VacCiencia

FINLAY EDICIONES

Boletín Científico

No. 6 (23-28 febrero/2021)

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.

- Resumen de la información publicada por la OMS sobre los candidatos vacunales en desarrollo contra la COVID-19 a nivel mundial.
- Noticias más recientes en la Web sobre vacunas.
- Artículos científicos más recientes de Medline sobre vacunas.
- Patentes registradas más recientes en PatentScope sobre vacunas.
- Patentes más recientes en USPTO sobre vacunas.

IFV INSTITUTO FINLAY DE VACUNAS

SiViFinlay

VaCyT

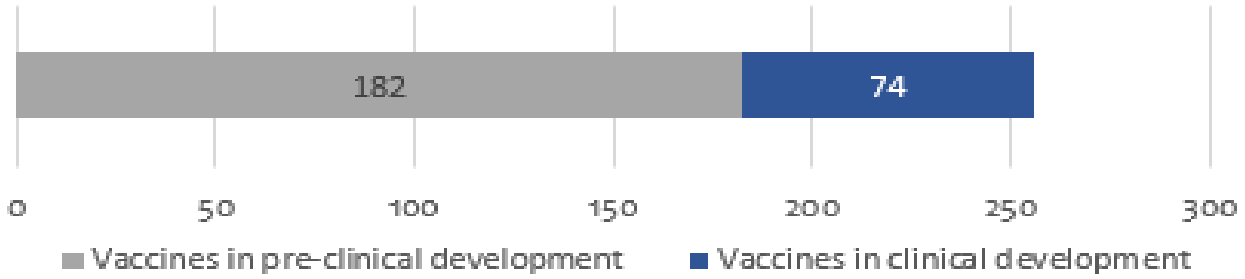
CUBA

Resumen de la información publicada por la OMS sobre los candidatos vacunales contra la COVID-19 en desarrollo a nivel mundial

Última actualización por la OMS: 26 de febrero de 2021.

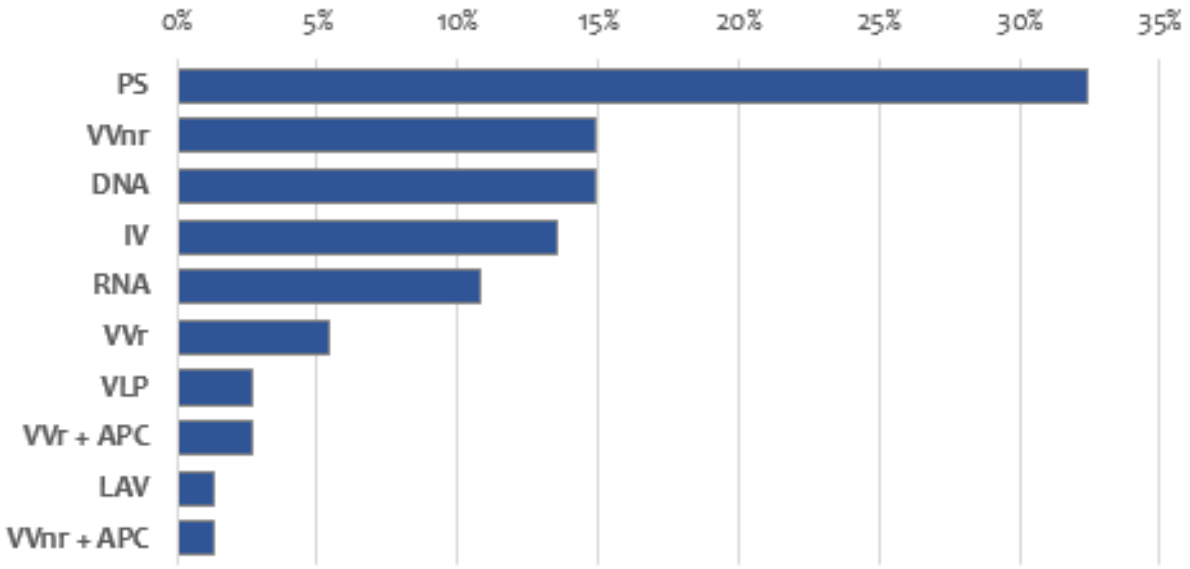
Fuente de información utilizada: World Health Organization; R&DBlueprint Powering research to prevent epidemics

74 candidatos vacunales en evaluación clínica y 182 en evaluación preclínica.



Candidatos vacunales en evaluación clínica por plataforma

Platform		Candidate vaccines (no. and %)	
PS	Protein subunit	24	32%
VVnr	Viral Vector (non-replicating)	11	15%
DNA	DNA	11	15%
IV	Inactivated Virus	10	14%
RNA	RNA	8	11%
VVr	Viral Vector (replicating)	4	5%
VLP	Virus Like Particle	2	3%
VVr + APC	VVr + Antigen Presenting Cell	2	3%
LAV	Live Attenuated Virus	1	1%
VVnr + APC	VVnr + Antigen Presenting Cell	1	1%
		74	



CUBA

Candidatos vacunales más avanzados a nivel global

Desarrollador de la vacuna/fabricante/país	Plataforma de la vacuna	Fase
Sinovac/China	Virus Inactivado	4
Wuhan Institute of Biological Products/Sinopharm/China	Virus Inactivado	3
Beijing Institute of Biological Products/Sinopharm/China	Virus Inactivado	3
University of Oxford/AstraZeneca/Reino Unido	Vector viral no replicativo	4
CanSino Biological Inc./Beijing Institute Biotechnology/China	Vector viral no replicativo	3
Gamaleya Research Institute/Rusia	Vector viral no replicativo	3
Janssen Pharmaceutical Companies/Estados Unidos	Vector viral no replicativo	3
Novavax/Estados Unidos	Subunidad proteica	3
Moderna/NIAID/Estados Unidos	ARN	4
BioNTech/Fosun Pharma/Pfizer/Estados Unidos	ARN	4
Anhui Zhifei Longcom Biopharmaceutical/Institute of Microbiology, Chinese Academy of Sciences	Subunidad proteica	3
CureVac AG	ARN	3
Institute of Medical Biology/Chinese Academy of Medical Sciences	Virus inactivado	3
Research Institute for Biological Safety Problems, Rep Kazakhstan	Virus inactivado	3
Inovio Pharmaceuticals/International Vaccine Institute/Advaccine (Suzhou) Biopharmacuetical Co., Ltd	ADN	2/3
AnGes/Takara Bio/Osaka University	ADN	2/3
Zydus Cadila Healthcare Ltd.	ADN	3
Bharat Biotech/India	Virus Inactivado	3
Clover Biopharmaceuticals Inc./GSK/Dynavax	Subunidad proteica	2/3
COVAXX/United Biomadical Inc.	Subunidad proteica	2/3
Medicago Inc./Canadá	Partículas similares a virus	2/3

Candidatos vacunales mucosales en evaluación clínica

Desarrollador de la vacuna/fabricante/país	Plataforma de la vacuna	Vía de adminsitración	Fase
Symvivo/Canadá	ADN	Oral	1
Codagenix/Serum Institute of India	Virus vivo atenuado	Intranasal	1
Vaxart/Estados Unidos	Vector viral no replicativo	Oral	1
Jiangsu Provincial Center for Disease Prevention and Control	Vector viral replicativo	Intranasal	2
ImmunityBio, Inc.	Vector viral no replicativo	Oral	1
Center for Genetic Engineering and Biotechnology (CIGB)	Subunidad proteica	Intranasal	1/2
Altimmune, Inc.	Vector viral no replicativo	Intranasal	1
University of Hong Kong, Xiamen University and Beiging Wan-tai Biological Pharmacy	Vector viral replicativo	Oral	1

Cantidad de dosis propuestas para los candidatos vacunales en evaluación clínica

Number of doses & schedule	Candidate vaccines (no. and %)	
1 dose	12	16%
Day 0	12	
2 doses	46	62%
Day 0 + 14	6	
Day 0 + 21	17	
Day 0 + 28	23	
3 doses	1	1%
Day 0 + 28 + 56	1	
TBD / No Data (ND)	15	20%

Noticias en la Web

Pfizer eyes higher prices for COVID-19 vaccine after the pandemic wanes: exec, analyst

23 feb. Amid the high-stakes fight against COVID-19, a company at the forefront of the vaccine effort is laying plans to hike prices after the crisis. A top Pfizer exec said the drugmaker aims to charge more after the "pandemic pricing environment," and an influential analyst says the company could be eying prices 3 to 4 times higher.

On an earnings call earlier this month, Chief Financial Officer Frank D'Amelio said that "obviously," the company is "going to get more on price" after the "pandemic pricing environment." He was speaking in response to Bank of America Merrill Lynch analyst Jason Zemansky, who asked the management team about how profit margins for the program could change over time.

In short, D'Amelio explained that Pfizer expects its COVID vaccine margins to improve. Under one pandemic supply deal, Pfizer is charging the U.S. $19.50 per dose, D'Amelio said, which is "not a normal price like we typically get for a vaccine—$150, $175 per dose. So, pandemic pricing."

As a specific for-instance, a dose of Pfizer's pneumococcal vaccine Prevnar 13 costs more than $200 on the private market in the U.S., according to Centers for Disease Control and Prevention data.

Pfizer has said it expects $15 billion from its COVID-19 vaccine this year, but if the company charges higher prices after the pandemic, it could continue to reap significant sales from the product in the years to come, particularly if routine boosters are needed as variants arise.

Even as Pfizer uses "pandemic pricing" during the crisis, the company is also paying for materials, labor, factory overhead, shipping, distribution costs and more to deliver doses, D'Amelio said. With all of its costs, "you come out with the high 20s in terms of that as a percentage of revenue," the CFO said.

Moving into the future, after the pandemic period, Pfizer is "going to get more on price," and will increase output at its factories, driving production costs per unit lower, the CFO said. In all, D'Amelio said there's a "significant opportunity for those margins to improve once we get beyond the pandemic environment that we're in."

Bernstein analyst Ronny Gal picked up on the comments and highlighted a recent report in Germany's Sueddeutsche Zeitung in a Monday note to clients. The publication reports that Pfizer and BioNTech approached European officials seeking €54 per dose, or €27 billion for 500 million doses, last summer.

While officials negotiated the price down to €15.50 per dose, Gal suspects that all of the developments indicate a "first hint" of Pfizer's thoughts on "post-epidemic pricing." The deal, in addition to other European supply pacts, was large enough to be "at least partially ... for post-pandemic use," Gal figured.

A Pfizer representative said in a statement these are "extraordinary times, and our pricing reflects that."

"During the pandemic, we priced our vaccine consistent with the urgent global health emergency we are facing to ensure widespread vaccination for all countries," he added. During government supply negotiations, the company considers volume and equitable distribution aims, he said, and has a "tiered pricing approach that enables poorer countries to pay less."

"Moving forward, we will continue to take a thoughtful approach to pricing, balancing a number of factors—including the value of the vaccine based on the growing evidence base, and access, affordability, and sustainability considerations," he added.

In initial deals with the U.S. government, Pfizer and BioNTech's vaccine costs $19.50 per dose, compared with $15 for Moderna's shot, $16 for Novavax's program, $10 for Johnson & Johnson's vaccine and $4 for AstraZeneca's.

Pfizer didn't take any government development funds for its shot, while other players received various amounts of assistance, and Pfizer was the first to reach the market.

The drugmaker isn't alone in viewing vaccine pricing differently during the pandemic and afterward. Johnson & Johnson and AstraZeneca have each pledged to sell their vaccines on not-for-profit basis during the pandemic.

Fuente: FIERCE Pharma. Disponible en https://cutt.ly/Ml34B51

New vaccine needed for serious childhood pneumonia

24 feb. A rise in vaccine-resistant bacteria shows the need for a new vaccine to fight childhood empyema after a spike in hospitalisations, a new UNSW study reveals.

A UNSW Sydney-led medical research team has called for a new vaccine, improved strategies and enhanced monitoring to combat serious complications from childhood pneumonia.

The researchers examined the impact of the 13-valent pneumococcal conjugate vaccine (13vPCV) on childhood pneumonia and empyema – complicated pneumonia – after its introduction to the Australian National Immunisation Program about a decade ago.

The new study, published in Thorax recently, found that while 13vPCV resulted in a 21 per cent decrease in childhood pneumonia hospitalisations, there was a contemporaneous 25 per cent increase in admissions for empyema.

This incidence data for childhood empyema hospitalisations is similar to that reported in other countries.

Approximately 7000 Australians under the age of 18 are hospitalised with pneumonia each year.

Senior author Professor Adam Jaffe, Head of the School of Women's and Children's Health at UNSW Medicine & Health, said the researchers' findings suggested an emergence of non-vaccine serotypes – those which 13vPCV does not cover.

13vPCV was introduced to cover the 13 most common serotypes responsible for invasive pneumococcal infection, extending coverage to six additional serotypes including 1 and 3.

The previous vaccine (7vPCV) covered seven serotypes. A serotype is a distinct variation within a bacteria species.

Prof. Jaffe said: "Although we found a substantial reduction in serotype 1, serotype 3 is now the predominant organism which causes childhood empyema – in 76 per cent of cases – so, efforts must be made to create a vaccine which is more effective against serotype 3.

"In fact, Australia recently changed the vaccination dosage schedule to try and improve the effectiveness of 13vPCV against serotype 3, but we need to continue monitoring patients using molecular techniques to see if this change has had an impact.

"Childhood bacterial pneumonia and empyema are potentially

preventable diseases through vaccination. So, if Australia can develop an effective vaccine, we could prevent children from being hospitalised with pneumonia and empyema."

Empyema is infected fluid around the lungs and about 1 per cent of children hospitalised with pneumonia develop it.

Although children are highly unlikely to die from empyema, they can expect a long stay in hospital for treatment with antibiotics and surgery, or the insertion of a drain. If adults develop empyema, about a third are likely to die.

Continuing enhanced surveillance needed

The researchers conducted a similar study during the period of the superseded 7vPCV. Their new study – which took four years to complete – is part of a broader research project on 13vPCV.

"Our new study had two parts," Prof. Jaffe said. "We analysed national hospitalisations for childhood empyema and childhood pneumonia, then we conducted an enhanced surveillance study on children with empyema."

The first part of the research used publicly available hospitalisations data – about 36,000 admissions – to assess whether the introduction of 13vPCV changed how many children were admitted to hospital with pneumonia and empyema.

The enhanced surveillance study involved the collection of blood and lung fluid samples from 401 children with empyema from February 2015 to September 2018.

The children were receiving treatment in 11 major children's hospitals across Australia.

Most children were boys (208 or 52 per cent) and the median age was four years old.

The researchers then conducted molecular testing on these samples and compared the results to their previous study undertaken during the period of 7vPCV.

The multidisciplinary team included Dr Nusrat Homaira, of the Discipline of Paediatrics at UNSW Medicine & Health, and paediatric research nurse Roxanne Strachan of Sydney Children's Hospital.

Prof. Jaffe said: "Our new research is the first of its kind in Australia – so, we now have the best data available for complicated childhood pneumonia to help guide future vaccination introductions and improve vaccine strategies.

"We are currently working on our larger study, of which this was a subset, to examine the effectiveness of 13vPCV on children with bacterial pneumonia. We will need to repeat the study in a few years' time to help with monitoring.

"In the meantime, it would make a big difference if molecular testing of patients' lung fluid was routine in laboratories, because that would ensure we had the best real-time data available which will help rationalise antibiotic choice; also, we would have no need to seek funding to undertake this much-needed research."

Fuente: Mirage News. Disponible en https://cutt.ly/fl35ka9

How do we know the COVID vaccine won't have long-term side-effects?

24 feb. As Australia's COVID-19 vaccine rollout begins this week, many people still have questions about the safety of COVID-19 vaccines, both in the short and long term.

As vaccine experts, we hear these concerns all the time, and it's normal to have questions about a vaccine.

The good news is that scientists have already been testing COVID -19 vaccines for months. For starters, serious side-effects are very, very rare. And, together with what we know about previous vaccines, if side-effects are going to occur, they usually happen within a few months after getting a vaccine. This is why international medical regulators, including Australia's Therapeutic Goods Administration (TGA), require the first few months of safety data before approving new

vaccines. This, plus information coming from vaccine recipients in the northern hemisphere, gives us confidence that COVID-19 vaccines are safe.

In fact, most side-effects occur within the first one or two days. And most of these are minor, such as pain at the injection site, fatigue or fever — which are signs your immune system is building a response against the thing you've been vaccinated against.

What do we know about long-term side effects?

Since December, more than 200 million people have received at least one dose of a COVID-19 vaccine worldwide — more than the total number of people who have been infected with the virus (112 million).

Given the sheer number of vaccines administered to date, common, uncommon and rare side-effects would have been detected by now. What's more, we've been testing these vaccines in clinical trials since mid-2020, and both the Pfizer and AstraZeneca vaccines have shown excellent safety results.

This gives us confidence the vaccines that'll be used around Australia are safe.

We've also seen some people raise concerns online about mRNA vaccines, such as the Pfizer-BioNTech vaccine, being a "new" technology. mRNA (or "messenger" RNA) is found in all living cells. mRNA is a message that tells cells how to make proteins that trigger the immune response inside the body. That immune response is what protects against infection if an individual is exposed to the virus. mRNA is not the same as DNA (your genes), and it cannot combine with our DNA to change our genetic code. mRNA vaccines do not affect or interact with DNA in any way. So we can be assured there'll be no long-term DNA-altering effects from these vaccines.

What's more, checking the safety of the vaccines doesn't just stop after they've been registered for use. Once a vaccine has been introduced, ongoing monitoring of its safety is a crucial part of the vaccine development process.

Australia has a robust system for this ongoing monitoring. The system was established to detect any unexpected side-effects from vaccines (if they occur) and ensure they're investigated promptly. This type of monitoring is standard practise in Australia for vaccines. The data about COVID-19 vaccination collected in these surveillance systems will be published weekly on the TGA website. This should reassure Australians that if there's a new serious side-effect, we will know about it, communicate it, and act on it quickly.

Withdrawal of vaccines after introduction to the general population is a very rare event. In the United States, a rotavirus vaccine called Rotashield led to a small increase in the number of small intestinal blockages. This prompted its withdrawal in the late 1990s. In Australia, an increased risk of febrile seizures in young children following a specific influenza vaccine was identified in 2010. It was subsequently withdrawn from use in that age group, and we now vaccinate with a different, safer flu vaccine. This vaccine is no longer available in Australia, and has been subsequently reformulated.

Both of these side-effects were observed within weeks of vaccination.

We now have improved monitoring systems in Australia to detect such serious side-effects even sooner, in the general population after clinical trials, than we did a decade ago.

But what about short-term side-effects?

Pfizer-BioNTech COVID-19 vaccine

The expected side-effects of the Pfizer vaccine have been reported from trials involving roughly 43,000 participants aged 16 years and older from the US, Argentina, Brazil and South Africa. Half of the participants received the Pfizer

vaccine and half received a placebo. And as part of COVID-19 vaccine rollouts around the world, millions of people have already been given this vaccine since December, meaning we have safety data now from both clinical trials and two months of "real world" vaccination.

For those receiving this vaccine in the large clinical trials which started in July 2020, about 80% have reported pain at the injection site. Other common side-effects included fatigue, headache, muscle pain, chills, joint pain and fever.

These were most often reported one or two days after the day of vaccination, and typically only lasted about one day. While some vaccine recipients may need a day off work due to some of these side-effects, this does not indicate the vaccine is unsafe.

In trials, no difference was seen in the rate of severe side-effects between the Pfizer vaccine and placebo. Early in the US program, 21 cases of anaphylaxis were reported. It's estimated anaphylaxis occurs at a rate of 11 in every one million recipients (0.0011%) of the Pfizer COVID-19 vaccine. Most occurred within 15 minutes, and all patients recovered. This is why it's a good idea though to remain at the vaccine clinic for up to 15 minutes after vaccination so that treatment and care can be provided if necessary.

A further concern was raised in January, after the death of 30 very frail elderly patients in Norway after receiving the Pfizer-BioNTech COVID-19 vaccine. But investigation by the European regulator concluded these weren't related to the vaccine, but rather to underlying conditions present before vaccination.

Oxford-AstraZeneca COVID-19 vaccine

This vaccine has been tested in ongoing trials with around 55,000 participants from the United Kingdom, Brazil, South Africa and the US. About half received the Oxford-AstraZeneca vaccine and half a placebo. Millions of doses have been already been administered among the general population, particularly in the UK.

Data from four clinical trials which commenced in April 2020 in the UK, Brazil and South Africa, show the most common side-effects were pain at the injection site, fatigue, headache and muscle pain. Similar to the Pfizer vaccine, there was no difference in the rate of reported severe side-effects for the vaccine compared with the placebo.

