prove that the prepared ferritin-PreF fusion protein also has enough physical stability and good safety. In addition, a vaccine containing a mRNA coding the ferritin-PreF fusion protein can endow individuals with effective body fluid and cell immune protection.

55.20240189406NATURAL KILLER T CELL LIGAND LOADED EXTRACELLULAR NANOVESICLE AND AUTOLOGOUS ANTI-CANCER VACCINE FOR HEMATOLOGIC MALIGNANCIES COMPRISING THE SAME

US - 13.06.2024

Int.Class A61K 39/00Appl.No 18528327Applicant SEOUL NATIONAL UNIVERSITY R&DB FOUNDATIONInventor Yeonseok CHUNG

The present invention provides a natural killer T cell ligand-loaded extracellular nanovesicle, and an autologous anticancer vaccine for hematologic malignancies including the above extracellular nanovesicle. More particularly, a cancer cell-derived extracellular nanovesicle in which a natural killer T cell ligand as an adjuvant is bound to a surface thereof, and an autologous anticancer vaccine including the same, which can recognize cancer antigens specific to patients with hematologic malignancies and has cancer cell-specific anticancer function thus to enable T cell activation.

56.WO/2024/137589METHODS OF TREATING PANCREATIC CANCER WITH A PD-1 AXIS BINDING ANTAGONIST AND AN RNA VACCINE

WO - 27.06.2024

Int.Class A61K 39/00Appl.No PCT/US2023/084762Applicant GENENTECH, INC.Inventor MANCUSO, Michael Robert

The present disclosure provides methods for treating an individual with pancreatic cancer with an individualized cancer vaccine and a PD-1 axis antagonist.

57.20240181045DENDRITIC CELL-TARGETING UNIVERSAL VACCINE FOR INFLUENZA INFECTION

US - 06.06.2024

Int.Class A61K 39/295Appl.No 17768624Applicant University of ManitobaInventor Xiao-Jian Yao

We have recently developed a novel DC-targeting vaccine platform using Ebola glycoprotein (EboGP) DC-targeting domain-based fusion protein technology. Here, we will use this technology to generate universal

vaccines against Influenza A by fusing a DC-targeting/activation domain (EboGPAM), derived from EboGP to I) a tetrameric conserved extracellular domain of M2 (M2e) of Influenza A strains from human, birds, and swine; 2) the conserved stalk regions (HAcs) of HA and an M2 polypeptide from H5N1 strain; and 3) the HA head regions polypeptides ($HA_{H5\text{-}1\text{-}3}$) derived from H5N1, H1 N1 and H3N2 strains.

58.4384194USE OF DOPAMINE PRODUCING PRODUCTS TO INCREASE VACCINE EFFICACY

EP - 19.06.2024

Int.Class A61K 35/66Appl.No 22879548Applicant UNIV IOWA STATE RES FOUND INCInventor LYTE MARK

The present disclosure is directed to dopamine producing probiotics to increase immune responses to vaccination and to provide increased immune protection. The present disclosure is further directed to dopamine producing synbiotic compositions, formulations, plants, and synthetic compounds and their use for targeted clinical and veterinary applications, for example, in promoting health and well-being and enhancing vaccine efficacy. The present disclosure also provides an approach for optimization of synbiotic delivery of a probiotic or other dopamine producing product with a dopamine precursor to beneficially aid in the use of such products for a variety of conditions and diseases, and particularly in the field of vaccines, whether prophylactic or therapeutic.

59.WO/2024/133656OIL ADJUVANT COMPOSITIONS AND VACCINE EMULSIONS COMPRISING SUCH OIL ADJUVANT COMPOSITIONS

WO - 27.06.2024

Int.Class A61K 39/39Appl.No PCT/EP2023/087232Applicant CEVA SANTE ANIMALEInventor GAUCHERON, Jérôme

The invention relates to oil adjuvant compositions comprising at least one oil, at least one nonionic lipophilic surfactant, which is a sorbitan ester or a mannitan ester, and at least one nonionic hydrophilic surfactant, which is an ethoxylated fatty alcohol. The invention also relates to adjuvant oil-in-water emulsions and vaccines oil-in-water emulsions obtained from the oil adjuvant compositions of the invention, and to the use of such vaccine oil-in-water emulsions for the treatment of porcine circovirus type 2 disease and/or porcine enzootic pneumonia.

60.4380610A VACCINE FOR PROTECTION AGAINST STREPTOCOCCUS SUIS OF VARIOUS SEROTYPES

EP - 12.06.2024

Int.Class A61K 39/09Appl.No 22740834Applicant INTERVET INT BVInventor JACOBS ANTONIUS ARNOLDUS CHRISTIAAN

The present invention pertains to a vaccine comprising in combination an IgM protease antigen of Streptococcus suis serotype (7), a Streptococcus suis bacterin serotype (9), sequence type (16), and a pharmaceutically acceptable carrier. The invention also pertains to a combination of an IgM protease antigen of Streptococcus suis serotype (7), and a Streptococcus suis bacterin serotype (9), sequence type (16), for use in a method to protect a pig against a pathogenic infection with Streptococcus suis and to a method for protecting pigs against a pathogenic infection with Streptococcus suis, by administering to the pigs an IgM

protease antigen of Streptococcus suis serotype (7) and a Streptococcus suis bacterin serotype (9), sequence type (16).

61.20240189419METHOD FOR THE PROPHYLAXIS OR TREATMENT OF CORONAVIRUS INFECTION USING AN IMMUNOMODULATOR AND VACCINE COMPOSITIONS COMPRISING THE SAME

US - 13.06.2024

Int.Class A61K 39/215Appl.No 18583389Applicant ADVAGENE BIOPHARMA CO., LTD.Inventor YU-SHEN HSU

The present disclosure provides a method for the treatment or prophylaxis of coronavirus infection, comprising administering a therapeutically effective amount of an immunomodulator to a subject in need thereof or at risk of coronavirus infection. A vaccine composition comprising a pharmaceutically effective amount of an immunomodulator is also provided.

62.4380611A VACCINE FOR PROTECTION AGAINST STREPTOCOCCUS SUIS OF VARIOUS SEROTYPES

EP - 12.06.2024

Int.Class A61K 39/09Appl.No 22741193Applicant INTERVET INT BVInventor JACOBS ANTONIUS ARNOLDUS CHRISTIAAN

The present invention pertains to a vaccine comprising in combination an IgM protease antigen of Streptococcus suis serotype 1, a *Streptococcus suis* bacterin serotype 9, sequence type 16, and a pharmaceutically acceptable carrier. The invention also pertains to a combination of an IgM protease antigen of *Streptococcus suis* serotype 1, and a *Streptococcus suis* bacterin serotype 9, sequence type 16, for use in a method to protect a pig against a pathogenic infection with *Streptococcus suis* and to a method for protecting pigs against a pathogenic infection with *Streptococcus suis*, by administering to the pigs an IgM protease antigen of *Streptococcus suis* serotype 1 and a *Streptococcus suis* bacterin serotype 9, sequence type 16.

63.WO/2024/114542MULTI-ANTIGEN CHIMERIC POXVIRUS VACCINE AND USE THEREOF

WO - 06.06.2024

Int.Class C07K 19/00Appl.No PCT/CN2023/134141Applicant INSTITUTE OF MICROBIOLOGY, CHINESE ACADEMY OF SCIENCESInventor GAO, Fu

The present application relates to a multi-immunogen chimeric or mixed antigen against poxviruses (particularly monkeypox viruses), a related product thereof, a preparation method therefor and the use thereof. The chimeric or mixed antigen of the present application comprises three immunogens: (1) a monkeypox virus A35R protein or an antigenic fragment thereof (or a derived peptide fragment thereof); (2) a monkeypox virus M1R protein or an antigenic fragment thereof (or a derived peptide fragment thereof); and (3) a monkeypox virus B6R protein or an antigenic fragment thereof (or a derived peptide fragment thereof). The chimeric or mixed antigen of the present application can elicit an immune response against two infectious virus particles of intracellular mature virus particles (IMV) and extracellular enveloped virus particles (EEV), thereby efficiently eliciting a specific immune protection effect against monkeypox viruses; in

addition, the poxvirus vaccine of the present application also has good safety, rapid responsiveness and productivity support, and has great clinical application prospects.

64.20240197862IMMUNOGENIC COMPOSITIONS AND METHODS FOR IMMUNIZATION AGAINST VARIANTS OF SEVERE ACUTE RESPIRATORY SYNDROME CORONAVIRUS 2 (SARS-COV-2)

US - 20.06.2024

Int.Class A61K 39/215Appl.No 18592811Applicant Medigen Vaccine Biologics CorporationInventor Charles CHEN

The present invention relates to immunogenic compositions and methods for immunization against variants of severe acute respiratory syndrome coronavirus 2 (SARS-COV-2), especially to an immunogenic composition having a recombinant SARS-CoV-2 S protein derived from Beta (B.1.351) variant and methods using an immunogenic composition derived from SARS-COV-2 Beta (B.1.351) variant.

