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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 más recientes en Patentscope sobre vacunas.
- Patentes más recientes en USPTO sobre vacunas.

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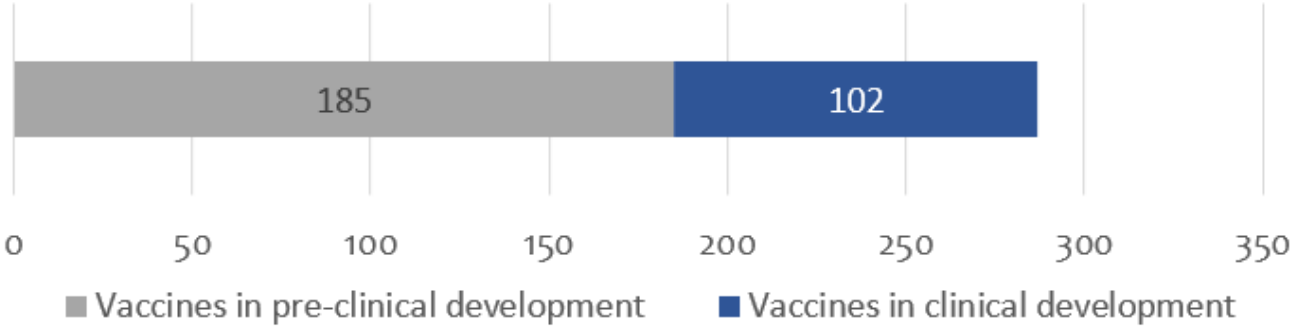
CUBA

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: 1 de junio de 2021.

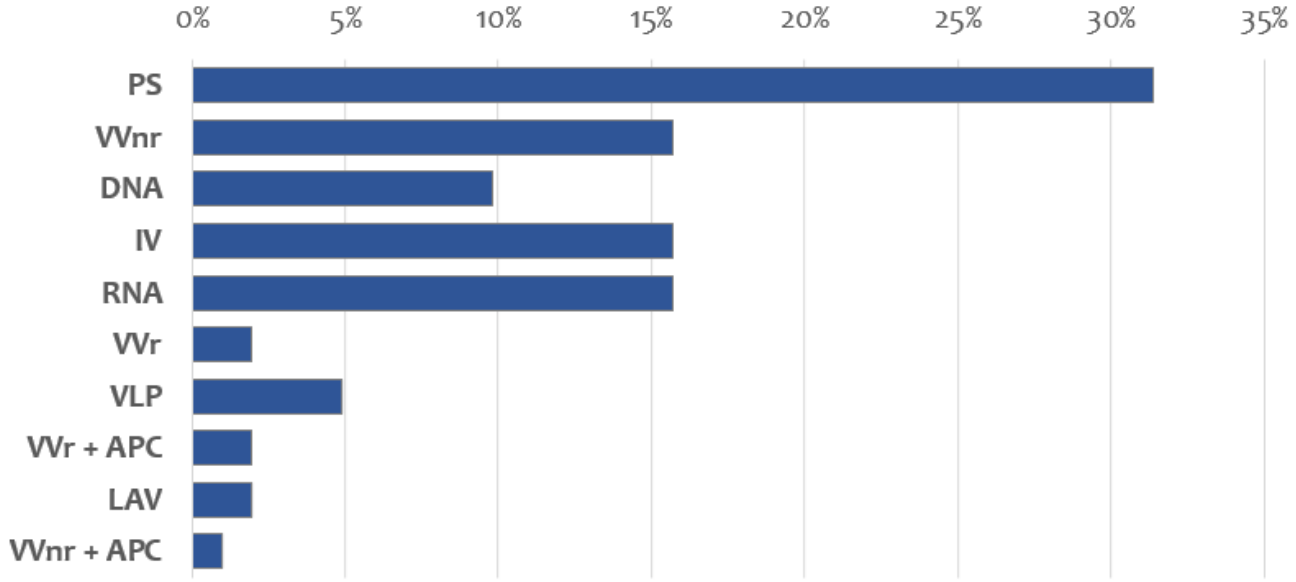
Fuente de información utilizada: World Health Organization | R&DBlueprint Powering research to prevent epidemics

102 candidatos vacunales en evaluación clínica y 185 en evaluación preclínica.



Candidatos vacunales en evaluación clínica por plataforma

Platform		Candidate vaccines (no. and %)	
PS	Protein subunit	32	31%
VVnr	Viral Vector (non-replicating)	16	16%
DNA	DNA	10	10%
IV	Inactivated Virus	16	16%
RNA	RNA	16	16%
VVr	Viral Vector (replicating)	2	2%
VLP	Virus Like Particle	5	5%
VVr + APC	VVr + Antigen Presenting Cell	2	2%
LAV	Live Attenuated Virus	2	2%
VVnr + APC	VVnr + Antigen Presenting Cell	1	1%
		102	



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	4
University of Oxford/AstraZeneca/Reino Unido	Vector viral no replicativo	4
CanSino Biological Inc./Beijing Institute Biotechnology/China	Vector viral no replicativo	4
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
Pfizer/BioNTech Fosun Pharma/Estados Unidos	ARN	4
Anhui Zhifei Longcom Biopharmac./Inst. Microbiology, Chinese Academy Sciences	Subunidad proteica	3
CureVac AG/Alemania	ARN	3
Institute of Medical Biology/Chinese Academy of Medical Sciences	Virus inactivado	3
Research Institute for Biological Safety Problems, Kazakhstan	Virus inactivado	3
Zydus Cadila Healthcare Ltd./India	ADN	3
Bharat Biotech/India	Virus Inactivado	3
Sanofi Pasteur + GSK/Francia/Gran Bretaña	Subunidad proteica	3
Shenzhen Kangtai Biological Products Co., Ltd./ China	Virus Inactivado	3
Instituto Finlay de Vacunas/Cuba	Subunidad proteica	3
Federal Budgetary Research Institution State Research Center of Virology and Biotechnology "Vector"/Rusia	Subunidad proteica	3
Academy Military Science (AMS) Walvax Biotechnology, Suzhou Abogen Bioscience/China	ARN	3
Center for Genetic Engineering and Biotechnology (CIGB)/Cuba	Subunidad proteica	3
Valneva, National Institute for Health Research, Reino Unido	Virus inactivo	3

Candidatos vacunales mucosales en evaluación clínica

Desarrollador de la vacuna/fabricante/país	Plataforma de la vacuna	Vía de administración	Fase
University of Oxford/Reino Unido	Vector viral no replicativo	Intranasal	1
Vaxart/Estados Unidos	Vector viral no replicativo	Oral	1
Univ. Hong Kong, Xiamen Univ./Beiging Wantai Biol. Pharm./China	Vector viral replicativo	Intranasal	2
Symvivo/Canadá	ADN	Oral	1
ImmunityBio, Inc./Estados Unidos	Vector viral no replicativo	Oral or IM	1/2
Codagenix/Serum Institute of India	Virus vivo atenuado	Intranasal	1
Center for Genetic Engineering and Biotechnology (CIGB)/Cuba	Subunidad proteica	Intranasal	1/2
Altimmune, Inc./Estados Unidos	Vector viral no replicativo	Intranasal	1
Razi Vaccine and Serum Research Institute/India	Subunidad proteica	Intranasal	2
Bharat Biotech International Limited/India	Vector viral no replicativo	Intranasal	1
Meissa Vaccines, Inc./Estados Unidos	Virus vivo atenuado	Intranasal	1
Laboratorio Avi-Mex/México	Virus inactivado	IM o IN	1
VaxForm/Estados Unidos	Subunidad proteica	Oral	1

Noticias en la Web

Los expertos de Salamanca, divididos sobre la segunda dosis a los vacunados con AstraZeneca

May 22. La mayoría cree que lo ideal sería completar la vacunación con el antídoto inoculado la primera vez. La decisión del Gobierno de completar con Pfizer la vacunación de los menores de 60 años que recibieron la primera dosis de AstraZeneca ha dividido a los afectados —unos prefieren que les inyecten de nuevo el antídoto de Oxford, tal y como se ha permitido después, previo consentimiento, mientras que otros se sienten más seguro con la vacuna de Pfizer—, y también a los expertos en virología, epidemiología y farmacología. Mientras algunos especialistas consultados por este periódico muestran su desconcierto por una decisión asociada a un estudio con un número muy pequeño de personas, otros consideran que lo importante es que el proceso de vacunación prosiga.

"Todo aquello que facilite la vacunación y que ofrezca más opciones es mejor que estar parados en el proceso de vacunación", afirma Ana Fernández Sesma, viróloga del Hospital Monte Sinaí de Nueva York y recuerda: "Hay datos suficientes de millones de vacunaciones en Inglaterra y otros países y la recomendación de la EMA (Agencia Europea del Medicamento) que avalan que la segunda dosis de AstraZeneca se puede administrar y es eficaz".

En cuanto a la combinación de AstraZeneca y Pfizer, la experta explica que el estudio sugiere que no sería perjudicial el combinar los dos tipos de vacunas, pero señala que "no aporta datos de porcentajes de efectos adversos como trombos al ser un número limitado de personas y ser todavía resultados preliminares". En cualquier caso insiste: "Las dos opciones funcionan y con cualquiera de las dos la persona vacunada tendrá una mejor protección contra el SARS-Cov-2 que las que tienen una dosis sola".

Precisamente, esa es una de las cuestiones en las que los especialistas inciden: mejor dos dosis, aunque sean de diferentes vacunas, que una sola dosis.

Acerca del estudio, Estanislao Nistal, virólogo formado en Salamanca y ahora en la Universidad San Pablo CEU, comenta: "Los resultados del estudio Combivacs son interesantes, aunque no resuelven una serie de problemas planteados de base".

En este sentido, el especialista apunta que no se aclara el tema de los trombos y, por tanto, "la decisión que se tome sigue sin estar fundamentada en evidencias, que por otro lado no pueden ser resueltas con un ensayo clínico dada su bajísima incidencia y el altísimo número de personas que habría que incluir en el estudio para saber si tiene efectos adversos". Y una cuestión más: "El estudio no compara la inmunidad generada con dos dosis de AstraZeneca frente a una dosis de AstraZeneca y segunda de Pfizer, con lo que no se permite saber si una u otra opción va a tener mejor o peor impacto tanto a corto como a medio plazo".

Ante esta situación, Nistal recomienda a las autoridades sanitarias informar de los pros y contras de seguir con una pauta o combinarla y plantear la posibilidad de tener una libre elección de otra opción en los casos particulares de las vacunaciones de menores de 60 que hayan recibido una dosis de 'Astra', así como recordar la importancia de completar las dos dosis vacunales como una medida para potenciar la seguridad y protección frente a la COVID-19.

Del mismo modo, Raquel Carnero, consultora en farmacéuticas, incide en que el estudio del Carlos III sobre la combinación de las dos vacunas, no es un ensayo clínico, y considera que "parece más una maniobra de justificación política, ya que desde el punto de vista regulatorio no se entiende".

Carnero recuerda que Castilla y León, como otras autonomías, no están satisfechas con la decisión del Ministerio de Sanidad, pero van a tener que asumirla. Además, plantea una cuestión importante: "Van a dejar a los que solo reciban una dosis sin pasaporte COVID".

Luis Félix Valero, epidemiólogo de la Universidad de Salamanca, responsable de la comisión de

seguimiento de la COVID-19 en la institución académica, se muestra claramente a favor de completar la vacunación con una segunda dosis del mismo tipo de vacuna.

"Informes previos de la Agencia Europea del Medicamento han indicado que la pauta de vacunación completa con AstraZeneca es eficaz y segura, siendo los beneficios muy superiores a los riesgos asociados. Si bien las dos posibilidades de vacunación, serían seguras y eficaces, no se debería generar incertidumbre dejando a la población la decisión de qué tipo de vacuna quiere recibir", explica el experto.

Esa es la sensación que tienen algunos ciudadanos, que el Gobierno les pasa la pelota sin tener suficientes datos para decidir.

En este sentido, Martín Pérez y Andrés, profesor de Inmunología del Estudio salmantino, aporta una cuestión más: "Los estudios realizados tanto en España como en otros países son limitados, pero parece que la inmunidad que proporciona la vacunación sería al menos tan intensa como el protocolo original de AstraZeneca y las complicaciones no serían más severas. En cualquier caso, no se puede descartar por completo que no aparezca alguna complicación como las observadas con el protocolo original, ya que el número de personas en las que se ha probado es pequeño".

Y es que todos los especialistas coinciden en el reducido número de personas que han participado en el ensayo del Carlos III.

Sin duda, el más optimista de los expertos consultados es Juan Ayllón, director del Área de Medicina Preventiva y Salud Pública de la Universidad de Burgos, que afirma: "Hay base para ambas decisiones", y no se posiciona a favor de ninguna de las dos posibilidades.

Fuente: La Gaceta de Salamanca. Disponible en https://cutt.ly/bnzOfmB

NGOs expose the mega rich that benefit from monopoly control of vaccine alliance

May 22. Profits from COVID-19 jabs have helped at least nine people become billionaires, a campaign group claimed, calling for an end to pharmaceutical corporations' "monopoly control" on vaccine technology.

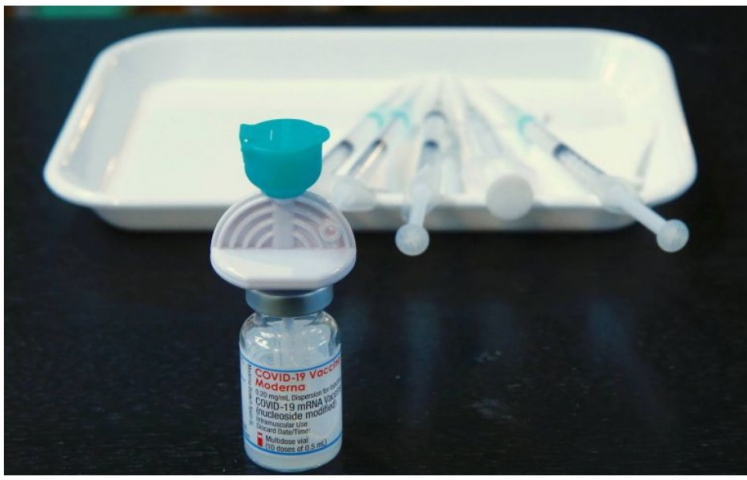
"Between them, the nine new billionaires have a combined net wealth of US$19.3 billion, enough to fully vaccinate all people in low-income countries 1.3 times," The People's Vaccine Alliance said in a statement.

The alliance, a network of organizations and activists campaigning for an end to property rights and patents for inoculations, said its figures were based on the Forbes Rich List data.

"These billionaires are the human face of the huge profits many pharmaceutical corporations are making from the monopoly they hold on these vaccines," said Anna Marriott from charity Oxfam, which is part of the alliance.

In addition to the new mega-rich, eight existing billionaires have seen their combined wealth increase by US$32.2 billion thanks to the vaccine roll-out, the alliance said.

Topping the list of new vaccine billionaires were the CEO of Moderna Stephane Bancel, and his BioNTech counterpart Ugur Sahin. Three other neo-billionaires are co-founders of the Chinese vaccine company CanSino Biologics.



The People´s Vaccine alloiance, a network of NGOs campagning for an end to patents for inoculations said its figures were based on the Forbes Rich List data.

While several G20 countries have rejected growing calls for intellectual property protections on COVID-19 vaccines. Proponents say doing so would boost production in developing countries and address the dramatic inequity in access.

President Joe Biden administration in the US as well as influential figures like Pope Francis, back the idea of a global waiver on patent protections.

Fuente: Merco Press. Disponible en https://cutt.ly/PnzPNSV

Should Your Child Get the COVID Vaccine?

May 22. A pediatric infectious disease expert answers questions about whether the vaccine is safe and why children need it.

The following essay is reprinted with permission from The Conversation, an online publication covering the latest research.

The FDA expanded emergency use authorization of the Pfizer-BioNTech COVID-19 vaccine to include adolescents 12 to 15 years of age on May 10, 2021. The Centers for Disease Control and Prevention followed with recommendations endorsing use in this age group after their advisory group meeting on May 12. The American Academy of Pediatrics also supports this decision.

Dr. Debbie-Ann Shirley is an associate professor of pediatrics at the University of Virginia specializing in pediatric infectious diseases. Here she addresses some of the concerns parents may have about their teen or preteen getting the COVID-19 vaccine.

1. Does the vaccine work in adolescents?

Yes, recently released data from Pfizer-BioNTech shows that the COVID-19 vaccine seems to work really well in this age group. The COVID-19 vaccine was found to be 100% efficacious in preventing symptomatic COVID-19 in an ongoing clinical trial of children in the U.S. aged 12 to 15. Adolescents made high levels of antibody in response to the vaccine, and their immune response was just as strong as what has been seen in older teens and young adults 16-25 years of age.

2. How do I know whether the vaccine is safe for my child?

So far, the COVID-19 vaccine appears to be safe and well tolerated in adolescents. All of the COVID-19 vaccines authorized for use in the U.S. have undergone rigorous study, but we don't want to assume that children are little adults. This is why it is so important to study these vaccines just as carefully in children before health authorities could recommend use. Ongoing studies will continue to follow vaccinated children closely and robust safety monitoring will help rapidly identify rare or unexpected concerns if they emerge.

3. I thought children were low-risk – do they still need to get the vaccine?

Currently, children represent nearly one-quarter of all new reported weekly COVID-19 cases in the U.S. While serious illness from COVID-19 is rare in children, it does occur – thousands of children have been hospitalized and at least 351 children have died from COVID-19 in the U.S. Some children who get seriously ill from COVID-19 may have underlying health conditions, but not all do. Vaccination will help protect children from developing serious illness.

Additionally, since adolescents can transmit COVID-19 to others, vaccinating children may prove to be an important part of safely getting back to normal activities of life, including attending school in person, participating in team sports and spending time with friends. A large survey of school-aged children showed

that children in full or partial virtual school reported lower levels of physical activity, less in-person time socializing with friends and worse mental or emotional health compared with those receiving full in-person schooling. Children are experiencing unprecedented increases in indirect adverse health and educational consequences related to the pandemic, and we need to find ways to help them get quickly and safely back to normal life. Vaccination is one of them.

4. What side effects might I expect for my child?

Nonsevere side effects may be experienced following vaccination. The most commonly reported side effects have been pain and swelling at the injection site. Other common side effects include tiredness and headache. Similar to young adults, some adolescents have experienced fever, chills, muscle aches and joint pain, which may be more common after the second dose. These effects are short-lived, however, and most resolve within one to two days.

Some adolescents may faint when receiving an injection. If this is a concern for your child, let your vaccine administration site know ahead of time – your child can be given the vaccine while they're seated or lying down to avoid injuries from falling.

5. Have there been any severe reactions among children?

No serious adverse events related to vaccination were reported in the Pfizer-BioNTech clinical trial. Serious allergic reactions have rarely been reported in older people. Anyone with a known severe or immediate allergy to the vaccine or any component of the vaccine should not get the vaccine. If your child has a history of any severe allergic reactions or any type of immediate allergic reaction to a vaccine or injectable therapy, let the vaccine site administrator know so that your child can be monitored for at least 30 minutes after getting the vaccine.

Parents should talk to a trusted health care provider or allergist if they have specific questions about the possibility of an allergic reaction in their child.

6. When will a COVID-19 vaccine be authorized for children younger than 12 years?

COVID-19 vaccine makers have begun or are planning to begin testing COVID-19 vaccines in younger children. As more information becomes available, the authorized age recommendations may change. Children ages 2-11 years old could potentially be eligible as early as the end of this year.

7. If I've been vaccinated but my child hasn't, could I still give the virus to them?

The COVID-19 vaccines do not contain live COVID-19 virus, so they cannot cause COVID-19. Rather, getting vaccinated will help protect both you and your children from COVID-19. Studies have shown that vaccinated pregnant and lactating mothers can pass protective immunity on to their young infants across the placenta and in breast milk—one more benefit of vaccination.

Though researchers are still learning how well the vaccine can help prevent spread, vaccination is still an important way to limit infecting people who are not yet eligible for the vaccine, like younger children.

Fuente: SCIENTIFIC AMERICAN. Disponible en https://cutt.ly/xnzSZBw

Moderna pedirá a la UE que autorice su vacuna para el grupo de 12 a 17 años

23 may. El laboratorio estadounidense Moderna va a presentar a comienzos de junio una demanda de autorización a la Agencia Europea del Medicamento (AEM) para que su vacuna pueda ser utilizada para los adolescentes de 12 a 17 años.

Su consejero delegado, el francés Stéphane Bancel, lo anuncia en una entrevista publicada este domingo por Le Journal du Dimanche, en la que justifica la rápida apertura de la vacunación para ese grupo de edad para protegerse con la inmunidad colectiva ante el riesgo de una eventual nueva ola epidémica.

A su juicio, "lo ideal" sería proteger a esos adolescentes "antes de finales de agosto. Si no se vacuna masivamente, no se puede descartar el riesgo de una cuarta ola".

Bancel afirma que habrá que dar una tercera dosis de refuerzo a las personas que ya fueron vacunadas, empezando "desde el final del verano" con los grupos de riesgo a los que se les inoculó a comienzos de año, y en particular con las personas que viven en residencias.

Advierte de que "dos o tres meses de retraso supondría numerosas hospitalizaciones y muertes".

Al final -añade- "todos los adultos, incluso los jóvenes" tendrán que recibir una dosis de refuerzo "para proteger a las personas frágiles no vacunadas" en nombre del principio de precaución.

Aunque cree que la vacuna de Moderna ofrece inmunidad durante un periodo de uno a tres años, "la llegada de variantes aumenta el nivel de la amenaza".

Bancel afirma que su empresa podría producir 3.000 millones de dosis anuales, lo que unido a los 4.000 millones que tiene previsto fabricar Pfizer-BioNTech, daría dosis suficientes para vacunar a todos los habitantes de la Tierra con una dosis.

Es una de las razones que da para oponerse a la suspensión de las patentes de las vacunas. También insiste en que sin las patentes su laboratorio no habría conseguido en los mercados los 1.800 millones de dólares con los que desarrolló la tecnología del ARN mensajero.

Además, recuerda que ahora solo Pfizer y Moderna tienen capacidad en el mundo para producir vacunas con ARN mensajero. Si se suspendieran las patentes, los otros fabricantes tendrían que comprar máquinas y contratar personal especializado, y con el tiempo necesario para hacerlo no habría avances en la inmunización este año.

Por ahora, 90 millones de personas en todo el mundo han recibido las dos dosis de Moderna.

El consejero delegado reitera sus críticas a la Unión Europea por su "falta de anticipación" en los primeros meses de la pandemia para trabajar con los laboratorios en las vacunas.

Dice que puso presión a la Comisión Europea -sin éxito- para que les hiciera un avance y poder lanzar así la producción en el Viejo Continente rápidamente, como ocurrió en Estados Unidos, cuya Administración se movilizó desde la primavera de 2020, pero con Bruselas no se consiguió hasta la firma del contrato en noviembre.

Fuente: SWI swissinfo.ch. Disponible en https://cutt.ly/4nzGiZT

Vacunas contra la covid-19: "Seremos capaces de salir juntos de esta pandemia. Solo así nos aseguraremos de que la luz al final del túnel no sea solo para los ricos, sino para todos"

23 may. El microbiólogo John McConnell tiene un privilegio único: leer de primera mano los estudios que evalúan la seguridad y eficacia de las vacunas contra la COVID-19.

El científico es editor en jefe de *The Lancet Infectious Diseases*, una revista científica que ha publicado las investigaciones más importantes sobre la pandemia y las vacunas en los últimos meses.

Es el responsable de recibir los estudios originales enviados por laboratorios y especialistas de diversas partes del mundo, y remitirlos al equipo de editores independientes, quienes revisan y analizan el contenido antes de su divulgación.

Con un título en Microbiología Clínica y Parasitología de la Universidad de East London, en Inglaterra, McConnell ha trabajado en *The Lancet* desde 1990. En 2001, fue uno de los fundadores y pronto se convirtió en editor en jefe de *The Lancet Infectious Diseases*, una revista centrada 100% en enfermedades infecciosas.

En una entrevista reciente con BBC Brasil realizada por correo electrónico, McConnell evaluó el ritmo actual de vacunación en el mundo y destacó que el fin de la pandemia está necesariamente ligado a acciones globales.

"Creo que seremos capaces de salir juntos de esta pandemia, siempre y cuando no perdamos el enfoque. Solo así nos aseguraremos de que la luz al final del túnel no esté destinada solo a los ricos y afortunados, sino para todos", dijo. A continuación se muestran los principales extractos de la entrevista.

En una hazaña sin precedentes, la humanidad pudo desarrollar, probar y aprobar varias vacunas contra la misma enfermedad en poco menos de un año. ¿Cómo evalúa este progreso?

Creo que es la culminación de muchos años de trabajo en el desarrollo de tecnologías, lo que nos ha permitido generar varios tipos diferentes de vacunas que ahora se están aplicando a miles de millones de personas. Una de esas tecnologías, que utiliza virus inactivos, existe desde hace un siglo o más. La tecnología que utiliza las llamadas subunidades de proteínas se ha aplicado a las vacunas contra la hepatitis B, por ejemplo, durante muchos años. E incluso las vacunas de vectores virales, como las de Johnson&Johnson y AstraZeneca/Oxford, utilizan una tecnología que se ha utilizado en ensayos clínicos durante unos 20 años, principalmente en tres inmunizadores autorizados contra el ébola.

Y aunque se cree que las vacunas de ARNm, como las de Pfizer/BioNTech y Moderna, son nuevas y esta es la primera vez que se utiliza dicha tecnología, la verdad es que se está trabajando en el desarrollo de productos similares desde hace casi 30 años. Antes de la COVID-19 había vacunas en ensayos clínicos que usaban tecnología de ARNm contra enfermedades como el sida, el zika y la rabia, por ejemplo.

Por lo tanto, aunque las vacunas Pfizer/BioNTech y Moderna son las primeras en utilizar esta tecnología a gran escala en humanos, se basan en conocimientos existentes y bien probados.

Entonces, en cierto modo, tuvimos suerte de que la pandemia llegara en un momento en el que tenemos algunas formas muy bien establecidas de producir vacunas, así como un conjunto de nuevas tecnologías para las que había un poco de experiencia clínica.

Como mencionó, tenemos varias plataformas tecnológicas exitosas en este momento. ¿Qué importancia tiene esta variedad?

Nunca se garantizó que una tecnología en particular funcionaría, por lo que creo que fue muy importante tener una variedad de intentos diferentes, incluso si, cuando se aplican en la vida real, son comparables en términos de efectividad.

Es importante tener vacunas que se puedan distribuir de diferentes formas. Por ejemplo, las vacunas Pfizer/BioNtech y Moderna necesitan una cadena de frío para su distribución que requiere congelación, mientras que las vacunas AstraZeneca/Oxford y Johnson & Johnson solo requieren refrigeradores regulares. La vacuna de Bharat Biotech se puede mantener a temperatura ambiente.

Necesitamos una gama de tecnologías que se puedan llevar a diferentes contextos en todo el mundo.

También es importante contar con vacunas que puedan modificarse a medida que surjan nuevas variantes del coronavirus. Algunas de las tecnologías se adaptan más fácilmente que otras.

También debo agregar que, al utilizar diferentes formas de producción de vacunas, estamos aprovechando al máximo las instalaciones de fabricación disponibles en todo el mundo. Si tuviéramos que depender únicamente de la tecnología ARNm, no habría forma de producir dosis suficientes para 2022 o 2023, incluso en países de altos ingresos.

¿Y cómo fue seguir tantas noticias y conocer, de primera mano, los resultados de seguridad y eficacia de las vacunas que el mundo entero esperaba con tanto interés?

Es un gran honor ser el canal a través del cual fluye esta increíblemente importante investigación durante la mayor emergencia de salud pública en el mundo en los últimos 100 años. Es un verdadero privilegio ver este material y organizar su revisión antes de su publicación. Realmente me siento honrada y espero que lo que estamos haciendo como editores tenga algún impacto en el control de la pandemia lo antes posible.

En algunos países, como Israel, los Emiratos Árabes Unidos y el Reino Unido, la campaña de inmunización contra la COVID-19 está muy avanzada. ¿Qué nos dice esta experiencia de la vida real sobre la efectividad de las vacunas disponibles?

Las vacunas parecen ser incluso más efectivas cuando se aplican a grandes poblaciones que en los ensayos clínicos. Los datos de Israel y el Reino Unido muestran alrededor del 90% de efectividad en la prevención de todas las formas de COVID-19 para la vacuna Pfizer/BioNTech y alrededor del 88% para la vacuna AstraZeneca/Oxford.

Es muy alentador que las vacunas que se utilizan en todo el mundo parezcan ser en gran medida eficaces contra variantes del virus, especialmente en términos de prevenir enfermedades graves y la muerte, aunque no necesariamente previenen la infección en sí.

Chile es un buen ejemplo de cómo funcionan realmente las vacunas. Allí está claro que los casos se han estabilizado o están disminuyendo en los individuos que han sido vacunados, mientras que sigue aumentando en los que no han sido inmunizados.

La razón del aumento de casos, por lo tanto, no es que la vacuna finalmente no esté funcionando, sino que aún no se ha administrado a un número suficiente de personas.

Si, por un lado, la campaña despega en algunos lugares, otros países están lidiando con la escasez o la falta absoluta de vacunas. ¿Cómo valora esta desigualdad global?

Existe un mecanismo global llamado Covax, que fue diseñado para comprar vacunas y distribuirlas a países que no pueden financiar sus propios programas de vacunación.

En la actualidad, este programa fue diseñado para ayudar a vacunar solo al 20% de las personas en estas naciones de ingresos bajos y medios.

En la progresión actual, será necesario hasta finales de 2023 para que las vacunas estén disponibles para todos en el mundo.

Es imperativo que otros países, cuando hayan vacunado completamente a sus poblaciones, pongan las dosis restantes a disposición de los gobiernos que no pueden pagarlas.

Algunos de estos países más ricos incluso han adquirido suficientes vacunas para cubrir tres o cuatro veces su población total.

¿Cree que es posible solucionar este problema de desigualdad global?

Es muy importante que los gobiernos tengan en cuenta el interés global en minimizar la cantidad de virus en circulación en todo el mundo.

Cuando se completen los programas de vacunación en estos lugares y se planifiquen los refuerzos necesarios en un futuro próximo, los países con existencias restantes deberán considerar seriamente la posibilidad de donar dosis sobrantes.

Mientras el virus permanezca en circulación, siempre existe la posibilidad de una mutación para la cual algunas vacunas actuales pueden no ser efectivos.

Dejo aquí una sugerencia, sobre la que no tengo opinión formada ni datos suficientes. Pero, ¿deberíamos dar prioridad a la vacunación de los niños, que no son particularmente susceptibles a esta enfermedad y es muy poco probable que presenten síntomas graves o mueran? ¿O deberíamos dar prioridad a las personas mayores y vulnerables en los países de ingresos bajos y medianos?

Para acortar este plazo de 2023, cuando todo el mundo estará vacunado de acuerdo con las proyecciones actuales, debemos hacernos preguntas sobre nuestras prioridades, y no solo mirar la realidad interna de nuestros propios países.

Incluso con la aprobación de las primeras vacunas contra la COVID-19, tenemos otras candidatas que aún están en estudio. ¿Por qué es importante tener más opciones de inmunizaciones contra la COVID-19?

Bueno, las vacunas que aún están en desarrollo tendrán la oportunidad de modificar sus formulaciones, para que estén dirigidas contra las nuevas variedades de coronavirus.

El mayor problema es que simplemente no hay suficientes vacunas para todos. Actualmente, hay muchas fábricas en el mundo que producen los inmunizadores. Si diferentes países tienen sus propias instalaciones de producción de vacunas y pueden satisfacer sus demandas, es extremadamente importante controlar la pandemia lo antes posible.

Además, también existe un problema de precio. Algunos fabricantes, por el tipo de tecnología que están

utilizando, han producido vacunas mucho más baratas y mucho más fáciles de distribuir que las que fueron desarrolladas por Pfizer/BioNTech, por ejemplo. No puedo imaginar cómo se vacunaría a todos en el mundo si solo confiáramos en la vacuna Pfizer/BioNTech.

Así como tenemos un arsenal de antibióticos muy amplio, por ejemplo, creo que necesitamos un arsenal de vacunas variado.

¿Cómo ayudará la vacunación a sacar al mundo de esta pandemia? ¿Ve la luz al final del túnel?

Sí, ciertamente hay una luz al final del túnel. Para los países que han implementado su programa de vacunación rápidamente, esta luz es muy fuerte.

Israel ya ha reabierto completamente y el Reino Unido está en camino. Francia tuvo que introducir una nueva cuarentena, pero la combinación de medidas de vacunación y restricción está llevando a ese país a una posición en la que pronto podrá comenzar a flexibilizar las políticas.

Incluso Estados Unidos está cambiando este juego, aunque no es la misma realidad para todos los estados. Sin embargo, los lugares donde existe una aceptación generalizada de la vacuna y donde las medidas de distancia física han sido más estrictas, definitivamente están evolucionando bien.

Algunos datos publicados por la autoridad de salud pública en Inglaterra (*Public Health England*), indican que casi el 70% de todos los donantes de sangre tienen anticuerpos contra el coronavirus.

Este 70% es el número establecido como la seroprevalencia necesaria para que exista la inmunidad colectiva. Todavía no podemos trazar una línea estricta al respecto, pero se cree que es una tasa importante.

También sabemos que menos del 20% de esta seroprevalencia es causada por una infección natural. Entonces, la mayor parte provino de la vacunación.

Todavía necesitamos organizar y disponer de una variedad de vacunas, pero hay una esperanza real.

Esa luz todavía es oscura para los países del sur de Asia, como Pakistán, Bangladesh y Nepal, que no pueden pagar las vacunas. En la misma línea, menos del 2% de toda la población del continente africano ya ha recibido sus dosis. Por lo tanto, algunas partes del mundo tienen mucho retraso.

Creo que podremos salir juntos de esta pandemia, siempre que no perdamos el enfoque. Solo así nos aseguraremos de que la luz al final del túnel no esté destinada solo a los ricos y afortunados, sino a todos.

Fuente: BBC NEWS. Disponible en https://cutt.ly/JnzKTpI

Biocen, la estratégica etapa final en la fabricación de vacunas y otros productos de la biotecnología cubana

24 may. Nuestro recorrido por el Centro Nacional de Biopreparados (Biocen), empresa de alta tecnología del grupo BioCubaFarma en Bejucal, Mayabeque, cerca de la periferia habanera, comienza en la Planta de Envase. En esta jornada están etiquetando y envasando la Soberana 02.

De la máquina de etiquetado, que controlan dos operarios, salen los bulbos de la vacuna anti-COVID-19 en cajuelas hacia una mesa cercana,

donde otra operaria los revisa y coloca en un carrito en el que seguirán camino hacia el área de envase. Allí, en dos salas, unas dos decenas de trabajadoras los colocan en estuches –cada uno de 25 bulbos, con la identidad de la vacuna y otros datos– en los que harán su viaje final hacia los vacunatorios.

El itinerario partió del Centro de Inmunología Molecular, donde, en un fermentador, se cultiva en células de mamífero (CHO, derivadas de ovario de hámster chino) la proteína RBD del virus SARS-CoV-2. De ahí, pasa al Instituto Finlay de Vacunas (donde se concibió el inmunógeno) y se conjuga el RBD con –en el caso de la Soberana 02– el toxoide tetánico. Ese ingrediente farmacéutico activo (IFA) conjugado se envía a Biocen, donde se realiza la formulación, el escalado productivo, y transcurre el proceso final hasta el envasado.

Mientras miramos los viales salir de la máquina de etiquetado, preguntamos cuántos salen en cada cajuela. Nos responden que 208. Hoy etiquetan y envasan Soberana 02 en presentación multidosis (10 dosis). Inevitablemente, hacemos la matemática: 2 080 dosis en cada cajuela. Y el flujo es constante. La máquina es rápida. Los operarios no se detienen.

En cada estuche de 25 unidades donde son colocados en la mesa de envase van, entonces, 250 dosis. Ahí también, mientras envasan, las operarias revisan los bulbos en busca de la más mínima imperfección en el etiquetado. Es uno de los detalles en la industria biotecnológica y en Biocen: la revisión, el control de la calidad constante, desde el primer paso de fabricación hasta la liberación final de cada lote por la autoridad regulatoria para la distribución.

Lo apreciamos minutos después, en la Planta de Parenterales 2. Allí comenzamos el recorrido por la sala automatizada de control, donde se siguen en pantallas todas las áreas de producción y se monitorean los parámetros de la planta.

De IFA conjugado a vacuna

Se escucha o lee “formulación”, “llenado” o “escalado productivo” y todo puede parecer simple, pero llevar el IFA a producto final –algo que, como característica de la industria biofarmacéutica a nivel mundial, se hace en locaciones o plantas distintas, incluso de países distintos– requiere plataformas tecnológicas (tanto maquinaria como procesos de producción) muy avanzadas, *know how* y detallados y estrictos procesos de validación y auditoría permanentes.

Según datos de la industria, el antígeno de la vacuna Pfizer/BioNTech se fabrica en Misuri y el ARNm en Massachussets, mientras que la formulación y el envasado tienen sede en Michigan y Puurs (Bélgica). Este año, BioNTech abrió otra planta productiva en Marburgo (Alemania), pero igual el envasado se hace en Puurs.

Moderna usa plantas para producir antígenos en Nuevo Hampshire, Pensilvania y Suiza, y dos especializadas en acabado en España e Indiana. Un análisis reciente refería que la vacuna de AstraZeneca/Oxford se produce en 25 plantas distribuidas en todo el mundo.

Hay que sumar a eso que estas cadenas dependen de plantas o laboratorios que suministran lípidos, enzimas, material genético y otros componentes, tanto sustancias como implementos especializados empleados en la producción.

En abril, leímos sobre países latinoamericanos que producirían el IFA y asumirían el llenado de una de las vacunas disponibles en el mercado, por acuerdo con la compañía desarrolladora.

El dueño de uno de los laboratorios implicados, al explicar demoras en el llenado, publicó en Twitter que "envasar cada tipo de vacuna requiere una serie de equipos e insumos específicos que, por la alta demanda global, hoy resultan imposibles de conseguir rápidamente". Hablaba también de la "capacitación del personal científico y técnico para esta fabricación en particular", que implica "reentrenar personal y realizar nuevas inversiones". Además, puntualizaba que su compañía no puede disponer del principio activo como si le perteneciera, "porque no es la propietaria", menos aún de la vacuna.

Es decir... Plataformas tecnológicas, equipos altamente especializados, *know how*, plantas con tecnología de punta; especialistas, técnicos y operarios bien capacitados. Todo acorde con regulaciones estrictas, validado y auditado nacional e internacionalmente y certificado por los reguladores sanitarios. Igualmente, insumos y materiales específicos de alta demanda en un mercado tensionado por la crisis sanitaria y bajo presión de la competencia (por vacunas y componentes); desarrollo y producción en cadena (en lo que es una ventaja, en el caso de Cuba, el enfoque de cooperación, el conocimiento y los procesos compartidos entre centros de la isla) y, entre muchos otros, un detalle importante: la propiedad sobre el IFA y las vacunas. En Cuba, ambos son cubanos.

En el caso de las tres vacunas Soberana, el ciclo comienza en el Centro de Inmunología Molecular (CIM), continúa en el Instituto Finlay de Vacunas (IFV) y concluye en Biocen. Es una de las rutas tecnológicas de las vacunas cubanas; la otra, de Abdala y Mambisa, involucra al CIGB y los Laboratorios Aica.

En la sala de control, el jefe de las plantas de parenterales de Biocen (Parenterales 2 y Parenterales 3), el ingeniero y máster en Ciencias Humberto Pérez de la Concepción, comienza hablándonos de los estrictos protocolos que aseguran la calidad y seguridad de los procesos.

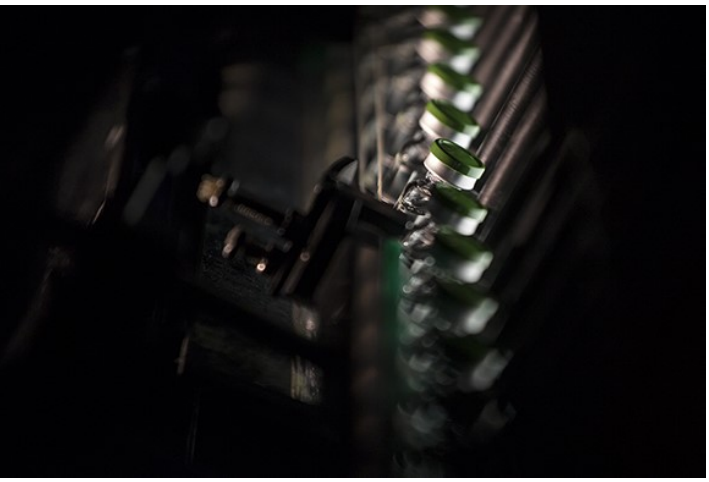
"El cuidado es extremo. El aire es filtrado, no puede haber partículas porque pueden contener microorganismos. Hay requisitos de vestuario y parámetros establecidos de humedad, temperatura, presión y niveles de partículas en el aire, que se mantienen en índices aceptables según las diferentes clasificaciones de áreas", explica.

Estamos en el inicio, en lo que llaman área "sucia" −que en realidad es un sitio en condiciones ambientales normales−, aunque el aire es acondicionado, filtrado, para temperatura y confort, "pero no es controlado".

A esa área llegan los trabajadores y en la zona de taquillas se cambian la ropa por un uniforme de circulación interna. "Ahí comienza el paso a las áreas que llamamos limpias o clasificadas, donde se realizan los diferentes procesos.

"Estas van desde un área limpia de menor clase hasta aquellas en que se realizan los procesos críticos de fabricación de parenterales, donde el medicamento, o el vial que contiene el medicamento, están expuestos al ambiente. La clase A, la más crítica y de más alta clasificación, es donde están las máquinas de llenado. Ahí todo se realiza bajo flujo laminar y se controla al extremo el índice de partículas.

"En clase A, el operario ingresa y trabaja con toda la anatomía cubierta, incluidos careta, doble traje de aislamiento y doble guante. No puede haber ninguna superficie del cuerpo expuesta, porque en cualquiera



de estas áreas de producción el hombre es el mayor contaminante.

"Luego está la clase B, un poco menos rigurosa. En las operaciones que se realizan el vial no está expuesto, pero es el área que rodea a la clase A; por lo tanto, debe estar controlada, al igual que los requisitos de vestimenta".

Otra condición del ambiente interior en las plantas de parenterales es la presión. "La presión es positiva desde el lugar más limpio al más sucio o en condiciones ambientales más cercanas a lo normal; hay una cascada de presiones, cambios de presión de un ambiente a otro, para que el aire salga del lugar más controlado a los menos controlados, hasta el área en condiciones ambientales más cercanas a lo normal.

"Quienes trabajan ahí tienen sobrepresión, están sujetos a condiciones de trabajo irregulares. Tienen este sistema de ropa, que es incómodo, doble uniforme y doble guante los que están en grado A y grado B; careta y otros implementos. Son condiciones difíciles de trabajo.

"Debido a esto, lo máximo que pueden estar en un turno son cinco horas, es el más largo que tenemos. Esto en las clases A y B, las de producción".

El sistema de presión también se controla en el puesto de control, donde hay un plano de toda la planta, con el sistema de cascada de presiones entre un ambiente y otro. Va pasando desde 10 o 15 pascales de diferencia hasta llegar al ambiente final. O sea, tenemos cuatro clases, puede que haya 60 pascales de diferencia entre el ambiente primario, el más controlado, y el ambiente exterior.

Los trabajadores pasan por chequeos médicos periódicos. No todo el mundo puede trabajar en área aséptica, no solo por la presión, sino también por las condiciones: parados, sometidos a estrés, con un vestuario especial; no pueden salir en turnos de 4 o 5 horas, porque una salida puede implicar una parada del proceso.

En las otras clases, C y D, el área de preparación, se alistan los materiales que pasan al área de producción (formulación y llenado) a través de dispositivos y procesos de esterilización.

"Todo lo que entra al núcleo, el área donde se encuentran las máquinas llenadoras, donde puede estar expuesto el medicamento, tiene que estar estéril", señala el jefe de las plantas de parenterales de Biocen mientras nos muestra en las pantallas de control las diferentes áreas, donde se ve a los operarios en sus funciones.

Por un lado, tapones y sellos pasan por autoclaves de doble puerta conectadas al área más limpia o crítica. "La autoclave descarga en el área limpia, bajo flujo laminar se recibe lo que ya está estéril, se guarda en esas condiciones y se traslada a las áreas de producción".

Cuando accedemos –debidamente vestidos– al área de recepción de bulbos ya llenados, vemos en acción, del otro lado del cristal, la máquina llenadora, con los depósitos de tapones y sellos de aluminio, y los viales ingresando por una plataforma móvil desde el horno.

"Los viales transitan por un proceso de lavado para remover cualquier partícula en el interior o exterior, y

después por uno de despirogenización (esterilización por calor seco) en un horno que alcanza los 300 grados. Desde ahí ingresan al área aséptica para alimentar la máquina llenadora, que dispensa el producto en cada vial, según las especificaciones, a partir de un contenedor", nos dice Pérez.

Ese contenedor llega desde otra parte del área crítica o de producción: la de formulación. En esta funciona un sistema de tanques rígidos y otro de bolsas tipo tanque, desechables, de 50 litros. "El medicamento ya formulado pasa de los reactores o del recipiente donde se realice la formulación a esa bolsa, que luego se conecta a la llenadora –que también recibe viales, tapones y sellos–, y de la máquina salen ya llenos y listos los viales a la inspección visual, el etiquetado y envasado".

En la Planta de Parenterales 2 funcionan dos máquinas llenadoras con capacidad para 7 000 viales por hora cada una (14 000/hora en total). En Parenterales 3 hay también dos máquinas, una de 12 000 y otra de 4 000 (16 000/hora en total).

Pérez precisa que la Planta de Parenterales 3 está dedicada "a liofilizados y otros productos biológicos o biotecnológicos, principalmente de los centros a lo que damos servicio: el Centro de Ingeniería Genética y Biotecnología (CIGB), el CIM, el IFV y también otros como el Censa, en el caso del Surfacén. La línea de 4 000 se usa para liofilizados, que tienen menor volumen en cuanto a tamaño de lote. La de 12 000, para otros productos con mayor volumen de producción, como, por ejemplo, la eritropoyetina recombinante del CIM".

En Parenterales 2, las dos líneas de 7 000 son destinadas principalmente a vacunas, "entre ellas las vacunas contra la hepatitis, contra el tétanos y ahora contra la COVID-19".

Parenterales 3 está diseñada para procesar dos productos a la vez, pues las dos líneas son paralelas, cada una con su preparación de materiales, su formulación y su sistema de llenado. En Parenterales 2, un solo producto a la vez, pues las dos máquinas llenadoras son servidas por las mismas áreas de preparación de materiales y de formulación.

El día de nuestra visita, en las dos plantas de parenterales de Biocen se llenaba Biomodulina T (de Biocen, un inmunomodulador que está entre los medicamentos empleados en el tratamiento de enfermos de COVID-19), eritropoyetina recombinante (ior ® EPOCIM, del CIM, para el tratamiento de anemia en pacientes con insuficiencia renal crónica, sida, bajo quimioterapia, entre otros), y el medio de transporte para hisopos (BTV, también de Biocen, actualmente destinado a la recolección y el traslado de muestras clínicas a los laboratorios de biología molecular para el diagnóstico confirmatorio por rt-PCR de COVID-19).

De la formulación y el llenado, en el área de producción, los viales pasan a la inspección visual en tres modalidades: manual, semiautomática y automática.

"El ciento por ciento de las unidades tiene que pasar por la inspección visual, en la cual se detecta si el vial tiene el contenido correcto, la apariencia requerida (no puede tener un objeto extraño o un color diferente al que establece la especificación del producto) y otros aspectos más cosméticos, como que el retape del vial esté bien colocado. El vial no puede tener la más mínima ralladura".

En términos de tiempo, Pérez precisa que la formulación se realiza un día antes o en la madrugada anterior al llenado. Depende del producto, de la cantidad de componentes y las condiciones en que se añade cada uno de esos componentes.

La cadena de procesos previos al llenado de un producto farmacéutico es compleja. “Primero hay que preparar los reactores, los materiales, las soluciones, los componentes activos de la formulación, pero hay excipientes que también hay que preparar, esterilizar y adicionar. Se incluyen el buffer (tampón, solución amortiguadora o reguladora, que mantiene estable el pH); si lo lleva, también preservo, que se prepara y se adiciona al final para asegurar la esterilidad del producto en el vial. Por ejemplo, el tiomersal que se usa en nuestras vacunas cuando son multidosis”.

El de Soberana 02 “es un proceso rápido, pues tiene pocos componentes”. Desde que se preparan los materiales y equipos, toma alrededor de 48 horas.

“Aquí recibimos el ingrediente farmacéutico activo y realizamos el proceso de formulación, que consiste en mezclar ese IFA con los otros componentes o excipientes que contiene la vacuna, en una concentración determinada. Ahí están las sales, un buffer, fosfato, que mantiene el pH en un rango determinado, y, si es presentación multidosis, el preservo, en este caso el tiomersal”.

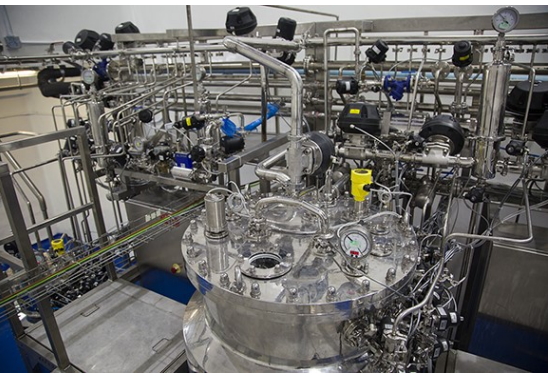
Cada uno de los reactores pasa por un proceso automático previo de lavado y esterilización. “Cuando están estériles, comenzamos a preparar los componentes de la vacuna, que se mezclan en un orden determinado de adición y a una velocidad específica. Eso da lugar a la vacuna formulada, que le llamamos ‘a granel’ y que se traslada en las bolsas desechables hacia el área de llenado. Estas se conectan a la máquina, que dispensa el producto en los viales, según el volumen programado”.

“Hay que tomar en cuenta que el proceso de llenado tiene una preparación previa: el montaje de todos los componentes de la línea de llenado que tienen que ingresar estériles al área, la conexión del producto a granel a la máquina de llenado, que también tiene su proceso y su procedimiento establecido; el monitoreo del área, el control previo al llenado, el ajuste previo del volumen a dispensar...

Todas estas son operaciones de rutina antes de cada llenado, e incluyen, después de que todo está listo, la revisión de especialistas y técnicos en el área, y un supervisor de buenas prácticas que garantiza que todas estas operaciones se realicen cumpliendo con lo regulado”.

“Todo −nos comenta el jefe de las plantas− transcurre en ambientes bajo monitoreo las 24 horas, tanto de partículas como de microorganismos. Los datos del monitoreo son registrados y guardados, porque esa información hay que enseñarla a la autoridad regulatoria o a cualquier auditor que, en cualquier momento, necesite comprobar en qué condiciones se hizo, por ejemplo, un lote específico de un producto específico”.

Durante el llenado se toman muestras de todo para comprobar la calidad, tanto microbiológica como físico-química; parámetros como pH, concentración, identidad, todo según la especificación de cada producto, y se envían al laboratorio de control de calidad de Biocen.



Además de una decena de inspecciones o auditorías anuales por parte de la autoridad regulatoria nacional, el Centro para el Control Estatal de Medicamentos, Equipos y Dispositivos Médicos (Cecmed), y clientes tanto internos para los que formulan y llenan (CIGB, CIM, IFV, entre otros) como extranjeros (aquellos que compran los productos de esos mismos centros, que son procesados en Biocen), el Centro Nacional de Biopreparados debe pasar por procesos de validación periódicos.

“Cada seis meses, por regulación, debemos realizar una simulación y

validación del proceso. Para garantizar que lo que está ahí está estéril, tenemos que demostrarlo. Lo hacemos con el proceso productivo más crítico, el material de envase más crítico (que demore más tiempo y que tenga más posibilidades de contaminarse; no es lo mismo que entre un microorganismo en un vial unidosis que en uno multidosis, con una abertura mayor, en uno que tarda más en transitar por la línea de llenado que en uno que lo hace más rápido).

