

On Thu, Aug 10, 2023 at 5:14 PM Kristian G. Andersen <> wrote:

Donald, in my first email I said to you "*Mostly, unless the virus was a really obvious recombinant virus, a virus from culture vs an intermediate host would probably be indistinguishable.*", before going into several points about things I felt we *could* actually say with more confidence. Importantly, those points ended up being some of our main conclusions in a later paper and also ended up being conclusions that have been only further supported by accumulating evidence.

It appears to me that you wish that I had been much more explicit about a "lab leak" in early February, 2020. I understand that, however, I have already pointed out why I don't think that would have been appropriate. Further, I'm glad that I *did* refrain from outright speculating, as it is clear from our own studies, as well as those by other scientists, that a "lab leak" just isn't a viable hypothesis (and, of course, is an accusation directed at named Chinese scientists).

It is fair to disagree on what you think I should or should not have said to you at the time, however, it is a long way from there to accusing me, and my colleagues, of being dishonest, which is exactly what you are doing in your draft chapter. Again, I was not, and I am not, and I went, and go, to great lengths to provide you with accurate and scientifically informed answers, based on my many years of having worked on infectious diseases. I am truly disappointed to see that in return you are going to accuse me, and my colleagues, of being dishonest and misleading you.

As for Jon, I talked to him at the time as well and have talked to him many times since - I deeply respect his reporting on this and other scientific topics. This isn't about getting "the scoop" - it's about getting it right. If you balance my early answers with the large body of evidence we have on the origin of the pandemic, you will see that they have held up remarkably well. The same can't be said about the "lab leak" accusation.

Best.

Kristian

On Thu, Aug 10, 2023 at 4:10 PM Donald G McNeil Jr <> wrote:

Kristian, if you had said, in answer to my first email: "I think it is possible that this virus did not evolve entirely in nature but might have been manipulated in a lab," I would have jumped out of my chair, headed for my editor's desk and said: "I was wrong, and I have a scoop."

I'm sure Jon Cohen would have had the same reaction. And he's smarter than me and doesn't have as many layers of panicky editors, so he would have beaten me to the scoop.

But that's not remotely what happened.

I'm going to write that, in my opinion, I was misled, and that in your opinion, I was not. And I'm going to suggest that anyone who wants to form their own opinion read the emails and Slack chats for themselves.

Donald

On Thu, Aug 10, 2023 at 6:45 PM Kristian G. Andersen <> wrote:

Donald,

I'm sorry to see you continuing down this road - as I have already mentioned, your editorializing of our private communications (and actions) is leading you to make false conclusions. Not only that, but you continue to accuse me of not being truthful in the answers I just emailed you - which, of course, couldn't be further from the truth.

20/20 hindsight is an amazing thing and as I have already stated, throughout our conversations I have always given you thoughtful and scientifically justified answers. Not just that, but I have gone to great lengths to ensure that my answers to you have been accurate and, I hope, helpful, and spent many hours answering your questions in emails and on the phone, including during the most stressful and busy times of my entire career. In addition to my responses directly to you, we have also published our findings and conclusions in the peer-reviewed literature - something that can't be said for the other sources you mention. For that, you accuse me - and my colleagues - of lying to you and being dishonest. These are very serious allegations and I am

sorry to say that such allegations are false, which is clear from the written record.

I would like to remind you, again, that in my answers to you, there was very clear acknowledgement of a potential lab leak, reflecting my understanding at the time. Of course, that changed, with our analyses and opinions having been published, as is the scientific method. The fact that I did not provide you with the exact 'perfect' answers at the time that you would now have liked me to is not because I was (or am) being dishonest - it's because I saw (and see) things differently than you and we're now three and a half years down the road.

As for my comment that I was not the best person (at the time, February 6) to ask about the 'Origin', that was, in fact, correct. As is clear from e.g., my many postings on Twitter and on Virological during the months of January and February, the vast majority of my time was spent on investigating early transmission, timing, etc. At that time, I was also much too undecided on the whole 'Origin' question (as is clear from my answers to you), to feel that I was a bonafide expert on the question. That was also clear from the February 1 conference call - I felt that people including Drosten, Fouchier, Rambaut, Koopmans, and Holmes had much clearer answers to all these complicated questions than I did. That, of course, changed, however, at that early point in time I was much more in "discovery" mode.

You say that "*You clearly all suspected that the furin cleavage site might have been inserted*" and conclude that I misled you because I didn't mention that in my emails. That is not correct, because by February 6, I didn't believe it had been inserted. I still don't (and by now, having thought about it more, that whole idea just doesn't make any sense whatsoever). As you yourself mention, I said "*I see nothing in the genome that would make me believe it has been genetically manipulated in a lab.*" in the Slack channel. I *did*, however, believe, at the time, that the furin site could have been acquired by culturing the virus (which is clear from the Slack conversations) because I thought Farzan had mentioned that to me (turns out that I likely misunderstood what Mike said, since there's nothing in the literature suggesting this being the case and, of course, SC2 actually loses that site when cultured). Finally, as you can see from our Proximal Origin drafts, on that same date, the language in our draft addressed this "*Analysis of*

the virus genome sequences clearly demonstrates that the virus is not a laboratory construct or experimentally manipulated virus". This is fully consistent with my answers to you. As for Bob's comment, you'll need to clarify with him.