65.WO/2024/113938ADENOVIRUS VECTOR VACCINE FOR PREVENTING AFRICAN SWINE FEVER AND USE THEREOF

WO - 06.06.2024

Int.Class C12N 15/34Appl.No PCT/CN2023/111044Applicant GUANGZHOU N BIOMED LTD.Inventor CHEN, Ling

The present invention relates to an adenovirus vector vaccine for preventing African swine fever and use thereof. Provided is a nucleic acid molecule, comprising the following optimized genes: p30 gene, p54 gene, CD2v gene, p72 gene, and p72 C gene. The nucleic acid molecule can express a p30 protein, a p54 protein, a CD2v protein, and a p72 protein, can express p30, p54, CD2v, and p72 antigens after immunizing an organism, generates specific antibodies and cellular immune responses against African swine fever virus antigens, can effectively protect the organism from being infected by African swine fever virus, and can be used to prepare a drug for preventing the infection caused by the African swine fever virus, to prepare a drug for preventing and/or treating African swine fever, to prepare a product for detecting the African swine fever virus, to prepare a product for diagnosing African swine fever, and to prepare a gene function regulator.

66.2037479BROAD-SPECTRUM MRNA VACCINE AGAINST BOVINE VIRAL DIARRHEA VIRUS AND USE THEREOF

NL - 10.06.2024

Int.Class A61K 39/00Appl.No 2037479Applicant NANJING CHENGSHI BIOMEDICAL TECHNOLOGY CO., LTD.Inventor Tiyun Han

The present invention relates to a broad-spectrum mRNA vaccine against bovine viral diarrhea virus (BVDV), and a preparation method and use thereof. The present invention 5 specifically provides a trivalent BVDV mRNA against the strains of a variety of genotypes of BVDV, which includes sequentially, from the N end to the C end, a bovine IgGl secretion signal peptide, a bovine IgGl Fc fragment, BVDVla E2 protein domains I-II, BVDVlb E2 protein domains 1-H, and BVDV2 E2 protein domains I-II. According to the present invention, the antigens of different genotypes of BVDV are simultaneously eXpressed by using a strand 10 of mRNA that has strong immunogenicity, is effectively secreted at a high level in the animals, to induce the production

of higher-level specific neutralizing antibody against BVDVIa, BVDVIb and BVDV 2, and produces desirable immune efficacy against the strains of a variety of genotypes of BVDV.

67.20240181031PREPARATION OF LIVE VACCINES

US - 06.06.2024

Int.Class A61K 39/02Appl.No 18441408Applicant Elanco Tiergesundheit AGInventor Klaus LINDE

Described is a method for the generation of a live vaccine containing stable bacteria carrying at least three attenuating mutations and a vaccine containing bacteria obtained by said method.

68.WO/2024/123640METHODS AND COMPOSITIONS FOR VACCINATING PIGLETS AGAINST PRRS-1 VIRUS

WO - 13.06.2024

Int.Class A61K 39/12Appl.No PCT/US2023/082226Applicant ZOETIS SERVICES LLCInventor BALASCH SANUY, Monica

This disclosure provides a vaccine comprising a modified live PRRS-1 virus attenuated in cells expressing porcine CD163 for use in inducing protective immunity in a piglet that is older than 60 hours of age, wherein said vaccine is administered to said piglet intranasally.

69.2024203628HUMAN IMMUNODEFICIENCY VIRUS (HIV)-NEUTRALIZING ANTIBODIES

AU - 13.06.2024

Int.Class Appl.No 2024203628Applicant International AIDS Vaccine InitiativeInventor BURTON, Dennis R.

The invention provides a method for obtaining a broadly neutralizing antibody (bNab), including screening memory B cell cultures from a donor PBMC sample for neutralization activity against a plurality of HIV-1 species, cloning a memory B cell that exhibits broad neutralization activity

70.WO/2024/115638METHOD TO EVALUATE THE CONSPICUOUSNESS OF AN EPITOPE TOWARDS THE REPERTOIRE OF T-CELL RECEPTORS

WO - 06.06.2024

Int.Class G16B 20/00Appl.No PCT/EP2023/083687Applicant IMMUNEWATCH BVInventor MEYSMAN, Pieter

The current invention relates to a method of predicting T-cell response to a query epitope with a known epitope-TCR binding comprising calculating conspicuousness score of said epitope based on the number of known TCR sequences or TCR clusters responsive to said epitopes or by a centrality metric for each said epitopes in the epitope-TCR graph. The invention further relates to a second method to predict T- Cell response of any arbitrary epitopes using a machine learning algorithm. The T- cell response of epitopes can be used for the selection of molecules for vaccine and/or non-immunogenic compositions. The invention further relates to a third method for producing vaccine, to a vaccine, a biological and a data base.

71.20240189422COMBINATION CANCER THERAPY

US - 13.06.2024

Int.Class A61K 39/395Appl.No 18529140Applicant MicroVAX, LLCInventor Albert B. Deisseroth

A method and combination for treating a cancer patient by combining two distinct immuno-therapy solutions for administration to a patient within a common time period, comprising a checkpoint inhibitor antibody component such as a PD-1 or PD-L1 antibody administered by infusion, and a TAA/ecdCD40L vaccine component administered subcutaneously, wherein an initial antibody component administered is followed by at least several successive antibody boosts and an initial vaccine component administered is followed by at least several successive vaccine boosts, both the initial and boosts of each administered within at least said common time period, wherein the combined administration of said two distinct immuno-therapy solutions provides for an enhanced therapeutic effect, over that of the therapeutic effect of either of the two distinct immuno-therapy component solutions when administered alone as monotherapy.

72.20240181040CLADE C HIV-1 ENVELOPE (ENV) TRIMER IMMUNOGENS, COMPOSITIONS INCLUDING THE CLADE C HIV-1 ENVELOPE (ENV) TRIMER IMMUNOGENS, AND USES THEREOF

US - 06.06.2024

Int.Class A61K 39/21Appl.No 18284894Applicant NOVA SOUTHEASTERN UNIVERSITYInventor Mark J. Cayabyab

The invention encompasses a non-naturally occurring clade C human immunodeficiency virus type-1 (HIV-1) 1086.C envelope (ENV) SOSIP trimer protein. This trimer protein contains broadly neutralizing epitopes and epitopes that induce anti-V1/V2 antibodies and thus is an immunogen for creation of HIV-1 vaccines. The invention also includes prophylactic or therapeutic vaccine compositions/kits and methods for using the trimer protein as a component of a vaccine against HIV-1 infection.

73.4384534TRUNCATED INFLUENZA NEURAMINIDASE AND METHODS OF USING THE SAME

EP - 19.06.2024

Int.Class C07K 14/11Appl.No 22764540Applicant SANOFI PASTEUR INCInventor BARRO MARIO

Provided are modified influenza virus subtype 2 neuraminidase molecules lacking all or substantially all of the stalk region that form active, soluble tetrameric neuraminidase when expressed in host cells and vaccine compositions comprising the tetrameric neuraminidase or a nucleic acid encoding the modified monomeric influenza virus subtype 2 neuraminidase molecules that forms tetrameric NA when expressed in a cell. Also provided are methods of using the vaccine compositions to vaccinate or immunize a subject against influenza virus.

74.20240181030PERTUSSIS VACCINE

US - 06.06.2024

Int.Class A61K 39/02Appl.No 18552346Applicant ModernaTX, Inc.Inventor Sunny Himansu

The disclosure relates to pertussis nucleic acid vaccines, diphtheria nucleic acid vaccines, tetanus nucleic acid vaccines, and combination vaccines, as well as methods of using the vaccines and compositions comprising the vaccines.

75.20240198001NEEDLE-FREE INJECTION SYSTEMS

US - 20.06.2024

Int.Class A61M 5/20Appl.No 18540959Applicant ZOETIS SERVICES LLCInventor STEVEN CHARLES DEANE

A gas-actuated needle-free injector is provided. Such gas-actuated needle-free injector includes a gas spring in communication with a piston. A vaccine dosing chamber is configured to receive one or more vaccines or components thereof. A ball screw is coaxial with the gas spring and the vaccine dosing chamber and configured to receive at least portion of the piston. The ball screw is configured to move the piston between a first position and a second position. Associated systems and methods are also provided.

76.20240197850SALMONELLA VACCINE

US - 20.06.2024

Int.Class A61K 39/112Appl.No 18553686Applicant University of Maryland, College ParkInventor Debabrata BISWAS

Provided are modified bacteria and methods of using the modified bacteria for prophylaxis or treatment of bacterial infections. The modified bacteria contain one or more genomic modifications such that the genomes of the bacteria are altered to encode and produce a holin protein and to encode and produce a lysozyme. The modified bacteria are illustrated using a type of *Salmonella enterica* (SE) in the form of autolytic SE serovar *Typhimurium* (*S. typhimurium*).

77.20240180889COMBINATION THERAPY FOR COVID-19 VACCINATION

US - 06.06.2024

Int.Class A61K 31/4535Appl.No 18284951Applicant Dompe' farmaceutici SpAInventor Marcello ALLEGRETTI

The present invention relates to the combination of a Selective Estrogen Receptor Modulator (SERM) and a COVID-19 vaccine.

78.WO/2024/118544VACCINES CONTAINING NOVEL NANOPARTICLE SCAFFOLDS

WO - 06.06.2024

Int.Class A61K 39/12Appl.No PCT/US2023/081246Applicant THE SCRIPPS RESEARCH INSTITUTEInventor HE, Linling

The present invention provides novel engineered nanoparticle scaffold sequences that are derived from the 13-01 protein. Relative to the known 13-01 protein or variants thereof, the novel 13-01 derived scaffold sequences of the invention contain an extended N-terminal helix. Also provided in the invention are vaccine constructs that contain various immunogenic proteins displayed on the novel nanoparticle

scaffold sequences described herein. The vaccine constructs of the invention include, e.g., nanoparticles displaying tandem repeats of influenza M2e proteins or HCV E2 core proteins.

