

## COVID-19 Bulletin

An RSB communication on the  
bioscience behind the outbreak and  
response

26 October 2020

Dear Sir or Madam,

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

**We can all contribute to the response to COVID-19 by engaging with sound science, countering misinformation and increasing awareness. We hope this bulletin is helpful in this.**

Views or opinions presented are those of the original author(s) and do not necessarily represent the views of the Royal Society of Biology; medical and government advice should be consulted regarding personal wellbeing decisions.

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

To read previous editions and directly sign-up to future editions of this bulletin, please [visit this page](#).

### **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 during self-isolation and social distancing.

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**

### **Main RSB webpage on COVID-19**

The RSB is working to adapt and ensure our services are delivered to the greatest extent possible whilst also taking into account Public Health England and Government advice during the

pandemic. We regularly update this webpage with relevant information about our activities, initiatives and community support.

### **The Biologist**

Our latest **COVID Q&A** explores the ongoing debate over whether COVID-19 is being transmitted through airborne aerosols. Air quality expert Professor Lidia Morawska says **a lack of research and age-old medical dogmas** have caused deadly delays in accepting this mode of transmission is possible.

### **Education during COVID-19**

Our education policy team is working with government, awarding bodies and policy partners to provide advice and support to teachers, parents and students. These pages will be updated regularly over the coming weeks.

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**

#### **Virus that causes Covid-19 can survive up to 28 days on surfaces, scientists find**

The Guardian reports Australian scientists have found that the virus that causes COVID-19 can survive for up to 28 days on surfaces such as the glass on mobile phones, stainless steel, vinyl and paper banknotes.

#### **Why COVID outbreaks look set to worsen this winter**

This Nature News article reports on how it's too soon to say whether COVID is seasonal like the flu - but where clusters aren't under control, infections will continue to swell.

### **COVID-19 pathophysiology**

#### **Long COVID: let patients help define long-lasting COVID symptoms**

The terminology for long-lasting COVID symptoms - and the definition of recovery - must incorporate patients' perspectives describes this Nature editorial.

#### **Young adults face higher risk of severe disease from infections than school-age children**

This LSHTM news article describes new research suggesting children aged 5-14 years are most resilient to infectious diseases, and immune aging may start in young adults, with implications for drug and vaccine design.

#### **SARS-CoV-2 during pregnancy was not associated with complications in neonates**

Nordic Life Science News reports on how, in a new study published in JAMA, researchers at Karolinska Institutet and Karolinska University Hospital have examined the association between a positive SARS-CoV-2 test during pregnancy and complications in mothers and their newborn babies.

## **COVID-19 again? Reinfection cases raise concerns over immunity**

This article from Reuters discusses the ramifications and knowledge gaps uncovered by the small number of documented reinfections globally.

## **Epidemiology and public health response**

### **Face masks: what the data say**

Nature News Feature reports on how the science supports that face coverings are saving lives during the coronavirus pandemic, and yet the debate trundles on.

### **Covid-19: The global crisis - in data**

The Financial Times Visual and Data Journalism team have charted and mapped the paradoxes of a pandemic that has claimed a million lives.

### **Magnitude, demographics and dynamics of the effect of the first wave of the COVID-19 pandemic on all-cause mortality in 21 industrialized countries**

The authors of this study in Nature Medicine applied Bayesian models to vital statistics data to estimate the all-cause mortality effect of the pandemic for 21 industrialized countries. The results reflect differences in how well countries have managed the pandemic and the resilience and preparedness of the health and social care systems.

### **Lessons learnt from easing COVID-19 restrictions: an analysis of countries and regions in Asia Pacific and Europe**

To facilitate cross-country learning, this Health Policy paper in The Lancet uses an adapted framework to examine the approaches taken by nine high-income countries and regions that have started to ease COVID-19 restrictions.

### **Black and Hispanic people in US face increased risk of testing positive for coronavirus**

This LSHTM News article describes how the largest study on COVID-19 related racial and ethnic disparities could help strengthen response strategies.

### **An analysis and opinion piece in The Telegraph 'All the costs, few of the benefits: Why Britain's response is faltering as the second wave rolls in'**

Paul Nuki, Global Health Security Editor for The Telegraph writes in an analysis and opinion piece that England itself - home to roughly 85 per cent of the UK's population of 66 million - appears to be fracturing in the face of a second wave.