You suggest that we misled you because I did not include language akin to "*We've alerted the American and British governments about our worries, have discussed it with government officials...*" in my responses to you. I am not sure why you think I should have included such language, however, it was already public knowledge at the time that the White House was looking into this and that I was involved:

<https://abcnews.go.com/Politics/white-house-asks-scientists-investigate-origins-coronavirus/story?id=68807304ABCABC>

<https://www.nationalacademies.org/news/2020/02/national-academies-provide-rapid-response-to-white-house-on-coronavirus-data-needs>

You say "*1. The rumors about it being an engineered strain were demonstrably false -- we would have been able to easily pick that up if that were the case. However, it is not.*"

That was not the whole truth. You were debating among yourselves about whether or not the furin site had been "dropped in" or had evolved during passage."

First, you are misquoting me here. I specifically said "*A lot of the conspiracy theories are talking about this being either a lab strain that had previously been engineered (Nature Medicine paper) or some new recombinant. These rumours are demonstratively false - we would have been able to easily pick that up if that were the case, however it is not.*" This is very different from your assertion that I am talking about "*rumors about it being an engineered strain*". Second, in the very same email I say that "*Mostly, unless the virus was a really obvious recombinant virus, a virus from culture vs an intermediate host would probably be indistinguishable.*". Yet, you conclude that my answers "*was not the whole truth*". This is not a question of interpretation. You are simply falsely accusing me of lying to you because my language is different from some imaginary 'perfect' answers you yourself have now thought up - *i.e.*, revisionist history.

You say: *"You now argue that "speculation based on hypotheses we had already dismissed at the time you contacted me, is reckless." That is not true. You and the others were still very much speculating on February 6th. You had not dismissed the lab-leak hypothesis by then. You were hoping the pangolin sequences would put a stake through its heart, but you had not seen them yet".*

You are misinterpreting my comment. *Of course* it is okay to "speculate" - scientists do that *all* the time. But there is a very big difference between bouncing ideas around with colleagues as studies are ongoing versus openly engaging in fact- and evidence-free speculation in the NYTimes, *before* actually having completed the required studies (which were ongoing at the time). Maybe you think I should have done that at the time, but I don't and I hope we can both agree that unjustified speculation in the news media of rapidly changing scientific topics is not just unhelpful, it is, in fact, reckless.

You say *"What you clearly decided was "reckless" was to tell me that you were speculating about a lab leak and investigating it."*

Please see above, and I must also again point out that I mentioned the need to consider the possibility of a "lab leak" several times in my early emails to you. Did you forget that we also talked on the phone where I mentioned we were looking into it as well? Plus, as the links above clearly show, it was public knowledge at the time.

I have already shared all our conversations and I was frankly shocked to learn that you hadn't read them when you drafted your chapter and also when you wrote your previous Medium post. You could simply have reached out and asked for them, but you chose not to. As for my non-dismissal of the lab leak directly in response to your questions, I will leave you with these quotes from our early correspondence:

Feb 7 Email:

The question about potential lab escape is not necessarily a crackpot theory though and should always be taken seriously and investigated scientifically.

As I mention in my previous email, many less subtle scenarios (e.g., culture) would be expected to look much the same as spillover, so it's

going to be very hard/impossible to distinguish between those sorts of scenarios.

Feb 14 Email:

As to your question - it's impossible to rule out everything here. There's nothing to suggest a bio weapon (somebody would have used SARS or MERS - not a novel bat virus). As for lab escape, as I mentioned in my previous email, that scenario would likely look like natural selection, so it's impossible to assess at this stage. What I can say is that the data is fully consistent with natural selection with bats being the ultimate reservoir. Again though, a lab escape might look much the same.

Finally, "*I must finish rewriting the chapter by tomorrow, and I have very little space (because of the limitations of the book-binding process.)*" is a shocking statement to me. I fully understand deadlines, however, the fact that you see no issue in accusing leading scientists of dishonesty and lying, despite the fact that you only re-read the relevant emails *after* you wrote the chapter, makes me question your integrity on this issue. As I have explained to you - and as is clear from the written record - your allegation that we misled you is simply false.

Best,

Kristian

On Thu, Aug 10, 2023 at 10:01 AM Donald G McNeil Jr <> wrote:

Kristian:

Thanks for giving me the chance to look at these.

I will put in my rewritten chapter your assertion that you feel the four of you did not mislead me. But I also will say that, in my opinion, I still think you did. You did not lie to me. But you also did not tell me the whole truth about what you suspected -- at that time -- about the virus' origins. I'll provide a link to the emails and Slack chat so that readers can decide for themselves.

