

COVID-19 Bulletin

An RSB communication on the
bioscience behind the outbreak and
response

1 December 2021

Dear Sir or Madam,

This twentieth edition of the RSB COVID-19 bulletin highlights a selection of the bioscience research and news of the last two months. It cannot be comprehensive and gives just a glimpse of the huge worldwide effort to understand SARS-CoV-2 and its effects.

This will be the final edition of the RSB COVID-19 bulletin for 2021. We will review the frequency of this bulletin in 2022. A huge thank you to all of our subscribers for your readership, support and contributions.

We can all contribute to the ongoing response to COVID-19 by engaging with sound science, countering misinformation and increasing awareness. We hope this 20-edition bulletin series has been and remains helpful in this.

Previous editions of this bulletin can all be freely accessed through our [Policy Resource Library](#). You can continue to receive COVID-19 related news, alongside other science policy headlines, by subscribing to our weekly science policy newsletter. To subscribe to RSB newsletters, simply sign in (or register for free if you don't have an account) to [mySociety](#) and select 'My Subscriptions' under 'Me and the RSB', then scroll through the options and select your preferred newsletter(s).

For further information and to get in touch, contact our policy team via: policy@rsb.org.uk.

This bulletin is divided into six main sections:

- 1. RSB news:** including key current updates from the RSB.
- 2. Research updates and expert opinion:** relevant national and international research news and outputs under topic headings.
- 3. How else can the bioscience community help?** Examples, resource and expertise calls.
- 4. Positive community news:** community impact aiding the pandemic response.
- 5. Other regularly updated information sources:** useful online information hubs.
- 6. Spotlight on personal and community wellbeing:** articles on mental health and wellbeing.

This newsletter provides links to published news articles from a range of sources. Views or opinions presented are those of the original author(s) and do not necessarily represent the views of the Royal Society of Biology.

RSB news

Training

The RSB offers training courses both online and in-person (via video conferencing). Training courses can also be delivered in-house to staff or students (via video conferencing). If you are interested in up-skilling then please contact us at training@rsb.org.uk. Visit our [online training platform myLearning](#) or send a request to sign-up to our [Training Newsletter](#) for regular updates.

For more current news, commentary and updates, visit the [RSB on Twitter](#), [LinkedIn](#), [The Biologist](#), and read our latest edition of the weekly [Science Policy Newsletter](#).

Research updates and expert opinion

SARS-CoV-2 is a virus in the zoonotic coronavirus family. This novel virus, discovered in 2019, was previously unidentified in humans and causes the disease COVID-19, which has since been characterized as a pandemic.

SARS-CoV-2 virus characteristics

Heavily mutated Omicron variant puts scientists on alert

Nature News describes how researchers are racing to determine whether a fast-spreading coronavirus variant poses a threat to COVID vaccines' effectiveness.

'Patience is crucial': Why we won't know for weeks how dangerous Omicron is

Science Magazine explains how lab tests and patterns of spread will show whether the new SARS-CoV-2 variant's many mutations are a serious threat.

Tracking SARS-CoV-2 variants

WHO webpage describing the characterisation of specific Variants of Interest (VOIs) and Variants of Concern (VOCs), in order to prioritise global monitoring and research, and ultimately to inform the ongoing response to the COVID-19 pandemic.

COVID Variant Mu Made a Splash, Disappeared Without a Peep

WebMD reports on how, amid the Delta variant summer surge in COVID-19 cases, hospitalizations, and deaths, some experts warned that the next potential threat was starting to emerge: the Mu variant of the coronavirus; but then an interesting thing happened - the prevalence of Mu in circulation in the U.S. dropped off quickly over a matter of weeks.

COVID-19 pathophysiology

How do people resist COVID infections? Hospital workers offer a hint

Nature News describes how immune cells might 'abort' SARS-CoV-2 infection, forestalling a positive PCR or antibody test.

Epidemiology and public health response

PM opening statement at COVID-19 press conference: 27 November 2021

Prime Minister Boris Johnson held a COVID-19 press conference where new measures in response to the Omicron variant were announced. These include face coverings in shops, in

communal areas in most education settings, and on public transport; PCR tests on or before day 2 for all international arrivals; and self-isolation for contacts of suspected Omicron cases, including for those who are fully-vaccinated.

G7 health ministers praise South Africa for alerts on Omicron

Reuters reports on how G7 health ministers praised South Africa on Monday 29th of November for the work it has done in detecting the new Omicron variant and alerting others, and said they would work together to monitor the strain.

Opinion: Scientists sharing Omicron data were heroic. Let's ensure they don't regret it

Jeffrey Barrett, who leads the COVID-19 genomics initiative at the Wellcome Sanger Institute, discusses how teams in Africa who detected the new Covid genome moved quickly, advising that their actions should not result in economic loss.

Trust deficit stalls vaccinations in Eastern Europe, driving new COVID surge

Politico reports on how vaccine hesitancy has proved difficult to dislodge amid deep mistrust and political uncertainty.

Navigating from SARS-CoV-2 elimination to endemicity in Australia, Hong Kong, New Zealand, and Singapore

In this article, published in The Lancet, the authors discuss the elimination strategies utilised by the countries in question, and how some are moving to an endemicity model instead, with recommendations for the future.

Weather played a limited role in early spread of Covid-19, research finds

Experts analysed Covid transmission in 409 cities and found little evidence that weather affected the virus' spread during the first wave

Testing and ongoing surveillance

People in England and Scotland urged to take more lateral flow tests

The Guardian reports on UK government guidance which has been updated to cover socialising indoors, as Scotland's first minister urges people to make 'extra effort'.

