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4 COMMITTEE ON OVERSIGHT AND ACCOUNTABILITY,  
5 SELECT SUBCOMMITTEE ON THE CORONAVIRUS PANDEMIC,  
6 U.S. HOUSE OF REPRESENTATIVES,  
7 WASHINGTON, D.C.

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13 INTERVIEW OF: KRISTIAN ANDERSEN

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Friday, June 16, 2023

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Washington, D.C.

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23 The interview in the above matter was held in the Executive Board Room, Hilton  
24 La Jolla Torrey Pines, La Jolla, California, commencing at 7:29 a.m Pacific time.

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2 Appearances:

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5 For the SELECT SUBCOMMITTEE ON THE CORONAVIRUS PANDEMIC:

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3 Mr. Benzine. We can go on the record.

4 Dr. Andersen, hi.

5 This is a transcribed interview of Dr. Kristian Andersen conducted by the House  
6 Select Subcommittee on the Coronavirus Pandemic under the authority granted to it by  
7 House Resolution 5 and the rules of the Committee on Oversight and Accountability.

8 This interview was requested by Chairman Brad Wenstrup as part of the select  
9 subcommittee's oversight of the Federal Government's response to the coronavirus  
10 pandemic.

11 Further, pursuant to House Resolution 5, the select subcommittee has  
12 wide-ranging jurisdiction, but specifically to investigate the origins of the coronaviruses  
13 pandemic, including, but not limited to, the Federal Government's funding of  
14 gain-of-function research.

15 Can the witness please state his name and spell his last name for the record?

16 Dr. Andersen. Kristian Andersen, A-n-d-e-r-s-e-n.

17 Mr. Benzine. Thank you.

18 Dr. Andersen, my name is Mitch Benzine, and I am the staff director for the  
19 majority staff of the select subcommittee. I want to thank you for coming in today for  
20 this interview. The select subcommittee recognizes that you are here voluntarily, and  
21 we appreciate that.

22 Under the select subcommittee and Committee on Oversight and Accountability's  
23 rules, you are allowed to have an attorney present to advise you during this interview.

24 Do you have an attorney representing you in a personal capacity present with you  
25 today?

1 Dr. Andersen. I do.

2 Mr. Benzine. Will counsel please identify themselves for the record?

3 Mr. Rowley. John Rowley of the law firm SECIL Law, PLLC, representing  
4 Dr. Andersen.

5 Mr. Benzine. Is there also an attorney present representing your employer with  
6 you today?

7 Dr. Andersen. Yes.

8 Mr. Benzine. Will counsel please identify themselves for the record?

9 Ms. Rutan. My name is Alanna Rutan. I'm the chief compliance counsel and  
10 secretary at Scripps Research.

11 And on the phone?

12 Mr. Fridman. Hi, this is Ari Fridman with Hogan Lovells, outside counsel for  
13 Scripps Research.

14 Mr. Benzine. For the record, starting with the remainder of the majority staff,  
15 can the additional staff members please introduce themselves with their name, title, and  
16 affiliation?

17 Mr. Emmer. Jack Emmer, majority staff.

18 Ms. Coleman. Olivia Coleman, press secretary.

19 Mr. Pellegrini. Giancarlo Pellegrini, chief minority counsel.

20 Mr. Romero. Joseph Romero, minority counsel.

21 Mr. Benzine. Thank you all.

22 Dr. Andersen, before we begin, I would like to go over the ground rules for this  
23 interview. The way the interview will proceed is as follows.

24 The majority and minority staff will alternate asking you questions, 1 hour per side  
25 per round, until each side is finished with their questioning.

1           The majority staff will begin and proceed for an hour, and then the minority staff  
2 will have an hour to ask questions. We will then alternate back and forth in this manner  
3 until both sides have no more questions.

4           If either side is in the middle of a specific line of questions, they may choose to  
5 end a few minutes past an hour to ensure completion of that specific line of questioning,  
6 including any pertinent follow-ups.

7           In this interview, while one member of the staff for each side may lead the  
8 questioning, additional staff may ask questions.