"Todo esto se tiene en cuenta. Tomamos un medio de cultivo (una solución enriquecida donde pueden crecer los microorganismos fácilmente), que es el más crítico, el más fácil de contaminarse, y se hace una corrida de llenado.... En esas condiciones se hace la validación, con los mismos operarios, simulando todas las intervenciones y fallos posibles, las paradas. Si en esas condiciones críticas la corrida de llenado sale estéril, tenemos la certeza de que con el producto, que es menos sensible a contaminación, todo va a estar bien".

Una inversión y mayor capacidad en la planta de IFA

Biocen no se dedica solo a formulación y llenado para otros centros científicos cubanos. Además de la investigación y desarrollo de productos, allí se produce ingrediente farmacéutico activo (IFA) para esos preparados propios y los de otras instituciones del país.

El ingeniero Yoel Perea Martínez, jefe de la Planta de Ingredientes Activos, nos comenta que fabrican el IFA de varios productos, entre ellos la estreptoquinasa recombinante, del CIGB; el LeukoCIM, del CIM; la Biomodulina T y las tres vacunas alergénicas Valergen, de Biocen, y una lista larga de fármacos desarrollados en este y otros centros de la biotecnología cubana, incluidos algunos en fase de ensayos clínicos.

"Hace más de una década, toda la vacuna de alergia de Cuba se produce aquí en Biocen. Suministramos a todas las provincias del país, son de tres ácaros: Valergen DP, del Dermatophagoides pteronyssinus; Valergen DS, del Dermatophagoides siboney, y Valergen BT, del Blomia tropicalis. Son vacunas terapéuticas en función del tipo de alergia que tenga el paciente. El especialista en alergia e inmunología determina el tratamiento y la dosis a aplicar".

Recientemente, Biocen adquirió una moderna batería de fermentadores, en fase de puesta en marcha durante el mes de mayo. Perea Martínez destaca que su capacidad de fermentación es de 600 litros, con lo que duplica la capacidad de los fermentadores anteriores que sustituye.

Como en el CIGB –explica–, "tenemos montado un sistema de fermentación en bacterias y levadura. Para esta nueva batería de fermentación, Biocen y BioCubaFarma realizaron un proceso de inversión grande y se hizo en medio de las restricciones de la pandemia, no solo económicas, sino de logística, comunicación y transferencia tecnológica. A veces había cierre en el país del fabricante, y estaba el cierre en Cuba. Incluso, hubo que posponerlo en varias ocasiones, pero finalmente se concretó".

El ingeniero químico Salvador Losada, con una maestría en procesos biotecnológicos y especializado en el área de fermentación en levaduras y bacterias desde su graduación en 1993, nos dice que la moderna batería está compuesta por dos fermentadores, "uno de semilla, que es el pequeño, y otro mayor, de producción".

Cuenta con tanques auxiliares para el control automático de pH –"uno lo carga y automáticamente el sistema puede inyectar base o ácido en dependencia de la necesidad para mantener el pH estable dentro

del fermentador"−, y hay un tercer tanque auxiliar para el control de espuma.

"La fermentación a veces genera espuma, pues son fermentaciones aerobias, necesitan aire porque consumen oxígeno; por tanto, el movimiento de agitación, más el aire suministrado, puede generar espuma, y mucha espuma puede comprometer el proceso de fermentación... Hay sensores de espuma y, si se llega a cierto nivel, se añade una solución antiespumante y se controla".

Un sistema computarizado permite el seguimiento y control del proceso desde una pantalla. "Todos los procesos son rastreables, verificables, algo que exigen las entidades regulatorias en la producción de medicamentos de alto estándar".

El mando computarizado −añade− "nos posibilita controlar el proceso en su totalidad, durante todas las fases de la fermentación, esterilización, temperatura y otros parámetros. Nos da seguridad en cuanto a la capacidad de fermentación. Todo queda registrado: las lecturas de sensores y las acciones del operario.

"Podemos guiarnos, dar seguimiento en línea al proceso de fermentación, la situación tanto del pH y la concentración de oxígeno como del crecimiento celular y el nivel o volumen dentro del fermentador gracias a sensores. Anteriormente teníamos que extraer muestras para apreciar el crecimiento celular; ahora lo vemos online, lo cual nos ayuda en la optimización del producto, porque sabemos cómo está el microorganismo".

Fue un trabajo conjunto de diseño con el fabricante "y se adaptó a nuestras condiciones, para que sea lo más versátil posible y permita varios tipos de fermentación. Hay fabricantes que lo hacen estándar, pero nosotros lo hicimos de acuerdo con nuestros requerimientos, necesidades y la experiencia de muchos años en fermentación.

"En el diálogo con el fabricante, este fue asimilando y nos dio la oportunidad de tener un equipo hecho según nuestras especificaciones. Sabíamos adónde íbamos, lo que necesitábamos y cómo lo necesitábamos".

Fuente: Cubadebate. Disponible en https://cutt.ly/hnz6T7l

México hará estudios fase 3 de vacuna de Sanofi contra Covid-19

24 may. Hasta ahora, la nación latinoamericana cuenta a su disposición con vacunas de la británica AstraZeneca, la estadounidense Pfizer, la rusa Sputnik V y las chinas CanSino Biologics y Sinovac Biotech.

México llevará a cabo la última etapa de los ensayos clínicos de la vacuna de la farmacéutica francesa Sanofi contra el Covid-19, que sumaría al arsenal de biológicos que está tratando de reunir para luchar contra la pandemia en el país, informó el lunes el canciller, Marcelo Ebrard.

Hasta ahora, la nación latinoamericana cuenta a su disposición con vacunas de la británica AstraZeneca, la estadounidense Pfizer, la rusa Sputnik V y las chinas CanSino Biologics y Sinovac Biotech.

"En México se tienen o ya se han llevado a cabo o se están realizando fase 3 de muy diversas vacunas y

nos notificaron vía (el regulador sanitario) Cofepris (sobre la aprobación de) Sanofi, con una proteína recombinante", dijo Ebrard en un evento virtual de la cancillería.

México ocupa el quinto lugar global en decesos vinculados con el Covid-19, con un total de 221,695, aunque la cifra de muertes y casos han venido disminuyendo sostenidamente en los últimos meses, mientras las autoridades de salud aceleran su plan de vacunación con la meta de completarla en octubre.

El diplomático destacó que el país ha recibido hasta el momento alrededor de 34 millones de dosis de vacunas y espera casi duplicar la cifra para finales del próximo mes. "Vamos a entrar en junio con 40 millones (de dosis) y vamos a salir (...) con 65 millones", aseveró.

A principios de mayo, Ebrard dijo que las autoridades locales también se encaminaban a iniciar pronto estudios en fase 3 de la vacuna de la firma china Walvax.

Si bien el gobierno mexicano fue el primero en la región en iniciar la inmunización de sus casi 126 millones de habitantes a fines del año pasado, hasta la fecha solo un 14.2% de la población ha recibido al menos una dosis de las vacunas, según un recuento de Reuters.

Fuente: EL ECONOMISTA. Disponible en https://cutt.ly/BnxqLsR

Pfizer begins testing use of pneumococcal vaccine along with COVID-19 booster shot

May 24. Pfizer Inc (PFE.N)said on Monday it began testing fully vaccinated adults over 65 in a new study that uses the company's 20-valent pneumococcal conjugate vaccine (20vPnC) candidate with a third dose of the Pfizer-BioNTech COVID-19 shot.

The aim of the study is to understand if the combination of the vaccines is safe, and the immune response after adding the pneumonia vaccine to the existing COVID-19 vaccine, Pfizer said.

The vaccine candidate, 20vPnC, is being developed to help protect adults against 20 serotypes responsible for the majority of invasive pneumococcal disease and pneumonia.

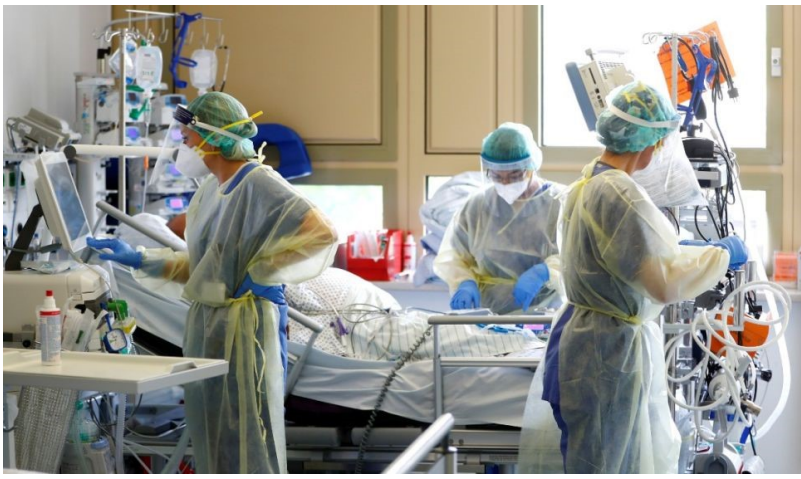
The new study will include 600 adults who will be recruited from the two companies' late-stage COVID-19 vaccine study, after having received their second dose of the vaccine at least six months before entering the co-administration study.

COVID-19 vaccines were previously recommended to be administered alone. But based on experience with non-COVID vaccines, the U.S. Centers for Disease Control and Prevention has said COVID-19 shots and other vaccines can be given simultaneously or on the same day.

In December, the U.S. Food and Drug Administration (FDA)accepted for a priority review Pfizer's biologics license application for the investigational 20vPnC in adults over 18 and set an action date for a decision in June. The European Medicines Agency (EMA) accepted the company's marketing authorization application for 20vPnC two months later.

Fuente: REUTERS. Disponible en https://cutt.ly/knxeOZp

OMS advierte que vendrá un virus más contagioso y mortal



May 24. La pandemia de COVID-19 no será la única en el mundo, ya que surgirá un nuevo virus que será más contagioso y mortal, alertó el director general de la OMS, Tedros Adhanom Ghebreyesus, durante la 74 Asamblea Anual.

"No se equivoquen: esta no será la última vez que el mundo se enfrente a la amenaza de una pandemia. Según estimaciones evolutivas, surgirá un nuevo virus que podría ser aún más contagioso y más mortal que el virus actual", subrayó Tedros.

Por ello, el director general de la OMS llamó a la cooperación para enfrentar el futuro virus que podría desencadenar otra pandemia como la actual por COVID-19.

"Este es el momento para las ideas, el compromiso y el liderazgo audaces, para hacer cosas que nunca se han hecho antes. Tenemos que elegir una opción: entre la cooperación, la competencia o la confrontación", afirmó el director de la OMS.

"Si los más atrasados son los primeros en recibir ayuda, si los más débiles son los primeros en ser fortalecidos y si los más vulnerables son los primeros en ser protegidos, entonces todos ganamos", destacó.

La OMS abrió la posibilidad de crear un tratado internacional con la intención de que el mundo esté preparado para futuras pandemias por virus.

Esta iniciativa de la OMS permitiría crear un sistema de financiación obligatorio para prevenir riesgos, lo que permitiría al órgano ser menos dependiente de los países más ricos que contribuyen de manera voluntaria.

Los presidentes de Francia, Alemania y España, entre otros, apoyaron en sus intervenciones ante la Asamblea esta idea de la OMS sobre un nuevo tratado internacional para evitar futuras pandemias.

"También tenemos que dar la posibilidad a la OMS a través de misiones de respuesta rápida de estar en el terreno a la primera señal de una pandemia. Me gustaría atribuirle la competencia de investigar un patógeno que pueda constituir una pandemia y esto le daría acceso rápido a cualquier país del mundo", sostuvo el mandatario francés, Emmanuel Macron.

El titular de la OMS ejemplifica las oportunidades para la cooperación al señalar el acaparamiento de las vacunas por parte de los países desarrollados.

"La crisis de las vacunas es una desigualdad escandalosa que está perpetuando esta pandemia", explicó el director de la OMS, recordando que el 75% de las vacunas se han administrado en solo 10 países.

"No hay una forma diplomática de decir esto: un pequeño grupo de países que fabrican y compran la mayoría de las vacunas, están controlando el destino del resto del mundo", advirtió el doctor de la OMS, Tedros Adhanom.

Por ello, el titular de la OMS, exhortó a la comunidad internacional a donar vacunas al mecanismo COVAX para que en septiembre al menos el 10 % de las poblaciones de todos los países estén vacunadas y se alcance el 30 % a finales de año.

Fuente: tv azteca. Disponible en https://cutt.ly/MnxrTyO

Moderna dice que su vacuna contra la COVID-19 es segura y parece eficaz en adolescentes

25 may. En un ensayo de fase 2/3 de 3.732 menores de 12 a 17 años en Estados Unidos , los análisis de sangre mostraron que la vacuna de Moderna contra el COVID-19 produjo una respuesta inmune que era equivalente a hallazgos anteriores en adultos.

La compañía no proporcionó un porcentaje de eficacia, ya que el ensayo no fue diseñado para examinar específicamente ese parámetro.

Sin embargo, las observaciones iniciales encontraron que ninguno de los menores que recibieron la vacuna se enfermó con COVID-19 a partir de 14 días después de su segunda dosis.

Cuatro de los menores que recibieron el placebo dieron positivo para COVID-19, lo que Moderna dice que es «consistente con una eficacia de la vacuna del 100%». La compañía señala que la cifra podría cambiar a medida que se recopilan más datos.

Segunda dosis

Moderna también revisó qué tan bien funcionaba la vacuna después de una sola dosis. Los resultados sugieren que después de una dosis, la vacuna fue 93% eficaz para prevenir casos leves de COVID-19, con un solo síntoma en lugar de dos o más síntomas.

Moderna dice que después de una dosis, la vacuna fue 93% eficaz para prevenir casos leves de COVID-19.

Moderna anunció los resultados el martes en un comunicado de prensa, y los resultados aún no han sido revisados o publicados por pares.

La compañía dijo que la vacuna era «generalmente bien tolerada» y no se han identificado problemas significativos de seguridad.

Efectos secundarios, que incluyen dolor de cabeza, fatiga, dolor muscular y escalofríos, se detectaron después de la administración de la segunda dosis. También se observó dolor en el lugar de la inyección.

Moderna dice que planea presentar los resultados a la Administración de Alimentos y Medicamentos de Estados Unidos a principios de junio junto con una solicitud de autorización para usar la vacuna en adolescentes. También planea enviar los datos a una publicación revisada por pares.

La vacuna Moderna ya está autorizada para su uso en personas mayores de 18 años. Otra vacuna COVID-19, fabricada por Pfizer / BioNTech, está autorizada para su uso en personas mayores de 12 años.

Fuente: News Channel 3. Disponible en https://cutt.ly/XnxtEif

La variante india del SARS-CoV-2 está presente en 44 países, incluida la Argentina

25 may. Se trata de la cepa B.1.617, responsable del aumento masivo de casos varias naciones, que se ha detectado en más de 4500 muestras cargadas en una base de datos de acceso abierto de 44 países en las seis regiones de la OMS.

La variante de la enfermedad COVID-19 responsable de la segunda ola mortal de la India se ha encontrado en 44 países, según la Organización Mundial de la Salud (OMS), que el 11 de mayo la clasificó como “de gran preocupación mundial”.

La agencia de salud de la ONU afirmó que la variante B.1.617, responsable del aumento masivo de casos en India, se ha detectado en más de 4500 muestras cargadas en una base de datos de acceso abierto “de 44 países en las seis regiones de la OMS”, incluido Estados Unidos, Gran Bretaña, Argentina, China, Singapur, Canadá, Australia y Francia.

“La OMS ha recibido informes de detecciones de cinco países adicionales”, indicó la organización en su actualización epidemiológica semanal sobre la pandemia. Esta nueva variante se encontró por primera vez en octubre en India y se cree que se transmite más rápidamente que el virus original y se considera más peligrosa. También fue reclasificado como una “variante de preocupación” por la OMS y agregado a la lista que contiene otras tres variantes de COVID-19, las que se detectaron por primera vez en Gran Bretaña, Brasil y Sudáfrica.

"Una evaluación de riesgo reciente de la situación en la India realizada por la OMS encontró que el resurgimiento y la aceleración de la transmisión de COVID-19 en la India tenían varios factores contribuyentes potenciales, incluido un aumento en la proporción de casos de variantes del SARS-CoV-2 con transmisibilidad potencialmente aumentada", decía. También señaló que la propagación de la India podría haber sido el resultado de "varios eventos religiosos y políticos de reuniones masivas que aumentaron la mezcla social; y la infrautilización y la reducción de la adherencia a las medidas sociales y de salud pública".

Según la OMS, aparte de la India, el país que había notificado el mayor número de casos de COVID-19 con esta variante es Gran Bretaña. También señaló la "evidencia preliminar" de que la variante era más resistente al tratamiento con el anticuerpo monoclonal Bamlanivimab, y destacó los primeros estudios de laboratorio que indicaban una "reducción limitada en la neutralización por anticuerpos". En el informe, hizo hincapié en que los "impactos del mundo real" sobre la eficacia de las vacunas contra la variante, por ejemplo, "pueden ser limitados" y agregó que la propagación de B.1.617, junto con otras variantes más transmisibles, parecía ser uno de los varios factores que alimentaron el dramático aumento en India de nuevos casos y muertes.

Con 1300 millones de personas, informó 200.000 nuevas infecciones en las últimas 24 horas y contabilizó 3500 muertos. Ya son casi 27 millones de personas contagiadas con COVID-19 desde que comenzó la pandemia.

Detectada en Argentina este mes, técnicamente, se la conoce como B.1.617 y presenta más de una docena de mutaciones. Se la ha llamado "doble mutante" por dos mutaciones prominentes: E484Q y L452R (que comparte con la variante de California), y podría ayudar al virus a evadir algunos tipos de anticuerpos que genera el mismo sistema inmune.

Esa variante apareció por primera vez en octubre y ahora es la más común en la India. Se ha encontrado en Gran Bretaña, Estados Unidos, Israel, entre otros 28 países. En diálogo con Infobae, Humberto Debat, investigador en virología del Instituto Nacional de Tecnología Agropecuaria (INTA) y miembro de Proyecto País, que realiza vigilancia genómica del coronavirus y depende del Ministerio de Ciencia, Tecnología e Innovación, comentó: "La variante que fue detectada en India comprende tres sublinajes. Tiene mutaciones que están asociadas a la posibilidad de un mayor escape inmune. Puede ser más transmisible aún que la variante del Reino Unido. No tendría impacto en la eficacia de las vacunas contra el COVID-19".

De las cinco variantes de preocupación mundial, cuatro se han detectado en la Argentina: Manaos, Inglaterra, India y Sudáfrica. Los tres viajeros que se testearon en Ezeiza y que tenían el coronavirus con variantes de preocupación pasaron a estar en aislamiento, según informó el lunes la directora de epidemiología del Ministerio de Salud de la Nación, Analía Rearte.

Por qué aparecen variantes

En el coronavirus que causa la enfermedad COVID-19, hay una cadena de 30.000 letras que representan propiedades químicas y que conforman su genoma. Para replicarse, el coronavirus se une al exterior de una célula humana y luego entra en ella: secuestra la maquinaria celular y la dirige para que haga copias del virus.

Cuando una célula infectada produce nuevos coronavirus, ocasionalmente comete pequeños errores de copia que se llaman "mutaciones". "Se produce una mutación o dos por mes", dijo a Infobae Julia Lo Médico, bióloga especializada en filogenética, quien fue expositora recientemente en un encuentro de capacitación de la Asociación Argentina de Medicina Respiratoria.

Cuando los científicos observan que hay mutaciones distintivas que aumentan su frecuencia se habla de "variante". "Es el aviso de que algo puede estar pasando", comentó Lo Médico. "Cada variante tiene una mutación o más", señaló. "Cuando una variante aumenta su frecuencia en más del 30% regional o 20% mundial se convierte en linaje. A medida que pasa el tiempo y con más contagios, se está favoreciendo a que haya más mutaciones".

Una variante tiene una o más mutaciones que la diferencian de las otras variantes en circulación. Como se preveía en el inicio de la pandemia, se han reportado múltiples variantes del coronavirus en el mundo.

Algunas de ellas han generado temor por la posibilidad de que alarguen la pandemia o por el riesgo de que hagan que las vacunas sean menos eficaces.
La Organización Mundial de la Salud (OMS) y los Centros para la Prevención y el Control de Enfermedades (CDC) de Estados Unidos) establecieron en marzo los nuevos criterios para clasificar las variantes del coronavirus con la idea de mejorar la calidad del tratamiento que se ofrece a los pacientes afectados. Sirven para evaluar los niveles de transmisión y el riesgo que representan para la población.

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

Soberana 02 concluye fase tres de ensayo clínico

27 may. Soberana 02, una de las cinco candidatas de vacunas cubanas contra la COVID-19 concluyó su tercera y última fase de ensayos clínicos, destaca un reportaje del diario Milenio en su versión digital.

Según el medio, el ensayo terminó este miércoles cuando todos los voluntarios que participaron en las pruebas completaron el esquema de inmunización.

Este biológico y Abdala, que ya finalizó su fase 3 a inicios de mayo, son las dos fórmulas más avanzadas de las cinco que desarrolla Cuba contra la COVID-19, y si estos estudios demuestran su efectividad se convertirían en las primeras vacunas desarrolladas en Latinoamérica, añade.

La confirmación de eficacia, expresa el reportaje, permitiría asimismo a las autoridades sanitarias de la isla obtener autorización para uso de emergencia o registro farmacológico, algo que esperan lograr dentro de unos días, en junio.

Esas autorizaciones posibilitarían iniciar la vacunación masiva en el país caribeño, que atraviesa un duro momento de la pandemia, con una tercera oleada de contagios desde hace semanas que no baja del millar de casos diarios pese a las medidas de restricción vigentes.

El gobierno cubano insiste en que tendrá inmunizada a toda su población antes de que acabe el año.

En esta tercera etapa de ensayos realizada en La Habana a doble ciego y con un grupo placebo, administraron la vacuna a 44 mil 10 voluntarios de 19 a 80 años con dos esquemas: uno con dos dosis y otro con esas dos más una de refuerzo de Soberana Plus, otra fórmula en investigación.

Soberana 02 es una vacuna conjugada de subunidad -muy seguras- que combina el antígeno del virus y el toxoide tetánico, y emplea también hidróxido de aluminio para estimular la respuesta del sistema inmune. Su desarrollo está a cargo del Instituto Finlay de Vacunas (IFV).

La directora de Investigaciones Clínicas del IFV, Meiby Rodríguez, explicó que una vez administradas todas las dosis comienza el seguimiento de los voluntarios para detectar posibles contagios como parte de la evaluación de la variable eficacia, fundamental para el registro del antígeno.

Una comparación del número de contagios que ocurran entre quienes recibieron el candidato vacunal y el placebo, es el dato que revelará el porcentaje de efectividad de la fórmula.

Rodríguez dijo está constatado que quienes recibieron placebo en las dos primeras fases de los ensayos clínicos tuvieron dos veces mayor probabilidad de enfermar respecto a los vacunados.

De acuerdo con los datos preliminares de esas etapas, el 76 por ciento de los voluntarios elevó la concentración de anticuerpos específicos contra el virus SARS-CoV-2 tras recibir dos dosis de Soberana 02, un porcentaje que se eleva 'alrededor del 90 por ciento' en el caso de los que recibieron la porción adicional de Soberana Plus, aseguró la científica.

Fuente: 5 DE SEPTIEMBRE. Disponible en https://cutt.ly/5nxiYiq

Disponible en Beijing vacuna recombinante de tres inyecciones contra COVID-19

28 may. Las autoridades sanitarias pusieron a disposición de Beijing una vacuna desarrollada por China a partir de proteínas recombinantes contra la COVID-19, cuya administración se divide en tres inyecciones.

La vacuna (células CHO) fue desarrollada conjuntamente por el Instituto de Microbiología de la Academia de Ciencias de China y la compañía Anhui Zhifei Longcom Biopharmaceutical. A partir del jueves, los investigadores del instituto recibieron las primeras inyecciones en el distrito de Haidian de la capital.

China emitió la autorización de uso de emergencia de la vacuna el 10 de marzo y personas de diversas provincias, incluyendo Anhui y Hubei, han sido inoculadas desde entonces. El 3 de mayo, el primer lote de la vacuna salió de la línea de producción en Beijing, según el instituto.

Los resultados de los ensayos de la segunda fase, con personas de entre 18 y 59 años, muestran que el 83 por ciento de los participantes produjeron anticuerpos neutralizantes después de dos dosis, y el 97 por ciento después de la tercera dosis.

Los ensayos de la fase inicial, realizados entre personas de 60 años o más, muestran que la tasa de seroconversión de anticuerpos neutralizantes alcanzó el 95 por ciento después de tres dosis, sin reacciones adversas graves relacionadas con la vacunación.

El nivel de anticuerpos neutralizantes obtenidos es comparable al de otras vacunas de proteína recombinante y ARNm contra la COVID-19 a nivel mundial, destacó el instituto en un comunicado.

La vacuna de proteína recombinante no necesita un laboratorio de bioseguridad de alto grado para su fabricación y puede alcanzar rápidamente una producción a gran escala. Resultan más rentables y fáciles de almacenar y transportar, añadió el fabricante.

Fuente: Spanish.CHINA.ORG.CN. Disponible en https://cutt.ly/PnxiBdW

Cuba, Argentina termed fruitful exchange on anti-Covid-19

May 29. The BioCubaFarma Business Group described the meeting held Friday with Argentina´s Health Minister Carla Vizzoti, visiting Cuba to learn about progress of anti-Covid-19 vaccine candidates, as fruitful.

On Twitter, BioCubaFarma -dedicated to the development of these formulations, announced that Carla Vizzoti found out about the results of Soberana 02 and Abdala, the two candidates that are currently under phase III of clinical trials.

Accompanied by Presidential Advisor Cecilia Nicolini and Ambassador to Cuba Luis Alberto Larregui, Vizzoti learned about 20-year collaboration between the Cuban biopharmaceutical sector and Argentine institutions.

'We are in Havana to learn from the Cuban health authorities and scientists about progress of Abdala and Soberana 02 vaccine candidates,' Vizzotti tweeted.

Vizzotti highlighted that her delegation came from Mexico, where regional ties and strategies were strengthened and with great pride and joy Presidents Alberto Fernández and Andrés Manuel López Obrador announced the beginning of AstraZeneca vaccine distribution.

Fuente: Prensa Latina. Disponible en https://cutt.ly/wnQC1xU

China-Cuba biotechnology innovation center inaugurated

May 29. Representatives from China and Cuba inaugurated an innovation center in the city of Yongzhou, Hunan province, to carry out joint research in biotechnology, a sector with solid ties, diplomatic sources reported today.

The island's ambassador here, Carlos Miguel Pereira, indicated that he led the opening ceremony together with the mayor of that municipality, Zhou Hongwu, and highlighted the importance of the project for bilateral cooperation.

In his intervention, the diplomat thanked those who contributed to materialize it, despite the inconveniences arising from the COVID-19 pandemic and stressed that the facility is called to become a national and international reference.

'(The work) It will allow not only the realization of novel scientific projects in the field of human and animal biomedicine, but also cooperation in the essential education and academic training of scientists from both countries,' Pereira remarked.

He ratified the support and accompaniment from the embassy, the authorities of Havana, the BioCubaFarma group and in particular, the Center for Genetic Engineering and Biotechnology of Cuba, the main manager, developer and strategic partner of the initiative.

He also highlighted the recent approval by the Ministry of Science and Technology of China of two of the six initial projects, including the one linked to the joint development of the PanCorona vaccine against various strains of the SARS-CoV-2 coronavirus and to prevent COVID-19.

On his part, Zhou also expressed gratitude for the work of those who contributed to the construction of the site in the past two years.

According to Pereira, the opening ceremony also included the inauguration of a cooperation center

for post-doctoral programs; the signing of an agreement for university and industrial research and the donation of equipment to BioCubaFarma.

Last year, the assembly of the Yongzhou center was completed, with equipment and laboratories designed by specialists from the island.

Plans and technologies obtained by the scientific personnel of the Caribbean nation will be developed there.

This site is the result of bilateral cooperation and is part of the policy approved by the Chinese government to stimulate innovation capacities through local administrations.

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

Francia abre vacunación contra Covid-19 para todas las personas de 18 años en adelante

31 may. Hasta ahora, poco más de 25 millones de franceses han recibido al menos una dosis de vacuna contra la COVID-19, lo que corresponde al 48% de la población adulta. Y poco menos de 11 millones han recibido dos dosis.

Francia abrió este lunes la vacunación contra la COVID-19 para todas las personas de 18 años en adelante, una "etapa clave" para evitar un repunte de la epidemia antes de las vacaciones de verano.

"Estoy convencido de que vamos a ver a mucha gente yendo a vacunarse", estimó el jefe de la campaña de vacunación de Francia, Alain Fischer.

Esta es una "etapa clave" para proteger a la población y "volver a una vida un poco más normal", dijo Fischer a la cadena de noticias LCI.

Pero para poder vacunarse, los franceses deben armarse de paciencia. Las citas disponibles para recibir la vacuna en uno de los centros oficiales se llenan rápidamente, según se puede observar en las plataformas habilitadas para reservar una fecha.

Hasta ahora, poco más de 25 millones de franceses han recibido al menos una dosis de vacuna contra la COVID-19, lo que corresponde al 48% de la población adulta. Y poco menos de 11 millones han recibido dos dosis.

Para el 15 de junio, "es muy probable que hayamos superado" el objetivo del gobierno de 30 millones de vacunados con al menos la primera dosis, apuntó Alain Fischer.

Francia es uno de los países europeos más duramente golpeados por la pandemia. Hasta la fecha se registran 109,000 muertos.

Pero los nuevos casos, muertes y hospitalizaciones han ido disminuyendo en las últimas semanas.

Tras más de seis meses de duras medidas para contener la expansión de la COVID-19 en el país, los franceses recobraron parte de su libertad el pasado 19 de mayo, con la reapertura de las terrazas de cafés y restaurantes, cines y museos.

Tendrán que esperar al 9 de junio para poder comer o tomar un café dentro de un restaurante o bar.

A partir del 30 de junio se podrán celebrar eventos con más de 1,000 personas, pero para poder acceder a éstos se deberá presentar un test negativo o un certificado de inmunidad.

Fuente: EL ECONOMISTA. Disponible en https://cutt.ly/snQ3f8Z

What Is Bacterial Meningitis?

Jun 1. A serious illness that affects the membranes around the brain and spinal cord.

Meningitis refers to inflammation of the meninges, the thin membranes that surround the brain and spinal cord. When the meninges become swollen, they can press on the brain and spinal cord, causing serious complications. Bacterial meningitis, also known as pyogenic meningitis, is a type of meningitis caused by a bacterial infection.

Early symptoms of bacterial meningitis may resemble those of a cold, such as a headache and fever, but they may change quickly. Bacterial meningitis can be life-threatening and requires treatment with antibiotics right away. It can cause permanent disabilities, and is considered a medical emergency.

Those with a weakened immune system are at higher risk of developing bacterial meningitis.2 Vaccines are the most effective way to protect yourself against bacterial meningitis.

Symptoms

The symptoms of bacterial meningitis often start out mild, and may resemble the symptoms of a cold or upper respiratory infection. They usually appear about three to seven days after exposure to bacteria.

Symptoms can quickly progress to a high fever and severe headache with a very stiff neck. If you are unable to look down to touch your chin to your chest, see your doctor right away.

Many people also experience nausea and vomiting. Other common symptoms include photophobia and confusion. Later symptoms of meningitis are life-threatening, and include seizures and coma.

Bacterial Meningitis in Babies and Children

In newborns, look at the fontanel on their head. This soft spot may appear to be bulging. If you notice a bulging fontanel or abnormal reflexes in your newborn, seek emergency treatment. Infants may appear to react slower than usual and seem irritable. They may not be interested in feeding and could vomit after nursing or drinking milk or formula from a bottle.

Causes

Bacterial meningitis is caused by a bacterial infection. The bacteria can be spread to people through food or close contact. The most common types of bacteria that can lead to bacterial meningitis in the United States include:

- *Streptococcus pneumoniae*
- Group B *Streptococcus*
- *Neisseria meningitidis*
- *Haemophilus influenzae* (Hib)
- *Listeria monocytogenes*

Although these infections can cause meningitis, they usually don't. So just being infected with one of these organisms doesn't mean you are at high risk of meningitis.

Hib and *S. pneumoniae* are spread when a sick person coughs or sneezes in close contact with others.

N. meningitidis is spread through respiratory or throat secretions like saliva. It is usually shared through kissing, coughing, or living in close contact.

Group B *Streptococcus* can be passed from mother to infant during childbirth. All pregnant women should be tested for this bacteria prior to giving birth. If they are positive, antibiotics are given to prevent the newborn from becoming infected.

E. coli can be spread through contaminated food when the person preparing it does not wash their hands after using the bathroom. It can also be spread from mother to infant during childbirth.

L. monocytogenes is also spread through contaminated food, and is dangerous to the fetus if a pregnant mother is exposed.

Types

Pneumococcal Meningitis

Pneumococcal meningitis is the most common and serious form of bacterial meningitis. This type of meningitis can lead to neurological damage. Each year there are about 6,000 new cases in the United States.

Pneumococcal meningitis is caused by the bacteria Streptococcus pneumoniae. This type of bacteria is also responsible for bacterial pneumonia and ear and sinus infections. When it spreads to the bloodstream, it can lead to septicemia.

Groups Most At Risk	Type of Bacterial Infection
Newborns	Group B *Streptococcus, S. pneumoniae, L. monocytogenes, E. coli*
Babies and young children	*S. pneumoniae, N. meningitidis, H. influenzae* type b (Hib), group B *Streptococcus*
Teens and young adults	*N. meningitidis, S. pneumoniae*
Older adults	*S. pneumoniae, N. meningitidis,* Hib, group B *Streptococcus, L. monocytogenes*

Groups most at risk of contracting pneumococcal meningitis are those with a compromised immune system or under two years of age. Fortunately, there is a vaccine available for some types of pneumococcal bacteria.

Meningococcal Meningitis

Meningococcal meningitis is caused by *Neisseria meningitidis* and accounts for 2,600 cases in the United

States each year. It is highly contagious, especially for young infants and those living in dormitory settings such as college students.

This type of meningitis has a 10% to 15% death rate, and 10% to 15% of people who have this condition have permanent brain damage. Meningococcal meningitis is contagious, and it's recommended that those living in close contact with someone who has it start prophylactic antibiotic therapy to be safe.

Haemophilus Meningitis

A third type of bacterial meningitis caused by *Haemophilus influenzae* is now preventable with the *Haemophilus influenzae* b vaccine and is rare in the United States. Those most at risk are usually young children without access to the vaccine.

Risk Factors

The risk factors for many types of bacterial meningitis are related to your risk of being exposed to the bacteria. Those living in close quarters with others or who work in a laboratory setting are at higher risk.

Risk factors for bacterial meningitis include:

Age: It's possible to be diagnosed with bacterial meningitis at any age, but infants, teens, and young adults are at higher risk.

Living in community: Living in close quarters with others can put you at higher risk of being exposed to a bacterial infection and bacterial meningitis. Examples include adults living in institutional settings and young adults living on college campuses.

Medical professionals: Those who work with sick individuals or in a lab setting may be more likely to be exposed to dangerous bacterial infections.

Immunocompromised individuals: Certain medical conditions like cancer can weaken one's immune system and make you more susceptible to bacterial infections. If you have had your spleen removed or are currently taking corticosteroids, your risk is higher as well.

Pregnant women are at increased risk of contracting listeriosis, a bacterial infection caused by the bacteria Listeria monocytogenes. This condition is usually mild in pregnant women, but can cause serious health problems in the fetus. L. monocytogenes are spread through contaminated food. Pregnant women can reduce their risk by avoiding certain foods during their pregnancy.

Fuente: verywell health. Disponible en https://cutt.ly/InWr9I2

Moderna busca la aprobación total de la FDA para su vacuna contra la COVID-19

1 jun. Moderna anunció este martes que solicitó la aprobación total para su vacuna contra la COVID-19 para personas de 18 años en adelante.

La empresa dice que seguirá enviando datos de prueba «de forma continua durante las próximas semanas con una solicitud de revisión prioritaria». Una revisión prioritaria solicita a la Administración de Alimentos y Medicamentos de Estados Unidos (FDA) que tome medidas dentro de los 6 meses, en comparación con los 10 meses designados en la revisión estándar.

"Nos complace anunciar este importante paso en el proceso regulatorio de EE.UU. para una Solicitud de

Licencia Biológica (BLA) de nuestra vacuna contra la COVID-19", dijo el director ejecutivo de Moderna, Stéphane Bancel, en un comunicado. «Esperamos trabajar con la FDA y continuaremos enviando datos de nuestro estudio de Fase 3 y completaremos la presentación continua».

Desde diciembre, la vacuna de dos dosis de Moderna se ha distribuido bajo una autorización de uso de emergencia para personas de 18 años en adelante. El 13 de abril, la compañía anunció que su vacuna mantenía una eficacia superior al 90% seis meses después, la cantidad de tiempo de seguimiento necesaria para solicitar la aprobación de la FDA.

Moderna es la segunda empresa que busca dicha aprobación en Estados Unidos. El 7 de mayo Pfizer anunció que estaba iniciando su propia aplicación para personas mayores de 16 años, luego de un anuncio del 1 de abril de que sus ensayos clínicos mostraban una eficacia superior al 91% después de seis meses. Los expertos dicen que esperan que esta protección dure mucho más tiempo, lo que se confirmará a medida que ingresen más datos.

Recibir la aprobación de la FDA puede motivar a algunas personas que dudan a ponerse esta vacuna, según una investigación publicada el viernes por la Kaiser Fundación.

Tanto Pfizer como Moderna también están estudiando sus vacunas en niños de hasta 6 meses. El mes pasado, la FDA otorgó a la vacuna de Pfizer una autorización de uso de emergencia para niños de 12 a 15 años.

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

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Filters activated: Publication date from 2021/05/22 to 2021/06/01. "Vaccine" (Title/Abstract) 811 records.

An evidence-based guide to SARS-CoV-2 vaccination of patients on immunotherapies in dermatology.
Gresham LM, Marzario B, Dutz J, Kirchhof MG. J Am Acad Dermatol. 2021 Jun;84(6):1652-1666. doi: 10.1016/j.jaad.2021.01.047. Epub 2021 Jan 19. PMID: 33482251

Systems Biological Analysis of Immune Response to Influenza Vaccination.
Cortese M, Sherman AC, Rouphael NG, Pulendran B. Cold Spring Harb Perspect Med. 2021 Jun 1;11(6):a038596. doi: 10.1101/cshperspect.a038596. PMID: 32152245

Swarna Bindu Prashana-an Ancient Approach to Improve the Infant's Immunity.
Nelaturi P, Nagarajan P, Sabapathy SK, Sambandam R. Biol Trace Elem Res. 2021 Jun;199(6):2145-2148. doi: 10.1007/s12011-020-02353-y. Epub 2020 Aug 27. PMID: 32856248

Vocal Fold Immobility Following Vaccination.
Talmor G, Nguyen B, Din-Lovinescu C, Paskhover B, Kaye R. Ann Otol Rhinol Laryngol. 2021 Jun;130(6):609-613. doi: 10.1177/0003489420965633. Epub 2020 Oct 16. PMID: 33063519

Heplisav-B: A Hepatitis B **Vaccine** With a Novel Adjuvant.
Champion CR. Ann Pharmacother. 2021 Jun;55(6):783-791. doi: 10.1177/1060028020962050. Epub 2020 Sep 28. PMID: 32988213

Hepatitis A **vaccine** immunogenicity 25 years after vaccination in Alaska.
Ramaswamy M, Bruden D, Nolen LD, Mosites E, Snowball M, Nelson NP, Bruce M, McMahon BJ. J Med Virol. 2021 Jun;93(6):3991-3994. doi: 10.1002/jmv.26327. Epub 2020 Aug 25. PMID: 33448443

Influenza **Vaccine** Effectiveness: New Insights and Challenges.
McLean HQ, Belongia EA. Cold Spring Harb Perspect Med. 2021 Jun 1;11(6):a038315. doi: 10.1101/cshperspect.a038315. PMID: 31988202

Hendra virus: Epidemiology dynamics in relation to climate change, diagnostic tests and control measures.
Yuen KY, Fraser NS, Henning J, Halpin K, Gibson JS, Betzien L, Stewart AJ. One Health. 2021 Jun;12:100207. doi: 10.1016/j.onehlt.2020.100207. Epub 2020 Dec 21. PMID: 33363250

Two-Dose Hepatitis B **Vaccine** (Heplisav-B) Results in Better Seroconversion Than Three-Dose **Vaccine** (Engerix-B) in Chronic Liver Disease.
Amjad W, Alukal J, Zhang T, Maheshwari A, Thuluvath PJ. Dig Dis Sci. 2021 Jun;66(6):2101-2106. doi: 10.1007/s10620-020-06437-6. Epub 2020 Jul 2. PMID: 32617767

The endemic GII.4 norovirus-like-particle induced-antibody lacks of cross-reactivity against the epidemic GII.17 strain.
Du J, Gu Q, Liu Y, Li Q, Guo T, Liu Y. J Med Virol. 2021 Jun;93(6):3974-3979. doi: 10.1002/jmv.26474. Epub 2020 Oct 8. PMID: 32869863

Immunogenicity and Safety of a Two-Dose Series of a Meningococcal (Groups A, C, W, and Y) Polysaccharide Diphtheria Toxoid Conjugate **Vaccine** (Men-ACWY-D) in Healthy Japanese Adults.
Matsuoka O, Tsuzuki D, Suzuki K, Tanaka T, Takagi Y, Oster P. Jpn J Infect Dis. 2021 May 24;74(3):193-199. doi: 10.7883/yoken.JJID.2020.411. Epub 2020 Oct 30. PMID: 33132297

Gianotti-Crosti syndrome and yellow fever **vaccine**: unprecedented reaction.
Leal SBC, Balconi SN, Cafrune FE. Int J Dermatol. 2021 Jun;60(6):e227-e228. doi: 10.1111/ijd.15381. Epub 2020 Dec 23. PMID: 33368195

Effects of non-pharmacological interventions as **vaccine** adjuvants in humans: a systematic review and network meta-analysis.
Vedhara K, Royal S, Sunger K, Caldwell DM, Halliday V, Taylor CM, Fairclough L, Avery A, Welton NJ. Health Psychol Rev. 2021 Jun;15(2):245-271. doi: 10.1080/17437199.2020.1854050. Epub 2020 Dec 3. PMID: 33222621

Detection of Immunotherapeutic Response in a Transgenic Mouse Model of Pancreatic Ductal Adenocarcinoma Using Multiparametric MRI Radiomics: A Preliminary Investigation.
Eresen A, Yang J, Shangguan J, Benson AB, Yaghmai V, Zhang Z. Acad Radiol. 2021 Jun;28(6):e147-e154. doi: 10.1016/j.acra.2020.04.026. Epub 2020 Jun 2. PMID: 32499156

Interim 2019/2020 Influenza **Vaccine** Effectiveness in Japan from October 2019 to January 2020.
Tsuzuki S, Ishikane M, Matsunaga N, Morioka S, Yu J, Inagaki T, Yamamoto M, Ohmagari N. Jpn J Infect Dis. 2021 May 24;74(3):175-179. doi: 10.7883/yoken.JJID.2020.177. Epub 2020 Sep 30. PMID: 32999182

Seroprevalence of **vaccine**-preventable and non-**vaccine**-preventable infections in migrants in Spain.
Norman FF, Comeche B, Martínez-Lacalzada M, Pérez-Molina JA, Gullón B, Monge-Maillo B, Chamorro S, López-Vélez R. J Travel Med. 2021 Jun 1;28(4):taab025. doi: 10.1093/jtm/taab025. PMID: 33611577

Vaccine hesitancy due to **vaccine** country of origin, **vaccine** technology, and certification.
Dror AA, Daoud A, Morozov NG, Layous E, Eisenbach N, Mizrachi M, Rayan D, Bader A, Francis S, Kaykov E, Barhoum M, Sela E. Eur J Epidemiol. 2021 May 26:1-6. doi: 10.1007/s10654-021-00758-0. Online ahead of print. PMID: 34037927

A Tale of Two Crises: Addressing Covid-19 **Vaccine** Hesitancy as Promoting Racial Justice.
Bunch L. HEC Forum. 2021 Jun;33(1-2):143-154. doi: 10.1007/s10730-021-09440-0. Epub 2021 Jan 19. PMID: 33464452

A measles outbreak in Kansai International Airport, Japan, 2016: Analysis of the quantitative difference and infectivity of measles virus between patients who are immunologically naive versus those with secondary **vaccine** failure.
Kurata T, Yamamoto SP, Nishimura H, Yumisashi T, Motomura K, Kinoshita M. J Med Virol. 2021 Jun;93(6):3446-3454. doi: 10.1002/jmv.26733. Epub 2020 Dec 29. PMID: 33325052

Vaccine efficacy against COVID-19: A foresight on the host-associated factors.
Priyanka, Choudhary OP. J Formos Med Assoc. 2021 Jun;120(6):1405-1407. doi: 10.1016/j.jfma.2020.11.021. Epub 2020 Dec 7. PMID: 33380377

Vaccine acceptability, uptake and completion amongst men who have sex with men: A systematic review, meta-analysis and theoretical framework.
Nadarzynski T, Frost M, Miller D, Wheldon CW, Wiernik BM, Zou H, Richardson D, Marlow LAV, Smith H, Jones CJ, Llewellyn C. Vaccine. 2021 May 22:S0264-410X(21)00564-8. doi: 10.1016/j.vaccine.2021.05.013. Online ahead of print. PMID: 34034949

Therapeutic cancer vaccines.
Saxena M, van der Burg SH, Melief CJM, Bhardwaj N. Nat Rev Cancer. 2021 Jun;21(6):360-378. doi: 10.1038/s41568-021-00346-0. Epub 2021 Apr 27. PMID: 33907315

Selecting and Using the Appropriate Influenza **Vaccine** for Each Individual.
Sekiya T, Ohno M, Nomura N, Handabile C, Shingai M, Jackson DC, Brown LE, Kida H. Viruses. 2021 May 24;13(6):971. doi: 10.3390/v13060971. PMID: 34073843

Immunopathogenesis and immunobiology of SARS-CoV-2.
Rabaan AA, Al-Ahmed SH, Al Mutair A, Alhumaid S, Sule AA, Tirupathi R, Fawzy M, Muhammad J, Khan A, Hasan A, Shrestha DB, Sah R, Dhawan M, Tiwari R, Bilal M, Ahmad T, Dhama K. Infez Med. 2021 Jun 1;29(2):167-180. PMID: 34061781

Immunogenicity and safety of a high-dose and prolonged-schedule hepatitis B **vaccine** among chronic kidney disease patients: a randomized, parallel-controlled trial.
Feng Y, Yao T, Han Y, Shi J, Dong S, Wu Y, Shao Z, Liu H, Guo H, Chai G, Liu L, Wang F, Wang J, Liang X, Wang S. Expert Rev Vaccines. 2021 May 31:1-9. doi: 10.1080/14760584.2021.1915777. Online ahead of print. PMID: 34058948

Virulence and live **vaccine** potential of Edwardsiella piscicida phoP and phoQ mutants in catfish against edwardsiellosis.
Sayed M, Ozdemir O, Essa M, Olivier A, Karsi A, Lawrence ML, Abdelhamed H. J Fish Dis. 2021 May 26. doi: 10.1111/jfd.13453. Online ahead of print. PMID: 34037985

Disparities in H1N1 Vaccination Rates: a Systematic Review and Evidence Synthesis to Inform COVID-19 Vaccination Efforts.
Ayers CK, Kondo KK, Williams BE, Kansagara D, Advani SM, Smith M, Young S, Saha S. J Gen Intern Med. 2021 Jun;36(6):1734-1745. doi: 10.1007/s11606-021-06715-7. Epub 2021 Mar 31. PMID: 33791935

Pertussis **vaccine** effectiveness and duration of protection - A systematic review and meta-analysis.
Wilkinson K, Righolt CH, Elliott LJ, Fanella S, Mahmud SM. Vaccine. 2021 May 27;39(23):3120-3130. doi: 10.1016/j.vaccine.2021.04.032. Epub 2021 Apr 30. PMID: 33934917

Safety, tolerability, and immunogenicity of an inactivated SARS-CoV-2 **vaccine** (CoronaVac) in healthy adults aged 60 years and older: a randomised, double-blind, placebo-controlled, phase 1/2 clinical trial.
Wu Z, Hu Y, Xu M, Chen Z, Yang W, Jiang Z, Li M, Jin H, Cui G, Chen P, Wang L, Zhao G, Ding Y, Zhao Y, Yin W. Lancet Infect Dis. 2021 Jun;21(6):803-812. doi: 10.1016/S1473-3099(20)30987-7. Epub 2021 Feb 3. PMID: 33548194

Interest in COVID-19 **vaccine** trials participation among young adults in China: Willingness, reasons for hesitancy, and demographic and psychosocial determinants.

Sun S, Lin D, Operario D. Prev Med Rep. 2021 Jun;22:101350. doi: 10.1016/j.pmedr.2021.101350. Epub 2021 Mar 12. PMID: 33816087

Immunization in the Neonatal Intensive Care Unit.
Flannery DD, Wade KC. Clin Perinatol. 2021 Jun;48(2):393-412. doi: 10.1016/j.clp.2021.03.010. PMID: 34030821

Global Prevalence and Drivers of Dental Students' COVID-19 **Vaccine** Hesitancy.
Riad A, Abdulqader H, Morgado M, Domnori S, Koščík M, Mendes JJ, Klugar M, Kateeb E, Iads-Score OBO. Vaccines (Basel). 2021 May 29;9(6):566. doi: 10.3390/vaccines9060566. PMID: 34072500

Genome-wide screening of **vaccine** targets prioritization and reverse vaccinology aided design of peptides **vaccine** to enforce humoral immune response against Campylobacter jejuni.
Zeb A, Ali SS, Azad AK, Safdar M, Anwar Z, Suleman M, Nizam-Uddin N, Khan A, Wei DQ. Comput Biol Med. 2021 Jun;133:104412. doi: 10.1016/j.compbiomed.2021.104412. Epub 2021 Apr 18. PMID: 33934066

Readability assessment of **vaccine** information: A systematic review for addressing **vaccine** hesitancy.
Okuhara T, Ishikawa H, Ueno H, Okada H, Kato M, Kiuchi T. Patient Educ Couns. 2021 May 30:S0738-3991(21)00395-5. doi: 10.1016/j.pec.2021.05.039. Online ahead of print. PMID: 34090717

Oral multivalent epitope **vaccine**, based on UreB, HpaA, CAT, and LTB, for prevention and treatment of Helicobacter pylori infection in C57BL / 6 mice.
Xie W, Zhao W, Zou Z, Kong L, Yang L. Helicobacter. 2021 Jun;26(3):e12807. doi: 10.1111/hel.12807. Epub 2021 Apr 12. PMID: 33847026

A Review of Vaccinations in Adult Patients with Secondary Immunodeficiency.
Righi E, Gallo T, Azzini AM, Mazzaferri F, Cordioli M, Merighi M, Tacconelli E. Infect Dis Ther. 2021 Jun;10(2):637-661. doi: 10.1007/s40121-021-00404-y. Epub 2021 Mar 9. PMID: 33687662

Willingness to Get a COVID-19 **Vaccine** and Reasons for Hesitancy Among Medicare Beneficiaries: Results From a National Survey.
Luo H, Qu H, Basu R, Rafferty AP, Patil SP, Cummings DM. J Public Health Manag Pract. 2021 Jun 1. doi: 10.1097/PHH.0000000000001394. Online ahead of print. PMID: 34081668

Emerging concepts in the science of **vaccine** adjuvants.
Pulendran B, S Arunachalam P, O'Hagan DT. Nat Rev Drug Discov. 2021 Jun;20(6):454-475. doi: 10.1038/s41573-021-00163-y. Epub 2021 Apr 6. PMID: 33824489

Attitudes of Lebanese adults regarding COVID-19 vaccination.
Kasrine Al Halabi C, Obeid S, Sacre H, Akel M, Hallit R, Salameh P, Hallit S. BMC Public Health. 2021 May 27;21(1):998. doi: 10.1186/s12889-021-10902-w. PMID: 34044790

Antibody Response and Protection After Receipt of Inactivated Influenza **Vaccine**: A Systematic Review.
Wall DJ, Patel MM, Chung JR, Lee B, Dawood FS. Pediatrics. 2021 Jun;147(6):e2020019901. doi: 10.1542/peds.2020-019901. PMID: 34039716

Pertactin-Deficient Bordetella pertussis, **Vaccine**-Driven Evolution, and Reemergence of Pertussis.
Ma L, Caulfield A, Dewan KK, Harvill ET. Emerg Infect Dis. 2021 Jun;27(6):1561-1566. doi: 10.3201/eid2706.203850. PMID: 34014152

Factors influencing acceptance of vaccination during pregnancy in The Gambia and Senegal.
Johm P, Nkoum N, Ceesay A, Mbaye EH, Larson H, Kampmann B. Vaccine. 2021 Jun 1:S0264-410X(21)00663-0. doi: 10.1016/j.vaccine.2021.05.068. Online ahead of print. PMID: 34088509

A high rate of COVID-19 **vaccine** hesitancy in a large-scale survey on Arabs.
Qunaibi EA, Helmy M, Basheti I, Sultan I. Elife. 2021 May 27;10:e68038. doi: 10.7554/eLife.68038. Online ahead of print. PMID: 34042047

Improving COVID-19 **vaccine**-related health literacy and **vaccine** uptake in patients: Comparison on the readability of patient information leaflets of approved COVID-19 vaccines.
Moore JE, Millar BC. J Clin Pharm Ther. 2021 May 27. doi: 10.1111/jcpt.13453. Online ahead of print. PMID: 34046929

Immunopotentiating and Delivery Systems for HCV Vaccines.
Andrianov AK, Fuerst TR. Viruses. 2021 May 25;13(6):981. doi: 10.3390/v13060981. PMID: 34070543

Recent Advances and Future Perspectives in Polymer-Based Nanovaccines.
Pippa N, Gazouli M, Pispas S. Vaccines (Basel). 2021 May 26;9(6):558. doi: 10.3390/vaccines9060558. PMID: 34073648

Measuring Multiple Dimensions and Indices of Nonvaccination Clustering in Michigan, 2008-2018.
Masters NB, Delamater PL, Boulton ML, Zelner J. Am J Epidemiol. 2021 Jun 1;190(6):1113-1121. doi: 10.1093/aje/kwaa264. PMID: 33305789

Sendai Virus-Vectored Vaccines That Express Envelope Glycoproteins of Respiratory Viruses.
Russell CJ, Hurwitz JL. Viruses. 2021 May 29;13(6):1023. doi: 10.3390/v13061023. PMID: 34072332

Structural and Biophysical Characterization of the HCV E1E2 Heterodimer for **Vaccine** Development.
Toth EA, Chagas A, Pierce BG, Fuerst TR. Viruses. 2021 May 29;13(6):1027. doi: 10.3390/v13061027. PMID: 34072451

Structural and immunogenicity analysis of reconstructed ancestral and consensus P48/45 for cross-species anti malaria transmission-blocking **vaccine**.
Ramanto KN, Nurdiansyah R. Comput Biol Chem. 2021 Jun;92:107495. doi: 10.1016/j.compbiolchem.2021.107495. Epub 2021 Apr 24. PMID: 33940529

Willingness to Take COVID-19 **Vaccine** Among People Most at Risk of Exposure in Southern Ethiopia.
Zewude B, Habtegiorgis T. Pragmat Obs Res. 2021 May 27;12:37-47. doi: 10.2147/POR.S313991. eCollection 2021. PMID: 34079423

Ethnic and minority group differences in engagement with COVID-19 vaccination programmes - at Pandemic Pace; when **vaccine** confidence in mass rollout meets local **vaccine** hesitancy.

