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

IFV INSTITUTO FINLAY DE VACUNAS SiViFinlay VaCyT

Análisis bibliométrico sobre vacunas inactivadas

Estrategia de búsqueda:

TITLE: ("inactivated vaccines") 2412 records

Periodo de estudio 1999-2020

Fuente de información utilizada:

Las variables utilizadas en el análisis fueron:

⇒ Productividad científica por año.

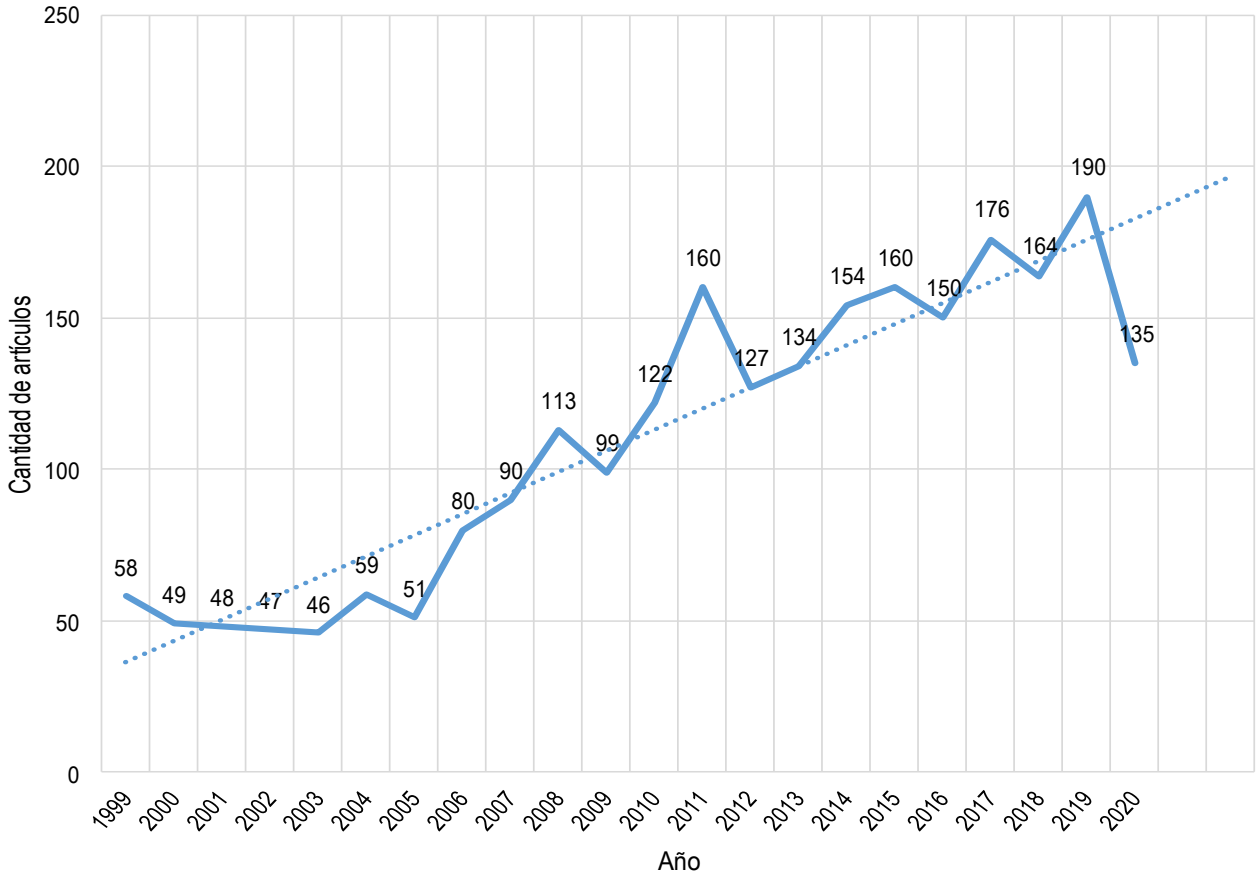
⇒ Autores con mayor productividad científica.

⇒ Revistas con mayor número de publicaciones sobre el tema.

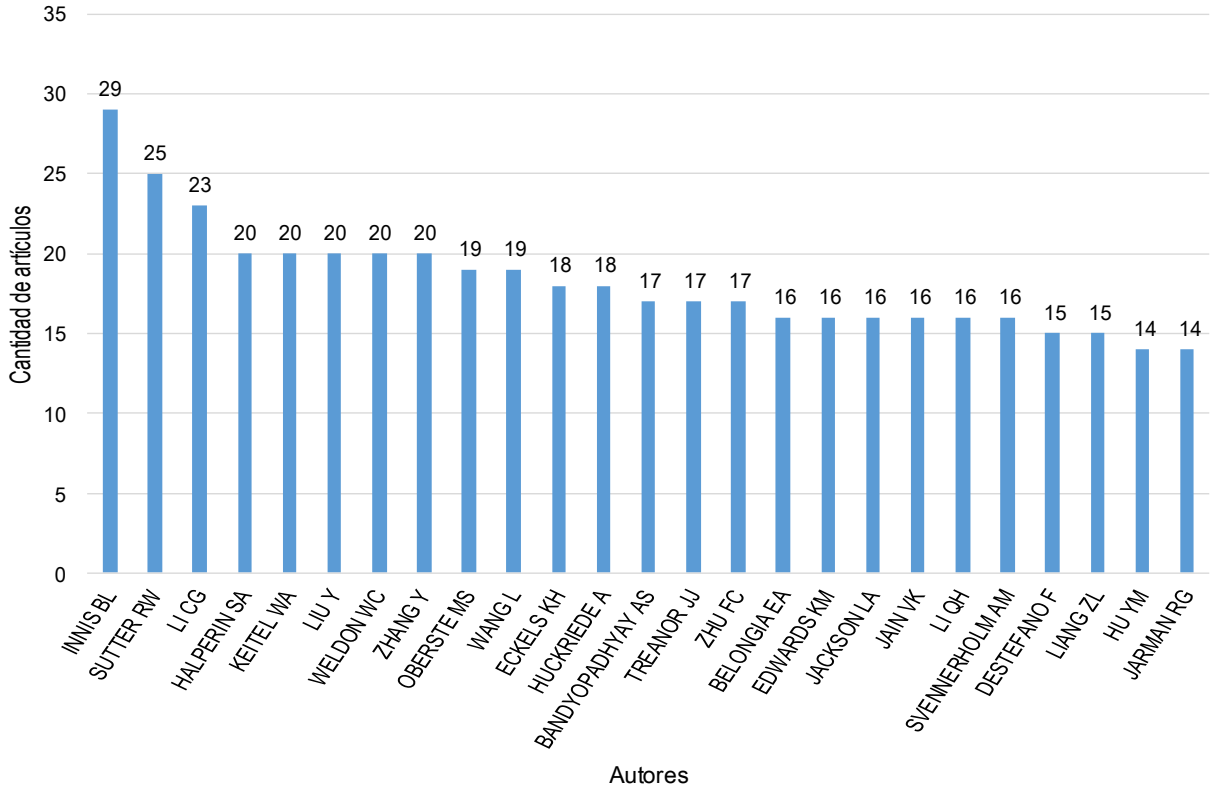
⇒ Instituciones que han trabajado el tema de estudio.

⇒ Países a la vanguardia sobre el tema.

Productividad científica por año



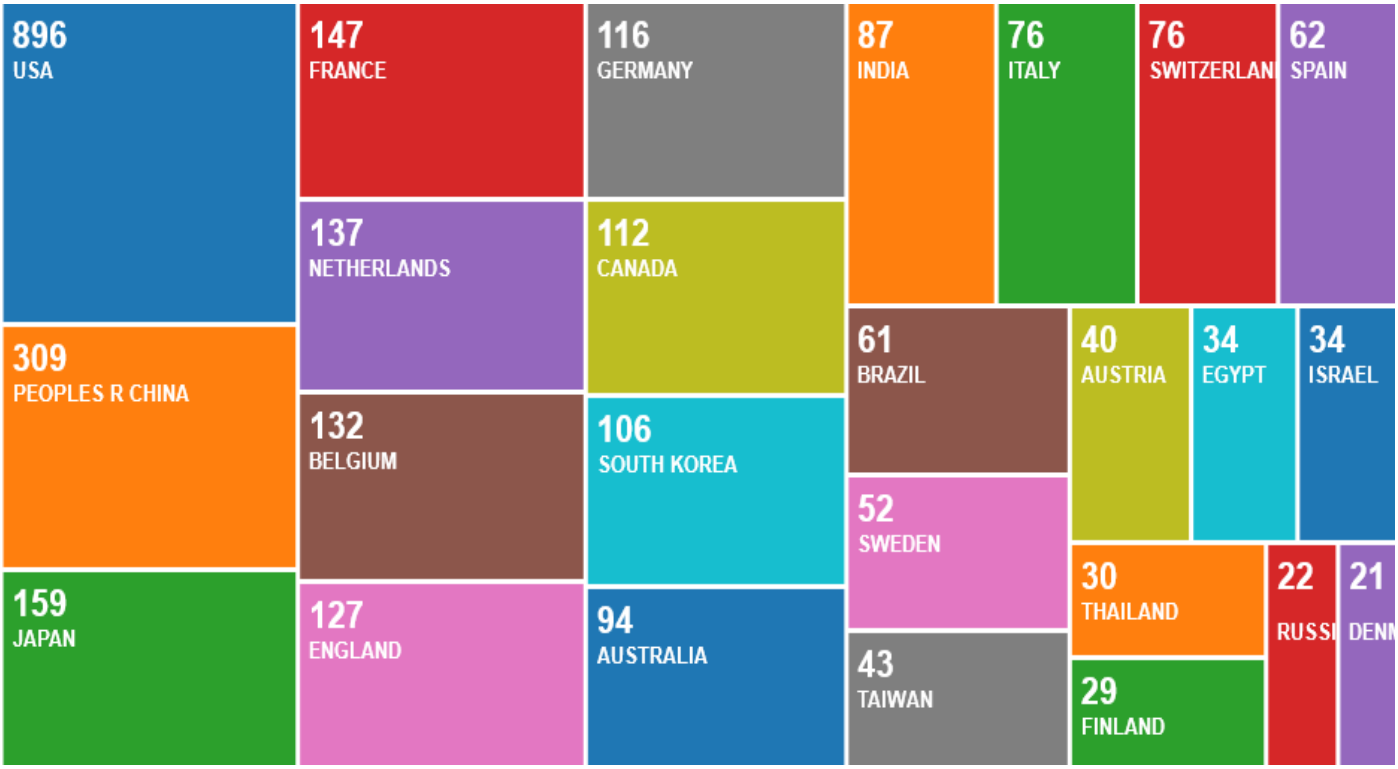
Autores con mayor productividad científica



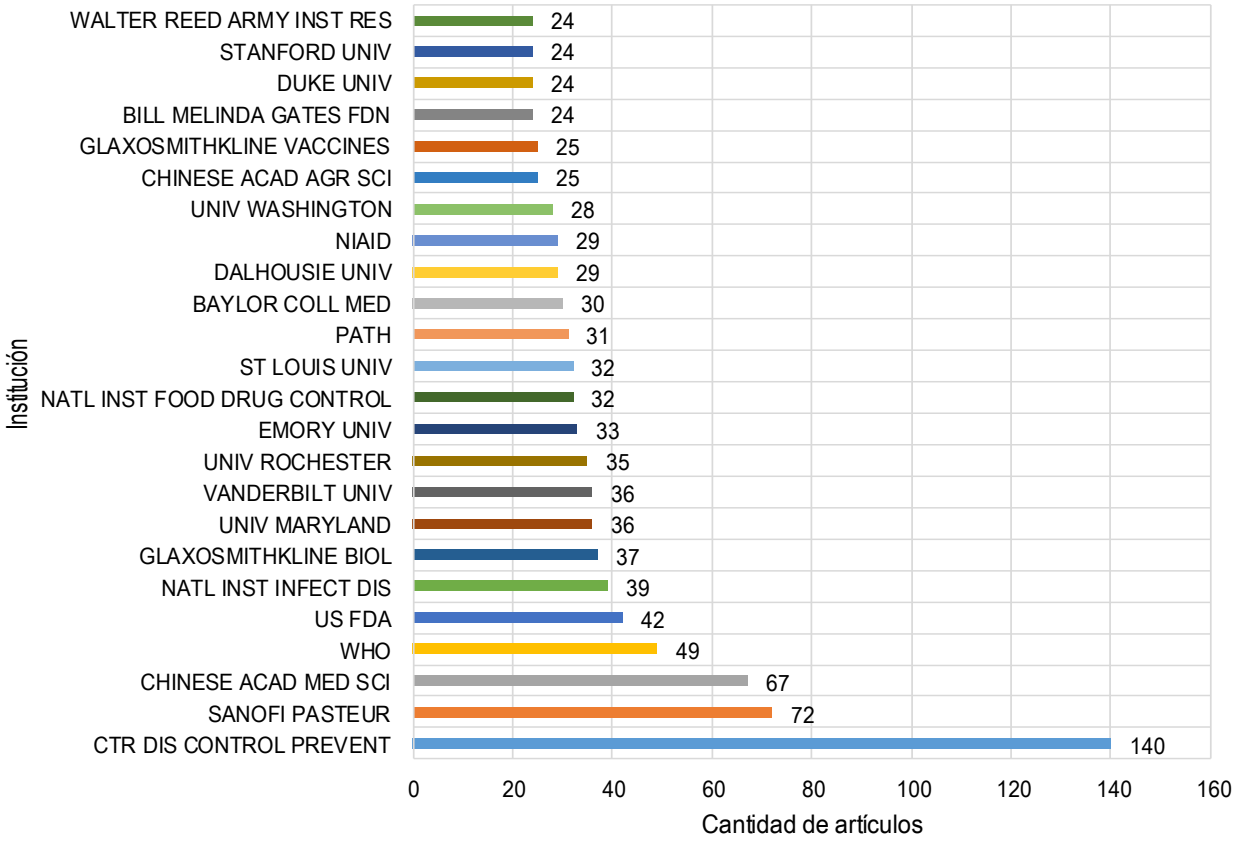
Revistas científicas que más han publicado sobre el tema