As early as February 6, I asked you and Andrew Rambaut "Is there any possibility that: it could be from the Wuhan lab? And, if it was -- would there be any way to tell? ... Is there anything in the sequences posted so far that suggests the virus has been manipulated by human hands in any way? (Sequences from another virus inserted, deletions that seem unlikely to occur in nature, anything like that?)"

As of that date, you and Drs. Rambaut, Garry and Holmes had exactly *that* fear. You had brought it to the attention of the US and British governments. An urgent phone call was convened. The four of you were tasked with looking into that question, and you' were debating it and looking for precedents in other viruses.

You clearly all suspected that the furin cleavage site might have been inserted (Bob Garry says while discussing Andrew Rambaut's answer to me "You could put in the furin site very cleanly." Andrew Rambaut answers "Yes, but I didn't say that."

You say to the others on Slack that you were thinking of answering: "I see nothing in the genome that would make me believe it has been genetically manipulated in a lab."

You didn't give that answer. But the core part of the multi-part answer you gave me was:

1. The rumors about it being an engineered strain were "demonstrably false -- we would have been able to easily pick that up if that were the case. However, it is not."

That was not the whole truth. You were debating among yourselves about whether or not the furin site had been "dropped in" or had evolved during passage.

You also said "I'm afraid I might not be the best person to answer, as we are mostly looking at what's going on during the epidemic (not before).

That also wasn't accurate. You were specifically looking into the epidemic's origin -- ie, what was going on before.

A fully honest answer would have been something like: "Several of us virologists have wondered the same thing ourselves. The nCoV has a furin cleavage site, which does not appear to occur in this family of coronaviruses. That could be what you asked about -- a "sequence from another virus inserted." We have also wondered whether it was adapted to the human ACE-2 receptor by serial passage. We've alerted the American and British governments about our worries, have discussed it with government officials and we are now gathering information to see how likely a "lab leak" scenario is. That said, there is no way to tell by looking at the genome whether the virus evolved the features that make it adapted to humans in nature or in a lab."

You now argue that "speculation based on hypotheses we had already dismissed at the time you contacted me, is reckless."

That is not true. You and the others were still very much speculating on February 6th. You had *not* dismissed the lab-leak hypothesis by then. You were hoping the pangolin sequences would put a stake through its heart, but you had not seen them yet.

What you clearly decided was "reckless" was to tell me that you were speculating about a lab leak and investigating it.

Perhaps the result of telling me would have been, in your opinion, bad: I would have reported it, the conspiracy theorists would have gone bananas, GOF opponents like Ebright would have done a victory dance, the Chinese would have been furious, and so on. But it would have been the whole truth. Not telling me was a political choice. Fine. People make political choices. But to argue that everything you did was merely disinterested scientific discussion is not true.

Your answer about my emails of the 19th -- when I said I was writing a narrative and asked for your personal account -- is also misleading. You now portray it as not wanting to delve into your personal life. But that wasn't what you said then. You told the others you would put me off before I asked "difficult to handle" followup questions. You didn't reply to me that I was asking for too-personal details. You mocked the idea of White House involvement, national security involvement or

anything but science, and said you wished your life were that exciting. But you *were* dealing with people on the White House Task Force and the question of informing the FBI and MI-5 had been raised. And you told the others "I really fucking wish my life *wasn't* this exciting."

So I'm not persuaded. You never lied, but you avoided giving me full answers. OK. That's not a crime. It's not a violation of any formal ethics code I know of. No one is obligated to tell reporters *anything*. But I did ask questions you could have given fuller answers to. The Slack chats suggest to me that you misdirected me by giving me half-answers. My chapter will say that, emphasizing that this is just my opinion, and I'll let readers make up their own minds.

I must finish rewriting the chapter by tomorrow, and I have very little space (because of the limitations of the book-binding process.) Later, I can go into this at greater length on Medium and put in a more detailed version of your rebuttal.

Thanks, Donald

On Tue, Aug 8, 2023 at 3:17 PM Kristian G. Andersen <> wrote:

Hi Donald,

I'm sorry to hear that you haven't had access to all your emails since your separation from NYTimes - FWIW, I thought that whole affair looked off and unjustified.

I hope you can see that the full email responses paint a very different picture than the one you describe in your draft email - and also show how much time I took to carefully answer your questions and phone calls (to be clear - these responses all came directly from me and were not discussed with my colleagues).

Best of luck getting the book wrapped up. I understand your initial reaction to seeing our private Slack messages with your name coming up, but I hope my email helped clarify some of that. If not, or if you have other questions, please let me know if you'd like to hop on a (Zoom) call.

Best,

Kristian

On Tue, Aug 8, 2023 at 5:47 AM Donald G McNeil Jr <> wrote:

Dear Kristian:

Thank you for this detailed reply, and thanks for sending me the full email exchanges. To my great frustration, I've lost access to those since I left the Times in March 2021.

I've just woken up at my brother's house in Utah and am packing to catch a plane back to NY. I will read through all carefully and send you an answer as soon as I can. My editor at Simon & Schuster has given me until Friday to make any final edits to the manuscript.

