



A medical worker stands on the balcony of a hotel in Wuhan, China, housing members of the World Health Organization team tasked with investigating the origins of COVID-19 on February 6, 2021.

PHOTOGRAPH BY ALY SONG, REUTERS

SCIENCE CORONAVIRUS COVERAGE

Here's what the WHO report found on the origins of COVID-19

The long-awaited report answers some questions. But experts warn that discovering the virus' true origins will take more digging.

BY JILLIAN KRAMER



PUBLISHED MARCH 30, 2021 • 5 MIN READ

A World Health Organization report released

<https://www.nationalgeographic.com/science/article/heres-what-the-who-report-found-on-the-origins-of-covid-19>

World Health Organization Report Released

today says that SARS-CoV-2, the virus that causes COVID-19, most likely leapt from animals to humans through an emissary animal.

The dispatch marks the culmination of a month-long mission by a team of Chinese and international experts to uncover COVID-19's true origins. According to the report, it's probable the virus originated in a bat or pangolin before making the leap to people. The report also says that it's "extremely unlikely" the highly transmissible virus escaped from a laboratory in China.

"All hypotheses remain on the table," Tedros Adhanom Ghebreyesus, the WHO's director general, said in a statement released today, indicating the organization's research is ongoing.

While the 120-page report resolves some queries, it leaves others unanswered, including the geographic origin of the virus and exactly how it infected the first human. The methods used to gather physical evidence, as well as the way the report was written and compiled, have also raised alarm bells, causing some experts to question its credibility and to urge for more transparency in future studies.

"This report is a very important beginning, but

it is not the end,” Ghebreyesus said, adding that until the source of the virus is found, “we must continue to follow the science and leave no stone unturned as we do.”

Path to infection

Most scientists are not surprised by the report’s conclusion that SARS-CoV-2 most likely jumped from an infected bat or pangolin to another animal and then to a human.

“This is what many of us thought all along,” says Ian Lipkin, director of the Center for Infection and Immunity at Columbia University’s Mailman School of Public Health. But Lipkin adds that it’s “still speculative, because they haven’t identified an intermediary animal.” The report authors suggest examining supply chains from both livestock and wildlife farms to public markets to try and find out exactly which animals were involved.

ADVERTISEMENT

If an intermediate host is part of the virus’ transmission chain, then it will be important to identify it so that mitigation measures can be put in place to prevent future outbreaks, says

Theodora Hatziioannou, an associate professor of virology at Rockefeller University in New York City.

The report outlines another likely transmission scenario: that the virus leapt directly from a bat to a human. Robert Garry, a virologist at Tulane University School of Medicine who has studied the virus's origin based on its genome, says such an event "is not too big a stretch."

However, the report questions whether the Huanan market was the location where the first animal-to-human transmission occurred, as some believed. The earliest reported case of COVID-19 did not have any link to the market. That suggests no firm conclusion can be drawn yet about the role of the Huanan market in the origin of the outbreak, or how the infection might have been introduced there, according to the report.

The hypothesis that frozen foods packaged and sold in markets might have played a role in SARS-CoV-2 transmission was also addressed. The report authors determined this so-called cold-chain route was possible and called for further case-control studies of outbreaks involving frozen products. They also recommended examining cold-chain products sold in the Huanan market from December 2019—if any are still available.

The report concludes that it was “extremely unlikely” the virus leaked from a Wuhan laboratory, a hypothesis propagated by former president Donald Trump but not often entertained by scientists. Robert Redfield, the former director of the Centers for Disease Control and Prevention, continued to spread the idea as recently as last week during a CNN interview.

“There is no record of viruses closely related to SARS-CoV-2 in any laboratory” before the first cases of COVID-19 were recorded in December 2019, the WHO report says, with the authors adding that the risk of accidentally introducing the novel coronavirus in a laboratory setting by infecting a human “is extremely low.” The report does not call for additional research into the possibility of a leak from one of Wuhan’s laboratories.

ADVERTISEMENT

“The preliminary conclusions are not outrageous, and they make perfect sense,” Hatziioannou says. “I know a lot of people would like to think it escaped from the lab, but I find conspiracy theories like that extremely hard to believe.”