CUBA

Países de mayor producción científica en el tema



Instituciones que han trabajado el tema de estudio



CUBA

Noticias en la Web

Vacuna anti-COVID hasta el año próximo, funcionario contradice a Trump

9 oct. Un funcionario del gobierno del presidente Donald Trump que encabeza la respuesta a la pandemia de coronavirus dice que Estados Unidos puede esperar que haya una vacuna disponible a partir de enero de 2021, a pesar de las declaraciones del mandatario de que las inoculaciones podrían comenzar este mes.

Un funcionario del gobierno del presidente Donald Trump que encabeza la respuesta a la pandemia de coronavirus dice que Estados Unidos puede esperar que haya una vacuna disponible a partir de enero de 2021, a pesar de las declaraciones del mandatario de que las inoculaciones podrían comenzar este mes.

"Creo que podemos comenzar en algún momento en octubre", señaló el mandatario en una sesión informativa el mes pasado.

El funcionario respondió a diversas preguntas de The Associated Press y FRONTLINE acerca de la respuesta del gobierno a la pandemia y, en particular, sobre la escasez de materiales médicos cruciales.

Fuente: Chicago Tribune. Disponible en https://cutt.ly/Ngk6O2W

China se une a la iniciativa de vacunas COVID-19 de la OMS

9 oct. El país tiene varias vacunas en ensayos clínicos y ahora será la economía más grande en el programa que busca garantizar que 2000 millones de dosis se fabriquen y distribuyan de manera equitativa para fines de 2021.

China se unió a COVAX, la iniciativa de la Organización Mundial de la Salud para el desarrollo y la distribución equitativa de una vacuna contra el COVID-19, informó su director, el doctor Tedros Adhanom Gebreyesus.

Esta semana Corea del Sur y Nauru también anunciaron su participación, lo que eleva a 171 el número total de países y economías que forman parte de la asociación sin precedentes de la OMS, la Alianza para la Vacunas, la Coalición para la Preparación ante Epidemias, y varios fabricantes de vacunas, que tiene la mayor cartera posible de inmunizaciones contra el coronavirus, con varias ya en ensayos avanzados en humanos.

China, con Estados Unidos y Rusia, había declinado previamente participar en el programa. La portavoz del Ministerio de Relaciones Exteriores del país asiático expresó en un comunicado a los medios que China ha dado este paso para acelerar la manufactura y asegurar una distribución equitativa de las vacunas, especialmente en los países en desarrollo. "Entre más países participen en la iniciativa COVAX habrá más posibilidad de desarrollar y repartir vacunas tan rápida y equitativamente como sea posible, para reducir el riesgo de enfermedad grave de COVID-19 a nivel mundial. Entre más países y economías sean parte de esta iniciativa, mejor. En cuanto a los detalles de la participación de China, esperamos que a comienzos de la próxima semana tengamos más datos específicos", dijo el asesor líder de la OMS, Bruce Aylward, durante la conferencia de prensa habitual de la Organización.

Otras buenas noticias

El doctor Tedros reiteró que inicialmente, el suministro de vacunas será limitado, pero que al compartirlo de manera equitativa,

los países y economías que forman parte de COVAX pueden distribuir vacunas simultáneamente a las poblaciones prioritarias, incluidos los trabajadores de la salud, las personas mayores y las personas con afecciones subyacentes.

"El objetivo de COVAX es garantizar que 2000 millones de dosis se fabriquen y distribuyan de manera equitativa para fines de 2021", explicó.

Tedros también le dio la bienvenida al anuncio de la farmacéutica estadounidense, Moderna, de que no hará cumplir sus derechos de patente sobre su vacuna COVID-19 durante la pandemia.

"Esperamos saber más sobre lo que significa este anuncio en términos de transferencia de tecnología. Agradecemos este acto solidario, que está en línea con los principios de nuestro reservorio de acceso tecnológico COVID-19, o C-TAP. Compartir los beneficios de la innovación es la mejor manera de poner fin a la pandemia y acelerar la recuperación económica mundial", añadió.

El director de la OMS recordó que las vacunas son uno de los inventos más poderosos de la historia de la humanidad.

"La viruela se ha erradicado y la poliomielitis está al borde de desaparecer, gracias a las vacunas. Las enfermedades antes temidas como la difteria, el tétanos, el sarampión, la meningitis y el cáncer de cuello uterino se pueden prevenir gracias a las vacunas. Ahora tenemos vacunas eficaces contra el ébola y la primera vacuna contra la malaria del mundo se está probando en tres países africanos", apuntó.

Tedros reiteró una vez más que ninguna de las vacunas contra el nuevo coronavirus SARS-COV-2 que están en ensayos será aprobada por la Organización hasta examinar los resultados.

Fuente: **Noticias ONU**. Disponible en https://cutt.ly/agk6VjP

Cuba's breakthroughs are the basis of Soberana 1 vaccine candidate

10 oct. Cuba's breakthroughs by the biopharmaceutical industry in the production of vaccines are the basis of Soberana 1 vaccine candidate, recognized the president of the BioCubaFarma business group, Eduardo Martinez.

In statements to the Granma newspaper, the scientist drew attention to the results of that sector in the last 30 years that paved the way for that drug against Covid-19 to be currently in the clinical trial phase.

Martinez explained that all the experience accumulated by Cuban institutions allowed to act quickly and to have that first vaccine candidate, in clinical evaluation in humans, and others in an advanced phase of preclinical studies.

The expert stated that before the end of 2020 it is very likely that the country will have at least two other vaccine candidates being assessed in human beings.

BioCubaFarma's president set out that by using different technological platforms, those drugs do not compete in terms of productive capacities, which would allow, in a short period of time, to have the quantities of vaccines necessary to immunize the whole Cuban population.

Martinez commented that, if achieved, the scientific entity would facilitate to make those medicines available to countries that require them and to position them at different ages.

Fuente: Prensa Latina. Disponible en https://cutt.ly/5gzcHQS

Soberana 1 no es obra de la casualidad

10 oct. «Cuba tiene gran experiencia en el desarrollo y producción de vacunas. Hoy, la industria biofarmacéutica nacional fabrica ocho de las 11 incluidas en el programa ampliado de inmunización», explicó Eduardo Martínez Díaz, presidente del grupo empresarial BioCubaFarma.

La prioridad concedida desde los inicios de la Revolución al progreso científico, con énfasis en la formación de un capital humano altamente calificado y la creación de centros investigativos en disímiles ramas del conocimiento, fueron premisas indispensables para que Cuba apostara por incursionar en el promisorio sector de la biotecnología en la década de los años 80 del pasado siglo, casi al mismo tiempo que esa industria emergía en un reducido grupo de naciones de mayor desarrollo tecnológico.

Hoy, cuando trasciende que somos el primer país de América Latina y el Caribe en disponer de un candidato vacunal contra la COVID-19 en fase de ensayos clínicos, no pocas personas dentro y fuera del territorio nacional se preguntan cómo ello ha sido posible en medio de un escenario económico tan adverso, agravado por el recrudecimiento del bloqueo económico, comercial y financiero impuesto por el gobierno de Estados Unidos.

Sobre el tema, Granma conversó con el doctor en Ciencias Eduardo Martínez Díaz, presidente del grupo empresarial BioCubaFarma, quien esbozó los principales resultados logrados por nuestros científicos en el campo de la producción de vacunas en los últimos 30 años, que explican por qué hemos llegado a la Soberana 1.

«Cuba tiene gran experiencia en el desarrollo y producción de vacunas. Hoy, la industria biofarmacéutica nacional fabrica ocho de las 11 incluidas en el programa ampliado de inmunización».

Lo anterior, recalcó, permite una cobertura de vacunación en el país superior al 98 %, con impacto significativo en la eliminación de varias enfermedades infecciosas y la reducción de la tasa de incidencias de otras.

Como puntualiza Eduardo Martínez, la vacuna antimeningocócica BC, desarrollada por el Instituto Finlay a finales de los años 80, bajo la conducción de la doctora en Ciencias Concepción Campa Huergo, fue la primera de su tipo, a nivel mundial, para el control de la meningitis tipo B.

Patentada por los científicos cubanos, recibió la Medalla de Oro de la Organización Mundial de la Propiedad Intelectual (OMPI). Su empleo en el contexto nacional desde los años 90, permitió disminuir significativamente la incidencia de la referida enfermedad y mantenerla bajo control.

«Otro significativo aporte lo es, sin duda, la vacuna recombinante contra la hepatitis b, creada por científicos del Centro de Ingeniería Genética y Biotecnología (CIGB), encabezados por el doctor en ciencias Luis Herrera Martínez. Además de reducir de forma apreciable la presencia de dicha dolencia en Cuba, a partir del año

2000 no se reportan casos de niños menores de cinco años infectados con el virus de la Hepatitis b».

«En la actualidad, la totalidad de la población hasta los 40 años está inmunizada contra la enfermedad, que causa aproximadamente un millón de muertes anualmente a nivel mundial. Fue la primera de América Latina y el Caribe en lograr la certificación por la Organización Mundial de la Salud (OMS), y podríamos convertirnos en uno de los primeros países en erradicarla».

Dentro de los hitos en esta esfera, el doctor Eduardo Martínez mencionó también la vacuna contra el haemophilus influenzae tipo B, resultado original de la Universidad de La Habana, conducido por el doctor en Ciencias Vicente Vérez Bencomo, junto a investigadores de varias entidades del sector biotecnológico.

«Su novedad radica en ser la primera de uso en humanos, cuyo antígeno se obtiene por síntesis química, y logró la certificación de la OMS, un requisito necesario para poder suministrarla a las agencias de las Naciones Unidas».

No menos trascendental es la obtención de la vacuna pentavalente contra la difteria, el tétanos, la tos ferina, la hepatitis B y el haemophilus influenzae tipo B, segunda en lograrse a nivel mundial y la primera producida por un país de América Latina y el Caribe, acotó.

«Nuestras vacunas tienen prestigio internacional, como lo demuestra que cientos de millones de dosis fabricadas en la Mayor de las Antillas han sido suministradas a más de 40 naciones».

Toda la experiencia acumulada por las instituciones cubanas ha sido la base para poder actuar con rapidez y llegar a tener un primer candidato vacunal para la COVID-19, en evaluación clínica en humanos, y otros en fase avanzada de estudios preclínicos, precisó Martínez Díaz.

-¿Cómo se organizó en BioCubaFarma el trabajo alrededor de este importante proyecto de vacuna?

–«A partir del surgimiento de la epidemia en China pensamos rápidamente en una vacuna. De hecho, desde el Centro de Investigación y Desarrollo chino-cubano que tenemos en Yonzhov, provincia Hunang, en China, presentamos una propuesta para su desarrollo.

«El proyecto tiene como característica la búsqueda de una vacuna universal que sea efectiva contra el coronavirus, no solo para el SARS-CoV-2. Tras ser aprobado, ha recibido fondos para su ejecución en China.