### **LSHTM to evaluate public attitudes towards new COVID-19 contact-tracing app**

The London School of Hygiene & Tropical Medicine's (LSHTM) Policy Innovation and Evaluation Research Unit is to lead a new study to understand public attitudes towards the new COVID-19 contact-tracing app and use of the technology.

### **Living with the COVID-19 pandemic: act now with the tools we have**

A comment piece in *The Lancet*.

### **Scientific consensus on the COVID-19 pandemic: we need to act now**

A comment piece in *The Lancet*.

### **First genetic evidence of in-flight COVID-19 transmission**

LSHTM News reports that analysis of a long-haul flight from Boston to Hong Kong in March 2020 has provided the first genetic evidence of in-flight transmission of the SARS-CoV-2 virus.

## "It's Up To Us"

Quarantine before family gatherings, take sore throats seriously and don't overestimate the immediate effect of a vaccine: Virologist Christian Drosten's advice for the corona winter through an interview with Zeit Online. Christian is leading Germany's response to the COVID-19 pandemic.

## Testing and ongoing surveillance

### 500 test sites now open as new lab partnerships boost capacity

The government has announced new partnership agreements with four London university labs to increase testing capacity by tens of thousands over the winter.

### Brazil city 'might have reached herd immunity'

SciDev.Net covers a study, led by a team at the University of São Paulo, investigating herd immunity and its implications in Manaus, the capital of Amazonas state.

## Prophylaxis and treatment

### Coronavirus vaccine: what we know so far - a comprehensive guide by academic experts

Writing for The Conversation, Rob Reddick, Commissioning Editor, summarises the opinions of authors from across The Conversation, drawing upon their expertise, to explain how a COVID-19 vaccine will work, the progress a leading vaccine is making, and the challenges that may occur with manufacturing and distribution.

### Dozens to be deliberately infected with coronavirus in UK 'human challenge' trials

Nature News reports on how proponents of the trials say they can be run safely and help to identify effective vaccines, but others have questioned their value.

### COVID-19 vaccines: time to talk about the uncertainties

Nature World View article discussing how to plan now for decisions on which vaccines should go to whom, when and how often.

### Plan now to speed vaccine supply for future pandemics

Slow-lane logistics shouldn't stymie fast-track science, says head of UK government's Vaccine Taskforce in Nature World View.

### What China's speedy COVID vaccine deployment means for the pandemic

China has promised vaccines to many countries, but whether it can meet its commitments is unclear, reports Nature News.

### Latin America's embrace of an unproven COVID treatment is hindering drug trials

Nature News reports on how unchecked ivermectin use in the region is making it difficult to test the anti-parasite drug's effectiveness against the coronavirus.

### Remdesivir has 'little or no effect' on survival rates of Covid patients, WHO study finds

The Telegraph reports results from randomised trials at hospitals around the world were 'unpromising'.

### 3 Covid-19 Trials Have Been Paused for Safety. That's a Good Thing.

This New York Times article explains how experts have been comforted that companies are following safety precautions. They pointed out that pauses in vaccine trials are common, but pauses in treatment trials like Eli Lilly's are rare.

## How anti-ageing drugs could boost COVID vaccines in older people

COVID-19 poses the greatest threat to older people, but vaccines often don't work well in this group. Scientists hope drugs that rejuvenate the immune system will help, describes this Nature News Feature.

## The Surgisphere Scandal: What Went Wrong?

The high-profile retractions of two COVID-19 studies stunned the scientific community earlier this year and prompted calls for reviews of how science is conducted, published, and acted upon. The warning signs had been there all along asserts this article in The Scientist.

## 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. This page is being updated regularly and if you would like to suggest additional content please [send us an email](#).

### Download the NHS COVID-19 app

The NHS COVID-19 app aims to help control coronavirus (COVID-19) transmission. People across England and Wales are being asked to download the NHS COVID-19 app to help control the spread of coronavirus and protect themselves and their loved ones as case numbers rise.

### Volunteer for study on the use of medical detection dogs as a solution to the urgent need for improved diagnostics for COVID-19

Volunteers are needed for a study where dogs are being trained to sniff out COVID-19 as part of a project led by the ARCTEC team at the London School of Hygiene & Tropical Medicine (LSHTM) with partners Medical Detection Dogs and Durham University.

### Pre call: Researching long-term COVID-19 effects in non-hospitalised individuals

NIHR and UKRI will be advertising a joint research call in early November, for projects starting in the New Year. The primary aim will be to fund ambitious and comprehensive research into the longer term, physical and mental effects, of COVID-19 in non-hospitalised individuals.