Thanks, Donald

On Mon, Aug 7, 2023 at 3:29 PM Kristian G. Andersen <> wrote:

Dear Don,

I am glad to hear that my comments back in February 2020 helped clarify your early thoughts on the origin of the pandemic, but I am truly dismayed to see where you have since gone. I agree that the media most certainly has gotten the whole "origin

debate" wrong, however, not for the reasons you describe. To be clear, conspiracy theorists, grifters, and other people with (non-scientific) agendas have played, and continue to play, an absolutely outsized role in this discussion. Scientists, studying the very question everybody claims to care so deeply about, are attacked on a daily basis. Private communications are released without context and quote mined, scientists are dragged in front of congress, and subpoenas are served - for the simple reason that scientists have published peer-reviewed papers with conclusions that go against a preferred narrative.

It is truly dismaying to see these attacks on science and scientists, myself included. Your book, of course, will only add to that - based on your misrepresentations of several of those early events. There are so many examples of getting the science wrong in your draft chapter below, that I won't go into the details here - it would simply require too much time.

However, let me clarify a few important points:

- You had many questions for me back in February, 2020 - both via emails (attached here) and from you cold-calling me when I was in the Mojave desert.
- I spent a tremendous amount of time responding to you - giving you accurate and specific answers to your questions. There was absolutely no "misleading" and my answers to you were not simply "technically accurate", they were (and are) just "accurate" - as should be clear from our several papers on the origin question. I did this because I deeply respect you as a journalist and believe that you have gotten many things right in the past.
- I followed up with you in March, 2020 to see how your story was coming along - further making my expertise available to you, had it been helpful. This is the opposite of being "misleading" - it's an attempt to be helpful and actually caring about your story.
- I understand you may be hurt reading our private Slack messages, however, what they show is simply my refusal to engage in speculation or "adding color" to articles in the New York Times on a topic we were actively researching

(as I also explained to you). Could I have phrased my Slack messages differently? Sure, but they were private communications among scientists who had been under a lot of stress for weeks. Importantly, my responses to you, including the one that prompted you to reach out again, reiterated what we published. I strongly believe that accuracy in reporting is important, and speculating on still-changing early hypotheses that later ended up being wrong, would have been reckless. Again, go back and read my responses to you, and you'll see that they simply just reflect our scientific conclusions.

A few clarifications to your email:

- The Slack conversations were a direct response to you requesting that I provide information "that adds color" to your story as you also said: "Could we talk about that? Not just about the science, but what went on in your head and in your life while this was unfolding?".
- As I already explained above, I see this type of speculation as being reckless and I did not want to talk about my personal "life" to a NYTimes reporter during a very stressful part of my life. My response to you therefore simply reiterated the science and our conclusions at the time (which still stand). This has nothing to do with "misleading" anybody - it's making sure the science is clear.

In addition to these points, let me also correct a few outright misrepresentations in your draft chapter:

"You jointly decided to omit any mention of that and congratulated each other on doing so"

This is false, as should be clear from the Slack messages. I simply shared what my reply to you would be with the rest of the group - as you'll see from the actual email (attached), I added several other helpful details too.

"the virus seemed remarkably well adapted to humans, suggesting lab engineering"

This is easily debunked by any expert, but is a typical notion from the many conspiracy theories out there. In fact, not only would "lab engineering" not be expected to make the virus well-adapted to humans, it would very likely de-adapt it. The simple explanation here is that we're just looking at survivorship bias - SARS-CoV-2 just happened to be that next pandemic virus and any pandemic virus would necessarily have to be "well adapted" for transmission (if it wasn't, it wouldn't cause a pandemic).

"But they clearly misled me early on"

As I have already stated, this is false.

"They told me they saw 'nothing in the genome that would make [them] believe it has been genetically manipulated in a lab.' Notably, they left out any mention of their suspicions about the furin site, the possibility that the virus's evolution had been sped up or that they knew the Wuhan lab had done such work."

As I have already pointed out, speculation based on hypotheses we had already dismissed at the time you contacted me, is reckless. So there's no "omission" here - as I also explained to you on the phone (and as was clear from our Proximal Origin preprint/paper), we were well-aware of the work at the WIV and hence a lab leak had to be considered scientifically. I also point this out multiple times in my early emails to you (see attached). As correctly stated in my reply to you, there's absolutely nothing in the genome of this virus suggesting it has been manipulated in the lab (despite that very notion being my initial hypothesis) - quite the contrary.

"while technically accurate, were very misleading in that you clearly thought"

As above, this is false.

"would mislead me, even if just by omission"

Same - this is false.

"Drs. Andersen and colleagues had exactly the same fears some conspiracy theorists had: that Chinese scientists could have rapidly mutated RaTG13 into SARS-CoV-2 by adding a furin cleavage site and growing it in cultures of human cells or in mice with "humanized" immune systems to evolve a spike protein primed to attach to human receptors"

This is also false. I can't think of a single credible scientist who thinks that RaTG13 could have been turned into SARS-CoV-2. We certainly never considered that a possibility.