«Luego de convertirse la enfermedad en pandemia, activamos de inmediato las comisiones de los consejos científicos del Instituto Finlay de Vacunas y el Centro de Ingeniería Genética y Biotecnología, instituciones con larga experiencia en los temas de vacunas.

«Igualmente, creamos un grupo de trabajo al cual se integró un núcleo de instituciones de BioCubaFarma, entre ellos, el Centro de Inmunología Molecular (CIM), el Centro Nacional de Biopreparados (BioCen), el Centro de Inmunoensayo (CIE) y el Centro Nacional para la Producción de Animales de Laboratorio (Cenpalab). Todos aportarán su granito de arena a esta labor, que ha contado con el especial acompañamiento del Ministerio de Salud Pública, incluido el Centro para el Control Estatal de Medicamentos, Equipos y Dispositivos Médicos (Cecmed)», aseveró el doctor en Ciencias Eduardo Martínez.

«La estrategia fue diseñar múltiples variantes basadas en las plataformas tecnológicas propias. Se ha trabajado con intensidad y, como es lógico, hay algunas que fueron descartándose en el camino, y otras que están teniendo muy buenos resultados.

«Una de ellas es Soberana01, actualmente en ensayos clínicos. Antes de finalizar 2020, es muy probable que tengamos, al menos, otros dos candidatos vacunales evaluándose en humanos».

Como los candidatos usan plataformas tecnológicas

diferentes, que no compiten en cuanto a las capacidades productivas, ello nos permitiría, en un periodo corto de tiempo, disponer de las cantidades de vacunas necesarias para inmunizar a toda nuestra población y ponerla, asimismo, a disposición de los países que la requieran, subrayó el Presidente de BioCubaFarma.

«Desarrollar distintas variantes de vacunas tiene también el propósito de posicionarlas en edades diferentes, o sea, una vacuna para niños podría ser diferente a la que usemos en adultos y, dentro de los adultos, podríamos diferenciar a los mayores de 60 años, que sabemos requieren de una vacuna de mayor potencia para lograr los niveles de inmunidad necesarios para la protección contra el virus.

«El reto, lanzado por el Presidente Miguel Díaz-Canel, de lograr soberanía con una vacuna propia y hacerla rápido, movilizó a nuestros científicos y tecnólogos. Se ha trabajado intensamente, en unidad, con inteligencia y vamos a cumplir con él, que es cumplir con nuestro pueblo y con Fidel y Raúl», resaltó el doctor en Ciencias Eduardo

Fuente: CMHW. Disponible en https://cutt.ly/TgzvmTN

India's first COVID-19 vaccine Covaxin journey: From test results to phase 3 trial, latest updates

10 oct. Covaxin, India's first COVID-19 vaccine candidate has sought the drug regulator's approval to start the large scale phase III clinical trial in the country. The Drugs Controller General of India asked the vaccine maker Bharat Biotech to submit "complete safety and immunogenicity data of the phase II trial" and some clarifications before proceeding for the next stage.

Developed by Bharat Biotech in collaboration with the Indian Council of Medical Research (ICMR), Covaxin is currently in the phase II clinical trial in the country. Hyderabad-based Bharat Biotech earlier released the animal study results of Covaxin. "The vaccine candidate was found to generate robust immune responses. Thus, preventing infection and disease in the primates upon high amounts of exposure to live SARS-CoV-2 virus," the drugmaker said.

In the early stage of human trials, Covaxin has been tested in 12 hospitals across the country. Volunteers between the ages of 18 and 55 with no co-morbidity conditions have participated in the trial. The vaccine trial took place in Hyderabad, Rohtak, Patna, Kancheepuram, Delhi, Goa, Bhubaneswar and Lucknow among other places.

Covaxin will use adjuvant Alhydroxiquim-II to boost immune response and longer lasting immunity, the firm said last week. The technology is being used under a licensing agreement with Kansas-based ViroVax, said Bharat Biotech.

"There is critical need for development and availability of adjuvants that elucidate mechanisms of action inducing greater antibody responses to vaccine antigens, thus resulting in long-term protection against pathogens. Adjuvants also enhance the sustainability of the global vaccine supply on account of their antigen-sparing effect," Krishna Ella, chairman and managing director of Bharat Biotech said.

How does Covaxin work?

Covaxin has been derived from a strain of the novel coronavirus isolated by the National Institute of Virology in Pune. Bharat Biotech developed an “inactivated" vaccine at its high-containment facility

at Genome Valley in Hyderabad.

“Once the vaccine is injected into a human, it has no potential to infect or replicate, since it is a killed virus. It just serves to the immune system as a dead virus and mounts an antibody response towards the virus," Bharat Biotech said.

For phase III trial, the drugmkaer plans to enroll 28,500 volunteers aged 18 years and above. The trial will be conducted across 10 states including Delhi, Mumbai, Patna and Lucknow. The phase III clinical trial application proposed a dose of 0.5 ml on day 0 and 28, sources told PTI.

COVID-19 vaccine candidates in India

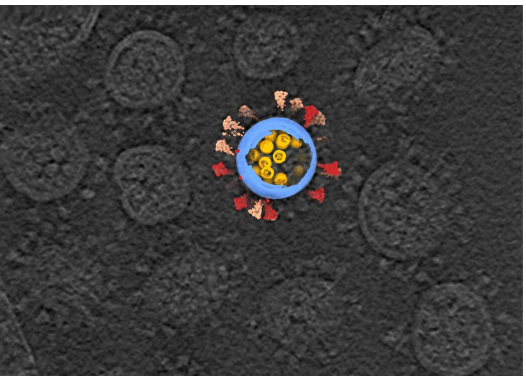
India's coronavirus vaccine production and delivery capacity will help all humanity in fighting the pandemic, said Prime Minister Narendra Modi at the United Nations General Assembly last month. "As the largest vaccine producing country of the world, I want to give one more assurance to the global community today. India's vaccine production and delivery capacity will be used to help all humanity in fighting this crisis," he added.

Besides, Bharat Biotech, another vaccine candidate developed by Zydus Cadila Ltd is in the phase II of the human clinical trials. Serum Institute of India has partnered with AstraZeneca for manufacturing the COVID-19 vaccine candidate developed by the University of Oxford. Pune-based drugmaker is conducting Phase II and III human clinical trials of the candidate in India.

Fuente: mint. Disponible en https://cutt.ly/NgzbOeo

Imágenes detalladas de la estructura del SARS-CoV-2 ayudaron a entender cómo el virus ataca a las células

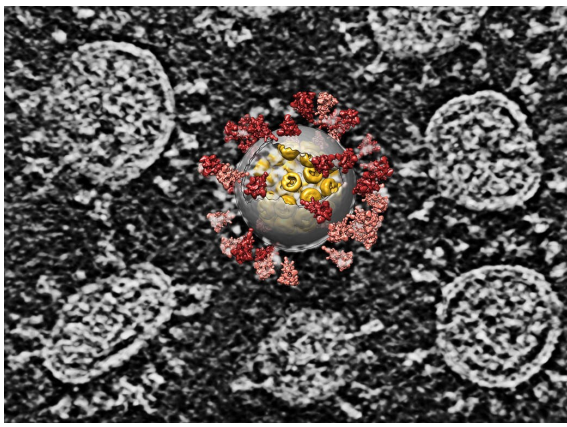
11 oct. Imágenes detalladas de la estructura del SARS-CoV-2, que han obtenido varios equipos de científicos a lo largo de la pandemia, han desempeñado un papel importante en la compresión de la interacción del virus con las células humanas y son un hito importante en el camino hacia la búsqueda de una vacuna, informa The New York Times.



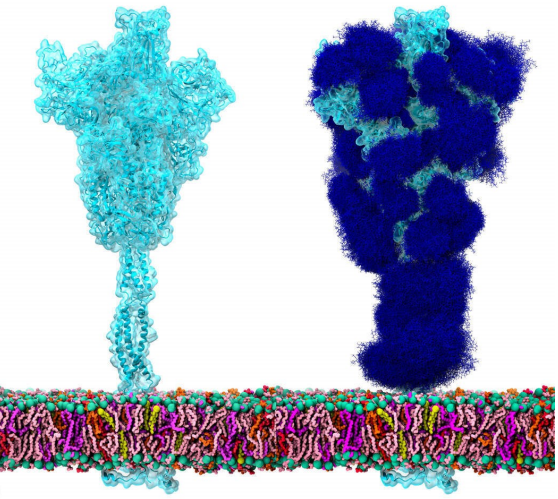
En febrero, en las primeras etapas de la pandemia, las mejores fotografías que alguien había logrado tomar eran imágenes de baja resolución, en las que el virus parecía una mancha apenas perceptible. El doctor Sai Li, biólogo estructural de la Universidad de Tsinghua de Pekín, fue uno de los primeros que logró captar en fotos muy detalladas la forma puntiaguda del coronavirus y su interactuación con las células humanas.

Li colaboró con un equipo de virólogos chinos que trabajó con el virus en un laboratorio de bioseguridad en la ciudad de Hangzhou, lo trató con una sustancia química para volverlo inofensivo y se lo envió en una muestra de líquido. El científico y su equipo concentraron el líquido cargado de virus de un litro hasta una sola gota, que fue congelada en una fracción de segundo y luego la observó a través de un microscopio crioelectrónico.

"Vi una pantalla llena de virus", contó Li al medio. "Pensé que era el primero en el mundo en ver el virus en tan buena resolución", añadió.

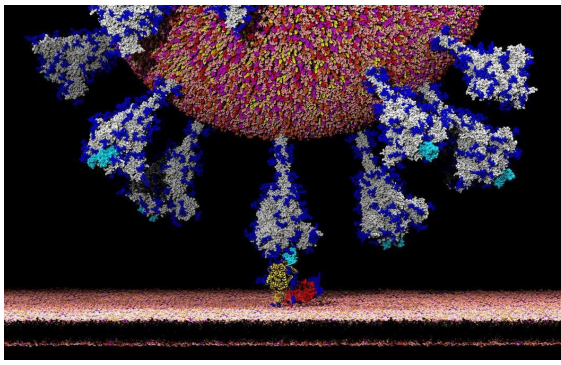


Durante las siguientes semanas, el doctor Li y su equipo estudiaron detenidamente las imágenes captadas del coronavirus: inspeccionaron las proteínas de su superficie y las que estaban en su núcleo, enrolladas con los genes.



Actualmente, algunos investigadores están usando supercomputadoras para crear virus virtuales completos que esperan usar para comprender cómo los virus reales se han propagado con una facilidad tan devastadora. Así, el equipo de Rommie Amaro, bióloga computacional de la Universidad de California en San Diego, creó modelos átomo por átomo del coronavirus y de su proteína pico.

Estas investigaciones, y otras parecidas, han ayudado a los científicos en todo el mundo a conocer el SARS-CoV-2 en detalle: han descubierto cómo utiliza algunas de sus proteínas para introducirse en las células y cómo sus genes logran dominar nuestra bioquímica y han allanado el camino hacia la vacuna que podrá combatirlo.



Fuente: Actualidad Russia Today. Disponible en https://cutt.ly/7gxvX4v

Evolución del coronavirus: qué es la mutagénesis letal (y en qué medida podría ayudar a combatir la Covid-19)

12 oct. Más de 36 millones de personas infectadas, más de un millón de muertos.

Hasta la fecha ningún tratamiento ha demostrado ser totalmente efectivo contra el SARS-CoV-2, el virus que causa la covid-19.

Y algunos científicos se preguntan si podría recurrirse a otra estrategia: usar las propias armas del virus en su contra.

Una de las tácticas del SARS-CoV-2 para vencer al sistema inmunológico es replicarse velozmente, pero allí también está su talón de Aquiles.

Al replicarse, el virus acumula mutaciones. ¿Sería posible entonces combatirlo acelerando esas mutaciones y haciendo que el virus "mute hasta morir", en un proceso que los científicos llaman "mutagénesis letal"?

Fármacos que causan mutagénesis letal ya han sido probados contra otros virus.

El gran interrogante es si ese mismo mecanismo podría ser efectivo contra el nuevo coronavirus.

Los virus ARN y su habilidad para mutar

El virus de la covid-19 es un virus ARN (RNA en inglés). Esto significa que el material genético en su interior es ARN o ácido ribonucleico, en lugar de ADN (DNA en inglés). Los virus ARN, como los de la gripe, el ébola o la covid-19 entre otros, consisten básicamente en un mensaje escrito en ARN rodeado de proteínas.

Ese mensaje está escrito en cuatro letras, "a", "g", "c", "u". Cada una de ellas representa un compuesto químico o nucleótido, y el orden de esos compuestos, al igual que el orden de las letras en una palabra, determina qué mensaje se transmite.