79.WO/2024/137574NEEDLE-FREE INJECTION SYSTEMS

WO - 27.06.2024

Int.Class A61M 5/20Appl.No PCT/US2023/084740Applicant ZOETIS SERVICES LLCInventor DEANE, Steven Charles

A gas-actuated needle-free injector is provided. Such gas-actuated needle-free injector includes a gas spring in communication with a piston. A vaccine dosing chamber is configured to receive one or more vaccines or components thereof. A ball screw is coaxial with the gas spring and the vaccine dosing chamber and configured to receive at least portion of the piston. The ball screw is configured to move the piston between a first position and a second position. Associated systems and methods are also provided.

80.20240207541PORTABLE COMBINED INHALATION DEVICE SUITABLE FOR VIALS

US - 27.06.2024

Int.Class A61M 15/00Appl.No 18288761Applicant RNAIMMUNE VACCINE (GUANGZHOU) CO., LTD.Inventor Chun LU

The present invention relates to a portable combined inhalation device suitable for vials, comprising an atomizing device and a connecting device detachably connected to the atomizing device; the connecting device comprises a support on which an accommodating groove capable of accommodating a vial is formed, and a puncture device that is arranged on the support and can puncture a rubber stopper of the vial; the puncture device comprises a liquid channel and a gas channel. If the vial, the connecting device, and the atomizing device are connected, one end of the liquid channel communicates with the vial, and the other end communicates with the atomizing device; one end of the gas channel communicates with the vial, and the other end communicates with air. The present invention can directly introduce medicinal liquid in the vial into the atomizing device for atomization under the action of atmospheric pressure, without the need to first transfer the medicament in the vial to a dedicated atomizing bottle and then connect the dedicated atomizing bottle to the atomizing device, thereby being more convenient and safer to use, and greatly reducing the possibility of the medicinal liquid being contaminated; in addition, the device has a simple structure.

81.WO/2024/120490SELF-REPLICATING RNA VACCINES AND METHODS OF USE

WO - 13.06.2024

Int.Class A61K 9/51Appl.No PCT/CN2023/137133Applicant IMMORNA (HANGZHOU) BIOTECHNOLOGY CO., LTD.Inventor WANG, Zihao

The disclosure relates improved self-replicating RNA vectors e.g., for use as a RNA vaccine or therapeutic, and methods of use.

82.20240197857VACCINATION WITH MRNA-CODED ANTIGENS

US - 20.06.2024

Int.Class A61K 39/145Appl.No 18596451Applicant CureVac SEInventor Karl-Josef KALLEN

The present invention relates to vaccines comprising at least one mRNA encoding at least one antigen for use in the treatment of a disease in an elderly patient preferably exhibiting an age of at least 50 years, more preferably of at least 55 years, 60 years, 65 years, 70 years, or older, wherein the treatment comprises vaccination of the patient and eliciting an immune response in said patient. The present invention is furthermore directed to kits and kits of parts comprising such a vaccine and/or its components and to methods applying such a vaccine or kit.

83.20240197844PEPTIDE VACCINES USABLE FOR HYPERCHOLESTEROLEMIA RELATED DISEASES

US - 20.06.2024

Int.Class A61K 39/00Appl.No 18589494Applicant AFFIRIS CVD GMBHInventor Sylvia BRUNNER

The present invention relates to a vaccine capable to induce the formation of antibodies directed to PCSK9 in vivo.

84.4387661METHOD OF PRODUCING A FOOT AND MOUTH DISEASE VIRUS VIRUS-LIKE PARTICLE

EP - 26.06.2024

Int.Class A61K 39/12Appl.No 22765893Applicant INTERVET INT BVInventor VAN DEN BORN ERWIN

The invention concerns a method of producing a foot and mouth disease virus (FMDV) virus-like particle (VLP) in a baculovirus expression system, the method comprising the steps of (i) infecting an insect cell with a baculovirus expression vector, (ii) culturing the insect cell in cell culture medium for 5 days or more post infection and (iii) harvesting the FMDV VLP from the cell culture medium. The invention further relates to a vaccine for use in the protection of a subject against an infection with FMDV, the vaccine being obtainable by the method of the invention.

85.20240181026IMMUNOGENIC COMPOSITIONS

US - 06.06.2024

Int.Class A61K 39/015Appl.No 18019403Applicant MACFARLANE BURNET INSTITUTE FOR MEDICAL RESEARCH AND PUBLIC HEALTH LIMITEDInventor James Beeson

Immunogenic or vaccine compositions for preventing malaria, comprising or encoding CSP N-terminal (NT) sequences capable of presenting NT epitopes to a subject, and methods of administering same.

86.WO/2024/118795PEPTIDES AND PEPTIDE MICROARRAYS FOR DETECTION AND DIFFERENTIATION OF ANTIBODY RESPONSES TO EBOLA VIRUS

WO - 06.06.2024

Int.Class G01N 33/569Appl.No PCT/US2023/081625Applicant THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORKInventor MISHRA, Nischay

Peptides, platforms and methods for detecting antibody responses to filovirus infections, detecting antibody responses to EBOV infection, and detecting antibody responses to vaccination by EBOV vesicular stomatitis virus-based vaccine.

87.20240181035ORAL VACCINE COMPOSITION

US - 06.06.2024

Int.Class A61K 39/12Appl.No 18285970Applicant KAICO LTD.Inventor Kenta YAMATO

A method of easily producing an immunogenic pupa for oral administration and a pupa for oral administration produced by the method are provided. The method is a method of producing a pupa for oral administration, including a step of infecting a larva or pupa of an insect capable of being baculovirus-infected with a recombinant baculovirus having DNA encoding an antigen protein introduced therein and freeze-drying a pupa having pupated from the infected larva or the infected pupa.

88.WO/2024/133515RHINOVIRUS MRNA VACCINE

WO - 27.06.2024

Int.Class A61K 39/125Appl.No PCT/EP2023/087041Applicant SANOFIInventor BERRY, Catherine

The present invention provides a method for identifying the amino acid sequence of a naturally occurring polyprotein from a group A or C rhinovirus that can be used as an immunogen capable of eliciting an immune response against rhinoviruses from multiple serotypes within the same group. The invention also provides immunogenic compositions that comprise at least one mRNA comprising a non-naturally occurring optimized nucleic acid encoding a polyprotein identified by this method.

89.4387663METHOD OF PRODUCING A FOOT AND MOUTH DISEASE VIRUS VIRUS-LIKE PARTICLE

EP - 26.06.2024

Int.Class A61K 39/12Appl.No 22768340Applicant INTERVET INT BVInventor VAN DEN BORN ERWIN

The invention concerns a method of producing a foot and mouth disease virus (FMDV) virus-like particle (VLP) in a baculovirus expression system, the method comprising the steps of (i) infecting an insect cell with a baculovirus expression vector, (ii) culturing the insect cell in cell culture medium for 4 days or more post infection, (iii) separating the insect cells from the cell culture to obtain cell-free cell culture medium, and (iv) harvesting the FMDV VLP from the cell-free cell culture medium. The invention further relates to a vaccine for use in the protection of a subject against an infection with FMDV, the vaccine being obtainable by the method of the invention.

90.WO/2024/115911COXIELLA BURNETTI VACCINE

WO - 06.06.2024

Int.Class A61K 39/02Appl.No PCT/GB2023/053101Applicant MOREDUN RESEARCH INSTITUTEInventor MCNEILLY, Tom

The disclosure provides a phase II Coxiella burnetii variant that can be used to raise protective immune responses. The disclosure further provides vaccines and compositions comprising the same as well as

antigens and LPS derived therefrom, both of which may also be used to raise protective immune responses. The disclosure further relates to the treatment of disease and/or conditions caused or contributed to by Coxiella burnetii.

91.20240209316SYSTEM AND METHOD OF PREPARING AND STORING ACTIVATED MATURE DENDRITIC CELLS

US - 27.06.2024

Int.Class C12N 5/0784Appl.No 18230449Applicant THE TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIAInventor Brian J. CZERNIECKI

The present invention provides compositions and methods for generating and cryopreserving dendritic cells with superior functionality in producing stronger signals to T cells, resulting in a more potent DC-based anti-tumor vaccine. The present invention includes mature, antigen loaded DCs activated by Toll-like receptor agonists that induce clinically effective immune responses, preferably when used earlier in the disease process. The DCs of the present invention produce desirable levels of cytokines and chemokines, and further have the capacity to induce apoptosis of tumor cells. The cells can be cryopreserved and thawed for later use, thereby reducing the need for repeated pheresis and elutriation processes during vaccine production. These methods can also be utilized to directly target molecules involved in carcinogenetic signaling pathways and cancer stem cells.

92.3506935NEISSERIA MENINGITIDIS VACCINE

PL - 10.06.2024

Int.Class A61K 39/095Appl.No 17765045ApplicantInventor RICHARD DAVID KENSINGER

93.WO/2024/131810LIPID NANOPARTICLES COMPRISING STEROL-MODIFIED PHOSPHOLIPIDS

WO - 27.06.2024

Int.Class A61K 9/127Appl.No PCT/CN2023/140052Applicant SUZHOU ABOGEN BIOSCIENCES CO., LTD.Inventor LING, Dandan

Provided is LNPs comprising phospholipids containing a sterol moiety. LNPs comprising such phospholipids have potential applications in mRNA vaccine technology. Provided are compositions comprising the LNPs and methods for using the LNPs or the compositions described above.