Just 0.7% of participants (79 people) from the four clinical trials who received the Oxford-AstraZeneca vaccine reported a serious side-effect after receiving at least one dose, compared with 0.8% (89 people) of those in the placebo group. No additional safety concerns have been identified since the vaccination program began in the UK.

If recommended a COVID-19 vaccine, take it

With countries continuing to monitor those who have received vaccines, we should be reassured there are no major safety concerns detected for serious side-effects so far. With millions of people vaccinated already, our confidence about the safety of COVID-19 vaccines is very high.

In Australia, and internationally, we have robust systems in place to continually monitor vaccine safety, ensuring Australians can be safely afforded the protection that COVID-19 vaccines are designed to provide.

Fuente: THE CONVERSATION. Disponible en https://cutt.ly/Gl8irRc

Una sola dosis de la vacuna J&J previene COVID-19 grave

24 feb. La vacuna de una sola dosis de Johnson & Johnson brinda fuerte protección contra el COVID-19 grave, de acuerdo con un análisis dado a conocer el miércoles por los reguladores estadounidenses que allana el camino para una decisión final sobre una vacuna nueva y sencilla de usar para ayudar a domar la pandemia.

Esta vacuna largamente esperada sería una tercera opción y ayudaría a acelerar la inmunización al requerir una sola dosis en lugar de dos. Científicos de la Administración de Alimentos y Medicamentos (FDA por sus siglas en inglés) confirmaron que la vacuna muestra un 66% de eficacia para prevenir el COVID-19 de moderado a grave y el 85% de eficacia en los casos más graves.

La vacuna de J&J es segura, añadió la FDA. El análisis es apenas un paso de la evaluación de la FDA.

El viernes, los asesores independientes de la agencia debatirán si las pruebas justifican recomendar la vacuna. Tras esa recomendación, se prevé que la FDA tomará su decisión final en pocos días.

La cifra de muertes de COVID-19 en Estados Unidos superó el medio millón esta semana y la campaña de vacunación ha sido más lenta que lo previsto debido a demoras logísticas y climáticas. Hasta el momento 44,5 millones de personas en Estados Unidos han recibido al menos una dosis de la vacuna de Pfizer o Moderna y casi 20 millones la segunda dosis para la protección total.

Los tests revelaron que las vacunas de Pfizer y Moderna resultan eficaces en un 95% para proteger del COVID-19 sintomático.

El doctor Paul Offit, experto en vacunas del Hospital de Niños de Filadelfia y miembro del panel asesor de la FDA advirtió que no se ha realizado una comparación directa entre las vacunas. Sin embargo, le complace que una dosis de la vacuna J&J parece tan eficaz para prevenir la enfermedad grave como sus competidoras de dos dosis.

"Esta es una vacuna para prevenir la hospitalización y la muerte a un nivel ciertamente comparable" con el de las de Pfizer y Moderna, aseveró.

J&J ensayó su vacuna de una dosis con 44.000 adultos en Estados Unidos, Latinoamérica y Sudáfrica. Distintas mutaciones del virus circulan en distintos países y el análisis de la FDA advierte que no está clara la efectividad de las vacunas para cada variante. J&J anunció previamente que su vacuna es más eficaz en Estados Unidos: 72% contra COVID-19 moderado o grave comparado con 66% en Latinoamérica y 57% en Sudáfrica.

Fuente: Chicago Tribune. Disponible en https://cutt.ly/6l62wrZ

Detectan una nueva variante del SARS-CoV-2 en un bebé de EEUU que tenía una carga viral 51.418 veces más alta

24 feb. El coronavirus y los niños son un caso excepcional. Quienes han padecido la enfermedad presentaron síntomas leves e incluso quienes necesitaron ser hospitalizados no escalaron hacia un estadio grave o severo. Pero la verdadera sorpresa llegó cuando los médicos estadounidenses registraron en el Hospital Nacional de Niños de Washington DC en el día de ayer, una importante carga viral en un bebé. Esta fue 51,418 veces más alta que la media de otros pacientes pediátricos. Y cuando secuenciaron el virus en el bebé, encontraron una variante que no

habían visto antes.

Pero la alarma no terminaría ahí: tras la secuenciación del genoma del virus, encontraron una variante nunca antes vista en el hospital lo que llevó a plantear la hipótesis de que en una parte de Estados Unidos podría estar circulando una nueva mutación del virus.

"«El hallazgo científico ocurrió en el Hospital Nacional de Niños de Washington DC y los epidemiólogos estadounidenses afirman que pertenece a la mutación N679S."

Jeremy Luban, virólogo de la Escuela de Medicina de la Universidad de Massachusetts, señaló que la carga viral en la nariz del bebé "es de por sí un dato alarmante y digno de atención". Pero Luban prefirió la cautela ante el caso documentado y afirmó que "puede deberse a la mutación N679S, o simplemente a que el sistema inmunológico del bebé todavía no estaba completamente desarrollado, lo que permitió la replicación descontrolada del virus".

Roberta DeBiasi, jefa de enfermedades infecciosas del hospital, sabía que no podía concluir nada de un solo caso. Y a medida que los investigadores profundizaron en el misterio, encontraron evidencia de que una variante con una mutación llamada N679S puede estar circulando en la región del Atlántico Medio.

"Podría ser una completa coincidencia", dijo DeBiasi. "Pero la asociación es bastante fuerte. Si ve a un paciente que tiene exponencialmente más virus y es una variante completamente diferente, probablemente esté relacionado ".

Los niños en general no se enferman por el coronavirus como lo hacen los adultos. La tasa de enfermedad grave es baja y unos 270 niños han muerto a causa del COVID-19, la enfermedad causada por el virus o una enfermedad asociada en un mar de 500.000 muertes en Estados Unidos. Podría ser algo sobre la biología de la juventud, han dicho algunos científicos, o quizás una mayor probabilidad de estar expuesto a un patógeno similar más recientemente.

No hay evidencia de que la variante con N679S, u otras identificadas por primera vez en el Reino Unido, Sudáfrica y Brasil, sean más peligrosas para los niños. Pero los funcionarios de salud en el Reino Unido han dicho que están monitoreando un aumento inusual de infecciones, especialmente entre los niños de 6 a 9 años, que es desproporcionado para su porcentaje de la población.

Y según un informe del 9 de febrero en la revista médica BMJ, Israel también ha experimentado "un fuerte aumento de las infecciones por COVID-19 entre los jóvenes, con más de 50.000 niños y adolescentes que dieron positivo en enero, más de lo que Israel vio en cualquier país, durante la primera y segunda oleada".

La vacuna también para los niños

Cuando se habla de la necesidad de inocular al 70/80% de la población para alcanzar la tan ansiada inmunidad de rebaño, siempre se dejó afuera de las prioridades a los niños debido a que no había estudios en el mundo sobre la seguridad y la eficacia de las vacunas desarrolladas en menores de 18 años.

Ahora, los más importantes productores de vacunas para prevenir el COVID-19 planean comenzar a investigar sus formulaciones en esa franja etaria.

Pfizer y Moderna inscribieron a niños de 12 años o más en ensayos clínicos de sus vacunas y esperan tener resultados para el verano boreal. Dependiendo del rendimiento de las vacunas en ese grupo de edad, las empresas podrán probarlas luego en niños más pequeños. La Administración de Alimentos y Medicamentos (FDA) generalmente demora algunas semanas en revisar los datos de un ensayo clínico y

autorizar una vacuna.

Otras tres compañías, Johnson & Johnson, Novavax y AstraZeneca, también planean probar sus vacunas en niños, pero están más rezagadas.

Según los especialistas, los niños también deberán ser vacunados para que los Estados Unidos se acerque a la inmunidad colectiva, ese objetivo prometido durante mucho tiempo en el que la pandemia se detiene porque el virus se queda sin personas para infectar.

La vacuna Pfizer-BioNTech fue autorizada en diciembre para cualquier persona de 16 años o más. La compañía continuó su prueba con voluntarios más jóvenes, reclutando a 2.259 adolescentes de 12 a 15 años. Los adolescentes tienen aproximadamente el doble de probabilidades de infectarse con el coronavirus que los niños más pequeños, según los Centros para el Control y la Prevención de Enfermedades.

La vacuna de Moderna, que también fue autorizada en diciembre, está en un camino similar para las pruebas pediátricas. En diciembre, la compañía comenzó a evaluar a adolescentes de 12 a 17 años y planea inscribir a 3 mil voluntarios en este grupo de edad. La compañía espera resultados “alrededor de mediados de 2021”, dijo Colleen Hussey, portavoz de Moderna.

Con base en los resultados, Moderna planea evaluar la vacuna a finales de este año en niños de entre seis meses y 11 años.

Los bebés pueden tener algunos anticuerpos al nacer de madres vacunadas o infectadas, pero es poco probable que la protección materna dure hasta el primer año de edad. Y con su sistema inmunológico relativamente débil, los bebés pueden ser particularmente susceptibles a la infección si la transmisión comunitaria es alta.

La vacuna de Moderna, que

también fue autorizada en diciembre, está en un camino similar para las pruebas pediátricas. En diciembre, la compañía comenzó a evaluar a adolescentes de 12 a 17 años y planea inscribir a 3 mil voluntarios en este grupo de edad. La compañía espera resultados “alrededor de mediados de 2021”, dijo Colleen Hussey, portavoz de Moderna.

Con base en los resultados, Moderna planea evaluar la vacuna a finales de este año en niños de entre seis meses y 11 años.

Los bebés pueden tener algunos anticuerpos al nacer de madres vacunadas o infectadas, pero es poco probable que la protección materna dure hasta el primer año de edad. Y con su sistema inmunológico relativamente débil, los bebés pueden ser particularmente susceptibles a la infección si la transmisión comunitaria es alta.

Fuente: infobae. Disponible en https://cutt.ly/izqylZL

Cuba se alista para iniciar la fase 3 de dos vacunas contra COVID-19 en marzo

25 feb. Autoridades científicas de la isla han dicho que Cuba tiene capacidad para fabricar en 2021 unas 100 millones de dosis de Soberana 2 y que la campaña de vacunación iniciará el primer semestre.

Soberana 2 y Abdala, los dos proyectos de vacunas contra el Covid-19 más avanzados de Cuba, pasarán en marzo a la fase 3 de ensayos clínicos, tras demostrar "seguridad y una potente respuesta inmunológica", anunció este jueves uno de los científicos responsables.

Estas dos inmunizantes en desarrollo, de los cuatro que tiene Cuba, "han demostrado ser vacunas seguras" y garantizan "la inducción de una potente respuesta inmunológica contra la enfermedad", dijo el presidente del grupo estatal BioCubaFarma (rector), Eduardo Martínez.

En un breve recorrido por dos centros científicos del oeste de La Habana, donde se producen los antígenos para ambas vacunas, Martínez precisó que este mes de marzo inicia la fase 3 de estudios clínicos.

Con trajes especiales y condiciones altamente asépticas, los científicos trabajan en las dos plantas de producción en turnos de 12 y 24 horas para cumplir los planes de producción trazados por BioCubaFarma.

Autoridades científicas de la isla han dicho que Cuba tiene capacidad para fabricar en 2021 unas 100 millones de dosis de Soberana 2 y que la campaña de vacunación iniciará el primer semestre.

Según los directivos, Cuba ya inició la producción "a escala industrial" de ambas.

Soberana 2 es uno de los dos proyectos del Instituto Finlay de Vacunas (IFV).

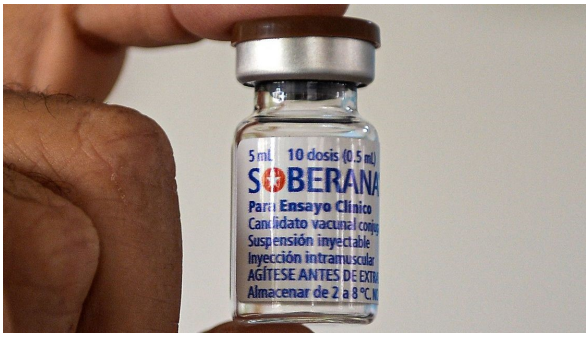
El otro proyecto, Soberana 1, acaba de concluir su primera fase de estudios con "buenos resultados" y un segundo "ensayo clínico en convalecientes con resultados muy buenos, lo cual es muy atractivo para el primer mundo", dijo su director Vicente Vérez.

Por su parte, el Centro de Ingeniería Genética y Biotecnología (CIGB), trabaja en otros dos candidatos, Abdala y Mambisa, este último es el único de los cuatro que se administra con un spray nasal.

Vérez precisó que en el ensayo fase 3 de Soberana 2 participarán 44,000 voluntarios, y que en paralelo se realizará otro "ensayo de eficacia" que "posiblemente llegue a más de un millón de personas".

Desde Washington, el subdirector de la Organización Panamericana de la Salud (OPS), Jarbas Barbosa, celebró el miércoles los esfuerzos de Cuba y Brasil por producir su propia vacuna anticovid pero estimó que completar la fase 3 de la Soberana 2 tomará "algunos meses".

Todas las vacunas cubanas son de proteína recombinante, indicó Vérez. La misma técnica utilizada



por la empresa de biotecnología estadounidense Novavax.

El coronavirus SARS-CoV-2 posee en su superficie unas puntas (proteínas virales) para entrar en contacto con las células e infectarlas. Estas proteínas pueden ser reproducidas y presentadas después al sistema inmunitario para hacerle reaccionar, explicó el científico.

"La apuesta cubana es tener vacunas muy eficaces en primer lugar, la segunda apuesta es que son vacunas muy seguras, y la tercera es que son vacunas que no tienen la limitación del número de dosis que se pueden aplicar", a diferencia de otras ya lanzadas al mercado, explicó.

Con 11.2 millones de habitantes, Cuba, que enfrenta actualmente un rebrote del coronavirus, mantiene un bajo índice de muertes desde que comenzó la pandemia en marzo, con 312 fallecimientos. Acumula 47,566 contagios y 42,809 recuperados.

Fuente: EL ECONOMISTA. Disponible en https://cutt.ly/6zqiMTR

Children Given Flu Shot Less Likely to Have Symptomatic COVID-19

25 feb. Children who have received an influenza vaccine are less likely to have symptomatic COVID-19 or severe disease, according to a study recently published in Cureus.

Anjali Patwardhan, M.D., and Adrienne Ohler, Ph.D., from the University of Missouri in Columbia, examined the effect of influenza and pneumococcal vaccines on the disease course among severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) patients aged 20 years and younger who visited Arkansas Children's Hospital System between Feb. 1 and Aug. 30, 2020.

The researchers found that viral interference may have played a role in the flu and COVID-19 twindemic. Comparing SARS-CoV-2-positive patients who had been vaccinated versus those who had not been vaccinated for influenza showed that patients who were vaccinated had lower odds of having symptomatic diseases (odds ratio [OR], 0.714). Patients who received the pneumococcal vaccine also had lower odds of having symptomatic disease than those who were unvaccinated (OR, 0.482). Compared with patients who were not vaccinated, patients who were vaccinated for influenza had lower odds of having respiratory symptoms (OR, 0.678).

Patients vaccinated for influenza and pneumonia had lower odds of severe disease than those not vaccinated (ORs, 0.672 and 0.412, respectively).

"It is known that the growth of one virus can be inhibited by a previous viral infection," Patwardhan said in a statement. "This phenomenon is called virus interference, and it can occur even when the first virus invader is an inactivated virus, such as the case with the flu vaccine."

Fuente: Physician´s Weekly. Disponible en https://cutt.ly/5zeACh5

La efectividad de vacunas contra covid-19: ¿cuál es la vacuna más efectiva?

27 feb. El proceso para aplicar la vacuna de covid-19 será el tema prioritario en el mundo en los próximos años a medida que los países intentan luchar contra la pandemia de coronavirus. ¿Cuál es la vacuna de covid-19 más efectiva?

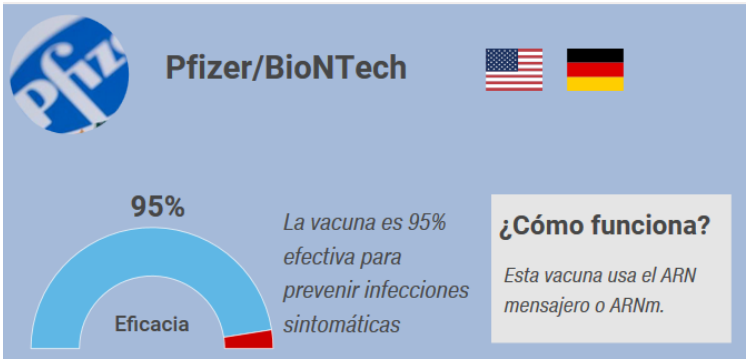
La vacuna Sputnik V tiene un 91,6% de efectividad para prevenir el covid-19 sintomático y es 100% efectiva para prevenir enfermedad grave por coronavirus, según un análisis provisional de los datos del ensayo de fase 3, publicado en la revista médica The Lancet. Varios países de América Latina recibirán la vacuna rusa.

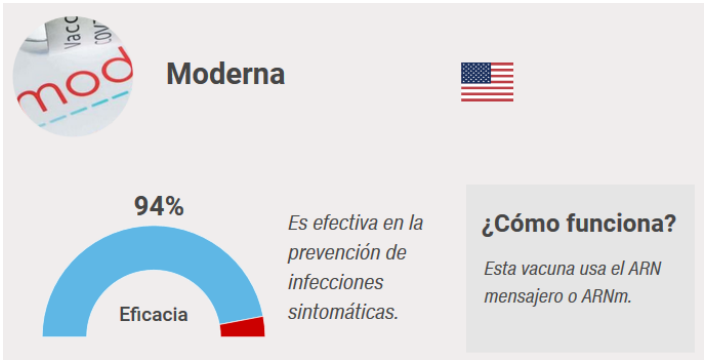
La alta efectividad de la vacuna Sputnik V, que recibió críticas en 2020 porque fue aprobada y desplegada rápidamente, se acerca a las de mayor éxito como la de Pfizer/BioNTech –que ya se aplica en Europa y Estados Unidos– que reporta una efectividad de 95% para prevenir infecciones sintomáticas, y la vacuna de Moderna, que es 94% efectiva para prevenir infecciones sintomáticas.

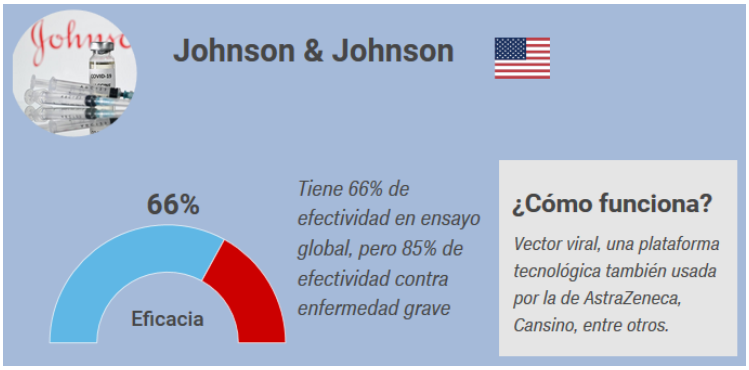
En el otro lado del espectro está la vacuna Sinovac, que apenas tiene un 49,62% de eficacia en promedio, y la vacuna de Johnson & Johnson, que es 66% eficaz.

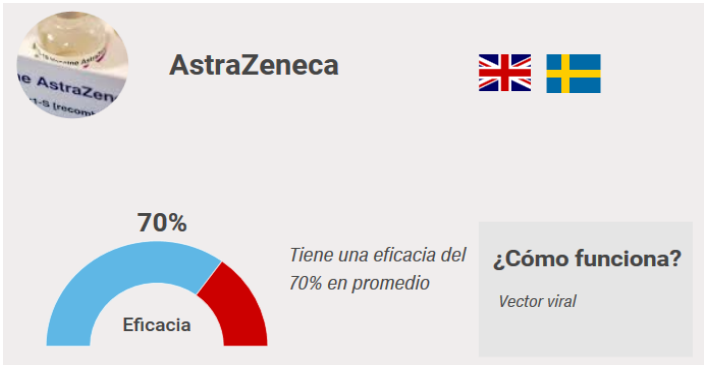
La Administración de Alimentos y Medicamentos de EE.UU. (FDA, por sus siglas en inglés) aprobó el uso de emergencia de una tercera vacuna contra el covid-19 en el país, fabricada por la división de vacunas de Johnson & Johnson, Janssen Biotech.