Reid JA, Mabhala MA. Isr J Health Policy Res. 2021 May 27;10(1):33. doi: 10.1186/s13584-021-00467-9. PMID: 34044891

Thrombotic Thrombocytopenia after COVID-19 Vaccination: In Search of the Underlying Mechanism.
Rzymski P, Perek B, Flisiak R. Vaccines (Basel). 2021 May 27;9(6):559. doi: 10.3390/vaccines9060559. PMID: 34071883

Mapping time use in clinical trials for vaccines against emerging infectious diseases.
Mandi H, Yimer SA, Norheim G. Clin Trials. 2021 Jun;18(3):286-294. doi: 10.1177/1740774520977283. Epub 2021 Mar 2. PMID: 33653146

Immunogenicity of a Live-Attenuated Dengue **Vaccine** Using a Heterologous Prime-Boost Strategy in a Phase 1 Randomized Clinical Trial.
Lin L, Koren MA, Paolino KM, Eckels KH, De La Barrera R, Friberg H, Currier JR, Gromowski GD, Aronson NE, Keiser PB, Sklar MJ, Sondergaard EL, Jasper LE, Endy TP, Jarman RG, Thomas SJ. J Infect Dis. 2021 May 28;223(10):1707-1716. doi: 10.1093/infdis/jiaa603. PMID: 32966573

RNAi Technology and Investigation on Possible Vaccines to Combat SARS-CoV-2 Infection.
Talukder P, Chanda S. Appl Biochem Biotechnol. 2021 Jun;193(6):1744-1756. doi: 10.1007/s12010-021-03548-2. Epub 2021 Apr 7. PMID: 33826068

An Analysis of COVID-19 **Vaccine** Sentiments and Opinions on Twitter.
Yousefinaghani S, Dara R, Mubareka S, Papadopoulos A, Sharif S. Int J Infect Dis. 2021 May 27:S1201-9712(21)00462-8. doi: 10.1016/j.ijid.2021.05.059. Online ahead of print. PMID: 34052407

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 May 25;782:145533. doi: 10.1016/j.gene.2021.145533. Epub 2021 Feb 23. PMID: 33636291

Reduced Influenza B-Specific Postvaccination Antibody Cross-reactivity in the B/Victoria Lineage-Predominant 2019/20 Season.
Xie H, Xiang R, Wan HJ, Plant EP, Radvak P, Kosikova M, Li X, Zoueva O, Ye Z, Wan XF. Clin Infect Dis. 2021 Jun 1;72(11):e776-e783. doi: 10.1093/cid/ciaa1481. PMID: 32990724

In-silico design of a multivalent epitope-based **vaccine** against Candida auris.
Akhtar N, Joshi A, Kaushik V, Kumar M, Mannan MA. Microb Pathog. 2021 Jun;155:104879. doi: 10.1016/j.micpath.2021.104879. Epub 2021 Apr 18. PMID: 33848597

Human papillomavirus (HPV) **vaccine** uptake among a community-recruited sample of gay, bisexual, and other men who have sex with men in the three largest cities in Canada from 2017 to 2019.
Grewal R, Deeks SL, Hart TA, Cox J, De Pokomandy A, Grennan T, Lambert G, Moore D, Brisson M, Coutlée F, Gaspar M, George C, Grace D, Jollimore J, Lachowsky NJ, Nisenbaum R, Ogilvie G, Sauvageau C, Tan DHS, Yeung A, Burchell AN. Vaccine. 2021 May 29:S0264-410X(21)00603-4. doi: 10.1016/j.vaccine.2021.05.031. Online ahead of print. PMID: 34074547

Vaccination and non-pharmaceutical interventions for COVID-19: a mathematical modelling study.
Moore S, Hill EM, Tildesley MJ, Dyson L, Keeling MJ. Lancet Infect Dis. 2021 Jun;21(6):793-802. doi: 10.1016/S1473-3099(21)00143-2. Epub 2021 Mar 18. PMID: 33743847

Vaccine Production Process: How Much Does the General Population Know about This Topic? A Web-Based Survey.
Bechini A, Bonanni P, Zanella B, Di Pisa G, Moscadelli A, Paoli S, Ancillotti L, Bonito B, Boccalini S. Vaccines (Basel). 2021 May 29;9(6):564. doi: 10.3390/vaccines9060564. PMID: 34072288

Thrombosis with thrombocytopenia syndrome associated with COVID-19 vaccines.
Long B, Bridwell R, Gottlieb M. Am J Emerg Med. 2021 May 25;49:58-61. doi: 10.1016/j.ajem.2021.05.054. Online ahead of print. PMID: 34062319

COVID-19 **Vaccine** Acceptance Among Pregnant, Breastfeeding and Non-pregnant Reproductive Aged Women.
Sutton D, D'Alton M, Zhang Y, Kahe K, Cepin A, Goffman D, Staniczenko A, Yates H, Burgansky A, Coletta J, Williams Z, Gyamfi-Bannerman C. Am J Obstet Gynecol MFM. 2021 May 25:100403. doi: 10.1016/j.ajogmf.2021.100403. Online ahead of print. PMID: 34048965

Immunogenicity and Safety of Inactivated Sabin-Strain Polio **Vaccine** "PoliovacSin": Clinical Trials Phase I and II.
Piniaeva A, Ignatyev G, Kozlovskaya L, Ivin Y, Kovpak A, Ivanov A, Shishova A, Antonova L, Khapchaev Y, Feldblium I, Ivanova O, Siniugina A, Ishmukhametov A. Vaccines (Basel). 2021 May 29;9(6):565. doi: 10.3390/vaccines9060565. PMID: 34072466

The Uro-oncology Patient and Vaccination Against SARS-CoV-2.
Socarrás MR, Gómez Rivas J, Teoh JY, Puente J, Moschini M, Moreno-Sierra J. Eur Urol Open Sci. 2021 May 27;29:77-81. doi: 10.1016/j.euros.2021.05.007. Online ahead of print. PMID: 34075362

Sociodemographic and health-related determinants of seasonal influenza vaccination in pregnancy: A systematic review and meta-analysis of the evidence since 2000.
Okoli GN, Reddy VK, Al-Yousif Y, Neilson CJ, Mahmud SM, Abou-Setta AM. Acta Obstet Gynecol Scand. 2021 Jun;100(6):997-1009. doi: 10.1111/aogs.14079. Epub 2021 Feb 17. PMID: 33420724

Willingness to participate in COVID-19 **vaccine** trials; a survey among a population of healthcare workers in Uganda.
Kitonsa J, Kamacooko O, Bahemuka UM, Kibengo F, Kakande A, Wajja A, Basajja V, Lumala A, Ssemwanga E, Asaba R, Mugisha J, Pierce BF, Shattock R, Kaleebu P, Ruzagira E. PLoS One. 2021 May 27;16(5):e0251992. doi: 10.1371/journal.pone.0251992. eCollection 2021. PMID: 34043693

Animal Models for Influenza Research: Strengths and Weaknesses.
Nguyen TQ, Rollon R, Choi YK. Viruses. 2021 May 28;13(6):1011. doi: 10.3390/v13061011. PMID: 34071367

Combination of a Sindbis-SARS-CoV-2 spike **vaccine** and alphaOX40 antibody elicits protective immunity against SARS-CoV-2 induced disease and potentiates long-term SARS-CoV-2-specific humoral and T-cell immunity.

Scaglione A, Opp S, Hurtado A, Lin Z, Pampeno C, Noval MG, Thannickal SA, Stapleford K, Meruelo D. bioRxiv. 2021 May 28:2021.05.28.446009. doi: 10.1101/2021.05.28.446009. Preprint. PMID: 34075383

Analysis of the coverage of inactivated enterovirus 71 (EV71) **vaccine** and adverse events following immunization with the EV71 **vaccine** among children from 2016 to 2019 in Guangzhou.
Li ZQ, Qin ZQ, Tan HF, Zhang CH, Xu JX, Chen J, Ni LH, Yun XX, Cui M, Huang Y, Wang W, Zhang ZB. Expert Rev Vaccines. 2021 May 26. doi: 10.1080/14760584.2021.1933451. Online ahead of print. PMID: 34036862

Development of a **Vaccine** against Human Cytomegalovirus: Advances, Barriers, and Implications for the Clinical Practice.
Scarpini S, Morigi F, Betti L, Dondi A, Biagi C, Lanari M. Vaccines (Basel). 2021 May 25;9(6):551. doi: 10.3390/vaccines9060551. PMID: 34070277

Association of Simulated COVID-19 Vaccination and Nonpharmaceutical Interventions With Infections, Hospitalizations, and Mortality.
Patel MD, Rosenstrom E, Ivy JS, Mayorga ME, Keskinocak P, Boyce RM, Hassmiller Lich K, Smith RL 3rd, Johnson KT, Delamater PL, Swann JL. JAMA Netw Open. 2021 Jun 1;4(6):e2110782. doi: 10.1001/jamanetworkopen.2021.10782. PMID: 34061203

Targeting Antigens for Universal Influenza **Vaccine** Development.
Nguyen QT, Choi YK. Viruses. 2021 May 24;13(6):973. doi: 10.3390/v13060973. PMID: 34073996

Potential biomarkers of immune protection in human leishmaniasis.
Rostami MN, Khamesipour A. Med Microbiol Immunol. 2021 Jun;210(2-3):81-100. doi: 10.1007/s00430-021-00703-8. Epub 2021 May 2. PMID: 33934238

Safety of vaccines used for routine immunization in the United States: An updated systematic review and meta-analysis.
Gidengil C, Goetz MB, Newberry S, Maglione M, Hall O, Larkin J, Motala A, Hempel S. Vaccine. 2021 May 23:S0264-410X(21)00385-6. doi: 10.1016/j.vaccine.2021.03.079. Online ahead of print. PMID: 34049735

Trajectories of COVID-19 **vaccine** intentions among U.S. adults: The role of race and ethnicity.
Niño MD, Hearne BN, Cai T. SSM Popul Health. 2021 Sep;15:100824. doi: 10.1016/j.ssmph.2021.100824. Epub 2021 May 27. PMID: 34075337

Vaccinations in multiple sclerosis patients receiving disease-modifying drugs.
Otero-Romero S, Ascherio A, Lebrun-Frénay C. Curr Opin Neurol. 2021 Jun 1;34(3):322-328. doi: 10.1097/WCO.0000000000000929. PMID: 33709979

Safety, Immunogenicity, and Efficacy of the BNT162b2 Covid-19 **Vaccine** in Adolescents.
Frenck RW Jr, Klein NP, Kitchin N, Gurtman A, Absalon J, Lockhart S, Perez JL, Walter EB, Senders S, Bailey R, Swanson KA, Ma H, Xu X, Koury K, Kalina WV, Cooper D, Jennings T, Brandon DM, Thomas SJ, Türeci Ö, Tresnan DB, Mather S, Dormitzer PR, Şahin U, Jansen KU, Gruber WC; C4591001 Clinical Trial Group. N Engl J Med. 2021 May 27. doi: 10.1056/NEJMoa2107456. Online ahead of print. PMID: 34043894

Development of Effective Tumor **Vaccine** Strategies Based on Immune Response Cascade Reactions.
Wu H, Fu X, Zhai Y, Gao S, Yang X, Zhai G. Adv Healthc Mater. 2021 May 22:e2100299. doi: 10.1002/adhm.202100299. Online ahead of print. PMID: 34021717

PPAR agonists as effective adjuvants for COVID-19 vaccines, by modifying immunogenetics: a review of literature.
AbdelMassih AF, Menshawey R, Ismail JH, Husseiny RJ, Husseiny YM, Yacoub S, Kamel A, Hozaien R, Yacoub E, Menshawey E, Abdelmalek A, Abouelazaem A, Elhatw A, Aboelmaaty A, Shahib A, Mansour A, Kamal A, Mohamed B, Atif B, Ghabreal B, Abdelmalak C, Ibrahim D, Elsaify E, Magdy F, Hanna FG, Hafez H, Dahir H, Merhom K, Ahmed M, Bishara M, Tawfik M, Youssef M, El Sharnouby M, Hamouda M, Ammar M, Ali N, Daniel N, El-Husseiny N, Abdelraouf N, Abdelhameed NK, Ahmed R, Othman R, Mohamadein R, Allam R, Elgendy R, Shebl R, Elsherbiney S, Fouad S, Emel S, Owais S, Hetta S, El-Saman S, Abdelalim S, Galal S, Asar Y, Osman Y, Khalaf Y, Aziz Y, Khafagy Y, Gamal N, Castaldi B. J Genet Eng Biotechnol. 2021 May 31;19(1):82. doi: 10.1186/s43141-021-00179-2. PMID: 34057580

Serotype distribution of invasive, non-invasive and carried Streptococcus pneumoniae in Malaysia: a meta-analysis.
Lister AJJ, Le CF, Cheah ESG, Desa MNM, Cleary DW, Clarke SC. Pneumonia (Nathan). 2021 May 25;13(1):9. doi: 10.1186/s41479-021-00086-7. PMID: 34030731

Vaccine Hesitancy and COVID-19: Nursing's Role.
Enriquez M. Hisp Health Care Int. 2021 Jun;19(2):74. doi: 10.1177/15404153211012874. PMID: 33984251

Chitosan, alginate, hyaluronic acid, gums, and beta-glucan as potent adjuvants and **vaccine** delivery systems for viral threats including SARS-CoV-2: A review.
Mallakpour S, Azadi E, Hussain CM. Int J Biol Macromol. 2021 May 25;182:1931-40. doi: 10.1016/j.ijbiomac.2021.05.155. Online ahead of print. PMID: 34048834

Considerations for fair prioritization of COVID-19 **vaccine** and its mandate among healthcare personnel.
Hughes K, Gogineni V, Lewis C, Deshpande A. Curr Med Res Opin. 2021 Jun;37(6):907-909. doi: 10.1080/03007995.2021.1908245. Epub 2021 Apr 9. PMID: 33760673

Bordetella pertussis in School-Age Children, Adolescents, and Adults: A Systematic Review of Epidemiology, Burden, and Mortality in the Middle East.
Macina D, Evans KE. Infect Dis Ther. 2021 Jun;10(2):719-738. doi: 10.1007/s40121-021-00440-8. Epub 2021 Apr 27. PMID: 33905101

Exploratory analysis of the effect of helminth infection on the immunogenicity and efficacy of the asexual blood-stage malaria **vaccine** candidate GMZ2.
Nouatin O, Mengue JB, Dejon-Agobé JC, Fendel R, Ibáñez J, Ngoa UA, Edoa JR, Adégbité BR, Honkpéhédji YJ, Zinsou JF, Hounkpatin AB, Moutairou K, Homoet A, Esen M, Kreidenweiss A, Hoffman SL, Theisen M, Luty AJF, Lell B, Agnandji ST, Mombo-Ngoma G, Ramharter M, Kremsner P, Mordmüller B, Adegnika AA. PLoS Negl Trop Dis. 2021 Jun 1;15(6):e0009361. doi: 10.1371/journal.pntd.0009361. Online ahead of print. PMID: 34061838

Willingness of Middle Eastern Public to Receive COVID-19 Vaccines.
Abu-Farha R, Mukattash T, Itani R, Karout S, Khojah H, Al-Mahmood A, Alzoubi K. Saudi Pharm J. 2021 May 31. doi: 10.1016/j.jsps.2021.05.005. Online ahead of print. PMID: 34093059

A Dengue Virus Serotype 1 mRNA-LNP **Vaccine** Elicits Protective Immune Responses.
Wollner CJ, Richner M, Hassert MA, Pinto AK, Brien JD, Richner JM. J Virol. 2021 May 24;95(12):e02482-20. doi: 10.1128/JVI.02482-20. Print 2021 May 24. PMID: 33762420

Sustained declines in age group-specific rotavirus infection and acute gastroenteritis in vaccinated and unvaccinated individuals during the five years since Rotavirus **vaccine** introduction in England.
Gower CM, Stowe J, Andrews NJ, Dunning J, Ramsay ME, Ladhani SN. Clin Infect Dis. 2021 May 27:ciab460. doi: 10.1093/cid/ciab460. Online ahead of print. PMID: 34043765

COVID-19 **vaccine** trials: The use of active controls and non-inferiority studies.
Fleming TR, Krause PR, Nason M, Longini IM, Henao-Restrepo AM. Clin Trials. 2021 Jun;18(3):335-342. doi: 10.1177/1740774520988244. Epub 2021 Feb 3. PMID: 33535811

Early Humoral Responses of Hemodialysis Patients after COVID-19 Vaccination with BNT162b2.
Speer C, Göth D, Benning L, Buylaert M, Schaier M, Grenz J, Nusshag C, Kälble F, Kreysing M, Reichel P, Töllner M, Hidmark A, Ponath G, Schnitzler P, Zeier M, Suesal C, Morath C, Klein K. Clin J Am Soc Nephrol. 2021 May 24:CJN.03700321. doi: 10.2215/CJN.03700321. Online ahead of print. PMID: 34031181

Immuno-protective efficiency of feed-based whole-cell inactivated bivalent **vaccine** against Streptococcus and Aeromonas infections in red hybrid tilapia (Oreochromis niloticus Oreochromis mossambicus).
Monir MS, Yusoff MSM, Zulperi ZM, Hassim HA, Zamri-Saad M, Amal MNA, Salleh A, Mohamad A, Yie LJ, Ina-Salwany MY. Fish Shellfish Immunol. 2021 Jun;113:162-175. doi: 10.1016/j.fsi.2021.04.006. Epub 2021 Apr 12. PMID: 33857622

The Burden of Invasive **Vaccine**-Preventable Diseases in Adults in the Middle East and North Africa (MENA) Region.
Bizri AR, Althaqafi A, Kaabi N, Obeidat N, Al Akoury N, Haridy H. Infect Dis Ther. 2021 Jun;10(2):663-685. doi: 10.1007/s40121-021-00420-y. Epub 2021 Mar 22. PMID: 33751422

Lack of effects on female fertility and prenatal and postnatal offspring development in rats with BNT162b2, a mRNA-based COVID-19 **vaccine**.
Bowman CJ, Bouressam M, Campion SN, Cappon GD, Catlin NR, Cutler MW, Diekmann J, Rohde CM, Sellers RS, Lindemann C. Reprod Toxicol. 2021 May 28;103:28-35. doi: 10.1016/j.reprotox.2021.05.007. Online ahead of print. PMID: 34058573

Ethical Considerations in **Vaccine** Allocation.
Reis-Dennis S, Applewhite MK. Immunol Invest. 2021 May 26:1-11. doi: 10.1080/08820139.2021.1924771. Online ahead of print. PMID: 34036865

Physicians' opinions on the necessity of COVID-19 vaccination in patients with epilepsy.
Asadi-Pooya AA, Sahraian A, Badv RS, Sahraian MA. Epileptic Disord. 2021 May 31. doi: 10.1684/epd.2021.1282. Online ahead of print. PMID: 34057409

Genomic variation, origin tracing, and **vaccine** development of SARS-CoV-2: A systematic review.
Li T, Huang T, Guo C, Wang A, Shi X, Mo X, Lu Q, Sun J, Hui T, Tian G, Wang L, Yang J. Innovation (N Y). 2021 May 28;2(2):100116. doi: 10.1016/j.xinn.2021.100116. Epub 2021 May 11. PMID: 33997827

COVID-19-Impfungen: Replizierend oder Nichtreplizierend? – Der Vektor in Sputnik-V.
Klimek L, Chaker AM, Cuevas M, Becker S. Laryngorhinootologie. 2021 May 27. doi: 10.1055/a-1509-8916. Online ahead of print. PMID: 34044465

Optimising HPV vaccination communication to adolescents: A discrete choice experiment.
Chyderiotis S, Sicsic J, Raude J, Bonmarin I, Jeanleboeuf F, Le Duc Banaszuk AS, Gauchet A, Bruel S, Michel M, Giraudeau B, Thilly N, Mueller JE. Vaccine. 2021 Jun 1:S0264-410X(21)00656-3. doi: 10.1016/j.vaccine.2021.05.061. Online ahead of print. PMID: 34088507

Advocacy, Hesitancy, and Equity: Exploring U.S. Race-Related Discussions of the COVID-19 **Vaccine** on Twitter.
Criss S, Nguyen TT, Norton S, Virani I, Titherington E, Tillmanns EL, Kinnane C, Maiolo G, Kirby AB, Gee GC. Int J Environ Res Public Health. 2021 May 26;18(11):5693. doi: 10.3390/ijerph18115693. PMID: 34073291

An Immunodominant Epitope-Specific Monoclonal Antibody Cocktail Improves Survival in a Mouse Model of Staphylococcus aureus Bacteremia.
Zeng H, Zhang J, Song X, Zeng J, Yuan Y, Chen Z, Xu L, Gou Q, Yang F, Zeng N, Zhang Y, Peng L, Zhao L, Zhu J, Liu Y, Luo P, Zou Q, Zhao Z. J Infect Dis. 2021 May 28;223(10):1743-1752. doi: 10.1093/infdis/jiaa602. PMID: 32959055

Preclinical safety assessment of a combined **vaccine** against Hepatitis a virus and enterovirus 71.
Yang T, Liu B, Yue L, Xie T, Li H, Shao M, Yang R, Luo F, Long R, Xie Z. Vaccine. 2021 Jun 1:S0264-410X(21)00653-8. doi: 10.1016/j.vaccine.2021.05.058. Online ahead of print. PMID: 34088510

A systematic review and meta-analysis of effectiveness of decision aids for vaccination decision-making.
Vujovich-Dunn C, Kaufman J, King C, Skinner SR, Wand H, Guy R, Leask J. Vaccine. 2021 May 26:S0264-410X(21)00583-1. doi: 10.1016/j.vaccine.2021.05.021. Online ahead of print. PMID: 34052064

Willingness of Ethiopian Population to Receive COVID-19 **Vaccine**.
Belsti Y, Gela YY, Akalu Y, Dagnew B, Getnet M, Abdu Seid M, Diress M, Yeshaw Y, Fekadu SA. J Multidiscip Healthc. 2021 May 28;14:1233-1243. doi: 10.2147/JMDH.S312637. eCollection 2021. PMID: 34093019

Hesitancy towards COVID-19 Vaccination among Healthcare Workers: A Multi-Centric Survey in France.
Janssen C, Maillard A, Bodelet C, Claudel AL, Gaillat J, Delory T, On Behalf Of The Acv Alpin Study Group. Vaccines (Basel). 2021 May 22;9(6):547. doi: 10.3390/vaccines9060547. PMID: 34067490

Hepatitis C Virus Epitope Immunodominance and B Cell Repertoire Diversity.
Brasher NA, Adhikari A, Lloyd AR, Tedla N, Bull RA. Viruses. 2021 May 25;13(6):983. doi: 10.3390/v13060983. PMID: 34070572

Factors Influencing Public Attitudes towards COVID-19 Vaccination: A Scoping Review Informed by the Socio-Ecological Model.
Al-Jayyousi GF, Sherbash MAM, Ali LAM, El-Heneidy A, Alhussaini NWZ, Elhassan MEA, Nazzal MA. Vaccines (Basel). 2021 May 24;9(6):548. doi: 10.3390/vaccines9060548. PMID: 34073757

Systematic identification and replication of factors associated with human papillomavirus **vaccine** initiation among adolescents in the United States using an environment-wide association study approach.
Nasserie T, Bendavid E. Sex Transm Infect. 2021 May 26:sextrans-2021-054976. doi: 10.1136/sextrans-2021-054976. Online ahead of print. PMID: 34039744

Understanding confidence in the human papillomavirus **vaccine** in Japan: a web-based survey of mothers, female adolescents, and healthcare professionals.
Shuto M, Kim Y, Okuyama K, Ouchi K, Ueichi H, Nnadi C, Larson HJ, Perez G, Sasaki S. Hum Vaccin Immunother. 2021 Jun 1:1-11. doi: 10.1080/21645515.2021.1918042. Online ahead of print. PMID: 34061707

BCG turns 100: its nontraditional uses against viruses, cancer, and immunologic diseases.
Singh AK, Netea MG, Bishai WR. J Clin Invest. 2021 Jun 1;131(11):e148291. doi: 10.1172/JCI148291. PMID: 34060492

The immune response and protective efficacy of a potential DNA **vaccine** against virulent Pasteurella multocida.
Yassein AAM, Teleb AA, Hassan GM, El Fiky ZA. J Genet Eng Biotechnol. 2021 May 31;19(1):81. doi: 10.1186/s43141-021-00180-9. PMID: 34057640

Design and application of nanoparticles as **vaccine** adjuvants against human corona virus infection.
Mao L, Chen Z, Wang Y, Chen C. J Inorg Biochem. 2021 Jun;219:111454. doi: 10.1016/j.jinorgbio.2021.111454. Epub 2021 Mar 29. PMID: 33878530

Collateral impact of COVID-19: why should children continue to suffer?
Nagakumar P, Chadwick CL, Bush A, Gupta A. Eur J Pediatr. 2021 Jun;180(6):1975-1979. doi: 10.1007/s00431-021-03963-x. Epub 2021 Feb 13. PMID: 33580826

Oral Probiotic **Vaccine** Expressing Koi Herpesvirus (KHV) ORF81 Protein Delivered by Chitosan-Alginate Capsules Is a Promising Strategy for Mass Oral Vaccination of Carps against KHV Infection.
Huang X, Ma Y, Wang Y, Niu C, Liu Z, Yao X, Jiang X, Pan R, Jia S, Li D, Guan X, Wang L, Xu Y. J Virol. 2021 May 24;95(12):e00415-21. doi: 10.1128/JVI.00415-21. Print 2021 May 24. PMID: 33827944

Myocarditis following COVID-19 mRNA vaccination.
Abu Mouch S, Roguin A, Hellou E, Ishai A, Shoshan U, Mahamid L, Zoabi M, Aisman M, Goldschmid N, Berar Yanay N. Vaccine. 2021 May 28:S0264-410X(21)00682-4. doi: 10.1016/j.vaccine.2021.05.087. Online ahead of print. PMID: 34092429

Antigenic evolution of contemporary clade 2.3.4.4 HPAI H5 influenza A viruses and impact on **vaccine** use for mitigation and control.
Lewis NS, Banyard AC, Essen S, Whittard E, Coggon A, Hansen R, Reid S, Brown IH. Vaccine. 2021 May 29:S0264-410X(21)00655-1. doi: 10.1016/j.vaccine.2021.05.060. Online ahead of print. PMID: 34074548

SARS-CoV-2 Vaccination and Anaphylaxis: Recommendations of the French Allergy Community and the Montpellier World Health Organization Collaborating Center.
Tanno LK, Berard F, Beaudoin E, Didier A, Demoly P. Vaccines (Basel). 2021 May 27;9(6):560. doi: 10.3390/vaccines9060560. PMID: 34072058

SLy2-overexpression impairs B-cell development in the bone marrow and the IgG response towards pneumococcal conjugate-**vaccine**.
Jaufmann J, Tümen L, Beer-Hammer S. Immun Inflamm Dis. 2021 Jun;9(2):533-546. doi: 10.1002/iid3.413. Epub 2021 Feb 16. PMID: 33592135

Hypermetabolic lymphadenopathy following administration of BNT162b2 mRNA Covid-19 **vaccine**: incidence assessed by [(18)F]FDG PET-CT and relevance to study interpretation.
Cohen D, Krauthammer SH, Wolf I, Even-Sapir E. Eur J Nucl Med Mol Imaging. 2021 Jun;48(6):1854-1863. doi: 10.1007/s00259-021-05314-2. Epub 2021 Mar 27. PMID: 33774684

"Somebody Like Me": Understanding COVID-19 **Vaccine** Hesitancy among Staff in Skilled Nursing Facilities.
Harrison J, Berry S, Mor V, Gifford D. J Am Med Dir Assoc. 2021 Jun;22(6):1133-1137. doi: 10.1016/j.jamda.2021.03.012. Epub 2021 Mar 20. PMID: 33861978

[COVID-19 **vaccine** and anaphylaxis].
Joob B, Wiwanitkit V. Bull Acad Natl Med. 2021 Jun;205(6):631. doi: 10.1016/j.banm.2021.03.003. Epub 2021 Apr 15. PMID: 33875896

Safety and immunogenicity of one versus two doses of the COVID-19 **vaccine** BNT162b2 for patients with cancer: interim analysis of a prospective observational study.
Monin L, Laing AG, Muñoz-Ruiz M, McKenzie DR, Del Molino Del Barrio I, Alaguthurai T, Domingo-Vila C, Hayday TS, Graham C, Seow J, Abdul-Jawad S, Kamdar S, Harvey-Jones E, Graham R, Cooper J, Khan M, Vidler J, Kakkassery H, Sinha S, Davis R, Dupont L, Francos Quijorna I, O'Brien-Gore C, Lee PL, Eum J, Conde Poole M, Joseph M, Davies D, Wu Y, Swampillai A, North BV, Montes A, Harries M, Rigg A, Spicer J, Malim MH, Fields P, Patten P, Di Rosa F, Papa S, Tree T, Doores KJ, Hayday AC, Irshad S. Lancet Oncol. 2021 Jun;22(6):765-778. doi: 10.1016/S1470-2045(21)00213-8. Epub 2021 Apr 27. PMID: 33930323

Designing a multi-epitope **vaccine** against Mycobacteroides abscessus by pangenome-reverse vaccinology.
Dar HA, Ismail S, Waheed Y, Ahmad S, Jamil Z, Aziz H, Hetta HF, Muhammad K. Sci Rep. 2021 May 27;11(1):11197. doi: 10.1038/s41598-021-90868-2. PMID: 34045649

Immunogenicity of Pfizer-BioNTech COVID-19 **Vaccine** in Patients with Inborn Errors of Immunity.
Hagin D, Freund T, Navon M, Halperin T, Adir D, Marom R, Levi I, Benor S, Alcalay Y, Freund NT. J Allergy Clin Immunol. 2021 Jun 1:S0091-6749(21)00887-3. doi: 10.1016/j.jaci.2021.05.029. Online ahead of print. PMID: 34087242

Impact of COVID-19 and intensive care unit capacity on vaccination support: Evidence from a two-leg representative survey in the United Kingdom.

Blanchard-Rohner G, Caprettini B, Rohner D, Voth HJ. J Virus Erad. 2021 Jun;7(2):100044. doi: 10.1016/j.jve.2021.100044. Epub 2021 May 17. PMID: 34026244

Intention to receive a COVID-19 **vaccine**: results from a population-based survey in Canada.
Ogilvie GS, Gordon S, Smith LW, Albert A, Racey CS, Booth A, Gottschlich A, Goldfarb D, Murray MCM, Galea LAM, Kaida A, Brotto LA, Sadarangani M. BMC Public Health. 2021 May 29;21(1):1017. doi: 10.1186/s12889-021-11098-9. PMID: 34051770

Do we need the criminalization of medical fake news?
Mamak K. Med Health Care Philos. 2021 Jun;24(2):235-245. doi: 10.1007/s11019-020-09996-7. Epub 2021 Jan 4. PMID: 33398487

Prevalence of human papillomavirus in young men who have sex with men after the implementation of gender-neutral HPV vaccination: a repeated cross-sectional study.
Chow EPF, Tabrizi SN, Fairley CK, Wigan R, Machalek DA, Garland SM, Cornall AM, Atchison S, Hocking JS, Bradshaw CS, Balgovind P, Murray GL, Chen MY. Lancet Infect Dis. 2021 May 24:S1473-3099(20)30687-3. doi: 10.1016/S1473-3099(20)30687-3. Online ahead of print. PMID: 34043963

Is further research on adult pneumococcal **vaccine** uptake improvement programs worthwhile? alpha value of information analysis.
Wateska AR, Nowalk MP, Jalal H, Lin CJ, Harrison LH, Schaffner W, Zimmerman RK, Smith KJ. Vaccine. 2021 May 24:S0264-410X(21)00609-5. doi: 10.1016/j.vaccine.2021.05.037. Online ahead of print. PMID: 34045104

Evolution of Toll-like receptor 7/8 agonist therapeutics and their delivery approaches: From antiviral formulations to **vaccine** adjuvants.
Bhagchandani S, Johnson J, Irvine DJ. Adv Drug Deliv Rev. 2021 May 28:S0169-409X(21)00177-0. doi: 10.1016/j.addr.2021.05.013. Online ahead of print. PMID: 34058283

Side Effects and Perceptions Following COVID-19 Vaccination in Jordan: A Randomized, Cross-Sectional Study Implementing Machine Learning for Predicting Severity of Side Effects.
Hatmal MM, Al-Hatamleh MAI, Olaimat AN, Hatmal M, Alhaj-Qasem DM, Olaimat TM, Mohamud R. Vaccines (Basel). 2021 May 26;9(6):556. doi: 10.3390/vaccines9060556. PMID: 34073382

Factors indicating intention to vaccinate with a COVID-19 **vaccine** among older U.S. adults.
Nikolovski J, Koldijk M, Weverling GJ, Spertus J, Turakhia M, Saxon L, Gibson M, Whang J, Sarich T, Zambon R, Ezeanochie N, Turgiss J, Jones R, Stoddard J, Burton P, Navar AM. PLoS One. 2021 May 24;16(5):e0251963. doi: 10.1371/journal.pone.0251963. eCollection 2021. PMID: 34029345

Immunogenomics guided design of immunomodulatory multi-epitope subunit **vaccine** against the SARS-CoV-2 new variants, and its validation through in silico cloning and immune simulation.
Khan A, Khan S, Saleem S, Nizam-Uddin N, Mohammad A, Khan T, Ahmad S, Arshad M, Ali SS, Suleman M, Wei DQ. Comput Biol Med. 2021 Jun;133:104420. doi: 10.1016/j.compbiomed.2021.104420. Epub 2021 Apr 24. PMID: 33930764

Convalescent-Phase Sera and **Vaccine**-Elicited Antibodies Largely Maintain Neutralizing Titer against Global SARS-CoV-2 Variant Spikes.

Tada T, Dcosta BM, Samanovic MI, Herati RS, Cornelius A, Zhou H, Vaill A, Kazmierski W, Mulligan MJ, Landau NR. mBio. 2021 Jun 1:e0069621. doi: 10.1128/mBio.00696-21. Online ahead of print. PMID: 34060334

Analysis of **vaccine**-like lumpy skin disease virus from flies near the western border of China.
Wang Y, Zhao L, Yang J, Shi M, Nie F, Liu S, Wang Z, Huang D, Wu H, Li D, Lin H, Li Y. Transbound Emerg Dis. 2021 May 25. doi: 10.1111/tbed.14159. Online ahead of print. PMID: 34033246

The impact of an educational forum intervention on East African mothers' HPV **vaccine**-related knowledge, attitudes, and intentions to vaccinate their adolescent children.
Chu H, Ko LK, Ibrahim A, Bille Mohamed F, Lin J, Shankar M, Amsalu F, Ali AA, Richardson BA, Taylor VM, Winer RL. Vaccine. 2021 May 27:S0264-410X(21)00593-4. doi: 10.1016/j.vaccine.2021.05.029. Online ahead of print. PMID: 34053792

Development of anti-thrombotic **vaccine** against human S100A9 in rhesus monkey.
Shimamura M, Kaikita K, Nakagami H, Kawano T, Ju N, Hayashi H, Nakamaru R, Yoshida S, Sasaki T, Mochizuki H, Tsujita K, Morishita R. Sci Rep. 2021 Jun 1;11(1):11472. doi: 10.1038/s41598-021-91153-y. PMID: 34075153

Antigenicity and Immunogenicity Analysis of the *E. coli* Expressed FMDV Structural Proteins; VP1, VP0, VP3 of the South African Territories Type 2 Virus.
Li G, Wubshet AK, Ding Y, Li Q, Dai J, Wang Y, Hou Q, Chen J, Ma B, Szczotka-Bochniarz A, Szathmary S, Zhang Y, Zhang J. Viruses. 2021 May 27;13(6):1005. doi: 10.3390/v13061005. PMID: 34072100

Gastric eosinophils are detrimental for Helicobacter pylori **vaccine** efficacy.
Vaillant L, Oster P, McMillan B, Velin D. Vaccine. 2021 May 25:S0264-410X(21)00606-X. doi: 10.1016/j.vaccine.2021.05.034. Online ahead of print. PMID: 34049736

Immunogenicity and safety of a novel ten-valent pneumococcal conjugate **vaccine** in healthy infants in The Gambia: a phase 3, randomised, double-blind, non-inferiority trial.
Clarke E, Bashorun A, Adigweme I, Badjie Hydara M, Umesi A, Futa A, Ochoge M, Obayemi D, Edem B, Saidy-Jah E, Onwuchekwa C, Dhere R, Sethna V, Kampmann B, Goldblatt D, Taylor D, Andi-Lolo I, Hosken N, Antony K, Innis BL, Alderson MR, Lamola S. Lancet Infect Dis. 2021 Jun;21(6):834-846. doi: 10.1016/S1473-3099(20)30735-0. Epub 2021 Jan 28. PMID: 33516293

Zika virus induces neuronal and vascular degeneration in developing mouse retina.
Li Y, Shi S, Xia F, Shan C, Ha Y, Zou J, Adam A, Zhang M, Wang T, Liu H, Shi PY, Zhang W. Acta Neuropathol Commun. 2021 May 25;9(1):97. doi: 10.1186/s40478-021-01195-6. PMID: 34034828

COVID-19 **vaccine** trials: The potential for "hybrid" analyses.
Fleming TR, Nason M, Krause PR, Longini IM, Henao-Restrepo AM. Clin Trials. 2021 May 27:17407745211018613. doi: 10.1177/17407745211018613. Online ahead of print. PMID: 34041932

Review article: immunisation against hepatitis B virus infection and the prevention of hepatocellular carcinoma.
Vallet-Pichard A, Pol S. Aliment Pharmacol Ther. 2021 Jun;53(11):1166-1182. doi: 10.1111/apt.16356. Epub 2021 Apr 28. PMID: 33909923

Protective role of PhtD and its amino and carboxyl fragments against pneumococcal sepsis.
André GO, Borges MT, Assoni L, Ferraz LFC, Sakshi P, Adamson P, Gordon DL, Ogunniyi AD, Venter H, Converso TR, Darrieux M. Vaccine. 2021 May 24:S0264-410X(21)00550-8. doi: 10.1016/j.vaccine.2021.04.068. Online ahead of print. PMID: 34045100

Comparison of the immune response following subcutaneous versus intranasal modified-live virus booster vaccination against bovine respiratory disease in pre-weaning beef calves that had received primary vaccination by the intranasal route.
Palomares RA, Bittar JHJ, Woolums AR, Hoyos-Jaramillo A, Hurley DJ, Saliki JT, Ferrer MS, Bullington AC, Rodriguez A, Murray T, Thoresen M, Jones K, Stoskute A. Vet Immunol Immunopathol. 2021 May 24;237:110254. doi: 10.1016/j.vetimm.2021.110254. Online ahead of print. PMID: 34034143

Strategies and action points to ensure equitable uptake of COVID-19 vaccinations: A national qualitative interview study to explore the views of undocumented migrants, asylum seekers, and refugees.
Deal A, Hayward SE, Huda M, Knights F, Crawshaw AF, Carter J, Hassan OB, Farah Y, Ciftci Y, Rowland-Pomp M, Rustage K, Goldsmith L, Hartmann M, Mounier-Jack S, Burns R, Miller A, Wurie F, Campos-Matos I, Majeed A, Hargreaves S; ESCMID Study Group for Infections in Travellers and Migrants (ESGITM). J Migr Health. 2021 May 27;4:100050. doi: 10.1016/j.jmh.2021.100050. Online ahead of print. PMID: 34075367

Knowledge, attitude, and practice toward COVID-19 vaccination in Kazakhstan: a cross-sectional study.
Issanov A, Akhmetzhanova Z, Riethmacher D, Aljofan M. Hum Vaccin Immunother. 2021 May 27:1-7. doi: 10.1080/21645515.2021.1925054. Online ahead of print. PMID: 34044728

Measles (Rubeola): A Case Of **Vaccine** Hesitancy And Pregnancy.
Kraus N, Condon SB. J Midwifery Womens Health. 2021 May 22. doi: 10.1111/jmwh.13223. Online ahead of print. PMID: 34022106

Reducing the Impact of Anti-**Vaccine** Propaganda on Family Health.
Glasper EA. Compr Child Adolesc Nurs. 2021 Jun;44(2):79-85. doi: 10.1080/24694193.2021.1912988. Epub 2021 Apr 30. PMID: 33929279

Comparative Antibody Responses to the Live-Attenuated and Recombinant Herpes Zoster Vaccines.
Schmid DS, Miao C, Leung J, Johnson M, Weinberg A, Levin MJ. J Virol. 2021 May 24;95(12):e00240-21. doi: 10.1128/JVI.00240-21. Print 2021 May 24. PMID: 33762414

A comparative assessment of attitudes and hesitancy for influenza vis-à-vis COVID-19 vaccination among healthcare students and professionals in Malta.
Cuschieri S, Grech V. Z Gesundh Wiss. 2021 May 25:1-8. doi: 10.1007/s10389-021-01585-z. Online ahead of print. PMID: 34055572

Effect of Training Pediatric Clinicians in Human Papillomavirus Communication Strategies on Human Papillomavirus Vaccination Rates: A Cluster Randomized Clinical Trial.
Szilagyi PG, Humiston SG, Stephens-Shields AJ, Localio R, Breck A, Kelly MK, Wright M, Grundmeier RW, Albertin C, Shone LP, Steffes J, Rand CM, Hannan C, Abney DE, McFarland G, Kominski GF, Seixas

BV, Fiks AG. JAMA Pediatr. 2021 May 24. doi: 10.1001/jamapediatrics.2021.0766. Online ahead of print. PMID: 34028494

Safety and immunogenicity of a quadrivalent inactivated subunit non-adjuvanted influenza **vaccine**: A randomized, double-blind, active-controlled phase 1 clinical trial.
Wang Y, Zhang Y, Wu H, Huang L, Yu H, Xie Z, Zhang H, Zhang W, Chen X, Zhang H, Zhang H, Jia C, Xia S, Wang S. Vaccine. 2021 Jun 1:S0264-410X(21)00665-4. doi: 10.1016/j.vaccine.2021.05.070. Online ahead of print. PMID: 34088505

Heterologous **vaccine** interventions: boosting immunity against future pandemics.
Marín-Hernández D, Nixon DF, Hupert N. Mol Med. 2021 May 31;27(1):54. doi: 10.1186/s10020-021-00317-z. PMID: 34058986

Evaluation of mRNA-1273 against SARS-CoV-2 B.1.351 Infection in Nonhuman Primates.
Corbett KS, Werner AP, O' Connell S, Gagne M, Lai L, Moliva JI, Flynn B, Choi A, Koch M, Foulds KE, Andrew SF, Flebbe DR, Lamb E, Nurmukhambetova ST, Provost SJ, Bock KW, Minai M, Nagata BM, Van Ry A, Flinchbaugh Z, Johnston TS, Mokhtari EB, Mudvari P, Henry AR, Laboune F, Chang B, Porto M, Wear J, Alvarado GS, Boyoglu-Barnum S, Todd JM, Bart B, Cook A, Dodson A, Pessaint L, Steingrebe K, Elbashir S, Andersen H, Wu K, Edwards DK, Kar S, Lewis MG, Bortiz E, Moore IN, Carfi A, Suthar MS, McDermott A, Roederer M, Nason MC, Sullivan NJ, Douek DC, Graham BS, Seder RA. bioRxiv. 2021 May 24:2021.05.21.445189. doi: 10.1101/2021.05.21.445189. Preprint. PMID: 34075375

Pfizer-BioNTech COVID-19 **Vaccine** Tolerance in Allergic versus Non-Allergic Individuals.
Nittner-Marszalska M, Rosiek-Biegus M, Kopeć A, Pawłowicz R, Kosińska M, Łata A, Szenborn L. Vaccines (Basel). 2021 May 25;9(6):553. doi: 10.3390/vaccines9060553. PMID: 34070671

Rotavirus **Vaccine** Is Effective Against Rotavirus Gastroenteritis Resulting in Outpatient Care: Results From the Medically Attended Acute Gastroenteritis (MAAGE) Study.
Burke RM, Groom HC, Naleway AL, Katz EM, Salas B, Mattison CP, Donald J, Tsaknaridis L, Biggs C, Bowen MD, Tate JE, Parashar UD, Schmidt M, Hall AJ. Clin Infect Dis. 2021 Jun 1;72(11):2000-2005. doi: 10.1093/cid/ciaa466. PMID: 32322882

Attitudes of physicians towards COVID-19 vaccines and reasons of **vaccine** hesitancy in Turkey.
Civelek B, Yazici O, Ozdemir N, Karacin C, Surel AA. Int J Clin Pract. 2021 May 26:e14399. doi: 10.1111/ijcp.14399. Online ahead of print. PMID: 34037294

Multimodal investigation of rat hepatitis E virus antigenicity: Implications for infection, diagnostics, and **vaccine** efficacy.
Sridhar S, Situ J, Cai JP, Yip CC, Wu S, Zhang AJ, Wen L, Chew NF, Chan WM, Poon RW, Chan JF, Tsang DN, Chen H, Xia NS, Yuen KY. J Hepatol. 2021 Jun;74(6):1315-1324. doi: 10.1016/j.jhep.2020.12.028. Epub 2021 Apr 9. PMID: 33845058

Vaccines: Considerations for pediatric dermatology patients on immunosuppressive agents.
Munshi MA, Noe MH, Chiu YE, Streicher JL. Pediatr Dermatol. 2021 Jun 1. doi: 10.1111/pde.14631. Online ahead of print. PMID: 34060143

Mucosal Priming with a Recombinant Influenza A Virus-Vectored **Vaccine** Elicits T-Cell and Antibody Responses to HIV-1 in Mice.
Wang J, Shu T, Deng W, Zheng Y, Liao M, Ye X, Han L, He P, Zheng X, Li T, Feng Y, Hu F, Li P, Sun C, Chen L, Li F, Feng L. J Virol. 2021 May 24;95(12):e00059-21. doi: 10.1128/JVI.00059-21. Print 2021 May 24. PMID: 33789991

Multi-epitope **vaccine** expressed in Leishmania tarentolae confers protective immunity to Toxoplasma gondii in BALB/c mice.
Majidiani H, Dalimi A, Ghaffarifar F, Pirestani M. Microb Pathog. 2021 Jun;155:104925. doi: 10.1016/j.micpath.2021.104925. Epub 2021 Apr 29. PMID: 33933602

Identification of Generalized Peptide Regions for Designing **Vaccine** Effective for All Significant Mutated Strains of SARS-CoV-2.
Biswas S, Manna S, Dey T, Chatterjee S, Dey S. Comb Chem High Throughput Screen. 2021 Jun 1. doi: 10.2174/1386207324666210601122820. Online ahead of print. PMID: 34077341

Granulocyte macrophage colony-stimulating factor has come of age: From a **vaccine** adjuvant to antiviral immunotherapy.
Petrina M, Martin J, Basta S. Cytokine Growth Factor Rev. 2021 Jun;59:101-110. doi: 10.1016/j.cytogfr.2021.01.001. Epub 2021 Jan 9. PMID: 33593661

The challenge of achieving immunity through multiple-dose vaccines in Madagascar.
Jones FK, Mensah K, Heraud JM, Randriatsarafara FM, Metcalf CJE, Wesolowski A. Am J Epidemiol. 2021 May 22:kwab145. doi: 10.1093/aje/kwab145. Online ahead of print. PMID: 34023892

Rabies in Europe: An epidemiological and clinical update.
Riccardi N, Giacomelli A, Antonello RM, Gobbi F, Angheben A. Eur J Intern Med. 2021 Jun;88:15-20. doi: 10.1016/j.ejim.2021.04.010. Epub 2021 Apr 29. PMID: 33934971

Willingness to get the COVID-19 **vaccine** among patients with rheumatic diseases, healthcare workers and general population in Turkey: a web-based survey.
Yurttas B, Poyraz BC, Sut N, Ozdede A, Oztas M, Uğurlu S, Tabak F, Hamuryudan V, Seyahi E. Rheumatol Int. 2021 Jun;41(6):1105-1114. doi: 10.1007/s00296-021-04841-3. Epub 2021 Mar 29. PMID: 33779780

Effect of statin use on the risk of influenza and influenza **vaccine** effectiveness.
MacIntyre CR, Chughtai AA, Das A, Rahman B, Moa AM, Gan CH, Tan TC. Int J Cardiol. 2021 Jun 1;332:205-208. doi: 10.1016/j.ijcard.2021.03.055. Epub 2021 Mar 26. PMID: 33775795

Zika virus outbreak in Brazil-Lessons learned and perspectives for a safe and effective **vaccine**.
Sáfadi MAP, Almeida FJ, de Ávila Kfouri R. Anat Rec (Hoboken). 2021 Jun;304(6):1194-1201. doi: 10.1002/ar.24622. Epub 2021 Apr 8. PMID: 33834635

Evaluation of Gilthead Seabream (*Sparus aurata*) Immune Response after LCDV-Sa DNA Vaccination.
Leiva-Rebollo R, Castro D, Moreno P, Borrego JJ, Labella AM. Animals (Basel). 2021 May 29;11(6):1613. doi: 10.3390/ani11061613. PMID: 34072482

Utilizing the Theory of Planned Behavior to determine the intentions to receive the influenza **vaccine** during COVID-19: A cross-sectional survey of US adults.
Chu A, Gupta V, Unni EJ. Prev Med Rep. 2021 Sep;23:101417. doi: 10.1016/j.pmedr.2021.101417. Epub 2021 May 29. PMID: 34094818

HPV **vaccine** communication training in healthcare systems: Evaluating a train-the-trainer model.
Brewer NT, Mitchell CG, Alton Dailey S, Hora L, Fisher-Borne M, Tichy K, McCoy T. Vaccine. 2021 May 30:S0264-410X(21)00610-1. doi: 10.1016/j.vaccine.2021.05.038. Online ahead of print. PMID: 34078555

Sustainability of neutralising antibodies induced by bivalent or quadrivalent HPV vaccines and correlation with efficacy: a combined follow-up analysis of data from two randomised, double-blind, multicentre, phase 3 trials.
Mariz FC, Gray P, Bender N, Eriksson T, Kann H, Apter D, Paavonen J, Pajunen E, Prager KM, Sehr P, Surcel HM, Waterboer T, Müller M, Pawlita M, Lehtinen M. Lancet Infect Dis. 2021 May 28:S1473-3099(20)30873-2. doi: 10.1016/S1473-3099(20)30873-2. Online ahead of print. PMID: 34081923

Oral vaccination of Nile tilapia (Oreochromis niloticus) against francisellosis elevates specific antibody titres in serum and mucus.
Hoare R, Leigh W, Limakom T, Wongwaradechkul R, Metselaar M, Shinn AP, Ngo TPH, Thompson KD, Adams A. Fish Shellfish Immunol. 2021 Jun;113:86-88. doi: 10.1016/j.fsi.2021.03.019. Epub 2021 Apr 4. PMID: 33826937

SARS-CoV-2 inactivated **vaccine** (Vero cells) shows good safety in repeated administration toxicity test of Sprague Dawley rats.
Huang Z, Jiang Q, Wang Y, Yang J, Du T, Yi H, Li C, Li Y, Wu Z, Fan S, Liao Y, Zhang Y, Wang L, Jiang G, Tang D, Ye Y, Wang C, Li Z, Li Z, Zhang C, Ma K, Li Q. Food Chem Toxicol. 2021 Jun;152:112239. doi: 10.1016/j.fct.2021.112239. Epub 2021 Apr 24. PMID: 33901607

NIPU: a randomised, open-label, phase II study evaluating nivolumab and ipilimumab combined with UV1 vaccination as second line treatment in patients with malignant mesothelioma.
Haakensen VD, Nowak AK, Ellingsen EB, Farooqi SJ, Bjaanæs MM, Horndalsveen H, Mcculloch T, Grundberg O, Cedres SM, Helland Å. J Transl Med. 2021 May 31;19(1):232. doi: 10.1186/s12967-021-02905-3. PMID: 34059094

Potential mechanisms of anaphylaxis to COVID-19 mRNA vaccines.
Risma KA, Edwards KM, Hummell DS, Little FF, Norton AE, Stallings A, Wood RA, Milner JD. J Allergy Clin Immunol. 2021 Jun;147(6):2075-2082.e2. doi: 10.1016/j.jaci.2021.04.002. Epub 2021 Apr 20. PMID: 33857566

Booster immunization of meningococcal meningitis **vaccine** among children in Hangzhou, China, 2014-2019.
Che X, Liu Y, Wang J, Xu Y, Zhang X, Gu W, Jiang W, Du J, Zhang X. PLoS One. 2021 May 25;16(5):e0251567. doi: 10.1371/journal.pone.0251567. eCollection 2021. PMID: 34032806

Non-antimicrobial approaches for the prevention or treatment of infectious bovine keratoconjunctivitis in cattle applicable to cow-calf operations: A scoping review.