94.20240181032VACCINES AND IMMUNOGLOBULINS TARGETING AFRICAN SWINE FEVER VIRUS, METHODS OF PREPARING SAME, AND METHODS OF USING SAME

US - 06.06.2024

Int.Class A61K 39/12Appl.No 18283163Applicant IGY IMMUNE TECHNOLOGIES AND LIFE SCIENCES INC.Inventor Huan Huu Nguyen

The present disclosure provides a method of isolating and preparing live African Swine Fever (ASF) viruses (ASFV) and an ASFV vaccine composed of ASF virus particles. ASF viral components, and/or immunosuppressive protein factors. The ASFV vaccine can be used to immunize pigs and wild boars, or can

be used to immunize species other than pig or wild boar, such as fowl, bovine, goat, rabbit, donkey or horse, to generate polyclonal immunoglobulins with broad-spectrum specificity to the ASFV. The ASFV-specific immunoglobulins then can be extracted and purified. The ASFV-specific immunoglobulins can provide acute treatment of ASF-infected pigs or wild boars or preventative treatment for pigs or wild boars at risk of ASF, for example that may have been exposed to ASFV or ASFV-infected subjects.

95.4376879GENETICALLY ENGINEERED CELL-DERIVED VACCINES

EP - 05.06.2024

Int.Class A61K 39/00Appl.No 22856688Applicant UNIV CALIFORNIAInventor KWON YOUNG JIK

The disclosure provides for compositions and methods comprising cell-derived vesicles induced from cells that have been genetically engineered or infected to express specific antigen(s), and uses thereof, including as a cell-free, cell-like vaccine.

96.WO/2024/117967PEPTIDE MIMICS AND THEIR USE

WO - 06.06.2024

Int.Class A61P 19/02Appl.No PCT/SE2023/051215Applicant DUBNOVITSKY, AnatolyInventor DUBNOVITSKY, Anatoly

Peptide mimics of post-translationally modified citrulline-containing peptides for use in methods of inducing tolerance against a specific antigen in a subject, wherein the induction of tolerance is a step in the treatment, alleviation, or prevention of rheumatoid arthritis. The peptide mimics are to be used as such, or in a complex, bound to a carrier such as a nanoparticle, a blood cell, a polysaccharide, a peptide, a protein, including recombinant fusion proteins, or an MHC class II molecule or parts thereof, or as part of a chimeric construct. The peptides are to be administered in the form of a vaccine, comprising the peptides as such, or in a complex, or administered using a tolerogenic mRNA vaccine comprising modified, non-inflammatory mRNA coding for said non- citrulline containing peptide mimic.

97.4378528RECOMBINANT VECTORS EXPRESSING ANTIGENS OF AVIAN INFLUENZA VIRUS AND USES THEREOF

EP - 05.06.2024

Int.Class A61P 31/16Appl.No 24161475Applicant BOEHRINGER INGELHEIM ANIMAL HEALTH USA INCInventor PRITCHARD JOYCE

The present invention provides recombinant viral vectors that contain and express an avian influenza virus antigen and a pharmaceutical composition or vaccine comprising the recombinant viral vector. The present invention further provides methods of vaccination against an avian influenza pathogen.

98.4384167[1,2,4]TRIAZOLO[4,3-A]PYRIMIDIN-7(8H)-ONE AS MITOCHONDRIAL PYRUVATE CARRIER INHIBITORS FOR USE IN THE TREATMENT OF CANCER

EP - 19.06.2024

Int.Class A61K 31/425Appl.No 22764428Applicant MPC THERAPEUTICS SAInventor PERRY BENJAMIN

The present invention is related to compounds, methods, compositions and uses that are able to inhibit mitochondrial pyruvate carrier (MPC) activity and which are useful for immunotherapy, in particular T-cell therapies, immune check point inhibitors or anti-cancer vaccine.

99.20240200084AUTOTRANSPORTER SYSTEM

US - 20.06.2024

Int.Class C12N 15/74Appl.No 18010792Applicant Prokarium LimitedInventor Marc Biarnes Carrera

The present invention provides for a modified autotransporter and the use of genetically engineered microorganisms comprising said modified autotransporters in the treatment of infectious and neoplastic disease. The present invention therefore also relates to vaccine and immunotherapeutic compositions comprising said genetically engineered microorganism.

100.20240197849IMMUNOGENIC COMPOSITIONS, ANTIGEN SCREENING METHODS, AND METHODS OF GENERATING IMMUNE RESPONSES

US - 20.06.2024

Int.Class A61K 39/015Appl.No 18359740Applicant UNIVERSITY OF WASHINGTONInventor Sean C. MURPHY

An immunogenic composition is provided herein. The immunogenic compositions are used to identify and select immunogenic antigens that elicit immune responses in a subject and may be subsequently used in multi-antigen vaccine compositions against one or more diseases or conditions. According to some embodiments, the immunogenic composition may include a plurality of nucleic acid fragments or minigenes derived from a nucleic acid library, wherein each nucleic acid fragment encodes a different antigen or functional portion thereof, and wherein the different antigens or functional portions thereof are associated with one or more disease or condition. The immunogenic composition may also include a delivery medium loaded with the plurality of nucleic acid fragments and in some embodiments, the delivery medium is loaded with nucleic acid fragments in such a way that individual antigen presenting cells receive only a subset of the nucleic acids within a vaccine in order to minimize antigenic competition.

101.4378474RECOMBINANT HVT VECTORS EXPRESSING INFLUENZA HEMAGGLUTININ AND IMMUNOGENIC COMPOSITIONS, AND PRODUCTION AND USES THEREOF

EP - 05.06.2024

Int.Class A61K 39/00Appl.No 24161470Applicant BOEHRINGER INGELHEIM VETMEDICA GMBHInventor KASSA AEMRO

An avian influenza virus antigen and a polynucleotide that encodes the avian influena virus antigen. Further provided is a plasmid and recombinant virus vector comprising the sequence of the avian influenza virus antigen and a composition or vaccine comprising the antigen, plasmid or recombinant virus vector.

102.20240197852PSORALEN-INACTIVATED NEISSERIA GONORRHOEAE VACCINES AND METHODS THEREOF

US - 20.06.2024

Int.Class A61K 39/095Appl.No 18556443Applicant Wake Forest University Health SciencesInventor Leigh Ann Sanders

The present invention relates to the fields of sexually transmitted disease and immunology. More specifically, but not exclusively, the invention provides a composition and methods to prepare and administer a vaccine for *Neisseria gonorrhoede* and/or other gram-negative bacteria such as by using psoralen-inactivated bacteria.

103.20240189412ZIKA VIRUS POLYPEPTIDES

US - 13.06.2024

Int.Class A61K 39/12Appl.No 17908704Applicant Mayo Foundation for Medical Education and ResearchInventor Gregory A. POLAND

This document provides methods and materials related to selected Zika virus polypeptides. For example. vaccine compositions that contain one or more selected Zika virus polypeptides provided herein and that have the ability to increase immune responses against flaviviruses such as Zika viruses within a mammal (e.g., a human) are provided.

104.20240191209VACCINE FOR IMMUNOCOMPROMISED HOSTS

US - 13.06.2024

Int.Class C12N 9/02Appl.No 18484993Applicant Universidade do Porto - ReitoriaInventor Paula Maria DAS NEVES FERREIRA DA SILVA

The invention provides peptides derived from a ubiquitous protein, and nucleic acids encoding such peptides. The invention extends to various uses of these peptides and nucleic acids, for example, as antigens for use in vaccines per se and in the generation of antibodies for use in therapeutic drugs for the prevention, amelioration or treatment of infections caused by sepsis-inducing bacteria. The invention particularly benefits immunocompromised hosts such as neonates, babies, children, women of fertile age, pregnant women, foetuses, the elderly and diabetics.

105.WO/2024/121280VACCINE AGAINST KLEBSIELLA PNEUMONIAE

WO - 13.06.2024

Int.Class A61K 39/108Appl.No PCT/EP2023/084647Applicant IDORSIA PHARMACEUTICALS LTDInventor BROECKER, Felix

The present invention relates to novel immunogenic compounds comprising at least one antigen of Formula (I), in particular immunogenic compounds of Formula (II), and their use as pharmaceuticals, in particular as vaccines. The invention also concerns related aspects including intermediates, as well as processes for the preparation of the immunogenic compounds. Furthermore, the invention relates to pharmaceutical compositions comprising the immunogenic compounds, as well as the use of the antigen of Formula (I) in biological assays.

106.4378475RECOMBINANT ANTIGEN FOR INDUCING AN IMMUNE RESPONSE AGAINST THE ZIKA VIRUS

EP - 05.06.2024

Int.Class A61K 39/12Appl.No 22757824Applicant CT INGENIERIA GENETICA BIOTECNOLOGIAInventor VALDÉS PRADO IRIS

The invention relates to a recombinant chimeric antigen comprising, in the polypeptide chain thereof, a polypeptide corresponding to amino acids 2 to 104 of the Zika virus capsid protein or a polypeptide with an amino acid sequence with at least 90% identity with said region of the capsid protein. The invention also relates to a vaccine composition comprising said recombinant chimeric antigen and a pharmaceutically acceptable vaccine adjuvant. The invention further relates to the use of the recombinant chimeric antigen, comprising, in the polypeptide chain thereof, a polypeptide corresponding to amino acids 2 to 104 of the Zika virus capsid protein or an amino acid sequence with at least 90% identity with said segment for the production of a drug for inducing an immune response against the Zika virus. The invention also discloses a method for inducing an immune response against the Zika virus, in which the recombinant chimeric antigen is administered.