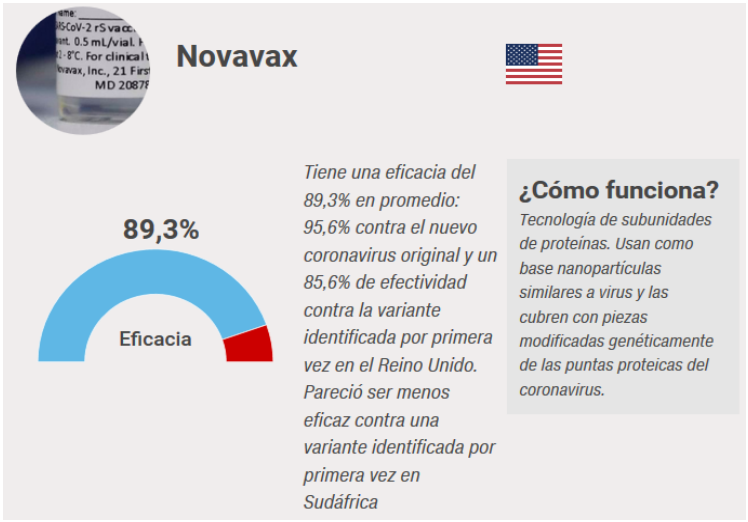
Mientras algunas compañías y laboratorios continúan haciendo ensayos, y otras ya están distribuyendo su vacuna contra la COVID-19, esto es lo que sabemos de la eficacia de 8 de ellas, desarrolladas por Pfizer/ BioNTech, Moderna, Johnson & Johnson, AstraZeneca, Novavax, Sputnik V, Sinopharm y Sinovac.

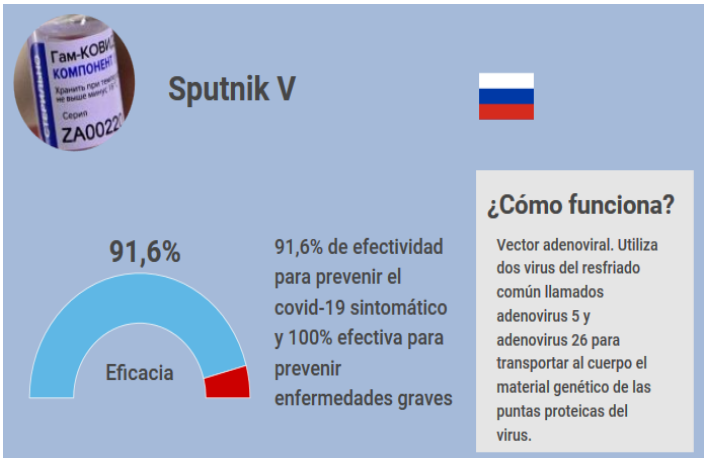


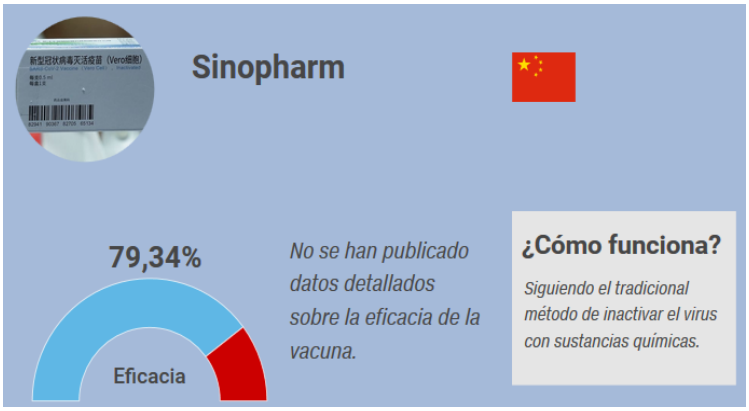


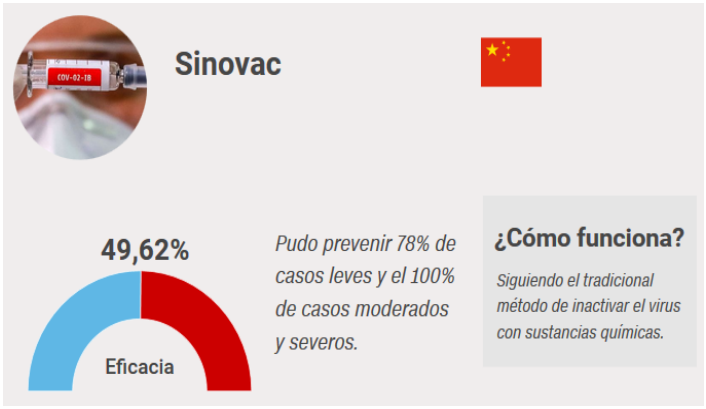












Fuente: CNN en español. Disponible en https://cutt.ly/vzeVwba

Solidaridad pide en Brasil adquirir vacuna cubana antiCovid-19

27 feb. El movimiento brasileño de solidaridad con Cuba comenzó una campaña para que instituciones y gobiernos regionales adquieran la vacuna cubana Soberana 02 ante la carencia que existe hoy de inmunizantes anti-Covid-19 para la inoculación masiva.

En la convocatoria, las entidades demandan que 'parte de la fase tres del estudio clínico de Soberana 02 se lleve a cabo en Brasil con la participación de alguna institución con experiencia en vacunas'.

Tal hecho, indica la nota, podría disminuir el tiempo de aprobación por la Agencia Nacional de Vigilancia Sanitaria (Anvisa) de este fármaco.

El Movimiento Capixaba de Solidaridad con Cuba, el Capitulo Brasil del Comité Internacional Paz, Justicia y Dignidad a los Pueblos, y el Comité Carioca de Solidaridad con Cuba -además de otras entidades y personalidades- invitan a todos a participar de la cruzada.

Recuerdan que el gigante suramericano 'atraviesa una situación sin precedentes en su historia. El país que alguna vez fue referente mundial en campañas de inmunización actualmente enfrenta una pandemia, la cual crece cada día ante la imposibilidad de vacunación masiva de nuestra población'.

Hospitales abarrotados, una cifra impresionante de muertes, sin medidas de contención. Tenemos el segundo mayor número de personas fallecidas (cerca de 253 mil) en el planeta sin que ninguna agencia gubernamental se exprese o cumpla con su deber de cuidar la vida según lo determina la Constitución Federal, indica el texto.

Reconoce que no existe ningún tipo de tratamiento preventivo o específico contra la COVID-19. Solo tenemos una alternativa en este momento: la vacuna.

Insisten los demandantes en que, 'como no podemos fabricar nuestra propia droga, tenemos que adquirirla en el exterior, sin embargo, por cuestiones ideológicas innecesarias, perdimos un tiempo valioso en esta disputa'.

Para el movimiento solidario, resulta de suma importancia adquirir vacunas en cantidad suficiente para la inmunización de la población, sin importar dónde se fabriquen, siempre y cuando cumplan con el método científico, tengan eficacia probada y estén autorizadas por la Anvisa.

'Estamos hablando de vidas. Eso no tiene precio. No podemos permitirnos el lujo de esperar. Por eso invitamos a todos a participar de la campaña que comienza con la adquisición por parte de Brasil de Soberana 02', desarrollada por el Instituto Finlay de Vacunas, con décadas de experiencia en la producción de diversos fármacos.

En total Cuba trabaja en cuatro candidatos vacunales a la vez, Soberana 01 y Soberana 02, del Finlay, y Abdala y Mambisa, desarrolladas por el Centro de Ingeniería Genética y Biotecnología. Este último es el único para administrar de forma nasal.

De esta forma, el país caribeño podría convertirse en el primero latinoamericano en tener sus propias vacunas contra la COVID-19.

Fuente: Prensa Latina. Disponible en https://cutt.ly/Qzrwngo

Johnson & Johnson: Estados Unidos aprueba la primera vacuna de una sola dosis contra el coronavirus

28 feb. Las autoridades estadounidenses aprobaron este sábado el uso de la vacuna de una sola dosis de la farmacéutica Johnson & Johnson, la tercera que recibe el visto bueno de la Administración de Medicamentos y Alimentos (FDA).

La vacuna es vista como una alternativa eficiente a las desarrolladas por Pfizer y Moderna, dado que solo requiere de una dosis y puede almacenarse en un frigorífico en lugar de un congelador, como requieren las otras dos.

Los ensayos mostraron que la vacuna de Johnson & Johnson tiene un 66% de eficacia, previene el desarrollo de síntomas graves de la enfermedad y no se reportaron hospitalizaciones o muertes.

Estados Unidos se convierte así en el primer país en permitir el uso de la vacuna desarrollada por el fabricante belga Janssen.

La compañía se ha comprometido a entregar a Estados Unidos 100 millones de dosis antes de que termine junio, aunque medios de EE.UU. han reportado que ha enfrentado problemas con la producción.

Reino Unido y Canadá también han hecho pedidos y otros 500 millones de dosis se canalizarán a través del programa Covax, que busca que las vacunas lleguen también a los países menos desarrollados.

La autorización de FDA llegó después de que un comité de expertos independientes votara por unanimidad a favor el viernes.

Los resultados de los ensayos llevados a cabo en Estados Unidos, Sudáfrica y Brasil revelaron una eficacia superior al 85% en la prevención del desarrollo de síntomas graves y de un 66% cuando se contaban también los casos de enfermedad moderada.

No hubo muertes ni ingresos hospitalarios entre los voluntarios que recibieron la vacuna en los 28 días posteriores a haberles sido administrada.

La protección global fue inferior en Sudáfrica y Brasil, donde variantes del virus se han vuelto predominantes, pero la defensa que la vacuna ofreció allí frente a síntomas severos o críticos de la enfermedad fue también "alta".

Sudáfrica comenzó este mes a inyectar la vacuna de Johnson & Johnson a sus trabajadores de la salud después de que los ensayos mostraran que la de la Universidad de Oxford y AstraZeneca ofrecía "mínima protección frente a la enfermedad moderada que provoca la variante del virus más extendida en el país.

Johnson & Johnson afirma que tiene previsto entregar 20 millones de dosis en total hasta final de marzo.

Al requerir una dosis menos que las de Pfizer y Moderna, también requerirá un menor número de citas y personal sanitario en su distribución.

Quién más ha pedido la vacuna de Johnson & Johnson

•Reino Unido - 30 millones de dosis

•Unión Europea - 200 millones de dosis.

•Canadá - 38 millones de dosis.

•Países del programa Covax - 500 millones de dosis.

El producto de Johnson & Johnson usa un virus del resfriado común que ha sido modificado para hacerlo inofensivo. Introduce parte del código genético del coronavirus, lo que resulta suficiente para que el cuerpo identifique la amenaza y aprenda a combatirla.

Esto entrena al sistema inmune en la lucha contra el coronavirus para cuando llegue el momento en que se enfrente a él realmente.

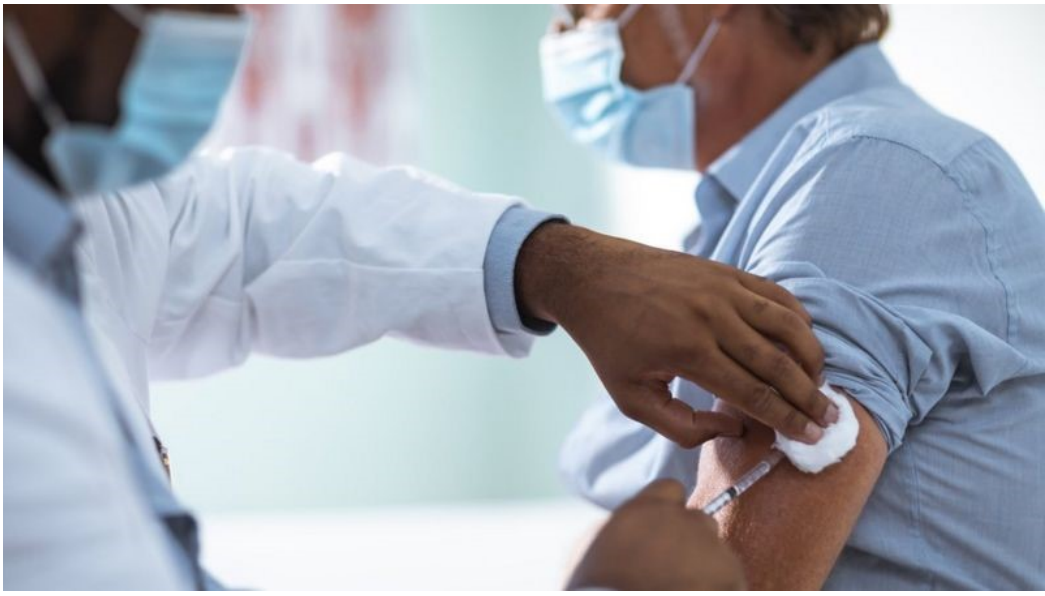
Se trata de un enfoque similar al utilizado en el desarrollo de la vacuna de la Universidad de Oxford y AstraZeneca.

Cuál es la situación en Estados Unidos

Alrededor de 72,8 millones de habitantes de Estados Unidos ya han sido vacunados y cerca de 1,3 millones de dosis se inyectan cada día en el país. El presidente Joe Biden se ha comprometido a administrar 100 millones de dosis en sus primeros 100 días en el cargo.

Más de 508.000 personas han muerto en Estados Unidos con covid, pero las muertes, las hospitalizaciones y los contagios se han mantenido a la baja en las últimas semanas.

Los expertos en salud pública advierten, no obstante, que las nuevas variantes del virus podrían poner en peligro los progresos realizados.



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

VacciMonitor es una revista dedicada a la vacunología y temas afines como Inmunología, Adyuvantes, Infectología, Microbiología, Epidemiología, Validación, Aspectos regulatorios, entre otros. Arbitrada, de acceso abierto y bajo la Licencia Creative Commons está indexada en:

Síganos en redes sociales

@vaccimonitor

@finlayediciones

@finlayediciones

Artículos científicos publicados en Medline

Filters activated: Publication date from 2021/02/23 to 2021/02/28. "Vaccine" (Title/Abstract) 226 records.

COVID research updates: A COVID **vaccine** passes a real-world test with flying colours.
[No authors listed] Nature. 2021 Feb 26. doi: 10.1038/d41586-020-00502-w. Online ahead of print. PMID: 32221507

Allergic Reactions Including Anaphylaxis After Receipt of the First Dose of Pfizer-BioNTech COVID-19 **Vaccine**.
Shimabukuro T, Nair N. JAMA. 2021 Feb 23;325(8):780-781. doi: 10.1001/jama.2021.0600. PMID: 33475702

Xq28 Duplication Syndrome, Int22h1/Int22h2 Mediated.
Ballout RA, El-Hattab AW, Schaaf CP, Cheung SW. 2016 Mar 10 [updated 2021 Feb 25]. In: Adam MP, Ardinger HH, Pagon RA, Wallace SE, Bean LJH, Mirzaa G, Amemiya A, editors. GeneReviews® [Internet]. Seattle (WA): University of Washington, Seattle; 1993–2021. PMID: 26962617

Inhibition of adjuvant-induced TAM receptors potentiates cancer **vaccine** immunogenicity and therapeutic efficacy.
Llopiz D, Ruiz M, Silva L, Repáraz D, Aparicio B, Egea J, Lasarte JJ, Redin E, Calvo A, Angel M, Berzofsky JA, Stroncek D, Sarobe P. Cancer Lett. 2021 Feb 28;499:279-289. doi: 10.1016/j.canlet.2020.11.022. Epub 2020 Nov 21. PMID: 33232788

Knowledge, attitude and practice of vaccinators and **vaccine** handlers on **vaccine** cold chain management in public health facilities, Ethiopia: Cross-sectional study.
Mohammed SA, Workneh BD, Kahissay MH. PLoS One. 2021 Feb 25;16(2):e0247459. doi: 10.1371/journal.pone.0247459. eCollection 2021. PMID: 33630946

HCV virology and diagnosis.
Roger S, Ducancelle A, Le Guillou-Guillemette H, Gaudy C, Lunel F. Clin Res Hepatol Gastroenterol. 2021 Feb 23;45(3):101626. doi: 10.1016/j.clinre.2021.101626. Online ahead of print. PMID: 33636428

Rapid Development of SARS-CoV-2 Spike Protein Receptor-Binding Domain Self-Assembled Nanoparticle **Vaccine** Candidates.
Kang YF, Sun C, Zhuang Z, Yuan RY, Zheng Q, Li JP, Zhou PP, Chen XC, Liu Z, Zhang X, Yu XH, Kong XW, Zhu QY, Zhong Q, Xu M, Zhong NS, Zeng YX, Feng GK, Ke C, Zhao JC, Zeng MS. ACS Nano. 2021 Feb 23;15(2):2738-2752. doi: 10.1021/acsnano.0c08379. Epub 2021 Jan 19. PMID: 33464829

SARS-CoV-2 **vaccine** testing and trials in the pediatric population: biologic, ethical, research, and implementation challenges.
Cooper DM, Afghani B, Byington CL, Cunningham CK, Golub S, Lu KD, Radom-Aizik S, Ross LF, Singh J, Smoyer WE, Lucas CT, Tunney J, Zaldivar F, Ulloa ER. Pediatr Res. 2021 Feb 24:1-5. doi: 10.1038/s41390-021-01402-z. Online ahead of print. PMID: 33627824

CD137 agonist-based combination immunotherapy enhances activated, effector memory T cells and prolongs survival in pancreatic adenocarcinoma.
Muth ST, Saung MT, Blair AB, Henderson MG, Thomas DL 2nd, Zheng L. Cancer Lett. 2021 Feb 28;499:99-108. doi: 10.1016/j.canlet.2020.11.041. Epub 2020 Nov 30. PMID: 33271264

Safety and Immunogenicity of the Ad26.RSV.preF Investigational **Vaccine** Coadministered With an Influenza **Vaccine** in Older Adults.
Sadoff J, De Paepe E, Haazen W, Omoruyi E, Bastian AR, Comeaux C, Heijnen E, Strout C, Schuitemaker H, Callendret B. J Infect Dis. 2021 Feb 24;223(4):699-708. doi: 10.1093/infdis/jiaa409. PMID: 32851411

mRNA **vaccine** for cancer immunotherapy.
Miao L, Zhang Y, Huang L. Mol Cancer. 2021 Feb 25;20(1):41. doi: 10.1186/s12943-021-01335-5. PMID: 33632261

Plasmodium infection and drug cure for malaria **vaccine** development.
Nevagi RJ, Good MF, Stanisic DI. Expert Rev Vaccines. 2021 Feb 23:1-21. doi: 10.1080/14760584.2021.1874923. Online ahead of print. PMID: 33428505

Severe allergic reactions after COVID-19 vaccination with the Pfizer/BioNTech **vaccine** in Great Britain and USA: Position statement of the German Allergy Societies: Medical Association of German Allergologists (AeDA), German Society for Allergology and Clinical Immunology (DGAKI) and Society for Pediatric Allergology and Environmental Medicine (GPA).
Klimek L, Novak N, Hamelmann E, Werfel T, Wagenmann M, Taube C, Bauer A, Merk H, Rabe U, Jung K, Schlenter W, Ring J, Chaker A, Wehrmann W, Becker S, Mülleneisen N, Nemat K, Czech W, Wrede H, Brehler R, Fuchs T, Jakob T, Ankermann T, Schmidt SM, Gerstlauer M, Vogelberg C, Zuberbier T, Hartmann K, Worm M. Allergo J Int. 2021 Feb 24:1-5. doi: 10.1007/s40629-020-00160-4. Online ahead of print. PMID: 33643776

Novel nanomaterial-organism hybrids with biomedical potential.
Li B, Cui Y, Wang X, Tang R. Wiley Interdiscip Rev Nanomed Nanobiotechnol. 2021 Feb 28:e1706. doi: 10.1002/wnan.1706. Online ahead of print. PMID: 33644977

Responses to an acellular pertussis booster vaccination in children, adolescents, and young and older adults: A collaborative study in Finland, the Netherlands, and the United Kingdom.
Versteegen P, Valente Pinto M, Barkoff AM, van Gageldonk PGM, Kassteele DJV, van Houten DMA, Sanders PEAM, de Groot PR, Diavatopoulos DDA, Bibi DS, Luoto DR, He PQ, Buisman DA, Kelly DDF, Mertsola PJ, Berbers DGAM. EBioMedicine. 2021 Feb 26;65:103247. doi: 10.1016/j.ebiom.2021.103247. Online ahead of print. PMID: 33647770