9           There is a court reporter taking down everything I say and everything you say to  
10 make a written record of the interview. For the record to be clear, please wait until the  
11 staffer questioning you finishes each question before you begin your answer, and the  
12 staffer will wait until you finish your response before proceeding to the next question.

13           Further, to ensure the court reporter can properly record this interview, please  
14 speak clearly, concisely, and slowly.

15           Also, the court reporter cannot record nonverbal answers, such as nodding or  
16 shaking your head, so it is important that you answer each question with an audible,  
17 verbal answer.

18           Exhibits may be entered into the record. Majority exhibits will be identified  
19 numerically. Minority exhibits will be identified alphabetically.

20           Do you understand?

21           Dr. Andersen. I understand.

22           Mr. Benzine. We want you to answer our questions in the most complete and  
23 truthful manner possible, so we will take our time. If you have any questions or do not  
24 fully understand the question, please let us know. We will attempt to clarify, add  
25 context to, or rephrase our questions.

1 Do you understand?

2 Dr. Andersen. I do.

3 Mr. Benzine. If we ask about specific conversations or events in the past and you  
4 are unable to recall the exact words or details, you should testify to the substance of  
5 those conversations or events to the best of your recollection.

6 If you recall only a part of a conversation or event, you should give us your best  
7 recollection of those events or parts of conversations that you do recall.

8 Do you understand?

9 Dr. Andersen. I do.

10 Mr. Benzine. Although you are here voluntarily and we will not swear you in,  
11 you are required, pursuant to Title 18, Section 1001 of the United States Code, to answer  
12 questions from Congress truthfully. This also applies to questions posed by  
13 congressional staff in this interview.

14 Do you understand?

15 Dr. Andersen. I do.

16 Mr. Benzine. If at any time you knowingly make false statements you could be  
17 subject to criminal prosecution.

18 Do you understand?

19 Dr. Andersen. I do.

20 Mr. Benzine. Is there any reason that you are unable to provide truthful  
21 testimony in today's interview?

22 Dr. Andersen. No.

23 Mr. Benzine. The select subcommittee follows the rules of the Committee on  
24 Oversight and Accountability. Please note that if you wish to assert a privilege over any  
25 statement today, that assertion must comply with the rules of the Committee on

1 Oversight and Accountability.

2 Pursuant to that, Committee Rule 16(c)(1) states: "For the Chair to consider  
3 assertions of privilege over testimony or statements, witnesses or entities must clearly  
4 state the specific privilege being asserted and the reason for the assertion on or before  
5 the scheduled date of testimony or appearance."

6 Do you understand?

7 Dr. Andersen. I do.

8 Mr. Benzine. Ordinarily we take a 5-minute break at the end of each hour of  
9 questioning, but if you need a longer break or a break before that, please let us know and  
10 we will be happy to accommodate.

11 However, to the extent that there is a pending question, we would ask that you  
12 finish answering the question before we take the break.

13 Do you understand?

14 Dr. Andersen. I do.

15 Mr. Benzine. Do you have any other questions before we begin?

16 Dr. Andersen. I don't.

17 Mr. Rowley. Counsel, before we begin I have a couple of questions.

18 Should I feel the need to do so as counsel for Dr. Andersen, will I have an  
19 opportunity to ask him questions to clear the record?

20 Mr. Benzine. Yes.

21 Mr. Rowley. And then, secondly, you referred to issues of privilege. I assume  
22 that the committee has no objection to assertions of attorney-client privilege to the  
23 extent that that's applicable or necessary during the course of the interview.

24 Mr. Benzine. Correct.

25 Mr. Rowley. Thank you.





1 just a --

2 A I teach, but very infrequently. I will teach, do a lecture, for example, but I  
3 don't teach any full courses.

4 Q Okay. Can you go through your career up until joining Scripps?

5 A Sure.

6 Q Briefly.

7 A Briefly, just my scientific career?

8 Q Yeah.

9 A Okay. My scientific career, yeah.

10 I did my undergraduate in Aarhus in Denmark, studying, again, biotechnology and  
11 molecular biology. And then I went on to do exchange here and at the University of  
12 Kent in Canterbury, focused on medical biochemistry mostly.