Prophylaxis and treatment

All adults to be offered COVID-19 boosters by end of January

Government press release describing how almost 7 million extra over 40s are now eligible for booster programme in England as gap between doses is halved.

Bias in medical devices may have led to avoidable UK Covid deaths, says Javid

The Guardian reports on an announcement by the health secretary of a review to examine why people of colour and women have worse health outcomes.

COVID antiviral pills: what scientists still want to know

Nature News explainer on how drugs such as molnupiravir and Paxlovid could change the course of the pandemic if clinical trial results hold up in the real world.

African scientists race to test COVID drugs - but face major hurdles

Nature News feature reporting on how, in a bid to stave off looming disaster, scientists are trying to repurpose drugs used for malaria and other diseases, but infrastructure and recruitment challenges stymie progress.

Gavi and Switzerland collaborate to prioritise supply to COVAX

Gavi declares Switzerland has become first country to respond to call to trade places with COVAX in manufacturers' supply queues.

How protein-based COVID vaccines could change the pandemic

Nature news reports on how 'jabs' from Novavax and other biotech firms are coming, and scientists say they have a lot to offer.

COVID vaccine makers brace for a variant worse than Delta

Nature News reports on how companies are updating vaccines and testing them on people to prepare for whatever comes next in the pandemic.

Vaccine effectiveness against COVID-19 - What can the COVID-19 Infection Survey tell us?

National Statistical describes how, as well as providing estimates on infection levels and antibodies, the Coronavirus (COVID-19) Infection Survey (CIS) collects information from participants on their vaccination status, providing some insight into vaccine effectiveness on variants, including Delta.

COVID vaccines cut the risk of transmitting Delta — but not for long

Nature News covers how people who receive two COVID-19 jabs and later contract the Delta variant are less likely to infect their close contacts than are unvaccinated people with Delta.

How else can the bioscience community help?

COVID-19 resources from the community

An RSB webpage with links to COVID-19 initiatives and resources available from other bioscience organisations and the wider community. If you would like to suggest additional content please **send us an email**.

GOV.UK: Coronavirus (COVID-19)

Government advice page linking to guidance on recommended precautions, vaccinations, testing, statistics and other forms of support.

Covid: How do I get a lateral flow or PCR test?

BBC reports on how people in England are being advised to test for Covid before going to crowded places. The government also advises that people test before spending time with those at greater risk from coronavirus.

Download the NHS COVID-19 app

The NHS provides an official COVID-19 contact tracing app for England and Wales enabling the fastest tracing alerts of contact risk.

What lessons can we learn from the pandemic and how do we build back better?

LSHTM asked some of their academics what lessons the world has learnt from the COVID-19 pandemic and how we can take these forward.

Contact RSB to discuss bioscience community issues or actions via policy@rsb.org.uk

Positive community news

New website for Covid-19 vaccine research launched

The British Society for Immunology has launched a brand new website to provide the latest information, news and resources on work being done by UK research teams to improve our understanding of vaccines for COVID-19.

The **UK Covid Vaccine Research Hub** aims to champion and celebrate the immense contribution of UK researchers to the development and understanding of the new vaccines, while giving people access to the latest evidence-based insights and expertise.

Funded by UK Research and Innovation's National Core Studies Programme, the site hosts a directory of research publications, information about major UK research initiatives and trials currently under way, news on the latest research as it appears, engaging and accessible resources for the public, briefings and reports for policy makers, and a range of information for researchers, including details of upcoming grants and awards.

Dr Doug Brown, Chief Executive of the British Society for Immunology, said:

"Since the pandemic began, there has been an unprecedented spotlight on scientific research, and on vaccines in particular. Never has there been more appetite for information and knowledge about how vaccines work, how they are developed and tested, and about the risks and benefits for individuals.

This exciting new initiative, the UK Covid Vaccine Research Hub, aims to help meet this demand while promoting awareness and support for the work being undertaken by UK research teams, whose explorations are vital to global efforts to bring us out of the pandemic."

New advanced analytics research to deliver next level of insights into COVID-19

HDRUK announces nine new studies awarded a total of £2m to use large-scale linked data to address priority research questions that will improve understanding of the pandemic and inform the continued policy response.

Opinion: Serendipity and foresight prepared the world to fight the coronavirus

The Washington Post describes how vaccine scientist Barney Graham laid the groundwork for the world to battle this pandemic, and the scientists he mentored will equip us for the next one.

Other regularly updated information sources

Additional COVID-19 resources

An RSB webpage collating other externally updated resources on COVID-19. If you would like to suggest additional content please **send us an email**.

[WHO] Coronavirus disease (COVID-19) Situation Dashboard

WHO COVID-19 situation dashboard.

Coronavirus COVID-19 Global Cases by Johns Hopkins CSSE

COVID-19 case dashboard.

Global.health open repository and visualisation platform

An international database tracking anonymised information about individual COVID-19 cases.

Spotlight on personal and community wellbeing

Sleeplessness and anxiety: PhD supervisors on toll of COVID pandemic

Nature News reports on a survey of 3,500 supervisors which lifts the lid on the demands of overseeing junior researchers — and the impacts of the pandemic.

Top tips for factoring COVID-19 into grant applications

COVID-19 has widened existing cracks in our research funding system. The Academy of Medical Sciences is working to account for this in their grants - read on for their advice for both applicants and funders.



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