Model-informed COVID-19 **vaccine** prioritization strategies by age and serostatus.
Bubar KM, Reinholt K, Kissler SM, Lipsitch M, Cobey S, Grad YH, Larremore DB. Science. 2021 Feb 26;371(6532):916-921. doi: 10.1126/science.abe6959. Epub 2021 Jan 21. PMID: 33479118

Perspectives for immune plasma treatment of COVID-19.
Sayinalp B, Çinar OE, Haznedaroğlu İC. Turk J Med Sci. 2021 Feb 26;51(1):1-9. doi: 10.3906/sag-2005-410. PMID: 32718128

Prime-Pull Immunization with a Bivalent M-Protein and Spy-CEP Peptide **Vaccine** Adjuvanted with CAF01 Liposomes Induces Both Mucosal and Peripheral Protection from covR/S Mutant Streptococcus pyogenes.
Ozberk V, Reynolds S, Huo Y, Calcutt A, Eskandari S, Dooley J, Mills JL, Rasmussen IS, Dietrich J, Pandey M, Good MF. mBio. 2021 Feb 23;12(1):e03537-20. doi: 10.1128/mBio.03537-20. PMID: 33622722

Systematic review and meta-analysis of the effect of pertussis **vaccine** in pregnancy on the risk of chorioamnionitis, non-pertussis infectious diseases and other adverse pregnancy outcomes.
Andersen AR, Kolmos SK, Flanagan KL, Benn CS. Vaccine. 2021 Feb 25:S0264-410X(21)00166-3. doi: 10.1016/j.vaccine.2021.02.018. Online ahead of print. PMID: 33642162

Cross-neutralization between **vaccine** and circulating wild-type mumps viruses in Korea.
Won H, Kim AR, Yoo JS, Chung GT, Kang HJ, Kim SJ, Kim SS, Lee JW. Vaccine. 2021 Feb 25:S0264-410X(21)00055-4. doi: 10.1016/j.vaccine.2021.01.039. Online ahead of print. PMID: 33642163

Efficacy of Coxsackievirus A5 **Vaccine** Candidates in an Actively Immunized Mouse Model.
Jin WP, Lu J, Zhang XY, Wu J, Wei ZN, Mai JY, Qian SS, Yu YT, Meng SL, Wang ZJ, Shen S. J Virol. 2021 Feb 24;95(6):e01743-20. doi: 10.1128/JVI.01743-20. Print 2021 Feb 24. PMID: 33408178

Virus-like particles: preparation, immunogenicity and their roles as nanovaccines and drug nanocarriers.
Nooraei S, Bahrulolum H, Hoseini ZS, Katalani C, Hajizade A, Easton AJ, Ahmadian G. J Nanobiotechnology. 2021 Feb 25;19(1):59. doi: 10.1186/s12951-021-00806-7. PMID: 33632278

Current and prospective control strategies of influenza A virus in swine.
Salvesen HA, Whitelaw CBA. Porcine Health Manag. 2021 Feb 28;7(1):23. doi: 10.1186/s40813-021-00196-0. PMID: 33648602

Vaccine candidates generated by codon and codon pair deoptimization of enterovirus A71 protect against lethal challenge in mice.
Lee MHP, Tan CW, Tee HK, Ong KC, Sam IC, Chan YF. Vaccine. 2021 Feb 24:S0264-410X(21)00172-9. doi: 10.1016/j.vaccine.2021.02.024. Online ahead of print. PMID: 33640144

Worldwide genetic variations in High-risk human papillomaviruses capsid L1 gene and their impact on **vaccine** efficiency.
Oumeslakht L, Ababou M, Badaoui B, Qmichou Z. Gene. 2021 Feb 23:145533. doi: 10.1016/j.gene.2021.145533. Online ahead of print. PMID: 33636291

Synthesis and Evaluation of Liposomal Anti-GM3 Cancer **Vaccine** Candidates Covalently and Noncovalently Adjuvanted by alphaGalCer.
Yin XG, Lu J, Wang J, Zhang RY, Wang XF, Liao CM, Liu XP, Liu Z, Guo J. J Med Chem. 2021 Feb 25;64(4):1951-1965. doi: 10.1021/acs.jmedchem.0c01186. Epub 2021 Feb 4. PMID: 33539088

Vaccine Hesitancy: Beliefs and Barriers Associated with COVID-19 Vaccination among Egyptian Medical Students.

Saied SM, Saied EM, Kabbash IA, Abdo SAE. J Med Virol. 2021 Feb 28. doi: 10.1002/jmv.26910. Online ahead of print. PMID: 33644891

Cancer Immunoprevention: Current Status and Future Directions.
Keshavarz-Fathi M, Rezaei N. Arch Immunol Ther Exp (Warsz). 2021 Feb 27;69(1):3. doi: 10.1007/s00005-021-00604-x. PMID: 33638703

Ethical and policy implications of vaccinomics in the United States: community members' perspectives.
Gerber JE, Brewer J, Limaye RJ, Sutherland A, Geller G, Spina CI, Salmon DA. Hum Vaccin Immunother. 2021 Feb 24:1-12. doi: 10.1080/21645515.2020.1859318. Online ahead of print. PMID: 33626296

Identification of SARS-CoV-2 Nucleocapsid and Spike T-Cell Epitopes for Assessing T-Cell Immunity.
Lee E, Sandgren K, Duette G, Stylianou VV, Khanna R, Eden JS, Blyth E, Gottlieb D, Cunningham AL, Palmer S. J Virol. 2021 Feb 24;95(6):e02002-20. doi: 10.1128/JVI.02002-20. Print 2021 Feb 24. PMID: 33443088

Mucosal Delivery of Recombinant Vesicular Stomatitis Virus Vectors Expressing Envelope Proteins of Respiratory Syncytial Virus Induces Protective Immunity in Cotton Rats.
Binjawadagi B, Ma Y, Binjawadagi R, Brakel K, Harder O, Peeples M, Li J, Niewiesk S. J Virol. 2021 Feb 24;95(6):e02345-20. doi: 10.1128/JVI.02345-20. Print 2021 Feb 24. PMID: 33408176

Harnessing CRISPR-Cas9 for Genome Editing in Streptococcus pneumoniae D39V.
Synefiaridou D, Veening JW. Appl Environ Microbiol. 2021 Feb 26;87(6):e02762-20. doi: 10.1128/AEM.02762-20. Print 2021 Feb 26. PMID: 33397704

Considering the potential for gene-based therapy in prostate cancer.
Gregg JR, Thompson TC. Nat Rev Urol. 2021 Feb 26. doi: 10.1038/s41585-021-00431-x. Online ahead of print. PMID: 33637962

Vaccine-associated enhanced disease: Case definition and guidelines for data collection, analysis, and presentation of immunization safety data.
Munoz FM, Cramer JP, Dekker CL, Dudley MZ, Graham BS, Gurwith M, Law B, Perlman S, Polack FP, Spergel JM, Van Braeckel E, Ward BJ, Didierlaurent AM, Lambert PH; Brighton Collaboration Vaccine-associated Enhanced Disease Working Group. Vaccine. 2021 Feb 23:S0264-410X(21)00094-3. doi: 10.1016/j.vaccine.2021.01.055. Online ahead of print. PMID: 33637387

Organoids: A New Model for SARS-CoV-2 Translational Research.
Yu J. Int J Stem Cells. 2021 Feb 28. doi: 10.15283/ijsc20169. Online ahead of print. PMID: 33632991

Hypoxia-modulatory nanomaterials to relieve tumor hypoxic microenvironment and enhance immunotherapy: where do we stand?
Yuan CS, Deng ZW, Qin D, Mu YZ, Chen XG, Liu Y. Acta Biomater. 2021 Feb 24:S1742-7061(21)00125-2. doi: 10.1016/j.actbio.2021.02.030. Online ahead of print. PMID: 33639310

Impact of Reactogenicity After Two Doses of Recombinant Zoster **Vaccine** Upon Physical Functioning and Quality of Life: An Open Phase III Trial in Older Adults.

Schmader KE, Levin MJ, Chen M, Matthews S, Riley ME, Woo W, Hervé C, Grupping K, Schuind AE, Oostvogels L, Curran D. J Gerontol A Biol Sci Med Sci. 2021 Feb 25;76(3):485-490. doi: 10.1093/gerona/glaa127. PMID: 32530462

Expert Opinions on the Most Promising Treatments and **Vaccine** Candidates for COVID-19: Global Cross-sectional Survey of Virus Researchers in the Early Months of the Pandemic.
Cabral BP, Braga L, Mota F. JMIR Public Health Surveill. 2021 Feb 26;7(2):e22483. doi: 10.2196/22483. PMID: 33635275

Differential Splicing of Human Adenovirus 5 E1A RNA Expressed in *cis* versus in *trans*.
Graves D, Akkerman N, Bachus S, Pelka P. J Virol. 2021 Feb 24;95(6):e02081-20. doi: 10.1128/JVI.02081-20. Print 2021 Feb 24. PMID: 33361423

A nationwide post-marketing survey of knowledge, attitudes and recommendations towards human papillomavirus vaccines among healthcare providers in China.
Xu X, Wang Y, Liu Y, Yu Y, Yang C, Zhang Y, Hong Y, Wang Y, Zhang X, Bian R, Cao X, Xu L, Hu S, Zhao F. Prev Med. 2021 Feb 26:106484. doi: 10.1016/j.ypmed.2021.106484. Online ahead of print. PMID: 33647350

Siderophore natural products as pharmaceutical agents.
Swayambhu G, Bruno M, Gulick AM, Pfeifer BA. Curr Opin Biotechnol. 2021 Feb 25;69:242-251. doi: 10.1016/j.copbio.2021.01.021. Online ahead of print. PMID: 33640597

Acute and chronic inflammatory neuropathies and COVID-19 vaccines: practical recommendations from the task force of the Italian Peripheral Nervous System Association (ASNP).
Doneddu PE, Spina E, Briani C, Fabrizi GM, Manganelli F, Nobile-Orazio E; Italian Peripheral Nervous System Association (ASNP). J Peripher Nerv Syst. 2021 Feb 23. doi: 10.1111/jns.12435. Online ahead of print. PMID: 33620123

Willingness to Pay for a COVID-19 **Vaccine**.
Cerda AA, García LY. Appl Health Econ Health Policy. 2021 Feb 23:1-9. doi: 10.1007/s40258-021-00644-6. Online ahead of print. PMID: 33619688

Humoral and cellular immunogenicity and safety following a booster dose of a tetravalent dengue **vaccine** 5+ years after completion of the primary series in Singapore: 2-year follow-up of a randomized phase II, placebo-controlled trial.
Park J, Archuleta S, Oh MH, Shek LP, Wang H, Bonaparte M, Frago C, Bouckenooghe A, Jantet-Blaudez F, Begue S, Gimenez-Fourage S, Pagnon A. Hum Vaccin Immunother. 2021 Feb 24:1-10. doi: 10.1080/21645515.2020.1861875. Online ahead of print. PMID: 33626291

COVID-19 vaccines for patients with cancer: benefits likely outweigh risks.
Hwang JK, Zhang T, Wang AZ, Li Z. J Hematol Oncol. 2021 Feb 27;14(1):38. doi: 10.1186/s13045-021-01046-w. PMID: 33640005

First Month of COVID-19 **Vaccine** Safety Monitoring - United States, December 14, 2020-January 13, 2021.

Gee J, Marquez P, Su J, Calvert GM, Liu R, Myers T, Nair N, Martin S, Clark T, Markowitz L, Lindsey N, Zhang B, Licata C, Jazwa A, Sotir M, Shimabukuro T. MMWR Morb Mortal Wkly Rep. 2021 Feb 26;70(8):283-288. doi: 10.15585/mmwr.mm7008e3. PMID: 33630816

Hepatitis A susceptibility parallels high COVID-19 mortality.
Sarialioğlu F, Belen FB, Hayran KM. Turk J Med Sci. 2021 Feb 26;51(1):382-384. doi: 10.3906/sag-2007-133. PMID: 32718125

Suitability of databases in the Asia-Pacific for collaborative monitoring of **vaccine** safety.
Duszynski KM, Stark JH, Cohet C, Huang WT, Shin JY, Lai EC, Man KKC, Choi NK, Khromava A, Kimura T, Huang K, Watcharathanakij S, Kochhar S, Chen RT, Pratt NL. Pharmacoepidemiol Drug Saf. 2021 Feb 26. doi: 10.1002/pds.5214. Online ahead of print. PMID: 33634545

Sex difference in the immunogenicity of the quadrivalent Human Papilloma Virus **vaccine**: Systematic review and meta-analysis.
Aldakak L, Huber VM, Rühli F, Bender N. Vaccine. 2021 Feb 23:S0264-410X(21)00170-5. doi: 10.1016/j.vaccine.2021.02.022. Online ahead of print. PMID: 33637386

Long-Term Survival of Virulent Tularemia Pathogens outside a Host in Conditions That Mimic Natural Aquatic Environments.
Golovliov I, Bäckman S, Granberg M, Salomonsson E, Lundmark E, Näslund J, Busch JD, Birdsell D, Sahl JW, Wagner DM, Johansson A, Forsman M, Thelaus J. Appl Environ Microbiol. 2021 Feb 26;87(6):e02713-20. doi: 10.1128/AEM.02713-20. Print 2021 Feb 26. PMID: 33397692

BNT162b2 mRNA Covid-19 **Vaccine** in a Nationwide Mass Vaccination Setting.
Dagan N, Barda N, Kepten E, Miron O, Perchik S, Katz MA, Hernán MA, Lipsitch M, Reis B, Balicer RD. N Engl J Med. 2021 Feb 24. doi: 10.1056/NEJMoa2101765. Online ahead of print. PMID: 33626250

Behavioral intention to receive self-financed and free COVID-19 vaccination among Chinese factory workers who resumed work during the pandemic: cross-sectional online survey.
Zhang KC, Fang Y, Cao H, Chen H, Hu T, Chen Y, Zhou X, Wang Z. J Med Internet Res. 2021 Feb 26. doi: 10.2196/24673. Online ahead of print. PMID: 33646966

A study of the possible factors affecting COVID-19 spread, severity and mortality and the effect of social distancing on these factors: Machine learning forecasting model.
Zawbaa H, El-Gendy A, Saeed H, Osama H, Ali AM, Gomaa D, Abdelrahman M, Harb HS, Madney YM, Abdelrahim M. Int J Clin Pract. 2021 Feb 27:e14116. doi: 10.1111/ijcp.14116. Online ahead of print. PMID: 33639032

The epidemiologic impact and cost-effectiveness of new tuberculosis vaccines on multidrug-resistant tuberculosis in India and China.
Weerasuriya CK, Harris RC, McQuaid CF, Bozzani F, Ruan Y, Li R, Li T, Rade K, Rao R, Ginsberg AM, Gomez GB, White RG. BMC Med. 2021 Feb 26;19(1):60. doi: 10.1186/s12916-021-01932-7. PMID: 33632218

BCG **Vaccine** Protection Against Mycobacterium tuberculosis Infection by Level of Exposure in The Gambia.

Campbell N, Verrall AJ, Donkor S, Sutherland JS, Hill PC. J Infect Dis. 2021 Feb 24;223(4):719-720. doi: 10.1093/infdis/jiaa411. PMID: 32638004

SARS-CoV-2 proteins: Are they useful as targets for COVID-19 drugs and vaccines?
Mohammed MEA. Curr Mol Med. 2021 Feb 23. doi: 10.2174/1566524021666210223143243. Online ahead of print. PMID: 33622224

Latest updates on SARS-CoV-2 genomic characterization, drug, and **vaccine** development; a comprehensive bioinformatics review.
Sakr MM, El Sayed NS, El-Housseiny GS. Microb Pathog. 2021 Feb 26:104809. doi: 10.1016/j.micpath.2021.104809. Online ahead of print. PMID: 33647446

Antibodies elicited by the CaniLeish **vaccine**: long-term clinical follow-up study of dogs in Spain.
Montoya A, Checa R, Marino V, Gálvez R, Portero M, De Mari K, Navarro C, Miró G. Parasitol Res. 2021 Feb 24. doi: 10.1007/s00436-021-07091-1. Online ahead of print. PMID: 33624147

Interpreting **vaccine** efficacy trial results for infection and transmission.
Lipsitch M, et al. medRxiv. 2021. PMID: 33655276

Severe Inflammatory Response in Myelodysplastic Syndrome and Trisomy 8 Following 23-Valent Polysaccharide Pneumococcal **Vaccine** Administration.
Fujikawa H, Miyazato Y, Ebisuda K, Saito M. Turk J Haematol. 2021 Feb 25;38(1):92-94. doi: 10.4274/tjh.galenos.2021.2020.0664. PMID: 33635039

Substantial Attenuation of Virulence of Tembusu Virus Strain PS Is Determined by an Arginine at Residue 304 of the Envelope Protein.
Yang L, Liang T, Lv J, Qu S, Meng R, Yang B, Feng C, Dai W, Wang X, Zhang B, Zhang D. J Virol. 2021 Feb 24;95(6):e02331-20. doi: 10.1128/JVI.02331-20. Print 2021 Feb 24. PMID: 33328312

Corrigendum to"PDL1-targeted **vaccine** exhibits potent antitumor activity by simultaneously blocking PD1/PDL1 pathway and activating PDL1-specific immune responses [Canc. Lett. 476 (2020) 170-182].
Tian H, Kang Y, Song X, Xu Y, Chen H, Gong X, Zhang W, Xu Y, Xia X, Gao X, Yao W. Cancer Lett. 2021 Feb 28;499:4. doi: 10.1016/j.canlet.2020.05.016. Epub 2020 Jul 31. PMID: 32747014

Multidisciplinary Recommendations Regarding Post-**Vaccine** Adenopathy and Radiologic Imaging: Radiology Scientific Expert Panel.
Becker AS, Perez-Johnston R, Chikarmane SA, Chen MM, El Homsi M, Feigin KN, Gallagher KM, Hanna EY, Hicks M, Ilica AT, Mayer EL, Shinagare AB, Yeh R, Mayerhoefer ME, Hricak H, Vargas HA. Radiology. 2021 Feb 24:210436. doi: 10.1148/radiol.2021210436. Online ahead of print. PMID: 33625298

Evaluating a Mobile Phone-Delivered Text Message Reminder Intervention to Reduce Infant Vaccination Dropout in Arua, Uganda: Protocol for a Randomized Controlled Trial.
Ehlman DC, Magoola J, Tanifum P, Wallace AS, Behumbiize P, Mayanja R, Luzze H, Yukich J, Daniels D, Mugenyi K, Baryarama F, Ayebazibwe N, Conklin L. JMIR Res Protoc. 2021 Feb 24;10(2):e17262. doi: 10.2196/17262. PMID: 33625372

Characterization and Specification of a Trivalent Protein-Based Pneumococcal **Vaccine** Formulation Using an Adjuvant-Free Nanogel Nasal Delivery System.
Yuki Y, Uchida Y, Sawada SI, Nakahashi-Ouchida R, Sugiura K, Mori H, Yamanoue T, Machita T, Honma A, Kurokawa S, Mukerji R, Briles DE, Akiyoshi K, Kiyono H. Mol Pharm. 2021 Feb 23. doi: 10.1021/acs.molpharmaceut.0c01003. Online ahead of print. PMID: 33621107

Research progress on O-GlcNAcylation in the occurrence, development, and treatment of colorectal cancer.
Liu Y, Peng FX. World J Gastrointest Surg. 2021 Feb 27;13(2):96-115. doi: 10.4240/wjgs.v13.i2.96. PMID: 33643531

An overview of **vaccine** development for COVID-19.
Shahcheraghi SH, Ayatollahi J, Aljabali AA, Shastri MD, Shukla SD, Chellappan DK, Jha NK, Anand K, Katari NK, Mehta M, Satija S, Dureja H, Mishra V, Almutary AG, Alnuqaydan AM, Charbe N, Prasher P, Gupta G, Dua K, Lotfi M, Bakshi HA, Tambuwala MM. Ther Deliv. 2021 Feb 24. doi: 10.4155/tde-2020-0129. Online ahead of print. PMID: 33624533

Biosecurity risks associated with **vaccine** platform technologies.
Sandbrink JB, Koblentz GD. Vaccine. 2021 Feb 24:S0264-410X(21)00171-7. doi: 10.1016/j.vaccine.2021.02.023. Online ahead of print. PMID: 33640142

Tabletized Supramolecular Assemblies for Sublingual Peptide Immunization.
Kelly SH, Opolot EE, Wu Y, Cossette B, Varadhan AK, Collier JH. Adv Healthc Mater. 2021 Feb 26:e2001614. doi: 10.1002/adhm.202001614. Online ahead of print. PMID: 33634607