Sheedy DB, Samah FE, Garzon A, Fausak E, Van Noord M, Angelos JA, Maier GU. Animal. 2021 May 28;15(6):100245. doi: 10.1016/j.animal.2021.100245. Online ahead of print. PMID: 34062463

Transdermal drug delivery systems for fighting common viral infectious diseases.
Wang FY, Chen Y, Huang YY, Cheng CM. Drug Deliv Transl Res. 2021 May 22:1-11. doi: 10.1007/s13346-021-01004-6. Online ahead of print. PMID: 34024014

Equity in **vaccine** trials for higher weight people? Protocol for a rapid review of inclusion and exclusion criteria for higher weight people in clinical trials for COVID-19.
Campbell J, Hobbs M, O'Hara L, Ballantyne A, Heywood A, Gray L. BMJ Open. 2021 May 25;11(5):e050114. doi: 10.1136/bmjopen-2021-050114. PMID: 34035111

Pneumococcal Vaccination Mandates for Child Care: Impact of State Laws on Vaccination Coverage at 19-35 Months.
Hair NL, Gruber A, Urban CJ. Am J Prev Med. 2021 Jun;60(6):e269-e276. doi: 10.1016/j.amepre.2021.01.026. Epub 2021 Mar 29. PMID: 33795181

Design of a Phase III immunogenicity and safety study evaluating two-dose regimens of 9-valent human papillomavirus (9vHPV) **vaccine** with extended dosing intervals.
Teppler H, Bautista O; Thomas Group, Flores S, McCauley J, Luxembourg A. Contemp Clin Trials. 2021 Jun;105:106403. doi: 10.1016/j.cct.2021.106403. Epub 2021 Apr 12. PMID: 33857679

To curb COVID-19, global health must go local.
[No authors listed] Nat Med. 2021 May 24:1. doi: 10.1038/s41591-021-01400-y. Online ahead of print. PMID: 34031608

Immuno-toxicological evaluation of her1 cancer **vaccine** in non-human primates: a 6-month subcutaneous study.
Mancebo Rodríguez A, Bergado Báez G, Acosta Lago E, León Goñi A, Blanco Gámez D, Fuentes Morales D, Hernández Fernández DR, Sánchez Ramírez B, Pérez Barreda A, Casacó Parada Á. Immunopharmacol Immunotoxicol. 2021 Jun;43(3):283-290. doi: 10.1080/08923973.2021.1900232. Epub 2021 Mar 16. PMID: 33722157

Experimental Assessment of Possible Factors Associated with Tick-Borne Encephalitis **Vaccine** Failure.
Tuchynskaya K, Volok V, Illarionova V, Okhezin E, Polienko A, Belova O, Rogova A, Chernokhaeva L, Karganova G. Microorganisms. 2021 May 29;9(6):1172. doi: 10.3390/microorganisms9061172. PMID: 34072340

Response to Measles, Mumps and Rubella (MMR) **Vaccine** in Transfusion-Dependent Patients.
Casale M, Di Maio N, Verde V, Scianguetta S, Di Girolamo MG, Tomeo R, Roberti D, Misso S, Perrotta S. Vaccines (Basel). 2021 May 27;9(6):561. doi: 10.3390/vaccines9060561. PMID: 34072263

Mix-and-Match System for the Enzymatic Synthesis of Enantiopure Glycerol-3-Phosphate-Containing Capsule Polymer Backbones from *Actinobacillus pleuropneumoniae*, *Neisseria meningitidis*, and *Bibersteinia trehalosi*.

Litschko C, Budde I, Berger M, Bethe A, Schulze J, Alcala Orozco EA, Mahour R, Goettig P, Führing JI, Rexer T, Gerardy-Schahn R, Schubert M, Fiebig T. mBio. 2021 May 26:e0089721. doi: 10.1128/mBio.00897-21. Online ahead of print. PMID: 34076489

Coronavirus disease 2019 vaccination in transplant recipients.
Eberhardt CS, Balletto E, Cornberg M, Mikulska M. Curr Opin Infect Dis. 2021 Jun 1. doi: 10.1097/QCO.0000000000000739. Online ahead of print. PMID: 34074880

Evaluation of Seropositivity Following BNT162b2 Messenger RNA Vaccination for SARS-CoV-2 in Patients Undergoing Treatment for Cancer.
Massarweh A, Eliakim-Raz N, Stemmer A, Levy-Barda A, Yust-Katz S, Zer A, Benouaich-Amiel A, Ben-Zvi H, Moskovits N, Brenner B, Bishara J, Yahav D, Tadmor B, Zaks T, Stemmer SM. JAMA Oncol. 2021 May 28. doi: 10.1001/jamaoncol.2021.2155. Online ahead of print. PMID: 34047765

COVID-19 **vaccine** platforms: Delivering on a promise?
Verdecia M, Kokai-Kun JF, Kibbey M, Acharya S, Venema J, Atouf F. Hum Vaccin Immunother. 2021 May 25:1-21. doi: 10.1080/21645515.2021.1911204. Online ahead of print. PMID: 34033528

Safety and immunogenicity of adjuvanted recombinant subunit herpes zoster **vaccine** in lung transplant recipients.
Hirzel C, L'Huillier AG, Ferreira VH, Marinelli T, Ku T, Ierullo M, Miao C, Schmid DS, Juvet S, Humar A, Kumar D. Am J Transplant. 2021 Jun;21(6):2246-2253. doi: 10.1111/ajt.16534. Epub 2021 Mar 6. PMID: 33565711

Potentially preventable hospitalisations of people with intellectual disability in New South Wales.
Weise JC, Srasuebkul P, Trollor JN. Med J Aust. 2021 May 24. doi: 10.5694/mja2.51088. Online ahead of print. PMID: 34028026

Awareness of the link between human papillomavirus and oral cancer in UK university students.
Dodd RH, Freeman M, Dekaj F, Bamforth J, Miah A, Sasieni P, Louie KS. Prev Med. 2021 Jun 1;150:106660. doi: 10.1016/j.ypmed.2021.106660. Online ahead of print. PMID: 34081936

Effectiveness of "Priorix" Against Measles and Mumps Diseases in Children Born After 2004 in the United Kingdom: A Retrospective Case-control Study Using the Clinical Practice Research Datalink GOLD Database.
Povey M, Aris E, Cheuvart B, Hall G, Cohet C, Willame C. Pediatr Infect Dis J. 2021 Jun 1;40(6):590-596. doi: 10.1097/INF.0000000000003111. PMID: 33956757

Prophylactic and therapeutic **vaccine** against Pseudomonas aeruginosa keratitis using bacterial membrane vesicles.
Ito S, Nakamura J, Fukuta M, Ura T, Teshigawara T, Fukushima J, Mizuki N, Okuda K, Shimada M. Vaccine. 2021 May 27;39(23):3152-3160. doi: 10.1016/j.vaccine.2021.04.035. Epub 2021 Apr 30. PMID: 33934918

Genetic modification to design a stable yeast-expressed recombinant SARS-CoV-2 receptor binding domain as a COVID-19 **vaccine** candidate.

Chen WH, Wei J, Kundu RT, Adhikari R, Liu Z, Lee J, Versteeg L, Poveda C, Keegan B, Villar MJ, de Araujo Leao AC, Rivera JA, Gillespie PM, Pollet J, Strych U, Zhan B, Hotez PJ, Bottazzi ME. Biochim Biophys Acta Gen Subj. 2021 Jun;1865(6):129893. doi: 10.1016/j.bbagen.2021.129893. Epub 2021 Mar 14. PMID: 33731300

Addressing People's **Vaccine** Hesitancy Will Be Helpful for COVID-19 Vaccination in China.
Chen L, Zhou X, Han X, Shi A, Cheng Z, Mou H. Asia Pac J Public Health. 2021 May 28:10105395211018175. doi: 10.1177/10105395211018175. Online ahead of print. PMID: 34049449

State estimation-based control of COVID-19 epidemic before and after **vaccine** development.
Rajaei A, Raeiszadeh M, Azimi V, Sharifi M. J Process Control. 2021 Jun;102:1-14. doi: 10.1016/j.jprocont.2021.03.008. Epub 2021 Apr 12. PMID: 33867698

Antigenic differences between equine influenza virus **vaccine** strains and Florida sublineage clade 1 strains isolated in Europe in 2019.
Nemoto M, Ohta M, Yamanaka T, Kambayashi Y, Bannai H, Tsujimura K, Yamayoshi S, Kawaoka Y, Cullinane A. Vet J. 2021 Jun;272:105674. doi: 10.1016/j.tvjl.2021.105674. Epub 2021 Apr 14. PMID: 33941332

CD40 and CD80/86 signaling in cDC1s mediate effective neoantigen vaccination and generation of antigen-specific CX3CR1^{+} CD8^{+} T cells.
Yamauchi T, Hoki T, Oba T, Kajihara R, Attwood K, Cao X, Ito F. Cancer Immunol Immunother. 2021 May 26. doi: 10.1007/s00262-021-02969-6. Online ahead of print. PMID: 34037810

Long -term persistence of antibodies against varicella in fully immunized healthcare workers: an Italian retrospective cohort study.
Bianchi FP, Tafuri S, Larocca AMV, Germinario CA, Stefanizzi P. BMC Infect Dis. 2021 May 25;21(1):475. doi: 10.1186/s12879-021-06180-x. PMID: 34034659

Extracellular vesicles as antigen carriers for novel vaccination avenues.
Mehanny M, Lehr CM, Fuhrmann G. Adv Drug Deliv Rev. 2021 Jun;173:164-180. doi: 10.1016/j.addr.2021.03.016. Epub 2021 Mar 26. PMID: 33775707

AIDS Malignancy Consortium 054: Safety and Immunogenicity of the Quadrivalent **Vaccine** in Indian Women Living With HIV.
Palefsky JM, Poongulali S, Lensing S, Lee J, Da Costa M, Chein A, Beulah F, Murugavel KG, Kumarasamy N. J Acquir Immune Defic Syndr. 2021 Jun 1;87(2):875-881. doi: 10.1097/QAI.0000000000002657. PMID: 33587509

Misinformation and other elements in HPV **vaccine** tweets: an experimental comparison.
Calo WA, Gilkey MB, Shah PD, Dyer AM, Margolis MA, Dailey SA, Brewer NT. J Behav Med. 2021 Jun;44(3):310-319. doi: 10.1007/s10865-021-00203-3. Epub 2021 Feb 2. PMID: 33528744

Safety and immunogenicity of Vi-typhoid conjugate **vaccine** co-administration with routine 9-month vaccination in Burkina Faso: A randomised controlled phase 2 trial.
Sirima SB, Ouedraogo A, Barry N, Siribie M, Tiono A, Nébié I, Konaté A, Berges GD, Diarra A, Ouedraogo M, Bougouma EC, Soulama I, Hema A, Datta S, Liang Y, Rotrosen ET, Kathleen Tracy J, Jamka LP,

Oshinsky JJ, Pasetti MF, Neuzil KM, Laurens MB. Int J Infect Dis. 2021 May 31:S1201-9712(21)00461-6. doi: 10.1016/j.ijid.2021.05.061. Online ahead of print. PMID: 34082090

Unilateral Lymphadenopathy After COVID-19 Vaccination: A Practical Management Plan for Radiologists Across Specialties.
Lehman CD, D'Alessandro HA, Mendoza DP, Succi MD, Kambadakone A, Lamb LR. J Am Coll Radiol. 2021 Jun;18(6):843-852. doi: 10.1016/j.jacr.2021.03.001. Epub 2021 Mar 4. PMID: 33713605

Vaccination with rEGVac elicits immunoprotection against different stages of Echinococcus granulosus life cycle: A pilot study.
Pourseif MM, Moghaddam G, Nematollahi A, Khordadmehr M, Naghili B, Dehghani J, Omidi Y. Acta Trop. 2021 Jun;218:105883. doi: 10.1016/j.actatropica.2021.105883. Epub 2021 Mar 4. PMID: 33676937

Improvement of the immunogenicity of ESAT-6 via fusion with the dodecameric protein dodecin of Mycobacterium tuberculosis.
Zhao R, Luo T, Ma P, Ge L, Chen Z, Wang X, Liao W, Bao L. Microb Pathog. 2021 Jun;155:104890. doi: 10.1016/j.micpath.2021.104890. Epub 2021 Apr 26. PMID: 33915207

Evaluation of multi-epitope recombinant protein as a candidate for a contraceptive **vaccine**.
Mortazavi B, Allahyari Fard N, Karkhane AA, Shokrpoor S, Heidari F. J Reprod Immunol. 2021 Jun;145:103325. doi: 10.1016/j.jri.2021.103325. Epub 2021 Apr 15. PMID: 33930667

COVID-19 **Vaccine** Perceptions Among Patients With Chronic Disease in a Large Gastroenterology and Hepatology Practice.
Serper M, Reddy KR, Bewtra M, Ahmad N, Mehta SJ. Am J Gastroenterol. 2021 Jun 1;116(6):1345-1349. doi: 10.14309/ajg.0000000000001270. PMID: 33878043

Live attenuated vaccines under immunosuppressive agents or biological agents: survey and clinical data from Japan.
Kamei K, Miyairi I, Shoji K, Arai K, Kawai T, Ogura M, Ishikura K, Sako M, Nakamura H. Eur J Pediatr. 2021 Jun;180(6):1847-1854. doi: 10.1007/s00431-021-03927-1. Epub 2021 Feb 1. PMID: 33523302

Chemical Conjugation Strategies for the Development of Protein-Based Subunit Nanovaccines.
Lu L, Duong VT, Shalash AO, Skwarczynski M, Toth I. Vaccines (Basel). 2021 May 28;9(6):563. doi: 10.3390/vaccines9060563. PMID: 34071482

Salmonella Bacterin Vaccination Decreases Shedding and Colonization of *Salmonella* Typhimurium in Pigs.
Moura EAGO, Silva DGD, Turco CH, Sanches TVC, Storino GY, Almeida HMS, Mechler-Dreibi ML, Rabelo IP, Sonalio K, Oliveira LG. Microorganisms. 2021 May 28;9(6):1163. doi: 10.3390/microorganisms9061163. PMID: 34071310

Uptake of COVID-19 vaccination in a medium secure psychiatric hospital population.
Gibbon S, McPhail E, Mills G, McBride M, Storer R, Taylor N, McCarthy L. BJPsych Open. 2021 Jun 1;7(4):e108. doi: 10.1192/bjo.2021.924. PMID: 34059167

Engineering a multi epitope **vaccine** against SARS-CoV-2 by exploiting its non structural and structural proteins.
Rajput VS, Sharma R, Kumari A, Vyas N, Prajapati V, Grover A. J Biomol Struct Dyn. 2021 May 26:1-18. doi: 10.1080/07391102.2021.1924265. Online ahead of print. PMID: 34038700

Immunization with Abeta3-10-KLH **vaccine** improves cognitive function and ameliorates mitochondrial dysfunction and reduces Alzheimer's disease-like pathology in Tg-APPswe/PSEN1dE9 mice.
Zhang XY, Meng Y, Yan XJ, Liu S, Wang GQ, Cao YP. Brain Res Bull. 2021 May 24;174:31-40. doi: 10.1016/j.brainresbull.2021.05.019. Online ahead of print. PMID: 34044034

Does the number of doses matter? A qualitative study of HPV vaccination acceptability nested in a dose reduction trial in Tanzania.
Mitchell KR, Erio T, Whitworth HS, Marwerwe G, Changalucha J, Baisley K, Lacey CJ, Hayes R, de SanJosé S, Watson-Jones D. Tumour Virus Res. 2021 May 26:200217. doi: 10.1016/j.tvr.2021.200217. Online ahead of print. PMID: 34051389

Immunogenicity and persistence of high-dose recombinant hepatitis B **vaccine** in adults infected with human immunodeficiency virus in China: A randomized, double-blind, parallel controlled trial.
Feng Y, Yao T, Chang Y, Gao L, Shao Z, Dong S, Wu Y, Shi X, Shi J, Feng D, Cheng Y, Pan M, Li C, Wang J, Lan G, Lu H, Wang P, Xiang S, Nong L, Wang F, Liang X, Wang S. Vaccine. 2021 May 26:S0264-410X(21)00618-6. doi: 10.1016/j.vaccine.2021.05.044. Online ahead of print. PMID: 34052065

Ultra-low dose immunization and multi-component vaccination strategies enhance protection against malaria in mice.
Collins KA, Brod F, Snaith R, Ulaszewska M, Longley RJ, Salman AM, Gilbert SC, Spencer AJ, Franco D, Ballou WR, Hill AVS. Sci Rep. 2021 May 24;11(1):10792. doi: 10.1038/s41598-021-90290-8. PMID: 34031479

Impact that the COVID-19 pandemic on routine childhood vaccinations and challenges ahead: A narrative review.
Chiappini E, Parigi S, Galli L, Licari A, Brambilla I, Angela Tosca M, Ciprandi G, Marseglia G. Acta Paediatr. 2021 May 24. doi: 10.1111/apa.15949. Online ahead of print. PMID: 34028088

Understanding **Vaccine** Hesitancy Among Parents of Children With Autism Spectrum Disorder and Parents of Children With Non-Autism Developmental Delays.
Mensah-Bonsu NE, Mire SS, Sahni LC, Berry LN, Dowell LR, Minard CG, Cunningham RM, Boom JA, Voigt RG, Goin-Kochel RP. J Child Neurol. 2021 May 28:8830738211000505. doi: 10.1177/08830738211000505. Online ahead of print. PMID: 34048284

Adverse events following mRNA SARS-CoV-2 vaccination among U.S. nursing home residents.
Bardenheier BH, Gravenstein S, Blackman C, Gutman R, Sarkar IN, Feifer RA, White EM, McConeghy K, Nanda A, Mor V. Vaccine. 2021 May 28:S0264-410X(21)00683-6. doi: 10.1016/j.vaccine.2021.05.088. Online ahead of print. PMID: 34092431

Impact of the influenza **vaccine** on COVID-19 infection rates and severity.
Conlon A, Ashur C, Washer L, Eagle KA, Hofmann Bowman MA. Am J Infect Control. 2021 Jun;49(6):694-700. doi: 10.1016/j.ajic.2021.02.012. Epub 2021 Feb 22. PMID: 33631305

Vaccine Strategy During the SARS-CoV-2 Pandemic: What School Nurses Need to Know.
Barnby E, Reynolds M, Gordon J. NASN Sch Nurse. 2021 Jun 1:1942602X211020101. doi: 10.1177/1942602X211020101. Online ahead of print. PMID: 34060925

Exploration and Ethical Analysis of Open-Label Pediatric **Vaccine** Trials in a Pandemic.
Wolfe ID, Patel A, Kociolek LK, Fazal A, Jhaveri R, Lantos JD. Clin Ther. 2021 May 23:S0149-2918(21)00204-6. doi: 10.1016/j.clinthera.2021.04.010. Online ahead of print. PMID: 34039479

Influenza **vaccine** community outreach: Leveraging an interprofessional healthcare student workforce to immunize marginalized populations.
Brown SH, Fisher EL, Taylor AQ, Neuzil KE, Trump SW, Sack DE, Fricker GP, Miller RF. Prev Med. 2021 Jun;147:106460. doi: 10.1016/j.ypmed.2021.106460. Epub 2021 Feb 18. PMID: 33609616

Recent Developments in Vaccines for Bovine Mycoplasmoses Caused by *Mycoplasma bovis* and *Mycoplasma mycoides* subsp. *mycoides*.
Dudek K, Szacawa E, Nicholas RAJ. Vaccines (Basel). 2021 May 24;9(6):549. doi: 10.3390/vaccines9060549. PMID: 34073966

Phageome based vaccination and human innate immune modulation could be a useful strategy to control human Coronavirus infections.
Abaidullah M, Peng S, Kamran M, Song X, Ali Sher A, Chen Y, Rehman A, Lin L, Jia R, Yin Z. J Biol Regul Homeost Agents. 2021 May 26;35(3). doi: 10.23812/20-592-A. Online ahead of print. PMID: 34042415

Efficacy of viable BCG **vaccine** paste in the treatment of common warts: a double-blind randomized control trial.
Yaghoobi R, Soghrati M, Tavakoli S, Pazyar N, Abounoori M, Abounoori A, Houshmand G. J Dermatolog Treat. 2021 Jun 1:1-15. doi: 10.1080/09546634.2021.1937482. Online ahead of print. PMID: 34060416

Mining the Mycobacterium tuberculosis proteome for identification of potential T-cell epitope based **vaccine** candidates.
Madan R, Pandit K, Bhati L, Kumar H, Kumari N, Singh S. Microb Pathog. 2021 May 24;157:104996. doi: 10.1016/j.micpath.2021.104996. Online ahead of print. PMID: 34044044

A versatile photothermal **vaccine** based on acid-responsive glyco-nanoplatform for synergistic therapy of cancer.
Gao Y, Zhao Q, Xiao M, Huang X, Wu X. Biomaterials. 2021 Jun;273:120792. doi: 10.1016/j.biomaterials.2021.120792. Epub 2021 Apr 8. PMID: 33872856

Older Adults' Behavior Intentions Once a COVID-19 **Vaccine** Becomes Available.
Callow MA, Callow DD. J Appl Gerontol. 2021 May 26:733464821101920 5. doi: 10.1177/07334648211019205. Online ahead of print. PMID: 34036821

Immunogenicity and structural efficacy of P41 of Plasmodium sp. as potential cross-species blood-stage malaria **vaccine**.
Ramanto KN, Nurdiansyah R. Comput Biol Chem. 2021 Jun;92:107493. doi: 10.1016/j.compbiolchem.2021.107493. Epub 2021 Apr 24. PMID: 33962170

Internet use habits and influenza **vaccine** uptake among US adults: results from seven years (2012-2018) of the National Health Interview Survey.
Khanijahani A, Calhoun B, Kiel J. Public Health. 2021 May 29;195:76-82. doi: 10.1016/j.puhe.2021.04.007. Online ahead of print. PMID: 34062275

Adherence of nurses to annual seasonal influenza vaccination over a 5-year period.
Chan CP, Lee SS, Wong NS. J Hosp Infect. 2021 Jun;112:6-15. doi: 10.1016/j.jhin.2021.02.017. Epub 2021 Feb 25. PMID: 33640372

Abundance of Lactobacillus in porcine gut microbiota is closely related to immune response following PRRSV immunization.
Zhang H, Ma W, Sun Z, Zhu C, Werid GM, Ibrahim YM, Zhang W, Pan Y, Shi D, Chen H, Wang Y. Vet Microbiol. 2021 May 26;259:109134. doi: 10.1016/j.vetmic.2021.109134. Online ahead of print. PMID: 34087673

Challenges targeting cancer neoantigens in 2021: a systematic literature review.
Chen I, Chen MY, Goedegebuure SP, Gillanders WE. Expert Rev Vaccines. 2021 May 28. doi: 10.1080/14760584.2021.1935248. Online ahead of print. PMID: 34047245

Immunogenicity of PCV24, an expanded pneumococcal conjugate **vaccine**, in adult monkeys and protection in mice.
McGuinness D, Kaufhold RM, McHugh PM, Winters MA, Smith WJ, Giovarelli C, He J, Zhang Y, Musey L, Skinner JM. Vaccine. 2021 May 29:S0264-410X(21)00549-1. doi: 10.1016/j.vaccine.2021.04.067. Online ahead of print. PMID: 34074546

Simulating Peptide Monolayer Formation: GnRH-I on Silica.
Pujol-Navarro N, Kubiak-Ossowska K, Ferro V, Mulheran P. Int J Mol Sci. 2021 May 24;22(11):5523. doi: 10.3390/ijms22115523. PMID: 34073815

Preventable Health Behaviors, COVID-19 Severity Perceptions, and **Vaccine** Uptake in Traditional Medicare and Medicare Advantage: a Survey-Based Study.
Park S, Jung J, Larson EB. J Gen Intern Med. 2021 Jun;36(6):1837-1840. doi: 10.1007/s11606-021-06801-w. Epub 2021 Apr 12. PMID: 33846942

Addressing Justified **Vaccine** Hesitancy in the Black Community.
Laurencin CT. J Racial Ethn Health Disparities. 2021 Jun;8(3):543-546. doi: 10.1007/s40615-021-01025-4. Epub 2021 Mar 30. PMID: 33783755

Identification of E484K and other novel SARS-COV-2 variants from the Kingdom of Bahrain.
Bindayna KM, Deifalla AHAFS, Mokbel HEM. Microb Pathog. 2021 May 29;157:104955. doi: 10.1016/j.micpath.2021.104955. Online ahead of print. PMID: 34058304

Genetic changes in plaque-purified varicella **vaccine** strain Suduvax during in vitro propagation in cell culture.
Hwang HR, Kang SH, Lee CH. J Microbiol. 2021 Jun 1. doi: 10.1007/s12275-021-1062-3. Online ahead of print. PMID: 34061341

Counselling for COVID-19 **vaccine** is necessary: Balancing the autonomy, beneficence and non-maleficence in the context of accelerating **vaccine** development.
Law LS, Lo EA. Int J Clin Pract. 2021 Jun;75(6):e14015. doi: 10.1111/ijcp.14015. PMID: 33998757

Cellular and humoral response after mRNA-1273 SARS-CoV-2 **vaccine** in kidney transplant recipients.
Cucchiari D, Egri N, Bodro M, Herrera S, Del Risco-Zevallos J, Casals-Urquiza J, Cofan F, Moreno A, Rovira J, Banon-Maneus E, Ramirez-Bajo MJ, Ventura-Aguiar P, Pérez-Olmos A, Garcia-Pascual M, Pascal M, Vilella A, Trilla A, Ríos J, Palou E, Juan M, Bayés B, Diekmann F. Am J Transplant. 2021 May 26. doi: 10.1111/ajt.16701. Online ahead of print. PMID: 34036720

Exploring SARS-COV-2 structural proteins to design a multi-epitope **vaccine** using immunoinformatics approach: An in silico study.
Sanami S, Alizadeh M, Nosrati M, Dehkordi KA, Azadegan-Dehkordi F, Tahmasebian S, Nosrati H, Arjmand MH, Ghasemi-Dehnoo M, Rafiei A, Bagheri N. Comput Biol Med. 2021 Jun;133:104390. doi: 10.1016/j.compbiomed.2021.104390. Epub 2021 Apr 20. PMID: 33895459

Effects of different types of written vaccination information on COVID-19 **vaccine** hesitancy in the UK (OCEANS-III): a single-blind, parallel-group, randomised controlled trial.
Freeman D, Loe BS, Yu LM, Freeman J, Chadwick A, Vaccari C, Shanyinde M, Harris V, Waite F, Rosebrock L, Petit A, Vanderslott S, Lewandowsky S, Larkin M, Innocenti S, Pollard AJ, McShane H, Lambe S. Lancet Public Health. 2021 Jun;6(6):e416-e427. doi: 10.1016/S2468-2667(21)00096-7. Epub 2021 May 13. PMID: 33991482

COVID-19 **Vaccine** and Death: Causality Algorithm According to the WHO Eligibility Diagnosis.
Pomara C, Sessa F, Ciaccio M, Dieli F, Esposito M, Giammanco GM, Garozzo SF, Giarratano A, Prati D, Rappa F, Salerno M, Tripodo C, Mannucci PM, Zamboni P. Diagnostics (Basel). 2021 May 26;11(6):955. doi: 10.3390/diagnostics11060955. PMID: 34073536

Evaluation of transduced dendritic cells expressing HIV-1 p24-Nef antigens in HIV-specific cytotoxic T cells induction as a therapeutic candidate **vaccine**.
Sadat Larijani M, Ramezani A, Mashhadi Abolghasem Shirazi M, Bolhassani A, Pouriayevali MH, Shahbazi S, Sadat SM. Virus Res. 2021 Jun;298:198403. doi: 10.1016/j.virusres.2021.198403. Epub 2021 Mar 26. PMID: 33775753

Epidemiological transcriptomic data supports BCG protection in viral diseases including COVID-19.
Sharma A. Gene. 2021 May 30;783:145574. doi: 10.1016/j.gene.2021.145574. Epub 2021 Mar 15. PMID: 33737124

Neutrophil Cells Are Essential for The Efficacy of a Therapeutic **Vaccine** against Paracoccidioidomycosis.
Dias LDS, Silva LBR, Nosanchuk JD, Taborda CP. J Fungi (Basel). 2021 May 26;7(6):416. doi: 10.3390/jof7060416. PMID: 34073466

DNA vaccination induced protective immunity against SARS CoV-2 infection in hamsterss.
Chai KM, Tzeng TT, Shen KY, Liao HC, Lin JJ, Chen MY, Yu GY, Dou HY, Liao CL, Chen HW, Liu SJ. PLoS Negl Trop Dis. 2021 May 27;15(5):e0009374. doi: 10.1371/journal.pntd.0009374. eCollection 2021 May. PMID: 34043618

Stopping a polio outbreak in the midst of war: Lessons from Syria.
Mbaeyi C, Moran T, Wadood Z, Ather F, Sykes E, Nikulin J, Al Safadi M, Stehling-Ariza T, Zomahoun L, Ismaili A, Abourshaid N, Asghar H, Korukluoglu G, Duizer E, Ehrhardt D, Burns CC, Sharaf M. Vaccine. 2021 May 27:S0264-410X(21)00619-8. doi: 10.1016/j.vaccine.2021.05.045. Online ahead of print. PMID: 34053791

Development of an automated platform for the optimal production of glycoconjugate vaccines expressed in Escherichia coli.
Samaras JJ, Mauri M, Kay EJ, Wren BW, Micheletti M. Microb Cell Fact. 2021 May 24;20(1):104. doi: 10.1186/s12934-021-01588-1. PMID: 34030723

Plant-based, adjuvant-free, potent multivalent vaccines for avian influenza virus via Lactococcus surface display.
Song SJ, Shin GI, Noh J, Lee J, Kim DH, Ryu G, Ahn G, Jeon H, Diao HP, Park Y, Kim MG, Kim WY, Kim YJ, Sohn EJ, Song CS, Hwang I. J Integr Plant Biol. 2021 May 29. doi: 10.1111/jipb.13141. Online ahead of print. PMID: 34051041

How practice nurses engage with parents during their consultations about the MMR **vaccine**: a qualitative study.
Hill MC, Salmon D, Chudleigh J, Aitken LM. Prim Health Care Res Dev. 2021 May 27;22:e20. doi: 10.1017/S1463423621000256. PMID: 34039463

Acceptability of COVID-19 Vaccines and Protective Behavior among Adults in Taiwan: Associations between Risk Perception and Willingness to Vaccinate against COVID-19.
Tsai FJ, Yang HW, Lin CP, Liu JZ. Int J Environ Res Public Health. 2021 May 23;18(11):5579. doi: 10.3390/ijerph18115579. PMID: 34071135

Adjuvant effects of TLR agonist gardiquimod admixed with Leishmania **vaccine** in mice model of visceral leishmaniasis.
Goyal DK, Keshav P, Kaur S. Infect Genet Evol. 2021 May 28;93:104947. doi: 10.1016/j.meegid.2021.104947. Online ahead of print. PMID: 34052416

Immunising older Australians: Pre-COVID-19 **vaccine** perspectives from general practice training.
Tranter I, Magin P, van Driel ML. Aust J Gen Pract. 2021 Jun;50(6):388-393. doi: 10.31128/AJGP-02-21-5844. PMID: 34059849

Epitope-targeting platform for broadly protective influenza vaccines.
Zeigler DF, Gage E, Clegg CH. PLoS One. 2021 May 27;16(5):e0252170. doi: 10.1371/journal.pone.0252170. eCollection 2021. PMID: 34043704

Rubella **vaccine**-induced granulomas are a novel phenotype with incomplete penetrance of genetic defects in cytotoxicity.
Groß M, Speckmann C, May A, Gajardo-Carrasco T, Wustrau K, Maier SL, Panning M, Huzly D, Agaimy A, Bryceson YT, Choo S, Chow CW, Dückers G, Fasth A, Fraitag S, Gräwe K, Haxelmans S, Holzinger D, Hudowenz O, Hübschen J, Khurana C, Kienle K, Klifa R, Korn K, Kutzner H, Lämmermann T, Ledig S, Lipsker D, Meeths M, Naumann-Bartsch N, Rascon J, Schänzer A, Seidl M, Tesi B, Vauloup-Fellous C,

Vollmer-Kary B, Warnatz K, Wehr C, Neven B, Vargas P, Sepulveda FE, Lehmberg K, Schmitt-Gräff A, Ehl S. J Allergy Clin Immunol. 2021 May 22:S0091-6749(21)00809-5. doi: 10.1016/j.jaci.2021.05.007. Online ahead of print. PMID: 34033843

Plant stanol esters might optimize the immune response and improve the COVID-19 **vaccine** efficacy in overweight and obese subjects.
Plat J, van Brakel L, Mensink RP. Br J Nutr. 2021 May 28:1-5. doi: 10.1017/S0007114521001781. Online ahead of print. PMID: 34044900

A randomised controlled trial of the immunogenicity and safety of a formaldehyde-inactivated Coxiella burnetii **vaccine** in 8-week-old goats.
Muleme M, Devlin JM, Campbell A, Vincent G, Benham PJ, Sprohnle C, Stent A, Cameron A, Islam A, Graves S, Wilks C, Stenos J, Firestone SM. Vet Immunol Immunopathol. 2021 Jun;236:110253. doi: 10.1016/j.vetimm.2021.110253. Epub 2021 Apr 25. PMID: 33940537

A liposome-displayed hemagglutinin **vaccine** platform protects mice and ferrets from heterologous influenza virus challenge.
Sia ZR, He X, Zhang A, Ang JC, Shao S, Seffouh A, Huang WC, D'Agostino MR, Teimouri Dereshgi A, Suryaprakash S, Ortega J, Andersen H, Miller MS, Davidson BA, Lovell JF. Proc Natl Acad Sci U S A. 2021 Jun 1;118(22):e2025759118. doi: 10.1073/pnas.2025759118. PMID: 34050027

Broadly Protective CD8(+) T Cell Immunity to Highly Conserved Epitopes Elicited by Heat Shock Protein gp96-Adjuvanted Influenza Monovalent Split **Vaccine**.
Zhang H, Zheng H, Guo P, Hu L, Wang Z, Wang J, Ju Y, Meng S. J Virol. 2021 May 24;95(12):e00507-21. doi: 10.1128/JVI.00507-21. Print 2021 May 24. PMID: 33827939

Antibodies response induced by recombinant virus-like particles from Triatoma virus and chimeric antigens from Trypanosoma cruzi.
Maria Vasconcelos Queiroz A, Aleksandrovna Yanshina Y, Thays da Silva Rodrigues E, Luciano Neves Santos F, Alejandra Fiorani Celedon P, Maheshwari S, Beatriz Gabelli S, Stephanie Peucelle Rubio C, Durana A, Marcelo Aguilar Guérin D, Sousa Silva M. Vaccine. 2021 May 27:S0264-410X(21)00611-3. doi: 10.1016/j.vaccine.2021.05.039. Online ahead of print. PMID: 34053789

QuickStats: Percentage* of Adults Aged 18-26 Years Who Ever Received a Human Papillomavirus **Vaccine**,() by Race and Hispanic Origin() and Sex - National Health Interview Survey, United States, 2019().
[No authors listed] MMWR Morb Mortal Wkly Rep. 2021 May 28;70(21):797. doi: 10.15585/mmwr.mm7021a5. PMID: 34043608

Efficacy of Two Commercial Ready-To-Use PCV2 and *Mycoplasma hyopneumoniae* Vaccines under Field Conditions.
López-Lorenzo G, Prieto A, López-Novo C, Díaz P, López CM, Morrondo P, Fernández G, Díaz-Cao JM. Animals (Basel). 2021 May 26;11(6):1553. doi: 10.3390/ani11061553. PMID: 34073385

An invariant Trypanosoma vivax **vaccine** antigen induces protective immunity.
Autheman D, Crosnier C, Clare S, Goulding DA, Brandt C, Harcourt K, Tolley C, Galaway F, Khushu M, Ong H, Romero-Ramirez A, Duffy CW, Jackson AP, Wright GJ. Nature. 2021 May 26. doi: 10.1038/s41586-021-03597-x. Online ahead of print. PMID: 34040257

Dynamics of antimicrobial resistance of Streptococcus pneumoniae following PCV10 introduction in Brazil: Nationwide surveillance from 2007 to 2019.
Brandileone MC, Almeida SCG, Bokermann S, Minamisava R, Berezin EN, Harrison LH, Andrade AL. Vaccine. 2021 May 27;39(23):3207-3215. doi: 10.1016/j.vaccine.2021.02.063. Epub 2021 Mar 9. PMID: 33707062

Inoculation now or later? Lower efficacy and **vaccine** passport concerns.
Brazal AM. J Public Health (Oxf). 2021 May 28:fdab179. doi: 10.1093/pubmed/fdab179. Online ahead of print. PMID: 34047344

Maximizing the Uptake of a COVID-19 **Vaccine** in People With Severe Mental Illness: A Public Health Priority.
Warren N, Kisely S, Siskind D. JAMA Psychiatry. 2021 Jun 1;78(6):589-590. doi: 10.1001/jamapsychiatry.2020.4396. PMID: 33320243

Reduced tissue colonization of Mycobacterium avium subsp. paratuberculosis in neonatal calves vaccinated with a cocktail of recombinant proteins.
Stabel JR, Bannantine JP. Vaccine. 2021 May 27;39(23):3131-3140. doi: 10.1016/j.vaccine.2021.04.051. Epub 2021 May 7. PMID: 33966908

Assessment of fitness of foot-and-mouth disease virus A IND 27/2011 as candidate **vaccine** strain.
Sreenivasa BP, Mohapatra JK, Jumanal V, Dhanesh VV, Subramaniam S, Patel BHM, Basagoudanavar SH, Hosamani M, Pattnaik B, Singh RK, Sanyal A. Transbound Emerg Dis. 2021 May 25. doi: 10.1111/tbed.14166. Online ahead of print. PMID: 34033238

Identification of evolutionarily stable functional and immunogenic sites across the SARS-CoV-2 proteome and greater coronavirus family.
Wang C, Konecki DM, Marciano DC, Govindarajan H, Williams AM, Wastuwidyaningtyas B, Bourquard T, Katsonis P, Lichtarge O. Bioinformatics. 2021 May 27:btab406. doi: 10.1093/bioinformatics/btab406. Online ahead of print. PMID: 34043002

A rabies virus vectored severe fever with thrombocytopenia syndrome (SFTS) bivalent candidate **vaccine** confers protective immune responses in mice.
Tian L, Yan L, Zheng W, Lei X, Fu Q, Xue X, Wang X, Xia X, Zheng X. Vet Microbiol. 2021 Jun;257:109076. doi: 10.1016/j.vetmic.2021.109076. Epub 2021 Apr 21. PMID: 33957572

Safety, immunogenicity, and efficacy of NDV-3A against Staphylococcus aureus colonization: A phase 2 **vaccine** trial among US Army Infantry trainees.
Millar EV, Bennett JW, Barin B, Carey PM, Law NN, English CE, Schwartz MM, Cochrane T, Ellis MW, Tribble DR, Timothy Cooke M, Hennessey JP. Vaccine. 2021 May 27;39(23):3179-3188. doi: 10.1016/j.vaccine.2021.04.031. Epub 2021 May 4. PMID: 33962841 Clinical Trial.

Maternal Vaccination in Uganda: Exploring Pregnant Women, Community Leaders and Healthcare Workers' Perceptions.
Nalubega P, Karafillakis E, Atuhaire L, Akite P, Zalwango F, Chantler T, Cochet M, Seeley J, Le Doare K. Vaccines (Basel). 2021 May 25;9(6):552. doi: 10.3390/vaccines9060552. PMID: 34070536

Short-term antibody response after 1 dose of BNT162b2 **vaccine** in patients receiving hemodialysis.
Goupil R, Benlarbi M, Beaubien-Souligny W, Nadeau-Fredette AC, Chatterjee D, Goyette G, Gunaratnam L, Lamarche C, Tom A, Finzi A, Suri RS; Réseau Rénal Québécois (Quebec Renal Network) COVID-19 Study Investigators. CMAJ. 2021 May 31;193(22):E793-E800. doi: 10.1503/cmaj.210673. Epub 2021 May 12. PMID: 33980499

Engineering a self-navigated MnARK nanovaccine for inducing potent protective immunity against novel coronavirus.
Wang Y, Xie Y, Luo J, Guo M, Hu X, Chen X, Chen Z, Lu X, Mao L, Zhang K, Wei L, Ma Y, Wang R, Zhou J, He C, Zhang Y, Zhang Y, Chen S, Shen L, Chen Y, Qiu N, Liu Y, Cui Y, Liao G, Liu Y, Chen C. Nano Today. 2021 Jun;38:101139. doi: 10.1016/j.nantod.2021.101139. Epub 2021 Mar 19. PMID: 33758593

Co-Created Messaging for Influenza Vaccination in a High-Risk Hispanic Community Provides Groundwork for COVID-19 **Vaccine**.
Long A, Mathew S, Alvarez KS, Smartt J, Shah M, Madden C, Perl TM, Cerise FP, Bhavan KP. Health Equity. 2021 May 24;5(1):345-352. doi: 10.1089/heq.2020.0132. eCollection 2021. PMID: 34084986

A practical method for evaluating the in vivo efficacy of EVA-71 **vaccine** using a hSCARB2 knock-in mouse model.
Wu Y, Qu Z, Xiong R, Yang Y, Liu S, Nie J, Liang C, Huang W, Wang Y, Fan C. Emerg Microbes Infect. 2021 May 28:1-21. doi: 10.1080/22221751.2021.1934558. Online ahead of print. PMID: 34044752

A core-shell structured COVID-19 mRNA **vaccine** with favorable biodistribution pattern and promising immunity.
Yang R, Deng Y, Huang B, Huang L, Lin A, Li Y, Wang W, Liu J, Lu S, Zhan Z, Wang Y, A R, Wang W, Niu P, Zhao L, Li S, Ma X, Zhang L, Zhang Y, Yao W, Liang X, Zhao J, Liu Z, Peng X, Li H, Tan W. Signal Transduct Target Ther. 2021 May 31;6(1):213. doi: 10.1038/s41392-021-00634-z. PMID: 34059617

Paediatric rotavirus gastroenteritis: A prospective study of regional prevalent genotypes, genotype correlation with disease severity and viral co-infection in County Mayo, Ireland, in the year following rotavirus **vaccine** introduction in Ireland.
Barsoum Z. J Virol Methods. 2021 May 24;294:114179. doi: 10.1016/j.jviromet.2021.114179. Online ahead of print. PMID: 34033855

Construction and immunological evaluation of hepatitis B virus core virus-like particles containing multiple antigenic peptides of respiratory syncytial virus.
Lei L, Qin H, Luo J, Tan Y, Yang J, Pan Z. Virus Res. 2021 Jun;298:198410. doi: 10.1016/j.virusres.2021.198410. Epub 2021 Apr 2. PMID: 33819519

Immunization with RBD-P2 and N protects against SARS-CoV-2 in nonhuman primates.
Hong SH, Oh H, Park YW, Kwak HW, Oh EY, Park HJ, Kang KW, Kim G, Koo BS, Hwang EH, Baek SH, Park HJ, Lee YS, Bang YJ, Kim JY, Bae SH, Lee SJ, Seo KW, Kim H, Kwon T, Kim JH, Lee S, Kim E, Kim

Y, Park JH, Park SI, Gonçalves M, Weon BM, Jeong H, Nam KT, Hwang KA, Kim J, Kim H, Lee SM, Hong JJ, Nam JH. Sci Adv. 2021 May 28;7(22):eabg7156. doi: 10.1126/sciadv.abg7156. Print 2021 May. PMID: 34049881

Intradermal delivery of a synthetic DNA **vaccine** protects macaques from Middle East respiratory syndrome coronavirus.
Patel A, Reuschel EL, Xu Z, Zaidi FI, Kim KY, Scott DP, Mendoza J, Ramos S, Stoltz R, Feldmann F, Okumura A, Meade-White K, Haddock E, Thomas T, Rosenke R, Lovaglio J, Hanley PW, Saturday G, Muthumani K, Feldmann H, Humeau LM, Broderick KE, Weiner DB. JCI Insight. 2021 May 24;6(10):146082. doi: 10.1172/jci.insight.146082. PMID: 33886507

A Structural Model for the Ligand Binding of Pneumococcal Serotype 3 Capsular Polysaccharide-Specific Protective Antibodies.
Ozdilek A, Huang J, Babb R, Paschall AV, Middleton DR, Duke JA, Pirofski LA, Mousa JJ, Avci FY. mBio. 2021 Jun 1:e0080021. doi: 10.1128/mBio.00800-21. Online ahead of print. PMID: 34061603

Entry-competent-replication-abortive African horse sickness virus strains elicit robust immunity in ponies against all serotypes.
Sullivan E, Lecollinet S, Kerviel A, Hue E, Pronost S, Beck C, Dumarest M, Zientara S, Roy P. Vaccine. 2021 May 27;39(23):3161-3168. doi: 10.1016/j.vaccine.2021.04.034. Epub 2021 May 3. PMID: 33958224

Potential adverse events in Japanese women who received tozinameran (BNT162b2, Pfizer-BioNTech).
Shimazawa R, Ikeda M. J Pharm Policy Pract. 2021 May 31;14(1):46. doi: 10.1186/s40545-021-00326-7. PMID: 34059124

Development of species-specific IgM antibodies and elevation of mucosal immune response in Labeo rohita using recombinant bicistronic nano DNA **vaccine** priming.
Leya T, Ahmad I, Valappil RK, Kurcheti PP, Tripathi G, Sharma R, Bedekar MK. Fish Shellfish Immunol. 2021 Jun;113:185-195. doi: 10.1016/j.fsi.2021.04.008. Epub 2021 Apr 16. PMID: 33857623

The metabolic hormone leptin promotes the function of T(FH) cells and supports **vaccine** responses.
Deng J, Chen Q, Chen Z, Liang K, Gao X, Wang X, Makota FV, Ong HS, Wan Y, Luo K, Gong D, Yu X, Camuglia S, Zeng Q, Zhou T, Xue F, He J, Wei Y, Xiao F, Ma J, Hill DL, Pierson W, Nguyen THO, Zhou H, Wang Y, Shen W, Sun L, Li Z, Xia Q, Qian K, Ye L, Rockman S, Linterman MA, Kedzierska K, Shen N, Lu L, Yu D. Nat Commun. 2021 May 24;12(1):3073. doi: 10.1038/s41467-021-23220-x. PMID: 34031386

Guillain-Barre syndrome should be monitored upon mass vaccination against SARS-CoV-2.
Leung C. Hum Vaccin Immunother. 2021 May 25:1-2. doi: 10.1080/21645515.2021.1922061. Online ahead of print. PMID: 34032555

Consumer willingness to pay for a hypothetical Chagas disease **vaccine** in Brazil: a cross-sectional study and the implications.
Athie TS, Nascimento GC, Labis da Costa MJ, Sales Silva J, Reis EA, Martin AP, Godman B, Dias Godói IP. J Comp Eff Res. 2021 Jun;10(8):659-672. doi: 10.2217/cer-2020-0241. Epub 2021 Apr 14. PMID: 33851872

A Virus-Like Particle-Based **Vaccine** Candidate against the Tick-Borne Powassan Virus Induces Neutralizing Antibodies in a Mouse Model.
Cimica V, Saleem S, Matuczinski E, Adams-Fish D, McMahon C, Rashid S, Stedman TT. Pathogens. 2021 May 31;10(6):680. doi: 10.3390/pathogens10060680. PMID: 34072726

Measuring the Success of the US COVID-19 **Vaccine** Campaign-It's Time to Invest in and Strengthen Immunization Information Systems.
Benjamin-Chung J, Reingold A. Am J Public Health. 2021 Jun;111(6):1078-1080. doi: 10.2105/AJPH.2021.306177. Epub 2021 Feb 18. PMID: 33600253

Vaccination with Rift Valley fever virus live attenuated **vaccine** strain Smithburn caused meningoencephalitis in alpacas.
Anthony T, van Schalkwyk A, Romito M, Odendaal L, Clift SJ, Davis AS. J Vet Diagn Invest. 2021 May 27:10406387211015294. doi: 10.1177/10406387211015294. Online ahead of print. PMID: 34041966

Simultaneous purification and depolymerization of Streptococcus pneumoniae serotype 2 capsular polysaccharides by trifluoroacetic acid.
Gaikwad WK, Kodam KM, Dhere RM, Jana SK, Gautam M, Mallya AD, Soni D, Bhagade S, Gulahne A. Carbohydr Polym. 2021 Jun 1;261:117859. doi: 10.1016/j.carbpol.2021.117859. Epub 2021 Feb 25. PMID: 33766348

Are the Allergic Reactions of COVID-19 Vaccines Caused by mRNA Constructs or Nanocarriers? Immunological Insights.
Selvaraj G, Kaliamurthi S, Peslherbe GH, Wei DQ. Interdiscip Sci. 2021 Jun;13(2):344-347. doi: 10.1007/s12539-021-00438-3. Epub 2021 May 22. PMID: 34021862

Use of an Evidence-Based Approach to Improve Influenza Vaccination Uptake in Pregnancy.
Dehlinger C, Nypaver C, Whiteside J. J Midwifery Womens Health. 2021 Jun 1. doi: 10.1111/jmwh.13227. Online ahead of print. PMID: 34062048