13 Came back to Denmark and finished my bachelor's degree there before heading to  
14 Cambridge in the U.K. where I worked at the MRC Laboratory of Molecular Biology, which  
15 is under the University of Cambridge, studying cellular and molecular immunology  
16 focused mostly on tolerance mechanisms.

17 And then I changed from there 2009, headed to Boston, joined the lab of  
18 Pardis Sabeti at Harvard and the Broad Institute and studied infectious diseases and  
19 computational genomics. So switched fields there.

20 Mostly focused on endemic diseases in Africa, Lassa fever, for example, which is a  
21 viral hemorrhagic fever, Ebola, which is also a viral hemorrhagic fever, and studied mostly  
22 focused on understanding the emergence and evolution and spread of these viruses.

23 And then in 2015, I joined Scripps Research as an assistant professor mostly taking  
24 over similar research, focused on infectious diseases. I was an assistant professor for 3  
25 or 4 years and then an associate professor maybe for a year or so, and I became a full

1 professor in 2020, I believe. And that work then continues to this day.

2 Q Thank you.

3 Do you currently hold or have you previously held any honorary positions?

4 A I do not.

5 Q Do you currently hold or have you previously held any positions on boards of  
6 companies or nonprofits?

7 A I have. I am the vice president of the Viral Hemorrhagic Fever Consortium,  
8 which is a nonprofit. I am on the scientific advisory board on Invivyd, which is a  
9 company that develops monoclonal antibodies. And then I consult for various entities,  
10 including Invivyd, but other companies too.

11 Q Okay. Thank you.

12 You touched on it briefly, and I'm going to ask you to do it again.

13 A Sure.

14 Q But briefly explain your experiences with emerging disease outbreaks and  
15 which ones that you've been directly involved with or directly studied?

16 A Yeah. So, again, I have a very cross-disciplinary background, so our  
17 research covers quite a lot of bases. But our primary research and my main expertise is  
18 in understanding the emergence of pathogens, whether well known or novel.

19 Prior to the pandemic, we had started out with Lassa fever, describing the  
20 emergence over thousands of years in West Africa and the spread of Lassa virus across  
21 West Africa over the past thousand to hundreds of years.

22 Moved from understanding Lassa to Ebola virus when that epidemic started in  
23 West Africa in 2014. Described the emergence of Ebola, described a single spillover we  
24 saw of Ebola from Guinea and then the spread of that virus across West Africa, including  
25 Liberia, Nigeria, and Sierra Leone, of course.

1           Moving on from Ebola and our Ebola-focused research, when I came to  
2           Scripps Research, the Zika epidemic in the Americas started. We looked at the  
3           emergence of that virus with a particular focus on understanding the emergence here in  
4           the United States which we linked to multiple introductions, in fact hundreds of  
5           introductions from the Caribbean islands into Florida, and then onward spread of the  
6           virus in Florida.

7           We also have done work on West Nile virus, for example, which is endemic here in  
8           the United States. We have a big program focused on understanding the emergence  
9           and evolution and spread of that particular virus.

10          And of course with the emergence of the pandemic, we started focusing on SARS  
11          2 and understanding, on one side, the emergence of the virus, the origin of the pandemic,  
12          but also the onward evolution and the spread of the virus, including early emergence in  
13          the United States.

14          We have several papers on that and the emergence of novel variants like B117,  
15          the Alpha variant, Omicron, and others. And a lot of the focus, in fact main focus, is on  
16          understanding that. So our portfolio extends to multiple different viruses.

17          Q    Thank you.

18          Over the course of your career that you just outlined, have you received grants or  
19          contracts from the Federal Government?

20          A    I have, yes. We have several grants from the National Institute of Health.  
21          And we also have contracts from the CDC.

22          Q    Can you, just the highlights on the NIH ones?

23          A    Sure.

24          Q    And then the highlights on the CDC ones?

25          A    Sure, yeah. We have two main grants from the NIH, one dating back to

1 2017, which is what's called a U19 Center grant, that is focused on systems biology of  
2 infectious diseases. That's specifically focused on understanding the evolution of these  
3 viruses and how that associates with human disease.

4 And this is focused -- initially it was focused on Lassa and Ebola, now also focused  
5 on COVID-19. That is, again, a systems biology grant, so it has a lot of different  
6 components. Most of it is focused on hematological studies, but also on viral evolution  
7 studies as part of that. That's called a Center for Viral Systems Biology, or CVSB.