Seroepidemiology of pertussis in China: A population-based, cross-sectional study.
Zhang Z, Pan J, Chen M, Zhang T, Li J, Lu L. Vaccine. 2021 Feb 25:S0264-410X(21)00199-7. doi: 10.1016/j.vaccine.2021.02.032. Online ahead of print. PMID: 33642160

Virus against virus: strategies for using adenovirus vectors in the treatment of HPV-induced cervical cancer.
Ghanaat M, Goradel NH, Arashkia A, Ebrahimi N, Ghorghanlu S, Malekshahi ZV, Fattahi E, Negahdari B, Kaboosi H. Acta Pharmacol Sin. 2021 Feb 25. doi: 10.1038/s41401-021-00616-5. Online ahead of print. PMID: 33633364

Online mis/disinformation and **vaccine** hesitancy in the era of COVID-19: Why we need an eHealth literacy revolution.
Dib F, Mayaud P, Chauvin P, Launay O. Hum Vaccin Immunother. 2021 Feb 24:1-3. doi: 10.1080/21645515.2021.1874218. Online ahead of print. PMID: 33625960

Highly-loaded protein nanocarriers prepared by Flash NanoPrecipitation with hydrophobic ion pairing.
Ristroph KD, Rummaneethorn P, Johnson-Weaver B, Staats H, Prud'homme RK. Int J Pharm. 2021 Feb 26:120397. doi: 10.1016/j.ijpharm.2021.120397. Online ahead of print. PMID: 33647410

A biotin-avidin-system-based virus-mimicking nanovaccine for tumor immunotherapy.
Lu Z, Zhang Y, Wang Y, Tan GH, Huang FY, Cao R, He N, Zhang L. J Control Release. 2021 Feb 26:S0168-3659(21)00102-4. doi: 10.1016/j.jconrel.2021.02.029. Online ahead of print. PMID: 33647430

Advancements on Adjuvanticity of Bioactive Inorganic and Organic Compounds.
Banerjee J, Dey S, Ali KM, Giri B, Dash SK. Endocr Metab Immune Disord Drug Targets. 2021 Feb 24. doi: 10.2174/1871530321666210225104819. Online ahead of print. PMID: 33632112

Postlicensure herpes zoster **vaccine** effectiveness: systematic review protocol.
Mbinta JF, Nguyen BP, Awuni PMA, Eme PE, Simpson CR. BMJ Open. 2021 Feb 23;11(2):e040964. doi: 10.1136/bmjopen-2020-040964. PMID: 33622942

Foreword - The importance of a healthy microbiota in the era of COVID-19.
Venema K. Benef Microbes. 2021 Feb 24;12(1):1-3. doi: 10.3920/BM2021.x001. PMID: 33627060

Vaccines do not cause atopic dermatitis: A systematic review and meta-analysis.
Ayasse M, Ahmed A, McCullum C, Espinosa ML, Paller AS, Silverberg JI. Vaccine. 2021 Feb 26:S0264-410X(21)00203-6. doi: 10.1016/j.vaccine.2021.02.036. Online ahead of print. PMID: 33648762

Development strategy and lessons learned for a 10-valent pneumococcal conjugate **vaccine** (PNEUMOSIL).
Alderson MR, Sethna V, Newhouse LC, Lamola S, Dhere R. Hum Vaccin Immunother. 2021 Feb 24:1-8. doi: 10.1080/21645515.2021.1874219. Online ahead of print. PMID: 33625961

Effect of an adenovirus-vectored universal influenza virus **vaccine** on pulmonary pathophysiology in a mouse model.
Dhakal S, Loube J, Misplon JA, Lo CY, Creisher P, Mulka KR, Deshpande S, Mitzner W, Klein SL, Epstein SL. J Virol. 2021 Feb 24:JVI.02359-20. doi: 10.1128/JVI.02359-20. Online ahead of print. PMID: 33627390

Spatial clustering of fourteen tick species across districts of Zimbabwe.
Shekede MD, Chikerema SM, Spargo M, Gwitira I, Kusangaya S, Mazhindu AN, Ndhlovu DN. BMC Vet Res. 2021 Feb 27;17(1):91. doi: 10.1186/s12917-021-02792-2. PMID: 33639938

Meteorological factors and childhood diarrhea in Peru, 2005-2015: a time series analysis of historic associations, with implications for climate change.
Delahoy MJ, Cárcamo C, Huerta A, Lavado W, Escajadillo Y, Ordoñez L, Vasquez V, Lopman B, Clasen T, Gonzales GF, Steenland K, Levy K. Environ Health. 2021 Feb 26;20(1):22. doi: 10.1186/s12940-021-00703-4. PMID: 33637108

Effects of applying external cold and vibration to children during vaccination on pain, fear and anxiety.
Sapçi E, Bilsin E, Gungormus Z. Complement Ther Med. 2021 Feb 25:102688. doi: 10.1016/j.ctim.2021.102688. Online ahead of print. PMID: 33640458

Early Covid-19 vaccination rollout: a commentary from England.
Sim F. Isr J Health Policy Res. 2021 Feb 26;10(1):18. doi: 10.1186/s13584-021-00451-3. PMID: 33637133

NDP-rhamnose biosynthesis and rhamnosyltransferases: building diverse glycoconjugates in nature.
Wagstaff BA, Zorzoli A, Dorfmueller HC. Biochem J. 2021 Feb 26;478(4):685-701. doi: 10.1042/BCJ20200505. PMID: 33599745

KAP-COVID$_{GLOBAL}$: a multinational survey of the levels and determinants of public knowledge, attitudes and practices towards COVID-19.
Masoud AT, Zaazouee MS, Elsayed SM, Ragab KM, Kamal EM, Alnasser YT, Assar A, Nourelden AZ, Istatiah LJ, Abd-Elgawad MM, Abdelsattar AT, Sofy AA, Hegazy DG, Femía VZ, Mendonça AR, Sayed FM, Elmoursi A, Alareidi A, Abd-Eltawab AK, Abdelmonem M, Mohammed OM, Derballa EA, El-Fas KA, Abdel-Daim MM, Abushouk AI; KAP-COVIDGLOBAL Investigators. BMJ Open. 2021 Feb 23;11(2):e043971. doi: 10.1136/bmjopen-2020-043971. PMID: 33622949

Association of SARS-CoV-2 Seropositive Antibody Test With Risk of Future Infection.
Harvey RA, Rassen JA, Kabelac CA, Turenne W, Leonard S, Klesh R, Meyer WA 3rd, Kaufman HW, Anderson S, Cohen O, Petkov VI, Cronin KA, Van Dyke AL, Lowy DR, Sharpless NE, Penberthy LT. JAMA Intern Med. 2021 Feb 24. doi: 10.1001/jamainternmed.2021.0366. Online ahead of print. PMID: 33625463

Attitudes towards Anti-SARS-CoV2 Vaccination among Healthcare Workers: Results from a National Survey in Italy.
Di Gennaro F, et al. Viruses. 2021. PMID: 33652829

Safety and immunogenicity of rabies **vaccine** as 4 - dose Essen Intramuscular regimen for post exposure prophylaxis: A non - randomized, comparative controlled study.
Haradanahalli RS, Banerjee R, Kalappa MS, Narayana A, Annadani RR, Bilagumba G. Hum Vaccin Immunother. 2021 Feb 23:1-6. doi: 10.1080/21645515.2021.1883388. Online ahead of print. PMID: 33621471

COVID-19 CG enables SARS-CoV-2 mutation and lineage tracking by locations and dates of interest.
Chen AT, Altschuler K, Zhan SH, Chan YA, Deverman BE. Elife. 2021 Feb 23;10:e63409. doi: 10.7554/eLife.63409. PMID: 33620031

Estimation of Undetected Symptomatic and Asymptomatic cases of COVID-19 Infection and prediction of its spread in USA.
Mahajan A, Solanki R, Sivadas N. J Med Virol. 2021 Feb 23. doi: 10.1002/jmv.26897. Online ahead of print. PMID: 33620096

Adherence of nurses to annual seasonal influenza vaccination over a five-year period.
Chan CP, Lee SS, Wong NS. J Hosp Infect. 2021 Feb 25:S0195-6701(21)00076-1. doi: 10.1016/j.jhin.2021.02.017. Online ahead of print. PMID: 33640372

Effect of childhood pneumococcal vaccination and beta-lactam antibiotic use on the incidence of invasive pneumococcal disease in the adult population.
Chávez AF, Comas LG, Moreno JCS, Moreno RC, de Provens OCP, Andrés JMA. Eur J Clin Microbiol Infect Dis. 2021 Feb 27. doi: 10.1007/s10096-021-04196-4. Online ahead of print. PMID: 33641040

Immune response during hantavirus diseases. Implications for immunotherapies and **vaccine** design.
Saavedra F, Díaz FE, Retamal-Díaz A, Covián C, González PA, Kalergis AM. Immunology. 2021 Feb 26. doi: 10.1111/imm.13322. Online ahead of print. PMID: 33638192

Cost-effectiveness of meningococcal vaccination of Norwegian teenagers with a quadrivalent ACWY conjugate **vaccine**.

Watle SV, Næss LM, Tunheim G, Caugant DA, Wisløff T. Hum Vaccin Immunother. 2021 Feb 25:1-11. doi: 10.1080/21645515.2021.1880209. Online ahead of print. PMID: 33631080

In silico evaluation of the compounds of the ayurvedic drug, AYUSH-64, for the action against the SARS-CoV-2 main protease.
Ram TS, et al. J Ayurveda Integr Med. 2021. PMID: 33654345

Immunoproteomic analysis of Clostridium botulinum type B secretome for identification of immunogenic proteins against botulism.
Sharma A, Ponmariappan S, Rani S, Alam SI, Shukla S. Biotechnol Lett. 2021 Feb 25:1-18. doi: 10.1007/s10529-021-03091-4. Online ahead of print. PMID: 33629143

Chromatin-Associated Protein Complexes Link DNA Base J and Transcription Termination in *Leishmania*.
Jensen BC, Phan IQ, McDonald JR, Sur A, Gillespie MA, Ranish JA, Parsons M, Myler PJ. mSphere. 2021 Feb 24;6(1):e01204-20. doi: 10.1128/mSphere.01204-20. PMID: 33627513

COMPUTATIONAL DISCOVERY AND EX-VIVO VALIDATION STUDY OF NOVEL ANTIGENIC **VACCINE** CANDIDATES AGAINST TUBERCULOSIS.
Arega AM, Pattanaik KP, Nayak S, Mahapatra RK. Acta Trop. 2021 Feb 23:105870. doi: 10.1016/j.actatropica.2021.105870. Online ahead of print. PMID: 33636152

Novel and Evolving Therapies for COVID-19 Related Pulmonary Complications.
Mehta PP, Dhapte-Pawar VS. Am J Med Sci. 2021 Feb 25:S0002-9629(21)00072-0. doi: 10.1016/j.amjms.2021.02.019. Online ahead of print. PMID: 33640363

Horses vaccinated with live attenuated intranasal Strangles **vaccine** seroconvert to SEQ2190 and SeM.
Boyle AG, Mitchell C, Stefanovski D, Waller AS. Equine Vet J. 2021 Feb 25. doi: 10.1111/evj.13443. Online ahead of print. PMID: 33630353

Generation and immunogenicity analysis of recombinant classical swine fever virus glycoprotein E2 and E^{rns} expressed in baculovirus expression system.
Wei Q, Bai Y, Song Y, Liu Y, Yu W, Sun Y, Wang L, Deng R, Xing G, Zhang G. Virol J. 2021 Feb 24;18(1):44. doi: 10.1186/s12985-021-01507-1. PMID: 33627167

Improving adolescent human papillomavirus (HPV) immunization uptake in school-based health centers through awareness campaigns.
Rane MS, Page LC, McVeigh E, Miller K, Baure D, Elizabeth Halloran M, Duchin JS. Vaccine. 2021 Feb 24:S0264-410X(21)00152-3. doi: 10.1016/j.vaccine.2021.02.006. Online ahead of print. PMID: 33640146

Factors Influencing Health Care Workers' Willingness to Respond to Duty during Infectious Disease Outbreaks and Bioterrorist Events: An Integrative Review.
Murray EJ, Mason M, Sparke V, Zimmerman PP. Prehosp Disaster Med. 2021 Feb 23:1-35. doi: 10.1017/S1049023X21000248. Online ahead of print. PMID: 33618789

A multivalent T-antigen-based **vaccine** for Group A Streptococcus.
Loh JMS, Rivera-Hernandez T, McGregor R, Khemlani AHJ, Tay ML, Cork AJ, M Raynes J, Moreland NJ, Walker MJ, Proft T. Sci Rep. 2021 Feb 23;11(1):4353. doi: 10.1038/s41598-021-83673-4. PMID: 33623073

Effects of the Prenatal Administration of Tetanus Toxoid on the Sociability and Explorative Behaviors of Rat Offspring: A Preliminary Study.
Sünnetçi E, Durankuş F, Albayrak Y, Erdoğan MA, Atasoy Ö, Erbaş O. Clin Psychopharmacol Neurosci. 2021 Feb 28;19(1):84-92. doi: 10.9758/cpn.2021.19.1.84. PMID: 33508791

Discovery of a novel specific inhibitor targeting influenza A nucleoprotein with pleiotropic inhibitory effects on various steps of viral life cycle.
Yang F, Pang B, Lai KK, Cheung NN, Dai J, Zhang W, Zhang J, Chan KH, Chen H, Sze KH, Zhang H, Hao Q, Yang D, Yuen KY, Kao RY. J Virol. 2021 Feb 24:JVI.01432-20. doi: 10.1128/JVI.01432-20. Online ahead of print. PMID: 33627391

Bioinformatics Analysis of SARS-CoV-2 to Approach an Effective **Vaccine** Candidate Against COVID-19.
Sadat SM, Aghadadeghi MR, Yousefi M, Khodaei A, Sadat Larijani M, Bahramali G. Mol Biotechnol. 2021 Feb 24:1-21. doi: 10.1007/s12033-021-00303-0. Online ahead of print. PMID: 33625681

Detection of non-polio and polio enteroviruses in Acute Flaccid Paralysis surveillance in Turkey.
Korukluoglu G, Ozdemirer U, Bayrakdar F, Unal Z, Cosgun Y, Atak T, Karademirtok H, Ata I, Kara F. Acta Microbiol Immunol Hung. 2021 Feb 27. doi: 10.1556/030.2021.01353. Online ahead of print. PMID: 33646138

Exhaled aerosol increases with COVID-19 infection, age, and obesity.
Edwards DA, Ausiello D, Salzman J, Devlin T, Langer R, Beddingfield BJ, Fears AC, Doyle-Meyers LA, Redmann RK, Killeen SZ, Maness NJ, Roy CJ. Proc Natl Acad Sci U S A. 2021 Feb 23;118(8):e2021830118. doi: 10.1073/pnas.2021830118. PMID: 33563754

COVIDC: An Expert System to Diagnose COVID-19 and Predict its Severity using Chest CT Scans: Application in Radiology.
Abbasi WA, Abbas SA, Andleeb S, Ul Islam G, Ajaz SA, Arshad K, Khalil S, Anjam A, Ilyas K, Saleem M, Chughtai J, Abbas A. Inform Med Unlocked. 2021 Feb 23;23:100540. doi: 10.1016/j.imu.2021.100540. Online ahead of print. PMID: 33644298

Diagnostic and Therapeutic Applications of Exosome Nanovesicles in Lung Cancer: State-of-The-Art.
Mohammadi R, Hosseini SA, Noruzi S, Ebrahimzadeh A, Sahebkar A. Anticancer Agents Med Chem. 2021 Feb 28. doi: 10.2174/1871520621666210301085318. Online ahead of print. PMID: 33645488

Productivity loss/gain in cost-effectiveness analyses for vaccines: a systematic review.
Yuasa A, Yonemoto N, LoPresti M, Ikeda S. Expert Rev Pharmacoecon Outcomes Res. 2021 Feb 23:1-11. doi: 10.1080/14737167.2021.1881484. Online ahead of print. PMID: 33593223

Outer Membrane Structural Defects in Salmonella enterica Serovar Typhimurium Affect Neutrophil Chemokinesis but Not Chemotaxis.

Leaman EJ, Aung A, Jacques AJ, Behkam B. mSphere. 2021 Feb 24;6(1):e01012-20. doi: 10.1128/mSphere.01012-20. PMID: 33627508

Endogenous complement human serum bactericidal assay (enc-hSBA) for **vaccine** effectiveness assessments against meningococcal serogroup B.
Kleinschmidt A, Vadivelu K, Serino L, Neidig N, de Wergifosse B. NPJ Vaccines. 2021 Feb 23;6(1):29. doi: 10.1038/s41541-021-00286-8. PMID: 33623041

Multiplexed, Microscale, Microarray-based Serological Assay for Antibodies Against All Human-Relevant Coronaviruses.
Dawson ED, Kuck LR, Blair RH, Taylor AW, Toth E, Knight V, Rowlen KL. J Virol Methods. 2021 Feb 25:114111. doi: 10.1016/j.jviromet.2021.114111. Online ahead of print. PMID: 33640374

Antibody Response against SARS-CoV-2 and Seasonal Coronaviruses in Nonhospitalized COVID-19 Patients.
Ruetalo N, Businger R, Althaus K, Fink S, Ruoff F, Pogoda M, Iftner A, Ganzenmüller T, Hamprecht K, Flehmig B, Bakchoul T, Templin MF, Schindler M. mSphere. 2021 Feb 24;6(1):e01145-20. doi: 10.1128/mSphere.01145-20. PMID: 33627511

Complete genome analysis identifies recombinant events and positive selection sites of hepatitis C virus from mainland China during 2010-2019.
Qi M, Yang M, Xu L, Ma C, Huang P, Sun J, Shi J, Hu Y. Virus Res. 2021 Feb 24:198354. doi: 10.1016/j.virusres.2021.198354. Online ahead of print. PMID: 33639223

Extracting postmarketing adverse events from safety reports in the **vaccine** adverse event reporting system (VAERS) using deep learning.
Du J, Xiang Y, Sankaranarayanapillai M, Zhang M, Wang J, Si Y, Pham HA, Xu H, Chen Y, Tao C. J Am Med Inform Assoc. 2021 Feb 27:ocab014. doi: 10.1093/jamia/ocab014. Online ahead of print. PMID: 33647938

Media Influence on Anxiety, Health Utility, and Health Beliefs Early in the SARS-CoV-2 Pandemic-a Survey Study.
Greenhawt M, Kimball S, DunnGalvin A, Abrams EM, Shaker MS, Mosnaim G, Comberiati P, Nekliudov NA, Blyuss O, Teufel M, Munblit D. J Gen Intern Med. 2021 Feb 24:1-11. doi: 10.1007/s11606-020-06554-y. Online ahead of print. PMID: 33629267

Notifiable diseases after implementation of COVID-19 public health prevention measures in Central Queensland, Australia.
Adegbija O, Walker J, Smoll N, Khan A, Graham J, Khandaker G. Commun Dis Intell (2018). 2021 Feb 26;45. doi: 10.33321/cdi.2021.45.11. PMID: 33632091

Production of small ruminant morbillivirus, rift valley fever virus and lumpy skin disease virus in CelCradle™ -500A bioreactors.
Rhazi H, Safini N, Mikou K, Alhyane M, Tadlaoui KO, Lin X, Venkatesan NP, Elharrak M. BMC Vet Res. 2021 Feb 27;17(1):93. doi: 10.1186/s12917-021-02801-4. PMID: 33639955

Elucidating the drug repurposing spectra of COVID-19 with its analogues SARS and MERS.
Mishra J, Prasun C, Sahoo PK, Nair MS. Mini Rev Med Chem. 2021 Feb 24. doi: 10.2174/1389557521666210225114733. Online ahead of print. PMID: 33632095

In silico prediction of T-cell and B-cell epitopes of human papillomavirus type 16 L1 protein.
Mahmoudvand S, Shokri S, Makvandi M, Taherkhani R, Rashno M, Jalilian FA, Angali KA. Biotechnol Appl Biochem. 2021 Feb 24. doi: 10.1002/bab.2128. Online ahead of print. PMID: 33624357

Implementing WHO guidance on conducting and analysing vaccination coverage cluster surveys: Two examples from Nigeria.
Wagai JN, Rhoda D, Prier M, Trimmer MK, Clary CB, Oteri J, Okposen B, Adeniran A, Danovaro-Holliday C, Cutts F. PLoS One. 2021 Feb 26;16(2):e0247415. doi: 10.1371/journal.pone.0247415. eCollection 2021. PMID: 33635913