Comparing cytokine production and clinical response following vaccination with BCG Moreau and BCG Russia strains in a Brazilian infant population.
Bitencourt J, Sarno A, Oliveira C, Souza RA, Lima CC, Takenami I, Pereira SM, Arruda S. Vaccine. 2021 May 27;39(23):3189-3196. doi: 10.1016/j.vaccine.2021.04.028. Epub 2021 May 5. PMID: 33965255

Comparative bursal cytokine gene expression and apoptosis in vaccinated chickens following virulent infectious bursal disease virus challenge.
Abou El-Fetouh MS, Hafez MH, El-Attar ER, El-Agamy ME, Ali A. Virology. 2021 Jun;558:126-133. doi: 10.1016/j.virol.2021.03.004. Epub 2021 Mar 18. PMID: 33765587

Influenza vaccination in autoimmune neuromuscular diseases: A survey of current practices and perceptions.
Roy B, Litchman T, Torabi T, Nowak RJ. Muscle Nerve. 2021 Jun;63(6):918-923. doi: 10.1002/mus.27224. Epub 2021 Mar 23. PMID: 33711167

What must be done to tackle **vaccine** hesitancy and barriers to COVID-19 vaccination in migrants?
Crawshaw AF, Deal A, Rustage K, Forster AS, Campos-Matos I, Vandrevala T, Würz A, Pharris A, Suk JE, Kinsman J, Deogan C, Miller A, Declich S, Greenaway C, Noori T, Hargreaves S. J Travel Med. 2021 Jun 1;28(4):taab048. doi: 10.1093/jtm/taab048. PMID: 33772312

Vaccine development lessons between HIV and COVID-19.
Vasan S, Pitisuttithum P. Lancet Infect Dis. 2021 Jun;21(6):759-761. doi: 10.1016/S1473-3099(21)00274-7. PMID: 34051181

Impact of the 13-valent pneumococcal conjugate **vaccine** on acute otitis media and acute sinusitis epidemiology in British Columbia, Canada.
Vadlamudi NK, Saatchi A, Patrick DM, Rose C, Sadatsafavi M, Marra F. J Antimicrob Chemother. 2021 May 22:dkab167. doi: 10.1093/jac/dkab167. Online ahead of print. PMID: 34021757

Immunoregulatory properties of a crude extraction fraction rich in polysaccharide from Chrysanthemum zawadskii Herbich var. latilobum and its potential role as a **vaccine** adjuvant.
Han JM, Song HY, Seo HS, Byun EH, Lim ST, Kim WS, Byun EB. Int Immunopharmacol. 2021 Jun;95:107513. doi: 10.1016/j.intimp.2021.107513. Epub 2021 Mar 20. PMID: 33756223

Live-attenuated RNA hybrid **vaccine** technology provides single-dose protection against Chikungunya virus.
Voigt EA, Fuerte-Stone J, Granger B, Archer J, Van Hoeven N. Mol Ther. 2021 May 28:S1525-0016(21)00300-2. doi: 10.1016/j.ymthe.2021.05.018. Online ahead of print. PMID: 34058388

Pneumococcal vaccination during chemotherapy in children treated for acute lymphoblastic leukemia.
Dorval S, Gantt S, Leclerc JM, Laverdière C, Ovetchkine P, Tapiéro B. Pediatr Blood Cancer. 2021 Jun;68(6):e28944. doi: 10.1002/pbc.28944. Epub 2021 Mar 27. PMID: 33773013

Profiling T cell receptor beta-chain in responders after immunization with recombinant hepatitis B **vaccine**.
Yan D, Yang J, Ji Z, Wang J, Lu X, Huang Y, Zhong C, Li L. J Gene Med. 2021 May 28:e3367. doi: 10.1002/jgm.3367. Online ahead of print. PMID: 34048625

Hydroxychloroquine does not impair antibody response to 13-valent pneumococcal conjugate **vaccine** in patients with cutaneous lupus erythematosus - a pilot study.
Pelka K, Matyja-Bednarczyk A, Wojas-Pelc A, Pastuszczak M. Dermatol Ther. 2021 May 30:e15013. doi: 10.1111/dth.15013. Online ahead of print. PMID: 34056799

Therapeutic plasma exchange (TPE) as a plausible rescue therapy in severe **vaccine**-induced immune thrombotic thrombocytopenia.
Rock G, Weber V, Stegmayr B. Transfus Apher Sci. 2021 May 28:103174. doi: 10.1016/j.transci.2021.103174. Online ahead of print. PMID: 34088601

Anti-COVID-19 measurements for hidradenitis suppurativa patients.
Giamarellos-Bourboulis EJ, Bettoli V, Jemec GBE, Del Marmol V, Marzano AV, Prens EP, Tzellos T, Zouboulis CC. Exp Dermatol. 2021 Jun;30 Suppl 1:18-22. doi: 10.1111/exd.14339. PMID: 34085330

Infections in Immunosuppressed Travellers with Autoimmune Inflammatory Diseases-A Narrative Review and Advice for Clinical Practice.
Allen V, Longley N. Rheumatology (Oxford). 2021 May 22:keab445. doi: 10.1093/rheumatology/keab445. Online ahead of print. PMID: 34022043

High immunogenicity of a messenger RNA based **vaccine** against SARS-CoV-2 in chronic dialysis patients.
Longlune N, Nogier MB, Miedougé M, Gabilan C, Cartou C, Seigneuric B, Del Bello A, Marion O, Faguer S, Izopet J, Kamar N. Nephrol Dial Transplant. 2021 May 31:gfab193. doi: 10.1093/ndt/gfab193. Online ahead of print. PMID: 34057463

Protected or not protected, that is the question - First data on COVID-19 **vaccine** responses in patients with NAFLD and liver transplant recipients.
Cornberg M, Eberhardt CS. J Hepatol. 2021 May 25:S0168-8278(21)00342-1. doi: 10.1016/j.jhep.2021.05.007. Online ahead of print. PMID: 34048861

The incremental burden of invasive pneumococcal disease associated with a decline in childhood vaccination using a dynamic transmission model in Japan: A secondary impact of COVID-19.
Kitano T, Aoki H. Comput Biol Med. 2021 Jun;133:104429. doi: 10.1016/j.compbiomed.2021.104429. Epub 2021 Apr 24. PMID: 33930765

Review of long-term immunogenicity following HPV vaccination: Gaps in current knowledge.
Hoes J, Pasmans H, Schurink-van 't Klooster TM, van der Klis FRM, Donken R, Berkhof J, de Melker HE. Hum Vaccin Immunother. 2021 May 25:1-11. doi: 10.1080/21645515.2021.1908059. Online ahead of print. PMID: 34033518

The COVID-19 **Vaccine** Landscape: What a Rheumatologist Needs to Know.
Bechman K, Dey M, Yates M, Bukhari M, Winthrop K, Galloway JB. J Rheumatol. 2021 Jun 1:jrheum.210106. doi: 10.3899/jrheum.210106. Online ahead of print. PMID: 34074678

Microparticle encapsulation of a tuberculosis subunit **vaccine** candidate containing a nanoemulsion adjuvant via spray drying.
Gomez M, Archer M, Barona D, Wang H, Ordoubadi M, Bin Karim S, Carrigy NB, Wang Z, McCollum J, Press C, Gerhardt A, Fox CB, Kramer RM, Vehring R. Eur J Pharm Biopharm. 2021 Jun;163:23-37. doi: 10.1016/j.ejpb.2021.03.007. Epub 2021 Mar 19. PMID: 33753213

Persistence of neutralizing antibody and its protective efficacy induced by a live attenuated tetravalent dengue **vaccine**, KD-382, in cynomolgus monkeys.
Yoshimura M, Shinmura Y, Shishido T, Takagi S, Kameyama K, Sonoda K, Yoksan S, Kimachi K. Vaccine. 2021 May 27;39(23):3169-3178. doi: 10.1016/j.vaccine.2021.04.030. Epub 2021 May 1. PMID: 33941407

Recovery preparedness of global air transport influenced by COVID-19 pandemic: Policy intervention analysis.
Zhu C, Wu J, Liu M, Wang L, Li D, Kouvelas A. Transp Policy (Oxf). 2021 Jun;106:54-63. doi: 10.1016/j.tranpol.2021.03.009. Epub 2021 Mar 26. PMID: 33785994

The COVID-19 **Vaccine**: Why the Hesitancy?
Grossman VA. J Radiol Nurs. 2021 Jun;40(2):116-119. doi: 10.1016/j.jradnu.2021.02.011. Epub 2021 Mar 11. PMID: 33727900

Disparities in maternal influenza immunization among women in rural and urban areas of the United States.
Kaur R, Callaghan T, Regan AK. Prev Med. 2021 Jun;147:106531. doi: 10.1016/j.ypmed.2021.106531. Epub 2021 Mar 23. PMID: 33771563

Glioma **Vaccine** Shows Early Signs of Success.
[No authors listed] Cancer Discov. 2021 Jun;11(6):OF7. doi: 10.1158/2159-8290.CD-NB2021-0342. Epub 2021 May 4. PMID: 33947662

Effectiveness of the SA 14-14-2 Live-Attenuated Japanese Encephalitis **Vaccine** in Myanmar.
Ngwe Tun MM, Kyaw AK, Nwe KM, Inoue S, Thant KZ, Morita K. Vaccines (Basel). 2021 May 31;9(6):568. doi: 10.3390/vaccines9060568. PMID: 34072933

Recommendations for Delivering COVID-19 **Vaccine** in Jails: Evidence from Kansas, Iowa, Nebraska, and Missouri.
Ramaswamy M, Satterwhite CL, Lipnicky A, Emerson A, Griffin P, Ash D, Ault K. Am J Public Health. 2021 Jun;111(6):1035-1039. doi: 10.2105/AJPH.2021.306218. PMID: 33950714

Incidence of pediatric inflammatory bowel disease within the **Vaccine** Safety Datalink network and evaluation of association with rotavirus vaccination.
Liles E, Irving SA, Dandamudi P, Belongia EA, Daley MF, DeStefano F, Jackson LA, Jacobsen SJ, Kharbanda E, Klein NP, Weintraub E, Naleway AL. Vaccine. 2021 May 26:S0264-410X(21)00604-6. doi: 10.1016/j.vaccine.2021.05.032. Online ahead of print. PMID: 34052066

A case report of acquired hemophilia following COVID-19 **vaccine**.
Radwi M, Farsi S. J Thromb Haemost. 2021 Jun;19(6):1515-1518. doi: 10.1111/jth.15291. Epub 2021 May 10. PMID: 33783953

Safety and Considerations of the COVID-19 **Vaccine** Massive Deployment.
Li J, Song M, Guo D, Yi Y. Virol Sin. 2021 Jun 1:1-7. doi: 10.1007/s12250-021-00408-5. Online ahead of print. PMID: 34061319

Nanomedicine for the poor: a lost cause or an idea whose time has yet to come?
Uskoković V. Nanomedicine (Lond). 2021 Jun;16(14):1203-1218. doi: 10.2217/nnm-2021-0024. Epub 2021 May 14. PMID: 33988035

Cell-free expression of the outer membrane protein OprF of Pseudomonas aeruginosa for **vaccine** purposes.
Mayeux G, Gayet L, Liguori L, Odier M, Martin DK, Cortès S, Schaack B, Lenormand JL. Life Sci Alliance. 2021 May 10;4(6):e202000958. doi: 10.26508/lsa.202000958. Print 2021 Jun. PMID: 33972378

How has nanomedical innovation contributed to the COVID-19 **vaccine** development?
Figueiró Longo JP, Muehlmann LA. Nanomedicine (Lond). 2021 Jun;16(14):1179-1181. doi: 10.2217/nnm-2021-0035. Epub 2021 May 11. PMID: 33973802

Restoring **Vaccine** Diplomacy.
Hotez PJ, Narayan KMV. JAMA. 2021 May 28. doi: 10.1001/jama.2021.7439. Online ahead of print. PMID: 34047758

Expert opinion on the way forward for improving maternal influenza vaccination in India.
Purandare CN, Preiss S, Kolhapure S, Sathyanarayanan S. Expert Rev Vaccines. 2021 May 31:1-6. doi: 10.1080/14760584.2021.1932474. Online ahead of print. PMID: 34018897

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 Jun 1;28(4):taab026. doi: 10.1093/jtm/taab026. PMID: 33635318

Sterilizing immunity: New opportunities for rational TB **vaccine** design.
Sher A, Flynn JL. J Exp Med. 2021 Jul 5;218(7):e20210454. doi: 10.1084/jem.20210454. Epub 2021 May 26. PMID: 34037668

Covid-19: How independent were the US and British **vaccine** advisory committees?
Thacker PD. BMJ. 2021 May 26;373:n1283. doi: 10.1136/bmj.n1283. PMID: 34039565

Using Nonheparin Anticoagulant to Treat a Near-Fatal Case With Multiple Venous Thrombotic Lesions During ChAdOx1 nCoV-19 Vaccination-Related **Vaccine**-Induced Immune Thrombotic Thrombocytopenia.
Bersinger S, Lagarde K, Marlu R, Pernod G, Payen JF. Crit Care Med. 2021 Jun 1. doi: 10.1097/CCM.0000000000005105. Online ahead of print. PMID: 34049307

COVID-19 **vaccine** passport for safe resumption of travel.
Pavli A, Maltezou HC. J Travel Med. 2021 Jun 1;28(4):taab079. doi: 10.1093/jtm/taab079. PMID: 34008004

The Trust Gap Between the Coronavirus **Vaccine** and Communities of Color: What Midwives Can Do To Help.
Vines S. J Midwifery Womens Health. 2021 Jun 1. doi: 10.1111/jmwh.13248. Online ahead of print. PMID: 34061434

Vaccine fake news: an analysis under the World Health Organization's 3Cs model.
Frugoli AG, Prado RS, Silva TMRD, Matozinhos FP, Trapé CA, Lachtim SAF. Rev Esc Enferm USP. 2021 May 26;55:e03736. doi: 10.1590/S1980-220X2020028303736. eCollection 2021. PMID: 34076180

Anaphylaxis associated with the mRNA COVID-19 vaccines: Approach to allergy investigation.
Erdeljic Turk V. Clin Immunol. 2021 Jun;227:108748. doi: 10.1016/j.clim.2021.108748. Epub 2021 Apr 28. PMID: 33932618

Identification of T Cell Epitopes in the Spike Glycoprotein of Severe Acute Respiratory Syndrome Coronavirus 2 in Rhesus Macaques.
Liu X, Li Y, Xiao H, Bi Y, Gong Y, Hu Z, Zeng Y, Sun M, He Z, Lu S, Li Q, Cun W. J Immunol. 2021 Jun 1;206(11):2527-2535. doi: 10.4049/jimmunol.2000922. Epub 2021 May 12. PMID: 33980582

Three Cases of Subacute Thyroiditis Following SARS-CoV-2 **Vaccine**: Post-vaccination ASIA Syndrome.
İremli BG, Şendur SN, Ünlütürk U. J Clin Endocrinol Metab. 2021 May 27:dgab373. doi: 10.1210/clinem/dgab373. Online ahead of print. PMID: 34043800

Preventing Shoulder Injury Related to **Vaccine** Administration.
Shoemaker S. Am J Nurs. 2021 Jun 1;121(6):45-47. doi: 10.1097/01.NAJ.0000753660.62075.69. PMID: 34009164

The Carboxy Terminal Region on Spike Protein of Porcine Epidemic Diarrhea Virus (PEDV) Is Important for Evaluating Neutralizing Activity.
Kang KJ, Kim DH, Hong EJ, Shin HJ. Pathogens. 2021 May 31;10(6):683. doi: 10.3390/pathogens10060683. PMID: 34072840

Structural Analysis of an Antigen Chemically Coupled on Virus-Like Particles in **Vaccine** Formulation.
Jaudzems K, Kirsteina A, Schubeis T, Casano G, Ouari O, Bogans J, Kazaks A, Tars K, Lesage A, Pintacuda G. Angew Chem Int Ed Engl. 2021 Jun 1;60(23):12847-12851. doi: 10.1002/anie.202013189. Epub 2021 May 5. PMID: 33750007

Preliminary evidence on the safety profile of BNT162b2 (*Comirnaty*): new insights from data analysis in EudraVigilance and adverse reaction reports from an Italian health facility.
Gringeri M, Mosini G, Battini V, Cammarata G, Guarnieri G, Carnovale C, Clementi E, Radice S. Hum Vaccin Immunother. 2021 May 27:1-3. doi: 10.1080/21645515.2021.1917236. Online ahead of print. PMID: 34043934

Letter to the Editor: Thyroiditis and Thyrotoxicosis After the SARS-CoV-2 mRNA **Vaccine**.
Schimmel J, Alba EL, Chen A, Russell M, Srinath R. Thyroid. 2021 May 24. doi: 10.1089/thy.2021.0184. Online ahead of print. PMID: 34030467

Governments Are Constitutionally Permitted to Provide "**Vaccine** Passports"-Some May Also Be Constitutionally Obligated to Do So.
Cope K, Stremitzer A. J Nucl Med. 2021 Jun 1;62(6):771-772. doi: 10.2967/jnumed.121.262434. Epub 2021 Apr 16. PMID: 33863825

On the necessity of proper quarantine without lock down for 2019-nCoV in the absence of **vaccine**.
Sahoo P, Mondal HS, Hammouch Z, Abdeljawad T, Mishra D, Reza M. Results Phys. 2021 Jun;25:104063. doi: 10.1016/j.rinp.2021.104063. Epub 2021 Apr 13. PMID: 33868906

SARS-CoV-2 mRNA **Vaccine**-Associated Fixed Drug Eruption.
Mintoff D, Pisani D, Betts A, Scerri L. J Eur Acad Dermatol Venereol. 2021 May 25. doi: 10.1111/jdv.17390. Online ahead of print. PMID: 34036651

Potential role of immunotherapy for advanced breast cancer.
de Mello RA, Amaral GA, Tajima CC, Tadokoro H, Iavelberg J, Simonetti D, Tolia M, Silva JA. Immunotherapy. 2021 Jun;13(8):633-636. doi: 10.2217/imt-2021-0037. Epub 2021 Apr 7. PMID: 33823677

Robust immunity induced by multi-epitope DnaK peptides, potential **vaccine** candidates against Salmonella: an in vitro study.
Verma S, Bansal A, Gaur M, Kumar B. Immunol Lett. 2021 May 28:S0165-2478(21)00084-5. doi: 10.1016/j.imlet.2021.05.005. Online ahead of print. PMID: 34058259

Implementation of the World Health Organization recommendation on the use of rotavirus **vaccine** without age restriction by African countries.
Mandomando I, Mumba M, Nsiari-Muzeyi Biey J, Kipese Paluku G, Weldegebriel G, Mwenda JM. Vaccine. 2021 May 27;39(23):3111-3119. doi: 10.1016/j.vaccine.2021.03.021. Epub 2021 May 3. PMID: 33958225

Intratracheal inoculation of human varicella zoster virus (VZV; MAV strain) **vaccine** successfully induced VZV IgG antibodies in rhesus monkeys.
Kim JM, Park CG. Lab Anim Res. 2021 May 22;37(1):14. doi: 10.1186/s42826-021-00091-3. PMID: 34022964

Debunking mRNA **Vaccine** Misconceptions-An Overview for Medical Professionals.
Hitti FL, Weissman D. Am J Med. 2021 Jun;134(6):703-704. doi: 10.1016/j.amjmed.2021.02.004. Epub 2021 Mar 15. PMID: 33737059

Role of rotavirus vaccination on G9P[8] rotavirus strain during a seasonal outbreak in Japan.
Kawata K, Hoque SA, Nishimura S, Yagyu F, Islam MT, Sharmin LS, Pham NTK, Onda-Shimizu Y, Quang TD, Takanashi S, Okitsu S, Khamrin P, Maneekarn N, Hayakawa S, Ushijima H. Hum Vaccin Immunother. 2021 May 25:1-6. doi: 10.1080/21645515.2021.1925060. Online ahead of print. PMID: 34033735

Lipid Nanoparticle RBD-hFc mRNA **Vaccine** Protects hACE2 Transgenic Mice against a Lethal SARS-CoV-2 Infection.
Elia U, Rotem S, Bar-Haim E, Ramishetti S, Naidu GS, Gur D, Aftalion M, Israeli M, Bercovich-Kinori A, Alcalay R, Makdasi E, Chitlaru T, Rosenfeld R, Israely T, Melamed S, Abutbul Ionita I, Danino D, Peer D, Cohen O. Nano Lett. 2021 May 25. doi: 10.1021/acs.nanolett.1c01284. Online ahead of print. PMID: 34032435

Words matter, humanity matters: alienating non-citizens from the COVID-19 **vaccine**.
Bajaj SS, Tu L, Stanford FC. Postgrad Med J. 2021 May 26:postgradmedj-2021-140212. doi: 10.1136/postgradmedj-2021-140212. Online ahead of print. PMID: 34039691

Cutaneous adverse reactions after m-RNA COVID-19 **vaccine**: early reports from North-East Italy.
Farinazzo E, Ponis G, Zelin E, Errichetti E, Stinco G, Pinzani C, Gambelli A, De Manzini N, Toffoli L, Moret A, Agozzino M, Conforti C, Di Meo N, Schincariol P, Zalaudek I. J Eur Acad Dermatol Venereol. 2021 May 22. doi: 10.1111/jdv.17343. Online ahead of print. PMID: 34021625

Vaccine-Induced Immune Thrombotic Thrombocytopenia (VITT): What We Know and Don't Know.
Arepally GM, Ortel TL. Blood. 2021 Jun 1:blood.2021012152. doi: 10.1182/blood.2021012152. Online ahead of print. PMID: 34061166

AZD1222 **vaccine**-related coagulopathy and thrombocytopenia without thrombosis in a young female.
Ryan E, Benjamin D, McDonald I, Barrett A, McHugh J, Ryan K, Enright H. Br J Haematol. 2021 May 25. doi: 10.1111/bjh.17530. Online ahead of print. PMID: 34036570

Reply to Commentary on the ACR "COVID-19 **Vaccine** Clinical Guidance Summary for Patients with Rheumatic and Musculoskeletal Diseases".
Curtis JR, Johnson SR, Anthony DD, Arasaratnam RJ, Baden LR, Bass AR, Calabrese C, Gravallese EM, Harpaz R, Kroger A, Sadun RE, Turner AS, Williams EA, Mikuls TR. Arthritis Rheumatol. 2021 May 27. doi: 10.1002/art.41805. Online ahead of print. PMID: 34042308

Mapping the SARS-CoV-2 spike glycoprotein-derived peptidome presented by HLA class II on dendritic cells.
Parker R, Partridge T, Wormald C, Kawahara R, Stalls V, Aggelakopoulou M, Parker J, Powell Doherty R, Ariosa Morejon Y, Lee E, Saunders K, Haynes BF, Acharya P, Thaysen-Andersen M, Borrow P, Ternette N. Cell Rep. 2021 May 25;35(8):109179. doi: 10.1016/j.celrep.2021.109179. Epub 2021 May 13. PMID: 34004174

Adverse Reactions of the Second Dose of the BNT162b2 mRNA COVID-19 **Vaccine** in Healthcare Workers in Korea.
Lee YW, Lim SY, Lee JH, Lim JS, Kim M, Kwon S, Joo J, Kwak SH, Kim EO, Jung J, Kwon HS, Kim TB, Kim SH, Bae S. J Korean Med Sci. 2021 May 31;36(21):e153. doi: 10.3346/jkms.2021.36.e153. PMID: 34060261

COVID-19 **Vaccine** Breakthrough Infections Reported to CDC - United States, January 1-April 30, 2021.
CDC COVID-19 Vaccine Breakthrough Case Investigations Team. MMWR Morb Mortal Wkly Rep. 2021 May 28;70(21):792-793. doi: 10.15585/mmwr.mm7021e3. PMID: 34043615

Recommendations for the clinical and laboratory diagnosis of VITT against COVID-19: Communication from the ISTH SSC Subcommittee on Platelet Immunology.
Nazy I, Sachs UJ, Arnold DM, McKenzie SE, Choi P, Althaus K, Ahlen MT, Sharma R, Grace RF, Bakchoul T. J Thromb Haemost. 2021 Jun;19(6):1585-1588. doi: 10.1111/jth.15341. Epub 2021 May 20. PMID: 34018298

Survey data of COVID-19 **vaccine** side effects among hospital staff in a national referral hospital in Indonesia.
Djanas D, Yusirwan, Martini RD, Rahmadian, Putra H, Zanir A, Syahrial, Nindrea RD. Data Brief. 2021 Jun;36:107098. doi: 10.1016/j.dib.2021.107098. Epub 2021 May 1. PMID: 33969163

Rethinking **vaccine** hesitancy among minority groups.
Khan MS, Ali SAM, Adelaine A, Karan A. Lancet. 2021 May 22;397(10288):1863-1865. doi: 10.1016/S0140-6736(21)00938-7. Epub 2021 Apr 21. PMID: 33894143

Neutralization heterogeneity of United Kingdom and South-African SARS-CoV-2 variants in BNT162b2-vaccinated or convalescent COVID-19 healthcare workers.
Marot S, Malet I, Leducq V, Abdi B, Teyssou E, Soulie C, Wirden M, Rodriguez C, Fourati S, Pawlotsky JM, Boutolleau D, Burrel S, Calvez V, Marcelin AG, Jary A. Clin Infect Dis. 2021 May 29:ciab492. doi: 10.1093/cid/ciab492. Online ahead of print. PMID: 34050731

Oral administration of Saccharomyces cerevisiae displaying VP28-VP24 confers protection against white spot syndrome virus in shrimp.

Lei H, Li S, Lu X, Ren Y. Virus Res. 2021 May 29:198467. doi: 10.1016/j.virusres.2021.198467. Online ahead of print. PMID: 34062193

Classical Swine Fever **Vaccine** Development.
[No authors listed] Vet Rec. 2021 Jun;188(11):414. doi: 10.1002/vetr.608. PMID: 34086301

RE: Progress in HPV **Vaccine** Hesitancy.
Brewer NT, Gilkey MB, Thompson P. Pediatrics. 2021 Jun;147(6):e2021051391A. doi: 10.1542/peds.2021-051391A. PMID: 34049956

Daily briefing: Navigating the **vaccine**-information minefield.
Graham F. Nature. 2021 May 24. doi: 10.1038/d41586-021-01424-x. Online ahead of print. PMID: 34035508

COVID-19 **vaccine** hesitancy: Lessons from Israel.
Gurwitz D. Vaccine. 2021 May 27:S0264-410X(21)00680-0. doi: 10.1016/j.vaccine.2021.05.085. Online ahead of print. PMID: 34090701

SARS-CoV-2 **vaccine**-induced cerebral venous thrombosis.
Ciccone A. Eur J Intern Med. 2021 May 25:S0953-6205(21)00185-0. doi: 10.1016/j.ejim.2021.05.026. Online ahead of print. PMID: 34090750

Understanding health inequities among transiting migrants within the Middle East and North African (MENA) region through strengthening data systems.
Requena-Méndez A, Wickramage K, Ito C, Assarag B, Hilali M, Deal A, Arias S, Zenner D, Chemao-Elfihri W, Hargreaves S; Migrant Health MENA Working Group. Travel Med Infect Dis. 2021 May 28;42:102094. doi: 10.1016/j.tmaid.2021.102094. Online ahead of print. PMID: 34058383

Inadvertent subcutaneous injection of COVID-19 **vaccine**.
Ng JY. Postgrad Med J. 2021 Jun;97(1148):400. doi: 10.1136/postgradmedj-2021-139870. Epub 2021 Feb 15. PMID: 33589486

Idiopathic Thrombocytopenic Purpura and the Moderna Covid-19 **Vaccine**.
Julian JA, Mathern DR, Fernando D. Ann Emerg Med. 2021 Jun;77(6):654-656. doi: 10.1016/j.annemergmed.2021.02.011. Epub 2021 Feb 12. PMID: 34030782

Chimeric HP-PRRSV2 containing an ORF2-6 consensus sequence induces antibodies with broadly neutralizing activity and confers cross protection against virulent NADC30-like isolate.
Chen N, Li S, Tian Y, Li X, Li S, Li J, Qiu M, Sun Z, Xiao Y, Yan X, Lin H, Yu X, Tian K, Shang S, Zhu J. Vet Res. 2021 May 27;52(1):74. doi: 10.1186/s13567-021-00944-8. PMID: 34044890

Editorial: Ensuring COVID-19 **vaccine** uptake by people with severe mental illness: a mental health nursing priority.
Usher K. Int J Ment Health Nurs. 2021 Jun;30(3):587-589. doi: 10.1111/inm.12880. Epub 2021 May 7. PMID: 33960098

Immunogenicity and safety of BNT162b2 COVID-19 **vaccine** in a chronic lymphocytic leukaemia patient.
Agrati C, Castilletti C, Sacchi A, Colavita F, Capobianchi MR, Puro V, Nicastri E, Ippolito G, Bibas M. J Cell Mol Med. 2021 May 25. doi: 10.1111/jcmm.16565. Online ahead of print. PMID: 34032357

COVID-19 **vaccine**: Risk of inequality and failure of public health strategies.
Cioffi A, Cioffi F. Ethics Med Public Health. 2021 Jun;17:100653. doi: 10.1016/j.jemep.2021.100653. Epub 2021 Mar 19. PMID: 33758775

Commentary on the American College of Rheumatology "COVID-19 **Vaccine** Clinical Guidance Summary for Patients with Rheumatic and Musculoskeletal Diseases": use of tofacitinib in the context of COVID-19 vaccination.
Mortezavi M, Menon S, Lee K, Rivas J. Arthritis Rheumatol. 2021 May 27. doi: 10.1002/art.41806. Online ahead of print. PMID: 34042319

COVID-19 **Vaccine** Interest among Corrections Officers and People Who Are Incarcerated at Middlesex County Jail, Massachusetts.
Khorasani SB, Koutoujian PJ, Zubiago J, Guardado R, Siddiqi K, Wurcel AG. J Urban Health. 2021 May 26:1-5. doi: 10.1007/s11524-021-00545-y. Online ahead of print. PMID: 34041670

Will there be a RNA **vaccine** for TB?
Fan XY, Lowrie DB. Emerg Microbes Infect. 2021 May 26:1-4. doi: 10.1080/22221751.2021.1935328. Online ahead of print. PMID: 34036874

Vigilant doctors ensure better **vaccine** safety.
Harg P. Tidsskr Nor Laegeforen. 2021 May 12;141(8). doi: 10.4045/tidsskr.21.0368. Print 2021 May 25. PMID: 34047154

Children and the American Rescue Plan: countering COVID-19 **vaccine** hesitancy during a global pandemic.
Shah S. Pediatr Res. 2021 May 25:1-3. doi: 10.1038/s41390-021-01590-8. Online ahead of print. PMID: 34035429

Engaging Nursing Assistants to Enhance Receptivity to the Coronavirus Disease 2019 **Vaccine**.
Sadarangani TR, David D, Travers J. J Am Med Dir Assoc. 2021 Jun;22(6):1125-1127. doi: 10.1016/j.jamda.2021.03.016. PMID: 34088503

Oxford-AstraZeneca COVID-19 **vaccine**-induced cerebral venous thrombosis and thrombocytopaenia: A missed opportunity for a rapid return of experience.
Geeraerts T, Montastruc F, Bonneville F, Mémier V, Raposo N; Toulouse Vitt Study Group. Anaesth Crit Care Pain Med. 2021 May 22:100889. doi: 10.1016/j.accpm.2021.100889. Online ahead of print. PMID: 34033927

Implications of Global and Local Inequalities in COVID-19 **Vaccine** Distribution for People With Severe Mental Disorders in Latin America.
Mascayano F, Bruni A, Susser E. JAMA Psychiatry. 2021 May 28. doi: 10.1001/jamapsychiatry.2021.1416. Online ahead of print. PMID: 34047782

Multisystem Inflammatory Syndrome after SARS-CoV-2 Infection and COVID-19 Vaccination.
Salzman MB, Huang CW, O'Brien CM, Castillo RD. Emerg Infect Dis. 2021 May 25;27(7). doi: 10.3201/eid2707.210594. Online ahead of print. PMID: 34034858

Adverse Events Following SARS-CoV-2 mRNA Vaccination: Among Patients with Inflammatory Bowel Disease.
Botwin GJ, Li D, Figueiredo J, Cheng S, Braun J, McGovern DPB, Melmed GY. Am J Gastroenterol. 2021 May 25. doi: 10.14309/ajg.0000000000001342. Online ahead of print. PMID: 34047304

COVID-19 vaccination on Brazil and the crocodile side-effect.
Boschiero MN, Palamim CVC, Marson FAL. Ethics Med Public Health. 2021 Jun;17:100654. doi: 10.1016/j.jemep.2021.100654. Epub 2021 Mar 19. PMID: 33758776

COVID-19 **vaccine** prioritisation for people with disabilities.
Epstein S, Ayers K, Swenor BK. Lancet Public Health. 2021 Jun;6(6):e361. doi: 10.1016/S2468-2667(21)00093-1. Epub 2021 Apr 21. PMID: 33894137

Exacerbation of immune thrombocytopenia following Covid-19 vaccination.
Kuter DJ. Br J Haematol. 2021 Jun 1. doi: 10.1111/bjh.17645. Online ahead of print. PMID: 34075578

A breath of humanity in the era of Covid-19 **vaccine**.
Vanhems P. Vaccine. 2021 May 24:S0264-410X(21)00638-1. doi: 10.1016/j.vaccine.2021.05.052. Online ahead of print. PMID: 34053788

A global compact to counter **vaccine** nationalism.
Jha P, Jamison DT, Watkins DA, Bell J. Lancet. 2021 May 29;397(10289):2046-2047. doi: 10.1016/S0140-6736(21)01105-3. Epub 2021 May 14. PMID: 34000254

How can we accelerate COVID-19 **vaccine** discovery?
Russo G, Di Salvatore V, Caraci F, Curreli C, Viceconti M, Pappalardo F. Expert Opin Drug Discov. 2021 May 31. doi: 10.1080/17460441.2021.1935861. Online ahead of print. PMID: 34058925

Maximization of Open Hospital Capacity under Shortage of SARS-CoV-2 Vaccines-An Open Access, Stochastic Simulation Tool.
Bosbach WA, Heinrich M, Kolisch R, Heiss C. Vaccines (Basel). 2021 May 22;9(6):546. doi: 10.3390/vaccines9060546. PMID: 34067405

National immunisation campaigns with oral polio **vaccine** may reduce all-cause mortality: Analysis of 2004-2019 demographic surveillance data in rural Bangladesh.
Nielsen S, Khalek MA, Benn CS, Aaby P, Hanifi SMA. EClinicalMedicine. 2021 May 24;36:100886. doi: 10.1016/j.eclinm.2021.100886. eCollection 2021 Jun. PMID: 34041458

Acute abducens nerve palsy following COVID-19 vaccination.
Reyes-Capo DP, Stevens SM, Cavuoto KM. J AAPOS. 2021 May 24:S1091-8531(21)00109-9. doi: 10.1016/j.jaapos.2021.05.003. Online ahead of print. PMID: 34044114

Biphasic anaphylaxis after exposure to the first dose of Pfizer-BioNTech COVID-19 mRNA **vaccine**.
Abi Zeid Daou C, Natout MA, El Hadi N. J Med Virol. 2021 May 29. doi: 10.1002/jmv.27109. Online ahead of print. PMID: 34050949

Immune response to SARS-CoV-2 infection and vaccination in patients receiving kidney replacement therapy.
Ikizler TA, Coates PT, Rovin BH, Ronco P. Kidney Int. 2021 Jun;99(6):1275-1279. doi: 10.1016/j.kint.2021.04.007. Epub 2021 Apr 20. PMID: 33931226

Cytokine release syndrome in a patient with colorectal cancer after vaccination with BNT162b2.
Au L, Fendler A, Shepherd STC, Rzeniewicz K, Cerrone M, Byrne F, Carlyle E, Edmonds K, Del Rosario L, Shon J, Haynes WA, Ward B, Shum B, Gordon W, Gerard CL, Xie W, Joharatnam-Hogan N, Young K, Pickering L, Furness AJS, Larkin J, Harvey R, Kassiotis G, Gandhi S; Crick COVID-19 Consortium, Swanton C, Fribbens C, Wilkinson KA, Wilkinson RJ, Lau DK, Banerjee S, Starling N, Chau I; CAPTURE Consortium, Turajlic S. Nat Med. 2021 May 26. doi: 10.1038/s41591-021-01387-6. Online ahead of print. PMID: 34040262

The potential benefits of a national **vaccine** registry for Canada.
Gorfinkel IS, Lexchin J. CMAJ. 2021 May 31;193(22):E808. doi: 10.1503/cmaj.78920. PMID: 34059499

Novel 1,2,3-triazole-tethered Pam(3)CAG conjugates as potential TLR-2 agonistic **vaccine** adjuvants.
Mhamane TB, Sambyal S, Vemireddy S, Khan IA, Shafi S, Halmuthur M SK. Bioorg Chem. 2021 Jun;111:104838. doi: 10.1016/j.bioorg.2021.104838. Epub 2021 Mar 22. PMID: 33848722

Are the new SARS-CoV-2 variants resistant against the **vaccine**?
Abdalla M, El-Arabey AA, Jiang X. Hum Vaccin Immunother. 2021 May 28:1-2. doi: 10.1080/21645515.2021.1925503. Online ahead of print. PMID: 34047679

Temporal relation between second dose BNT162b2 mRNA Covid-19 **vaccine** and cardiac involvement in a patient with previous SARS-COV-2 infection.
Ammirati E, Cavalotti C, Milazzo A, Pedrotti P, Soriano F, Schroeder JW, Morici N, Giannattasio C, Frigerio M, Metra M, Camici PG, Oliva F. Int J Cardiol Heart Vasc. 2021 Jun;34:100774. doi: 10.1016/j.ijcha.2021.100774. Epub 2021 Mar 31. PMID: 33821210

Impaired anti-SARS-CoV-2 Humoral and Cellular Immune Response induced by Pfizer-BioNTech BNT162b2 mRNA **Vaccine** in Solid Organ Transplanted Patients.
Miele M, Busà R, Russelli G, Sorrentino MC, Di Bella M, Timoneri F, Mularoni A, Panarello G, Vitulo P, Conaldi PG, Bulati M. Am J Transplant. 2021 May 31. doi: 10.1111/ajt.16702. Online ahead of print. PMID: 34058052

Rate and Risk Factors for Breakthrough SARS-CoV-2 infection After Vaccination.
Butt AA, Khan T, Yan P, Shaikh OS, Omer SB, Mayr F. J Infect. 2021 May 27:S0163-4453(21)00263-2. doi: 10.1016/j.jinf.2021.05.021. Online ahead of print. PMID: 34052241

Production of a Promising Biosynthetic Self-Assembled Nanoconjugate **Vaccine** against Klebsiella Pneumoniae Serotype O2 in a General Escherichia Coli Host.

Peng Z, Wu J, Wang K, Li X, Sun P, Zhang L, Huang J, Liu Y, Hua X, Yu Y, Pan C, Wang H, Zhu L. Adv Sci (Weinh). 2021 May 24:e2100549. doi: 10.1002/advs.202100549. Online ahead of print. PMID: 34032027

Viral replicon particles protect IFNAR$^{-/-}$ mice against lethal Crimean-Congo hemorrhagic fever virus challenge three days after vaccination.
Spengler JR, Welch SR, Scholte FEM, Rodriguez SE, Harmon JR, Coleman-McCray JD, Nichol ST, Montgomery JM, Bergeron É, Spiropoulou CF. Antiviral Res. 2021 May 24;191:105090. doi: 10.1016/j.antiviral.2021.105090. Online ahead of print. PMID: 34044061

Antibody Response to mRNA-1273 SARS-CoV-2 **Vaccine** in Hemodialysis Patients with and without Prior COVID-19.
Chan L, Fuca N, Zeldis E, Campbell K, Shaikh A. Clin J Am Soc Nephrol. 2021 May 24:CJN.04080321. doi: 10.2215/CJN.04080321. Online ahead of print. PMID: 34031182

[Defining priorities, the case of of COVID-19 **vaccine**].
Frigerio M. G Ital Cardiol (Rome). 2021 Jun;22(6):509-510. doi: 10.1714/3612.35936. PMID: 34037597

[Reply to "Defining priorities, the case of of COVID-19 **vaccine**"].
Indolfi C, Barillà F, Basso C, Ciccone MM, Curcio A, Mancone M, Mercuro G, Muscoli S, Nodari S, Pedrinelli R, Romeo F, Sinagra G, Filardi PP. G Ital Cardiol (Rome). 2021 Jun;22(6):510-511. doi: 10.1714/3612.35937. PMID: 34037598

Vaccine Must be Provided to Health Professionals Lactating Mothers.
Rizwan W, Rana N, Bukhari MH, Sadiq M. J Hum Lact. 2021 May 27:8903344211021319. doi: 10.1177/08903344211021319. Online ahead of print. PMID: 34043461

New hope for **vaccine** against a devastating livestock disease.
Thompson B, Bundell S. Nature. 2021 May 26. doi: 10.1038/d41586-021-01441-w. Online ahead of print. PMID: 34040247

COVID-19 mRNA **vaccine**-related adenopathy mimicking metastatic melanoma.
Prieto PA, Mannava K, Sahasrabudhe DM. Lancet Oncol. 2021 Jun;22(6):e281. doi: 10.1016/S1470-2045(21)00197-2. PMID: 34087152

Addressing COVID-19 **vaccine** hesitancy: is official communication the key?
Schwarzinger M, Luchini S. Lancet Public Health. 2021 Jun;6(6):e353-e354. doi: 10.1016/S2468-2667(21)00108-0. Epub 2021 May 13. PMID: 33991483

Delirium triggered by COVID-19 **vaccine** in an elderly patient.
Zavala-Jonguitud LF, Pérez-García CC. Geriatr Gerontol Int. 2021 Jun;21(6):540. doi: 10.1111/ggi.14163. Epub 2021 Apr 8. PMID: 33829614

Is complement the culprit behind COVID-19 **vaccine**-related adverse reactions?
Mastellos DC, Skendros P, Lambris JD. J Clin Invest. 2021 Jun 1;131(11):e151092. doi: 10.1172/JCI151092. PMID: 33945504

Experience with SARS-CoV-2 BNT162b2 mRNA **vaccine** in dialysis patients.
Yanay NB, Freiman S, Shapira M, Wishahi S, Hamze M, Elhaj M, Zaher M, Armaly Z. Kidney Int. 2021 Jun;99(6):1496-1498. doi: 10.1016/j.kint.2021.04.006. Epub 2021 Apr 20. PMID: 33887318

Protesters call for UK to back covid **vaccine** waiver.
Shepherd A. BMJ. 2021 May 28;373:n1388. doi: 10.1136/bmj.n1388. PMID: 34049988

Design of a new Multi-Epitope **vaccine** against Brucella based on T and B cell epitopes using bioinformatics methods.
Chen Z, Zhu Y, Sha T, Li Z, Li Y, Zhang F, Ding J. Epidemiol Infect. 2021 May 25:1-41. doi: 10.1017/S0950268821001229. Online ahead of print. PMID: 34032200

An affordable pneumococcal conjugate **vaccine** after 20 years.
Madhi SA, Knoll MD. Lancet Infect Dis. 2021 Jun;21(6):751-753. doi: 10.1016/S1473-3099(21)00002-5. Epub 2021 Jan 28. PMID: 33516294

Preparing for COVID-19 **vaccine** roll-out through simulation exercises.
Copper FA, de Vázquez CC, Bell A, Mayigane LN, Vedrasco L, Chungong S. Lancet Glob Health. 2021 Jun;9(6):e742-e743. doi: 10.1016/S2214-109X(21)00051-6. Epub 2021 Mar 3. PMID: 33675693

mRNA COVID-19 **Vaccine** for People with Kidney Failure.
Miskulin D, Combe C. Clin J Am Soc Nephrol. 2021 May 27:CJN.04500421. doi: 10.2215/CJN.04500421. Online ahead of print. PMID: 34045299

What does 95% COVID-19 **vaccine** efficacy really mean?
Olliaro P. Lancet Infect Dis. 2021 Jun;21(6):769. doi: 10.1016/S1473-3099(21)00075-X. Epub 2021 Feb 17. PMID: 33609458

Vaccine-related ophthalmic vein thrombosis in the wider context of VITT.
Jolobe OMP. QJM. 2021 May 25:hcab149. doi: 10.1093/qjmed/hcab149. Online ahead of print. PMID: 34037767

The RECOVAC IR study: the immune response and safety of the mRNA-1273 COVID-19 **vaccine** in patients with chronic kidney disease, on dialysis, or living with a kidney transplant - a prospective, controlled, multicenter observational cohort by the REnal patients COVID-19 VACcination (RECOVAC) consortium COVID-19 VACcination (RECOVAC) consortium.
Kho MML, Reinders MEJ, Baan CC, van Baarle D, Bemelman FJ, Diavatopoulos DA, Gansevoort RT, van der Klis FRM, Koopmans MPG, Messchendorp AL, van der Molen RG, Remmerswaal EBM, Rots N, Vart P, de Vries RD, Hilbrands LB, Sanders JF; RECOVAC Collaborators. Nephrol Dial Transplant. 2021 May 26:gfab186. doi: 10.1093/ndt/gfab186. Online ahead of print. PMID: 34038554

Antibody response to the BNT162b2 **vaccine** in maintenance hemodialysis patients.
Attias P, Sakhi H, Rieu P, Soorkia A, Assayag D, Bouhroum S, Nizard P, El Karoui K. Kidney Int. 2021 Jun;99(6):1490-1492. doi: 10.1016/j.kint.2021.04.009. Epub 2021 Apr 20. PMID: 33887317

Polyethylene glycol and polysorbate skin testing in the evaluation of coronavirus disease 2019 **vaccine** reactions: Early report.