Again, I am sorry to see you having gone down this path and I'm sorry to see that you would write such misleading statements attacking scientists. Not only have you gotten the science on the origin question wrong, you have clearly gotten our intentions and early discussions wrong.

Best,

Kristian

On Thu, Aug 3, 2023 at 2:06 PM Donald G McNeil Jr <> wrote:

Dear Kristian:

It has taken me a while to write this because I was on a camping trip when the news broke detailing Slack chats about me between you, Bob Garry, Andrew Rambaut and Edward Holmes. I wanted to get back to civilization, read through all the released chats and emails before deciding what I think.

Right now, my first priority is this: I'm in the final stages of proof-reading my book, "The Wisdom of Plagues/Lessons from 25 Years of Covering Pandemics." Part of one chapter

concerns the lab-leak vs zoonotic jump controversy. I clearly must rewrite it immediately and I have permission from my editor to do so. I want to give you, Bob, Andrew, and Eddie a chance to be included in it, if you desire.

I should emphasize this: I am *not* trying to definitively say whether the virus jumped from nature or leaked from a lab. I think that will be impossible until China reveals all it knows from its own internal investigations. I don't expect that to happen during my lifetime.

I lean toward the zoonotic jump. I always have. What I think, however, matters not at all, since I'm a journalist, not a virologist.

What I *am* writing is a chapter on how and why journalists covering pandemics make mistakes -- sometimes big ones that affect the course of their outlet's coverage or even of the country's approach to the disease. I give a couple of examples from my own career, one related to the 2009 H1N1 "swine flu" outbreak, and one covering my role in coverage of the lab leak theory.

What does matter to me is how/why I get things wrong. I need to address that in my rewrite. When I wrote to you and to Andrew Rambaut in early 2020 asking whether there was any evidence the virus had been lab-engineered, I obviously did not know that the four of you would share my emails, debate how to reply, and come up with answers that, while technically accurate, were very misleading in that you clearly thought -- at least for a while -- that there was a good chance that there had been lab engineering -- a furin cleavage site insertion and/or passaging in human cells or humanized mice. You jointly decided to omit any mention of that and congratulated each other on doing so. Obviously, that omission changed how I thought about the virus and how I argued during internal NYT debates about what I had learned from sources I considered trustworthy experts. I'm dismayed that I was so easily put off. I'm also surprised and maybe even a bit hurt that scientists I respected would mislead me, even if just by

omission. My feelings are unimportant. It's not like we were old pals; I think Bob is the only one of you I've personally met. But I do feel I must address that as I rewrite my chapter. Once that's out of the way, I may also write something on Medium.

I'm writing this note to let you see what I plan to say in that chapter. It's still in process, but it's the core of what I plan. I have only a few days to finalize it. If you have anything you want to say -- on the record, please -- please do. I will also send copies of this note to Bob, Andrew and Eddie.

If you want to reach me on the phone, that's fine, but I'd like to keep it on the record. I'm in a cabin in Montana right now, so I'm on U.S. Mountain time.

Thanks, Donald

What I plan to write:

(Chapter is titled "The Media's Forced Errors." The first half is on a different subject)

Far more serious errors occur when sources deliberately lie to reporters. In late July 2023, this book was almost in print when I learned – thanks to documents leaked from a Congressional subcommittee – that in February 2020, in the pandemic's earliest days, several eminent scientists I respected had conspired to mislead me. That affected how I covered the controversy over Covid's origins: the "zoonotic spillover theory" versus the "lab-leak theory." My editor allowed me to quickly rewrite this chapter. (By the time it appears, more facts may have emerged.)

Even now, I do not pretend to be certain whether the virus first jumped to humans from an animal in the Huanan Seafood Market or a culture in a Wuhan lab. I still lean toward zoonotic spillover, mostly for a simple reason: As was true in almost

every outbreak I've covered, it was first spotted by emergency room doctors with every incentive to raise alarms and none to engage in a coverup. Those doctors were sure the market was the epicenter. If a highly transmissible virus had leaked in a lab, there would have been a detectable surge among lab workers and their family members, as had happened in previous lab leaks.

But plausible arguments have been made for both sides. I fear this is doomed to be one of those looming questions like "Was Cuba behind JFK's assassination?" or "Was Alger Hiss a Soviet spy?" that will be answered only when an authoritarian state opens its archives—something I do not expect to see in my lifetime.

I played a small role in the debate. Almost as soon as the virus appeared, conspiracy-oriented websites began claiming it was a bioweapon. The first such article I found was on January 26 in The Washington Times, a newspaper founded by the Unification Church. The only evidence it cited was that the outbreak occurred in the same city as what was then an obscure lab, the Wuhan Institute of Virology. It quoted an Israeli bioterrorism expert saying the lab did bioweapons research and a leak was "possible." I phoned him, and he said he was not misquoted, but it was only possible—he had no evidence that it had happened. (Such suspicions seemed logical. As the comedian Jon Stewart later put it: If there was "an outbreak of chocolatey goodness" near Hershey, Pennsylvania, would you first suspect that a steam shovel had mated with a cocoa bean? Or would you suspect the chocolate factory?) Meanwhile, other rumors were whirling: unreviewed papers posted on preprint servers claimed the virus had originated in snakes or had HIV gene inserts. Chinese labs were accused of selling their dead animals as food. We science reporters were frantically rushing to confirm or debunk each one.