8 And, again, this is an effort I've been leading since 2017 and that was recently  
9 renewed for another 5 years.

10 And then the other major grant we have is what's called a Euro 1. It's also a  
11 Center grant under the NIH, which is called WARN-ID, or the West African Research  
12 Network for Infectious Diseases. It's under the CREID portfolio, the CREID centers at the  
13 NIH, focused on understanding emerging infectious diseases.

14 And this is a joint grant with what's called a contact PI, my colleague Bob Garry is  
15 what's called an MPI, a multiple PI, and then my former adviser, Pardis Sabeti at the  
16 Broad Institute, is also a PI on that grant.

17 And then we have four African partners on that grant. And, in fact, all the  
18 research is focused in Africa, from Liberia, Sierra Leone, Nigeria, and Senegal.

19 And this is a grant that was awarded in 2020, written just before the pandemic in  
20 June of 2019, I believe reviewed in 2019, and, of course, was initially focused on just  
21 emerging infectious diseases, RNA viruses specifically.

22 Of course, the pandemic happened following the award of that grant, so much of  
23 that research has been focused on COVID-19, but also on malaria and many other  
24 infectious diseases.

25 Q For the record, can you say what the acronym CREID stands for?

1 A I cannot. I think it's --

2 Q Would Center for Research on Infectious Diseases make sense?

3 A It has emerging infectious diseases, so the EID is that.

4 Q Okay.

5 A Honestly, I don't know what the CR is for, but it's got to be center-something  
6 for emerging infectious diseases. Yeah, it's colloquially known as the CREID Network,  
7 which is also what they call it within the NIH portfolio.

8 Q And the CDC ones that you mentioned?

9 A The CDC ones are contracts to -- which is focused here in San Diego, and  
10 that's specifically focused on understanding the evolution and the spread of SARS-CoV-2.  
11 One is focused on especially understanding cross-border transmission of the virus.  
12 We have partners in Mexico on this. But also a big wastewater surveillance program  
13 here to understand how can we use wastewater to surveil for, for example, SARS-CoV-2  
14 variants.

15 And those are funded by two CDC contracts, one that I am the PI on and one that  
16 my colleague at UCSD, Rob Knight, is the PI on. And the one I'm the PI on was initially  
17 for a 2-year period, and we've just been extended for another 2 years.

18 Q Okay. Thank you.

19 I'm going to go down a long list of people and just a yes or no for now --

20 A Sure.

21 Q -- of whether you've had discussions with them regarding origins of  
22 COVID-19 --

23 A Sure.

24 Q -- between end of December 2019 and now.

25 A Yeah.

- 1 Q Dr. Francis Collins?
- 2 A Yes.
- 3 Q Dr. Anthony Fauci?
- 4 A Yes.
- 5 Q Dr. Lawrence Tabak?
- 6 A Not directly, but he has been on calls, yes.
- 7 Q Dr. Hugh Auchincloss?
- 8 A I think he has been on calls too, but yeah, no.
- 9 Q Dr. Cliff Lane?
- 10 A I think on calls as well, yeah.
- 11 Q Dr. David Morens?
- 12 A Via email, he is, yes.
- 13 Q Dr. Ping Chen?
- 14 A No.
- 15 Q Dr. Ian Watson?
- 16 A No.
- 17 Q Dr. Andrew Pope?
- 18 A Yes.
- 19 Q Dr. Victor Dzau?
- 20 A Not directly, but here's the thing. I believe he has been leading, he is
- 21 NASEM, yeah. So he has been involved, but I haven't discussed with him directly.
- 22 Q Dr. Robert Redfield?
- 23 A No.
- 24 Q Dr. Michael Lauer?
- 25 A No.