Pitlick MM, Sitek AN, Kinate SA, Joshi AY, Park MA. Ann Allergy Asthma Immunol. 2021 Jun;126(6):735-738. doi: 10.1016/j.anai.2021.03.012. Epub 2021 Mar 26. PMID: 33775902

Herpes zoster following inactivated COVID-19 **vaccine**: A coexistence or coincidence?
Bostan E, Yalici-Armagan B. J Cosmet Dermatol. 2021 Jun;20(6):1566-1567. doi: 10.1111/jocd.14035. Epub 2021 Mar 8. PMID: 33638924

Humoral response of mRNA-1273 SARS-CoV-2 **vaccine** in peritoneal dialysis patients.
Rodríguez-Espinosa D, Broseta JJ, Francisco Maduell, José Luis Bedini, Vera M. Kidney Int. 2021 May 31:S0085-2538(21)00558-5. doi: 10.1016/j.kint.2021.05.018. Online ahead of print. PMID: 34081947

Incentives for Immunity - Strategies for Increasing Covid-19 **Vaccine** Uptake.
Volpp KG, Cannuscio CC. N Engl J Med. 2021 May 26. doi: 10.1056/NEJMp2107719. Online ahead of print. PMID: 34038633

Is it safe to breastfeed my baby after a coronavirus **vaccine**?
Sarchet P. New Sci. 2021 May 29;250(3336):10. doi: 10.1016/S0262-4079(21)00896-4. Epub 2021 May 28. PMID: 34092876

Immediate high-dose intravenous immunoglobulins followed by direct thrombin-inhibitor treatment is crucial for survival in Sars-Covid-19-adenoviral vector **vaccine**-induced immune thrombotic thrombocytopenia VITT with cerebral sinus venous and portal vein thrombosis.
Graf T, Thiele T, Klingebiel R, Greinacher A, Schäbitz WR, Greeve I. J Neurol. 2021 May 22:1-3. doi: 10.1007/s00415-021-10599-2. Online ahead of print. PMID: 34023956

Highly Pathogenic Avian Influenza A(H5N8) Virus in Swans, China, 2020.
Li X, Lv X, Li Y, Peng P, Zhou R, Qin S, Ma E, Liu W, Fu T, Ma P, An Q, Li Y, Hua Y, Wang Y, Lei C, Chu D, Sun H, Li Y, Gao Y, Chai H. Emerg Infect Dis. 2021 Jun;27(6):1732-1734. doi: 10.3201/eid2706.204727. Epub 2021 Apr 9. PMID: 33834988

Covid-19: Are high rates of B.1.617.2 linked to **vaccine** hesitancy?
Iacobucci G. BMJ. 2021 May 25;373:n1345. doi: 10.1136/bmj.n1345. PMID: 34035010

Early Experience with SARs-CoV-2 mRNA **Vaccine** Breakthrough Among Kidney Transplant Recipients.
Song CC, Christensen J, Kumar D, Vissichelli N, Morales M, Gupta G. Transpl Infect Dis. 2021 May 29:e13654. doi: 10.1111/tid.13654. Online ahead of print. PMID: 34051026

Malaria **vaccine** shows phase II promise, advances into phase III.
Mullard A. Nat Rev Drug Discov. 2021 Jun;20(6):414. doi: 10.1038/d41573-021-00081-z. PMID: 33981089

Mosaic vaccination schedule: An unexpected card to play against SARS-CoV-2?
Ricco M, De Nard F, Peruzzi S. Infect Dis Now. 2021 Jun;51(4):402-405. doi: 10.1016/j.idnow.2021.03.001. Epub 2021 Mar 13. PMID: 33748805

Patient information on covid-19 vaccines-a **vaccine** centre lottery.
Cartwright AC, Tompkins M, Boncey J, Hastie C, Grant R, Leakey D, Simpson IG, Cockbill S, Taylor B, Beaman M, Craig J, Lange CA. BMJ. 2021 May 25;373:n1310. doi: 10.1136/bmj.n1310. PMID: 34035008

New-onset chilblains in close temporal association to mRNA-1273 vaccination.
Kha C, Itkin A. JAAD Case Rep. 2021 Jun;12:12-14. doi: 10.1016/j.jdcr.2021.03.046. Epub 2021 Apr 3. PMID: 33898675

Healthcare staff perceptions towards influenza and potential COVID-19 vaccination in the 2020 pandemic context.
Robbins T, Berry L, Wells F, Randeva H, Laird S. J Hosp Infect. 2021 Jun;112:45-48. doi: 10.1016/j.jhin.2021.02.024. Epub 2021 Mar 19. PMID: 33746009

Letter regarding "Minimal change disease relapse following SARS-CoV-2 mRNA **vaccine**".
Schwotzer N, Kissling S, Fakhouri F. Kidney Int. 2021 May 27:S0085-2538(21)00500-7. doi: 10.1016/j.kint.2021.05.006. Online ahead of print. PMID: 34052236

'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 Jun 1;28(4):taab024. doi: 10.1093/jtm/taab024. PMID: 33620081

Corrigendum to: Human Challenge Studies Are Unlikely to Accelerate Coronavirus **Vaccine** Licensure due to Ethical and Practical Issues.
Spinola SM, Zimet GD, Ott MA, Katz BP. J Infect Dis. 2021 May 28;223(10):1837. doi: 10.1093/infdis/jiab109. PMID: 33871610

Morocco achieves the highest COVID-19 **vaccine** rates in Africa in the first phase: what are reasons for its success?
Drissi Bourhanbour A, Ouchetto O. J Travel Med. 2021 Jun 1;28(4):taab040. doi: 10.1093/jtm/taab040. PMID: 33748858

Vaccine hesitancy over the upcoming COVID-19 **vaccine** - A thought-provoking concern with regards to the present scenario.
Mishra A, Boratne AV, Bahurupi Y. Indian J Med Microbiol. 2021 May 27:S0255-0857(21)04112-8. doi: 10.1016/j.ijmmb.2021.05.010. Online ahead of print. PMID: 34053810

Severe acute respiratory syndrome coronavirus 2 escape mutants and protective immunity from natural infections or immunizations.
Di Caro A, Cunha F, Petrosillo N, Beeching NJ, Ergonul O, Petersen E, Koopmans MPG. Clin Microbiol Infect. 2021 Jun;27(6):823-826. doi: 10.1016/j.cmi.2021.03.011. Epub 2021 Mar 29. PMID: 33794345

The COVID **vaccine** pioneer behind southeast Asia's first mRNA shot.
Mallapaty S. Nature. 2021 May 26. doi: 10.1038/d41586-021-01426-9. Online ahead of print. PMID: 34040244

Single dose of BNT162b2 mRNA **vaccine** against SARS-CoV-2 induces high frequency of neutralising antibody and polyfunctional T-cell responses in patients with myeloproliferative neoplasms.
Harrington P, de Lavallade H, Doores KJ, O'Reilly A, Seow J, Graham C, Lechmere T, Radia D, Dillon R, Shanmugharaj Y, Espehana A, Woodley C, Saunders J, Curto-Garcia N, O'Sullivan J, Raj K, Kordasti S,

Malim MH, Harrison CN, McLornan DP. Leukemia. 2021 May 22:1-5. doi: 10.1038/s41375-021-01300-7. Online ahead of print. PMID: 34023850

Minimal change disease following the Moderna mRNA-1273 SARS-CoV-2 **vaccine**.
Holzworth A, Couchot P, Cruz-Knight W, Brucculeri M. Kidney Int. 2021 May 26:S0085-2538(21)00501-9. doi: 10.1016/j.kint.2021.05.007. Online ahead of print. PMID: 34048824

Efforts to deploy COVID-19 **vaccine** in the WHO Eastern Mediterranean Region within the first 100 days of 2021.
Abubakar A, Al-Mandhari A, Brennan R, Chaudhri I, Elfakki E, Fahmy K, Ghoniem A, Hajjeh R, Hamam I, Hasan Q, Hutin Y, Langar H, Musa N, Rashidian A, Samhouri D. East Mediterr Health J. 2021 May 27;27(5):433-437. doi: 10.26719/emhj.21.024. PMID: 34080669

Secondary immune thrombocytopenia supposedly attributable to COVID-19 vaccination.
Fueyo-Rodriguez O, Valente-Acosta B, Jimenez-Soto R, Neme-Yunes Y, Inclán-Alarcón SI, Trejo-Gonzalez R, García-Salcido MÁ. BMJ Case Rep. 2021 May 31;14(5):e242220. doi: 10.1136/bcr-2021-242220. PMID: 34059544

Neurologic Disease after Yellow Fever Vaccination, São Paulo, Brazil, 2017-2018.
Ribeiro AF, Guedes BF, Sulleiman JMAH, de Oliveira FTM, de Souza IOM, Nogueira JS, Marcusso RMN, Fernandes EG, do Olival GS, de Figueiredo PHFM, Veiga APR, Dahy FE, Ximenes NN, Pinto LF, Vidal JE, de Oliveira ACP. Emerg Infect Dis. 2021 Jun;27(6). doi: 10.3201/eid2706.204170. PMID: 34014156

Surmounting inherent challenges in healthcare service delivery for effective procurement and distribution of COVID-19 vaccines; A developing country context.
Chukwu OA, Nnogo CC. Health Policy Technol. 2021 Jun;10(2):100518. doi: 10.1016/j.hlpt.2021.100518. Epub 2021 May 19. PMID: 34026475

Covid-19: Single **vaccine** dose is 33% effective against variant from India, data show.
Iacobucci G. BMJ. 2021 May 25;373:n1346. doi: 10.1136/bmj.n1346. PMID: 34035039

Genomic survey of SARS-CoV-2 **vaccine** breakthrough infections in healthcare workers from Kerala, India.
J BP, Jolly B, John N, Bhoyar RC, Majeed N, Senthivel V, P FC, Rophina M, Vasudevan B, Imran M, Viswanathan P, Arvinden VR, Joseph A, Divakar MK, Nair PR, Shamnath A, Kumar PJ, Jain A, Geetha P, Bajaj A, Mathew S, Gupta V, Agrawal SJ, Scaria V, Sivasubbu S, Radhakrishnan C. J Infect. 2021 May 24:S0163-4453(21)00260-7. doi: 10.1016/j.jinf.2021.05.018. Online ahead of print. PMID: 34044037

Covid-19: Pfizer-BioNTech **vaccine** is "likely" responsible for deaths of some elderly patients, Norwegian review finds.
Torjesen I. BMJ. 2021 May 27;373:n1372. doi: 10.1136/bmj.n1372. PMID: 34045236

Pfizer-BioNTech mRNA BNT162b2 Covid-19 **vaccine** protection against variants of concern after one versus two doses.
Abu-Raddad LJ, Chemaitelly H, Yassine HM, Benslimane FM, Al Khatib HA, Tang P, Malek JA, Coyle P, Ayoub HH, Al Kanaani Z, Al Kuwari E, Jeremijenko A, Kaleeckal AH, Latif AN, Shaik RM, Abdul Rahim HF,

Nasrallah GK, Al Kuwari MG, Al Romaihi HE, Al-Thani MH, Al Khal A, Butt AA, Bertollini R. J Travel Med. 2021 May 28:taab083. doi: 10.1093/jtm/taab083. Online ahead of print. PMID: 34050372

Response to letter from Dr O. Jolobe entitled '**Vaccine**-related ophthalmic vein thrombosis in the wider context of VITT'.
McDonnell T, Circuit A, McGlynn S. QJM. 2021 May 25:hcab150. doi: 10.1093/qjmed/hcab150. Online ahead of print. PMID: 34037781

Impact of first dose of BNT162b2 **vaccine** on COVID-19 infection among healthcare workers in an Irish hospital.
Walsh J, Skally M, Traynor L, de Barra E, Dhuthaigh AN, Hayes B, Fitzpatrick F. Ir J Med Sci. 2021 May 27:1-2. doi: 10.1007/s11845-021-02658-4. Online ahead of print. PMID: 34041693

Intensified antibody response elicited by boost suggests immune memory in individuals administered two doses of SARS-CoV-2 inactivated **vaccine**.
Liao Y, Zhang Y, Zhao H, Pu J, Zhao Z, Li D, Fan S, Yu L, Xu X, Wang L, Jiang G, Liu L, Li Q. Emerg Microbes Infect. 2021 May 29:1-10. doi: 10.1080/22221751.2021.1937328. Online ahead of print. PMID: 34057040

Failure to seroconvert after two doses of BNT162b2 SARS-CoV-2 **vaccine** in a patient with uncontrolled HIV.
Touizer E, Alrubayyi A, Rees-Spear C, Fisher-Pearson N, Griffith SA, Muir L, Pellegrino P, Waters L, Burns F, Kinloch S, Rowland-Jones S, Gupta RK, Gilson R, Peppa D, McCoy LE. Lancet HIV. 2021 Jun;8(6):e317-e318. doi: 10.1016/S2352-3018(21)00099-0. PMID: 34087093

Methotrexate hampers immunogenicity to BNT162b2 mRNA COVID-19 **vaccine** in immune-mediated inflammatory disease.
Haberman RH, Herati R, Simon D, Samanovic M, Blank RB, Tuen M, Koralov S, Atreya R, Tascilar K, Allen J, Castillo R, Cornelius A, Rackoff P, Solomon G, Adhikari S, Azar N, Rosenthal P, Izmirly P, Samuels J, Golden B, Reddy SM, Neurath M, Abramson SB, Schett G, Mulligan M, Scher JU. Ann Rheum Dis. 2021 May 25:annrheumdis-2021-220597. doi: 10.1136/annrheumdis-2021-220597. Online ahead of print. PMID: 34035003

Comparison of neutralizing antibody responses against SARS-CoV-2 in healthy volunteers who received the BNT162b2 mRNA or the AZD1222 **vaccine**: Should the second AZD1222 **vaccine** dose be given earlier?
Terpos E, Trougakos IP, Karalis V, Ntanasis-Stathopoulos I, Sklirou AD, Bagratuni T, Papanagnou ED, Patseas D, Gumeni S, Malandrakis P, Korompoki E, Dimopoulos MA. Am J Hematol. 2021 May 24. doi: 10.1002/ajh.26248. Online ahead of print. PMID: 34028867

A three-tiered approach to address barriers to COVID-19 **vaccine** delivery in the Black community.
Abdul-Mutakabbir JC, Casey S, Jews V, King A, Simmons K, Hogue MD, Belliard JC, Peverini R, Veltman J. Lancet Glob Health. 2021 Jun;9(6):e749-e750. doi: 10.1016/S2214-109X(21)00099-1. Epub 2021 Mar 10. PMID: 33713634

Rapid lateral-flow immunochromatographic tests to assess anti N/S IgG seropositivity after BNT162b2 **vaccine**: a cross-sectional study.: Rapid lateral-flow immunochromatographic tests after BNT162b2 **vaccine**.
Pezzati L, Giacomelli A, Mileto D, Conti F, Gagliardi G, Rizzo A, Milazzo L, Schiuma M, Covizzi A, Siano M, Bassoli C, Passerini M, Piscaglia M, Torre A, Oreni L, Rizzardini G, Galli M, Ridolfo AL, Antinori S. J Infect. 2021 May 29:S0163-4453(21)00271-1. doi: 10.1016/j.jinf.2021.05.029. Online ahead of print. PMID: 34062183

Ischaemic stroke as a presenting feature of ChAdOx1 nCoV-19 **vaccine**-induced immune thrombotic thrombocytopenia.
Al-Mayhani T, Saber S, Stubbs MJ, Losseff NA, Perry RJ, Simister RJ, Gull D, Jäger HR, Scully MA, Werring DJ. J Neurol Neurosurg Psychiatry. 2021 May 25:jnnp-2021-326984. doi: 10.1136/jnnp-2021-326984. Online ahead of print. PMID: 34035134

Bell's palsy following a single dose of mRNA SARS-CoV-2 **vaccine**: a case report.
Martin-Villares C, Vazquez-Feito A, Gonzalez-Gimeno MJ, de la Nogal-Fernandez B. J Neurol. 2021 May 25:1-2. doi: 10.1007/s00415-021-10617-3. Online ahead of print. PMID: 34032902

Weak anti-SARS-CoV-2 antibody response after the first injection of an mRNA COVID-19 **vaccine** in kidney transplant recipients.
Benotmane I, Gautier-Vargas G, Cognard N, Olagne J, Heibel F, Braun-Parvez L, Martzloff J, Perrin P, Moulin B, Fafi-Kremer S, Caillard S. Kidney Int. 2021 Jun;99(6):1487-1489. doi: 10.1016/j.kint.2021.03.014. Epub 2021 Mar 26. PMID: 33775674

Purpuric lesions on the eyelids developed after BNT162b2 mRNA COVID-19 **vaccine**: another piece of SARS-CoV-2 skin puzzle?
Mazzatenta C, Piccolo V, Pace G, Romano I, Argenziano G, Bassi A. J Eur Acad Dermatol Venereol. 2021 May 28. doi: 10.1111/jdv.17340. Online ahead of print. PMID: 34048614

Local reactions to the second dose of the BNT162 COVID-19 **vaccine**.
Tammaro A, Adebanjo GAR, Parisella FR, De Marco G, Rello J. Dermatol Ther. 2021 May 25:e15000. doi: 10.1111/dth.15000. Online ahead of print. PMID: 34031953

Low immunization rates among kidney transplant recipients who received 2 doses of the mRNA-1273 SARS-CoV-2 **vaccine**.
Benotmane I, Gautier-Vargas G, Cognard N, Olagne J, Heibel F, Braun-Parvez L, Martzloff J, Perrin P, Moulin B, Fafi-Kremer S, Caillard S. Kidney Int. 2021 Jun;99(6):1498-1500. doi: 10.1016/j.kint.2021.04.005. Epub 2021 Apr 20. PMID: 33887315

SARS-CoV-2 vaccination of people living with human T leukaemia virus type 1.
Araujo A, Martin F. Sex Transm Infect. 2021 May 26:sextrans-2021-055007. doi: 10.1136/sextrans-2021-055007. Online ahead of print. PMID: 34039746

Induction of immune response after SARS-CoV-2 mRNA BNT162b2 vaccination in healthcare workers.
Zaffina S, Alteri C, Ruggiero A, Cotugno N, Vinci MR, Camisa V, Santoro AP, Brugaletta R, Deriu G, Piano Mortari E, Fernandez Salinas A, Russo C, Ranno S, Coltella L, Colagrossi L, Porzio O, Onetti Muda A,

Raponi M, Ciofi Degli Atti M, Rizzo C, Villani A, Rossi P, Palma P, Carsetti R, Perno CF. J Virus Erad. 2021 Jun;7(2):100046. doi: 10.1016/j.jve.2021.100046. Epub 2021 May 19. PMID: 34026245

Maximizing number of doses drawn from multi-dose COVID-19 vaccines by minimizing dead-volume.
Le Daré B, Bacle A, Lhermitte R, Lesourd F, Lurton Y. J Travel Med. 2021 Jun 1;28(4):taab049. doi: 10.1093/jtm/taab049. PMID: 33772277

Antibody Response to 2-Dose SARS-CoV-2 mRNA **Vaccine** Series in Solid Organ Transplant Recipients.
Boyarsky BJ, Werbel WA, Avery RK, Tobian AAR, Massie AB, Segev DL, Garonzik-Wang JM. JAMA. 2021 Jun 1;325(21):2204-2206. doi: 10.1001/jama.2021.7489. PMID: 33950155

The SIOG COVID-19 working group recommendations on the rollout of COVID-19 vaccines among older adults with cancer.
Mislang AR, Soto-Perez-de-Celis E, Russo C, Colloca G, Williams GR, O'Hanlon S, Cooper L, O'Donovan A, Audisio RA, Cheung KL, Sarrió RG, Stauder R, Jaklitsch M, Cairo C, Gil LA Jr, Sattar S, Kantilal K, Loh KP, Lichtman SM, Brain E, Wildiers H, Kanesvaran R, Battisti NML. J Geriatr Oncol. 2021 Jun;12(5):848-850. doi: 10.1016/j.jgo.2021.03.003. Epub 2021 Mar 5. PMID: 33715995

Letter to Editor: COVID-19 in Kidney Transplant Recipients Vaccinated with Oxford-AstraZeneca COVID-19 **vaccine** (Covishield): A Single Center Experience from India.
Meshram HS, Kute VB, Shah N, Chauhan S, Navadiya VV, Patel AH, Patel HV, Engineer D, Banerjee S, Rizvi J, Mishra VV. Transplantation. 2021 May 26. doi: 10.1097/TP.0000000000003835. Online ahead of print. PMID: 34049359

A million-dose success for Nepal: insights from Nepal's national **vaccine** deployment plan against COVID-19.
Bhattarai S, Dhungana J. J Travel Med. 2021 Jun 1;28(4):taab027. doi: 10.1093/jtm/taab027. PMID: 33668060

Early humoral response among lung transplant recipients vaccinated with BNT162b2 **vaccine**.
Shostak Y, Shafran N, Heching M, Rosengarten D, Shtraichman O, Shitenberg D, Amor SM, Yahav D, Ben Zvi H, Pertzov B, Kramer MR. Lancet Respir Med. 2021 Jun;9(6):e52-e53. doi: 10.1016/S2213-2600(21)00184-3. Epub 2021 May 5. PMID: 33964244

Neutralizing SARS-CoV-2 antibody response in dialysis patients after the first dose of the BNT162b2 mRNA COVID-19 **vaccine**: the war is far from being won.
Torreggiani M, Blanchi S, Fois A, Fessi H, Piccoli GB. Kidney Int. 2021 Jun;99(6):1494-1496. doi: 10.1016/j.kint.2021.04.010. Epub 2021 Apr 20. PMID: 33887320

Exacerbation of subacute cutaneous lupus erythematosus following vaccination with BNT162b2 mRNA **vaccine**.
Niebel D, Ralser-Isselstein V, Jaschke K, Braegelmann C, Bieber T, Wenzel J. Dermatol Ther. 2021 Jun 1. doi: 10.1111/dth.15017. Online ahead of print. PMID: 34075664

A Case of Severe Cutaneous Adverse Reaction Following Administration of the Janssen Ad26.COV2.S COVID-19 **Vaccine**.

Lospinoso K, Nichols CS, Malachowski SJ, Mochel MC, Nutan F. JAAD Case Rep. 2021 May 26. doi: 10.1016/j.jdcr.2021.05.010. Online ahead of print. PMID: 34056055

Inactivated COVID-19 **vaccine** BBV152/COVAXIN effectively neutralizes recently emerged B.1.1.7 variant of SARS-CoV-2.
Sapkal GN, Yadav PD, Ella R, Deshpande GR, Sahay RR, Gupta N, Vadrevu KM, Abraham P, Panda S, Bhargava B. J Travel Med. 2021 Jun 1;28(4):taab051. doi: 10.1093/jtm/taab051. PMID: 33772577

Recurrent erythema nodosum leprosum associated with Mycobacterium indicus pranii **vaccine** in a case of leprosy: a rare paradox.
Kothari R, Vashisht D, Pudasaini N, Venugopal R, Paliwal G. J Eur Acad Dermatol Venereol. 2021 Jun;35(6):e391-e393. doi: 10.1111/jdv.17176. Epub 2021 Feb 25. PMID: 33587765

Arthroscopic surgical management of shoulder secondary to shoulder injury related to **vaccine** administration (SIRVA): a case report.
Wong W, Okafor C, Belay E, Klifto CS, Anakwenze O. J Shoulder Elbow Surg. 2021 Jun;30(6):e334-e337. doi: 10.1016/j.jse.2021.01.027. Epub 2021 Feb 18. PMID: 33610727

Polyethylene glycol (PEG) is a cause of anaphylaxis to the Pfizer/BioNTech mRNA COVID-19 **vaccine**.
Sellaturay P, Nasser S, Islam S, Gurugama P, Ewan PW. Clin Exp Allergy. 2021 Jun;51(6):861-863. doi: 10.1111/cea.13874. Epub 2021 Apr 9. PMID: 33825239

Correction to: Under consent: participation of people with HIV in an Ebola **vaccine** trial in Canada.
David PM, Mathiot B, Thiongane O, Graham JE. BMC Med Ethics. 2021 Jun 1;22(1):69. doi: 10.1186/s12910-021-00629-z. PMID: 34074298

Public health impact of delaying second dose of BNT162b2 or mRNA-1273 covid-19 **vaccine**: simulation agent based modeling study.
[No authors listed] BMJ. 2021 May 25;373:n1334. doi: 10.1136/bmj.n1334. PMID: 34035040

Correction to: A Tale of Two Crises: Addressing Covid-19 **Vaccine** Hesitancy as Promoting Racial Justice.
Bunch L. HEC Forum. 2021 Jun;33(1-2):155. doi: 10.1007/s10730-021-09446-8. PMID: 33677740

SARS-CoV-2 vaccines: Lights and shadows.
Angeli F, Spanevello A, Reboldi G, Visca D, Verdecchia P. Eur J Intern Med. 2021 Jun;88:1-8. doi: 10.1016/j.ejim.2021.04.019. Epub 2021 Apr 30. PMID: 33966930

Effect of the varicella vaccination implementation on the development of herpes zoster in children and adolescents.
Inan Yuksel E, Kara Polat A, Gore Karaali M, Koku Aksu AE, Gurel MS. Dermatol Ther. 2021 May 24:e14995. doi: 10.1111/dth.14995. Online ahead of print. PMID: 34031954

A highly virulent canine distemper virus strain isolated from vaccinated mink in China.
Liu Y, Liu C, Ding H, Cao Y, Sun Z, Wu H, Wang L, He W, Huang B, Xi X, Tian K. Virus Genes. 2021 Jun;57(3):266-275. doi: 10.1007/s11262-021-01837-w. Epub 2021 May 5. PMID: 33950332

Metastatic perioral melanoma in a wild mountain gorilla (Gorilla beringei beringei).
Kambale Syaluha E, Zimmerman D, Ramer J, Gilardi K, Kabuyaya M, Cranfield MR, Kent MS, Corner SM, Yeh N, Lowenstine L. J Med Primatol. 2021 Jun;50(3):197-200. doi: 10.1111/jmp.12521. Epub 2021 Apr 24. PMID: 33893639

Ipsilateral Herpes Zoster after the first dose of BNT162b2 mRNA COVID-19 **vaccine**.
Tessas I, Kluger N. J Eur Acad Dermatol Venereol. 2021 May 31. doi: 10.1111/jdv.17422. Online ahead of print. PMID: 34058038

Clinically relevant cell culture models and their significance in isolation, pathogenesis, **vaccine** development, repurposing and screening of new drugs for SARS-CoV-2: a systematic review.
Kumar S, Sarma P, Kaur H, Prajapat M, Bhattacharyya A, Avti P, Sehkhar N, Kaur H, Bansal S, Mahendiratta S, Mahalmani VM, Singh H, Prakash A, Kuhad A, Medhi B. Tissue Cell. 2021 Jun;70:101497. doi: 10.1016/j.tice.2021.101497. Epub 2021 Jan 26. PMID: 33550034

Non-clinical immunological comparison of a Next-Generation 24-valent pneumococcal conjugate **vaccine** (VAX-24) using site-specific carrier protein conjugation to the current standard of care (PCV13 and PPV23).
Fairman J, Agarwal P, Barbanel S, Behrens C, Berges A, Burky J, Davey P, Fernsten P, Grainger C, Guo S, Iki S, Iverson M, Kane M, Kapoor N, Marcq O, Migone TS, Sauer P, Wassil J. Vaccine. 2021 May 27;39(23):3197-3206. doi: 10.1016/j.vaccine.2021.03.070. Epub 2021 May 6. PMID: 33965258

Vaccine Considerations for Multiple Sclerosis in the COVID-19 Era.
Coyle PK, Gocke A, Vignos M, Newsome SD. Adv Ther. 2021 Jun 1:1-39. doi: 10.1007/s12325-021-01761-3. Online ahead of print. PMID: 34075554

Targeted Delivery of BZLF1 to DEC205 Drives EBV-Protective Immunity in a Spontaneous Model of EBV-Driven Lymphoproliferative Disease.
Ahmed EH, Brooks E, Sloan S, Schlotter S, Jeney F, Hale C, Mao C, Zhang X, McLaughlin E, Shindiapina P, Shire S, Das M, Prouty A, Lozanski G, Mamuye AT, Abebe T, Alinari L, Caligiuri MA, Baiocchi RA. Vaccines (Basel). 2021 May 26;9(6):555. doi: 10.3390/vaccines9060555. PMID: 34073261

Japan's special approval for emergency system during COVID-19 pandemic.
Maeda H. Clin Pharmacol Ther. 2021 May 25. doi: 10.1002/cpt.2310. Online ahead of print. PMID: 34032279

NASYM, a live intranasal **vaccine**, protects young calves from bovine respiratory syncytial virus in the presence of maternal antibodies.
Marzo E, Montbrau C, Moreno MC, Roca M, Sitjà M, March R, Gow S, Lacoste S, Ellis J. Vet Rec. 2021 Jun;188(11):e83. doi: 10.1002/vetr.83. Epub 2021 Jan 28. PMID: 33818796

The immunopeptidomes of two transmissible cancers and their host have a common, dominant peptide motif.
Gastaldello A, Ramarathinam SH, Bailey A, Owen R, Turner S, Kontouli N, Elliott T, Skipp P, Purcell AW, Siddle HV. Immunology. 2021 Jun;163(2):169-184. doi: 10.1111/imm.13307. Epub 2021 Feb 4. PMID: 33460454

Positivity of SARS-CoV-2 Antibodies among Korean Healthy Healthcare Workers 1 and 2 Weeks after Second Dose of Pfizer-BioNTech Vaccination.
Kim N, Minn D, Park S, Roh EY, Yoon JH, Park H, Shin S. J Korean Med Sci. 2021 May 31;36(21):e158. doi: 10.3346/jkms.2021.36.e158. PMID: 34060264

Less severe clinical symptoms of Norwalk virus 8fIIb inoculum compared to its precursor 8fIIa from human challenge studies.
Liu P, Rahman M, Leon J, Moe C. J Med Virol. 2021 Jun;93(6):3557-3563. doi: 10.1002/jmv.26578. Epub 2020 Oct 30. PMID: 33017074

SARS-CoV-2 variants, spike mutations and immune escape.
Harvey WT, Carabelli AM, Jackson B, Gupta RK, Thomson EC, Harrison EM, Ludden C, Reeve R, Rambaut A; COVID-19 Genomics UK (COG-UK) Consortium, Peacock SJ, Robertson DL. Nat Rev Microbiol. 2021 Jun 1:1-16. doi: 10.1038/s41579-021-00573-0. Online ahead of print. PMID: 34075212

Reactive arthritis after COVID-19 vaccination.
An QJ, Qin DA, Pei JX. Hum Vaccin Immunother. 2021 May 25:1-3. doi: 10.1080/21645515.2021.1920274. Online ahead of print. PMID: 34033732

Serosurveillance of rabies antibodies in dogs in Mumbai region by using indirect ELISA.
Nale JM, Pharande RR, Majee SB, Gandge RS, Sawane MP, Ingle SA. Comp Immunol Microbiol Infect Dis. 2021 Jun;76:101655. doi: 10.1016/j.cimid.2021.101655. Epub 2021 Apr 24. PMID: 33930629

Influenza Virus and SARS-CoV-2 Vaccines.
Sandor AM, Sturdivant MS, Ting JPY. J Immunol. 2021 Jun 1;206(11):2509-2520. doi: 10.4049/jimmunol.2001287. Epub 2021 May 21. PMID: 34021048

Ensuring COVID-19 vaccines for low-income countries.
Corpuz JCG. J Public Health (Oxf). 2021 May 29:fdab186. doi: 10.1093/pubmed/fdab186. Online ahead of print. PMID: 34056653

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 HM, El-Gendy A, Saeed H, Osama H, Ali AMA, Gomaa D, Abdelrahman M, Harb HS, Madney YM, Abdelrahim MEA. Int J Clin Pract. 2021 Jun;75(6):e14116. doi: 10.1111/ijcp.14116. Epub 2021 Mar 8. PMID: 33639032

Primary vaccination in adult patients after allogeneic hematopoietic stem cell transplantation - A single center retrospective efficacy analysis.
Sattler C, Hoffmann P, Herzberg PY, Weber D, Holler B, Fehn U, Plentz A, Beckhove P, Winkler J, Edinger M, Herr W, Holler E, Wolff D. Vaccine. 2021 May 25:S0264-410X(21)00511-9. doi: 10.1016/j.vaccine.2021.04.052. Online ahead of print. PMID: 34049733

Effectiveness of SARS-CoV-2 vaccination in a Veterans Affairs Cohort of Inflammatory Bowel Disease Patients with Diverse Exposure to Immunosuppressive Medications.
Khan N, Mahmud N. Gastroenterology. 2021 May 25:S0016-5085(21)03066-3. doi: 10.1053/j.gastro.2021.05.044. Online ahead of print. PMID: 34048782

Development of a Genetically Stable Live Attenuated Influenza **Vaccine** Strain Using an Engineered High-Fidelity Viral Polymerase.
Mori K, Ohniwa RL, Takizawa N, Naito T, Saito M. J Virol. 2021 May 24;95(12):e00493-21. doi: 10.1128/JVI.00493-21. Print 2021 May 24. PMID: 33827947

Prevalence of high-risk HPV genotypes in sub-Saharan Africa based on Human immunodeficiency virus status: a 20-year systematic review.
Okoye JO, Ofordile CA, Adeleke OK, Okechi O. Epidemiol Health. 2021 May 25:e2021039. doi: 10.4178/epih.e2021039. Online ahead of print. PMID: 34044477

Molecular Analysis of East African Lumpy Skin Disease Viruses Reveals a Mixed Isolate with Features of Both **Vaccine** and Field Isolates.
Chibssa TR, Sombo M, Lichoti JK, Adam TIB, Liu Y, Elraouf YA, Grabherr R, Settypalli TBK, Berguido FJ, Loitsch A, Sahle M, Cattoli G, Diallo A, Lamien CE. Microorganisms. 2021 May 26;9(6):1142. doi: 10.3390/microorganisms9061142. PMID: 34073392

Rotavirus vaccination likely to be cost saving to society in the United States.
Newall AT, Leong RN, Reyes JF, Curns AT, Rudd J, Tate J, Macartney K, Parashar U. Clin Infect Dis. 2021 May 26:ciab442. doi: 10.1093/cid/ciab442. Online ahead of print. PMID: 34038527

Detecting Medical Misinformation on Social Media Using Multimodal Deep Learning.
Wang Z, Yin Z, Argyris YA. IEEE J Biomed Health Inform. 2021 Jun;25(6):2193-2203. doi: 10.1109/JBHI.2020.3037027. Epub 2021 Jun 3. PMID: 33170786

Epilepsy care and COVID-19: A cross-sectional online survey from Lithuania.
Puteikis K, Mameniškienė R. Acta Neurol Scand. 2021 Jun;143(6):666-672. doi: 10.1111/ane.13409. Epub 2021 Mar 16. PMID: 33724450

Identification of the dominant non-neutralizing epitope in the haemagglutinin of H7N9 avian influenza virus.
Hu Z, Zhao J, Shi L, Hu J, Hu S, Liu X. Virus Res. 2021 Jun;298:198409. doi: 10.1016/j.virusres.2021.198409. Epub 2021 Apr 2. PMID: 33819520

Effect of Edema Disease Vaccination on Mortality and Growth Parameters in Nursery Pigs in a Shiga Toxin 2e Positive Commercial Farm.
Mesonero-Escuredo S, Morales J, Mainar-Jaime RC, Díaz G, Arnal JL, Casanovas C, Barrabés S, Segalés J. Vaccines (Basel). 2021 May 31;9(6):567. doi: 10.3390/vaccines9060567. PMID: 34072889

Understanding vaccination communication between health workers and parents: a Tailoring Immunization Programmes (TIP) qualitative study in Serbia.
Trifunović V, Bach Habersaat K, Tepavčević DK, Jovanović V, Kanazir M, Lončarević G, Jackson C. Hum Vaccin Immunother. 2021 May 25:1-8. doi: 10.1080/21645515.2021.1913962. Online ahead of print. PMID: 34033519

Drug repurposing: new strategies for addressing COVID-19 outbreak.
Shende P, Khanolkar B, Gaud RS. Expert Rev Anti Infect Ther. 2021 Jun;19(6):689-706. doi: 10.1080/14787210.2021.1851195. Epub 2020 Dec 3. PMID: 33183102

Surveying willingness toward SARS-CoV-2 vaccination of healthcare workers in Italy.
Di Giuseppe G, Pelullo CP, Della Polla G, Montemurro MV, Napolitano F, Pavia M, Angelillo IF. Expert Rev Vaccines. 2021 May 25:1-9. doi: 10.1080/14760584.2021.1922081. Online ahead of print. PMID: 33900148

The Use of GIS Technology to Optimize COVID-19 **Vaccine** Distribution: A Case Study of the City of Warsaw, Poland.
Krzysztofowicz S, Osińska-Skotak K. Int J Environ Res Public Health. 2021 May 25;18(11):5636. doi: 10.3390/ijerph18115636. PMID: 34070378

Epitope profiling reveals binding signatures of SARS-CoV-2 immune response in natural infection and cross-reactivity with endemic human CoVs.
Stoddard CI, Galloway J, Chu HY, Shipley MM, Sung K, Itell HL, Wolf CR, Logue JK, Magedson A, Garrett ME, Crawford KHD, Laserson U, Matsen FA 4th, Overbaugh J. Cell Rep. 2021 May 25;35(8):109164. doi: 10.1016/j.celrep.2021.109164. Epub 2021 May 6. PMID: 33991511

Serotype-Switch Variant of Multidrug-Resistant Streptococcus pneumoniae Sequence Type 271.
Scherer EM, Beall B, Metcalf B. Emerg Infect Dis. 2021 Jun;27(6):1689-1692. doi: 10.3201/eid2706.203629. Epub 2021 Apr 29. PMID: 33915076

The Importance of Apparent pKa in the Development of Nanoparticles Encapsulating siRNA and mRNA.
Patel P, Ibrahim NM, Cheng K. Trends Pharmacol Sci. 2021 Jun;42(6):448-460. doi: 10.1016/j.tips.2021.03.002. Epub 2021 Apr 16. PMID: 33875229

Modifications in an Emergency: The Role of N1-Methylpseudouridine in COVID-19 Vaccines.
Nance KD, Meier JL. ACS Cent Sci. 2021 May 26;7(5):748-756. doi: 10.1021/acscentsci.1c00197. Epub 2021 Apr 6. PMID: 34075344

A Relational Reflection on Pandemic Nationalism.
Yeophantong P, Shih CY. J Chin Polit Sci. 2021 Jun 1:1-25. doi: 10.1007/s11366-021-09736-5. Online ahead of print. PMID: 34092991

Synthesis of L-hexoses: an Update.
Paul A, Kulkarni SS. Chem Rec. 2021 Jun 1. doi: 10.1002/tcr.202100087. Online ahead of print. PMID: 34075685

Ebola, Dengue, Chikungunya, and Zika Infections in Neonates and Infants.
de St Maurice A, Ervin E, Chu A. Clin Perinatol. 2021 Jun;48(2):311-329. doi: 10.1016/j.clp.2021.03.006. PMID: 34030816

COVID-19 Infection, Reinfection, and **Vaccine** Effectiveness in a Prospective Cohort of Arizona Frontline/Essential Workers: The AZ HEROES Research Protocol.
Lutrick K, Ellingson KD, Baccam Z, Rivers P, Beitel S, Parker J, Hollister J, Sun X, Gerald JK, Komatsu K, Kim E, LaFleur B, Grant L, Yoo YM, Kumar A, Mayo Lamberte J, Cowling BJ, Cobey S, Thornburg NJ, Meece JK, Kutty P, Nikolich-Zugich J, Thompson MG, Burgess JL. JMIR Res Protoc. 2021 May 26. doi: 10.2196/28925. Online ahead of print. PMID: 34057904

An overview of some potential immunotherapeutic options against COVID-19.
Bayat M, Asemani Y, Mohammadi MR, Sanaei M, Namvarpour M, Eftekhari R. Int Immunopharmacol. 2021 Jun;95:107516. doi: 10.1016/j.intimp.2021.107516. Epub 2021 Feb 26. PMID: 33765610

Knowledge, Attitude, and Behavior of Teachers Regarding HPV (Human Papillomavirus) and Vaccination.
Keten HS, Ucer H, Dalgaci AF, Isik O, Ercan Ö, Guvenc N. J Cancer Educ. 2021 Jun;36(3):584-590. doi: 10.1007/s13187-019-01668-2. PMID: 31840211

Pathomechanisms, therapeutic targets and potent inhibitors of some beta-coronaviruses from bench-to-bedside.
Ayipo YO, Yahaya SN, Alananzeh WA, Babamale HF, Mordi MN. Infect Genet Evol. 2021 May 27:104944. doi: 10.1016/j.meegid.2021.104944. Online ahead of print. PMID: 34052418

Dynamics of the COVID-19 epidemic in the post-vaccination period in South Korea - a rapid assessment.
Min KD, Tak S. Epidemiol Health. 2021 May 27:e2021040. doi: 10.4178/epih.e2021040. Online ahead of print. PMID: 34082498

A Role for Extracellular Vesicles in SARS-CoV-2 Therapeutics and Prevention.
Machhi J, Shahjin F, Das S, Patel M, Abdelmoaty MM, Cohen JD, Singh PA, Baldi A, Bajwa N, Kumar R, Vora LK, Patel TA, Oleynikov MD, Soni D, Yeapuri P, Mukadam I, Chakraborty R, Saksena CG, Herskovitz J, Hasan M, Oupicky D, Das S, Donnelly RF, Hettie KS, Chang L, Gendelman HE, Kevadiya BD. J Neuroimmune Pharmacol. 2021 Jun;16(2):270-288. doi: 10.1007/s11481-020-09981-0. Epub 2021 Feb 5. PMID: 33544324

Examination of the effect of niosome preparation methods in encapsulating model antigens on the vesicle characteristics and their ability to induce immune responses.
Obeid MA, Teeravatcharoenchai T, Connell D, Niwasabutra K, Hussain M, Carter K, Ferro VA. J Liposome Res. 2021 Jun;31(2):195-202. doi: 10.1080/08982104.2020.1768110. Epub 2020 May 28. PMID: 32396752

Generation and characterization of HLA-A2 transgenic mice expressing the human TCR 1G4 specific for the HLA-A2 restricted NY-ESO-$1_{157-165}$ tumor-specific peptide.
Shenderov E, Kandasamy M, Gileadi U, Chen J, Shepherd D, Gibbs J, Prota G, Silk JD, Yewdell JW, Cerundolo V. J Immunother Cancer. 2021 Jun;9(6):e002544. doi: 10.1136/jitc-2021-002544. PMID: 34088742

The COVID-19-Cancer Connection.
Boyle DA. Clin J Oncol Nurs. 2021 Jun 1;25(3):235-236. doi: 10.1188/21.CJON.235-236. PMID: 34019020

Performance of the rapid high-throughput automated electrochemiluminescence immunoassay targeting total antibodies to the SARS-CoV-2 spike protein receptor binding domain in comparison to the neutralization assay.
Resman Rus K, Korva M, Knap N, Avšič Županc T, Poljak M. J Clin Virol. 2021 Jun;139:104820. doi: 10.1016/j.jcv.2021.104820. Epub 2021 Apr 10. PMID: 33865031

[Thrombosis and COVID-19 **vaccine**: much ado about nothing?].
Toschi V. G Ital Cardiol (Rome). 2021 Jun;22(6):448-451. doi: 10.1714/3612.35927. PMID: 34037587

A novel self-assembled epitope peptide nanoemulsion **vaccine** targeting nasal mucosal epithelial cell for reinvigorating CD8(+) T cell immune activity and inhibiting tumor progression.
Yang Y, Ge S, Song Z, Zhao A, Zhao L, Hu Z, Cai D, Zhang Z, Peng L, Lu D, Luo P, Zhang W, Sun H, Zou Q, Zeng H. Int J Biol Macromol. 2021 May 27:S0141-8130(21)01133-8. doi: 10.1016/j.ijbiomac.2021.05.158. Online ahead of print. PMID: 34052270

The impact of a universal human papilloma virus (HPV) vaccination program on lower genital tract dysplasia and genital warts.
Clark M, Jembere N, Kupets R. Prev Med. 2021 May 25;150:106641. doi: 10.1016/j.ypmed.2021.106641. Online ahead of print. PMID: 34048822

A Narrative Review of Pneumococcal Disease in Children in the Philippines.
Gamil A, Lalas MY, Capeding MRZ, Ong-Lim ALT, Bunyi MAC, Claveria AM. Infect Dis Ther. 2021 Jun;10(2):699-718. doi: 10.1007/s40121-021-00434-6. Epub 2021 Apr 24. PMID: 33895977

Comparison of specific in-vitro virulence gene expression and innate host response in locally invasive vs colonizer strains of Streptococcus pneumoniae.
Fuji N, Pichichero ME, Kaur R. Med Microbiol Immunol. 2021 Jun;210(2-3):111-120. doi: 10.1007/s00430-021-00701-w. Epub 2021 Mar 22. PMID: 33751214

Clinical, epidemiological, and molecular aspects of picornaviruses (entero, parecho) in acute gastroenteritis: A study from Pune (Maharashtra), Western India.
Gopalkrishna V, Ganorkar N, Patil P, Hedda G, Ranshing S, Kulkarni R. J Med Virol. 2021 Jun;93(6):3590-3600. doi: 10.1002/jmv.26571. Epub 2020 Oct 14. PMID: 32997382

Cellular and Humoral Immune Responses in Mice Immunized with Vaccinia Virus Expressing the SARS-CoV-2 Spike Protein.
Harbour JC, Lyski ZL, Schell JB, Thomas A, Messer WB, Slifka MK, Nolz JC. J Immunol. 2021 Jun 1;206(11):2596-2604. doi: 10.4049/jimmunol.2100054. Epub 2021 May 10. PMID: 33972374

Adsorption of protein antigen to the cationic liposome adjuvant CAF®01 is required for induction of Th1 and Th17 responses but not for antibody induction.
Wørzner K, Hvannastein J, Tandrup Schmidt S, Foged C, Rosenkrands I, Kristian Pedersen G, Christensen D. Eur J Pharm Biopharm. 2021 May 24:S0939-6411(21)00150-8. doi: 10.1016/j.ejpb.2021.05.020. Online ahead of print. PMID: 34044110

Cutaneous tuberculosis in children from the northeastern region of Morocco.
BayBay H, Senhaji I, Zinoun S, Elloudi S, Douhi Z, Mernissi FZ. Arch Pediatr. 2021 May 22:S0929-693X(21)00091-9. doi: 10.1016/j.arcped.2021.04.011. Online ahead of print. PMID: 34034930

Neonatal Herpes Simplex Virus Disease: Updates and Continued Challenges.
Samies NL, James SH, Kimberlin DW. Clin Perinatol. 2021 Jun;48(2):263-274. doi: 10.1016/j.clp.2021.03.003. PMID: 34030813

The Current Lung Cancer Neoantigen Landscape and Implications for Therapy.
Ye L, Creaney J, Redwood A, Robinson B. J Thorac Oncol. 2021 Jun;16(6):922-932. doi: 10.1016/j.jtho.2021.01.1624. Epub 2021 Feb 10. PMID: 33581342

Why do poxviruses still matter?
Yang Z, Gray M, Winter L. Cell Biosci. 2021 May 22;11(1):96. doi: 10.1186/s13578-021-00610-8. PMID: 34022954

Pulmonary Therapy Podcast-COVID-19: Research and Real-World Experiences from the Editorial Board.
Beeh KM, Chaudhuri N, Craig TJ, Kaplan A, Kennedy MP. Pulm Ther. 2021 Jun;7(1):1-7. doi: 10.1007/s41030-021-00157-6. Epub 2021 May 11. PMID: 33974239

Vaccines for COVID-19: An Overview.
Lane TF, Eber RM, Gansky S, Reddy MS. Compend Contin Educ Dent. 2021 Jun;42(6):298-304; quiz 305. PMID: 34077664

Whole-genome analysis of Malawian Plasmodium falciparum isolates identifies possible targets of allele-specific immunity to clinical malaria.
Shah Z, Naung MT, Moser KA, Adams M, Buchwald AG, Dwivedi A, Ouattara A, Seydel KB, Mathanga DP, Barry AE, Serre D, Laufer MK, Silva JC, Takala-Harrison S. PLoS Genet. 2021 May 25;17(5):e1009576. doi: 10.1371/journal.pgen.1009576. Online ahead of print. PMID: 34033654

Plasmodium vivax Strains Use Alternative Pathways for Invasion.
Kanjee U, Grüring C, Babar P, Meyers A, Dash R, Pereira L, Mascarenhas A, Chaand M, Rangel GW, Clark MA, Chery L, Gomes E, Rathod PK, Duraisingh MT. J Infect Dis. 2021 May 28;223(10):1817-1821. doi: 10.1093/infdis/jiaa592. PMID: 32941614

Can reactogenicity predict immunogenicity after COVID-19 vaccination?
Hwang YH, Song KH, Choi Y, Go S, Choi SJ, Jung J, Kang CK, Choe PG, Kim NJ, Park WB, Oh MD. Korean J Intern Med. 2021 May 28. doi: 10.3904/kjim.2021.210. Online ahead of print. PMID: 34038996

A protein A based Staphylococcus aureus **vaccine** with improved safety.
Shi M, Chen X, Sun Y, Kim HK, Schneewind O, Missiakas D. Vaccine. 2021 Jun 1:S0264-410X(21)00667-8. doi: 10.1016/j.vaccine.2021.05.072. Online ahead of print. PMID: 34088508

A systems map of the economic considerations for vaccination: Application to hard-to-reach populations.
Cox SN, Wedlock PT, Pallas SW, Mitgang EA, Yemeke TT, Bartsch SM, Abimbola T, Sigemund SS, Wallace A, Ozawa S, Lee BY. Vaccine. 2021 May 24:S0264-410X(21)00605-8. doi: 10.1016/j.vaccine.2021.05.033. Online ahead of print. PMID: 34045101

In vitro evaluation of novel (nanoparticle) oral delivery systems allow selection of gut immunomodulatory formulations.
Attaya A, Veenstra K, Welsh MD, Ahmed M, Torabi-Pour N, Saffie-Siebert S, Yoon S, Secombes CJ. Fish Shellfish Immunol. 2021 Jun;113:125-138. doi: 10.1016/j.fsi.2021.03.007. Epub 2021 Mar 18. PMID: 33746060

Molecular cloning and immunogenicity evaluation of IsdE protein of methicillin resistant Staphylococcus aureus as **vaccine** candidates.
Vahdani Y, Faraji N, Haghighat S, Yazdi MH, Mahdavi M. Microb Pathog. 2021 May 25;157:104953. doi: 10.1016/j.micpath.2021.104953. Online ahead of print. PMID: 34044042

[Avian coronaviroses: Characteristics of epidemiological interest, in comparative medicine].
Bouzouaya M. Bull Acad Natl Med. 2021 May 29. doi: 10.1016/j.banm.2021.03.004. Online ahead of print. PMID: 34092795

A Review of Repurposed Cancer Drugs in Clinical Trials for Potential Treatment of COVID-19.
Costa B, Vale N. Pharmaceutics. 2021 May 30;13(6):815. doi: 10.3390/pharmaceutics13060815. PMID: 34070725

Toward the prevention of coronavirus infection: what role can polymers play?
Jiang X, Li Z, Young DJ, Liu M, Wu C, Wu YL, Loh XJ. Mater Today Adv. 2021 Jun;10:100140. doi: 10.1016/j.mtadv.2021.100140. Epub 2021 Mar 20. PMID: 33778467

Causes of acute gastroenteritis in Korean children between 2004 and 2019.
Ryoo E. Clin Exp Pediatr. 2021 Jun;64(6):260-268. doi: 10.3345/cep.2020.01256. Epub 2020 Sep 18. PMID: 32972055

Australia's notifiable disease status, 2016: Annual report of the National Notifiable Diseases Surveillance System.
NNDSS Annual Report Working Group. Commun Dis Intell (2018). 2021 May 27;45. doi: 10.33321/cdi.2021.45.28. PMID: 34074234

Randomized COVID-19 vaccination rollout can offer direct real-world evidence: Randomized COVID-19 vaccination rollout.
Hemkens LG, Goodman SN. J Clin Epidemiol. 2021 May 25:S0895-4356(21)00160-8. doi: 10.1016/j.jclinepi.2021.05.014. Online ahead of print. PMID: 34048910

Willingness to Vaccinate Against COVID-19 in the U.S.: Representative Longitudinal Evidence From April to October 2020.
Daly M, Robinson E. Am J Prev Med. 2021 Jun;60(6):766-773. doi: 10.1016/j.amepre.2021.01.008. Epub 2021 Feb 15. PMID: 33773862

Seroprevalence of hepatitis A virus infection in Central-West of Tunisia.
Ayouni K, Kharroubi G, Mallekh R, Hammami W, Marouani R, Mhamdi M, Ben Salah A, Triki H, Bettaieb J. J Med Virol. 2021 Jun;93(6):3666-3671. doi: 10.1002/jmv.26563. Epub 2020 Oct 10. PMID: 32986240

Health Communication in COVID-19 Era: Experiences from the Italian VaccinarSì Network Websites.
Arghittu A, Dettori M, Dempsey E, Deiana G, Angelini C, Bechini A, Bertoni C, Boccalini S, Bonanni P, Cinquetti S, Chiesi F, Chironna M, Costantino C, Ferro A, Fiacchini D, Icardi G, Poscia A, Russo F, Siddu A, Spadea A, Sticchi L, Triassi M, Vitale F, Castiglia P. Int J Environ Res Public Health. 2021 May 25;18(11):5642. doi: 10.3390/ijerph18115642. PMID: 34070427

PfSPZ-CVac efficacy against malaria increases from 0% to 75% when administered in the absence of erythrocyte stage parasitemia: A randomized, placebo-controlled trial with controlled human malaria infection.
Murphy SC, Deye GA, Sim BKL, Galbiati S, Kennedy JK, Cohen KW, Chakravarty S, K C N, Abebe Y, James ER, Kublin JG, Hoffman SL, Richie TL, Jackson LA. PLoS Pathog. 2021 May 28;17(5):e1009594. doi: 10.1371/journal.ppat.1009594. Online ahead of print. PMID: 34048504

Diversity and natural selection of Merozoite Surface Protein-1 in three species of human Malaria Parasites: contribution from South-East Asian isolates.
Goh XT, Lim YAL, Lee PC, Nissapatorn V, Chua KH. Mol Biochem Parasitol. 2021 Jun 1:111390. doi: 10.1016/j.molbiopara.2021.111390. Online ahead of print. PMID: 34087264

Anti-SARS-CoV-2 Antibodies Testing in Recipients of COVID-19 Vaccination: Why, When, and How?
Lippi G, Henry BM, Plebani M. Diagnostics (Basel). 2021 May 25;11(6):941. doi: 10.3390/diagnostics11060941. PMID: 34070341

Comparing infectivity and virulence of emerging SARS-CoV-2 variants in Syrian hamsters.
Abdelnabi R, Boudewijns R, Foo CS, Seldeslachts L, Sanchez-Felipe L, Zhang X, Delang L, Maes P, Kaptein SJF, Weynand B, Vande Velde G, Neyts J, Dallmeier K. EBioMedicine. 2021 May 24;68:103403. doi: 10.1016/j.ebiom.2021.103403. Online ahead of print. PMID: 34049240

[Attitude towards vaccination against SARS-CoV-2 : Survey among employees in hospitals before and after the start of vaccinations in German hospitals].
Janssens U, Kluge S, Marx G, Hermes C, Salzberger B, Karagiannidis C. Med Klin Intensivmed Notfmed. 2021 Jun;116(5):421-430. doi: 10.1007/s00063-021-00821-4. Epub 2021 Apr 20. PMID: 33877427

A systematic review of human papillomavirus vaccination among US adolescents.
Mansfield LN, Vance A, Nikpour JA, Gonzalez-Guarda RM. Res Nurs Health. 2021 Jun;44(3):473-489. doi: 10.1002/nur.22135. Epub 2021 Apr 16. PMID: 33860541

Addressing logistical barriers to childhood vaccination using an automated reminder system and online resource intervention: A randomized controlled trial.
Wagner NM, Dempsey AF, Narwaney KJ, Gleason KS, Kraus CR, Pyrzanowski J, Glanz JM. Vaccine. 2021 May 28:S0264-410X(21)00639-3. doi: 10.1016/j.vaccine.2021.05.053. Online ahead of print. PMID: 34059372

SARS-CoV-2 variants: A double-edged sword?
Jogalekar MP, Veerabathini A, Gangadaran P. Exp Biol Med (Maywood). 2021 May 22:15353702211014146. doi: 10.1177/15353702211014146. Online ahead of print. PMID: 34024159

Development of a Unique Rapid Test to Detect Anti-bodies Directed Against an Extended RBD of SARS-CoV-2 Spike Protein.
Brosi L, Kübler E, Weston A, Romann P, Panikulam S, Dirscherl L, Gerspach M, Giegelmann C, Dolce D, Überschlag ME, Melone A, Bantleon FI, Villiger TK, Gerhold CB. Chimia (Aarau). 2021 May 28;75(5):446-452. doi: 10.2533/chimia.2021.446. PMID: 34016243

Canine parvovirus type 2c in Vietnam continues to produce distinct descendants with new mutations restricted to Vietnamese variants.
Doan HTT, Le XTK, Do RT, Nguyen KT, Le TH. Arch Virol. 2021 Jun;166(6):1741-1749. doi: 10.1007/s00705-021-05059-1. Epub 2021 Apr 16. PMID: 33860842

A unified route for flavivirus structures uncovers essential pocket factors conserved across pathogenic viruses.
Hardy JM, Newton ND, Modhiran N, Scott CAP, Venugopal H, Vet LJ, Young PR, Hall RA, Hobson-Peters J, Coulibaly F, Watterson D. Nat Commun. 2021 Jun 1;12(1):3266. doi: 10.1038/s41467-021-22773-1. PMID: 34075032

Italian association for the study of the liver position statement on SARS-CoV2 vaccination.
Russo FP, Piano S, Bruno R, Burra P, Puoti M, Masarone M, Montagnese S, Ponziani FR, Petta S, Aghemo A; Italian Association for the Study of the Liver. Dig Liver Dis. 2021 Jun;53(6):677-681. doi: 10.1016/j.dld.2021.03.013. Epub 2021 Apr 30. PMID: 33941488

Opportunities for Innovation: Building on the success of lipid nanoparticle vaccines.
Huang J, Yuen D, Mintern JD, Johnston APR. Curr Opin Colloid Interface Sci. 2021 May 29:101468. doi: 10.1016/j.cocis.2021.101468. Online ahead of print. PMID: 34093062

Nanoscale pathogens treated with nanomaterial-like peptides: a platform technology appropriate for future pandemics.
F Nahhas A, F Nahhas A, J Webster T. Nanomedicine (Lond). 2021 Jun;16(14):1237-1254. doi: 10.2217/nnm-2020-0447. Epub 2021 May 14. PMID: 33988037

Genome-wide analysis of 10664 SARS-CoV-2 genomes to identify virus strains in 73 countries based on single nucleotide polymorphism.
Ghosh N, Saha I, Sharma N, Nandi S, Plewczynski D. Virus Res. 2021 Jun;298:198401. doi: 10.1016/j.virusres.2021.198401. Epub 2021 Mar 26. PMID: 33781798

Influenza vaccination and the risk of COVID-19 infection and severe illness in older adults in the United States.
Huang K, Lin SW, Sheng WH, Wang CC. Sci Rep. 2021 May 26;11(1):11025. doi: 10.1038/s41598-021-90068-y. PMID: 34040014

Pneumococcal meningitis in adults: a prospective nationwide cohort studY over a 20-year period.
Koelman DLH, Brouwer MC, Ter Horst L, Bijlsma MW, van der Ende A, van de Beek D. Clin Infect Dis. 2021 May 24:ciab477. doi: 10.1093/cid/ciab477. Online ahead of print. PMID: 34036322

Comparative analysis of swine leukocyte antigen gene diversity in European farmed pigs.
Hammer SE, Duckova T, Groiss S, Stadler M, Jensen-Waern M, Golde WT, Gimsa U, Saalmueller A. Anim Genet. 2021 May 24. doi: 10.1111/age.13090. Online ahead of print. PMID: 34028065

[The impact of the COVID-19 pandemic on first-line primary care in southeastern France: Feedback on the implementation of a real-time monitoring system based on regional health insurance data].