107.WO/2024/115561VACCINATION AGAINST RSV

WO - 06.06.2024

Int.Class A61K 39/12Appl.No PCT/EP2023/083523Applicant GLAXOSMITHKLINE BIOLOGICALS SAInventor DE SMEDT, Jonathan

The present invention relates to vaccination against respiratory syncytial virus (RSV), in particular to the use of a vaccine formulation comprising an RSV fusion (F) protein (RSV F protein) antigen and an adjuvant in methods of inducing an immune response and in methods of prevention of RSV infection and disease in older adults.

108.WO/2024/136521LACTIC ACID BACTERIA WITH TARGET PROTEIN EXPRESSED ON SURFACE THEREOF AND USE THEREOF

WO - 27.06.2024

Int.Class C12N 15/74Appl.No PCT/KR2023/021249Applicant SAELOUN BIO CO.,LTDInventor LEE, Kyung Ah

The present invention relates to a vector expressing a COVID-RBD antigen on a cell surface, lactic acid bacteria transformed by the vector, and a vaccine composition comprising the lactic acid bacteria as an active ingredient. The vector according to the present invention comprises a promoter of a GAPDH gene, a signal sequence derived from Lactobacillus plantarum Lp_2578, an LPxTG anchoring peptide motif, a COVID-RBD antigen protein, T4 trimer, and a nucleic acid sequence encoding an immune cell activation peptide. In the present invention, it was confirmed that, when lactic acid bacteria transformed by the vector were administered to the nasal cavity of mice, IgA antibody production was induced in the nasal cavity and the lungs. Therefore, the lactic acid bacteria transformed with the vector can be used as a more economical

and stable preventive vaccine that induces the production of an antibody in the blood of the body and mucosal immunity, against coronavirus.

109.4387648MRNA VACCINES COMPRISING IL-4 AND/OR IL-13 RNA AND USES THEREOF

EP - 26.06.2024

Int.Class A61K 38/20Appl.No 22769571Applicant NEOVACSInventor DROUET BEATRICE

The present invention relates to an mRNA vaccine comprising at least one RNA molecule encoding at least one cytokine (preferably IL-4, IL-13 or fragments thereof) and at least one T cell epitope, for treating or preventing disorders associated with aberrant IL-4 and/or IL- 13 expression or activity, in particular asthma, atopic dermatitis and allergic disorders.

110.4380614VACCINE FOR EQUINE HERPESVIRUS

EP - 12.06.2024

Int.Class A61K 39/12Appl.No 22762013Applicant INTERVET INT BVInventor REEMERS SYLVIA

The present invention is directed to an immunogenic composition comprising an antigen of Equine Herpes Virus type 1 (EHV-1) and an antigen of Equine Herpes Virus type 4 (EHV-4). The immunogenic composition reduces viremia and other clinical reactions in horses infected with EHV-1 when compared to non-treated horses but also when compared to EHV-1 vaccinated horses.

111.4387600ENCAPSULATED BIOMOLECULES FOR INTRACELLULAR DELIVERY

EP - 26.06.2024

Int.Class A61K 9/48Appl.No 22786052Applicant AABO AKADEMIInventor ZHANG HONGBO

According to an example aspect of the present invention, there are provided biomolecules encapsulated with Metal Organic Frameworks (MOFs) for use in intracellular delivery and controlled release of the biomolecules within cells, in vitro and in vivo. The invention also discloses the use of MOFs in combination with biomolecules for gene editing, cancer therapy and vaccine development.

112.4387596LOW-DOSE LYOPHILIZED RNA VACCINES AND METHODS FOR PREPARING AND USING THE SAME

EP - 26.06.2024

Int.Class A61K 9/127Appl.No 22764467Applicant GLAXOSMITHKLINE BIOLOGICALS SAInventor LODAYA RUSHIT

Compositions and methods are provided for stabilization of RNA encapsulated by lipid nanoparticles during lyophilization. The compositions and methods involve the use of empty lipid nanoparticles to stabilize the lyophilized composition. These techniques may be used to prevent the need for cold chain storage and may also simplify the procedure at the clinic for reconstituting the vaccine to prepare an injectable composition.

113.20240189407MODIFIED VIRUS-LIKE PARTICLES OF BACTERIOPHAGE AP205

US - 13.06.2024

Int.Class A61K 39/00Appl.No 18554935Applicant SAIBA AGInventor Kaspars TARS

The present invention relates to a modified virus-like particle of RNA bacteriophage AP205 (AP205 VLP) comprising AP205 coat protein dimers to which antigenic polypeptides are fused at the N-terminus and/or at the C-terminus. The modified AP205 VLPs can be used as a platform, in particular for vaccine development, in generating immune responses against a variety of antigens.

114.WO/2024/137601SYSTEMS, METHODS, AND COMPOSITIONS FOR PREPARING VACCINES COMPRISING INACTIVATED/ATTENUATED PATHOGENS

WO - 27.06.2024

Int.Class A61K 39/145Appl.No PCT/US2023/084780Applicant COLORADO STATE UNIVERSITY RESEARCH FOUNDATIONInventor GOODRICH, Raymond, P.

Provided herein are methods for inactivating an attenuated pathogen, the methods comprising contacting the microbe with UV light in the presence of riboflavin such that the integrity of the antigenic proteins of the pathogen is preserved In some embodiments, the viral pathogen is a African Swine Fever Virus (ASFV). Vaccine compositions comprising attenuated pathogen, and methods of use thereof, are also provided.

115.312334RESPIRATORY SYNCYTIAL VIRUS RNA VACCINE

IL - 01.06.2024

Int.Class A61K 39/00Appl.No 312334Applicant SANOFIInventor

116.812396PERSONALIZED CANCER VACCINE EPITOPE SELECTION

NZ - 25.06.2024

Int.Class A61K 31/7105Appl.No 812396Applicant MODERNATX, INC.Inventor HOPSON, Kristen

117.20240181041ADENOVIRUS SARS-COV-2 VACCINE

US - 06.06.2024

Int.Class A61K 39/215Appl.No 18282029Applicant THE WISTAR INSTITUTEInventor Hildegund C.J. Ertl

The present invention includes methods and compositions useful for treating or preventing a coronavirus infection in a subject. In certain embodiments the treatment comprises adenoviral-based vaccines against SARS-CoV-2 viral proteins.

118.20240196891METHODS OF INACTIVATION OF VIRUSES USING N-METHYLGLUCAMIDE AND ITS DERIVATIVES

US - 20.06.2024

Int.Class A01N 37/20Appl.No 18538562Applicant BAYER HEALTHCARE LLCInventor SHENGJIANG LIU

This disclosure relates to methods for use in inactivating viruses. The methods of inactivating viruses with N-methylglucamides is applicable to the purification process of biologically-active drugs such as protein subunits, proteins (enzymes, factors, etc.), recombinant proteins, antibodies, vaccine or gene therapeutic products. The detergents used in this method are based on multiple N-methylglucamide homologs, consisting of a hydrophilic glucose moiety and hydrophobic fatty acid tail, linked by an amide bond. Additionally, these sugar-based detergents are nonionic by nature, which do not disrupt the drug protein, plasma biologics, non-enveloped viral vaccine or adeno associated viral particles.

A method of purifying a biological product solution of interest having an unidentified enveloped virus contaminant, including incubating a biological product solution of interest with a standard solution, inactivating any potential enveloped virus contaminant present in the biological product solution of step (a), measuring the inactivated virus present in the final solution of step (b), incubating a separate biological product solution of interest with a N-methylglucamide solution, measuring the inactivated virus present in the final solution of step (d), and comparing the results of the final solutions of step (c) and step (e).

119.20240197855FOOT-AND-MOUTH DISEASE VACCINE

US - 20.06.2024

Int.Class A61K 39/135Appl.No 18511123Applicant Zoetis Services LLCInventor Paul Joseph Dominowski

Compositions for prevention of Foot and Mouth Disease (FMD) are provided, comprising an antigen component in the amount equivalent to 0.5-20 μg FMD virus and an adjuvant component comprising oil, an immunostimulatory oligonucleotide, and a polycationic carrier. Methods of using the composition, as well as the methods of reducing FMD persistence are also provided.

120.4380951VACCINE CONSTRUCT AND USES THEREOF

EP - 12.06.2024

Int.Class C07K 14/005Appl.No 22851487Applicant UNIV MELBOURNEInventor TORESSI JOSEPH

Disclosed herein are nucleic acid constructs for producing a virus-like particle (VLP) capable of raising an immune response against severe acute respiratory syndrome coronavirus (SARS-CoV), and uses thereof, wherein the constructs comprise nucleic acid sequences encoding an immunogen and a polyprotein, wherein the polyprotein comprises two or more viral structural proteins, wherein at least two of the two or more viral structural proteins are separated by a signal peptidase sequence such that, when the polyprotein is expressed in a host cell, the signal peptidase sequence undergoes host cell peptidase-dependent cleavage to liberate the two or more viral structural proteins, thereby allowing the liberated structural proteins to self-assemble into a VLP carrying the immunogen.

121.4384215DRY POWDER COMPOSITIONS OF OIL-IN-WATER (O/W) EMULSION ADJUVANTED VACCINES

EP - 19.06.2024

Int.Class A61K 39/39Appl.No 22786669Applicant UNIV TEXASInventor CUI ZHENGRONG

Described herein is the use of thin film freeze drying methods with oil-in-water adjuvants to produce improved vaccine compositions. This approach solves several major problems associated with the emulsion-adjuvanted vaccines. Additionally, the developed dry powder compositions have the potential to be administered via non-invasive routes (such as intranasal, pulmonary, transcutaneous with or without microneedles) and be stored at ambient temperatures which significantly reduce the costs of vaccination programs.