En el caso de un virus, el orden de las letras contiene las instrucciones para que el virus pueda replicarse o copiarse a sí mismo.

Y al replicarse, los virus generan mutaciones o errores en la secuencia de letras.

"Los virus RNA al tener genomas más pequeños pueden tolerar frecuencias de mutación mayores (el número de mutaciones frente al número total de nucleótidos). Este número es aproximadamente de 1 mutación cada 10.000 nucleótidos, lo cual en el mundo de la

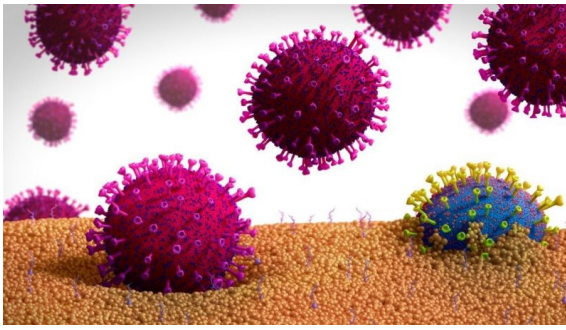
biología es mucho", explicó a BBC Mundo Armando Arias, virólogo de la Universidad de Castilla -La Mancha en España, e investigador de virus ARN.

"Los virus DNA grandes tienen tasas de mutación mucho menores (entre 100 y 10.000 veces menor). Al ser sus genomas tan grandes no pueden tolerar 1 mutación cada 10.000 nucleótidos. Se acumularían muchas mutaciones aleatorias en un solo genoma que podrían inactivar alguna función vital para el virus. Por ello, los virus DNA son menos mutables", agregó el científico.

"Los virus RNA además tienen polimerasas (las enzimas que copian el material genético) que mutan más que las de los virus DNA. Y no tienen mecanismos de reparación de errores".

Esteban Domingo, virólogo del Centro de Biología Molecular Severo Ochoa, en Madrid, fue pionero en demostrar que los virus ARN se multiplicaban cometiendo errores hasta acabar formando lo que el científico llama "nubes de mutantes".

"Nubes de mutantes se refiere a que cada copia individual del material genético (es decir el ácido ribonucleico o RNA presente en el interior de cada partícula de virus y que está formado por unos miles de unidades que llamamos



nucleótidos) no es idéntica a las demás", señaló Domingo a BBC Mundo.

"Dado que las poblaciones de virus suelen ser muy grandes, con miles de millones de partículas, cada una con su genoma ligeramente distinto de los demás, la manera de visualizarlo es llamándole 'nube de mutantes'".

Fuente: BBC News. Disponible en https://cutt.ly/wgxneAv

SARS-CoV-2 antibodies provide lasting immunity

13 oct. One of the most significant questions about the novel coronavirus is whether people who are infected are immune from reinfection and, if so, for how long.

To determine the answer, University of Arizona Health Sciences researchers studied the production of antibodies from a sample of nearly 6,000 people and found immunity persists for at least several months after being infected with SARS-CoV-2, the virus that causes COVID-19.

"We clearly see high-quality antibodies still being produced five to seven months after SARS-CoV-2 infection," said Deepta Bhattacharya, Ph.D., associate professor, UArizona College of Medicine—Tucson, Department of Immunobiology. "Many concerns have been expressed about immunity against COVID-19 not lasting. We used this study to investigate that question and found immunity is stable for at least five months."

The resulting paper, "Orthogonal SARS-CoV-2 Serological Assays Enable Surveillance of Low Prevalence Communities and Reveal Durable Humoral Immunity," was published today in the journal Immunity. Dr. Bhattacharya and Janko Nikolich-Zugich, MD, Ph.D., professor and head of the Department of Immunobiology, led the research team.

When a virus first infects cells, the immune system deploys short-lived plasma cells that produce antibodies to immediately fight the virus. Those antibodies appear in blood tests within 14 days of infection.

The second stage of the immune response is the creation of long-lived plasma cells, which produce high-quality antibodies that provide lasting immunity. Drs. Bhattacharya and Nikolich-Zugich tracked antibody levels over several months in people who tested

positive for SARS-CoV-2 antibodies. They found SARS-CoV-2 antibodies are present in blood tests at viable levels for at least five to seven months, although they believe immunity lasts much longer.

"Whether antibodies provide lasting protection against SARS-CoV-2 has been one of the most difficult questions to answer," said UArizona Health Sciences Senior Vice President Michael D. Dake, MD, who is a co-author on the paper. "This research not only has given us the ability to accurately test for antibodies against COVID-19, but also has armed us with the knowledge that lasting immunity is a reality."

Earlier studies extrapolated antibody production from initial infections and suggested antibody levels drop quickly after infection, providing only short-term immunity. Dr. Bhattacharya believes those conclusions focused on short-lived plasma cells and failed to take into account long-lived plasma cells and the high-affinity antibodies they produce.

"The latest time-points we tracked in infected individuals were past seven months, so that is the longest period of time we can confirm immunity lasts," Dr. Bhattacharya said. "That said, we know that people who were infected with the first SARS coronavirus, which is the most similar virus to SARS-CoV-2, are still seeing immunity 17 years after infection. If SARS-CoV-2 is anything like the first one, we expect antibodies to last at least two years, and it would be unlikely for anything much shorter."

The study began when Drs. Nikolich-Zugich and Bhattacharya, both members of the UArizona BIO5 Institute, led a UArizona Health Sciences team that developed a blood test to check for SARS-CoV-2 antibodies. A partnership with the state led to 5,882 volunteers undergoing antibody testing in Pima County, Ariz., starting April 30. The testing efforts later were expanded statewide.

Since antibodies attach to viruses at more than one location, the UArizona Health Sciences test was developed employing two different parts of the SARS-CoV-2 virus—S1 and S2. Most tests look for antibodies at S1, which includes the receptor-binding domain wherein the spike protein binds to a protein receptor to infect cells. The UArizona Health Sciences test also analyzes the S2 region of the spike protein. Antibodies must be present in both locations for the test to be determined positive.

"When we began, the first test we developed was 99% accurate for measuring antibodies in one part of the virus," Dr. Nikolich-Zugich said. "We decided to confirm, and hopefully improve, that accuracy level by looking at another part of the virus that makes antibodies independent of the first location. We then validated that test, knowing some people will make antibodies more consistently for one part of the virus than the other. We put the two tests together, and only people who show antibody production for both parts of the test are determined to be positive."

The scientific verification of the high level of accuracy of the UArizona Health Sciences antibody test is the other finding highlighted in the Immunity paper. Of 5,882 tests completed, only one returned a false positive, a rate of less than .02%. The test received U.S. Food and Drug Administration emergency use authorization in August.

Dr. Nikolich-Zugich said the team now has tested almost 30,000 people. Antibody tests still are available for anyone in Arizona age 18 and older at multiple locations throughout the state. Visit covid19antibodytesting.arizona.edu for more information and to sign up for testing.

Fuente: Medical Xpress. Disponible en https://cutt.ly/rgxmQO2

Vacuna contra la covid-19: Johnson & Johnson interrumpe los ensayos clínicos por enfermedad de un voluntario

13 oct. La empresa Johnson & Johnson anunció este lunes que interrumpe temporalmente los ensayos clínicos de la vacuna para la COVID-19 "por la enfermedad inexplicable" de un participante del estudio.

La enfermedad de la persona está siendo revisada y evaluada por una junta independiente de monitoreo de datos y seguridad, así como por los doctores clínicos y de seguridad de la empresa, según expuso Johnson & Johnson en un comunicado.

"Hemos detenido temporalmente la administración de nuevas dosis en todos nuestros ensayos clínicos de la vacuna candidata, incluido el ensayo de fase 3 'ENSEMBLE', debido a una enfermedad inexplicable en un participante del estudio", señala el reporte de la compañía.

La pausa significa que se ha cerrado el sistema para registrarse *online* para la prueba clínica con 60.000 pacientes.

La farmacéutica declinó suministrar mayores detalles al argumentar que deben "respetar la privacidad de este participante".

"Estamos aprendiendo más sobre la enfermedad de este participante y es importante tener todos los datos antes de compartir información adicional", añadió el comunicado.

Ensayos

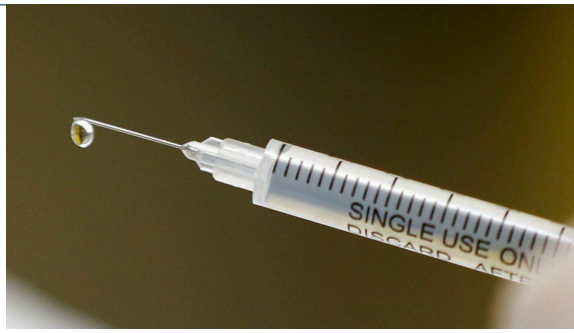
Johnson & Johnson, que presenta sus resultados financieros este martes, indicó que estas interrupciones son normales en los grandes ensayos que pueden incluir a decenas de miles de personas.

Agregó que la "pausa del estudio" a la hora de proporcionar dosis de la vacuna candidata es diferente a una "parada regulatoria" requerida por las autoridades sanitarias.

"Una interrupción del estudio, en la que el patrocinador del estudio hace una pausa en el reclutamiento o la dosificación, es un componente estándar del protocolo de un ensayo clínico", explicó Johnson & Johnson.

La vacuna candidata de la empresa es una de vector recombinante que utiliza un adenovirus humano para generar una proteína en las células.

El ensayo, diseñado para evaluar si la fórmula puede prevenir la



COVID-19 sintomática, después de un régimen de dosis única, buscaba inscribir hasta 60.000 voluntarios en alrededor de 215 lugares de investigación clínica, tanto en Estados Unidos como otros países.

Interrupción de AstraZeneca

La decisión de la multinacional estadounidense es similar a la adoptada por AstraZeneca el pasado septiembre, cuando interrumpió los ensayos en la fase final también por una enfermedad inexplicada de un participante en Reino Unido.

Los ensayos en Reino Unido, Brasil, Sudáfrica e India se reanudaron, pero la prueba estadounidense sigue en espera pendiente de una revisión regulatoria.

Casi 180 candidatas a vacunas se están probando en todo el mundo, pero ninguna ha completado aún los ensayos clínicos.

La de Johnson & Johnson, así como la de AstraZeneca, se encuentra en una etapa avanzada de pruebas.

Fuente: BBC News Mundo. Disponible en https://cutt.ly/5gxWAw6

Estudian causa de enfermedad en vacuna contra COVID-19

13 oct. Directivos de la farmacéutica Johnson & Johnson dijeron que les tomará varios días conocer en detalle la enfermedad de causa desconocida que afectó a un participante en la última fase de una vacuna experimental contra el COVID-19 y que obligó a poner en ensayo en pausa.

La enfermedad "podría no estar relacionada con la vacuna", dijo Mathai Mammen, jefe de investigación de desarrollo de Janssen, la subsidiaria de Johnson & Johnson que desarrolla medicamentos.

Mammen dijo que aún no saben si el participante enfermo recibió la vacuna experimental o un placebo. Añadió que Johnson & Johnson informó del caso a la junta independiente de monitoreo que vela por la seguridad de los participantes en el estudio, como requiere el protocolo de investigación.

La junta recomendará los próximos pasos.

El estudio de la vacuna de dosis única llamada ENSEMBLE incluirá hasta 60.000 personas de diversos países. La empresa espera completar el enrolamiento en dos a tres meses.

Johnson & Johnson no ha revelado la naturaleza de la enfermedad, de la que se enteró el domingo y reveló el lunes por la noche. Estas pausas no son infrecuentes en los estudios clínicos prolongados, ya que algunos participantes suelen contraer enfermedades no relacionadas con éstos.

A diferencia de un estudio impuesto por reguladores del gobierno, la pausa es iniciada por el patrocinador de la prueba y con frecuencia se resuelve rápidamente.

Fuente: AP. Disponible en https://cutt.ly/SgxYLCM

Pfizer to start testing its Covid-19 vaccine in children as young as 12

14 oct. Drugmaker Pfizer has plans to start testing its experimental coronavirus vaccine in children as young as 12, and parents have already expressed interest in enrolling their kids, the researcher helping lead the trial told CNN Tuesday.

It will be the first coronavirus vaccine trial to include children in the United States.

A team at Cincinnati Children's Hospital will begin vaccinating teenagers aged 16 and 17 this week, and will move to enroll 12-to 15-year-olds later, said Dr. Robert Frenck, director of the Vaccine Research Center at the hospital. Other sites will also enroll children.

The company confirmed on its website it has approval from the US Food and Drug Administration

to enroll children as young as 12 in its trial.