Davin-Casalena B, Jardin M, Guerrera H, J Mabille, Tréhard H, Lapalus D, Ménager C, Nauleau S, Cassaro V, Verger P, Guagliardo V. Rev Epidemiol Sante Publique. 2021 Jun;69(3):105-115. doi: 10.1016/j.respe.2021.04.135. Epub 2021 Apr 27. PMID: 33992499

Anguillid herpesvirus 1 (AngHV) ORF95 encodes a late, structural envelope protein.
Chen X, Yang JX, Li YY, Song TY, Ge JQ. Virus Genes. 2021 Jun;57(3):280-283. doi: 10.1007/s11262-021-01836-x. Epub 2021 Apr 30. PMID: 33929643

The role of HIF-1α in BCG-stimulated macrophages polarization and their tumoricidal effects in vitro.
Zhu P, Hou Y, Tang M, Jin Z, Yu Y, Li D, Yan D, Dong Z. Med Microbiol Immunol. 2021 Jun;210(2-3):149-156. doi: 10.1007/s00430-021-00708-3. Epub 2021 May 11. PMID: 33974122

Three decades of clinical trials on immunotherapy for human leishmaniases: a systematic review and meta-analysis.
Mota CA, Oyama J, Souza Terron Monich M, Brustolin AÁ, Perez de Souza JV, Murase LS, Ghiraldi Lopes LD, Silva Santos TD, Vieira Teixeira JJ, Verzignassi Silveira TG. Immunotherapy. 2021 Jun;13(8):693-721. doi: 10.2217/imt-2020-0184. Epub 2021 Apr 15. PMID: 33853344

Coronavirus Disease-2019 (COVID-19) and Cardiovascular Complications.
Ma L, Song K, Huang Y. J Cardiothorac Vasc Anesth. 2021 Jun;35(6):1860-1865. doi: 10.1053/j.jvca.2020.04.041. Epub 2020 Apr 30. PMID: 32451271

Structure of the merozoite surface protein 1 from *Plasmodium falciparum*.
Dijkman PM, Marzluf T, Zhang Y, Chang SS, Helm D, Lanzer M, Bujard H, Kudryashev M. Sci Adv. 2021 Jun 2;7(23):eabg0465. doi: 10.1126/sciadv.abg0465. Print 2021 Jun. PMID: 34078606

Securing Public Trust: Dentistry, SARS-CoV-2, and "Testing for Tomorrow".
Rekow ED, Alfano MC. Compend Contin Educ Dent. 2021 Jun;42(6):314-321. PMID: 34077668

B Cell Responses against Influenza Viruses: Short-Lived Humoral Immunity against a Life-Long Threat.
Guthmiller JJ, Utset HA, Wilson PC. Viruses. 2021 May 22;13(6):965. doi: 10.3390/v13060965. PMID: 34067435

Promising role of defensins peptides as therapeutics to combat against viral infection.
Solanki SS, Singh P, Kashyap P, Sansi MS, Ali SA. Microb Pathog. 2021 Jun;155:104930. doi: 10.1016/j.micpath.2021.104930. Epub 2021 Apr 29. PMID: 33933603

Targeting cancer testis antigens in synovial sarcoma.
Mitchell G, Pollack SM, Wagner MJ. J Immunother Cancer. 2021 Jun;9(6):e002072. doi: 10.1136/jitc-2020-002072. PMID: 34083416

Psoriasis and Psoriatic Arthritis in the Context of the COVID-19 Pandemic: A Plenary Session From the GRAPPA 2020 Annual Meeting.
Mease PJ, Calabrese LH, Duffin KC, Haberman RH, Firmino R, Scher JU, Schick L, Winthrop K, Merola JF. J Rheumatol Suppl. 2021 Jun;97:24-29. doi: 10.3899/jrheum.201671. PMID: 34074662

The solid organ transplant recipient with SARS-CoV-2 infection.
Laracy JC, Miko BA, Pereira MR. Curr Opin Organ Transplant. 2021 Jun 1. doi: 10.1097/MOT.0000000000000888. Online ahead of print. PMID: 34074938

A single-cell atlas of Plasmodium falciparum transmission through the mosquito.
Real E, Howick VM, Dahalan FA, Witmer K, Cudini J, Andradi-Brown C, Blight J, Davidson MS, Dogga SK, Reid AJ, Baum J, Lawniczak MKN. Nat Commun. 2021 May 27;12(1):3196. doi: 10.1038/s41467-021-23434-z. PMID: 34045457

Overview of the interaction of helminth extracellular vesicles with the host and their potential functions and biological applications.
Sánchez-López CM, Trelis M, Bernal D, Marcilla A. Mol Immunol. 2021 Jun;134:228-235. doi: 10.1016/j.molimm.2021.03.020. Epub 2021 Apr 6. PMID: 33836351

Local immune responses to VAA DNA **vaccine** against Listonella anguillarum in flounder (Paralichthys olivaceus).
Xing J, Jiang X, Xu H, Sheng X, Tang X, Chi H, Zhan W. Mol Immunol. 2021 Jun;134:141-149. doi: 10.1016/j.molimm.2021.03.012. Epub 2021 Mar 24. PMID: 33773157

Long-term population effects of infant 10-valent pneumococcal conjugate vaccination on pneumococcal meningitis in Finland.
Polkowska A, Rinta-Kokko H, Toropainen M, Palmu AA, Nuorti JP. Vaccine. 2021 May 27;39(23):3216-3224. doi: 10.1016/j.vaccine.2021.02.030. Epub 2021 Apr 30. PMID: 33934915

Impact of influenza vaccination in the Netherlands, 2007-2016: Vaccinees consult their general practitioner for clinically diagnosed influenza, acute respiratory infections, and pneumonia more often than non-vaccinees.
Caini S, Paget J, Spreeuwenberg P, Korevaar JC, Meijer A, Hooiveld M. PLoS One. 2021 May 28;16(5):e0249883. doi: 10.1371/journal.pone.0249883. eCollection 2021. PMID: 34048429

Immunocompetent cancer-on-chip models to assess immuno-oncology therapy.
Maulana TI, Kromidas E, Wallstabe L, Cipriano M, Alb M, Zaupa C, Hudecek M, Fogal B, Loskill P. Adv Drug Deliv Rev. 2021 Jun;173:281-305. doi: 10.1016/j.addr.2021.03.015. Epub 2021 Mar 30. PMID: 33798643

Synthetic proteins for COVID-19 diagnostics.
Schein CH, Levine CB, McLellan SLF, Negi SS, Braun W, Dreskin SC, Anaya ES, Schmidt J. Peptides. 2021 Jun 1:170583. doi: 10.1016/j.peptides.2021.170583. Online ahead of print. PMID: 34087220

Immune Response of Mice Against Babesia canis Antigens is Enhanced When Antigen is Coupled to Gold Nanoparticles.
Staroverov SA, Fomin AS, Kozlov SV, Volkov AA, Kozlov ES, Gabalov KP, Dykman LA. Acta Parasitol. 2021 Jun;66(2):493-500. doi: 10.1007/s11686-020-00305-z. Epub 2020 Nov 9. PMID: 33165701

Effect of 2 Inactivated SARS-CoV-2 Vaccines on Symptomatic COVID-19 Infection in Adults: A Randomized Clinical Trial.

Al Kaabi N, Zhang Y, Xia S, Yang Y, Al Qahtani MM, Abdulrazzaq N, Al Nusair M, Hassany M, Jawad JS, Abdalla J, Hussein SE, Al Mazrouei SK, Al Karam M, Li X, Yang X, Wang W, Lai B, Chen W, Huang S, Wang Q, Yang T, Liu Y, Ma R, Hussain ZM, Khan T, Saifuddin Fasihuddin M, You W, Xie Z, Zhao Y, Jiang Z, Zhao G, Zhang Y, Mahmoud S, ElTantawy I, Xiao P, Koshy A, Zaher WA, Wang H, Duan K, Pan A, Yang X. JAMA. 2021 May 26. doi: 10.1001/jama.2021.8565. Online ahead of print. PMID: 34037666

Conference report: 34th IUSTI Europe Congress.
Bangura A, Marriott A, Shaw J, Patel R. Int J STD AIDS. 2021 Jun;32(7):588-590. doi: 10.1177/0956462420975925. Epub 2021 Mar 26. PMID: 33769154

Insights into SARS-CoV-2 evolution, potential antivirals, and vaccines.
Abdel-Moneim AS, Abdelwhab EM, Memish ZA. Virology. 2021 Jun;558:1-12. doi: 10.1016/j.virol.2021.02.007. Epub 2021 Feb 22. PMID: 33691216

Gene fusion neoantigens: Emerging targets for cancer immunotherapy.
Wang Y, Shi T, Song X, Liu B, Wei J. Cancer Lett. 2021 May 28;506:45-54. doi: 10.1016/j.canlet.2021.02.023. Epub 2021 Mar 4. PMID: 33675984

Do ectothermic vertebrates have a home in which to affinity mature their antibody responses?
Muthupandian A, Waly D, Magor BG. Dev Comp Immunol. 2021 Jun;119:104021. doi: 10.1016/j.dci.2021.104021. Epub 2021 Jan 19. PMID: 33482240

Test for Covid-19 seasonality and the risk of second waves.
Engelbrecht FA, Scholes RJ. One Health. 2021 Jun;12:100202. doi: 10.1016/j.onehlt.2020.100202. Epub 2020 Nov 29. PMID: 33283035

COVID-19 infection data encode a dynamic reproduction number in response to policy decisions with secondary wave implications.
Rowland MA, Swannack TM, Mayo ML, Parno M, Farthing M, Dettwiller I, George G, England W, Reif M, Cegan J, Trump B, Linkov I, Lafferty B, Bridges T. Sci Rep. 2021 May 25;11(1):10875. doi: 10.1038/s41598-021-90227-1. PMID: 34035322

Reactance revisited: Consequences of mandatory and scarce vaccination in the case of COVID-19.
Sprengholz P, Betsch C, Böhm R. Appl Psychol Health Well Being. 2021 May 25. doi: 10.1111/aphw.12285. Online ahead of print. PMID: 34032388

Circulating immunity protects the female reproductive tract from *Chlamydia* infection.
Labuda JC, Pham OH, Depew CE, Fong KD, Lee BS, Rixon JA, McSorley SJ. Proc Natl Acad Sci U S A. 2021 May 25;118(21):e2104407118. doi: 10.1073/pnas.2104407118. PMID: 34001624

SARS_CoV2 RBD gene transcription cannot be driven by CMV promoter.
Xie L, Yi K, Li Y. Virology. 2021 Jun;558:22-27. doi: 10.1016/j.virol.2021.02.010. Epub 2021 Mar 5. PMID: 33711560

Design, synthesis and immunological evaluation of self-assembled antigenic peptides from dual-antigen targets: a broad-spectrum candidate for an effective antibreast cancer therapy.

Shi W, Qiu Q, Feng Z, Tong Z, Guo W, Zou F, Yue N, Huang W, Qian H. J Immunother Cancer. 2021 Jun;9(6):e002523. doi: 10.1136/jitc-2021-002523. PMID: 34083420

Production of SARS-CoV-2 Virus-Like Particles in Insect Cells.
Mi Y, Xie T, Zhu B, Tan J, Li X, Luo Y, Li F, Niu H, Han J, Lv W, Wang J. Vaccines (Basel). 2021 May 26;9(6):554. doi: 10.3390/vaccines9060554. PMID: 34073159

How Social Media Comments Inform the Promotion of Mask-Wearing and Other COVID-19 Prevention Strategies.
Keller SN, Honea JC, Ollivant R. Int J Environ Res Public Health. 2021 May 25;18(11):5624. doi: 10.3390/ijerph18115624. PMID: 34070305

Functional study of a role of N-terminal HA stem region of swine influenza A virus in virus replication.
Wang Z, Yu J, Sheng Z, Hause BM, Li F, Kaushik RS, Wang D. Vet Microbiol. 2021 May 25;258:109132. doi: 10.1016/j.vetmic.2021.109132. Online ahead of print. PMID: 34052744

Genotypes of rhinovirus detected among children in two communities of South-West Nigeria.
Oluwasemowo OO, Nejo YT, Abokede JO, Lawson M, Motayo BO. Virus Genes. 2021 Jun;57(3):276-279. doi: 10.1007/s11262-021-01841-0. Epub 2021 May 14. PMID: 33988838

COVID-19 vaccines: Frequently asked questions and updated answers.
Lefebvre M, Vignier N, Pitard B, Botelho-Nevers E, Wyplosz B, Cohen R, Epaulard O; SPILF Vaccination Prevention group. Infect Dis Now. 2021 Jun;51(4):319-333. doi: 10.1016/j.idnow.2021.02.007. Epub 2021 Feb 27. PMID: 33681861

Hybrid Nanoassemblies from Viruses and DNA Nanostructures.
Ojasalo S, Piskunen P, Shen B, Kostiainen MA, Linko V. Nanomaterials (Basel). 2021 May 27;11(6):1413. doi: 10.3390/nano11061413. PMID: 34071795

Protein and glycan molecular weight determination of highly glycosylated HIV-1 envelope trimers by HPSEC-MALS.
Bender MF, Li Y, Ivleva VB, Gowetski DB, Paula Lei Q. Vaccine. 2021 May 28:S0264-410X(21)00634-4. doi: 10.1016/j.vaccine.2021.05.048. Online ahead of print. PMID: 34053790

Microbial exposures that establish immunoregulation are compatible with Targeted Hygiene.
Rook GAW, Bloomfield SF. J Allergy Clin Immunol. 2021 May 22:S0091-6749(21)00811-3. doi: 10.1016/j.jaci.2021.05.008. Online ahead of print. PMID: 34033844

Immunomodulatory roles and novel applications of bacterial membrane vesicles.
Gilmore WJ, Johnston EL, Zavan L, Bitto NJ, Kaparakis-Liaskos M. Mol Immunol. 2021 Jun;134:72-85. doi: 10.1016/j.molimm.2021.02.027. Epub 2021 Mar 13. PMID: 33725501

Humoral Immunity against SARS-CoV-2 and the Impact on COVID-19 Pathogenesis.
Lee E, Oh JE. Mol Cells. 2021 Jun 1. doi: 10.14348/molcells.2021.0075. Online ahead of print. PMID: 34059562

Prophylactic effects of probiotics on respiratory viruses including COVID-19: a review.
Lee NK, Paik HD. Food Sci Biotechnol. 2021 May 24:1-9. doi: 10.1007/s10068-021-00913-z. Online ahead of print. PMID: 34054314

Outpatient Treatment of SARS-CoV-2 Infection to Prevent COVID-19 Progression.
Cohen MS, Wohl DA, Fischer WA, Smith DJ, Eron JJ. Clin Infect Dis. 2021 May 28:ciab494. doi: 10.1093/cid/ciab494. Online ahead of print. PMID: 34048568

A short review on key role of plants and their extracts in boosting up immune response to combat COVID-19.
Khan M, Saddique MAB, Tahir H, Amjad MD, Ahmad A, Masood U, Khan D. Infect Disord Drug Targets. 2021 May 26. doi: 10.2174/1871526521666210527091939. Online ahead of print. PMID: 34047261

Structural Fine-Tuning of Desmuramylpeptide NOD2 Agonists Defines Their *In Vivo* Adjuvant Activity.
Guzelj S, Nabergoj S, Gobec M, Pajk S, Klančič V, Slütter B, Frkanec R, Štimac A, Šket P, Plavec J, Mlinarič-Raščan I, Jakopin Ž. J Med Chem. 2021 May 27. doi: 10.1021/acs.jmedchem.1c00644. Online ahead of print. PMID: 34043358

Role of nanotechnology behind the success of mRNA vaccines for COVID-19.
Khurana A, Allawadhi P, Khurana I, Allwadhi S, Weiskirchen R, Banothu AK, Chhabra D, Joshi K, Bharani KK. Nano Today. 2021 Jun;38:101142. doi: 10.1016/j.nantod.2021.101142. Epub 2021 Mar 26. PMID: 33815564

Impact of pharmacy intervention on influenza vaccination acceptance: a systematic literature review and meta-analysis.
Murray E, Bieniek K, Del Aguila M, Egodage S, Litzinger S, Mazouz A, Mills H, Liska J. Int J Clin Pharm. 2021 May 28:1-10. doi: 10.1007/s11096-021-01250-1. Online ahead of print. PMID: 34047881

Smart vaginal bilayer films of Tenofovir based on Eudragit® L100/natural polymer for the prevention of the sexual transmission of HIV.
Martín-Illana A, Cazorla-Luna R, Notario-Pérez F, Bedoya LM, Rubio J, Tamayo A, Ruiz-Caro R, Veiga MD. Int J Pharm. 2021 Jun 1;602:120665. doi: 10.1016/j.ijpharm.2021.120665. Epub 2021 Apr 30. PMID: 33933643

Evaluating recovery, cost, and throughput of different concentration methods for SARS-CoV-2 wastewater-based epidemiology.
LaTurner ZW, Zong DM, Kalvapalle P, Gamas KR, Terwilliger A, Crosby T, Ali P, Avadhanula V, Santos HH, Weesner K, Hopkins L, Piedra PA, Maresso AW, Stadler LB. Water Res. 2021 Jun 1;197:117043. doi: 10.1016/j.watres.2021.117043. Epub 2021 Mar 15. PMID: 33784608

Organoids: A New Model for SARS-CoV-2 Translational Research.
Yu J. Int J Stem Cells. 2021 May 30;14(2):138-149. doi: 10.15283/ijsc20169. PMID: 33632991

Increasing influenza vaccination coverage in healthcare workers: a review on campaign strategies and their effect.
Schumacher S, Salmanton-García J, Cornely OA, Mellinghoff SC. Infection. 2021 Jun;49(3):387-399. doi: 10.1007/s15010-020-01555-9. Epub 2020 Dec 7. PMID: 33284427

Immune to addiction: how immunotherapies can be used to combat methamphetamine addiction.
Hossain MK, Hassanzadeganroudsari M, Kypreos E, Feehan J, Apostolopoulos V. Expert Rev Vaccines. 2021 Jun 1:1-9. doi: 10.1080/14760584.2021.1927725. Online ahead of print. PMID: 33970739

Acute bacterial meningitis.
Wall EC, Chan JM, Gil E, Heyderman RS. Curr Opin Neurol. 2021 Jun 1;34(3):386-395. doi: 10.1097/WCO.0000000000000934. PMID: 33767093

Novel atypical Aeromonas salmonicida bath challenge model for juvenile ballan wrasse (Labrus bergylta, Ascanius).
Papadopoulou A, Garvey K, Hill T, Ramirez-Paredes JG, Monaghan SJ, Baily JL, Davie A, Katsiadaki I, Verner-Jeffreys D, Wallis T, Migaud H, Adams A. J Fish Dis. 2021 Jun;44(6):823-835. doi: 10.1111/jfd.13312. Epub 2020 Dec 4. PMID: 33277726

Stem cell therapy in coronavirus disease 2019: current evidence and future potential.
Shetty R, Murugeswari P, Chakrabarty K, Jayadev C, Matalia H, Ghosh A, Das D. Cytotherapy. 2021 Jun;23(6):471-482. doi: 10.1016/j.jcyt.2020.11.001. Epub 2020 Nov 9. PMID: 33257213

The Covid-19 world-Are we there yet?
Hamamoto Y. J Diabetes Investig. 2021 May 31. doi: 10.1111/jdi.13605. Online ahead of print. PMID: 34056843

Breastfeeding and Coronavirus Disease 2019 (COVID-19) Vaccination: Position Statement of the Indian Academy of Pediatrics/Advisory Committee on Vaccination and Immunization Practices.
Kasi SG, Dhir SK, Shivananda S, Marathe S, Chatterjee K, Agarwalla S, Verma S, Shah AK, Srirampur S, Kalyani S, Pemde HK, Balasubramanian S, Basavaraja GV, Parekh BJ, Kumar R, Gupta P. Indian Pediatr. 2021 May 28:S097475591600336. Online ahead of print. PMID: 34047719

Genetic immunization against toxoplasmosis: A review article.
Yektaeian N, Malekpour A, Atapour A, Davoodi T, Hatam G. Microb Pathog. 2021 Jun;155:104888. doi: 10.1016/j.micpath.2021.104888. Epub 2021 Apr 27. PMID: 33930415

Reliable or not? An automated classification of webpages about early childhood vaccination using supervised machine learning.
Meppelink CS, Hendriks H, Trilling D, van Weert JCM, Shao A, Smit ES. Patient Educ Couns. 2021 Jun;104(6):1460-1466. doi: 10.1016/j.pec.2020.11.013. Epub 2020 Nov 12. PMID: 33243581

Challenges and Solutions to Viral Diseases of Finfish in Marine Aquaculture.
Mugimba KK, Byarugaba DK, Mutoloki S, Evensen Ø, Munang'andu HM. Pathogens. 2021 May 30;10(6):673. doi: 10.3390/pathogens10060673. PMID: 34070735

Thromboembolic Complications of SARS-CoV-2 and Metabolic Derangements: Suggestions from Clinical Practice Evidence to Causative Agents.
Nappi F, Iervolino A, Avtaar Singh SS. Metabolites. 2021 May 25;11(6):341. doi: 10.3390/metabo11060341. PMID: 34070672

mSphere of Influence: Structural Insights into the Molecular Mechanism Underlying Placental Malaria.
Quintana MDP. mSphere. 2021 May 28:e0039121. doi: 10.1128/mSphere.00391-21. Online ahead of print. PMID: 34047650

A Homotypic Membrane-Camouflaged Biomimetic Nanoplatform with Gold Nanocrystals for Synergistic Photothermal/Starvation/Immunotherapy.
Li Z, Rong L. ACS Appl Mater Interfaces. 2021 May 26;13(20):23469-23480. doi: 10.1021/acsami.1c04305. Epub 2021 May 17. PMID: 33999610

Antibody evasion by the P.1 strain of SARS-CoV-2.
Dejnirattisai W, Zhou D, Supasa P, Liu C, Mentzer AJ, Ginn HM, Zhao Y, Duyvesteyn HME, Tuekprakhon A, Nutalai R, Wang B, López-Camacho C, Slon-Campos J, Walter TS, Skelly D, Costa Clemens SA, Naveca FG, Nascimento V, Nascimento F, Fernandes da Costa C, Resende PC, Pauvolid-Correa A, Siqueira MM, Dold C, Levin R, Dong T, Pollard AJ, Knight JC, Crook D, Lambe T, Clutterbuck E, Bibi S, Flaxman A, Bittaye M, Belij-Rammerstorfer S, Gilbert SC, Carroll MW, Klenerman P, Barnes E, Dunachie SJ, Paterson NG, Williams MA, Hall DR, Hulswit RJG, Bowden TA, Fry EE, Mongkolsapaya J, Ren J, Stuart DI, Screaton GR. Cell. 2021 May 27;184(11):2939-2954.e9. doi: 10.1016/j.cell.2021.03.055. Epub 2021 Mar 30. PMID: 33852911

Challenges and perspectives for immunotherapy in oesophageal cancer: A look to the future (Review).
Lampis A, Ratti M, Ghidini M, Mirchev MB, Okuducu AF, Valeri N, Hahne JC. Int J Mol Med. 2021 Jun;47(6):97. doi: 10.3892/ijmm.2021.4930. Epub 2021 Apr 13. PMID: 33846775

Evaluation of Cellular and Serological Responses to Acute SARS-CoV-2 Infection Demonstrates the Functional Importance of the Receptor-Binding Domain.
Mantus G, Nyhoff LE, Kauffman RC, Edara VV, Lai L, Floyd K, Shi PY, Menachery VD, Edupuganti S, Scherer EM, Kay A, McNair N, Anderson EJ, Rouphael N, Ahmed R, Suthar MS, Wrammert J. J Immunol. 2021 Jun 1;206(11):2605-2613. doi: 10.4049/jimmunol.2001420. Epub 2021 May 5. PMID: 33952616

Virtual screening of peptides with high affinity for SARS-CoV-2 main protease.
Porto WF. Comput Biol Med. 2021 Jun;133:104363. doi: 10.1016/j.compbiomed.2021.104363. Epub 2021 Apr 2. PMID: 33862305

Sustained release of PKR inhibitor C16 from mesoporous silica nanoparticles significantly enhances mRNA translation and anti-tumor vaccination.
Zhang W, Liu Y, Min Chin J, Phua KKL. Eur J Pharm Biopharm. 2021 Jun;163:179-187. doi: 10.1016/j.ejpb.2021.03.011. Epub 2021 Mar 23. PMID: 33771622

Diagnosis of COVID-19 using CT scan images and deep learning techniques.
Shah V, Keniya R, Shridharani A, Punjabi M, Shah J, Mehendale N. Emerg Radiol. 2021 Jun;28(3):497-505. doi: 10.1007/s10140-020-01886-y. Epub 2021 Feb 1. PMID: 33523309

Potency Assessment of Dendritic Cell Anticancer **Vaccine**: Validation of the Co-Flow DC Assay.
Carloni S, Piccinini C, Pancisi E, Soldati V, Stefanelli M, Granato AM, Ibrahim T, Petrini M. Int J Mol Sci. 2021 May 29;22(11):5824. doi: 10.3390/ijms22115824. PMID: 34072360

SARS-CoV-2: One Year in the Pandemic. What Have We Learned, the New **Vaccine** Era and the Threat of SARS-CoV-2 Variants.
Scialo F, Vitale M, Daniele A, Nigro E, Perrotta F, Gelzo M, Iadevaia C, Cerqua FS, Costigliola A, Allocca V, Amato F, Pastore L, Castaldo G, Bianco A. Biomedicines. 2021 May 27;9(6):611. doi: 10.3390/biomedicines9060611. PMID: 34072088

Current Updates on Cancer-Causing Types of Human Papillomaviruses (HPVs) in East, Southeast, and South Asia.
Xia C, Li S, Long T, Chen Z, Chan PKS, Boon SS. Cancers (Basel). 2021 May 30;13(11):2691. doi: 10.3390/cancers13112691. PMID: 34070706

Evaluation of the immunogenicity and efficacy of a chimeric OMP25-OMP31 antigen in BALB/c mice.
Mohammadi Y. Vet Med Sci. 2021 May 31. doi: 10.1002/vms3.537. Online ahead of print. PMID: 34057317

Online study of health professionals about their vaccination attitudes and behavior in the COVID-19 era: addressing participation bias.
Verger P, Scronias D, Fradier Y, Meziani M, Ventelou B. Hum Vaccin Immunother. 2021 May 28:1-6. doi: 10.1080/21645515.2021.1921523. Online ahead of print. PMID: 34047670

Safety and immunogenicity of the epicutaneous reactivation of pertussis toxin immunity in healthy adults: a phase I, randomized, double-blind, placebo-controlled trial.
Chatzis O, Blanchard-Rohner G, Mondoulet L, Pelletier B, De Gea-Hominal A, Roux M, Huttner A, Hervé PL, Rohr M, Matthey A, Gutknecht G, Lemaître B, Hayem C, Pham HT, Wijagkanalan W, Lambert PH, Benhamou PH, Siegrist CA. Clin Microbiol Infect. 2021 Jun;27(6):878-885. doi: 10.1016/j.cmi.2020.08.033. Epub 2020 Sep 5. PMID: 32896653

Targeting B cells in multiple sclerosis.
Sellebjerg F, Weber MS. Curr Opin Neurol. 2021 Jun 1;34(3):295-302. doi: 10.1097/WCO.0000000000000938. PMID: 33782253

Characterization of neutralizing versus binding antibodies and memory B cells in COVID-19 recovered individuals from India.
Nayak K, Gottimukkala K, Kumar S, Reddy ES, Edara VV, Kauffman R, Floyd K, Mantus G, Savargaonkar D, Goel PK, Arora S, Rahi M, Davis CW, Linderman S, Wrammert J, Suthar MS, Ahmed R, Sharma A, Murali-Krishna K, Chandele A. Virology. 2021 Jun;558:13-21. doi: 10.1016/j.virol.2021.02.002. Epub 2021 Mar 5. PMID: 33706207

Bibliometric analysis of global scientific research on COVID-19.
Wang P, Tian D. J Biosaf Biosecur. 2021 Jun;3(1):4-9. doi: 10.1016/j.jobb.2020.12.002. Epub 2021 Jan 23. PMID: 33521590

Genome-wide association study of individual differences of human lymphocyte profiles using large-scale cytometry data.
Okada D, Nakamura N, Setoh K, Kawaguchi T, Higasa K, Tabara Y, Matsuda F, Yamada R. J Hum Genet. 2021 Jun;66(6):557-567. doi: 10.1038/s10038-020-00874-x. Epub 2020 Nov 23. PMID: 33230199

Galinpepimut-S (GPS): an investigational agent for the treatment of acute myeloid leukemia.
Jain AG, Talati C, Pinilla-Ibarz J. Expert Opin Investig Drugs. 2021 May 31:1-7. doi: 10.1080/13543784.2021.1928635. Online ahead of print. PMID: 34053383

Resident Sensitive Quality Measures for General Pediatrics: Alignment with Existing Care Recommendations.
Petosa JJ Jr, Martini A, Klein M, Schumacher D. Acad Pediatr. 2021 May 26:S1876-2859(21)00229-1. doi: 10.1016/j.acap.2021.04.011. Online ahead of print. PMID: 34051374

Potential therapeutic agents to COVID-19: An update review on antiviral therapy, immunotherapy, and cell therapy.
Mirtaleb MS, Mirtaleb AH, Nosrati H, Heshmatnia J, Falak R, Zolfaghari Emameh R. Biomed Pharmacother. 2021 Jun;138:111518. doi: 10.1016/j.biopha.2021.111518. Epub 2021 Mar 16. PMID: 33774315

Structure insights of SARS-CoV-2 open state envelope protein and inhibiting through active phytochemical of ayurvedic medicinal plants from *Withania somnifera*.
Abdullah Alharbi R. Saudi J Biol Sci. 2021 Jun;28(6):3594-3601. doi: 10.1016/j.sjbs.2021.03.036. Epub 2021 Mar 18. PMID: 33758570

Role of Serine Proteases and Host Cell Receptors Involved in Proteolytic Activation, Entry of SARS-CoV-2 and Its Current Therapeutic Options.
Dessie G, Malik T. Infect Drug Resist. 2021 May 24;14:1883-1892. doi: 10.2147/IDR.S308176. eCollection 2021. PMID: 34079299

Bacterial Cyclic Dinucleotides and the cGAS-cGAMP-STING Pathway: A Role in Periodontitis?
Elmanfi S, Yilmaz M, Ong WWS, Yeboah KS, Sintim HO, Gürsoy M, Könönen E, Gürsoy UK. Pathogens. 2021 May 30;10(6):675. doi: 10.3390/pathogens10060675. PMID: 34070809

A rationally designed oral **vaccine** induces immunoglobulin A in the murine gut that directs the evolution of attenuated Salmonella variants.
Diard M, Bakkeren E, Lentsch V, Rocker A, Bekele NA, Hoces D, Aslani S, Arnoldini M, Böhi F, Schumann-Moor K, Adamcik J, Piccoli L, Lanzavecchia A, Stadtmueller BM, Donohue N, van der Woude MW, Hockenberry A, Viollier PH, Falquet L, Wüthrich D, Bonfiglio F, Loverdo C, Egli A, Zandomeneghi G, Mezzenga R, Holst O, Meier BH, Hardt WD, Slack E. Nat Microbiol. 2021 May 27. doi: 10.1038/s41564-021-00911-1. Online ahead of print. PMID: 34045711

Immunotherapeutic approach for advanced pancreatic adenocarcinoma.
Kaur J, Mir T, Gill R, Duong J, Marcus S, Khan R. Immunotherapy. 2021 Jun;13(9):767-782. doi: 10.2217/imt-2020-0344. Epub 2021 Apr 29. PMID: 33910383

Quantification of SARS-CoV-2 neutralizing antibody by wild-type plaque reduction neutralization, microneutralization and pseudotyped virus neutralization assays.
Bewley KR, Coombes NS, Gagnon L, McInroy L, Baker N, Shaik I, St-Jean JR, St-Amant N, Buttigieg KR, Humphries HE, Godwin KJ, Brunt E, Allen L, Leung S, Brown PJ, Penn EJ, Thomas K, Kulnis G, Hallis B, Carroll M, Funnell S, Charlton S. Nat Protoc. 2021 Jun;16(6):3114-3140. doi: 10.1038/s41596-021-00536-y. Epub 2021 Apr 23. PMID: 33893470

The concomitant effects of self-limiting insect releases and behavioural interference on patterns of coexistence and exclusion of competing mosquitoes.
Vollans M, Bonsall MB. Proc Biol Sci. 2021 May 26;288(1951):20210714. doi: 10.1098/rspb.2021.0714. Epub 2021 May 19. PMID: 34004130

Emerging new avian reovirus variants from cases of enteric disorders and arthritis/tenosynovitis in Brazilian poultry flocks.
De la Torre D, Astolfi-Ferreira CS, Chacón RD, Puga B, Piantino Ferreira AJ. Br Poult Sci. 2021 Jun;62(3):361-372. doi: 10.1080/00071668.2020.1864808. Epub 2021 Feb 22. PMID: 33448227

Polyanhydride nanoparticles stabilize pancreatic cancer antigen MUC4β.
Liu L, Kshirsagar P, Christiansen J, Gautam SK, Aithal A, Gulati M, Kumar S, Solheim JC, Batra SK, Jain M, Wannemuehler MJ, Narasimhan B. J Biomed Mater Res A. 2021 Jun;109(6):893-902. doi: 10.1002/jbm.a.37080. Epub 2020 Aug 25. PMID: 32776461

The Immunotherapy Landscape in Adrenocortical Cancer.
Pegna GJ, Roper N, Kaplan RN, Bergsland E, Kiseljak-Vassiliades K, Habra MA, Pommier Y, Del Rivero J. Cancers (Basel). 2021 May 28;13(11):2660. doi: 10.3390/cancers13112660. PMID: 34071333

Characterization of Streptococcus pneumoniae detected in clinical respiratory tract samples in southern Sweden 2 to 4 years after introduction of PCV13.
Uddén F, Rünow E, Slotved HC, Fuursted K, Ahl J, Riesbeck K. J Infect. 2021 May 29:S0163-4453(21)00274-7. doi: 10.1016/j.jinf.2021.05.031. Online ahead of print. PMID: 34062179

An overview of rational design of mRNA-based therapeutics and vaccines.
To KKW, Cho WCS. Expert Opin Drug Discov. 2021 May 31. doi: 10.1080/17460441.2021.1935859. Online ahead of print. PMID: 34058918

Biomarkers, immune responses and cellular changes in vaccinated and non-vaccinated goats during experimental infection of M. haemolytica A2 under tropical conditions.
Maqbool A, Paul BT, Jesse FFA, Teik Chung EL, Mohd Lila MA, Haron AW. Microb Pathog. 2021 May 25;157:105001. doi: 10.1016/j.micpath.2021.105001. Online ahead of print. PMID: 34048891

Is SARS-CoV-2 Spike glycoprotein impairing macrophage function via α7-nicotinic acetylcholine receptors?
Tanmay S, Labrou D, Farsalinos K, Poulas K. Food Chem Toxicol. 2021 Jun;152:112184. doi: 10.1016/j.fct.2021.112184. Epub 2021 Apr 8. PMID: 33838172

New Approaches and Repurposed Antiviral Drugs for the Treatment of the SARS-CoV-2 Infection.
Vittoria BL, Imbesi C, Irene G, Calì G, Bitto A. Pharmaceuticals (Basel). 2021 May 25;14(6):503. doi: 10.3390/ph14060503. PMID: 34070359

Viewpoint of a WHO Advisory Group Tasked to Consider Establishing a Closely-monitored Challenge Model of Coronavirus Disease 2019 (COVID-19) in Healthy Volunteers.
Levine MM, Abdullah S, Arabi YM, Darko DM, Durbin AP, Estrada V, Jamrozik E, Kremsner PG, Lagos R, Pitisuttithum P, Plotkin SA, Sauerwein R, Shi SL, Sommerfelt H, Subbarao K, Treanor JJ, Vrati S, King D,

Balasingam S, Weller C, Aguilar AO, Cassetti MC, Krause PR, Restrepo AMH. Clin Infect Dis. 2021 Jun 1;72(11):2035-2041. doi: 10.1093/cid/ciaa1290. PMID: 32857836

Analyzing National Responses to COVID-19 Pandemic using STPA.
Chen S, Khastgir S, Jennings P. Saf Sci. 2021 Jun;138:105195. doi: 10.1016/j.ssci.2021.105195. Epub 2021 Feb 4. PMID: 33558791

The COVID-19 pandemic face mask waste: A blooming threat to the marine environment.
Dharmaraj S, Ashokkumar V, Hariharan S, Manibharathi A, Show PL, Chong CT, Ngamcharussrivichai C. Chemosphere. 2021 Jun;272:129601. doi: 10.1016/j.chemosphere.2021.129601. Epub 2021 Jan 9. PMID: 33497928

Antiphospholipid antibodies and risk of post-COVID-19 vaccination thrombophilia: The straw that breaks the camel's back?
Talotta R, Robertson ES. Cytokine Growth Factor Rev. 2021 May 28:S1359-6101(21)00042-3. doi: 10.1016/j.cytogfr.2021.05.001. Online ahead of print. PMID: 34090785

Effect of the deletion of lprG and p55 genes in the K10 strain of Mycobacterium avium subspecies paratuberculosis.
Viale MN, Colombatti Olivieri MA, Alonso N, Moyano RD, Imperiale B, Morcillo N, Santangelo MP, Davis W, Romano MI. Res Vet Sci. 2021 May 28;138:1-10. doi: 10.1016/j.rvsc.2021.05.019. Online ahead of print. PMID: 34087563

Population (Antibody) Testing for COVID-19-Technical Challenges, Application and Relevance, an English Perspective.
Maple PAC. Vaccines (Basel). 2021 May 24;9(6):550. doi: 10.3390/vaccines9060550. PMID: 34073985

Development of COVID-19 Infection in Transplant Recipients After SARS-CoV-2 Vaccination.
Ali NM, Alnazari N, Mehta SA, Boyarsky B, Avery RK, Segev DL, Montgomery RA, Stewart ZA. Transplantation. 2021 May 26. doi: 10.1097/TP.0000000000003836. Online ahead of print. PMID: 34049360

Vaccination with cathepsin L mimotopes of Fasciola hepatica in goats reduces worm burden, morphometric measurements, and reproductive structures.
Villa-Mancera A, Alcalá-Canto Y, Olivares-Pérez J, Molina-Mendoza P, Hernández-Guzmán K, Utrera-Quintana F, Carreón-Luna L, Olmedo-Juárez A, Reynoso-Palomar A. Microb Pathog. 2021 Jun;155:104859. doi: 10.1016/j.micpath.2021.104859. Epub 2021 Apr 9. PMID: 33845124

Development of a non-biased, high-throughput ELISA for the rapid evaluation of immunogenicity and cross-reactivity.
Fegan JE, Yu RH, Islam EA, Schryvers AB. J Immunol Methods. 2021 Jun;493:113037. doi: 10.1016/j.jim.2021.113037. Epub 2021 Mar 17. PMID: 33722512

Development of diagnostic assays for differentiation of atypical Aeromonas salmonicida vapA type V and type VI in ballan wrasse (Labrus bergylta, Ascanius).
Papadopoulou A, Davie A, Monaghan SJ, Migaud H, Adams A. J Fish Dis. 2021 Jun;44(6):711-719. doi: 10.1111/jfd.13334. Epub 2021 Jan 25. PMID: 33493378

Comprehensive Analysis of Synonymous Codon Usage Bias for Complete Genomes and E2 Gene of Atypical Porcine Pestivirus.
Yu X, Liu J, Li H, Liu B, Zhao B, Ning Z. Biochem Genet. 2021 Jun;59(3):799-812. doi: 10.1007/s10528-021-10037-y. Epub 2021 Feb 4. PMID: 33538926

Role of Exosomes in Breast Cancer Management: Evidence-Based Review.
AlHumaidi RB, Fayed B, Sharif SI, Noreddin A, Soliman SSM. Curr Cancer Drug Targets. 2021 Jun 1. doi: 10.2174/1568009621666210601115707. Online ahead of print. PMID: 34077346

Profile and Epidemiology of Intussusception in Children Under-Two Years of Age: A Prospective Surveillance.
Das MK, Arora NK, Mathai J, Sam CJ, G R, R K, K J, Arunachalam P, Gupta B. Indian J Pediatr. 2021 May 31. doi: 10.1007/s12098-021-03776-8. Online ahead of print. PMID: 34057604

Coronavirus disease 2019 (COVID-19): Biophysical and biochemical aspects of SARS-CoV-2 and general characteristics.
Güler G, Özdemir H, Omar D, Akdoğan G. Prog Biophys Mol Biol. 2021 May 22:S0079-6107(21)00057-2. doi: 10.1016/j.pbiomolbio.2021.05.007. Online ahead of print. PMID: 34033836

Immunogenicity of a first dose of mRNA- or vector-based SARS-CoV-2 vaccination in dialysis patients: a multicenter prospective observational pilot study.
Lesny P, Anderson M, Cloherty G, Stec M, Haase-Fielitz A, Haarhaus M, Santos C, Lucas C, Macario F, Haase M. J Nephrol. 2021 May 29:1-9. doi: 10.1007/s40620-021-01076-0. Online ahead of print. PMID: 34050904

Virulence and immunogenicity of blue catfish alloherpesvirus in channel, blue and blue × channel hybrid catfish.
Venugopalan A, Griffin MJ, Wise DJ, White D, Ford L, López-Porras A, Camus AC, Hanson LA. J Fish Dis. 2021 May 24. doi: 10.1111/jfd.13398. Online ahead of print. PMID: 34028055

Severe acute respiratory syndrome coronavirus 2 infection and critically ill children.
Damania R, Moore W, Viamonte HC, Kamat P, Basu RK. Curr Opin Pediatr. 2021 Jun 1;33(3):286-291. doi: 10.1097/MOP.0000000000001019. PMID: 33938473

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 Jun;36(3):321-337. doi: 10.1017/S1049023X21000248. Epub 2021 Feb 23. PMID: 33618789

Association between the traffic level from other areas and the COVID-19 prevalence at the provincial levels in South Korea.
Lee H, Noh E, Jeon H, Nam EW. Int J Infect Dis. 2021 May 24:S1201-9712(21)00457-4. doi: 10.1016/j.ijid.2021.05.054. Online ahead of print. PMID: 34044141

Randomized peptide assemblies for enhancing immune responses to nanomaterials.
Votaw NL, Collier L, Curvino EJ, Wu Y, Fries CN, Ojeda MT, Collier JH. Biomaterials. 2021 Jun;273:120825. doi: 10.1016/j.biomaterials.2021.120825. Epub 2021 Apr 15. PMID: 33901731

Cppsite 2.0: An Available Database of Experimentally Validated Cell-Penetrating Peptides Predicting their Secondary and Tertiary Structures.
Kardani K, Bolhassani A. J Mol Biol. 2021 May 28;433(11):166703. doi: 10.1016/j.jmb.2020.11.002. Epub 2020 Nov 10. PMID: 33186582

"I Took the Trouble to Make Inquiries, So I Refuse to Accept Your Instructions": Religious Authority and **Vaccine** Hesitancy Among Ultra-Orthodox Jewish Mothers in Israel.
Keshet Y, Popper-Giveon A. J Relig Health. 2021 Jun;60(3):1992-2006. doi: 10.1007/s10943-020-01122-4. Epub 2021 Jan 2. PMID: 33389435

Clinical Utility of Biosensing Platforms for Confirmation of SARS-CoV-2 Infection.
Phan LMT, Tieu MV, Pham TT, Cho S. Biosensors (Basel). 2021 May 24;11(6):167. doi: 10.3390/bios11060167. PMID: 34073756

Non-structural protein 1-specific antibodies directed against Zika Virus in humans mediate antibody-dependent cellular cytotoxicity.
Sanchez Vargas LA, Adam A, Masterson M, Smith M, Lyski ZL, Dowd KA, Pierson TC, Messer WB, Currier JR, Mathew A. Immunology. 2021 May 31. doi: 10.1111/imm.13380. Online ahead of print. PMID: 34056709

Epidemiological and molecular characteristics of a measles outbreak in northern Vietnam, 2013-2014.
Do LP, Van TTT, Nguyen DTM, Van Khang P, Pham QT, Tran MT, Dang AD, Komase K. J Clin Virol. 2021 Jun;139:104840. doi: 10.1016/j.jcv.2021.104840. Epub 2021 Apr 24. PMID: 33962181

Development of a TaqMan loop-mediated isothermal amplification assay for the rapid detection of pigeon paramyxovirus type 1.
Liang R, Liang L, Ren X, Jia Y, Han K, Zhao J, Song C, Cui S. Arch Virol. 2021 Jun;166(6):1599-1605. doi: 10.1007/s00705-021-04963-w. Epub 2021 Mar 23. PMID: 33755802

Emergence of unusual rotavirus G9P[4] and G8P[8] strains during post vaccination surveillance in Argentina, 2017-2018.
Degiuseppe JI, Stupka JA; Argentinean Rotavirus Surveillance Network. Infect Genet Evol. 2021 May 24;93:104940. doi: 10.1016/j.meegid.2021.104940. Online ahead of print. PMID: 34033946

Congregational COVID-19 Conversations: Utilization of Medical-Religious Partnerships During the SARS-CoV-2 Pandemic.
Monson K, Oluyinka M, Negro D, Hughes N, Maydan D, Iqbal S, Golden SH, Teague P, Hale WD, Galiatsatos P. J Relig Health. 2021 May 25:1-9. doi: 10.1007/s10943-021-01290-x. Online ahead of print. PMID: 34032973

Development of an ELISA for distinguishing convalescent sera with Mycoplasma hyopneumoniae infection from hyperimmune sera responses to bacterin vaccination in pigs.

Ding H, Wen Y, Xu Z, Zhou B, Tlili C, Tian Y, Wang Z, Ning Y, Xin J. Vet Med Sci. 2021 May 22. doi: 10.1002/vms3.539. Online ahead of print. PMID: 34021737

Development and characterization of monoclonal antibodies against the N-terminal domain of African swine fever virus structural protein, p54.
Wang A, Jiang M, Liu H, Liu Y, Zhou J, Chen Y, Ding P, Wang Y, Pang W, Qi Y, Zhang G. Int J Biol Macromol. 2021 Jun 1;180:203-211. doi: 10.1016/j.ijbiomac.2021.03.059. Epub 2021 Mar 16. PMID: 33737177

Neonatal and postneonatal tetanus at a referral hospital in Kamsar, Guinea: a retrospective audit of paediatric records (2014-2018).
Condé I, Cherif MS, Dahal P, Hyjazi ME, Camara F, Diaby M, Diallo AS, Aderoba AK, Conde F, Diallo ML, Diallo FB, Dia H, Diallo MP, Delamou A, Sy T. Int Health. 2021 May 28:ihab021. doi: 10.1093/inthealth/ihab021. Online ahead of print. PMID: 34048561

Artificial intelligence as a fundamental tool in management of infectious diseases and its current implementation in COVID-19 pandemic.
Kaur I, Behl T, Aleya L, Rahman H, Kumar A, Arora S, Bulbul IJ. Environ Sci Pollut Res Int. 2021 May 25:1-18. doi: 10.1007/s11356-021-13823-8. Online ahead of print. PMID: 34036497

Drug repurposing of selective serotonin reuptake inhibitors: Could these drugs help fight COVID-19 and save lives?
Pashaei Y. J Clin Neurosci. 2021 Jun;88:163-172. doi: 10.1016/j.jocn.2021.03.010. Epub 2021 Mar 19. PMID: 33992179

Lumpy skin disease outbreaks investigation in Egyptian cattle and buffaloes: Serological evidence and molecular characterization of genome termini.
Ahmed EM, Eltarabilli MMA, Shahein MA, Fawzy M. Comp Immunol Microbiol Infect Dis. 2021 Jun;76:101639. doi: 10.1016/j.cimid.2021.101639. Epub 2021 Mar 9. PMID: 33770551

SARS-CoV-2: Insight in genome structure, pathogenesis and viral receptor binding analysis - An updated review.
Bhat EA, Khan J, Sajjad N, Ali A, Aldakeel FM, Mateen A, Alqahtani MS, Syed R. Int Immunopharmacol. 2021 Jun;95:107493. doi: 10.1016/j.intimp.2021.107493. Epub 2021 Feb 25. PMID: 33721758

Influenza Vaccination Among U.S. College or University Students: A Systematic Review.
Shon EJ, Choe S, Lee L, Ki Y. Am J Health Promot. 2021 Jun;35(5):708-719. doi: 10.1177/0890117120985833. Epub 2021 Feb 3. PMID: 33530696

The evolution of dengue-2 viruses in Malindi, Kenya and greater East Africa: Epidemiological and immunological implications.
Pollett S, Gathii K, Figueroa K, Rutvisuttinunt W, Srikanth A, Nyataya J, Mutai BK, Awinda G, Jarman RG, Berry IM, Waitumbi JN. Infect Genet Evol. 2021 Jun;90:104617. doi: 10.1016/j.meegid.2020.104617. Epub 2020 Nov 6. PMID: 33161179

FDA-approved thiol-reacting drugs that potentially bind into the SARS-CoV-2 main protease, essential for viral replication.

Lobo-Galo N, Terrazas-López M, Martínez-Martínez A, Díaz-Sánchez ÁG. J Biomol Struct Dyn. 2021 Jun;39(9):3419-3427. doi: 10.1080/07391102.2020.1764393. Epub 2020 May 14. PMID: 32364011

Conformational epitope matching and prediction based on protein surface spiral features.
Lo YT, Shih TC, Pai TW, Ho LP, Wu JL, Chou HY. BMC Genomics. 2021 May 31;22(Suppl 2):116. doi: 10.1186/s12864-020-07303-5. PMID: 34058977

Fiber modifications enable fowl adenovirus 4 vectors to transduce human cells.
Zhang W, Guo X, Yin F, Zou X, Hou W, Lu Z. J Gene Med. 2021 May 28:e3368. doi: 10.1002/jgm.3368. Online ahead of print. PMID: 34050587

Comparison of two commercial surrogate ELISAs to detect a neutralising antibody response to SARS-CoV-2.
Müller K, Girl P, von Buttlar H, Dobler G, Wölfel R. J Virol Methods. 2021 Jun;292:114122. doi: 10.1016/j.jviromet.2021.114122. Epub 2021 Mar 8. PMID: 33705832

CovidExpress: an interactive portal for intuitive investigation on SARS-CoV-2 related transcriptomes.
Djekidel MN, Rosikiewicz W, Peng JC, Kanneganti TD, Hui Y, Jin H, Hedges D, Schreiner P, Fan Y, Wu G, Xu B. bioRxiv. 2021 May 26:2021.05.14.444026. doi: 10.1101/2021.05.14.444026. Preprint. PMID: 34075382

Rapid Progress in Immunotherapies for Multiple Myeloma: An Updated Comprehensive Review.
Nishida H. Cancers (Basel). 2021 May 31;13(11):2712. doi: 10.3390/cancers13112712. PMID: 34072645

Tenofovir Alafenamide for HIV Prevention: Review of the Proceedings from the Gates Foundation Long-Acting TAF Product Development Meeting.
Romano JW, Baum MM, Demkovich ZR, Diana F, Dobard C, Feldman PL, Garcia-Lerma JG, Grattoni A, Gunawardana M, Ho DK, Hope TJ, Massud I, Milad M, Moss JA, Pons-Faudoa FP, Roller S, van der Straten A, Srinivasan S, Veazey RS, Zane D. AIDS Res Hum Retroviruses. 2021 Jun;37(6):409-420. doi: 10.1089/AID.2021.0028. PMID: 33913760

Emergence of porcine circovirus 2g (PCV2g) and evidence for recombination between genotypes 2g, 2b and 2d among field isolates from non-vaccinated pigs in Mizoram, India.
Rajkhowa TK, Lalnunthanga P, Rao PL, Subbiah M, Lalrohlua B. Infect Genet Evol. 2021 Jun;90:104775. doi: 10.1016/j.meegid.2021.104775. Epub 2021 Feb 20. PMID: 33618002

Genetic variation of E6 and E7 genes of human papillomavirus 52 from Central China.
Li S, Ye M, Chen Y, Gong Q, Mei B. J Med Virol. 2021 Jun;93(6):3849-3856. doi: 10.1002/jmv.26690. Epub 2020 Dec 1. PMID: 33230866

A novel anti-NS2BNS3pro antibody-based indirect ELISA test for the diagnosis of dengue virus infections.
Gandikota C, Gandhi L, Maisnam D, Kesavulu MM, Billoria A, Prasad VSV, Venkataramana M. J Med Virol. 2021 Jun;93(6):3312-3321. doi: 10.1002/jmv.26024. Epub 2020 Sep 30. PMID: 32418268

Production of first- and second-generation ethanol for use in alcohol-based hand sanitizers and disinfectants in India.