122.20240189413COMPOSITIONS AND METHODS OF MANUFACTURING TRIVALENT FILOVIRUS VACCINES

US - 13.06.2024

Int.Class A61K 39/12Appl.No 18376177Applicant Soligenix, Inc.Inventor Oreola Donini

Disclosed is a stable immunogenic composition capable of eliciting a robust and durable immune response, comprising at least one antigen consisting of a filovirus glycoprotein and at least one nano-emulsion adjuvant which are co-lyophilized and can be reconstituted immediately prior to use. Also disclosed is a vaccine composition comprising at least two antigens, wherein each antigen is specific to a different genus of filovirus and which also comprises at least one nano-emulsion adjuvant.

123.20240189356ACTIVE DONOR T CELL STAT6

US - 13.06.2024

Int.Class A61K 35/17Appl.No 18535619Applicant Mirac Nedim InceInventor Mirac Nedim Ince

Provided herein is the use of donor T cells that express a continuously active form of STAT6, e.g., before or during BMT/HCT or after BMT/HCT, the use of autologous T cells genetically engineered to express a continuously active form of STAT6 to prevent, inhibit or treat immune diseases including autoimmune diseases and the use of T cells genetically engineered to express a continuously active form of STAT6 to enhance an immune response to a vaccine.

124.4388016METHODS AND COMPOSITIONS FOR TREATING FIBROTIC DISEASES

EP - 26.06.2024

Int.Class C07K 16/44Appl.No 22765728Applicant SIWA CORPInventor GRUBER LEWIS S

A method of treating or preventing the onset of a fibrotic disease comprises administering to a subject a composition comprising an anti-AGE antibody. The anti- AGE antibody binds an AGE antigen comprising at least one protein or peptide that exhibits AGE modifications selected from the group consisting of FFI, pyrraline, AFGP, ALI, carboxymethyllysine, carboxyethyllysine and pentosidine. A method of treating or preventing the onset of a fibrotic disease comprises administering to a subject a vaccine comprising an AGE antigen.

125.312261NOROVIRUS VACCINE AND METHODS OF USE

IL - 01.06.2024

Int.Class A61K 39/00Appl.No 312261Applicant THE TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIAInventor ATOCHINA-VASSERMAN, Elena

126.WO/2024/129791METHODS OF VACCINE ADMINISTRATION TO SALMONIDS

WO - 20.06.2024

Int.Class A61K 39/02Appl.No PCT/US2023/083710Applicant ZOETIS SERVICES LLCInventor MONJANE, Adérito Luis

The disclosure provides compositions and methods for salmonid vaccination against PMCV and at least one other pathogen

127.20240188545MODULE FOR OPERATIONAL CONTROL OF THE GUIDED ADVANCE/WITHDRAWAL DEVICE OF THE NEEDLE ADDED TO THE SMART SUBSTANCE INJECTION DEVICE ON BOARD EQUIPMENT FOR INOCULATING SUBSTANCES INSIDE A FERTILE EGG AND SMART METHOD FOR INJECTION INSIDE A FERTILE EGG

US - 13.06.2024

Int.Class A01K 45/00Appl.No 18581873Applicant PAS REFORM B.V.Inventor Hernani Telles ASSUNCAO

Module for operational control of the guided advance/withdrawal device of the needle added to the smart substance injection device on board equipment for inoculating substances inside a fertile egg and smart method for injection inside a fertile egg, wherein the “inoculation of substances” inside a fertile egg, be this into the embryo, in the case of vaccines, and even into the amniotic fluid, in the case of a nutrient or nutritional vaccine complex, allows the injection needle (**11**) to be brought close at a controlled speed.

128.WO/2024/123134NANOPARTICLE COMPRISING PEPTIDE-BASED CONJUGATE FOR DELIVERING MRNA INTO B CELL AND T CELL AND USES THEREOF

WO - 13.06.2024

Int.Class A61K 48/00Appl.No PCT/KR2023/020203Applicant SEOUL NATIONAL UNIVERSITY R&DB FOUNDATIONInventor PARK, Yoon Jeong

The present invention relates to a peptide-based conjugate for mRNA delivery, which overcomes the limitations of existing lipid nanoparticles and is capable of safely and immediately responding to new variants of infectious diseases. mRNA binds to an RNA-binding peptide of the conjugate and undergoes self-assembly by an amphipathic polypeptide or polymer to thereby form a peptide and mRNA complex nanoparticle. The nanoparticle and a pharmaceutical composition comprising same were confirmed to efficiently increase intracellular delivery of mRNA and exhibit a vaccine effect by mRNA.

129.4384213INTERFERON-PRODUCING UNIVERSAL SARBECOVIRUS VACCINES, AND USES THEREOF

EP - 19.06.2024

Int.Class A61K 39/12Appl.No 23818271Applicant CENTRE FOR VIROLOGY VACCINOLOGY AND THERAPEUTICS LTDInventor KOK KIN HANG

The present invention relates to universal sarbecovirus vaccines that specifically express an interferon. This live universal sarbecovirus vaccine elicits mucosal immunity and heterotypic immunity against various sarbecoviruses, including SARS-CoV-1, SARS-CoV-2, and its variants. Interferon directly encoded from the genome of the live universal sarbecovirus overrides the virus-induced "delayed type-I interferon", resulting in enhancement of mucosal T cell responses. The present invention further relates to uses of the vaccines for the preparation of pharmaceutical compositions, methods of treating or preventing viral infections, and kits comprising the vaccines.

130.2624871PROCESS FOR PREPARING A POPULATION OF DENDRITIC CELLS AND IMMUNOTHERAPY USING THE SAME

GB - 05.06.2024

Int.Class C12N 5/0784Appl.No 202217889Applicant ALV B ASInventor FRANCESCA GATTI

A method for the generation of functionally mature dendritic cells from a sample obtained from a non-human mammal. The method comprises obtaining a sample comprising dendritic cell precursors or immature dendritic cells, such as monocytes; incubating the sample in the presence of granulocyte-macrophage colony stimulating factor (GM-CSF), interleukin 4 (IL-4) and a Bacillus Calmette-Guerin (BCG) composition. One or more cytokines, e.g. interferon gamma (IFN-γ) may also be included. The mature dendritic cells produced may be used as a vaccine for the treatment of cancer.

131.4387664FMDV VIRUS-LIKE PARTICLE WITH STABILIZING MUTATION

EP - 26.06.2024

Int.Class A61K 39/135Appl.No 22740832Applicant INTERVET INT BVInventor VAN DEN BORN ERWIN

The present invention provides a recombinant foot and mouth disease virus (FMDV) capsid precursor protein comprising a modified VP1 protein and optionally further comprising a modified VP4 protein. The invention further relates to an isolated nucleic acid molecule and an expression vector comprising the nucleic acid molecule for recombinant expression of the modified capsid precursor protein. In further aspects, the invention relates to a virus-like particle (VLP) obtained from the modified capsid precursor protein and a vaccine for use in the protection of a subject against an infection with FMDV produced from the VLP.

132.2024203626VACCINE COMPOSITIONS AND METHODS OF MAKING SAME

AU - 13.06.2024

Int.Class Appl.No 2024203626Applicant TNG Pharmaceuticals Inc.Inventor MARTINOD, Serge

Disclosed herein are fusion proteins comprising a truncated thrombostasin protein having at least 85% sequence homology to a thrombostasin protein, wherein the thrombostasin protein has a carboxy terminal deletion

133.4378531METHODS AND COMPOSITIONS FOR TREATING CANCERS USING ANTISENSE

EP - 05.06.2024

Int.Class A61P 35/00Appl.No 24157422Applicant UNIV JEFFERSONInventor ANDREWS DAVID W

The present disclosure relates to compositions and methods for treating cancers using antisense (AS) nucleic acids directed against Insulin-like Growth Factor 1 Receptor (IGF-1R). The AS may be administered to the patients systemically, or may be used to produce an autologous cancer cell vaccine. In embodiments, the AS are provided in an implantable irradiated biodiffusion chamber comprising tumor cells and an effective amount of the AS. The chambers are irradiated and implanted in the abdomen of subjects and stimulate an immune response that attacks tumors distally. The compositions and methods disclosed herein may be used to treat many different kinds of cancer, for example glioblastoma.

134.WO/2024/130155SWINE INFLUENZA VACCINE COMPOSITIONS AND METHODS THEREOF

WO - 20.06.2024

Int.Class C07K 14/11Appl.No PCT/US2023/084345Applicant CORNELL UNIVERSITYInventor DIEL, Diego

The present disclosure provides novel sequences, vectors, and pharmaceutical compositions for the treatment of IAV in swine. Methods of using the novel sequences, vectors, and pharmaceutical compositions are also provided, including for induction of an immune response in animals and for prevention of an IAV infection in an animal.

135.4380606SELF-CLEAVING POLYPROTEINS AND USES THEREOF

EP - 12.06.2024

Int.Class A61K 39/00Appl.No 22851488Applicant UNIV MELBOURNEInventor TORRESI JOSEPH

Disclosed herein are vaccine constructs for producing a virus-like particle (VLP) capable of raising an immune response to an immunogen, and uses thereof, wherein the constructs comprise nucleic acid sequences encoding an immunogen and a polyprotein, wherein the polyprotein comprises two or more viral structural proteins, wherein at least two of the two or more viral structural proteins are separated by a signal peptidase sequence such that, when the polyprotein is expressed in a host cell, the signal peptidase sequence undergoes host cell peptidase-dependent cleavage to liberate the two or more viral structural proteins, thereby allowing the liberated structural proteins to self-assemble into a VLP carrying the immunogen.