Setbacks and scrutiny

However, the report is already facing scrutiny. Although it's a joint effort between Chinese and WHO officials, investigators representing the WHO were denied permission to visit the Wuhan market and collect other data in the initial phases of the research, leading some pundits to say that the WHO was ceding responsibility to China, its second biggest funder behind the United States.

China also held back information about the initial outbreak in Wuhan, which delayed the WHO's investigation.

Today, a joint statement issued by the governments of 14 countries, including the U.S., raised concerns about the transparency of future research into the origins of the novel virus.

“It is critical for independent experts to have full access to all pertinent human, animal, and environmental data, research, and personnel involved in the early stages of the outbreak relevant to determining how this pandemic emerge,” the statement reads.

Despite the study's setbacks, Tulane University's Garry believes the WHO report is credible. “It's a very detailed report—it's not the type of data you can make up,” he says.

Lipkin agrees: “It’s thorough, it’s exhaustive, it’s well written,” he says. “It’s what we predicted. That’s not to say that it wasn’t important to do this, but there’s nothing here to say, Ah-ha, I never thought this would be the case.” 📄



SHARE



TWEET



EMAIL

READ THIS NEXT



PHOTOGRAPHY PROOF

Look Inside the Abandoned Stadiums of Past...

As we gear up for the 2018 Winter Olympics in Pyeongchang, let's take a

look at what's left behind when the sporting events come to an end.



HISTORY & CULTURE

Haitians reflect on the past while confronting the future



SCIENCE

Chunk of an ancient supercontinent discovered under New Zealand



TRAVEL BOOK CLUB

These mystery stories solve crimes and spark travel

ADVERTISEMENT

GO FURTHER

ANIMALS

ANIMALS

Wild cockatoos learn to open bins by copying others—first evidence of social learning

ANIMALS

Extreme heat triggers mass die-offs and stress for wildlife in the West

ENVIRONMENT

ENVIRONMENT

Wildfire smoke blowing across the U.S. is more toxic than we thought

ENVIRONMENT PERPETUAL PLANET

Can a new way to measure tropical rainforest vulnerability help save them?

HISTORY & CULTURE

HISTORY & CULTURE

The bombing of Hamburg foreshadowed the horrors of Hiroshima

HISTORY & CULTURE

Haitians reflect on the past while confronting the future

SCIENCE

SCIENCE CORONAVIRUS COVERAGE

Scientists urge local mask mandates as Delta sweeps the U.S.