"We really think a vaccine for adolescents and children is going to be critical for getting Covid-19 under control," Frenck told CNN in a telephone interview.

"I think one of the things that is important to remember is that although the death rate for children with Covid-19 is lower than in older adults, it's not zero," he said, noting that more than half a million children have been diagnosed with coronavirus in the US. "It is not a nonexistent infection in children."

Children can develop serious illness and also die from coronavirus and there is no way to predict which ones will, he said. They also can spread it to other, more vulnerable people, including parents, grandparents, healthcare workers and others. And children can develop a rare but serious side-effect from coronavirus infection called multisystem inflammatory syndrome in children or MIS-C.

Frenck also believes more children have been infected with coronavirus than the official data show. "I think we are probably under detecting the number of kids that are infected because they are not getting sick enough to where a parent says they need to go to a doctor," he said.

"Most of the time in kids, you have a Young kid at home and they have a runny nose, they have a cough -- you are not going to bring them to a doctor," he added.

"And most of the time, what a coronavirus causes is a cold."

Plus, the FDA has asked the companies working to make a coronavirus vaccine to test them in diverse groups -- including in people usually missed in drug and vaccine trials, such as the elderly, Blacks, Hispanics and Native Americans.

Pfizer, one of four companies to have vaccines in advanced, Phase 3 clinical trials in the US, says it has enrolled close to 38,000 volunteers in its trial. More than 31,000 of them have received the second of two shots.

Frenck said more than 90 people have responded to an ad looking for volunteers to sign up teens for the trial.

Pfizer developed its two-dose coronavirus vaccine with Germany's BioNtech. It uses pieces of viral genetic material to induce immunity to the coronavirus.

"If regulatory approval or authorization is obtained, the companies expect to manufacture globally up to 100 million doses by the end of 2020 and potentially 1.3 billion doses by the end of 2021," the company said on its website.

Fuente: CNN health. Disponible en https://cutt.ly/2gxUDRh

BioCen logró desarrollar el primer medio de transporte para virus obtenido en Cuba

13 oct. Investigadores del Centro Nacional de Biopreparados (BioCen) desarrollaron el primer medio de transporte para virus obtenido en Cuba destinado a la recolección y traslado de las muestras clínicas nasofaríngeas y orofaríngeas de pacientes para el diagnóstico del SARS-COV-2, agente causal de la COVID-19.

El BioCen logró y escaló industrialmente el producto en solo siete días y, posteriormente, recibió su Registro Sanitario, otorgado por el Centro Estatal para el Control de Medicamentos, Equipos y Dispositivos Médicos (Cecmed).

Este garantiza la continuidad del diagnóstico microbiológico y, por lo tanto, de la vigilancia epidemiológica y el control de la enfermedad en la Isla, contribuyendo al establecimiento inmediato de las medidas que minimizan la transmisión de la contagiosa dolencia, además de incrementar la pesquisa activa de los casos potenciales, incluyendo los asintomáticos.

Su creación obedeció a la

estrecha colaboración entre BioCen y el Instituto de Medicina Tropical Pedro Kourí. Otras instituciones del sistema de Salud y de BioCubaFarma contribuyeron a la evaluación del mismo, entre ellas, el Centro de Ingeniería Genética y Biotecnología (CIGB), el Centro Provincial de Higiene y Epidemiología de La Habana, y el hospital Salvador Allende.

Entre las ventajas del novedoso producto está la de posibilitar la adecuada preservación de las muestras, desde el momento de su recolección en los centros asistenciales de Salud y de aislemiento, hasta su procesamiento por RT-PCR en los distintos laboratorios de biología molecular.

La doctora en Ciencias Marilyn Díaz Pérez, investigadora del BioCen y autora principal del innovador aporte, expresó a Granma que el medio de transporte para virus se desarrolló bajo el riguroso cumplimiento de los más exigentes estándares internacionales y basado en un sistema de gestión de la calidad certificado por las normas ISO 9001 a lo largo de más de 20 años, y el cumplimiento de las buenas prácticas de fabricación.

Indicó que su elaboración en Cuba brinda soberanía tecnológica y sustituye importaciones, pues productos similares se comercializan en el mercado internacional a precios elevados.

Precisó la doctora en Ciencias Marilyn Díaz que, desde abril hasta los primeros días de octubre, el Sistema Nacional de Salud recibió más de 100 000 unidades del medio de transporte para virus.

Aumentar la producción y alcanzar la cifra de 10 000 unidades diarias es ahora el propósito de la institución, aseveró la científica.

Con la fabricación del transportador, y del hisopo, desarrollado en paralelo por el Centro de Neurociencias de Cuba (Cneuro) para la toma de las muestras, se logra completar el paquete diagnosticador, elemento básico en el enfrentamiento a la actual contingencia epidemiológica en la Mayor de las Antillas.

Fuente: Granma. Disponible en https://cutt.ly/pgxPAOM

Until a coronavirus vaccine is ready, pneumonia vaccines may reduce deaths from COVID-19

14 oct. The yearly influenza season threatens to make the COVID-19 pandemic doubly deadly, but I believe that this isn't inevitable.

There are two commonly given vaccines – the pneumococcal vaccine and the Hib vaccine – that protect against bacterial pneumonias. These bacteria complicate both influenza and COVID-19, often leading to death. My examination of disease trends and vaccination rates leads me to believe that broader use of the pneumococcal and Hib vaccines could guard against the worst effects of a COVID-19 illness.

I am an immunologist and physiologist interested in the effects of combined infections on immunity. I have reached my insight by juxtaposing two seemingly unrelated puzzles: Infants and children get SARS-CoV-2, the virus that causes COVID-19, but very rarely become hospitalized or die; and case numbers and death rates from COVID-19 began varying greatly from nation to nation and city to city even before lockdowns began. I wondered why.

One night I woke up with a possible answer: vaccination rates. Most children, beginning at age two months, are vaccinated against numerous diseases; adults less so. And, both infant and adult vaccination rates vary widely across the world. Could differences in the rates of vaccination against one or more diseases account for differences in COVID-19 risks? As someone who had previously investigated other pandemics such as the Great Flu Pandemic of 1918 -19 and AIDS, and who has worked with vaccines, I had a strong background for tracking down the relevant data to test my hypothesis.

Pneumococcal vaccination rates correlate with lower COVID-19 cases and deaths

I gathered national and some local data on vaccination rates against influenza, polio, measles-mumps-rubella (MMR), diphtheria-tetanus-pertussis (DTP), tuberculosis (BCG), pneumococci and Haemophilus influenzae type B (Hib). I correlated them with COVID-19 case rates and death rates for 24 nations that had experienced their COVID-19 outbreaks at about the same time. I controlled for factors such as percentage of the population who were obese, diabetic or elderly.

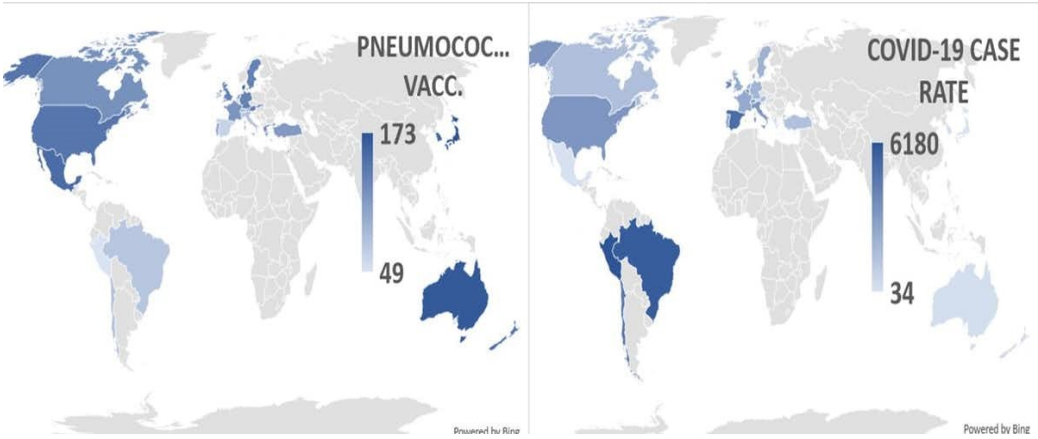
I found that only pneumococcal vaccines afforded statistically significant protection against COVID-19. Nations such as Spain, Italy, Belgium, Brazil, Peru and Chile that have the highest COVID-19 rates per million have the poorest pneumococcal vaccination rates among both infants and adults. Nations with the lowest rates of COVID-19 – Japan, Korea, Denmark, Australia and New Zealand – have the highest rates of pneumococcal vaccination among both infants and adults.

A recent preprint study (not yet peer-reviewed) from researchers at the Mayo Clinic has also reported very strong associations between pneumococcal vaccination and protection against COVID-19. This is especially true among minority patients who are bearing the brunt of the coronavirus pandemic. The report also suggests that other vaccines, or combinations of vaccines, such as Hib and MMR may also provide protection.

These results are important because in the U.S., childhood vaccination against pneumococci – which protects against Streptococcus pneumoniae bacteria – varies by state from 74% to 92%. Although the CDC recommends that all adults 18-64 in high risk groups for COVID -19 and all adults over the age of 65 get a pneumococcal vaccination, only 23% of high-risk adults and 64% of those over the age of 65 do so.

Similarly, although the CDC recommends at all infants and some high-risk adults be vaccinated against Haemophilus influenzae type B (Hib), only 80.7% of children in the U.S. and a handful of immunologically compromised adults have been. Pneumococcal and Hib vaccination rates are significantly lower in minority populations in the U.S. and in countries that have been hit harder by COVID-19 than the U.S.

Based on these data, I advocate universal pneumococcal and Hib vaccination among children, at-risk adults and all adults over 65 to prevent serious COVID-19 disease.



Left: Combined rates of childhood and adult (over 65) pneumococcal vaccination (out of a possible 200). Right: Cases (per million) population of COVID-19 at about 90 days into the pandemic for 24 nations. Nations with high pneumococcal vaccination rates have low COVID-19 case rates. CC BY-SA

How pneumococcal vaccination protects against COVID-19

Protection against serious COVID-19 disease by pneumococcal and Hib vaccines makes sense for several reasons. First, recent studies reveal that the majority of hospitalized COVID-19 patients, and in some studies nearly all, are infected with streptococci, which causes pneumococcal pneumonias, Hib or other pneumonia-causing bacteria. Pneumococcal and Hib vaccinations should protect coronavirus patients from these infections and thus significantly cut the risk of serious pneumonia.

I also found that pneumococcal, Hib and possibly rubella vaccines may confer specific protection against the SARS-CoV-2 virus that causes COVID-19 by means of "molecular mimicry."

Molecular mimicry occurs when the immune system thinks one microbe looks like another. In this case, proteins found in pneumococcal vaccines and, to a lesser degree, ones found in Hib and rubella vaccines as well look like several proteins produced by the SARS-CoV-2 virus.

Two of these proteins found in pneumococcal vaccines mimic the spike and membrane proteins that permit the virus to infect cells. This suggests pneumococcal vaccination may prevent SARS-CoV-2 infection. Two other mimics are the nucleoprotein and replicase that control virus replication. These proteins are made after viral infection, in which case pneumococcal vaccination may control, but not prevent, SARS-CoV-2 replication.

Either way, these vaccines may provide proxy protection against SARS-CoV-2 infection that we can implement right now, even before we have a specific virus vaccine. Such protection may not be complete. People might still suffer a weakened version of COVID-19 but, like most infants and children, be protected against the worst effects of the infection.

Fighting influenza-related pneumonias during the COVID-19 pandemic

While the specific protection these other vaccines confer against COVID-19 has not yet been tested in a clinical trial, I advocate broader implementation of pneumococcal and Hib vaccination for one additional, well-validated reason.

Pneumococcal and Hib pneumonias – both caused by bacteria – are the major causes of death following viral influenza. The influenza virus rarely causes death directly. Most often, the virus makes the lungs more susceptible to bacterial pneumonias, which are deadly. Dozens of studies around the world have demonstrated that increasing rates of pneumococcal and Hib vaccination dramatically lowers influenza-related pneumonias.

Similar studies demonstrate that the price of using these vaccines is balanced by savings due to lower rates of influenza-related hospitalizations, intensive care unit admissions and deaths. In the context of COVID-19, lowering rates of influenza-related hospitalizations and ICU admissions would free up resources to fight the coronavirus, independent of any effect these vaccines might have on SARS-CoV-2 itself. In my opinion, that is a winning scenario.

In short, we need not wait for a SARS-CoV-2 vaccine to slow down COVID-19.

