7

#### **MIT Technology Review**



### MIT Technology Review



**Biotechnology** Jul 07

# A group of 239 scientists says there's growing evidence covid-19 is airborne



The news: A group of 239 scientists from 32 countries have written an <u>open letter</u> to the World Health Organization arguing that covid-19 can be transmitted through the air. You might think we know that already, but most current guidance is based on the idea that covid-19 is transmitted via *droplets* expelled from an infected person's nose or mouth. The thought is that these larger respiratory droplets quickly fall to the floor. That's the position the WHO has taken from early on in the pandemic, and that's why we have been keeping at a distance from one other. However, the signatories of the open letter say the organization is underestimating the role of airborne transmission, where much smaller droplets (called aerosols) stay suspended in the air. These aerosols can travel farther than droplets and linger in an area even when an infected person has left.

**What's the evidence?** The letter says multiple studies "have demonstrated beyond any reasonable doubt that viruses are released during exhalation, talking, and coughing in

microdroplets small enough to remain aloft in air." It says these microdroplets "pose a risk of exposure at distances beyond 1 to 2 m from an infected individual." An early laboratory https://www.technologyreview.com/2020/07/07/1004841/a-group-of-239-scientists-say-theres-growing-evidence-covid-19-is-airborne/

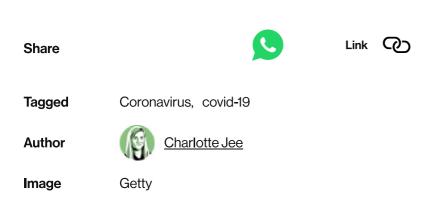


#### MIT Technology Review



aerosols collected at two hospitals in Wuhan, China, according to a study published in <u>Nature</u> in April. And superspreading events add to the weight of evidence: for example, after <u>a choir practice in the US</u> nearly 50 people were infected even though they kept a safe distance apart.

The implications: If airborne transmission is a route for the spread of the virus, it could lead to changes in the current advice. It would suggest that social distancing may be insufficient, especially indoors. This may place yet more importance on mask-wearing around people who are not part of your household if you meet them indoors, even if you are distancing, and increasing ventilation in enclosed areas. It could make air-filtering systems more important to try to cut down on the recirculation of air. And it might mean health-care workers caring for coronavirus patients need the highest grade of mask—N95—to filter out the smallest droplets.



Humans and technology July 13

# Activating the opportunity marketplace

Watch Deloitte's EmTech Next 2020 panel session and learn about Opportunity Marketplaces—a new framework to reimagine the future of work and tap into new worker potential.





**Astronomy** Jul 13

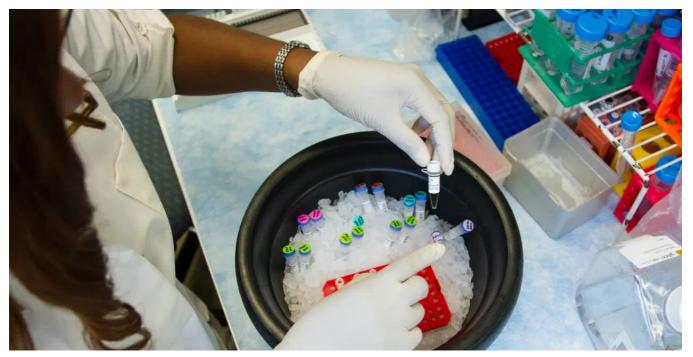
# Astronomers found a giant intergalactic "wall" of galaxies hiding in plain sight

Astronomers have found one of the largest structures in the known universe—an intergalactic "wall" of galaxies that's at least 1.4 million light-years long. And given how close it is to us, it's remarkable that we haven't seen it before now. What happened: An international team of scientists reported the discovery of the South Pole Wall...

**Expand** 

**Biotechnology** Jul 13

# Immunity to covid-19 could disappear in months, a new study suggests





#### MIT Technology Review



who have caught the disease and recovered. The study: Researchers at King's College London repeatedly tested 96 patients and health-care workers at Guy's and St Thomas' NHS Foundation Trust for antibodies between March and June. All the participants were...

**Expand** 

Tech policy 2 months

# A flood of coronavirus apps are tracking us. Now it's time to keep track of them.

There's a deluge of apps that detect your covid-19 exposure, often with little transparency. Our Covid Tracing Tracker project will document them.



MS TECH | GETTY

Artificial intelligence Jul 10

# A new way to train AI systems could keep them safer from hackers

The context: One of the greatest unsolved flaws of deep learning is its vulnerability to so-called adversarial attacks. When added to the input of an Al system, these perturbations, seemingly random



#### **MIT Technology Review**



**Expand** 

Coronavirus July 11

# If the coronavirus is really airborne, we might be fighting it the wrong way

Airborne transmission would mean there are certain solutions we really need to focus on.



**SPONSORED** 

# Smarter devices, better patient care

New medical technology draws on artificial intelligence to combat chronic conditions and radically improve people's health.

#### Medtronic

In association with Medtronic

## 7

#### **MIT Technology Review**



# How carbon-sucking machines could cut aviation emissions

Carbon Engineering and Aerion have teamed up to test whether synthetic fuels derived from captured CO2 can enable carbon-neutral flights.

Space Jul 08

## Will astronauts ever visit gas giants like Jupiter?

Trying to get an up close and personal look at the solar system's gas giants is a tricky and dangerous journey.



## Are we making spacecraft too autonomous?



#### **Podcast**

# Deep Tech episode 8

To beat a pandemic, try prepping for a tsunami.

Go deeper on our best stories and ideas with this subscriber-only podcast (free for a limited time).

**Listen now** 

7

## MIT Technology Review