Better immune efficacy triggered by the inactivated gI/gE-deleted pseudorabies virus with the additional insertion of gC gene in mice and weaned pigs.
Yan Z, Chen M, Tang D, Wu X, Ren X, Pan H, Li Y, Ji Q, Luo Y, Fan H, Ju C. Virus Res. 2021 Feb 25:198353. doi: 10.1016/j.virusres.2021.198353. Online ahead of print. PMID: 33640358

Ethics of **vaccine** refusal.
Kowalik M. J Med Ethics. 2021 Feb 26:medethics-2020-107026. doi: 10.1136/medethics-2020-107026. Online ahead of print. PMID: 33637609

HPV genotyping and risk factors for anal high-risk HPV infection in men who have sex with men from Toronto, Canada.
Choi Y, Loutfy M, Remis RS, Liu J, Rebbapragada A, Huibner S, Brunetta J, Smith G, Reko T, Halpenny R, Kaul R, Grennan T. Sci Rep. 2021 Feb 26;11(1):4779. doi: 10.1038/s41598-021-84079-y. PMID: 33637798

Comprehensive N-glycosylation analysis of the influenza A virus proteins HA and NA from adherent and suspension MDCK cells.
Pralow A, Hoffmann M, Nguyen-Khuong T, Pioch M, Hennig R, Genzel Y, Rapp E, Reichl U. FEBS J. 2021 Feb 24. doi: 10.1111/febs.15787. Online ahead of print. PMID: 33629527

Preterm birth rate after bivalent HPV vaccination: Registry-based follow-up of a randomized clinical trial.
Kalliala I, Eriksson T, Aro K, Hokkanen M, Lehtinen M, Gissler M, Nieminen P. Prev Med. 2021 Feb 24;146:106473. doi: 10.1016/j.ypmed.2021.106473. Online ahead of print. PMID: 33639181

Impact of pneumococcal conjugate **vaccine** on invasive pneumococcal disease in children under 5 years of age in the Czech Republic.
Kozakova J, Krizova P, Maly M. PLoS One. 2021 Feb 26;16(2):e0247862. doi: 10.1371/journal.pone.0247862. eCollection 2021. PMID: 33635933

Spatial clustering of cholera cases in the Kathmandu Valley: implications for a ring vaccination strategy.
Roskosky M, Ali M, Upreti SR, Sack D. Int Health. 2021 Feb 24;13(2):170-177. doi: 10.1093/inthealth/ihaa042. PMID: 32761173

Defending 'snake oil': The preservation of contentious knowledge and practices.
Tan CD. Soc Stud Sci. 2021 Feb 23:306312721992543. doi: 10.1177/0306312721992543. Online ahead of print. PMID: 33618580

Development and Evaluation of an Online Continuing Education Course to Increase Healthcare Provider Self-Efficacy to Make Strong HPV **Vaccine** Recommendations to East African Immigrant Families.
McFadden SM, Ko LK, Shankar M, Ibrahim A, Berliner D, Lin J, Mohamed FB, Amsalu F, Ali AA, Jang SH, Winer RL. Tumour Virus Res. 2021 Feb 26:200214. doi: 10.1016/j.tvr.2021.200214. Online ahead of print. PMID: 33647533

Monitoring social distancing under various low light conditions with deep learning and a single motionless time of flight camera.
Rahim A, Maqbool A, Rana T. PLoS One. 2021 Feb 25;16(2):e0247440. doi: 10.1371/journal.pone.0247440. eCollection 2021. PMID: 33630951

Developing smarter vaccines for paratuberculosis: From early biomarkers to **vaccine** design.
de Silva K. Immunol Rev. 2021 Feb 23. doi: 10.1111/imr.12961. Online ahead of print. PMID: 33619731

Health Problems in Travellers to Nepal Visiting CIWEC Clinic in Kathmandu - A GeoSentinel Analysis.
Pandey P, Lee K, Amatya B, Angelo KM, Shlim DR, Murphy H. Travel Med Infect Dis. 2021 Feb 24:101999. doi: 10.1016/j.tmaid.2021.101999. Online ahead of print. PMID: 33639265

Pathological environment directed in situ peptidic supramolecular assemblies for nanomedicines.
Chen J, Zhao Y, Yao Q, Gao Y. Biomed Mater. 2021 Feb 25;16(2):022011. doi: 10.1088/1748-605X/abc2e9. PMID: 33630754

Traditional Chinese medicine auricular point acupressure for the relief of pain, fatigue, and gastrointestinal adverse reactions after the injection of novel coronavirus-19 vaccines: a structured summary of a study protocol for a multicentre, three-arm, single-blind, prospective randomized controlled trial.
Fu Q, Xie H, Zhou L, Li X, Liu Y, Liu M, Wang C, Wang X, Wang Z, Tang J, Xiao H, Xiao Z, Zhou J, Feng C, Wang L, Ao Z, Chen X, Su C, Wu X, Zhao M, Hu S, Lin H, Huang J, Xu G, Zhang Q, Jiang L. Trials. 2021 Feb 25;22(1):162. doi: 10.1186/s13063-021-05138-3. PMID: 33632286

Significant Declines in Juvenile Onset Recurrent Respiratory Papillomatosis following HPV **Vaccine** Introduction in the United States.
Meites E, Stone L, Amiling R, Singh V, Unger ER, Derkay C, Markowitz LE. Clin Infect Dis. 2021 Feb 23:ciab171. doi: 10.1093/cid/ciab171. Online ahead of print. PMID: 33621333

Emerging advances in cationic liposomal cancer nanovaccines: opportunities and challenges.
Ahmad MZ, Ahmad J, Alasmary MY, Abdel-Wahab BA, Warsi MH, Haque A, Chaubey P. Immunotherapy. 2021 Feb 25. doi: 10.2217/imt-2020-0258. Online ahead of print. PMID: 33626936

A Phase IIb Randomized Controlled Trial of the TLPLDC **Vaccine** as Adjuvant Therapy After Surgical Resection of Stage III/IV Melanoma: A Primary Analysis.
Vreeland TJ, Clifton GT, Hale DF, Chick RC, Hickerson AT, Cindass JL, Adams AM, Bohan PMK, Andtbacka RHI, Berger AC, Jakub JW, Sussman JJ, Terando AM, Wagner T, Peoples GE, Faries MB. Ann Surg Oncol. 2021 Feb 27. doi: 10.1245/s10434-021-09709-1. Online ahead of print. PMID: 33641012

Performance of four IgM antibody assays in the diagnosis of Measles virus primary infection and cases with a serological profile indicating reinfection.
Semmler G, Aberle SW, Griebler H, Richter L, Schmid D, Stiasny K, Holzmann H, Weseslindtner L. J Clin Microbiol. 2021 Feb 24:JCM.02047-20. doi: 10.1128/JCM.02047-20. Online ahead of print. PMID: 33627321

Achieving herd immunity against COVID-19 at the country level by the exit strategy of a phased lift of control.
de Vlas SJ, Coffeng LE. Sci Rep. 2021 Feb 24;11(1):4445. doi: 10.1038/s41598-021-83492-7. PMID: 33627674

Safety, immunogenicity of lyophilized purified vero cell cultured rabies **vaccine** administered in Zagreb and Essen regimen in post-exposure subjects: A post-marketing, parallel control clinical trial.
Zhang L, Huang S, Cai L, Zhu Z, Chen J, Lu S, Zhu Z, Zhang M, Fang Y, Hu Q. Hum Vaccin Immunother. 2021 Feb 25:1-7. doi: 10.1080/21645515.2021.1880200. Online ahead of print. PMID: 33631078

Early immune response in large yellow croaker (Larimichthys crocea) after immunization with oral **vaccine**.
Zhang W, Zhu C, Chi H, Liu X, Gong H, Xie A, Zheng W, Chen J, Zhang N, Wu Y. Mol Cell Probes. 2021 Feb 23:101708. doi: 10.1016/j.mcp.2021.101708. Online ahead of print. PMID: 33636281

Chinese tree shrew: a permissive model for *in vitro* and *in vivo* replication of human adenovirus species B.
Li X, Zhou Z, Liu W, Fan Y, Luo Y, Li K, Zheng Z, Tian X, Zhou R. Emerg Microbes Infect. 2021 Feb 24:1-43. doi: 10.1080/22221751.2021.1895679. Online ahead of print. PMID: 33622191

A Viral Pandemic, **Vaccine** Safety, and Compensation for Adverse Events.
Meissner HC. JAMA. 2021. PMID: 33544127

K-Ras Peptide Mimotope Induces Antigen Specific Th1 and B-Cell Immune Responses against G12A-Mutated K-Ras Antigen in Balb/c Mice.
Siak PY, et al. Vaccines (Basel). 2021. PMID: 33652552

Spatial clustering of cholera cases in the Kathmandu Valley: implications for a ring vaccination strategy.
Roskosky M, et al. Int Health. 2021. PMID: 32761173

A Novel SARS-CoV-2 Variant of Concern, B.1.526, Identified in New York.
Annavajhala MK, et al. medRxiv. 2021. PMID: 33655278

Seroconversion rate following HBV vaccination in clinical practice: The role of age and DMT treatment.
Faustino P, et al. Mult Scler Relat Disord. 2021. PMID: 33652232

Lymphadenopathy in COVID-19 **Vaccine** Recipients: Diagnostic Dilemma in Oncology Patients.
Özütemiz C, Krystosek LA, Church AL, Chauhan A, Ellermann JM, Domingo-Musibay E, Steinberger D. Radiology. 2021 Feb 24:210275. doi: 10.1148/radiol.2021210275. Online ahead of print. PMID: 33625300

A Viral Pandemic, **Vaccine** Safety, and Compensation for Adverse Events.
Meissner HC. JAMA. 2021 Feb 23;325(8):721-722. doi: 10.1001/jama.2020.26792. PMID: 33544127 No abstract available.

Investigating BB0405 as a novel Borrelia afzelii vaccination candidate in Lyme borreliosis.
Klouwens MJ, Trentelman JJ, Ersoz JI, Nieves Marques Porto F, Sima R, Hajdusek O, Thakur M, Pal U, Hovius JW. Sci Rep. 2021 Feb 26;11(1):4775. doi: 10.1038/s41598-021-84130-y. PMID: 33637813

Inflammation, immunity and potential target therapy of SARS-COV-2: a total scale analysis review.
Smail SW, Saeed M, Twana Alkasalias, Khudhur ZO, Younus DA, Rajab MF, Abdulahad WH, Hussain HI, Niaz K, Safdar M. Food Chem Toxicol. 2021 Feb 25:112087. doi: 10.1016/j.fct.2021.112087. Online ahead of print. PMID: 33640537

Covid-19 **vaccine** hesitancy among ethnic minority groups.
Razai MS, Osama T, McKechnie DGJ, Majeed A. BMJ. 2021 Feb 26;372:n513. doi: 10.1136/bmj.n513. PMID: 33637577

Vaccine trials ramp up in children and adolescents.
Couzin-Frankel J. Science. 2021 Feb 26;371(6532):874-875. doi: 10.1126/science.371.6532.874. PMID: 33632828

Vaccine trials ramp up in children and adolescents.
Couzin-Frankel J. Science. 2021 Feb 26;371(6532):874-875. doi: 10.1126/science.371.6532.874. PMID: 33632828

Chitosan Nanoparticles Loaded with Truncated ORF2 Protein as an Oral **Vaccine** Candidate against Hepatitis E.
Wei W, Behloul N, Wang W, Baha S, Liu Z, Shi R, Meng J. Macromol Biosci. 2021 Feb 24:e2000375. doi: 10.1002/mabi.202000375. Online ahead of print. PMID: 33624916

Breastfeeding and COVID-19 vaccination: position statement of the Italian scientific societies.
Davanzo R, Agosti M, Cetin I, Chiantera A, Corsello G, Ramenghi LA, Staiano A, Tavio M, Villani A, Viora E, Mosca F. Ital J Pediatr. 2021 Feb 27;47(1):45. doi: 10.1186/s13052-021-00998-6. PMID: 33639998

Informing patients that they are at high risk for serious complications of viral infection increases vaccination rates.
Shermohammed M, Goren A, Lanyado A, Yesharim R, Wolk DM, Doyle J, Meyer MN, Chabris CF. medRxiv. 2021 Feb 23:2021.02.20.21252015. doi: 10.1101/2021.02.20.21252015. Preprint. PMID: 33655258

External validity of phase III trials on vaccines against SARS-CoV-2 to a middle-aged and elderly Western European population.
Terzikhan N, Hofman A, Goudsmit J, Ikram MA. Eur J Epidemiol. 2021 Feb 26:1-6. doi: 10.1007/s10654-021-00729-5. Online ahead of print. PMID: 33634346

Chitosan Nanoparticles Loaded with Truncated ORF2 Protein as an Oral **Vaccine** Candidate against Hepatitis E.
Wei W, Behloul N, Wang W, Baha S, Liu Z, Shi R, Meng J. Macromol Biosci. 2021 Feb 24:e2000375. doi: 10.1002/mabi.202000375. Online ahead of print. PMID: 33624916

Breastfeeding and COVID-19 vaccination: position statement of the Italian scientific societies.
Davanzo R, Agosti M, Cetin I, Chiantera A, Corsello G, Ramenghi LA, Staiano A, Tavio M, Villani A, Viora E, Mosca F. Ital J Pediatr. 2021 Feb 27;47(1):45. doi: 10.1186/s13052-021-00998-6. PMID: 33639998

External validity of phase III trials on vaccines against SARS-CoV-2 to a middle-aged and elderly Western European population.
Terzikhan N, Hofman A, Goudsmit J, Ikram MA. Eur J Epidemiol. 2021 Feb 26:1-6. doi: 10.1007/s10654-021-00729-5. Online ahead of print. PMID: 33634346

A Polymer Multicellular Nanoengager for Synergistic NIR-II Photothermal Immunotherapy.
Xu C, Jiang Y, Han Y, Pu K, Zhang R. Adv Mater. 2021 Feb 26:e2008061. doi: 10.1002/adma.202008061. Online ahead of print. PMID: 33634897

Investigation of the inhibitory activity of some dietary bioactive flavonoids against SARS-CoV-2 using molecular dynamics simulations and MM-PBSA calculations.
Varughese JK, Joseph Libin KL, Sindhu KS, Rosily AV, Abi TG. J Biomol Struct Dyn. 2021 Feb 23:1-16. doi: 10.1080/07391102.2021.1891139. Online ahead of print. PMID: 33618628

Enhancing the immunogenicity of cancer vaccines by harnessing CLEC9A.
Lahoud MH, Radford KJ. Hum Vaccin Immunother. 2021 Feb 24:1-5. doi: 10.1080/21645515.2021.1873056. Online ahead of print. PMID: 33625943

The health belief model predicts vaccination intentions against COVID-19: A survey experiment approach.
Zampetakis LA, Melas C. Appl Psychol Health Well Being. 2021 Feb 26. doi: 10.1111/aphw.12262. Online ahead of print. PMID: 33634930

COVID-19 **vaccine**-related myositis.
Theodorou DJ, Theodorou SJ, Axiotis A, Gianniki M, Tsifetaki N. QJM. 2021 Feb 27:hcab043. doi: 10.1093/qjmed/hcab043. Online ahead of print. PMID: 33647971

Highly pathogenic avian influenza A/Guangdong/17SF003/2016 is immunogenic and induces cross-protection against antigenically divergent H7N9 viruses.
Radvak P, Kosikova M, Kuo YC, Li X, Garner R, Schmeisser F, Kosik I, Ye Z, Weir JP, Yewdell JW, Xie H. NPJ Vaccines. 2021 Feb 26;6(1):30. doi: 10.1038/s41541-021-00295-7. PMID: 33637737

Immune memory in mild COVID-19 patients and unexposed donors from India reveals persistent T cell responses after SARS-CoV-2 infection.
Ansari A, Arya R, Sachan S, Jha SN, Kalia A, Lall A, Sette A, Grifoni A, Weiskopf D, Coshic P, Sharma A, Gupta N. medRxiv. 2021 Feb 26:2020.11.16.20232967. doi: 10.1101/2020.11.16.20232967. Preprint. PMID: 33655267

Diversity of antibody responses after influenza infection or vaccination- Needed or nice to have?
Gärtner B, Sester M. Am J Transplant. 2021 Feb 27. doi: 10.1111/ajt.16554. Online ahead of print. PMID: 33638930

Identification of Immunodominant Outer Membrane Proteins of Fusobacterium necrophorum from Severe Ovine Footrot By MALDI-TOF Mass Spectrometry.

Farooq S, Wani SA, Qureshi S, Bhat MA, Kashoo ZA, Hussain I. Curr Microbiol. 2021 Feb 27. doi: 10.1007/s00284-021-02383-2. Online ahead of print. PMID: 33638672

O-serotype distribution of Escherichia coli bloodstream infection isolates in critically ill patients in The Netherlands.
Verboom DM, Varkila MRJ, Morrow B, Davies T, Ibarra de Palacios P, Poolman J, Hermans PWM, Dudley EG, Roberts E, Cremer OL, Bonten MJM. Vaccine. 2021 Feb 25:S0264-410X(21)00198-5. doi: 10.1016/j.vaccine.2021.02.031. Online ahead of print. PMID: 33642161

SARS-Cov2 variants and convalescent plasma: reality, fallacies, and opportunities.
Casadevall A, Henderson J, Joyner M, Pirofski LA. J Clin Invest. 2021 Feb 23:148832. doi: 10.1172/JCI148832. Online ahead of print. PMID: 33621214

BRAZILIAN IBD STUDY GROUP POSITION STATEMENT ON SARS-COV2 VACCINATION.
Queiroz NSF, Teixeira FV, Freire CCF, Motta MP, Vasconcellos MAM, Chebli LA, Saad-Hossne R; Brazilian Inflamatory Bowel Diseases Study Group (GEDIIB) COVID taskforce. Arq Gastroenterol. 2021 Feb 26:S0004-28032021005001201. doi: 10.1590/S0004-2803.202100000-02. Online ahead of print. PMID: 33656063

Announcing the Lancet Commission on **Vaccine** Refusal, Acceptance, and Demand in the USA.
Commissioners of the Lancet Commission on Vaccine Refusal, Acceptance, and Demand in the USA. Lancet. 2021 Feb 24:S0140-6736(21)00372-X. doi: 10.1016/S0140-6736(21)00372-X. Online ahead of print. PMID: 33639088

Exploratory analysis of immunization records highlights decreased SARS-CoV-2 rates in individuals with recent non-COVID-19 vaccinations.
Pawlowski C, Puranik A, Bandi H, Venkatakrishnan AJ, Agarwal V, Kennedy R, O'Horo JC, Gores GJ, Williams AW, Halamka J, Badley AD, Soundararajan V. Sci Rep. 2021 Feb 26;11(1):4741. doi: 10.1038/s41598-021-83641-y. PMID: 33637783

Peruvian COVID-19 **vaccine** scandal spreads.
Chauvin L. Lancet. 2021 Feb 27;397(10276):783. doi: 10.1016/S0140-6736(21)00508-0. PMID: 33640052

Industry Update covering November 2020.
Simpson I. Ther Deliv. 2021 Feb 24. doi: 10.4155/tde-2021-0002. Online ahead of print. PMID: 33624539

Estimated Medicaid Costs Associated with Hepatitis A During an Outbreak - West Virginia, 2018-2019.
Batdorf SJ, Hofmeister MG, Surtees TC, Thomasson ED, McBee SM, Pauly NJ. MMWR Morb Mortal Wkly Rep. 2021 Feb 26;70(8):269-272. doi: 10.15585/mmwr.mm7008a2. PMID: 33630818

A plasmid DNA-launched SARS-CoV-2 reverse genetics system and coronavirus toolkit for COVID-19 research.
Rihn SJ, Merits A, Bakshi S, Turnbull ML, Wickenhagen A, Alexander AJT, Baillie C, Brennan B, Brown F, Brunker K, Bryden SR, Burness KA, Carmichael S, Cole SJ, Cowton VM, Davies P, Davis C, De Lorenzo G, Donald CL, Dorward M, Dunlop JI, Elliott M, Fares M, da Silva Filipe A, Freitas JR, Furnon W, Gestuveo RJ, Geyer A, Giesel D, Goldfarb DM, Goodman N, Gunson R, Hastie CJ, Herder V, Hughes J, Johnson C, Johnson N, Kohl A, Kerr K, Leech H, Lello LS, Li K, Lieber G, Liu X, Lingala R, Loney C, Mair D, McElwee