Hans M, Lugani Y, Chandel AK, Rai R, Kumar S. Biomass Convers Biorefin. 2021 May 27:1-18. doi: 10.1007/s13399-021-01553-3. Online ahead of print. PMID: 34075327

Influenza Vaccination Campaign during the COVID-19 Pandemic: The Experience of a Research and Teaching Hospital in Milan.
Perrone PM, Biganzoli G, Lecce M, Campagnoli EM, Castrofino A, Cinnirella A, Fornaro F, Gallana C, Grosso FM, Maffeo M, Shishmintseva V, Pariani E, Castaldi S. Int J Environ Res Public Health. 2021 May 30;18(11):5874. doi: 10.3390/ijerph18115874. PMID: 34070763

Mathematical modeling and analysis of the novel Coronavirus using Atangana-Baleanu derivative.
Alzahrani E, El-Dessoky MM, Baleanu D. Results Phys. 2021 Jun;25:104240. doi: 10.1016/j.rinp.2021.104240. Epub 2021 Apr 26. PMID: 33936936

Pinpointing the potential hits for hindering interaction of SARS-CoV-2 S-protein with ACE2 from the pool of antiviral phytochemicals utilizing molecular docking and molecular dynamics (MD) simulations.
Patel CN, Goswami D, Jaiswal DG, Parmar RM, Solanki HA, Pandya HA. J Mol Graph Model. 2021 Jun;105:107874. doi: 10.1016/j.jmgm.2021.107874. Epub 2021 Feb 22. PMID: 33647752

COVID-19 Management in Clinical Dental Care Part II: Personal Protective Equipment for the Dental Care Professional.
Melo P, Afonso A, Monteiro L, Lopes O, Alves RC. Int Dent J. 2021 Jun;71(3):263-270. doi: 10.1016/j.identj.2021.01.007. Epub 2021 Jan 18. PMID: 33531145

A Prevalent Focused Human Antibody Response to the Influenza Virus Hemagglutinin Head Interface.
McCarthy KR, Lee J, Watanabe A, Kuraoka M, Robinson-McCarthy LR, Georgiou G, Kelsoe G, Harrison SC. mBio. 2021 Jun 1:e0114421. doi: 10.1128/mBio.01144-21. Online ahead of print. PMID: 34060327

Strong Binding of Leupeptin with TMPRSS2 Protease May Be an Alternative to Camostat and Nafamostat for SARS-CoV-2 Repurposed Drug: Evaluation from Molecular Docking and Molecular Dynamics Simulations.
Ramakrishnan J, Kandasamy S, Iruthayaraj A, Magudeeswaran S, Chinnasamy K, Poomani K. Appl Biochem Biotechnol. 2021 Jun;193(6):1909-1923. doi: 10.1007/s12010-020-03475-8. Epub 2021 Jan 29. PMID: 33512650

Brucellosis in Iranian livestock: A meta-epidemiological study.
Dadar M, Shahali Y, Fakhri Y. Microb Pathog. 2021 Jun;155:104921. doi: 10.1016/j.micpath.2021.104921. Epub 2021 Apr 27. PMID: 33930414

Hospital-based sentinel surveillance for bacterial meningitis in under-five children prior to the introduction of the PCV13 in India.
Jayaraman Y, Veeraraghavan B, Girish Kumar CP, Sukumar B, Rajkumar P, Kangusamy B, Verghese VP, Varghese R, Jayaraman R, Kapoor AN, Gupta N, Kanagasabai K, David JK, Rajaraman J, Sockalingam G, Khera A, Haldar P, Aggarwal MK, Pillai RK, Manchanda V, Theodore RBJ, Rajahamsan J, Mohan G, Jayalekshmi V, Nedunchelian K, Devasena N, Sridharan S, Selvi R, Ravinder T, Narayana Babu R, Mathevan G, Sugumari C, Sugandhi Rao P, Kini PG, Dwibedi B, Kanga A, Grover N, Narayanan H, Mehendale SM. Vaccine. 2021 May 29:S0264-410X(21)00613-7. doi: 10.1016/j.vaccine.2021.05.041. Online ahead of print. PMID: 34074545

Prior transient exposure to interleukin-21 delivered by recombinant adeno-associated virus vector protects mice from hepatitis B virus persistence.
Shen Z, Gao Z, Gu C, Wu J, Wang J, Zhang J, Xie Y, Liu J. Antiviral Res. 2021 Jun;190:105076. doi: 10.1016/j.antiviral.2021.105076. Epub 2021 Apr 15. PMID: 33865876

Sequence Analysis of 20,453 Severe Acute Respiratory Syndrome Coronavirus 2 Genomes from the Houston Metropolitan Area Identifies the Emergence and Widespread Distribution of Multiple Isolates of All Major Variants of Concern.
Long SW, Olsen RJ, Christensen PA, Subedi S, Olson R, Davis JJ, Saavedra MO, Yerramilli P, Pruitt L, Reppond K, Shyer MN, Cambric J, Finkelstein IJ, Gollihar J, Musser JM. Am J Pathol. 2021 Jun;191(6):983-992. doi: 10.1016/j.ajpath.2021.03.004. Epub 2021 Mar 16. PMID: 33741335

Seroprevalence of HBV and HCV in female sex workers from four cities in the state of Pará, northern Brazil.
Miranda NTGP, de Souza RL, Monteiro JC, Costa IB, Siravenha LQ, da Luz ALB, de Almeida NCC, Oliveira-Filho AB, Laurentino RV, Machado LFA. J Med Virol. 2021 Jun;93(6):3730-3737. doi: 10.1002/jmv.26759. Epub 2020 Dec 30. PMID: 33368401

Mathematical modeling of the COVID-19 pandemic with intervention strategies.
Khajanchi S, Sarkar K, Mondal J, Nisar KS, Abdelwahab SF. Results Phys. 2021 Jun;25:104285. doi: 10.1016/j.rinp.2021.104285. Epub 2021 May 6. PMID: 33977079

Nuclear overexpression levels of MAGE-A3 predict poor prognosis in patients with prostate cancer.
Khalvandi A, Abolhasani M, Madjd Z, Shekarabi M, Kourosh-Arami M, Mohsenzadegan M. APMIS. 2021 Jun;129(6):291-303. doi: 10.1111/apm.13132. Epub 2021 Apr 13. PMID: 33743542

Evaluation of potential MHC-I allele-specific epitopes in Zika virus proteins and the effects of mutations on peptide-MHC-I interaction studied using in silico approaches.
da Costa AS, Fernandes TVA, Bello ML, de Souza TLF. Comput Biol Chem. 2021 Jun;92:107459. doi: 10.1016/j.compbiolchem.2021.107459. Epub 2021 Feb 16. PMID: 33636637

Immune adjuvant effects of interferon-gamma (IFN-γ) of flounder (Paralichthys olivaceus) against Edwardsiella tarda.
Wang H, Guo M, Tang X, Xing J, Sheng X, Chi H, Zhan W. Dev Comp Immunol. 2021 May 31:104159. doi: 10.1016/j.dci.2021.104159. Online ahead of print. PMID: 34081944

Staphylococcal Protein A Induces Leukocyte Necrosis by Complexing with Human Immunoglobulins.
Fox PG, Schiavetti F, Rappuoli R, McLoughlin RM, Bagnoli F. mBio. 2021 Jun 1:e0089921. doi: 10.1128/mBio.00899-21. Online ahead of print. PMID: 34060329

Group A rotavirus prevalence and genotypes among adult outpatients with diarrhea in Beijing, China, 2011-2018.
Tian Y, Gao Z, Li W, Liu B, Chen Y, Jia L, Yan H, Wang Q. J Med Virol. 2021 May 24. doi: 10.1002/jmv.27100. Online ahead of print. PMID: 34028862

Strengthening the immunity of the Swiss population with micronutrients: A narrative review and call for action.
Berger MM, Herter-Aeberli I, Zimmermann MB, Spieldenner J, Eggersdorfer M. Clin Nutr ESPEN. 2021 Jun;43:39-48. doi: 10.1016/j.clnesp.2021.03.012. Epub 2021 Mar 24. PMID: 34024545

Comparison of three non-human primate aerosol models for glanders, caused by Burkholderia mallei.
Waag DM, Chance TB, Trevino SR, Rossi FD, Fetterer DP, Amemiya K, Dankmeyer JL, Ingavale SS, Tobery SA, Zeng X, Kern SJ, Worsham PL, Cote CK, Welkos SL. Microb Pathog. 2021 Jun;155:104919. doi: 10.1016/j.micpath.2021.104919. Epub 2021 Apr 27. PMID: 33915206

Optimizing investigation of suspected allergy to polyethylene glycols.
Bruusgaard-Mouritsen MA, Jensen BM, Poulsen LK, Johansen JD, Garvey LH. J Allergy Clin Immunol. 2021 May 27:S0091-6749(21)00825-3. doi: 10.1016/j.jaci.2021.05.020. Online ahead of print. PMID: 34052265

Experience of establishing and coordinating a nationwide network for bidirectional intussusception surveillance in India: lessons for multisite research studies.
Das MK; INCLEN Intussusception Surveillance Network Study Group. BMJ Open. 2021 May 28;11(5):e046827. doi: 10.1136/bmjopen-2020-046827. PMID: 34049918

Risk factors associated with exposure to Crimean-Congo haemorrhagic fever virus in animal workers and cattle, and molecular detection in ticks, South Africa.
Msimang V, Weyer J, le Roux C, Kemp A, Burt FJ, Tempia S, Grobbelaar A, Moolla N, Rostal MK, Bagge W, Cordel C, Karesh WB, Paweska JT, Thompson PN. PLoS Negl Trop Dis. 2021 May 28;15(5):e0009384. doi: 10.1371/journal.pntd.0009384. eCollection 2021 May. PMID: 34048430

Maternal nutrients and effects of gestational COVID-19 infection on fetal brain development.
Hoffman MC, Freedman R, Law AJ, Clark AM, Hunter SK. Clin Nutr ESPEN. 2021 Jun;43:1-8. doi: 10.1016/j.clnesp.2021.04.019. Epub 2021 Apr 29. PMID: 34024500

Designing of a chimeric protein contains StxB, intimin and EscC against toxicity and adherence of enterohemorrhagic Escherichia coli O157:H7 and evaluation of serum antibody titers against it.
Sadri Najafabadi Z, Nazarian S, Kargar M, Kafilzadeh F. Mol Immunol. 2021 Jun;134:218-227. doi: 10.1016/j.molimm.2021.03.016. Epub 2021 Apr 3. PMID: 33823320

Quantifying the risk of SARS-CoV-2 reinfection over time.
O Murchu E, Byrne P, Carty PG, De Gascun C, Keogan M, O'Neill M, Harrington P, Ryan M. Rev Med Virol. 2021 May 27:e2260. doi: 10.1002/rmv.2260. Online ahead of print. PMID: 34043841

Genetic diversity and distribution patterns of PfEMP1 in Plasmodium falciparum isolates along the Thai-Myanmar border.
Sirisabhabhorn K, Chaijaroenkul W, Muhamad P, Na-Bangchang K. Parasitol Int. 2021 May 24;84:102397. doi: 10.1016/j.parint.2021.102397. Online ahead of print. PMID: 34033864

Genome-Wide B Cell, CD4$^+$, and CD8$^+$ T Cell Epitopes That Are Highly Conserved between Human and Animal Coronaviruses, Identified from SARS-CoV-2 as Targets for Preemptive Pan-Coronavirus Vaccines.

Prakash S, Srivastava R, Coulon PG, Dhanushkodi NR, Chentoufi AA, Tifrea DF, Edwards RA, Figueroa CJ, Schubl SD, Hsieh L, Buchmeier MJ, Bouziane M, Nesburn AB, Kuppermann BD, BenMohamed L. J Immunol. 2021 Jun 1;206(11):2566-2582. doi: 10.4049/jimmunol.2001438. Epub 2021 Apr 28. PMID: 33911008

Age-appropriate vaccination practice and associated factors among mothers of children aged less than one year in the pastoral community of Afar region, Ethiopia.
Woldu Anbesu E, Abubeker SA, Berhe BM. Hum Vaccin Immunother. 2021 Jun 1:1-8. doi: 10.1080/21645515.2021.1919480. Online ahead of print. PMID: 34062099

[Prediction of the epitopes of SARS-CoV-2 by immunoinformatics].
Zhao J, Mao Y, Dong R, Tong X, Zhang Q, Zha Y. Xi Bao Yu Fen Zi Mian Yi Xue Za Zhi. 2021 Jun;37(6):487-494. PMID: 34060442

Genome-Scale Metabolic Model of Infection with SARS-CoV-2 Mutants Confirms Guanylate Kinase as Robust Potential Antiviral Target.
Renz A, Widerspick L, Dräger A. Genes (Basel). 2021 May 24;12(6):796. doi: 10.3390/genes12060796. PMID: 34073716

Prevention of hepatitis B mother-to-child transmission in Namibia: A cost-effectiveness analysis.
Tamandjou Tchuem CR, Andersson MI, Wiysonge CS, Mufenda J, Preiser W, Cleary S. Vaccine. 2021 May 27;39(23):3141-3151. doi: 10.1016/j.vaccine.2021.04.041. Epub 2021 May 4. PMID: 33962836

Influenza Vaccination Blunts the Inflammatory Response in Patients Undergoing Cardiopulmonary Bypass.
Atoui R, Ebrahim F, Saroka K, Mireau J, McElhaney JE, Hare GMT. Ann Thorac Surg. 2021 Jun;111(6):1923-1930. doi: 10.1016/j.athoracsur.2020.07.052. Epub 2020 Oct 7. PMID: 33038338

Mapping social distancing measures to the reproduction number for COVID-19.
Brooks-Pollock E, Read JM, McLean AR, Keeling MJ, Danon L. Philos Trans R Soc Lond B Biol Sci. 2021 Jul 19;376(1829):20200276. doi: 10.1098/rstb.2020.0276. Epub 2021 May 31. PMID: 34053268

Viral Vector DNA- and RNA-Based SARS-CoV-2 Vaccines: Possible Integration into the Human Genome Are Adenoviral Genes Expressed in Vector-based Vaccines?
Doerfler W. Virus Res. 2021 Jun 1:198466. doi: 10.1016/j.virusres.2021.198466. Online ahead of print. PMID: 34087261

Risk of reinfection after seroconversion to SARS-CoV-2: A population-based propensity-score matched cohort study.
Leidi A, Koegler F, Dumont R, Dubos R, Zaballa ME, Piumatti G, Coen M, Berner A, Darbellay Farhoumand P, Vetter P, Vuilleumier N, Kaiser L, Courvoisier D, Azman AS, Guessous I, Stringhini S; SEROCoV-POP study group. Clin Infect Dis. 2021 May 27:ciab495. doi: 10.1093/cid/ciab495. Online ahead of print. PMID: 34043763

[Incidence of severe exacerbation in patients diagnosed with diabetes and chronic obstructive pulmonary disease: Cohort study].
Castañ-Abad MT, Godoy P, Bertran S, Montserrat-Capdevila J, Ortega M. Aten Primaria. 2021 May 22;53(8):102074. doi: 10.1016/j.aprim.2021.102074. Online ahead of print. PMID: 34033994

Health Impact and Cost-effectiveness Assessment for the Introduction of Universal Varicella Vaccination in Switzerland.
Heininger U, Pillsbury M, Samant S, Lienert F, Guggisberg P, Gani R, O'Brien E, Pawaskar M. Pediatr Infect Dis J. 2021 Jun 1;40(6):e217-e221. doi: 10.1097/INF.0000000000003136. PMID: 33872276

Evaluation of a new point-of-care test to determine prior dengue infection for potential use in pre-vaccination screening.
Daag JV, Ylade M, Adams C, Jadi R, Crisostomo MV, Alpay R, Aportadera ETC, Yoon IK, White L, Deen J, de Silva AM, Lopez AL. Clin Microbiol Infect. 2021 Jun;27(6):904-908. doi: 10.1016/j.cmi.2020.08.026. Epub 2020 Aug 28. PMID: 32866651

Capsular genotype distribution of Group B Streptococcus colonization among at-risk pregnant women in Sao Paulo, Brazil.
Kfouri RÁ, Pignatari ACC, Kusano EJU, Rocchetti TT, Fonseca CL, Weckx LY. Braz J Infect Dis. 2021 May 31:101586. doi: 10.1016/j.bjid.2021.101586. Online ahead of print. PMID: 34081894

Molecular Characterization of Seasonal Influenza A and B from Hospitalized Patients in Thailand in 2018-2019.
Boonnak K, Mansanguan C, Schuerch D, Boonyuen U, Lerdsamran H, Jiamsomboon K, Sae Wang F, Huntrup A, Prasertsopon J, Kosoltanapiwat N, Puthavathana P. Viruses. 2021 May 25;13(6):977. doi: 10.3390/v13060977. PMID: 34070388

BNT162b2 **vaccine** induces neutralizing antibodies and poly-specific T cells in humans.
Sahin U, Muik A, Vogler I, Derhovanessian E, Kranz LM, Vormehr M, Quandt J, Bidmon N, Ulges A, Baum A, Pascal KE, Maurus D, Brachtendorf S, Lörks V, Sikorski J, Koch P, Hilker R, Becker D, Eller AK, Grützner J, Tonigold M, Boesler C, Rosenbaum C, Heesen L, Kühnle MC, Poran A, Dong JZ, Luxemburger U, Kemmer-Brück A, Langer D, Bexon M, Bolte S, Palanche T, Schultz A, Baumann S, Mahiny AJ, Boros G, Reinholz J, Szabó GT, Karikó K, Shi PY, Fontes-Garfias C, Perez JL, Cutler M, Cooper D, Kyratsous CA, Dormitzer PR, Jansen KU, Türeci Ö. Nature. 2021 May 27. doi: 10.1038/s41586-021-03653-6. Online ahead of print. PMID: 34044428

Active and passive immunization with myelin basic protein as a window for treatment of spinal cord injury; A systematic review and meta-analysis.
Yousefifard M, Madani Neishaboori A, Rafiei Alavi SN, Toloui A, Gubari MIM, Zareie Shab Khaneh A, Karimi Ghahfarokhi M, Hosseini M. Int J Clin Pract. 2021 May 27:e14406. doi: 10.1111/ijcp.14406. Online ahead of print. PMID: 34042239

Immune characterization and profiles of SARS-CoV-2 infected patients reveals potential host therapeutic targets and SARS-CoV-2 oncogenesis mechanism.
Policard M, Jain S, Rego S, Dakshanamurthy S. Virus Res. 2021 May 28:198464. doi: 10.1016/j.virusres.2021.198464. Online ahead of print. PMID: 34058265

Granulomatous Dermatitis Associated With Rubella Virus Infection in an Adult With Immunodeficiency.
Shields BE, Perelygina L, Samimi S, Haun P, Leung T, Abernathy E, Chen MH, Hao L, Icenogle J, Drolet B, Wilson B, Bryer JS, England R, Blumberg E, Wanat KA, Sullivan K, Rosenbach M. JAMA Dermatol. 2021 May 26. doi: 10.1001/jamadermatol.2021.1577. Online ahead of print. PMID: 34037685

Innate and adaptive immune responses to SARS-CoV-2 in humans: relevance to acquired immunity and **vaccine** responses.
Jordan SC. Clin Exp Immunol. 2021 Jun;204(3):310-320. doi: 10.1111/cei.13582. Epub 2021 Mar 4. PMID: 33534923

U.S. population at increased risk of severe illness from COVID-19.
Ajufo E, Rao S, Navar AM, Pandey A, Ayers CR, Khera A. Am J Prev Cardiol. 2021 Jun;6:100156. doi: 10.1016/j.ajpc.2021.100156. Epub 2021 Feb 13. PMID: 33615285

Contemporary Outcomes of Patients with Nonmuscle-Invasive Bladder Cancer Treated with bacillus Calmette-Guérin: Implications for Clinical Trial Design.
Matulay JT, Li R, Hensley PJ, Brooks NA, Narayan VM, Grossman HB, Navai N, Dinney CPN, Kamat AM. J Urol. 2021 Jun;205(6):1612-1621. doi: 10.1097/JU.0000000000001633. Epub 2021 Jan 27. PMID: 33502236

Human Papilloma Virus Vaccination Among Female Patients Attending French Pediatric Cystic Fibrosis Centers.
Rousset-Jablonski C, Haesebaert J, Denis A, Reix P, Llerena C, Perceval M, Touzet S, Durieu I. J Pediatr Adolesc Gynecol. 2021 Jun;34(3):317-323. doi: 10.1016/j.jpag.2020.12.004. Epub 2020 Dec 16. PMID: 33338628

Has the human papillomavirus (HPV) immunization programme improved obstetric outcomes in spontaneous delivery? An ecological study.
Xu X, Woolner A, Bhattacharya S, Cotton S, Zhao F, Cruickshank M. Eur J Obstet Gynecol Reprod Biol. 2021 May 24;262:221-227. doi: 10.1016/j.ejogrb.2021.05.037. Online ahead of print. PMID: 34082145

Changing trends in seroprevalence rates of transfusion-transmitted diseases among blood donors in Jordan.
Souan L, Siag M, Al-Salahat H, Al-Atrash T, Sughayer MA. BMC Infect Dis. 2021 May 31;21(1):508. doi: 10.1186/s12879-021-06196-3. PMID: 34059011

PCSK9 and cancer: Rethinking the link.
Mahboobnia K, Pirro M, Marini E, Grignani F, Bezsonov EE, Jamialahmadi T, Sahebkar A. Biomed Pharmacother. 2021 May 28;140:111758. doi: 10.1016/j.biopha.2021.111758. Online ahead of print. PMID: 34058443

Coronavirus disease 2019 (COVID-19) Versus Influenza in Hospitalized Adult Patients in the United States: Differences in Demographic and Severity Indicators.
Talbot HK, Martin ET, Gaglani M, Middleton DB, Ghamande S, Silveira FP, Murthy K, Zimmerman RK, Trabue CH, Olson SM, Petrie JG, Ferdinands JM, Patel MM, Monto AS; HAIVEN Study Investigators. Clin Infect Dis. 2021 May 29:ciab123. doi: 10.1093/cid/ciab123. Online ahead of print. PMID: 34050659

Seroprevalence of COVID-19 and associated factors in a medical institution in Pakistan.
Naiyar I, Anjum AF, Khalid AM, Noor I, Abdullah MS, Anwar MZ. J Taibah Univ Med Sci. 2021 May 29. doi: 10.1016/j.jtumed.2021.04.004. Online ahead of print. PMID: 34093105

Challenges to improved animal rabies surveillance: Experiences from pilot implementation of decentralized diagnostic units in Chad.
Naïssengar K, Oussiguere A, Madaye E, Mbaipago N, Mindekem R, Moyengar R, Madjadinan A, Ngandolo R, Zinsstag J, Léchenne M. Acta Trop. 2021 May 28:105984. doi: 10.1016/j.actatropica.2021.105984. Online ahead of print. PMID: 34058158

In ovo administration of Bacillus subtilis serotypes effect hatchability, 21-day performance, and intestinal microflora.
Castañeda CD, Gamble JN, Wamsley KGS, McDaniel CD, Kiess AS. Poult Sci. 2021 Jun;100(6):101125. doi: 10.1016/j.psj.2021.101125. Epub 2021 Mar 11. PMID: 33940280

Genome-wide variation in betacoronaviruses.
LaTourrette K, Holste NM, Rodriguez-Peña R, Leme RA, Garcia-Ruiz H. J Virol. 2021 May 26:JVI0049621. doi: 10.1128/JVI.00496-21. Online ahead of print. PMID: 34037417

Vaccination practices for *Leptospira* spp. on New Zealand dairy farms.
Yupiana Y, Wilson PR, Collins-Emerson JM, Weston JF, Benschop J, Vallée E, Heuer C. N Z Vet J. 2021 Jun 1:1-9. doi: 10.1080/00480169.2021.1928563. Online ahead of print. PMID: 33977853

Evaluation of a measles vaccination campaign at the universities in the city of Zurich, 2019.
Lang P, Zens KD, Bally B, Meier C, Martin B, Fehr J. Public Health. 2021 May 27;195:51-53. doi: 10.1016/j.puhe.2021.03.023. Online ahead of print. PMID: 34052507

Mortality, neurodevelopmental impairments, and economic outcomes after invasive group B streptococcal disease in early infancy in Denmark and the Netherlands: a national matched cohort study.
Horváth-Puhó E, van Kassel MN, Gonçalves BP, de Gier B, Procter SR, Paul P, van der Ende A, Søgaard KK, Hahné SJM, Chandna J, Schrag SJ, van de Beek D, Jit M, Sørensen HT, Bijlsma MW, Lawn JE. Lancet Child Adolesc Health. 2021 Jun;5(6):398-407. doi: 10.1016/S2352-4642(21)00022-5. Epub 2021 Apr 21. PMID: 33894156

Immunity against diphtheria among children aged 5-17 years in India, 2017-18: a cross-sectional, population-based serosurvey.
Murhekar MV, Kamaraj P, Kumar MS, Khan SA, Allam RR, Barde PV, Dwibedi B, Kanungo S, Mohan U, Mohanty SS, Roy S, Sagar V, Savargaonkar D, Tandale BV, Topno RK, Kumar CPG, Sabarinathan R, Bitragunta S, Grover GS, Lakshmi PVM, Mishra CM, Sadhukhan P, Sahoo PK, Singh SK, Yadav CP, Kumar R, Dutta S, Toteja GS, Gupta N, Mehendale SM; ICMR Serosurvey Group. Lancet Infect Dis. 2021 Jun;21(6):868-875. doi: 10.1016/S1473-3099(20)30595-8. Epub 2021 Jan 21. PMID: 33485469

Quantification and Trends of Rotavirus and Enterovirus in Untreated Sewage Using Reverse Transcription Droplet Digital PCR.
Kiulia NM, Gonzalez R, Thompson H, Aw TG, Rose JB. Food Environ Virol. 2021 Jun;13(2):154-169. doi: 10.1007/s12560-020-09455-9. Epub 2021 Feb 16. PMID: 33591485

Mathematical modelling and phylodynamics for the study of dog rabies dynamics and control: A scoping review.
Layan M, Dellicour S, Baele G, Cauchemez S, Bourhy H. PLoS Negl Trop Dis. 2021 May 27;15(5):e0009449. doi: 10.1371/journal.pntd.0009449. Online ahead of print. PMID: 34043640

Excess Deaths Among Blacks and Latinx Compared to Whites During Covid-19.
Laurencin CT, Wu ZH, McClinton A, Grady JJ, Walker JM. J Racial Ethn Health Disparities. 2021 Jun;8(3):783-789. doi: 10.1007/s40615-021-01010-x. Epub 2021 Mar 22. PMID: 33751484

The High Potency of Green Synthesized Copper Nanoparticles to Prevent the Toxoplasma gondii Infection in Mice.
Albalawi AE, Alanazi AD, Alyousif MS, Sepahvand A, Ebrahimi K, Niazi M, Mahmoudvand H. Acta Parasitol. 2021 May 29. doi: 10.1007/s11686-021-00421-4. Online ahead of print. PMID: 34050875

Investigating connections between COVID-19 pandemic, air pollution and community interventions for Pakistan employing geoinformation technologies.
Mehmood K, Bao Y, Petropoulos GP, Abbas R, Abrar MM, Saifullah, Mustafa A, Soban A, Saud S, Ahmad M, Hussain I, Fahad S. Chemosphere. 2021 Jun;272:129809. doi: 10.1016/j.chemosphere.2021.129809. Epub 2021 Jan 29. PMID: 33582510

Chemoprophylaxis trial designs in epidemics: insights from a systematic review of COVID-19 study registrations.
Manoharan L, Olliaro P, Horby PW, Watson CH. Trials. 2021 May 29;22(1):370. doi: 10.1186/s13063-021-05323-4. PMID: 34051840

Acute Chelation Therapy-Associated Changes in Urine Gadolinium, Self-reported Flare Severity, and Serum Cytokines in Gadolinium Deposition Disease.
Maecker HT, Siebert JC, Rosenberg-Hasson Y, Koran LM, Ramalho M, Semelka RC. Invest Radiol. 2021 Jun 1;56(6):374-384. doi: 10.1097/RLI.0000000000000752. PMID: 33449576

Patentes registradas en Patentscope

Estrategia de búqueda: *Vaccine in the title or abstract AND 20210522:20210601 as the publication date 28 records.*

1.3589901VACCINEBÆRER MED ET PASSIVT KØLESYSTEM
DK - 25.05.2021
Clasificación Internacional A01N 1/02 Nº de solicitud 18704997 Solicitante B Medical Systems S.à.r.l.
Inventor/a DE CLERCQ, Julien
The present invention relates to a mobile vaccine carrier (1) comprising a housing (2) having a lid (3) preferably hinged to a base member (4), a vaccine storage member (5) disposed within the housing (2) and defining a storage space for a plurality of vaccine containers (V); and a cooling element (6) disposed within the housing (2). The the vaccine storage member (5) further comprises an inner container (7) defining the storage space and having an inlet opening (8) for placing and removing vaccine containers (V); are movable vaccine container holder (9) and a cover member (10) disposed on the lid. The vaccine container holder (9) has an abutment portion (11) abutting against an outer portion (12) of the inner container (7) so that the inlet opening (8) is covered by the vaccine container holder (9) and at least a part of the cover member (10) protrudes into the storage space when the lid (3) is in a closed position. Further, the invention relates to a method for operating a vaccine carrier (1).

2.WO/2021/101187NOVEL VACCINE IMMUNE ADJUVANT COMPOSITION CONTAINING BAVACHIN
WO - 27.05.2021
Clasificación Internacional A61K 39/39 Nº de solicitud PCT/KR2020/016066 Solicitante KOREA INSTITUTE OF ORIENTAL MEDICINE Inventor/a JIN, Young Hee
The present invention relates to: a vaccine immune adjuvant composition containing bavachin as an active ingredient, the composition enabling antibody titer to be improved when administered with an antigen and cellular immunity and humoral immunity to be enhanced; a vaccine formulation containing bavachin and an antigen; a method for promoting immune responses, comprising a step of administering an individual with both the vaccine immune adjuvant composition and a vaccine composition or before or after administration of the vaccine composition; and a vaccine adjuvant composition for promoting immune responses, containing bavachin. A vaccine immune adjuvant composition of the present invention contains bavachin isolated from a Psoraleae semen extract of which the safety is ensured, and thus is safe, and can enhance the titer of an antibody produced according to an antigen and both humoral immunity and cellular immunity, thereby being widely usable in the development of an effective vaccine formulation.

3.WO/2021/102307VACCINIA VIRUSES AND METHODS FOR USING VACCINIA VIRUSES
WO - 27.05.2021
Clasificación Internacional A61K 39/285 Nº de solicitud PCT/US2020/061578 Solicitante UNIVERSITY OF PITTSBURGH - OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION Inventor/a BARTLETT, David
The disclosure relates to methods and materials for treating cancer. For example, recombinant vaccinia viruses having the ability to direct the expression of membrane-bound IL-12 polypeptides on the surface of infected cells and methods for using such recombinant vaccinia viruses to treat cancer are provided. Specifically, the disclosure provides a recombinant vaccinia virus comprising a vaccinia virus genome comprising a nucleic acid encoding an IL-12p35 polypeptide sequence and an IL-12p40 polypeptide sequence, wherein one of the polypeptide sequences comprises a membrane anchoring polypeptide sequence.

4.WO/2021/099444A NOVEL VACCINE AGAINST HEAMOPHILUS PARASUIS
WO - 27.05.2021
Clasificación Internacional A61K 39/102 Nº de solicitud PCT/EP2020/082634 Solicitante INTERVET INTERNATIONAL B.V. Inventor/a JACOBS, Antonius, Arnoldus, Christiaan
The invention pertains to a protein having at least 69% sequence identity with the protein according to SEQ ID No: 1 or an immunogenic fragment of this protein, for use in a prophylactic method to protect a pig against an infection with Haemophilus parasuis by administering a vaccine to the pig, the vaccine comprising the protein or the immunogenic fragment thereof as an antigen. The invention also pertains to a vaccine, a method to manufacture such a vaccine and a method to protect a pig against H. parasuis.

5.WO/2021/098521METHOD FOR RAPID PREPARATION OF EPIDEMIC AND INFECTIOUS BRONCHITIS VACCINE
WO - 27.05.2021
Clasificación Internacional C12N 7/01 Nº de solicitud PCT/CN2020/126654 Solicitante SOUTH CHINA AGRICULTURAL UNIVERSITY Inventor/a XIE, Qingmei
The present invention provides a method for rapid preparation of an epidemic and infectious bronchitis vaccine. The method takes infectious clone of an infectious bronchitis virus (IBV) H120 vaccine strain as a skeleton carrier, then replaces an antigen gene in the skeleton carrier with a targeted antigen gene of an infectious bronchitis epidemic virus strain, so as to obtain a method for recombining bronchitis virus, wherein the targeted antigen gene is an S1 gene or an S gene, the S gene being one of S gene

fragments of the infectious bronchitis epidemic virus strain or a fusion gene composed of multiple of the S gene fragments; replacement can also be the simultaneous replacement of the targeted antigen gene and an N gene, and a signal peptide region of an original S1 gene in the skeleton carrier needs to be preserved during the replacement. The method for the rapid preparation of the epidemic and infectious bronchitis vaccine of the present invention has the beneficial effects that an operation method is simple and easy to implement, the repeatability is high, the generation stability is good, the frequent variation of IBV epidemic can be quickly and efficiently tackled, and the method provides a new idea for the construction of a carrier vaccine.

6.WO/2021/099446A NOVEL VACCINE AGAINST HEAMOPHILUS PARASUIS
WO - 27.05.2021
Clasificación Internacional A61K 39/102 Nº de solicitud PCT/EP2020/082640 Solicitante INTERVET INTERNATIONAL B.V. Inventor/a JACOBS, Antonius, Arnoldus, Christiaan
The invention pertains to a serine protease antigen which induces antibodies against a protein having at least 69% sequence identity with the Heamophilus parasuis protein according to SEQ ID No: 1, for use in a prophylactic method to protect a pig against an infection with Haemophilus parasuis by administering a vaccine to the pig, wherein the vaccine comprises the serine protease antigen. The invention also pertains to a vaccine, a method to manufacture such a vaccine and a method to protect a pig against H. parasuis.

7.WO/2021/099458A NOVEL VACCINE AGAINST HEAMOPHILUS PARASUIS
WO - 27.05.2021
Clasificación Internacional A61K 39/102 Nº de solicitud PCT/EP2020/082677 Solicitante INTERVET INTERNATIONAL B.V. Inventor/a JACOBS, Antonius, Arnoldus, Christiaan
The invention pertains to a protein having at least 69% sequence identity with the protein according to SEQ ID No: 1 or an immunogenic fragment of this protein, for use in a prophylactic method to protect a pig against an infection with Haemophilus parasuis serotype 4 and an infection with Haemophilus parasuis serotype 5, by administering a vaccine to the pig, the vaccine comprising the protein or the immunogenic fragment thereof as an antigen. The invention also pertains to a vaccine, a method to manufacture such a vaccine and a method to protect a pig against H. parasuis.

8.3823666IMPFSTOFFFORMULIERUNGEN MIT KONSERVIERUNGSSYSTEM
EP - 26.05.2021
Clasificación Internacional A61K 39/00 Nº de solicitud 19841047 Solicitante BIOLOGICAL E LTD Inventor/a SANGAREDDY VEERAPANDU
The present invention relates to vaccine formulations comprising preservative systems. More particularly, the present invention relates to preservative systems for vaccine formulations which is free of thiomersal, and comprising 2-phenoxyethanol and at least one other preservative selected from m-cresol, benzyl alcohol, phenol and benzoic acid.

9.20210154291IMMUNOSTIMULATORY COMPOSITIONS, PARTICLES, AND USES RELATED THERETO
US - 27.05.2021
Clasificación Internacional A61K 39/385 Nº de solicitud 17132320 Solicitante Emory University Inventor/a Periasamy Selvaraj
In some embodiments, described herein is a method of tumor treatment or tumor vaccination. The method generally comprises applying to a human being in need thereof a tumor therapeutic composition or tumor vaccine defined herein. The tumor therapeutic composition or tumor vaccine can be produced by protein transfer of glycosyl-phosphatidylinositol (GPI)-anchored immunostimulatory or costimulatory molecules

10.20210154281CELL-BASED CANCER VACCINES AND CANCER THERAPIES

US - 27.05.2021
Clasificación Internacional A61K 39/00 Nº de solicitud 17033050 Solicitante Massachusetts Institute of Technology Inventor/a Darrell Irvine
Described are cell-based cancer vaccines and anti-cancer immunotherapies. The vaccines include isolated tumor cells activated with one or more genotoxic drugs, and, optionally, treated with one or more MK2 inhibitors. The activated cells are highly immunogenic non-proliferative cells, and may be tested for immunogenicity ex vivo for priming T cells by co-incubating the isolated activated cells with dendritic cells and T cells. The vaccines are typically administered into patient's tumor to provide an intratumoral immune activation. Immune checkpoint inhibitor(s) (ICI) may be administered before, during, or after vaccine administration. ICI may be a component of the vaccine. The vaccines confer heightened cytotoxic immune response against the cancer cells, induce tumor regression, and enhance survival from cancer. The vaccines prevent tumor recurrence and induce a long-lasting anti-tumor immunological memory.

11.WO/2021/099572MEDICAL USES OF 4-1BBL ADJUVANTED RECOMBINANT MODIFIED VACCINIA VIRUS ANKARA (MVA)
WO - 27.05.2021
Clasificación Internacional A61K 39/00 Nº de solicitud PCT/EP2020/082888 Solicitante BAVARIAN NORDIC A/S Inventor/a HINTERBERGER, Maria
The invention relates to a recombinant Modified Vaccinia Virus Ankara (MVA) expressing a TAA and the costimulatory molecule 4-1BBL for use in (i) the prevention of recurrence of a solid tumor, wherein the recombinant MVA is intratumorally administered to the solid tumor, or (ii) the treatment, prevention and/or prevention of recurrence of a tumor, wherein the recombinant MVA is intratumorally administered to another solid tumor.

12.20210154296VACCINE OR IMMUNOTHERAPEUTIC AGENT COMPOSITION CONTAINING PHOTOTHERMALLY TREATED CELL LYSATES AS ACTIVE INGREDIENTS
US - 27.05.2021
Clasificación Internacional A61K 41/00 Nº de solicitud 16633168 Solicitante INJE UNIVERSITY INDUSTRY-ACADEMIC COOPERATION FOUNDATION Inventor/a Yeon Jeong KIM
Disclosed are a vaccine composition including photothermal (PT)-treated cell lysate as an active ingredient and an immunotherapeutic composition including PT-treated cell lysate as an active ingredient, wherein the PT-treated cells exposed to ex vivo PT treatment maximize the expression of HSPs which enhance immunogenicity, thereby generating cancer-specific immune responses in vivo.

13.WO/2021/099982DOSAGE AND ADMINISTRATION OF A BACTERIAL SACCHARIDE GLYCOCONJUGATE VACCINE
WO - 27.05.2021
Clasificación Internacional A61K 39/09 Nº de solicitud PCT/IB2020/060901 Solicitante GLAXOSMITHKLINE BIOLOGICALS SA Inventor/a ADAMO, Roberto
The present invention provides a glycoconjugate for administration to a subject in a method comprising the steps of: (i) administering a first dose of glycoconjugate; (ii) subsequently administering a second dose of glycoconjugate; wherein the amount of glycoconjugate in the first dose or first and second doses are atypically low, and also related aspects.

14.3082855SAMMENSÆTNING
DK - 25.05.2021
Clasificación Internacional A61K 39/08 Nº de solicitud 14828499 Solicitante University of Exeter Inventor/a TITBALL, Richard William

The invention provides a composition comprising a reduced toxicity NetB epitope polypeptide and areduced toxicity Clostridium perfringensalpha-toxinepitope polypeptide. The composition is useful as a vaccine providing complete protection against infection by C. perfringens.

15.20210154284NOVEL PEPTIDES AND COMBINATION OF PEPTIDES FOR USE IN IMMUNOTHERAPY AGAINST NHL AND OTHER CANCERS
US - 27.05.2021
Clasificación Internacional A61K 39/00 Nº de solicitud 17165457 Solicitante Immatics Biotechnologies GmbH Inventor/a Oliver SCHOOR
The present invention relates to peptides, proteins, nucleic acids and cells for use in immunotherapeutic methods. In particular, the present invention relates to the immunotherapy of cancer. The present invention furthermore relates to tumor-associated T-cell peptide epitopes, alone or in combination with other tumor-associated peptides that can for example serve as active pharmaceutical ingredients of vaccine compositions that stimulate anti-tumor immune responses, or to stimulate T cells ex vivo and transfer into patients. Peptides bound to molecules of the major histocompatibility complex (MHC), or peptides as such, can also be targets of antibodies, soluble T-cell receptors, and other binding molecules.

16.2021202909METHOD FOR THE PROPHYLAXIS OR TREATMENT OF CORONAVIRUS INFECTION USING AN IMMUNOMODULATOR AND VACCINE COMPOSITIONS COMPRISING THE SAME
AU - 27.05.2021
Clasificación Internacional Nº de solicitud 2021202909 Solicitante ADVAGENE BIOPHARMA CO., LTD. Inventor/a

17.20210153484Humanized Mouse Model
US - 27.05.2021
Clasificación Internacional A01K 67/027 Nº de solicitud 17045562 Solicitante The Wistar Institute Inventor/a Rajasekharan Somasundaram

The present invention relates to a humanized mouse, methods for generating a humanized mouse, and methods of using the humanized mouse for testing a vaccine, drug or treatment. Also provided are other uses for the humanized mouse.

18.WO/2021/099829MEDICINE VIAL SYSTEM
WO - 27.05.2021
Clasificación Internacional A61J 1/14 Nº de solicitud PCT/IB2020/000921 Solicitante DECOENE, Tine Inventor/a DECOENE, Tine
Working method and system to manage whether or not a needle can be pricked into a medicine vial, preferably a vaccine vial.

19.20210154277IMMUNOTHERAPEUTIC COMBINATION FOR TREATING CANCER
US - 27.05.2021
Clasificación Internacional A61K 39/00 Nº de solicitud 16762397 Solicitante Nektar Therapeutics Inventor/a Jonathan ZALEVSKY Provided herein are methods and compositions for treating a subject having cancer by administering to the subject a neoantigen-based vaccine composition and a long acting, IL-2RPβ-selective agonist composition comprised of compounds of Formula (I), and optionally, an anti-PD-1 antibody.

20.20210155714Hybridoma Cell Strain and Monoclonal Antibody Produced Therefrom Against Serine Protease of Trichinella Spiralis in Intestinal Stage and Application Thereof
US - 27.05.2021
Clasificación Internacional C07K 16/40 Nº de solicitud 17111608 Solicitante Jilin University Inventor/a Mingyuan LIU

A hybridoma cell stain and a monoclonal antibody secreted therefrom and application thereof belong to the technical field of prevention and treatment of *Trichinella spiralis* (*T. spiralis*). Aiming at the technical problem of how to specifically diagnose trichinellosis, the disclosure provides a hybridoma cell strain deposited under an accession number of CGMCC No. 18317. Tests show that the monoclonal antibody Ts-ZH68-2A4-Ab secreted by the hybridoma cell strain can compete with the positive serum of pigs infected with *T. spiralis* for binding to Ts-ZH68 antigen, and the recognition peptide is ^{222}GVDRSATCQGDSGGP^{236}. The monoclonal antibody of the disclosure and the Ts-ZH68 protein B cell epitope polypeptide recognized by the monoclonal antibody can be used to prepare a reagent or a vaccine for diagnosing or preventing infection of *T. spiralis*, laying the foundation for establishment of a serological diagnosis method of *T. spiralis.*

21.2589096The pinball herpes antibody system
GB - 26.05.2021
Clasificación Internacional A61K 39/00 Nº de solicitud 201916805 Solicitante RAYMOND JOEL RAIRIE Inventor/a RAYMOND JOEL RAIRIE
An intentional, artificial infection process that generates Herpes Simplex Virus 01 antibodies in a controlled, safe and regulated manner to prevent a human being from generating a viral infection and from getting the associated painful sores. The approach is designed to prevent herpes infection around the genitals, mouth, anus, hands, face and eyes. A doctor artificially infects a patient to allow it to work like a vaccine. The approach may also be applied to protect against neonatal herpes and Alzheimer's disease.

22.2589230Replication-defective recombinant H9N2 avian influenza virus expressing HA of H5 subtype
GB - 26.05.2021
Clasificación Internacional C12N 7/01 Nº de solicitud 202019165 Solicitante UNIV QINGDAO AGRICULTURAL Inventor/a JUNWEI LI
A method for preparing a replication-defective recombinant H9N2 avian influenza virus expressing HA of H5N1 subtype, comprising constructing a replication-defective recombinant avian influenza virus steadily expressing surface glycoprotein hemagglutinin (HA) of both H9N2 and H5N1 subtypes and subjecting to replication and packaging in a MDCK cell capable of steadily expressing neuraminidase (NA) of both H9N2 subtype to form a recombinant virus particle. The virus particle can be used to prepare an attenuated vaccine.

23.20210154289Live-Attenuated Yellow Fever Virus Strain Adapted to Grow on Vero Cells and Vaccine Composition Comprising the Same
US - 27.05.2021
Clasificación Internacional A61K 39/12 Nº de solicitud 17045322 Solicitante Sanofi Pasteur Inventor/a Manuel Vangelisti
The invention relates to a live-attenuated yellow fever virus strain adapted to grow on Vero cells from a parent yellow fever virus 17D substrain that is not adapted to grow on Vero cells, wherein said live-attenuated yellow fever virus strain is less neurovirulent than said parent yellow fever virus 17D substrain.

24.WO/2021/102363METHODS AND COMPOSITIONS FOR RECOMBINANT DENGUE VIRUSES FOR VACCINE AND DIAGNOSTIC DEVELOPMENT
WO - 27.05.2021
Clasificación Internacional C07K 14/005 Nº de solicitud PCT/US2020/061661 Solicitante THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL Inventor/a BARIC, Ralph
The present invention provides compositions and methods of use comprising a chimeric dengue virus E glycoprotein comprising a dengue virus E glycoprotein backbone, which comprises amino acid

substitutions that may introduce an epitope that is recognized by an antibody from a dengue virus serotype that is different from the dengue virus serotype of the dengue virus E glycoprotein backbone.

25.2021202950Development of dengue virus vaccine components
AU - 27.05.2021
Clasificación Internacional Nº de solicitud 2021202950 Solicitante The Government of the United States of America, as represented by the Secretary, Department of Health and Human Services Inventor/a

26.20210154279TARGET PEPTIDES FOR COLORECTAL CANCER THERAPY AND DIAGNOSTICS
US - 27.05.2021
Clasificación Internacional A61K 39/00 Nº de solicitud 16901277 Solicitante University of Virginia Patent Foundation Inventor/a Donald F. Hunt
A set of target peptides are presented by HLA A*0201, B*0301, B*0702 and B*2705 on the surface of disease cells. They are envisioned to, among other things, stimulate an immune response to the proliferative disease, e.g., colorectal cancer, to function as immunotherapeutics in adoptive T cell therapy or as a vaccine, facilitate antibody recognition of tumor boundaries in surgical pathology samples, act as biomarkers for early detection and/or diagnosis of the disease, and/or act as targets in the generation antibody-like molecules which recognize the target-peptide/MHC complex.

27.WO/2021/101813HYBRID VIRUS-LIKE PARTICLES AND USES THEREOF AS A THERAPEUTIC HEPATITIS B VACCINE
WO - 27.05.2021
Clasificación Internacional A61K 39/29 Nº de solicitud PCT/US2020/060542 Solicitante VLP BIOTECH, INC. Inventor/a MILICH, David R.
The present disclosure relates to hybrid hepadnavirus core antigens including one or more epitopes of a human hepatitis B vims (HBV) antigen. More specifically, the present disclosure relates to hybrid hepadnavirus core antigens in the form of fusion proteins containing a fragment of the PreSl region of the HBV surface antigen inserted in a woodchuck hepadnavirus core antigen. The present disclosure further relates to hybrid hepadnavirus core antigens in the form of fusions proteins containing a truncated HBV core antigen and woodchuck hepadnavirus core antigen. Also provided are nucleic acids encoding the hybrid core antigens, and the use of the hybrid core antigens and nucleic acids for treating HBV-infected individuals.

28.3824097HAUPTHISTOKOMPATIBILITÄTSKOMPLEX KLASSE II EXPRIMIERENDER KREBSZELLENIMPFSTOFF UND VERFAHREN ZU SEINER VERWENDUNG ZUR ERZEUGUNG INTEGRIERTER IMMUNANTWORTEN
EP - 26.05.2021
Clasificación Internacional C12Q 1/68 Nº de solicitud 19841026 Solicitante HEALTH RESEARCH INC Inventor/a ODUNSI KUNLE
Provided are modified cancer cells that are modified to co-express class II trans-activator (CIITA), and an immuno-stimulatory molecule. The immuno-stimulatory molecule is OX-40-ligand or 4-IBB-Ligand. Methods of making the cells are provided by introducing polynucleotides encoding the CIITA and the immune-stimulatory molecule into cancer cells. Methods of stimulating humoral and cell-mediated immune responses by administering the modified cancer cells, or polynucleotides encoding the CIITA and immune-stimulatory molecules are also provided. These approaches can be used to stimulate an immune response against any of a wide variety of cancer antigens.

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

Results Search in US Patent Collection db for: (ABST/vaccine AND ISD/20210522->20210601), 21 records.

	PAT. NO.	Title
1	11,021,534	Mycobacterial antigen composition
2	11,020,477	RNA vaccines
3	11,020,475	Cold-adapted live attenuated severe acute respiratory syndrome coronavirus and vaccine containing the same
4	11,020,474	Producing recombinant SARS-CoV-2 spike protein in a pre-fusion state
5	11,020,472	Multivalent recombinant SPV
6	11,020,464	Immunogenic composition targeting S100A9
7	11,020,434	Peptides and combination of peptides of non-canonical origin for use in immunotherapy against different types of cancers
8	11,020,433	Peptides and combination of peptides of non-canonical origin for use in immunotherapy against different types of cancers
9	11,020,432	Peptides and combination thereof for use in the immunotherapy against cancers
10	11,015,221	Markers of immune response
11	11,014,972	B*44 restricted peptides for use in immunotherapy against cancers and related methods
12	11,013,798	Orf virus-based platform for vaccine delivery
13	11,013,797	Porcine epidemic diarrhea preventative or therapeutic method, vaccine, and vaccine kit
14	11,013,795	Antigenically matched influenza vaccines
15	11,013,794	Method for preparing foot-and-mouth disease vaccines
16	11,013,792	Compositions and methods of enhancing immune responses to enteric pathogens
17	11,013,791	NYVAC-based plasmodium malaria vaccine
18	11,013,790	Vaccination with immuno-isolated cells producing an immunomodulator
19	11,013,769	Peptides and combination of peptides of non-canonical origin for use in immunotherapy against different types of cancers
20	11,013,768	Peptides and combination of peptides of non-canonical origin for use in immunotherapy against different types of cancers
21	11,013,766	Peptides and combination of peptides of non-canonical origin for use in immunotherapy against different types of cancers

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