

## Where Did Covid Come From?

*di Nicholas Wade*

In the four years since the SARS-CoV-2 virus was unleashed on the world, data have steadily accumulated supporting the hypothesis that it emerged from a laboratory. The latest information, released last month, makes a formidable case that the virus is the product of laboratory synthesis, not of nature.

This startling fact will probably take some time to sink into the national consciousness, given the mainstream media's sustained inability to report the issue objectively. Editors have failed to think beyond the extreme politicization that requires liberals to oppose the lab-leak hypothesis. Science journalists are too beholden to their sources to suspect that virologists would lie to them about the extent of their profession's responsibility for a catastrophic pandemic.

Here are some salient facts that haven't been clearly reported to readers of the mainstream press:

In March 2018 a team of American and Chinese virologists applied to the Pentagon's Defense Advanced Research Projects Agency, known as Darpa, seeking a \$14 million grant to manipulate viruses related to SARS-CoV-1, the bat virus that caused a minor epidemic in 2002. Their goal was to identify bat viruses in Asia with the highest potential for jumping to people and to immunize bats so they wouldn't infect soldiers in the region.

The proposal for [Project DEFUSE](#) specified that the viruses' infectivity would be enhanced by inserting into them a genetic element known as a furin cleavage site. Depending on the starting viruses, this protocol could have produced SARS-CoV-2, the virus that causes Covid-19, which has a distinctive furin cleavage site.

In 2022 three biologists, Valentin Bruttel, Alex Washburne and Antonius VanDongen, guessed that if SARS-CoV-2 had been generated in a lab by a standard method, it would have been assembled from six sections of lab-synthesized DNA

with the help of a biological agent called BsmBI. On [analyzing the virus's structure](#), they found evidence for the seams between sections and other distinctive marks of the assembly process.

Their paper was derided as “kindergarten molecular biology” by the virologists who are favorites of the mainstream press for their opposition to the lab-leak hypothesis. But a batch of [documents](#) reveal new details about the DEFUSE proposal and confirm that the three authors were on target. Emily Kopp of U.S. Right to Know obtained the documents through a Freedom of Information Act request from the Interior Department, having noticed that a researcher at the U.S. Geological Survey was a member of the DEFUSE team.

The new documents, which are background planning papers and drafts for the DEFUSE proposal, call for assembling SARS-like viruses from six sections of DNA, and include a cost estimate for purchase of the BsmBI restriction enzyme—exactly as the three authors had inferred. This clearly strengthens, perhaps conclusively, their contention that the virus is synthetic. Richard H. Ebright, a molecular biologist at Rutgers University, says it raises “to the level of a smoking gun” the genetic evidence that the virus was manufactured.

Other strong indicators of the virus’s laboratory birth include the furin cleavage site, possessed by none of the other more than 1,500 members of its viral family with which in nature it might swap genetic material. The codons—“words” used by the genetic code to specify the units of proteins—that define the cleavage site are those preferred by humans, not coronaviruses, pointing to their likely origin in a lab kit. And whereas most viruses require repeated tries to switch from an animal host to people, SARS-CoV-2 infected humans out of the box, as if it had been preadapted while growing in the humanized mice called for in the DEFUSE protocol.

The authors of the proposal were a team led by Peter Daszak of the EcoHealth Alliance of New York, Shi Zhengli of the Wuhan Institute of Virology and Ralph Baric of the University of North Carolina. Although Mr. Baric is the leading expert on the technology, Mr. Daszak intended for much or most of the work to be done in Ms. Shi’s laboratory, despite giving a different impression to Darpa. He writes in the recently discovered documents that “I do want to stress the US side of this proposal so that DARPA are comfortable with our team. Once we get the funds, we can then

allocate who does what exact work, and I believe that a lot of these assays can be done in Wuhan.”

Ms. Shi did most of her work with SARS-type viruses in the minimal-containment condition known as BSL2, whereas Mr. Baric, who regarded the viruses as seriously dangerous, worked in a more secure lab known as BSL3. Mr. Daszak noted that the lower-security labs would save money: “The BSL-2 nature of work on SARSr-CoVs makes our system highly cost-effective relative to other bat-virus systems.” Mr. Baric replied to this comment that the viruses might be grown under BSL2 safety conditions in China, but “US researchers will likely freak out.”

Mr. Daszak’s EcoHealth Alliance last year asserted that the DEFUSE project was never implemented: “The proposal was not funded and the work was never done, therefore it cannot have played a role in the origin of COVID-19.” But science is a competitive business. After Darpa turned down the DEFUSE proposal in February 2019, the researchers in Wuhan might have secured Chinese government funding and gone ahead by themselves. Viruses made according to the DEFUSE protocol could have been available by the time Covid-19 broke out, sometime between August and November 2019. This would account for the otherwise unexplained timing of the pandemic along with its place of origin. (Mr. Daszak, Mr. Baric and Ms. Shi didn’t respond to emails seeking comment. Chinese officials have demanded that the U.S. “stop defaming China” by raising the possibility of a lab leak.)

One piece is missing from the puzzle—the identity of the parent viruses from which SARS-CoV-2 was derived. The Chinese authorities have rigorously suppressed all information about the viruses being kept in the Wuhan Institute of Virology. But the documentary and scientific evidence already assembled seems sufficient to understand the genesis of the pandemic that killed millions.

*Mr. Wade is a former science editor of the New York Times.*