MJ, McFarlane S, Nichols J, Nomikou K, Orr A, Orton RJ, Palmarini M, Parr YA, Pinto RM, Raggett S, Reid E, Robertson DL, Royle J, Cameron-Ruiz N, Shepherd JG, Smollett K, Stewart DG, Stewart M, Sugrue E, Szemiel AM, Taggart A, Thomson EC, Tong L, Torrie LS, Toth R, Varjak M, Wang S, Wilkinson SG, Wyatt PG, Zusinaite E, Alessi DR, Patel AH, Zaid A, Wilson SJ, Mahalingam S. PLoS Biol. 2021 Feb 25;19(2):e3001091. doi: 10.1371/journal.pbio.3001091. eCollection 2021 Feb. PMID: 33630831

Immunity to TBEV Related Flaviviruses with Reduced Pathogenicity Protects Mice from Disease but Not from TBEV Entry into the CNS.
Petry M, Palus M, Leitzen E, Mitterreiter JG, Huang B, Kröger A, Verjans GMGM, Baumgärtner W, Rimmelzwaan GF, Růžek D, Osterhaus A, Prajeeth CK. Vaccines (Basel). 2021 Feb 26;9(3):196. doi: 10.3390/vaccines9030196. PMID: 33652698

Market design to accelerate COVID-19 **vaccine** supply.
Castillo JC, Ahuja A, Athey S, Baker A, Budish E, Chipty T, Glennerster R, Kominers SD, Kremer M, Larson G, Lee J, Prendergast C, Snyder CM, Tabarrok A, Tan BJ, Więcek W. Science. 2021 Feb 25:eabg0889. doi: 10.1126/science.abg0889. Online ahead of print. PMID: 33632897

Medical experimentation and the roots of COVID-19 **vaccine** hesitancy among Indigenous Peoples in Canada.
Mosby I, Swidrovich J. CMAJ. 2021 Feb 24:cmaj.210112. doi: 10.1503/cmaj.210112. Online ahead of print. PMID: 33627413

Herpes Zoster Following Inactivated COVID-19 **Vaccine**: a Coexistence or Coincidence?
Bostan E, Yalici-Armagan B. J Cosmet Dermatol. 2021 Feb 27. doi: 10.1111/jocd.14035. Online ahead of print. PMID: 33638924

Cross-reactive immunogenicity of group A streptococcal vaccines designed using a recurrent neural network to identify conserved M protein linear epitopes.
Spencer JA, Penfound T, Salehi S, Aranha MP, Wade LE, Agarwal R, Smith JC, Dale JB, Baudry J. Vaccine. 2021 Feb 25:S0264-410X(21)00129-8. doi: 10.1016/j.vaccine.2021.01.075. Online ahead of print. PMID: 33642159

SARS-CoV-2 **vaccine** hesitancy among patients with rheumatic and musculoskeletal diseases: a message for rheumatologists.
Priori R, Pellegrino G, Colafrancesco S, Alessandri C, Ceccarelli F, Di Franco M, Riccieri V, Scrivo R, Sili Scavalli A, Spinelli FR, Conti F. Ann Rheum Dis. 2021 Feb 23:annrheumdis-2021-220059. doi: 10.1136/annrheumdis-2021-220059. Online ahead of print. PMID: 33622689

Aptamer-targeting of Aleutian mink disease virus (AMDV) can be an effective strategy to inhibit virus replication.
Lu T, Zhang H, Zhou J, Ma Q, Yan W, Zhao L, Wu S, Chen H. Sci Rep. 2021 Feb 25;11(1):4649. doi: 10.1038/s41598-021-84223-8. PMID: 33633317

A novel fiber-2-edited live attenuated **vaccine** candidate against the highly pathogenic serotype 4 fowl adenovirus.
Xie Q, Cao S, Zhang W, Wang W, Li L, Kan Q, Fu H, Geng T, Li T, Wan Z, Gao W, Shao H, Qin A, Ye J. Vet Res. 2021 Feb 27;52(1):35. doi: 10.1186/s13567-021-00907-z. PMID: 33640033

ASO Author Reflections: The Tumor Lysate, Particle-Loaded, Dendritic Cell **Vaccine** for Advanced-Stage Melanoma: Reflection on Personalized Cancer Vaccination.
Adams AM, Vreeland TJ, Clifton GT, Peoples GE. Ann Surg Oncol. 2021 Feb 26:1-2. doi: 10.1245/s10434-021-09782-6. Online ahead of print. PMID: 33638047

William chambers: British army surgeon (Toulon, 1793) and his vaccination institution (1803) in Brighton, England.
Cooper MJ, Whiston B. J Med Biogr. 2021 Feb 27:967772021991818. doi: 10.1177/0967772021991818. Online ahead of print. PMID: 33641509

Historical evidence to inform COVID-19 **vaccine** mandates.
Batniji R. Lancet. 2021 Feb 27;397(10276):791. doi: 10.1016/S0140-6736(21)00267-1. PMID: 33640058

Covid-19 **vaccine** apps should deliver more to patients.
Dasgupta N, Lazard A, Brownstein JS. Lancet Digit Health. 2021 Feb 25:S2589-7500(21)00021-2. doi: 10.1016/S2589-7500(21)00021-2. Online ahead of print. PMID: 33642239

COVID-19 **vaccine** availability: what are the side effects?
Akanet A. Br J Gen Pract. 2021 Feb 25;71(704):120. doi: 10.3399/bjgp21X715049. Print 2021. PMID: 33632683

How to test SARS-CoV-2 vaccines ethically even after one is available.
Eyal N, Lipsitch M. Clin Infect Dis. 2021 Feb 26:ciab182. doi: 10.1093/cid/ciab182. Online ahead of print. PMID: 33639622

Covid-19: **Vaccine** success drives England's lockdown exit.
Iacobucci G, Mahase E. BMJ. 2021 Feb 23;372:n528. doi: 10.1136/bmj.n528. PMID: 33622684

Effect of previous SARS-CoV-2 infection on humoral and T-cell responses to single-dose BNT162b2 **vaccine**.
Prendecki M, Clarke C, Brown J, Cox A, Gleeson S, Guckian M, Randell P, Pria AD, Lightstone L, Xu XN, Barclay W, McAdoo SP, Kelleher P, Willicombe M. Lancet. 2021 Feb 25:S0140-6736(21)00502-X. doi: 10.1016/S0140-6736(21)00502-X. Online ahead of print. PMID: 33640037

Influenza hemagglutinin-specific IgA Fc-effector functionality is restricted to stalk epitopes.
Freyn AW, Han J, Guthmiller JJ, Bailey MJ, Neu K, Turner HL, Rosado VC, Chromikova V, Huang M, Strohmeier S, Liu STH, Simon V, Krammer F, Ward AB, Palese P, Wilson PC, Nachbagauer R. Proc Natl Acad Sci U S A. 2021 Feb 23;118(8):e2018102118. doi: 10.1073/pnas.2018102118. PMID: 33593910

Persistence of anti-rubella immunoglobulin G antibody titers in young adults involved in a short-term periodic immunization in Japan.
Sasaki H, Fukunaga T, Asano A, Tsumita M, Suzuki Y, Shibata N. Jpn J Infect Dis. 2021 Feb 26. doi: 10.7883/yoken.JJID.2020.542. Online ahead of print. PMID: 33642429

Building public trust in COVID-19 vaccines through the Catholic Church in the Philippines.
Gopez JMW. J Public Health (Oxf). 2021 Feb 26:fdab036. doi: 10.1093/pubmed/fdab036. Online ahead of print. PMID: 33640960

Immunoinformatic based identification of cytotoxic T lymphocyte epitopes from the Indian isolate of SARS-CoV-2.
Mulpuru V, Mishra N. Sci Rep. 2021 Feb 25;11(1):4516. doi: 10.1038/s41598-021-83949-9. PMID: 33633155

What can we learn from COVID-19 **vaccine** R&D in China? A discussion from a public policy perspective.
Hu Y, Chen S. J Travel Med. 2021 Feb 25:taab026. doi: 10.1093/jtm/taab026. Online ahead of print. PMID: 33635318

Behind the scenes of the Pfizer BioNTech covid-19 **vaccine** trial.
Silberner J. BMJ. 2021 Feb 23;372:n271. doi: 10.1136/bmj.n271. PMID: 33622695

'Blue toes' following vaccination with the BNT162b2 mRNA COVID-19 **vaccine**.
Davido B, Mascitti H, Fortier-Beaulieu M, Jaffal K, de Truchis P. J Travel Med. 2021 Feb 23:taab024. doi: 10.1093/jtm/taab024. Online ahead of print. PMID: 33620081

COVID-19 first anniversary review of cases, hospitalization, and mortality in the UK.
Merchant HA, Kow CS, Hasan SS. Expert Rev Respir Med. 2021 Feb 26:1-6. doi: 10.1080/17476348.2021.1890035. Online ahead of print. PMID: 33573416

The Essential Role of a Physiatrist in Recommending a COVID-19 **Vaccine**.
Warden A, Caldera K. PM R. 2021 Feb 28. doi: 10.1002/pmrj.12582. Online ahead of print. PMID: 33644964

Characterisation of an Australian fowlpox virus carrying a near-full-length provirus of reticuloendotheliosis virus.
Sarker S, Athukorala A, Bowden TR, Boyle DB. Arch Virol. 2021 Feb 23. doi: 10.1007/s00705-021-05009-x. Online ahead of print. PMID: 33620554

Acute Immune thrombocytopenia following administration of Shingrix recombinant zoster **vaccine**.
Schmidt N, Maitland H. Am J Hematol. 2021 Feb 25. doi: 10.1002/ajh.26143. Online ahead of print. PMID: 33630318

Vaccine hesitancy among medical students: considerations for the future of public health.
Walker B. J Public Health (Oxf). 2021 Feb 26:fdab035. doi: 10.1093/pubmed/fdab035. Online ahead of print. PMID: 33637988

Correspondence Global COVID-19 **Vaccine** Equity Should Precede Requiring Travelers Proof of Vaccination.
Franco-Paredes C, Suarez JA, Henao-Martínez AF. Int J Infect Dis. 2021 Feb 25:S1201-9712(21)00147-8. doi: 10.1016/j.ijid.2021.02.061. Online ahead of print. PMID: 33640569

Commentary on "Coronavirus **Vaccine** Considerations for the Aesthetic Patient" by Rice et al.-Our Duty to Our Patients.
Nayak LM. Facial Plast Surg Aesthet Med. 2021 Feb 25. doi: 10.1089/fpsam.2021.0014. Online ahead of print. PMID: 33635155

Building the global **vaccine** manufacturing capacity needed to respond to pandemics.
Sell TK, Gastfriend D, Watson M, Watson C, Richardson L, Cicero A, Inglesby T, Connell N. Vaccine. 2021 Feb 24:S0264-410X(21)00165-1. doi: 10.1016/j.vaccine.2021.02.017. Online ahead of print. PMID: 33640143

Pregnant People's Paradox-Excluded From **Vaccine** Trials Despite Having a Higher Risk of COVID-19 Complications.
Rubin R. JAMA. 2021 Feb 24. doi: 10.1001/jama.2021.2264. Online ahead of print. PMID: 33625462

Covid-19: GPs could get extra funding to boost **vaccine** uptake in hard-to-reach groups.
Iacobucci G. BMJ. 2021 Feb 24;372:n548. doi: 10.1136/bmj.n548. PMID: 33627340

Covid-19: Pfizer BioNTech **vaccine** reduced cases by 94% in Israel, shows peer reviewed study.
Wise J. BMJ. 2021 Feb 25;372:n567. doi: 10.1136/bmj.n567. PMID: 33632676

Covid-19: NHS England pledges extra funding to local areas to reduce **vaccine** inequalities.
Iacobucci G. BMJ. 2021 Feb 26;372:n580. doi: 10.1136/bmj.n580. PMID: 33637487

A Nonprofit Public Utility Approach to Enhance Next-Generation **Vaccine** Manufacturing Capacity.
Liljenquist D, Dai T, Bai G. Popul Health Manag. 2021 Feb 26. doi: 10.1089/pop.2020.0377. Online ahead of print. PMID: 33646049

Stakeholder Perspectives on Linking HIV Pre-Exposure Prophylaxis with Human Papillomavirus **Vaccine**.
Sullivan-Blum Z, Stites S, Kennedy P, Swenson M, Ault K, Alt M, Dietz C, Rotert P, Ramaswamy M. AIDS Patient Care STDS. 2021 Feb 23. doi: 10.1089/apc.2020.0234. Online ahead of print. PMID: 33625257

Jeremy Farrar: Make **vaccine** available to other countries as soon as our most vulnerable people have received it.
[No authors listed] BMJ. 2021 Feb 26;372:n581. doi: 10.1136/bmj.n581. PMID: 33637578

Patentes registradas en PatentScope

Estrategia de búqueda: *Vaccine in the title or abstract AND 20210223:20210228 as the publication date*

185 records

1.20210052714TUBERCULOSIS VACCINE, PREPARATION METHOD THEREFOR, AND USE THEREOF
US - 25.02.2021

2.20210052719A UNIVERSAL VACCINE AGAINST INFLUENZA
US - 25.02.2021

3.20210052724METHOD FOR IMPROVING THE EFFICACY OF A SURVIVIN VACCINE IN THE TREATMENT OF CANCER
US - 25.02.2021

4.WO/2021/034349METHODS FOR PREVENTING DENGUE AND HEPATITIS A
WO - 25.02.2021

5.20210052718RESPIRATORY SYNCYTIAL VIRUS (RSV) VACCINES

US - 25.02.2021

6.3782640WT1 VACCINE
EP - 24.02.2021

7.WO/2021/034729N-ARYL SULFONAMIDE DERIVATIVES AS VACCINE ADJUVANT
WO - 25.02.2021

8.20210057043TUMOR NEOANTIGEN PREDICTION PLATFORM AND APPLICATION THEREOF IN NEOANTIGEN VACCINE DEVELOPMENT SYSTEM
US - 25.02.2021

9.10925937Vaccines for use in treating juvenile disorders associated with inflammation
US - 23.02.2021

10.20210053986CYANO CYCLOBUTYL COMPOUNDS FOR CBL-B INHIBITION AND USES THEREOF
US - 25.02.2021

11.20210053961SUBSTITUTED BENZYL-TRIAZOLE COMPOUNDS FOR CBL-B INHIBITION, AND FURTHER USES THEREOF
US - 25.02.2021

12.20210052720CAP260, CAP174 AND K0224 HIV-1 ENVELOPES, PEPTIDE AND COMPOSITIONS
US - 25.02.2021

13.20210052725ADJUVANT SYSTEM FOR ORAL VACCINE ADMINISTRATION
US - 25.02.2021

14.3781946METHODS FOR DETERMINING VACCINE POTENCY
EP - 24.02.2021

15.3781198TICK VACCINE
EP - 24.02.2021

16.20210054043MODULATION OF SLAMF6 SPLICE VARIANTS FOR CANCER THERAPY
US - 25.02.2021

17.20210052727CYTOKINE FUSION PROTEINS
US - 25.02.2021

18.20210052723NEW SYNTHETIC AGONISTS OF TLR4 RECEPTOR
US - 25.02.2021

19.20210052717CANCER IMMUNOTHERAPY USING VIRUS PARTICLES
US - 25.02.2021

20.WO/2021/033420PORCINE CIRCOVIRUS TYPE 2 VLP VACCINE
WO - 25.02.2021

21.20210057074A PLATFORM AND SYSTEM FOR USE IN THERAPEUTIC PROCEDURES
US - 25.02.2021

22.WO/2021/031409APPLICATION OF PSEUDOMONAS AERUGINOSA VACCINE IN RESPIRATORY DISEASE
WO - 25.02.2021

23.20210054461MEASUREMENT AND COMPARISON OF IMMUNE DIVERSITY BY HIGH-THROUGHPUT SEQUENCING
US - 25.02.2021

24.20210052647TETHERED INTERLEUKIN-15 AND INTERLEUKIN-21
US - 25.02.2021

25.WO/2021/034975PROTEIN PANELS FOR THE EARLY DIAGNOSIS/PROGNOSIS AND TREATMENT OF AGGRESSIVE PROSTATE CANCER
WO - 25.02.2021

26.20210052653PEPTIDES AND COMBINATION OF PEPTIDES OF NON-CANONICAL ORIGIN FOR USE IN IMMUNOTHERAPY AGAINST DIFFERENT TYPES OF CANCERS
US - 25.02.2021

27.20210052652PEPTIDES AND COMBINATION OF PEPTIDES OF NON-CANONICAL ORIGIN FOR USE IN IMMUNOTHERAPY AGAINST DIFFERENT TYPES OF CANCERS
US - 25.02.2021

28.20210052654PEPTIDES AND COMBINATION OF PEPTIDES OF NON-CANONICAL ORIGIN FOR USE IN IMMUNOTHERAPY AGAINST DIFFERENT TYPES OF CANCERS
US - 25.02.2021

29.20210052651PEPTIDES AND COMBINATION OF PEPTIDES OF NON-CANONICAL ORIGIN FOR USE IN IMMUNOTHERAPY AGAINST DIFFERENT TYPES OF CANCERS
US - 25.02.2021

30.20210054073ANTI-PD-L1 ANTIBODIES AND USES THEREOF
US - 25.02.2021

31.WO/2021/032179APPLICATION OF PSEUDOMONAS AERUGINOSA VACCINE IN TREATING INFECTION ASSOCIATED WITH BURN OR SCALD INJURY
WO - 25.02.2021

32.3782642STREPTOCOCCUS PNEUMONIAE CAPSULAR POLYSACCHARIDES AND IMMUNOGENIC CONJUGATE THEREOF
EP - 24.02.2021

33.20210054434KIT FOR AMPLIFYING IMMUNOGLOBULIN SEQUENCES
US - 25.02.2021

34.20210052613METHODS FOR TREATING FILOVIRIDAE VIRUS INFECTIONS
US - 25.02.2021

35.20210052628METHOD
US - 25.02.2021

36.2021200484Methods and kits for quantifying the removal of Mock Virus Particles from a purified solution
AU - 25.02.2021

37.WO/2021/034616METHODS OF TREATING A SUBJECT WITH A CDC42-SPECIFIC INHIBITOR
WO - 25.02.2021

38.WO/2021/034943IN VIVO IMMUNOIMAGING OF INTERLEUKIN-12
WO - 25.02.2021

39.202100543243D SPATIALLY PATTERNED LYMPH NODE ON A MICROFLUIDIC DEVICE
US - 25.02.2021

40.3781192ADDITIVES FOR PROTEIN FORMULATIONS TO IMPROVE THERMAL STABILITY
EP - 24.02.2021

41.20210054032MUTANT FRAGMENTS OF OSPA AND METHODS AND USES RELATING THERETO
US - 25.02.2021

42.20210054084ANTI-CD25 ANTIBODY AGENTS

US - 25.02.2021

43.10927153Synthetic plasmodium antigens, compositions, and uses thereof
US - 23.02.2021

44.3781208PHYTATES FOR USE AS A BIOMOLECULES DELIVERY OR ADSORPTION SYSTEM
EP - 24.02.2021

45.WO/2021/034804PHARMACEUTICAL FORMULATIONS OF TENOFOVIR ALAFENAMIDE
WO - 25.02.2021

46.20210052671COMPOSITIONS COMPRISING BACTERIAL STRAINS
US - 25.02.2021

47.3781195CHIMERIC VACCINE ANTIGENS FOR ANAPLASMOSIS
EP - 24.02.2021

48.3782643MODIFIED MENINGOCOCCAL FHBP POLYPEPTIDES
EP - 24.02.2021

49.20210052713Proteins and nucleic acids useful in vaccines targeting Klebsiella pneumoniae
US - 25.02.2021

50.20210052694COMPOSITIONS AND METHODS FOR SUBCUTANEOUS ADMINISTRATION OF CANCER IMMUNOTHERAPY
US - 25.02.2021

51.WO/2021/034143SEVERE FEVER WITH THROMBOCYTOPENIA SYNDROME VIRUS DERIVED IMMUNOGENIC POLYPEPTIDE FRAGMENT AND USE THEREOF
WO - 25.02.2021

52.WO/2021/033082A PROKARYOTIC-EUKARYOTIC HYBRID VIRAL VECTOR FOR DELIVERY OF LARGE CARGOS OF GENES AND PROTEINS INTO HUMAN CELLS
WO - 25.02.2021

53.20210054410PROKARYOTIC-EUKARYOTIC HYBRID VIRAL VECTOR FOR DELIVERY OF LARGE CARGOS OF GENES AND PROTEINS INTO HUMAN CELLS
US - 25.02.2021