I believe that we can and should act now by fighting the coronavirus with all the tools at our disposal, including influenza, Hib, pneumococcal and perhaps rubella vaccinations.

Preventing pneumococcal and Hib complications of influenza and COVID-19, and perhaps proxy-vaccinating against SARS-CoV-2 itself, helps everyone. Administering these already available and well-tested pneumococcal and Hib vaccines to people will save money by freeing up hospital beds and ICUs. It will also improve public health by reducing the spread of multiple infections and boost the economy by nurturing a healthier population.

Fuente: THE CONVERSATION. Disponible en https://cutt.ly/OgxS4wf

Los adultos jóvenes afrontan un mayor riesgo de contraer enfermedades graves por infecciones que los menores de 14 años

15 oct. La primera revisión sistemática de cómo la gravedad de las enfermedades infecciosas cambia con la edad sugiere que el sistema inmunológico humano podría comenzar a perder la capacidad de proteger contra las infecciones antes de lo que se pensaba, según una nueva investigación publicada en la revista 'Scientific Data'.

Dirigido por la Escuela de Higiene y Medicina Tropical de Londres, el estudio analizó datos de 32 enfermedades infecciosas diferentes, 19 virales y 13 bacterianas, buscando patrones de gravedad en diferentes edades utilizando tasas de letalidad y hospitalización.

Se encontró que la gravedad de la mayoría de las enfermedades infecciosas es más baja en los niños en edad escolar (de 5 a 14 años). Sorprendentemente, la gravedad fue mayor entre los adultos jóvenes de 20 años que entre los niños en edad escolar en muchas enfermedades, como la poliomielitis, el sarampión, el VIH, la tuberculosis, la tifoidea y la meningitis meningocócica.

Algunas infecciones muestran un aumento más lento de la gravedad con la edad después de la infancia, incluidos COVID-19, SARS, peste y hepatitis A y B, pero para la mayoría de las infecciones, este aumento comienza mucho antes de la vejez. El dengue fue la única infección más grave en los niños en edad escolar.

Estos hallazgos sugieren que el "envejecimiento inmunológico" puede comenzar mucho antes de lo que se pensaba anteriormente, con un aumento en la gravedad de muchas enfermedades infecciosas después de la niñez que se manifiesta a la edad de 20 años.

Los investigadores dicen que estos resultados podrían tener implicaciones importantes para la comprensión de la resistencia a las infecciones, la programación óptima de vacunas, el diseño de fármacos y las políticas de protección de la salud a lo largo de la vida.

La profesora Judith Glynn, autora principal de la Escuela de Higiene y Medicina Tropical de Londres, reconoce: "Sabemos que los bebés son particularmente vulnerables a las enfermedades infecciosas debido a su sistema inmunológico inmaduro, y los ancianos son vulnerables debido al deterioro inmunológico. Sorprendentemente, se sabe poco sobre cómo cambia la respuesta a la infección entre estos extremos de edad".

"El hallazgo de que el 'envejecimiento inmunológico' podría comenzar tan temprano como los adultos jóvenes podría ser un catalizador para nuevos enfoques muy necesarios sobre cómo se diseñan y programan los medicamentos y las vacunas, aunque esta resistencia a la infección podría ser atribuible a otros aspectos fuera de la función inmunitaria", añade.

Para revelar estos patrones de gravedad de la enfermedad en diferentes grupos de edad, los investigadores recopilaron más de 140 conjuntos de datos con información sobre la gravedad de la enfermedad para más de 30 infecciones bacterianas y virales diferentes. Estos incluyeron estudios de la era anterior a los antibióticos y a las vacunas, para comprender las respuestas naturales a la infección.

Descubrieron que, si bien la mayoría de las enfermedades tienen la gravedad más baja en los niños en edad escolar, para muchos la gravedad aumenta en los adultos jóvenes. La gravedad fue mayor a la edad de 20 años para la poliomielitis, la fiebre tifoidea, la tuberculosis, el sarampión, la viruela, la varicela,

el VIH, la mononucleosis infecciosa y la fiebre amarilla.

Las enfermedades infecciosas que mostraron una mayor gravedad a partir de los 20 años incluyeron el ébola, la meningitis meningocócica, el cólera, la escarlatina y la fiebre de Lassa. Algunos tuvieron un aumento más lento de la gravedad después de la infancia, incluida la gripe estacional, la brucelosis y la infección aguda por hepatitis B, donde la enfermedad grave era más común a partir de los 30 años.

Para el SARS, COVID-19, MERS -CoV y la gravedad de la hepatitis A aumentó a partir de los 40 años. El COVID-19 y el SARS parecen tener una variación más extrema en la gravedad por edad que otras infecciones, con una enfermedad predominantemente muy leve en los niños y altas tasas de letalidad en los ancianos.

La profesora Glynn agrega que "extraordinariamente, la información sobre las respuestas a las infecciones por edad nunca se había reunido anteriormente para una amplia gama de infecciones, y las razones de la variación en la gravedad fuera de los extremos de la edad apenas se han explorado".

"Nuestros resultados sugieren una respuesta inmune máxima se alcanza durante la edad escolar, y luego comienza a disminuir mucho antes de lo que se piensa actualmente, a partir de los 15 años en algunos casos --prosigue--. También vemos patrones de edad en las respuestas inmunitarias a algunas vacunas, en cómo el cuerpo maneja algunos infecciones virales, y en marcadores inmunes, que juntos apoyan nuestra interpretación".

Si bien los adolescentes y los adultos pueden estar expuestos a dosis más altas del agente infeccioso, lo que aumenta el riesgo de infección, la relación con la gravedad de la enfermedad es menos constante y la dosis infecciosa no puede explicar el aumento continuo de la gravedad durante la edad adulta.

Las comorbilidades también tienden a aumentar con la edad, pero generalmente son bajas en los adultos jóvenes, por lo que es poco probable que expliquen el aumento de la gravedad.

Se requiere más investigación sobre los mecanismos del envejecimiento inmunológico y cómo los niños en edad escolar son más capaces de resistir las infecciones, a fin de informar nuevos enfoques para el diseño de medicamentos o vacunas. Comprender la diferente capacidad de recuperación de niños y adultos a las infecciones debe orientar las políticas, incluidos los programas de vacunación y el papel del cierre de escuelas.

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Estrategia de búqueda: *Vaccine in the title or abstract AND 20201001:20201007 as the publication date*

39 records

1.WO/2020/208434ZIKA VIRUS SUBUNIT VACCINE
WO - 15.10.2020
Int.Class A96K 39/12 Appl.No PCT/IB2020/051462 Applicant INTERNATIONAL CENTRE FOR GENETIC ENGINEERING AND BIOTECHNOLOGY Inventor SHANMUGAM, Rajgokul K.
The present invention relates to the field of vaccine development against Zika Virus (ZIKV). ZIKV vaccine development is complicated by the existence of antibody- dependent enhancement (ADE) phenomenon, stemming from the interaction between ZIKV on the one hand and dengue viruses on the other. The present invention provides a subunit ZIKV vaccine which provides protection against Zika virus but does not result in ADE. The subunit ZIKV vaccine according to the present invention comprises a membrane-associated particulate form of immunogen rec ZIKV envelope (E) protein, wherein said rec ZIKV E protein comprises of domains I, II and III and said domain III is placed on the membrane surface and is freely accessible to ZIKV EDIII-specific antibodies. Also provided are methods for preparing the subunit ZIKV vaccine and kits for detecting ZIKV-specific antibodies in biofluids such as blood, plasma, serum, urine and saliva.

2.20200319184VITRO POTENCY ASSAY FOR PROTEIN-BASED MENINGOCOCCAL VACCINES
US - 08.10.2020
Int.Class G01N 33/577 Appl.No 16799113 Applicant GLAXOSMITHKLINE BIOLOGICALS SA Inventor Marzia GIULIANI

The invention uses Elisa or similar assays for analysing a meningococcal vaccine. The assay uses antibodies which bind to meningococcal proteins within the vaccine, and in particular monoclonal antibodies which are bactericidal for meningococcus and/or which recognise conformational epitopes within the meningococcal proteins. By performing the assay on a series of dilutions of a test vaccine, and by comparing the results with those obtained using a reference vaccine of known potency, it is possible to determine the relative potency of the test vaccine. This value can be used as a parameter for determining whether a manufactured batch of a vaccine is suitable for release to the public, or whether it has experienced a production failure and so should not be used.

3.20200316192Methods Of Vaccine Administration
US - 08.10.2020
Int.Class A61K 39/235 Appl.No 16910284 Applicant Zoetis Services LLC Inventor Cassius McAllister Tucker

This invention relates to a method of treating a dog for canine diseases comprising administering to the dog therapeutically effective amounts of a vaccine, wherein the vaccine comprises viral antigens, a bacterin, or both, and wherein the vaccine is administered subcutaneously or orally according to the schedules provided herein.

4.WO/2020/210611A RECOMBINANT HTLV-1 VACCINE
WO - 15.10.2020

Int.Class C12N 15/86 Appl.No PCT/US2020/027649 Applicant UNIVERSITY OF MIAMI Inventor BARBER, Glen
The invention relates to a vector and/or vaccine that can be used for therapeutic and preventive purposes. The virus is based on vesicular stomatitis virus (VSV) with a substituted VSV G (glycoprotein) for HTLV-1 G, referred to as gp62. The vector and/or vaccine further comprise a fusion protein comprising HTLV-1 regulatory proteins (HBZ and TAX) together to make a fusion product (HBZ-TAX) and mutated versions thereof. The vector and/or vaccine do not impede innate immune signaling and generate neutralizing antibodies and CTLs to gp62, HBZ, and TAX.

5.WO/2020/204172WATER SOLUBLE ADJUVANT
WO - 08.10.2020
Int.Class A61K 39/00 Appl.No PCT/JP2020/015359 Applicant SUMITOMO DAINIPPON PHARMA CO., LTD. Inventor BAN, Hitoshi
The present invention pertains to a compound useful as a vaccine adjuvant for a cancer vaccine, a method for producing said compound, a medicinal composition containing said compound, and a use of said compound as a vaccine adjuvant for a cancer vaccine.

6.WO/2020/204173WATER SOLUBLE ADJUVANT AND COMPOSITION CONTAINING SAME
WO - 08.10.2020
Int.Class A61K 39/00 Appl.No PCT/JP2020/015364 Applicant SUMITOMO DAINIPPON PHARMA CO., LTD. Inventor BAN, Hitoshi
The present invention pertains to a compound useful as a vaccine adjuvant for a cancer vaccine, a method for producing said compound, a medicinal composition containing said compound, and a use of said compound as a vaccine adjuvant for a cancer vaccine.

7.20200316124NOVEL GAMMA DELTA T-CELL RECEPTOR AND ITS LIGAND
US - 08.10.2020
Int.Class A61K 35/17 Appl.No 16877928 Applicant University College Cardiff Consultants Ltd. Inventor Andrew SEWELL

The present disclosure relates to a new T-cell receptor (TCR), in particular at least one complementarity-determining region (CDR) thereof; a T-cell expressing said TCR; a clone expressing said TCR; a vector encoding said TCR; a soluble version of said TCR; a pharmaceutical composition or immunogenic agent or bispecific or vaccine comprising said TCR, said cell, said clone or said vector; said TCR or said cell or said clone or said vector or said pharmaceutical composition or immunogenic agent or bispecific or vaccine for use in the treatment of cancer; a method of treating cancer using said TCR, said cell, said clone, said vector, said pharmaceutical composition, immunogenic agent, bispecific or vaccine comprising said TCR; and a ligand with which said TCR binds.

8.20200316193GENETICALLY STABLE RECOMBINANT MODIFIED VACCINIA ANKARA (RMVA) VACCINES AND METHODS OF PREPARATION THEREOF
US - 08.10.2020
Int.Class A61K 39/285 Appl.No 16834359 Applicant CITY OF HOPE Inventor Don DIAMOND

A vaccine comprising an immunologically effective amount of recombinant modified vaccinia Ankara (rMVA) virus which is genetically stable after serial passage and produced by a) constructing a transfer plasmid vector comprising a modified H5 (mH5) promoter operably linked to a DNA sequence encoding a

heterologous foreign protein antigen, wherein the expression of said DNA sequence is under the control of the mH5 promoter; b) generating rMVA virus by transfecting one or more plasmid vectors obtained from step a) into wild type MVA virus; c) identifying rMVA virus expressing one or more heterologous foreign protein antigens using one or more selection methods for serial passage; d) conducting serial passage; e) expanding an rMVA virus strain identified by step d); and f) purifying the rMVA viruses from step e) to form the vaccine. One embodiment is directed to a fusion cytomegalovirus (CMV) protein antigen comprising a nucleotide sequence encoding two or more antigenic portions of Immediate-Early Gene-1 or Immediate-Early Gene-2 (IEfusion), wherein the antigenic portions elicit an immune response when expressed by a vaccine.