**Opens: 12 November 2020**

**Closes: 9 December 2020**

### UKRI open call for research and innovation ideas to address Covid-19

Proposals are invited for short-term projects addressing and mitigating the health, social, economic, cultural and environmental impacts of the COVID-19 outbreak. For this next phase of the call, UKRI will focus on areas that fill gaps in the Covid-19 research and innovation landscape. UKRI have developed a priority list of areas which they are particularly interested in seeing addressed. These will be updated periodically. It's important that applicants also check what projects are already in progress. On Friday 31 July the application process changed. Application to the research councils is via the Joint Electronic Submission (Je-S) system.

**Closes: 31 December 2020**

### COVID Misinformation Is Killing People

'This "infodemic" has to stop' this opinion piece in Scientific American outlines some key recommendations for the science community, public health professionals, members of the public, and industry on what they can do to effectively blunt the effect of misinformation surrounding the COVID-19 response.

## **Invitation from the Valuing Nature Network to participate in a study on the impacts of COVID-19 on human wellbeing and interactions with coastal nature**

If you live in or near coastal areas Valuing Nature Network invites you to participate in a research study exploring the impacts of COVID-19 on people's wellbeing and interactions with coastal nature, by completing an anonymous survey and forwarding it to others living in or near coastal areas.

Contact RSB to discuss bioscience community issues or actions via [policy@rsb.org.uk](mailto:policy@rsb.org.uk)

## **Positive community news**

### **New research to tackle Covid's impact on mental health receives £2 million boost**

UK Research and Innovation has announced six new projects worth a total of £2 million will give a much-needed boost in support for research investigating the impact of the COVID-19 pandemic on mental health.

### **Queen's Birthday Honours 2020**

MRC writes congratulations to Dr Jonathan Pearce, whose achievements were recognised in the Queen's Birthday Honours 2020, for services to Covid-19 Research.

### **LSHTM, ONS and PHE to jointly lead new study of COVID-19 infections in schools**

The London School of Hygiene & Tropical Medicine LSHTM, Office for National Statistics (ONS) and Public Health England (PHE) are to jointly lead a study to better understand the spread of the coronavirus (COVID-19) in schools in England.

## **Other regularly updated information sources**

### **Additional COVID-19 resources**

An RSB webpage collating other regularly updated resources on COVID-19. This page has recently undergone a revamp for easier navigation of the wide range of resources posted.

### **[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.

## **Spotlight on personal and community wellbeing**

### **Understanding the impact of the pandemic on people with mental ill health**

Back in June, MRC Executive Chair, Professor Fiona Watt, outlined how researchers were tackling the far-reaching effects of the Covid-19 pandemic on our mental health in a blog for MRC. Here, Gordon Johnston, a peer researcher with lived experience of mental ill health, and a co-applicant on the University of York's Optimising Wellbeing during Self-isolation (OWLS) project - a project recently funded by the National Institute for Health Research (NIHR) and UK Research and Innovation (UKRI) - describes its background, his involvement, and how it can help us understand the impact of Covid-19 on mental ill health.

## Resilient science: Adapting to the new normal

Research has continued at the Research Complex at Harwell (RCaH) in recent months, adapting to the challenges presented by the coronavirus pandemic. As Director of this unique UKRI cross-disciplinary facility, Professor David Payne discusses the importance of resilient science for the research community this week in Research Professional News and in an opinion-based excerpt in this MRC blog.

## Don't let COVID stop your fieldwork: three tips for successful collaborations

In this Nature Career Column piece two researchers write on how they were struck by the kindness of co-workers when coronavirus lockdowns began.

## Cruise begins with COVID restrictions

Dr Kristin Burmeister is an oceanographer on the scientific cruise DY120, headed for the North Atlantic to undertake crucial data monitoring and retrieval work, but this cruise on board the RRS Discovery is very different to every other that has gone before, because of COVID-19. DY120 is only the second scientific cruise to leave the UK since lockdown in March and only half the original science team have been allowed on board. In the first of a series of blogs for the Scottish Association for Marine Science, recording this unique experience, Dr Burmeister shares her experience of joining the ship.

## Nature World View 'Tired of science being ignored? Get political'

This opinion article discusses how the idea that competent researchers are apolitical is false, and it costs lives.



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