54.20210052695PEPTIDE EXCHANGE PROTEIN
US - 25.02.2021

55.20210052680Stable Frozen Virus Formulation
US - 25.02.2021

56.WO/2021/034964MODULATION OF T CELL RESPONSES BY UL18 OF HUMAN CYTOMEGALOVIRUS
WO - 25.02.2021

57.20210054072ANTI-SIGLEC-7 ANTIBODIES HAVING REDUCED EFFECTOR FUNCTION
US - 25.02.2021

58.20210054080PEPTIDES
US - 25.02.2021

59.20210054036PEPTIDES
US - 25.02.2021

60.20210054037PEPTIDES OF PAGE5
US - 25.02.2021

61.20210052596TARGETING THE CBM SIGNALOSOME COMPLEX INDUCES REGULATORY T CELLS TO INFLAME THE TUMOR MICROENVIRONMENT
US - 25.02.2021

62.20210054045PEPTIDES
US - 25.02.2021

63.20210054074ANTI-LAG-3 ANTIBODIES AND METHODS OF USE THEREOF
US - 25.02.2021

64.WO/2021/034728COMPOSITIONS AND PARTICLES FOR PAYLOAD DELIVERY
WO - 25.02.2021

65.WO/2021/035172DIAGNOSTICS AND METHODS FOR PROGNOSING RESPONSE TO IMMUNOTHERAPY BASED ON THE METHYLATION STATUS OF IMMUNE SYNAPSE GENE SIGNATURE
WO - 25.02.2021

66.20210054464METHODS FOR SUBTYPING OF BLADDER CANCER
US - 25.02.2021

67.WO/2021/034275METHOD FOR THE GENERATION OF DUMBBELL-SHAPED DNA VECTORS
WO - 25.02.2021

68.20210052738Disulfide Bridging Conjugates
US - 25.02.2021

69.WO/2021/031270BACTERIAL MEMBRANE VESICLES, AND SEPARATION AND PREPARATION SYSTEM AND METHOD THEREFOR
WO - 25.02.2021

70.WO/2021/034774FUCOSYLATION AND IMMUNE MODULATION IN CANCER
WO - 25.02.2021

71.20210054055HIGHLY SPECIFIC ZIKA NEUTRALIZING HUMAN ANTIBODIES
US - 25.02.2021

72.20210052712HETEROLOGOUS COMBINATION PRIME:BOOST THERAPY AND METHODS OF TREATMENT
US - 25.02.2021

73.3783027METHOD AND COMPOSITIONS FOR INDUCING DIFFERENTIATION OF MYELOID DERIVED SUPPRESSOR CELL TO TREAT CANCER AND INFECTIOUS DISEASES
EP - 24.02.2021

74.WO/2021/034582LARGE SCALE PRODUCTION OF EXOSOME MIMETICS AND USES THEREOF
WO - 25.02.2021

75.WO/2021/035177VARIANT FC DOMAINS AND USES THEREOF
WO - 25.02.2021

76.20210053946PD-1/PD-L1 INHIBITORS
US - 25.02.2021

77.20210053972COMPOUNDS USEFUL AS IMMUNOMODULATORS
US - 25.02.2021

78.20210053971CRYSTAL FORM OF MONOMETHANESULFONATE OF DEUTERATED 3-(4,5-SUBSTITUTED AMINOPYRIMIDINE)PHENYL COMPOUND AND PREPARATION METHOD THEREFOR

US - 25.02.2021

79.2021100486A phage display FMD particle and its preparation method and vaccine
AU - 25.02.2021

80.3783029THERAPEUTIC AND DIAGNOSTIC METHODS FOR CANCER
EP - 24.02.2021

81.3783100COXSACKIE VIRUS B FOR TREATING TUMORS
EP - 24.02.2021

82.3783018BROADLY-NEUTRALIZING ANTI-HIV ANTIBODIES
EP - 24.02.2021

83.20210054056HUMAN ANTIBODIES TO BET V 1 AND METHODS OF USE THEREOF
US - 25.02.2021

84.3783032COMBINING ADENOVIRUS AND CHECKPOINT INHIBITORS FOR TREATING CANCER
EP - 24.02.2021

85.20210054102COMPOSITIONS AND METHODS FOR ENHANCING NUCLEAR TRANSLOCATION
US - 25.02.2021

86.20210052669COMPOSITIONS AND METHODS FOR TREATING IMMUNE DISORDERS USING LACHNOSPIRACEAE BACTERIA
US - 25.02.2021

87.20210052498COMPOSITIONS AND METHODS OF USING PROPYLENE SULFIDE-BASED POLYMERS FOR TREATMENT OF CHAGAS DISEASE
US - 25.02.2021

88.20210054380Interferon Production Using Short RNA Duplexes
US - 25.02.2021

89.20210052721HEPATITIS C VIRUS PEPTIDE COMPOSITIONS AND METHODS OF USE THEREOF
US - 25.02.2021

90.20210054327Single Use Container Including a Collapsible Baffle Having Channels
US - 25.02.2021

91.20210052645Innate Targeting of Adoptive Cellular Therapies
US - 25.02.2021

92.20210052690TREATMENT OF HMGB1-MEDIATED INFLAMMATION
US - 25.02.2021

93.20210051930GENETICALLY MODIFIED T CELL RECEPTOR MICE
US - 25.02.2021

94.20210054332CELL SHEET FOR GENE DELIVERY
US - 25.02.2021

95.20210054092HIGHLY CONCENTRATED PHARMACEUTICAL FORMULATIONS
US - 25.02.2021

96.20210053933THERAPEUTIC AURONES
US - 25.02.2021

97.3783026SWITCH MOLECULE AND SWITCHABLE CHIMERIC ANTIGEN RECEPTOR
EP - 24.02.2021

98.WO/2021/034660COMPOSITIONS FOR GUT HEALTH COMPRISING COMBINATIONS OF LACTOBACILLUS STRAINS

WO - 25.02.2021

99.20210054053FORMULATIONS OF ANTIBODY MOLECULES TO INFLUENZA VIRUS
US - 25.02.2021

100.3782615PATCH FOR ALLEVIATION AND PREVENTION OF ACNE
EP - 24.02.2021

101.20210054091ANTIBODIES TO CD40
US - 25.02.2021

102.20210054016Enzymatic RNA Capping Method
US - 25.02.2021

103.WO/2021/034533CELL CULTURE ASSEMBLIES AND METHODS OF USING THE SAME
WO - 25.02.2021

104.3782677DRUG DELIVERY DEVICE WITH CARTRIDGE HOLDER
EP - 24.02.2021

105.3782716CROSSFLOW FILTRATION METHOD, METHOD FOR OBTAINING AT LEAST ONE CROSSFLOW FILTRATION PARAMETER AND SYSTEM FOR OBTAINING AT LEAST ONE CROSSFLOW FILTRATION PARAMETER
EP - 24.02.2021

106.20210052710COMPOSITIONS AND METHODS FOR PROTECTING AGAINST AIRBORNE PATHOGENS AND IRRITANTS
US - 25.02.2021

107.20210054081ANTI HLA-G SPECIFIC ANTIBODIES
US - 25.02.2021

108.WO/2021/035129USE OF BRAZIKUMAB TO TREAT CROHN'S DISEASE
WO - 25.02.2021

109.20210056496SYSTEM FOR FACILITATING PURCHASE OF PRESCRIPTION DRUGS
US - 25.02.2021

110.20210052566METHODS FOR TREATING HEPATITIS B VIRUS (HBV) INFECTION
US - 25.02.2021

111.20210052643MODIFIED MACROPHAGES AND MACROPHAGE PRECURSORS AND ASSOCIATED METHODS
US - 25.02.2021

112.20210052700METHOD FOR TREATING PULMONARY FIBROSIS USING S100A3 PROTEIN
US - 25.02.2021

113.WO/2021/034415SAMPLE-CONCENTRATING ASSISTED ARRAY-BASED ASSAY METHOD
WO - 25.02.2021

114.20210052728ANTI-ANGIOGENESIS THERAPY FOR THE TREATMENT OF OVARIAN CANCER
US - 25.02.2021

115.WO/2021/032653CLOSURE FOR MEDICAMENT CONTAINER
WO - 25.02.2021

116.WO/2021/035170COMPOSITIONS AND METHODS FOR TCR REPROGRAMMING USING FUSION PROTEINS
WO - 25.02.2021

117.202100539964-Substituted Benzoxaborole Compounds and Uses Thereof

US - 25.02.2021

118.20210054047NOVEL ANTICANCER FUSION PROTEIN AND USE THEREOF
US - 25.02.2021

119.WO/2021/034879PROBIOTIC DELIVERY OF GUIDED ANTIMICROBIAL PEPTIDES
WO - 25.02.2021

120.20210052814CONTAINER FOR AN INJECTABLE MEDICAMENT
US - 25.02.2021

121.20210052679PROBIOTIC DELIVERY OF GUIDED ANTIMICROBIAL PEPTIDES
US - 25.02.2021

122.3782633ORAL CAVITY COMPOSITION FOR ANIMAL, AND PERIODONTAL DISEASE-PREVENTING AGENT, INFECTIOUS DISEASE-PREVENTING AGENT, AND HALITOSIS-PREVENTING AGENT WHICH ARE FOR ANIMAL AND USE SAME
EP - 24.02.2021

123.20210052624RNAI THERAPY FOR HEPATITIS B VIRUS INFECTION
US - 25.02.2021

124.20210053999Tricyclic Benzoxaborole Compounds and Uses Thereof
US - 25.02.2021

125.20210055309Tau Imaging Ligands and Their Uses in the Diagnosis and Treatment of Tauopathy
US - 25.02.2021

126.20210054407Dry Transfection Compositions and Methods for Making and Using the Same
US - 25.02.2021

127.20210052817CONTAINER FOR AN INJECTABLE MEDICAMENT
US - 25.02.2021

128.20210054048RAPID AND SIMPLE PURIFICATION OF ELASTIN-LIKE POLYPEPTIDES DIRECTLY FROM WHOLE CELLS AND CELL LYSATES BY ORGANIC SOLVENT EXTRACTION
US - 25.02.2021

129.20210054019PANAXADIOL GLYCOSIDE DERIVATIVE AND PREPARATION METHOD AND APPLICATION THEREOF
US - 25.02.2021

130.20210054457AUTISM ASSOCIATED GENETIC MARKERS
US - 25.02.2021

131.20210052528THE USE OF SGC ACTIVATORS AND SGC STIMULATORS FOR THE TREATMENT OF COGNITIVE IMPAIRMENT
US - 25.02.2021

132.WO/2021/033153PYRAZOLO[3,4-B]PYRAZINE SHP2 PHOSPHATASE INHIBITORS
WO - 25.02.2021

133.20210054331METHOD AND SYSTEM FOR USE IN MONITORING BIOLOGICAL MATERIAL
US - 25.02.2021

134.WO/2021/032779CELL THERAPY METHODS
WO - 25.02.2021

135.20210054027Catheter Injectable Cyclic Peptide Pro-Gelators for Myocardial Tissue Engineering
US - 25.02.2021

136.20210054068DETECTION OF PANCREATIC CANCER WITH AN ENGINEERED ANTI-THY1 SINGLE-CHAIN ANTIBODY
US - 25.02.2021

137.20210054379YEAST FOR PRODUCING AND DELIVERING RNA BIOACTIVE MOLECULES AND METHODS AND USES THEREOF
US - 25.02.2021

138.20210052740CLOTTING FACTOR VARIANTS AND THEIR USE
US - 25.02.2021

139.20210052561TARGETING ASPARTATE BETA-HYDROXYLASE SUPPRESSES TUMOR MALIGNANCY AND METASTASIS
US - 25.02.2021

140.WO/2021/034650METHODS OF DETERMINING THE SUITABILITY OF CULTURED THYMUS TISSUE FOR IMPLANTATION INTO HUMANS AND ASSOCIATED METHODS OF USE
WO - 25.02.2021

141.20210052648METHOD OF PRODUCING LEUKOCYTES USING PTPN2 INHIBITION FOR ADOPTIVE CELL TRANSFER
US - 25.02.2021

142.20210054358METHOD FOR MAKING PLURIPOTENT STEM CELLS
US - 25.02.2021

143.20210052715IMMUNOMODULATORY MINICELLS AND METHODS OF USE
US - 25.02.2021

144.2021200525Immunomodulatory minicells and methods of use
AU - 25.02.2021

145.20210052507DRUGS AND GENE CARRIER PARTICLES THAT RAPIDLY MOVE THROUGH MUCOUS BARRIERS
US - 25.02.2021

146.20210054381OLIGOMERS AND OLIGOMER CONJUGATES
US - 25.02.2021

147.WO/2021/034418NOVEL PEPTIDE, COMPOSITIONS AND METHOD FOR DELIVERY OF AGENTS INTO CELLS AND TISSUES
WO - 25.02.2021

148.3783023ANTI-INTERLEUKIN-33 ANTIBODIES AND USES THEREOF
EP - 24.02.2021

149.WO/2021/035120ADENO-ASSOCIATED VIRUS VECTOR DELIVERY OF ALPHA-SARCOGLYCAN AND THE TREATMENT OF MUSCULAR DYSTROPHY
WO - 25.02.2021

150.20210052871METHODS FOR BETTER DELIVERY OF ACTIVE AGENTS TO TUMORS
US - 25.02.2021

151.20210052743CD59 FOR INHIBITING INFLAMMASOME ACTIVATION
US - 25.02.2021

152.3782628METHODS OF USING ZSCAN4 FOR REJUVENATING HUMAN CELLS
EP - 24.02.2021

153.20210054355SOLUBLE ALPHA-KLOTHO PROTEINS, PROTEIN FRAGMENTS, AND USES THEREOF
US - 25.02.2021

154.WO/2021/032591MACROCYCLIC SULFONYLUREA DERIVATIVES USEFUL AS NLRP3 INHIBITORS
WO - 25.02.2021

155.WO/2021/034982IMMUNE CELLS FOR ADOPTIVE CELL THERAPIES
WO - 25.02.2021

156.20210052626COMPOSITIONS AND METHODS FOR TREATING MALIGNANT, AUTOIMMUNE AND INFLAMMATORY DISEASES
US - 25.02.2021

157.20210054062ANTI-FAMILY WITH SEQUENCE SIMILARITY 19, MEMBER A5 ANTIBODIES AND METHOD OF USE THEREOF
US - 25.02.2021

158.WO/2021/034976T-CELL IMMUNOTHERAPY SPECIFIC FOR WT-1
WO - 25.02.2021

159.20210055302AGENTS AND METHODS FOR PREDICTING RESPONSE TO THERAPY
US - 25.02.2021

160.2021200474Continuous purification of therapeutic proteins
AU - 25.02.2021

161.WO/2021/034770NEUROMELANIN-SENSITIVE MRI FOR ASSESSING PARKINSON'S DISEASE
WO - 25.02.2021

162.WO/2021/032588MACROCYCLIC SULFONYLAMIDE DERIVATIVES USEFUL AS NLRP3 INHIBITORS
WO - 25.02.2021

163.20210052550COMPOSITION COMPRISING TETRACYCLIC COMPOUND
US - 25.02.2021

164.20210054454METHODS FOR BIOLOGICAL SAMPLE PROCESSING AND ANALYSIS
US - 25.02.2021

165.20210054086IMMUNE CELLS EXPRESSING A CHIMERIC ANTIGEN RECEPTOR
US - 25.02.2021

166.20210052621METHODS FOR TREATING FLAVIVIRUSES AND ZIKA INFECTIONS
US - 25.02.2021

167.20210052747SPECIFIC CONJUGATION LINKERS, SPECIFIC IMMUNOCONJUGATES THEREOF, METHODS OF MAKING AND USES SUCH CONJUGATES THEREOF
US - 25.02.2021

168.3782638STAPLED AND STITCHED POLYPEPTIDES AND USES THEREOF
EP - 24.02.2021

169.20210054376EXPRESSION OF FOXP3 IN EDITED CD34+ CELLS
US - 25.02.2021

170.20210052660NEURAL STEM CELL COMPOSITIONS INCLUDING CHIMERIC POXVIRUSES FOR CANCER TREATMENT
US - 25.02.2021

171.3782649BIODEGRADABLE POLYETHYLENE GLYCOL BASED WATER-INSOLUBLE HYDROGELS
EP - 24.02.2021

172.2021200562Conjugation Linkers, Cell Binding Molecule-Drug Conjugates Containing the linkers, methods of making and uses such conjugates with the linkers
AU - 25.02.2021

173.WO/2021/035087SILK PERSONAL CARE COMPOSITIONS
WO - 25.02.2021

174.20210054087THERAPEUTIC ANTIBODIES AND THEIR USES
US - 25.02.2021

175.20210054353NOVEL RNA-PROGRAMMABLE ENDONUCLEASE SYSTEMS AND USES THEREOF
US - 25.02.2021

176.WO/2021/034727COMPOSITIONS, FORMULATIONS, AND INTERLEUKIN PRODUCTION AND PURIFICATION
WO - 25.02.2021

177.20210052489PARTICLES, COMPOSITIONS AND METHODS FOR OPHTHALMIC AND/OR OTHER APPLICATIONS
US - 25.02.2021

178.WO/2021/035096COMPOSITIONS AND METHODS FOR TARGETING CELLULAR MOLECULES
WO - 25.02.2021

179.3782986HETEROCYCLIC COMPOUND
EP - 24.02.2021

180.20210054071SINGLE-DOMAIN ANTIBODIES AND VARIANTS THEREOF AGAINST TIGIT
US - 25.02.2021

181.20210054098Methods for Treating Conditions Associated with MASP-2 Dependent Complement Activation
US - 25.02.2021

182.20210053974INHIBITORS OF THE MENIN-MLL INTERACTION
US - 25.02.2021

183.20210054040NOVEL IL-15 CONJUGATES AND USES THEREOF
US - 25.02.2021

184.3782604AEROSOL TYROSINE KINASE INHIBITOR COMPOUNDS AND USES THEREOF
EP - 24.02.2021

185.3782626HEPATITIS B CORE PROTEIN MODULATORS

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

Results Search in US Patent Collection db for: (ABST/vaccine AND ISD/20210223->20210228), 15 records.

	PAT. NO.	Title
1	10,927,151	Methods of optimizing nucleotide sequences encoding engineered influenza proteins
2	10,927,147	Muramyl peptide derivative compound, synthesis and uses thereof
3	10,926,086	Lymphatic system neuromodulation and uses thereof
4	10,925,961	Vaccines with CD40 ligand as an adjuvant
5	10,925,959	Porcine epidemic diarrhea virus S protein and subunit vaccine thereof as well as method for preparing subunit vaccine and application thereof
6	10,925,954	Vaccines against Chlamydia sp
7	10,925,951	Vaccination against diabetes, obesity and complications thereof
8	10,925,950	Immunogenic compositions, antigen screening methods, and methods of generating immune responses
9	10,925,949	Immunotherapy against several tumors of the blood, such as acute myeloid leukemia (AML)
10	10,925,948	Peptides and combination of peptides for use in immunotherapy against lung cancer, including NSCLC and other cancers
11	10,925,947	A*03 restricted peptides for use in immunotherapy against cancers and related methods
12	10,925,945	Bacterial vaccines deficient in the 2-C-methyl-D-erythritol-4-phosphate pathway and methods of preparation and use thereof
13	10,925,938	Composition comprising PCSK9 peptide conjugated to a Qbeta carrier and methods of using the same
14	10,925,937	Vaccines for use in treating juvenile disorders associated with inflammation
15	10,925,936	Vaccine pharmaceutical composition for cell-mediated immunity containing bisphosphonates

***NOTA ACLARATORIA**: Las noticias y otras informaciones que aparecen en este boletín provienen de sitios públicos, debidamente referenciados mediante vínculos a Internet que permiten a los lectores acceder a las versiones electrónicas de sus fuentes originales. Hacemos el mayor esfuerzo por verificar de buena fe la objetividad, precisión y certeza de las opiniones, apreciaciones, proyecciones y comentarios que aparecen en sus contenidos, pero este boletín no puede garantizarlos de forma absoluta, ni se hace responsable de los errores u omisiones que pudieran contener. En este sentido, sugerimos a los lectores cautela y los alertamos de que asumen la total responsabilidad en el manejo de dichas informaciones; así como de cualquier daño o perjuicio en que incurran como resultado del uso de estas, tales como la toma de decisiones científicas, comerciales, financieras o de otro tipo.*

Edición: Annia Ramos Rodríguez aramos@finlay.edu.cu
Ma. Victoria Guzmán Sánchez mguzman@finlay.edu.cu
Randelys Molina Castro rmolina@finlay.edu.cu
Yamira Puig Fernández yamipuig@finlay.edu.cu
Rolando Ochoa Azze ochoa@finlay.edu.cu

FINLAY EDICIONES