136.4384535VIRUS-LIKE PARTICLE VACCINE FOR RESPIRATORY SYNCYTIAL VIRUS

EP - 19.06.2024

Int.Class C07K 14/135Appl.No 22856762Applicant ICOSAVAX INCInventor KANESA-THASAN NIRANJAN

The present disclosure relates to targeting Respiratory Syncytial Virus (RSV), and methods of using such vaccines to treat infections with RSV, in particular, lower respiratory tract infections (LRTIs).

137.4376880VACCINE COMPOSITIONS COMPRISING BRUCELLA STRAINS AND METHODS THEREOF

EP - 05.06.2024

Int.Class A61K 39/10Appl.No 22850517Applicant TEXAS A & M UNIV SYSInventor DE FIGEIREDO PAUL

The present disclosure provides pharmaceutical compositions comprising a live attenuated bacterial strain of *Brucella melitensis*, in particular a live attenuated bacterial strain of *Brucella melitensis* is *Brucella*

melitensis 16M ΔvjbR (BmΔ*vjbR*). Methods of utilizing the live attenuated bacterial strain of *Brucella melitensis* for treatment of a patient are also provided, including wherein the patient is in need of treatment for cancer, an autoimmune disorder, and/or an inflammatory disorder.

138.WO/2024/130212RECOMBINANT VACCINIA VIRUS ENCODING ONE OR MORE NATURAL KILLER CELL AND T LYMPHOCYTE INHIBITORS

WO - 20.06.2024

Int.Class C12N 7/00Appl.No PCT/US2023/084453Applicant TURNSTONE BIOLOGICS CORP.Inventor DELPEUT, Sebastien

Various embodiments of the invention provide recombinant oncolytic viruses engineered to express human cytomegalovirus (HCMV) glycoprotein UL40 and/or Kaposi's sarcoma associated herpesvirus (KSHV) K5 protein, and methods and uses of the same for treating cancer. Also provided are combination therapies involving a T lymphocyte infiltrating (TIL) cell therapy and a provided recombinant oncolytic virus for treating a cancer, including solid tumors.

139.WO/2024/138121LIPID NANOPARTICLES FOR THE PREVENTION OF TUBERCULOSIS OR OTHER MYCOBACTERIAL INFECTIONS

WO - 27.06.2024

Int.Class A61K 39/04Appl.No PCT/US2023/085680Applicant AKAGERA MEDICINES, INC.Inventor FULTON, Ross

Aspects of the present disclosure provides for improved mycobacterium tuberculosis vaccine compositions of ionizable lipid nanoparticles for the delivery of immunogenic nucleic acids to cells. Anionic phospholipids, including phosphatidyl serine and phosphatidylglycerol are included in the lipid nanoparticles to increase the transfection efficiency in dendritic cells. In some embodiments, the incorporation of mono-unsaturated alkyl chain analogs in dimethylaminopropyl - dioxolane or heterocyclic ketal ionizable lipids in the formulation provided high levels of transfection in human dendritic cells, compared to other ionizable lipids in the same family, and demonstrated good stability to oxidative damage. Other aspects of the present disclosure provide mRNA that encodes for concatenated peptides encoding for multiple MHC-II tuberculosis epitopes, and optionally includes a second mRNA encoding for concatenated MHC-I tuberculosis epitopes.

140.WO/2024/118959METHODS OF BLOCKING / NEUTRALIZING ASFV INFECTION THROUGH INTERRUPTION OF CELLULAR AND VIRAL RECEPTOR INTERACTIONS

WO - 06.06.2024

Int.Class A61K 39/12Appl.No PCT/US2023/081897Applicant CHEN, DaluInventor CHEN, Dalu

A method of preventing and treating viral infections in animals (and preferably ASFV in porcine), by inhibiting viral ligand interactions with critical cellular receptors that are involved either directly (endo/pinocytosis)) or indirectly (infection through RBCs that have been aggregated by viral interactions) with cellular entry in an animal and preventing and treating the viral infection in the animal. A method of treating a viral infection in an individual with a virus that is both lysogenic and lytic. A composition for treating a viral infection in an

individual with a virus that is both lysogenic and lytic. A vaccine for preventing viral infection, including whole and/or partial domains of proteins of both a lysogenic and lytic phase of a virus.

141.4387594VACCINE ASSESSMENT AND COMPLIANCE TESTING METHODS AND SYSTEMS

EP - 26.06.2024

Int.Class A61K 9/00Appl.No 22859114Applicant INNOVAR SCIENT INCInventor GILSTRAP RICHARD A

Various methods and corresponding systems for evaluating potency-correlated material states of a state dependent pharmaceutical product are disclosed. The method may include the steps of creating a data representation of material state specifications for a pharmaceutical product using data gathered from at least one sensor. The method may include correlating a minimum viable potency of the pharmaceutical product and communicating the data representation to at least one participant of a supply chain. The method may include the steps of generating a specimen representation of a material state of a sample of the pharmaceutical product using data gathered from at least one sensor acting on the sample and evaluating the specimen representation of the material state of the sample. The method may include the step of determining whether the specimen representation of the material state of the sample exhibits a material state change greater than the maximum allowable material state change.

142.20240181047MICROMOLDED OR 3-D PRINTED PULSATILE RELEASE VACCINE FORMULATIONS

US - 06.06.2024

Int.Class A61K 39/39Appl.No 18400533Applicant Massachusetts Institute ofTechnologyInventor Ana Jaklenec

Emulsion-based and micromolded (“MM”) or three dimensional printed (“3DP”) polymeric formulations for single injection of antigen, preferably releasing at two or more time periods, have been developed. Formulations are preferably formed of biocompatible, biodegradable polymers. Discrete regions encapsulating antigen, alone or in combination with other antigens, adjuvants, stabilizers, and release modifiers, are present in the formulations. Antigen is preferably present in excipient at the time of administration, or on the surface of the formulation, for immediate release, and incorporated within the formulation for release at ten to 45 days after initial release of antigen, optionally at ten to 90 day intervals for release of antigen in one or more additional time periods. Antigen may be stabilized through the use of stabilizing agents such as trehalose glass. In a preferred embodiment for immunization against polio, antigen is released at the time of administration, and two, four and six months thereafter.

143.WO/2024/113638VIRUS MAINTENANCE LIQUID FOR RUMINANT POXVIRUS CULTURE AND USE THEREOF IN FULL-SUSPENSION CULTURE OF RUMINANT POXVIRUS

WO - 06.06.2024

Int.Class C12N 7/00Appl.No PCT/CN2023/088676Applicant JINYUBAOLING BIO-PHARMACEUTICAL CO., LTDInventor XIN, Junli

Provided is a virus maintenance liquid for ruminant poxvirus culture and use thereof in full-suspension culture of a ruminant poxvirus. The provided virus maintenance liquid for ruminant poxvirus culture is prepared from a dry powder composition of a plurality of virus maintenance liquids, and comprises 5%-20%

of a dry powder of maintenance liquid-1 and 5%-20% of a dry powder of maintenance liquid-2, and further comprises 50%-90% of one of a dry powder of maintenance liquid-3 and a dry powder of maintenance liquid-4 or a mixture of the two dry powders in any ratio. When the virus maintenance liquid is used for full-suspension culture of a ruminant poxvirus, the virus titer in a harvested virus liquid can be significantly improved, and the cost of vaccine production can be further reduced.

144.4387665FMDV VIRUS-LIKE PARTICLE WITH DOUBLE STABILIZING MUTATION

EP - 26.06.2024

Int.Class A61K 39/135Appl.No 22740833Applicant THE PIRBRIGHT INSTInventor PORTA CLAUDINE

The invention concerns a modified recombinant foot and mouth disease virus (FMDV) VP2 protein and further concerns an FMDV capsid precursor protein P1 comprising the modified VP2 protein. In a specific aspect, the present invention concerns a VP2 protein or a capsid precursor protein P1 comprising the VP2 protein, wherein the amino acid sequence of the VP2 protein is modified to improve the stability of FMDV capsids. The invention further relates to an isolated nucleic acid molecule and an expression vector comprising the nucleic acid molecule for recombinant expression of the modified VP2 protein or a capsid precursor protein P1 comprising the VP2 protein. In further aspects, the invention relates to a virus-like particle (VLP) obtained from the modified capsid precursor protein P1 and a vaccine for use in the protection of a subject against an infection with FMDV produced from the VLP.

145.4384614MATERIALS AND METHODS TO COMPREHENSIVELY DEFINE ADAPTIVE IMMUNE RESPONSES

EP - 19.06.2024

Int.Class C12N 15/10Appl.No 22855435Applicant UNIV HONG KONGInventor SUN REN

Methods for detecting adaptive immune responses to pathogens or self-antigens by antibody or B cell or T cell binding to antigenic epitopes have been established. The methods inform functional and structural interactions between immune receptors and antigens, identify potential therapeutic targets and guide vaccine development. The methods employ high throughput modified mRNA-display or variations of droplet display to determine single epitope-specific antibody and B- and T- cell receptor sequences at the genomic scale at single epitope and single amino acid resolution. In some forms, the methods collect and integrate the data to provide a database of an adaptive immunity profile for a human or animal subject. In some forms, the methods identify and record changes in an immunity profile over different time points to reflect immunological responses in a subject. The methods provide high resolution immunity profiles of immune responses at the genomic level for diagnostic, prophylactic, and therapeutic applications.