9.WO/2020/2105083-SUBSTITUTED PIPERIDINE COMPOUNDS FOR CBL-B INHIBITION, AND USE OF A CBL-B INHIBITOR IN COMBINATION WITH A CANCER VACCINE AND/OR ONCOLYTIC VIRUS
WO - 15.10.2020
Int.Class C07D 401/14 Appl.No PCT/US2020/027492 Applicant NURIX THERAPEUTICS, INC. Inventor SANDS, Arthur T.
Compounds, compositions, and methods for use in inhibiting the E3 enzyme Cbl-b in the ubiquitin proteasome pathway are disclosed. The compounds, compositions, and methods can be used to modulate the immune system, to treat diseases amenable to immune system modulation, and for treatment of cells in vivo, in vitro, or ex vivo. Also disclosed are pharmaceutical compositions comprising a Cbl-b inhibitor and a cancer vaccine, as well as methods for treating cancer using a Cbl-b inhibitor and a cancer vaccine; and pharmaceutical compositions comprising a Cbl-b inhibitor and an oncolytic virus, as well as methods for treating cancer using a Cbl-b inhibitor and an oncolytic virus.

10.20200318078H9 AVIAN INFLUENZA VACCINE STRAIN WHICH DIFFERENTIATES INFECTED FROM VACCINATED ANIMALS, AND PREPARATION METHOD THEREFOR
US - 08.10.2020
Int.Class C12N 7/00 Appl.No 15733120 Applicant Jiasheng SONG Inventor Jiasheng SONG

Provided is an application of a label gene sequence in the preparation of an H9 avian influenza vaccine strain which differentiates influenza A virus infection from vaccination, the label gene sequence containing a DNA sequence for coding an influenza B virus NA protein extracellular region amino acid sequence. Also provided are an H9 avian influenza vaccine strain which differentiates influenza A virus infection from vaccination, a preparation method therefor, and an application.

11.WO/2020/206307MULTI-SUBUNIT VACCINES TO ELICIT BOTH MHC- AND CD1-RESTRICTED T CELL RESPONSES
WO - 08.10.2020
Int.Class A61K 39/04 Appl.No PCT/US2020/026649 Applicant NORTHWESTERN UNIVERSITY Inventor SCOTT, Evan, A.
Provided herein are subunit vaccine compositions comprising a nanocarrier and a lipid antigen, a peptide antigen or combinations thereof that elicit bother a CD1 -restricted and an MHC-restricted T cell response in a subject. Methods for making and using the subunit vaccine compositions are also provided.

12.20200316186MULTI-SUBUNIT VACCINES TO ELICIT BOTH MHC- AND CD1-RESTRICTED T CELL RESPONSES
US - 08.10.2020
Int.Class A61K 39/04 Appl.No 16839861 Applicant Northwestern University Inventor Evan A. Scott

Provided herein are subunit vaccine compositions comprising a nanocarrier and a lipid antigen, a peptide antigen or combinations thereof that elicit bother a CD1-restricted and an MHC-restricted T cell response in a subject. Methods for making and using the subunit vaccine compositions are also provided.

13.WO/2020/203731PNEUMOCOCCAL SURFACE PROTEINS
WO - 08.10.2020
Int.Class A61K 39/09 Appl.No PCT/JP2020/013929 Applicant THE UNIVERSITY OF TOKYO Inventor YUKI Yoshikazu
The present invention provides D39-derived mutant PspA that does not undergo deamination and maintains molecular stability even at near-neutral pH. Specifically, the present invention is the following protein (a) or (b). (a) A protein that includes the amino acid sequence represented by sequence no. 2 and that has pneumococcus vaccine antigenic activity, and a protein substantially the same as said protein; and (b) a protein that includes a portion of the amino acid sequence represented by sequence no. 2, said portion including aspartic acid at position 254, and that has pneumococcus vaccine antigenic activity, and a protein substantially the same as said protein.

14.WO/2020/198785VACCINATION USING HIGH-DENSITY MICROPROJECTION ARRAY PATCH
WO - 08.10.2020
Int.Class A61M 37/00 Appl.No PCT/AU2020/050296 Applicant FORSTER, Angus Inventor FORSTER, Angus
The present invention relates to microprojection arrays for the delivery of vaccines, in particular the use of polymer high density microprojection arrays for the delivery of vaccines to patients in which the dose of the vaccine delivered may be less than the dose of vaccine delivered by intramuscular injection while providing equal or superior immunogenicity.

15.20200316180DNA VACCINES AND METHODS FOR THE PREVENTION OF TRANSPLANTATION REJECTION
US - 08.10.2020
Int.Class A61K 39/00 Appl.No 16676196 Applicant Loma Linda University Inventor Fengchun Li

Methods for preventing, delaying the onset of, or treating rejection of an allograft using a DNA vaccine, where the vaccine can comprise a polynucleotide encoding a pro-apoptotic protein, like BAX and/or a polynucleotide encoding an autoantigen or donor antigen, like secreted glutamic acid decarboxylase 55. Administering one of the DNA vaccines to a transplant recipient, as described herein, can induce a donor specific tolerogenic response.

16.20200316189VACCINATION IN NEWBORNS AND INFANTS
US - 08.10.2020
Int.Class A61K 39/155 Appl.No 16910845 Applicant CureVac AG Inventor 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 newborns and/or infants, preferably exhibiting an age of not more than 2 years, preferably of not more than 1 year, more preferably of not more than 9 months or even 6 months, wherein the treatment comprises vaccination of the newborn or infant and eliciting an immune response in said newborn or infant. 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.

17.WO/2020/210149BROAD AND LONG-LASTING INFLUENZA VACCINE

WO - 15.10.2020
Int.Class C12N 7/00 Appl.No PCT/US2020/026841 Applicant ALTIMMUNE INC Inventor ROBERTS, Scot
Provided herein are monovalent pharmaceutical compositions (vaccine compositions) and methods for inducing a multi-arm (mucosal, humoral and cell-mediated) immune response and extended seroprotection of at least 12 months post vaccination against influenza virus.

18.WO/2020/204923THROMBOXANE RECEPTOR-BASED VACCINE FOR MANAGING THROMBOGENESIS
WO - 08.10.2020
Int.Class A61K 39/00 Appl.No PCT/US2019/025612 Applicant BOARD OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM Inventor KHASAWNEH, Fadi T.
A vaccine against TPR's ligand binding domain, namely the C-terminus of the second extracellular loop (C-EL2), inhibits platelet activation and thrombus formation, without exerting any effects on hemostasis.

19.20200316188BROAD AND LONG-LASTING INFLUENZA VACCINE
US - 08.10.2020
Int.Class A61K 39/145 Appl.No 16840723 Applicant Altimmune, Inc Inventor Scot Roberts

Provided herein are monovalent pharmaceutical compositions (vaccine compositions) and methods for inducing a multi-arm (mucosal, humoral and cell-mediated) immune response and extended seroprotection of at least 12 months post vaccination against influenza virus.

20.20200316182NOVEL PEPTIDES AND COMBINATION OF PEPTIDES AS TARGETS OR ACTIVE INGREDIENTS FOR USE IN IMMUNOTHERAPY AGAINST AML AND OTHER CANCERS
US - 08.10.2020
Int.Class A61K 39/00 Appl.No 16910937 Applicant Immatics Biotechnologies GmbH Inventor Andrea MAHR

The present invention relates to peptides, proteins, nucleic acids and cells for use in immunotherapeutic methods. In particular, the present invention relates to the immunotherapy of cancer. The present invention furthermore relates to tumor-associated T-cell peptide epitopes, alone or in combination with other tumor-associated peptides that can for example serve as active pharmaceutical ingredients of vaccine compositions that stimulate anti-tumor immune responses, or to stimulate T cells ex vivo and transfer into patients. Peptides bound to molecules of the major histocompatibility complex (MHC), or peptides as such, can also be targets of antibodies, soluble T-cell receptors, and other binding molecules.

21.WO/2020/210817CD40 SPECIFIC DNA APTAMERS AS VACCINE ADJUVANTS
WO - 15.10.2020
Int.Class A61K 31/713 Appl.No PCT/US2020/027970 Applicant THE BOARD OF TRUSTEES OF THE UNIVERSITY OF ARKANSAS Inventor AL-OGAILI, Adil, Sabr
The present invention provides immunostimulatory nucleic acids that have an affinity to a specific target protein. The present invention also provides templates and methods for making and using the immunostimulatory nucleic acids. Further, methods for linking the immunostimulatory nucleic acids to antigens and using the resulting complexes to enhance an immune response are provided.

22.WO/2020/201191MULTIVALENT MALARIA TRANSMISSION-BLOCKING VACCINES
WO - 08.10.2020

Int.Class A61K 39/015 Appl.No PCT/EP2020/058906 Applicant STATENS SERUM INSTITUT Inventor SINGH, Susheel Kumar
The present invention relates to a method for recombinant production of a fusion protein comprising multiple malaria antigens for inducing immune responses comprising a combination of antibodies. In particular, the fusion proteins of the present invention comprise fragments of both Pfs230 and Pfs48/45 to lower the required threshold of functional antibodies and to reduce the risk of escape mutations. Thus, the fusion proteins of the present invention are suitable for use in a multivalent malaria vaccine.

23.20200316126NOVEL PEPTIDES AND COMBINATION OF PEPTIDES FOR USE IN IMMUNOTHERAPY AGAINST EPITHELIAL OVARIAN CANCER AND OTHER CANCERS
US - 08.10.2020
Int.Class A61K 35/17 Appl.No 16905530 Applicant Immatics Biotechnologies GmbH Inventor Heiko SCHUSTER

The present invention relates to peptides, proteins, nucleic acids and cells for use in immunotherapeutic methods. In particular, the present invention relates to the immunotherapy of cancer. The present invention furthermore relates to tumor-associated T-cell peptide epitopes, alone or in combination with other tumor-associated peptides that can for example serve as active pharmaceutical ingredients of vaccine compositions that stimulate anti-tumor immune responses, or to stimulate T cells ex vivo and transfer into patients. Peptides bound to molecules of the major histocompatibility complex (MHC), or peptides as such, can also be targets of antibodies, soluble T-cell receptors, and other binding molecules.

24.20200316190PSGL-1 (P-SELECTIN GLYCOPROTEIN LIGAND-1) TO INACTIVATE ALL ENVELOPED VIRUSES FOR PRODUCING LIVE-ATTENUATED VACCINES
US - 08.10.2020
Int.Class A61K 39/21 Appl.No 16838264 Applicant George Mason University Inventor Yuntao Wu

Embodiments relate to a method comprising (a) expressing a vector comprising a PSGL-1 (P-selectin glycoprotein ligand-1) or a mutant thereof in a VPC (virus producing cell); and blocking a virus infection by inactivating an infectivity of a released virions from the VPC; or (b) expressing a glycoprotein or a mutant thereof in the VPC; blocking the virus infection by preventing binding of the released virions to a target cell; inactivating infectivity of the released virions; and targeting a viral infection. Other embodiments relate to (1) a broad-spectrum anti-viral product comprising: a vector expressing a glycoprotein or a mutant thereof in a VPC; and blocking a virus infection by inactivating infectivity of a released virion from the VPC; and (2) a vaccine comprising a viral particle is configured to a live attenuated or an inactivated or a non-infectious, wherein the viral particle are produced in a VPC.

25.WO/2020/204644COMPOSITION CONTAINING HEALTHY EXTRACT AS ACTIVE INGREDIENT FOR ENHANCING PRODUCTION RATES OF NEUTRALIZING ANTIBODIES
WO - 08.10.2020
Int.Class A23L 33/10 Appl.No PCT/KR2020/004542 Applicant KOREA INSTITUTE OF ORIENTAL MEDICINE Inventor YOU, Sooseong
The present invention pertains to a composition for enhancing the production rates of neutralizing antibodies, the composition containing a healthy extract as an active ingredient. In an animal model inoculated with a vaccine after the administration of the healthy extract of the present invention, there are the effects in which the formation of antigen-specific antibodies is enhanced, the production rate of cytokine produced by antigen

stimulation, which has been lowered by anticancer drugs, is restored, and the production rates of antibodies to H1N1 and H3N2 antigens are enhanced after vaccination. Thus, applying the composition of the present invention to immunocompromised patients or the elderly prior to flu vaccination is expected to increase the production rate of antibodies.