What I did not know at the time was that some of the world's leading evolutionary virologists, including Kristian G. Andersen of Scripps Research, Edward C. Holmes of the University of

Sydney, Robert F. Garry Jr. of Tulane University, and Andrew Rambaut of the University of Edinburgh, thought the virus showed signs of having been manipulated in a lab. It had features they at first believed were rare in SARS-like coronaviruses that made it “loaded for human transmission,” Dr. Holmes said. Most worrying was that it had a cleavage site primed to attach to furin, a protein found on the surface of human cells that viruses use to “cleave” or split open to inject their genetic instructions.

On February 1, a conference call to discuss their fears was convened by Dr. Jeremy Farrar, director of Britain’s Wellcome Trust, which is roughly the British equivalent of the Bill & Melinda Gates Foundation. Drs. Anthony S. Fauci and Francis Collins of the National Institutes of Health sat in; Dr. Fauci asked the virologists to write a paper reflecting their thoughts. (The call and follow-up emails were revealed starting in late 2022 when investigative reporters used the Freedom of Information Act to get progressively less-redacted versions of the records of Drs. Fauci and Collins. The long silence about that important discussion has hurt the credibility of everyone involved.)

On February 3, 2020, in the middle of this maelstrom of speculation, the Wuhan Institute posted a surprising paper: among its frozen samples it had identified a bat coronavirus named RaTG13 that was 96 percent identical to SARS-CoV-2. The paper’s point was to suggest that the pandemic virus had come from bats, but conspiracy theorists pounced on it as evidence that the lab had cooked up the virus.

Virologists, including those on the Feb. 1 call, publicly pooh-poohed that conclusion, saying it would take at least forty years of natural evolution to create a 4 percent difference in a virus 30,000 base pairs long. However, emails and Slack chats released in July 2023 showed that Drs. Andersen and colleagues had exactly the same fears some conspiracy theorists had: that Chinese scientists could have rapidly mutated RaTG13 into SARS-CoV-2 by adding a furin cleavage site and growing it in cultures of human cells or in

mice with “humanized” immune systems to evolve a spike protein primed to attach to human receptors. “The lab escape version of this is so friggin’ likely to have happened because they were already doing this type of work and the molecular data is fully consistent with that scenario,” Dr. Andersen wrote. They even joked that PREDICT, a U.S.-government program funded to detect dangerous viruses, might have started the pandemic. But they hesitated to reveal their suspicions. Dr. Rambaut suggested “limited dissemination.”

I left the Times on March 1, 2021 and have not had access to my @nytimes.com emails since then. My memories of who said what in early 2020 have faded. But the leaked Slack chats show that on February 6, I emailed Drs. Andersen and Rambaut – each of whom I had interviewed for previous stories. I was “trying to check out a rumor that an editor got from a government source – that the U.S. government is trying to seriously investigate the possibility that the nCoV came out of the Wuhan Virus laboratory rather than out of a wet market.” Although the rumors included “silly conspiracy theories,” I wrote, was there any way to tell if a virus had been manipulated by human hands, such as sequences from other viruses inserted or unexpected deletions?

The virologists shared my emails on Slack. (Jon Cohen of Science magazine was also “sniffing around,” one wrote.) After debating how to reply, they agreed on answers that were technically accurate but left out all mention of their own fears. “McNeil very serious but like any reporter can be mislead [sic],” Dr Holmes wrote. “Don...pretty much nailed it,” Dr. Andersen added. “Let’s not tell him.”

They told me they saw “nothing in the genome that would make [them] believe it has been genetically manipulated in a lab.” Notably, they left out any mention of their suspicions about the furin site, the possibility that the virus's evolution had been sped up or that they knew the Wuhan lab had done such work.

On February 16, along with W. Ian Lipkin of Columbia University, who was not on the Slack channel, they posted their paper, "The Proximal Origin of SARS-CoV-2" on the forum virological.org. Their analysis, they said "clearly shows that SARS-CoV-2 is not a laboratory construct or a purposefully manipulated virus."

It was a tough read for any non-geneticist, including me. I began drafting an effort to turn it into plain English, interview other scientists and explain why most favored zoonotic spillover.

If I remember correctly, I also interviewed or emailed Richard H. Ebright of Rutgers University, Stanley Perlman of the University of Iowa, Trevor Bedford of the Fred Hutch Cancer Center, Pardis Sabeti of the Broad Institute, and Peter Daszak of the EcoHealth Alliance. (I didn't yet know how involved the Alliance was with the Wuhan Institute.)

On February 19, when I again wrote to Dr. Andersen with what he called "difficult to handle questions," he not only put me off, saying he had "nothing to add," but boasted to the others that his reply "includes humor to deflect the fact that I'm dismissing him." He even added what he called a "very deliberate" smiley face.