146.WO/2024/131960VECTOR FOR EXPRESSING POLIOVIRUS-LIKE PARTICLES, PREPARATION METHOD THEREFOR, AND USE THEREOF

WO - 27.06.2024

Int.Class C12N 7/04Appl.No PCT/CN2023/141132Applicant CANSINO BIOLOGICS INC.Inventor YAN, Qiaoling

Provided are a vector for expressing poliovirus-like particles, a preparation method therefor, and use thereof. The vector comprises genes encoding VP0, VP1 and VP3 proteins, wherein any two of the VP0, VP1 and VP3 genes are linked by means of an Intein-self-cleavage sequence and are inserted downstream of a promoter of a first expression cassette, and the remaining gene is inserted downstream of a promoter of a second expression cassette, thus obtaining a recombinant plasmid comprising the gens for the structural proteins of the poliovirus-like particles. The described vector, due to the lack of 3CD genotoxicity, has good stability and significantly improved yield. The vector, due to the absence of a residual linker sequence, is close to the native conformation. The poliovirus type I, type II and type III-like particles prepared using the technical route can be used for preparing a virus-like particle-based poliovirus vaccine that can elicit higher levels of neutralizing antibodies against poliovirus infection.

147.WO/2024/126194PROCESS FOR OBTAINING PLANT-BASED SQUALENE

WO - 20.06.2024

Int.Class C07C 7/00Appl.No PCT/EP2023/084498Applicant EVONIK OPERATIONS GMBHInventor JAKOB, Andreas

Process for the production of a squalene composition having an enriched squalene content, in particular of a pharmaceutical squalene composition, form a squalene comprising composition having a lower squalene content, in particular from a plant-based oil having a lower squalene content, comprising the steps of i) providing a composition comprising squalene having a lower squalene content, ii) subjecting the squalene comprising composition having a lower squalene content to a purification step at a temperature below the boiling point of squalene, and obtaining an intermediate composition with a squalene content, and iii) performing a chromatography step with the intermediate composition with a squalene content, and iv) obtaining a squalene composition having the enriched squalene content. Furthermore, objects of the invention are also a squalene composition having an enriched squalene content, in particular a pharmaceutical squalene composition, in particular a parenteral pharmaceutical composition, more preferred a vaccine and an oil-in water emulsion comprising a squalene composition.

148.4389761POLYPEPTIDE FOR RESISTING NOVEL CORONAVIRUS AND APPLICATION THEREOF

EP - 26.06.2024

Int.Class C07K 14/165Appl.No 22857610Applicant INST MICROBIOLOGY CASInventor GAO FU

The present application relates to a polypeptide for preventing or treating a novel coronavirus and an application thereof. The polypeptide is P3 polypeptide and any one of P3-1 polypeptide, P3-2 polypeptide, P3-3 polypeptide, P3-4 polypeptide, and P3-5 polypeptide derived from the P3 polypeptide. The amino acid sequences of the P3 polypeptide, the P3-1 polypeptide, the P3-2 polypeptide, the P3-3 polypeptide, the P3-4 polypeptide, and the P3-5 polypeptide are respectively shown in SEQ ID NOs: 1-6. The polypeptide of the present application has a strong inhibitory effect on original strains and a plurality of variant strains of the novel coronavirus, and can be used for preparing a drug or a vaccine for preventing and/or treating diseases caused by the novel coronavirus. The polypeptide is expected to also have the potential of preventing and/or treating new variant strains appearing in the future and sarbecovirus.

149.20240180843THERMALLY STABLE VACCINE FORMULATIONS UTILISING METAL ORGANIC FRAMEWORK (MOF) SHELLS

US - 06.06.2024

Int.Class A61K 9/51Appl.No 18285814Applicant Commonwealth Scientific and Industrial Research OrganisationInventor Ruhani Singh

The present application relates to metal-organic framework (MOF) encapsulation or viral vaccines and vectors. The present application discloses methods for stabilizing viral vaccines and vectors and provides MOF encapsulated viral vaccines and vectors with improved stability.

150.20240181036TRANSDERMAL ACTIVE AGENT DELIVERY DEVICES HAVING CORONAVIRUS VACCINE COATED MICRO-PROTRUSIONS

US - 06.06.2024

Int.Class A61K 39/145Appl.No 17996882Applicant Emergex USA CorporationInventor Mahmoud AMERI

Disclosed herein are systems and methods for the transdermal or intracutaneous delivery of vaccines, and more particularly to the delivery of vaccines that produce coronavirus or other virus specific antibodies in the serum of vaccinated mammals, including to prevent COVID-19.

151.2024203948VACCINE CANDIDATES FOR HUMAN RESPIRATORY SYNCYTIAL VIRUS (RSV) HAVING ATTENUATED PHENOTYPES

AU - 20.06.2024

Int.Class Appl.No 2024203948Applicant Codagenix, Inc.Inventor Buchholz, Ursula J.

152.20240180834DEVELOPMENT OF COVID-19 VACCINE USING A DUAL TLR LIGAND LIPOSOME ADJUVANT

US - 06.06.2024

Int.Class A61K 9/127Appl.No 18279193Applicant Christopher FoxInventor William A. Petri, Jr.

Disclosed are compositions for eliciting anti-SARS-CoV-2 immune responses in subjects. In some embodiments, the compositions include one or more SARS-CoV-2 antigens and one or more PEGylated liposomal adjuvants, wherein at least one of the PEGylated liposomal adjuvants includes a cholesterol, a non-PEGylated neutral lipid, and a PEGylated lipid. Also provided are methods for using the presently disclosed compositions for stimulating anti-SARS-CoV-2 immune responses, for inducing anti-SARS-CoV-2 Th1 responses, for stimulating systemic immune responses and/or mucosal immune responses, for inducing anti-SARS-CoV-2 IgA responses, for reducing SARS-CoV-2-induced lung injuries, and for inducing anti-SARS-CoV-2 neutralizing antibodies in subjects in need thereof.

153.20240185994METHOD AND SYSTEM FOR PROVIDING CERTIFICATION OF VACCINE INOCULATION AND POST-INOCULATION MANAGEMENT

US - 06.06.2024

Int.Class G16H 40/20Appl.No 18550263Applicant BLOCKCHAIN LABS INC.Inventor Yong Tae KIM

The present disclosure relates to a method for vaccination management including at least: transmitting, by a medical institution device, a vaccination certificate issuance request, an identity certification verifiable credential (VC) for a user, a vaccination agency VC for a medical institution, and a digital signature of the medical institution, to a trusted institution server; verifying, by the trusted institution server, the vaccination agency VC based on a digital signature of a VC issuer included in the vaccination agency VC and the identifier of the trusted institution stored in a public distributed ledger; determining, by the trusted institution server, whether there is an authority for the vaccination certificate issuance request based on the vaccination agency VC and a medical institution database stored in the trusted institution server; and issuing, by the trusted institution server, a vaccination certification VC.

154.WO/2024/138134LIPID NANOPARTICLES FOR DELIVERY OF NUCLEIC ACIDS AND VACCINE FOR THE PREVENTION OF CORONAVIRUS INFECTION

WO - 27.06.2024

Int.Class A61K 39/215Appl.No PCT/US2023/085706Applicant AKAGERA MEDICINES, INC.Inventor DRUMMOND, Daryl, C.

Aspects of present disclosure provide for improved compositions of ionizable lipid nanoparticles for the delivery of therapeutic nucleic acids to cells. Anionic phospholipids, including phosphatidylserine and phosphatidylglycerol are included in the lipid nanoparticles to increase the transfection efficiency in dendritic cells. The further incorporation of mono-unsaturated alkyl chain analogs in dimethylaminopropyl-dioxolane or heterocyclic ketal ionizable lipids in the formulation demonstrated high levels of transfection in human dendritic cells, compared to other ionizable lipids in the same family, and demonstrated good stability to oxidative damage. Other aspects of the present disclosure provide mRNA that encodes for concatenated peptides encoding for multiple MHC-I SARS-CoV-2 epitopes.

155.WO/2024/121424COMPOSITE AIDS VACCINE GENERATING ANTI-HIV SPECIFIC NEUTRALIZING ANTIBODIES AND/OR ANTI-HIV CYTOTOXIC T CELLS

WO - 13.06.2024

Int.Class A61K 38/00Appl.No PCT/EP2023/084994Applicant ZAGURY, DanielInventor ZAGURY, Daniel

In the present invention, the Applicant provides a novel method for prophylactically or curatively treating acquired immune deficiency syndrome (AIDS) in a subject in need thereof, wherein said subject is a human immunodeficiency virus (HIV)-seropositive patient. The Applicant also provides a novel method for preventing acquired immune deficiency syndrome (AIDS) in a subject in need thereof, wherein said subject is a human immunodeficiency virus (HIV)-seronegative patient. The Applicant further provides a novel method for prophylactically treating or curatively treating acquired immune deficiency syndrome (AIDS) in a subject in need thereof, wherein said subject is a human immunodeficiency virus (HIV)-seropositive Elite Controller patient.

156.20240181044GLYCAN MODIFIED SPIKE RECEPTOR BINDING DOMAIN NANOPARTICLES AND METHOD OF USE THEREOF AS A CORONAVIRUS DISEASE 2019 (COVID-19) VACCINE

US - 06.06.2024

Int.Class A61K 39/215Appl.No 18556414Applicant Daniel KulpInventor Daniel Kulp

Disclosed herein are glycan-coated RBD immunogens, engineered nanoparticle vaccines comprising glycan-coated RBD immunogens and methods of use thereof for SARS-COV-2 vaccines.

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