SCIENCE CORONAVIRUS COVERAGE

Vaccines are highly unlikely to cause side effects long after getting the shot

TRAVEL

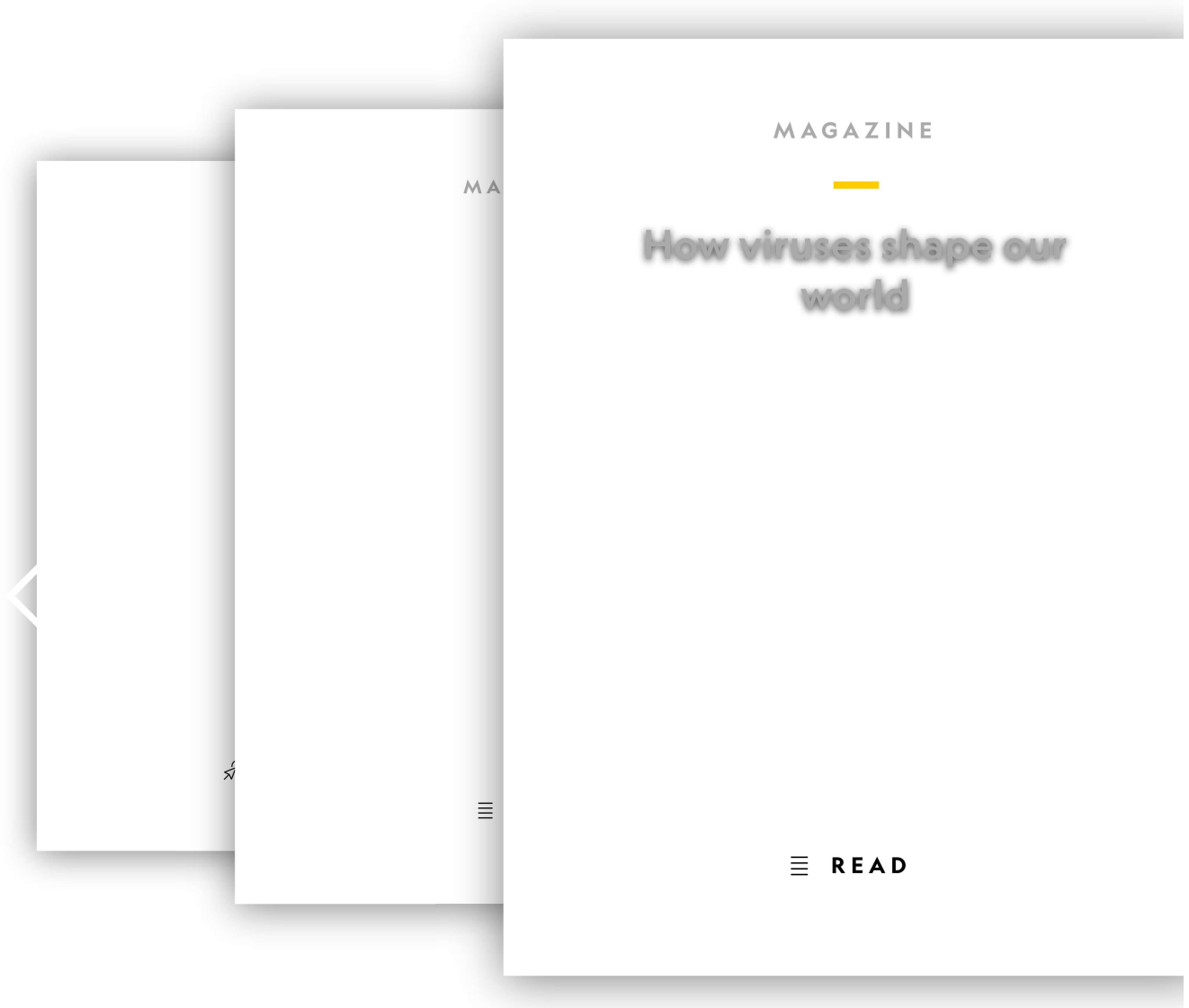
ADVENTURE

Rock climbing is getting more popular—and that concerns conservationists

TRAVEL

Canada is reopening its border. Here's what travelers need to know.

SUBSCRIBER EXCLUSIVE CONTENT



[SEE MORE](#)

THE BEST OF NATIONAL GEOGRAPHIC DELIVERED TO YOUR INBOX

Sign up for more inspiring photos, stories, and special offers from National Geographic.

Email Address

Yes! I would like to receive updates, special offers, and other information from National Geographic and The Walt Disney Family of Companies. By creating an account, I agree to the Terms of Use and acknowledge that I have read the Privacy Policy and California Privacy Notice.

SIGN UP

LEGAL

- [Terms of Use](#)
- [Privacy Policy](#)
- [Your California Privacy Rights](#)
- [Children's Online Privacy Policy](#)
- [Interest-Based Ads](#)
- [About Nielsen Measurement](#)
- [Do Not Sell My Personal Information](#)

OUR SITES

- [Nat Geo Home](#)
- [Attend a Live Event](#)
- [Book a Trip](#)
- [Buy Maps](#)
- [Inspire Your Kids](#)
- [Shop Nat Geo](#)
- [Visit the D.C. Museum](#)
- [Watch TV](#)
- [Learn About Our Impact](#)
- [Support our Mission](#)

JOIN US

- [Subscribe](#)
- [Customer Service](#)
- [Renew Subscription](#)
- [Manage Your Subscription](#)
- [Work at Nat Geo](#)
- [Sign up for Our Newsletters](#)
- [Contribute to Protect the Planet](#)
- [Pitch a Story](#)

FOLLOW US

 [United States \(Change\)](#)

Nat Geo Partners

Masthead

Press Room

Advertise With Us



Copyright © 1996-2015 National Geographic Society | Copyright © 2015-2021 National Geographic Partners, LLC. All rights reserved