Why did they mislead me? Why not admit that they initially suspected a lab leak? The 140-page-long Slack conversation suggests three motives: 1. Back then, they truly were unsure about whether the virus had been manipulated. 2. They were reluctant to give ammunition to critics like Dr. Ebright, who, Dr. Garry wrote, thought scientists who did research into making dangerous viruses even more transmissible "should be locked up." 3. They feared what Dr. Rambaut called "the shit show that would happen if anyone serious accused the Chinese of even accidental release." In the absence of proof either way, they decided to be "content with ascribing it to natural processes." Dr. Andersen said he "hated when politics is injected into science—but it's impossible not to."

In the ensuing months, as more SARS-CoV-2-like features were found in wild viruses, they became more sure they were right about the origin. But they clearly misled me early on. I'm disappointed— both in myself and in them – that I was taken in so easily. On the other hand, it's one thing to be lied to by a politician and fail to check it out. But to whom do you go for a second opinion about viral evolution? At their level, there are precious few experts. It's like Albert Einstein telling you that nuclear fission is probably harmless. Whom would you trust to quote saying “Einstein's wrong?”

I worked on my draft intermittently from February to April. It was no one's top priority then because the pandemic was raging in New York and most of my time was spent reporting the long “predict-the-future” articles I had been assigned. Its tentative headline was “New Coronavirus Is ‘Clearly Not a Lab Leak,’ Scientists Say.” It outlined many reasons: Previous outbreaks, including SARS and MERS, were zoonotic spillovers. By late February, a bat virus with a furin cleavage site and a pangolin virus with a similar spike protein had been found, meaning both anomalies existed in nature and might be found in some as-yet-undetected animal host. After the market was hosed down, SARS-CoV-2 was found in swabs taken from the wild-animal section, including from floors, drains, and sewers—places where coughing humans would not have deposited virus, but the sloshed-around blood of a butchered animal would. The “Proximal Origins” paper argued that the new virus's attachment point – its receptor binding domain – was so unlike those of SARS or MERS that any lab hunting for a candidate to test for an affinity for human cells would probably not have chosen it to experiment on. Also, the virus was studded with glycans, sugar-like molecules that act as shields against antibodies; shields would be more likely to have evolved if the virus had evolved inside an animal with an antibody-producing immune system rather than in a lab.

My draft story never ran, for two reasons: Inside the Times, we were having a fierce debate. Some of my Washington colleagues covering national security had sources insisting it was a lab leak. But their sources were anonymous, offered

zero evidence other than “take our word for it,” and, to me seemed clearly part of the Trump administration’s campaign to blame China instead of admitting its own failures. (With one exception: a science colleague had a non-administration source—also anonymous—who had inspected the Wuhan lab and felt its safety procedures were shoddy.)

My sources, by contrast, were respected scientists, spoke on the record, and laid out their arguments in exhaustive detail. They were more credible. The other reason my story never ran was that it was four thousand words long and full of jargon like “polybasic cleavage site” and “RNA-dependent RNA polymerase gene.” My overtaxed editors just didn’t want to struggle with it.

At some point – probably in early April -- the Washington reporters drafted an article quoting their anonymous sources. They were given a copy of my draft; they reduced my detailed counterarguments to two short “Some scientists disagree . . .” paragraphs. When I was allowed to see their draft, just hours before it was to be published, I exploded and wrote a note accusing them of downplaying my reporting because it had “too many big words.” I was told off for my tone, but their article was held. I can only surmise that their sources then went to Fox News, which soon ran something similar.

Had I known that the “Proximal Origins” authors initially suspected a lab leak, would my approach have been different? Of course. Did my ignorance – and my insistent advocacy -- tip the balance of Times coverage away from the lab-leak theory? I don’t know because I don’t sit in on the Page One meetings, but it probably contributed to what happened next: the Times essentially dropped the topic for a year. We had other priorities: the politicized battles over lockdowns, masks, and the WHO, the prospect of 100,000 deaths, Mr. Trump’s own bout with Covid, the vaccines—and, eventually, of course, the presidential election and the January 6 Capitol takeover.

Over the course of the next year, however, important facts emerged. Despite an exhaustive search, SARS-CoV-2 was not found in wild or domestic animals. Other scientists noted what the “Proximal Origins” authors had played down: the virus seemed remarkably well adapted to humans, suggesting lab engineering. The Wall Street Journal, citing anonymous sources, reported that three Wuhan researchers had fallen seriously ill in November 2019. However, it later turned out that the Trump State Department suspected either Covid or just “common seasonal illnesses.” In June 2023, another outlet, again citing anonymous sources, published what it claimed were the researchers’ names. They denied having been sick in 2019, denied working with live viruses, and said antibody tests done in March 2020 showed they had not had Covid.

China repeatedly acted as if it had something to hide: it hampered a WHO investigation and insisted its report play down the possibility of a lab leak. It took genetic sequences off public databases. It also raised silly red herrings, including the ideas that the virus had reached China in frozen seafood or that the American military had unleashed it during the “Military World Games” in October 2019.

