

News in focus



Director of US National Intelligence Avril Haines warned that the 90-day investigation into COVID-19's origins might be inconclusive.

US COVID ORIGINS REPORT: RESEARCHERS PLEASED WITH SCIENTIFIC APPROACH

Intelligence investigation is inconclusive on virus's origins, but finds SARS-CoV-2 wasn't weaponized and is unlikely to have been engineered.

By Amy Maxmen

When agents from the FBI and CIA flew to New Orleans, Louisiana, in July to talk to virologist Robert Garry about the origins of COVID-19, he was relieved by the depth of their scientific background. "These folks were really knowledgeable, had PhDs in molecular biology, they had read all of the papers in detail," he says.

The visit was part of the 90-day US

intelligence-community investigation into where the coronavirus SARS-CoV-2 came from, ordered by US President Joe Biden on 26 May. Like many researchers, Garry, at Tulane University, didn't know what tack the confidential investigation would take, and felt that a scientific approach was essential. The agents spoke to him about studies, including his own, on coronavirus evolution.

Biden received the investigation's classified report on 24 August, and an unclassified version was made public three days later

(see go.nature.com/38c0k1o). The top-line result is that the investigation was inconclusive. Intelligence agencies were divided on whether the pandemic is most likely to have begun because of a laboratory accident, or because of human contact with an infected animal. The only strong conclusion is that the coronavirus was not developed as a biological weapon; most agencies also thought, with low confidence, that it was unlikely to have been genetically engineered. In a press statement, the intelligence community writes that it aims

to issue more details on its investigation in the near future.

Garry says the report exceeds his expectations. “It’s huge to mainly rule out that this is a product of engineering,” he says. He and other researchers aren’t surprised that the intelligence community hasn’t solved the mystery of COVID-19’s beginnings, because outbreak origin investigations are often complicated. The government’s senior intelligence officer, Avril Haines, warned of this outcome on 30 June, in an interview with Yahoo News. At the time, she said arguments could be made in favour of both the main competing hypotheses. COVID-19 was first reported in Wuhan, China, where a leading institute studies coronaviruses, making a lab escape possible; and most emerging infectious diseases begin with a spillover from nature, lending weight to that scenario. She said the intelligence community would be working with experts, including scientists at national labs, to collect data and evaluate existing information, and trying to think about these in new ways. “I think the best thing I can do is to present the facts as we know them,” she said.

Many researchers welcome what seems to be a dispassionate investigation, after more than a year of politicization around how COVID-19 began. “I am glad to see us having a more nuanced discussion about this now,” says Stephen Morrison, director of global health policy at the Center for Strategic and International Studies in Washington DC. However, researchers also hope that the intelligence community will reveal more about its process, and are keen to hear about further investigations, either spearheaded by the World Health Organization (WHO) or independent of the agency. “This is an immensely complicated problem,” says David Relman, a microbiologist at Stanford University in California. “No one expected this to be figured out by summer.”

Scientific expertise

The US government has been considering COVID-19 origins ever since the pandemic began – but there have been disagreements between and within agencies, as made clear by reporting from BuzzFeed and other outlets. During the administration of former president Donald Trump, secretary of state Mike Pompeo and some other state department officials argued that the virus was the product of Chinese government manipulation, and a potential biological weapon. But in April last year, the intelligence community issued a statement that “the COVID-19 virus was not manmade or genetically modified”.

This June, Christopher Ford, who was a high-level state department official in the Trump administration, posted an article on the website Medium expressing discontent with what he felt were hasty conclusions that his colleagues had drawn without consulting scientific experts. The piece links to a

4 January e-mail to his colleagues, now in the public domain, in which he writes: “Why hasn’t it been possible to get third-party experts together – folks with real bioscience chops ... who can assess the worrying things you say you’ve found?” He adds, “We need to make sure what we say is solid and passes muster from real experts before we risk embarrassing and discrediting ourselves in public.”

Biden asked the intelligence community to look into both the lab- and natural-origin hypotheses, while bringing scientists into the investigation. The one-page unclassified report reveals that the National Intelligence Council and four intelligence groups lean towards COVID-19 stemming from a person naturally infected by an animal. One group lean towards a release from a lab accident, partly on the basis of the “inherently risky nature of work on coronaviruses”, and three other groups were undecided. The report, which did not disclose the identities of the groups, says that more information is required. “China’s cooperation most likely would be needed to reach a conclusive assessment of the origins of COVID-19,” it reads, adding that Beijing resists sharing information.

Finer details of what the intelligence agencies assessed remain unknown to the public. According to an anonymous source who spoke to CNN, some of the intelligence community’s probe was directed at a “trove” of genetic sequences from viruses associated with the Wuhan Institute of Virology. Garry has not seen such data, but speculates that the sequences

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could have been extracted from cloud-based data systems. Typically, sequencing machines automatically upload massive amounts of data to the cloud, which researchers can remotely access and analyse. That the report is inconclusive, says Garry, might indicate that investigators did not find a SARS-CoV-2 sequence dating from before the first reported cases of COVID-19, or a very similar sequence suggesting that researchers might have genetically tweaked an existing virus to create the pathogen circulating today.

Relman, however, says that it’s hard to draw conclusions without more information on the type of data the agents obtained, and their process.

Next steps

After the release of the public report on 27 August, Biden issued a statement that the United States would continue to trace the origins of COVID-19. He condemned China

for its lack of cooperation, and pressed Chinese officials to cooperate fully with the WHO’s phase-two investigation. On 16 July, WHO director-general Tedros Adhanom Ghebreyesus outlined requests for that study, which would follow a probe supported by the agency that was completed in March. Among other studies, Tedros suggested research into animals sold at markets in Wuhan, and an audit of the Wuhan Institute of Virology.

At a news conference soon afterwards, the vice-minister of China’s national health commission, Zeng Yixin, said that Chinese scientists were following some leads suggested in the March report. He also welcomed a WHO-led phase-two investigation that includes tracing the history of the first people now known to have had COVID-19, and studies in multiple countries on animals that might have served as intermediary hosts, transferring the virus from, say, bats to humans. But Zeng rejected Tedros’s call for a laboratory audit, saying: “From this point, I can feel that the plan showed disrespect for common sense and arrogance toward science.”

Since then, the WHO has posted a notice asking for scientists from about 20 fields, including laboratory security and virology, to apply to serve on a committee on the origins of emerging pathogens, ranging from SARS-CoV-2 to Ebola. This group, called the Scientific Advisory Group for Origins of Novel Pathogens, would advise on the phase-two COVID-19 origins investigation, as well as those in the future.

Many researchers welcome the news of a standing scientific committee devoted to origins investigations, saying that it will help future studies to start sooner, when the early events of an outbreak are still fresh in bodies and in minds. However, Thomas Bollyky, director of the global health programme at the Council on Foreign Relations in Washington DC, says, “I think this sort of group would be better outside of the WHO, as a coalition of national scientific academies.”

Taking COVID-19 as an example, Bollyky explains that resolving where the pandemic came from requires cooperation from China. He says scientists – acting to some extent independently of governments – are well placed to collaborate across borders. By contrast, the WHO can’t force its member states to do anything, he says. And because the WHO is led and financed by its member states – two of the most powerful being the United States and China – it is ill-equipped to resolve their geopolitical differences.

Meanwhile, investigations by US intelligence agencies are unlikely to achieve cooperation from China because their aim will be viewed as political, says Bollyky. “China and many other countries simply won’t accept the outcome, and that defeats the whole damn point of doing this origin investigation, which is to make us safer in the future.”