26.20200317719SAPONIN PURIFICATION
US - 08.10.2020
Int.Class C07J 63/00 Appl.No 16768402 Applicant GLAXOSMITHKLINE BIOLOGICALS SA Inventor Ahmad Taimour BAIG

Saponin extracts containing at least 93% QS-21 main peak and 0.25-3% 2018 component by UV absorbance at 214 nm, methods for making said extracts, their use as vaccine adjuvants and related aspects.

27.20200317739RECOMBINANT POLYPEPTIDES DERIVED FROM FBP1 AND FBP2 AND USES OF THE SAME
US - 08.10.2020
Int.Class C07K 14/47 Appl.No 16908179 Applicant CHANG GUNG UNIVERSITY Inventor Shin-Ru Shih

Disclosed herein are recombinant polypeptides derived from FBP1 and FBP2. Also disclosed herein are recombinant expression vectors and recombinant host cells for producing the aforesaid recombinant polypeptides. The recombinant polypeptides are proven to be useful and effective in producing a picornavirus with a type I internal ribosome entry site (IRES), so as to facilitate the preparation of a viral vaccine.

28.WO/2020/204130RNA CAPPING METHOD, PRODUCTION METHOD FOR MODIFIED RNA, AND MODIFIED RNA
WO - 08.10.2020
Int.Class C07H 21/02 Appl.No PCT/JP2020/015168 Applicant KYOTO UNIVERSITY Inventor SAITO Hirohide
An RNA capping method that includes a step for reacting RNA and a compound (1) that is represented by general formula (1) in the presence of the Vaccinia virus capping enzyme. (Rb1 represents an oxo group, an alkoxy group, or a halogen atom, Rb2 is absent or represent an alkyl group, Rb3 represents an amino group or a hydrogen atom, Rb4 is absent or represents a hydrogen atom or an alkyl group, Rr1 represents a hydroxy group, a C1–3 alkoxy group, an amino group, an azide group, -OR1C≡CH, or -R2R3, Rr2 represents a hydrogen atom, a hydroxy group, a halogen atom, an alkoxy group, an amino group, an azide group, -OR1C≡CH, or -R2R3, and A1 represents an oxygen atom or a sulfur atom.)

29.20200316125NOVEL PEPTIDES AND COMBINATION OF PEPTIDES FOR USE IN IMMUNOTHERAPY AGAINST EPITHELIAL OVARIAN CANCER AND OTHER CANCERS
US - 08.10.2020
Int.Class A61K 35/17 Appl.No 16905499 Applicant Immatics Biotechnologies GmbH Inventor Heiko Schuster

The present invention relates to peptides, proteins, nucleic acids and cells for use in immunotherapeutic methods. In particular, the present invention relates to the immunotherapy of cancer. The present invention furthermore relates to tumor-associated T-cell peptide epitopes, alone or in combination with other tumor-associated peptides that can for example serve as active pharmaceutical ingredients of vaccine compositions that stimulate anti-tumor immune responses, or to stimulate T cells ex vivo and transfer into patients.

Peptides bound to molecules of the major histocompatibility complex (MHC), or peptides as such, can also be targets of antibodies, soluble T-cell receptors, and other binding molecules.

30.20200316185VACCINES AND METHODS OF VACCINATION AGAINST SCHISTOSOMA
US - 08.10.2020
Int.Class A61K 39/112 Appl.No 16812212 Applicant THE ROYAL INSTITUTION FOR THE ADVANCEMENT OF LEARNING/MCGILL UNIVERSITY Inventor Brian J. Ward

A method of immunizing a human against infection by parasitic worms, comprising orally administering a live attenuated recombinant bacterium, expressing at least one antigen corresponding to a parasitic worm antigen; and a sterile injectable vaccine comprising the at least one antigen corresponding to a parasitic worm antigen. The method is effective against worms, including schistosomes.

31.WO/2020/206282HUMAN VACCINE COMPOSITIONS AND METHODS FOR TREATING LEUKEMIA
WO - 08.10.2020
Int.Class A61K 38/17 Appl.No PCT/US2020/026615 Applicant THE REGENTS OF THE UNIVERSITY OF CALIFORNIA Inventor GAENSLER, Karin
Provided herein, inter alia, nucleic acids including coding sequences for human CD80, IL-15, IL-15Rα polypeptides, wherein the coding sequence for hCD80 is operably positioned upstream to the coding sequences for hIL-15 and hIL-15Rα. The disclosure also provides recombinant cells, cell cultures, pharmaceutical compositions, and whole-cell vaccines containing the recombinant cells disclosed herein. Also disclosed are methods useful for treating myeloma and leukemias, such as acute myelogenous leukemia (AML).

32.20200316127NOVEL PEPTIDES AND COMBINATION OF PEPTIDES FOR USE IN IMMUNOTHERAPY AGAINST EPITHELIAL OVARIAN CANCER AND OTHER CANCERS
US - 08.10.2020
Int.Class A61K 35/17 Appl.No 16905550 Applicant Immatics Biotechnologies GmbH Inventor Heiko SCHUSTER

The present invention relates to peptides, proteins, nucleic acids and cells for use in immunotherapeutic methods. In particular, the present invention relates to the immunotherapy of cancer. The present invention furthermore relates to tumor-associated T-cell peptide epitopes, alone or in combination with other tumor-associated peptides that can for example serve as active pharmaceutical ingredients of vaccine compositions that stimulate anti-tumor immune responses, or to stimulate T cells ex vivo and transfer into patients. Peptides bound to molecules of the major histocompatibility complex (MHC), or peptides as such, can also be targets of antibodies, soluble T-cell receptors, and other binding molecules.

33.WO/2020/207472PREPARATION OF ZINC ZOLEDRONATE MICRO-NANOPARTICLE ADJUVANT AND USE THEREOF AS VACCINE ADJUVANT
WO - 15.10.2020
Int.Class A61K 39/39 Appl.No PCT/CN2020/084190 Applicant XIAMEN INNOVAX BIOTECH CO., LTD. Inventor ZHAO, Qinjian
Disclosed is a zinc zoledronate micro-nanoparticle adjuvant, which contains zinc and zoledronic acid and optionally contains a phosphate and aluminum. The preparation method therefor comprises performing mixed precipitation on a soluble salt solution containing zinc ions, zoledronic acid, and sodium hydroxide. The adjuvant can be used to prepare vaccines, etc.

34.WO/2020/201048STABILISATION OF LIVE MOLLICUTES BACTERIA IN A LIQUID COMPOSITION
WO - 08.10.2020
Int.Class A61K 39/02 Appl.No PCT/EP2020/058649 Applicant INTERVET INTERNATIONAL B.V. Inventor PIEST, Martin
The present invention relates to a liquid composition of live Mollicutes bacteria and a stabiliser, whereby the stabiliser is a natural deep-eutectic solvent (NADES). In this liquid composition the live Mollicutes are stabilised without need for freezing or freeze-drying. This allows various advantageous uses in diagnostics and medicin, specifically as a liquid vaccine for use against infection or disease caused by Mollicutes bacteria, for human- or non-human animals.

35.20200316183NOVEL PEPTIDES AND COMBINATION OF PEPTIDES FOR USE IN IMMUNOTHERAPY AGAINST PANCREATIC CANCER AND OTHER CANCERS
US - 08.10.2020
Int.Class A61K 39/00 Appl.No 16911069 Applicant Immatics Biotechnologies GmbH Inventor Toni WEINSCHENK

The present invention relates to peptides, proteins, nucleic acids and cells for use in immunotherapeutic methods. In particular, the present invention relates to the immunotherapy of cancer. The present invention furthermore relates to tumor-associated T-cell peptide epitopes, alone or in combination with other tumor-associated peptides that can for example serve as active pharmaceutical ingredients of vaccine compositions that stimulate anti-tumor immune responses, or to stimulate T cells ex vivo and transfer into patients. Peptides bound to molecules of the major histocompatibility complex (MHC), or peptides as such, can also be targets of antibodies, soluble T-cell receptors, and other binding molecules.

36.20200318083DEVELOPMENT OF DENGUE VIRUS VACCINE COMPONENTS
US - 08.10.2020
Int.Class C12N 7/04 Appl.No 16912359 Applicant The Government of the USA as represented by the Secretary, Dept. of Health and Human Services Inventor Stephen S. Whitehead

The invention is related to a dengue virus or chimeric dengue virus that contains a mutation in the 3' untranslated region (3'-UTR) comprising a Δ30 mutation that removes the TL-2 homologous structure in each of the dengue virus serotypes 1, 2, 3, and 4, and nucleotides additional to the Δ30 mutation deleted from the 3'-UTR that removes sequence in the 5' direction as far as the 5' boundary of the TL-3 homologous structure in each of the dengue serotypes 1, 2, 3, and 4, or a replacement of the 3'-UTR of a dengue virus of a first serotype with the 3'-UTR of a dengue virus of a second serotype, optionally containing the Δ30 mutation and nucleotides additional to the Δ30 mutation deleted from the 3'-UTR; and immunogenic compositions, methods of inducing an immune response, and methods of producing a dengue virus or chimeric dengue virus.

37.WO/2020/210628COMPOSITIONS AND METHODS FOR IMPROVING VACCINATION OF HYPORESPONSIVE INDIVIDUALS
WO - 15.10.2020
Int.Class A61K 31/4745 Appl.No PCT/US2020/027675 Applicant EMV ENHANCE (HK) LIMITED Inventor LAU, Johnson Yiu-Nam
Compositions and methods are provided that enhance the ability of low- or non-responding individuals undergoing renal replacement therapy to develop a protective antibody response following immunization. A

toll-like receptor agonist is applied at or near the vaccination site and left in place for a period of time following vaccination, for example with a Hepatitis B vaccine.

38.20200316191METHODS AND COMPOSITIONS FOR TREATING AND PREVENTING HIV
US - 08.10.2020
Int.Class A61K 39/21 Appl.No 16946390 Applicant INSERM (Institut National de la Sante et de la Recherche Medicate) Inventor Yves LEVY

Methods and compositions are provided that can be used to vaccinate against and treat HIV. Specifically contemplated are vaccine compositions and methods of using these compositions treat HIV in patients. Aspects of the disclosure relate to an anti-CD40 antibody-HIV antigen fusion protein comprising (i) an anti-CD40 heavy chain (HCD40)-HIV antigen (Ag) fusion protein comprising the formula: HCD40-Ag, wherein Ag is a polypeptide with at least 80% sequence identity to SEQ ID NO:1; and (ii) an anti-CD40 light chain (LCD40).

39.20200317748NOVEL PEPTIDES AND COMBINATION OF PEPTIDES FOR USE IN IMMUNOTHERAPY AGAINST OVARIAN CANCER AND OTHER CANCERS
US - 08.10.2020
Int.Class C07K 14/74 Appl.No 16911109 Applicant Immatics Biotechnologies GmbH Inventor Heiko SCHUSTER

The present invention relates to peptides, proteins, nucleic acids and cells for use in immunotherapeutic methods. In particular, the present invention relates to the immunotherapy of cancer. The present invention furthermore relates to tumor-associated T-cell peptide epitopes, alone or in combination with other tumor-associated peptides that can for example serve as active pharmaceutical ingredients of vaccine compositions that stimulate anti-tumor immune responses, or to stimulate T cells ex vivo and transfer into patients. Peptides bound to molecules of the major histocompatibility complex (MHC), or peptides as such, can also be targets of antibodies, soluble T-cell receptors, and other binding molecules.

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

Results of Search in US Patent Collection db for: (ABST/vaccine AND ISD/20201008->20201015), 10 records.

	PAT. NO.	Title
1	10,800,823	Peptides and combination of peptides for use in immunotherapy against lung cancer, including NSCLC, SCLC and other cancers
2	10,799,713	Miniature wearable laser treatment device
3	10,799,577	Nucleic acid comprising or coding for a histone stem-loop and a poly(A) sequence or a polyadenylation signal for increasing the expression of an encoded pathogenic antigen
4	10,799,574	Method and composition for treating cancer or skin lesion using a vaccine
5	10,799,571	Immunotherapy against several tumors of the blood, such as acute myeloid leukemia (AML)

6	10,799,570	Peptides and combination of peptides as targets or active ingredients for use in immunotherapy against AML and other cancers
7	10,799,569	Peptides and combination of peptides for use in immunotherapy against prostate cancer and other cancers
8	10,799,553	Composition comprising a nucleotide sequence encoding an ELA2 fusion protein and plasmacytoid dendritic cells
9	10,799,537	Peptides and combination of peptides of non-canonical origin for use in immunotherapy against different types of cancers
10	10,799,454	Hydrophilic filtration during manufacture of vaccine adjuvants

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