Most important in my eyes was that internet sleuths translating obscure papers from Chinese virology journals, including even a 2013 master’s thesis, had shown that RaTG13 was identical to a virus previously known as Bat Coronavirus 4991, which had been found in a cave in southern China where miners digging bat guano in 2012 had developed pneumonias very much like those later seen in Covid victims and had died. The Wuhan lab, investigating the deaths, had found and sequenced BtCoV4991 and dubbed it “SARS-like.” Those revelations undercut a crucial premise of the “Proximal Origins” paper: it showed that the Wuhan lab clearly suspected that BtCoV4991, which did not superficially resemble SARS or MERS, could kill humans. That provided a powerful motive to further investigate it. When it first described RaTG13, the lab had concealed that important fact. Later, it admitted the two were the same virus, claiming that the renaming was just to

better identify its origin: RaTG13 stood for “Rhinolophus affinis bat in Tong Guan Cave in 2013.”

It was also revealed that the lab’s coronavirus chief, Shi Zhengli—regarded with awe as “Bat Woman” for her prowess at sampling bats in dangerous caves—had years of practice in making “chimera” viruses by splicing new spikes onto viral backbones to produce variants that could infect human cells. She had studied with a University of North Carolina lab on ways to do that leaving no traces. All this circumstantial evidence suggested that her lab—or another, perhaps even a military one she could not control—might have made chimeras using BtCoV4991 as a backbone and then growing them in human cells or humanized mice.

In an interview with Scientific American published June 1, 2020, Dr. Shi said that, on December 30, 2019, when she was ordered to leave a conference in Shanghai and return to Wuhan to help analyze the new virus, her first fear was that it had come from her lab. She went through years of records, she said, to reassure herself that it had not. “That really took a load off my mind,” Scientific American quoted her as saying. “I had not slept a wink for days.” In a June 2021 article in The New York Times, she reiterated that her lab had done no work that could have led to SARS-CoV-2. In a 2022 article, she said the whole BtCoV4991 sample had been used up in 2018 during efforts to sequence it.

Much depends on whether one believes Dr. Shi. Her American and British collaborators praised her as an imaginative and forthright scientist trained in the West. Wang Linfa, an infectious disease specialist at the Duke-NUS Medical School in Singapore, told the BBC he visited Dr. Shi’s lab in January 2020 as it was investigating the new mystery pneumonia; its researchers were acting normally, making plans for dinners and karaoke nights, which made him feel there was “zero chance” they feared it threatened them. Dr. Shi has repeatedly expressed her fury at the accusations and blames anti-China bigotry. But she is also presumably under

intense pressure to not undermine her government's narrative of blamelessness.

On May 17, 2021, two months after leaving the Times, I published an article on Medium titled "How I Learned to Stop Worrying and Love the Lab-Leak Theory." It was a play on the subtitle of the movie Dr. Strangelove, but a poor choice because it implied that I believed the theory. I was really arguing that it was time to stop dismissing it as crackpot nonsense and to press China to open its records. It appeared shortly after a similar article by Nicholas Wade, another retired Times science writer, and just as eighteen prominent scientists published a letter in Science titled "Investigate the Origins of Covid-19." Ten days later, the Biden administration ordered the country's intelligence agencies to do so. They reached widely divergent conclusions, which they mostly rated as "low-confidence." If they found new evidence, they have not, as of this writing, shared it publicly.

In September 2021, viruses even closer to Covid than RaTG13 were found in Laos. More recently, scientific detective work, much of it led by Michael Worobey of the University of Arizona, has powerfully bolstered the case for a market jump. He debunked reports that early cases had no market connections; the first was probably a seafood vendor infected on December 10; the previous "patient zero" had been hospitalized on December 8, but for dental surgery; his respiratory symptoms began on the 16th. Dr. Worobey and collaborators showed that most of the positive market samples were found near a single stall and from equipment used to strip fur and feathers from butchered animals. Photographs taken in 2014 had shown raccoon dogs and other exotics for sale at that stall. They further argued that a second variant circulated briefly in the market, implying two animal-human jumps. If true, that would be a dagger in the heart of the lab-leak theory, but not every virologist agrees that both variants—which barely differed—emerged inside the market instead of arriving later in infected humans. In March 2023, it was reported that some market swabs contained raccoon dog

DNA. Those foxlike animals, bred on wildlife farms in China, are known to harbor SARS-like viruses.

As of this writing, the debate is a stalemate. Neither side has dispositive proof. If Beijing does, it is not saying so. In this country, adherents of both sides keep hurling mud. Science journalists are caught in the middle – even editors not committed to either side for partisan reasons keep demanding to know which explanation is most likely so they can assign analyses of which political candidates benefit. Under such pressures, a science reporter finds it nearly impossible to remain objective. If he commits either way and new evidence proves him wrong, he looks foolish. Worse, he will be accused of carrying water for that side. If both sides are willing to lie, embarrassing errors become inevitable and the truth never comes out.