- 1 Q Dr. David Christian Hassell?
- 2 A Again, he has been on some of these National Academy of Science calls.
- 3 But yeah, no direct conversations.
- 4 Q Dr. Jeremy Farrar?
- 5 A Yes.
- 6 Q Dr. Bob Garry?
- 7 A Yes.
- 8 Q Dr. Michael Farzan?
- 9 A Yes.
- 10 Q Dr. Eddie Holmes?
- 11 A Yes.
- 12 Q Dr. Ian Lipkin?
- 13 A Yes, as part of -- yes.
- 14 Q Dr. Andrew Rambaut?
- 15 A Yes.
- 16 Q Dr. Christian Drosten?
- 17 A Yes.
- 18 Q Dr. Ron Fouchier?
- 19 A Yes.
- 20 Q Dr. Marion Koopmans?
- 21 A Yes.
- 22 Q Dr. Peter Daszak?
- 23 A Yes.
- 24 Q Dr. Aleksei Chmura?
- 25 A I don't know who that is.



1 Q So no?

2 A Yeah, I guess that's a no. But, again, I get a lot of emails, so --

3 Q Yeah. To the best of your recollection.

4 A Yeah, no.

5 Q Dr. Kevin Olival?

6 A No.

7 Q Dr. Michael Worobey?

8 A Yes.

9 Q Dr. Jonathan Pekar?

10 A Yes.

11 Q Dr. Florence Debarre?

12 A Yes.

13 Q Dr. James LeDuc?

14 A I think we were on a panel together really early on in 2020. I think it was  
15 him, but I'm not totally sure. But probably, yes.

16 Q Dr. Shi Zhengli?

17 A No.

18 Q Dr. George Gao?

19 A Yes.

20 Q Dr. Ralph Baric?

21 A Yes.

22 Q Can you go a little bit into more detail on when and how you spoke to  
23 Dr. Gao?

24 A Dr. Gao I have reached out to via email a few times, and then we  
25 have -- dating back to probably 2021, again when we investigated, we had these two

1 science papers looking at the early distribution of cases and the distribution of positive  
2 sampling from the Huanan Seafood Market.

3 We realized at the time that there was sequencing data from the market that had  
4 not been released into the public domain dating back to 2020, early 2020, January,  
5 February, and I reached out to George Gao as part of that. Had a few back-and-forth  
6 conversations but never actually talked in any detail about any of it.

7 Then we have been on one conference call under the WHO SAGO, where Dr. Gao  
8 was on, and there was conversations back and forth about the origin, relating to this  
9 particular data I mentioned which was recently released and which we wrote a report on  
10 and which they wrote a paper on.

11 Q So the conversations with Dr. Gao weren't like the early 2020 conversations?

12 A No. I did not have any direct, and I don't think I was on any emails with  
13 Dr. Gao in 2020, no.

14 Q Last person. Dr. Ben Hu?

15 A Yeah. I'm not even sure who that is. I think he was a researcher at the  
16 Wuhan Institute of Virology?

17 Q Uh-huh.

18 A Yeah, no.

19 Q For this same time period, did Dr. Holmes ever mention speaking with  
20 Dr. Ben Hu?

21 A No. I don't believe he has spoken to him. I don't believe he knows who  
22 he is.

23 Q I'm going to ask you the same kind of questions, if you've had any  
24 interactions with the following institutions for the same time period.

25 A Sure.

1 Q The Wuhan Institute of Virology?

2 A I've had contact with the Wuhan Institute of Virology, the former director,  
3 about SARS 1, nothing about SARS 2. But we reached out because they had some early  
4 sequence data on SARS 1, and we were interested in understanding the origin of SARS 1  
5 more fully.

6 So I had a back-and-forth initiated by Ling Parwan (ph) to basically get some  
7 clarifying questions I had on the naming and the data early, but focused on SARS 1. I've  
8 not had any conversations about SARS 2 with anybody at the Wuhan Institute of Virology.

9 Q The Wuhan Centers for Disease Control and Prevention?

10 A No.

11 Q The Chinese Centers for Disease Control and Prevention?

12 A Nothing direct, but as I mentioned, of course, Dr. Gao and Dr. Liu, who has  
13 been on these WHO calls, so a part of those conversations, yes. But nothing directly  
14 with the Centers for Disease Control and Prevention.

15 Q Wuhan University?

16 A I believe we reached out about some of the early data. I don't believe that  
17 we had any conversations with them about any of the data. I don't think they got back  
18 to us.

19 Q The Chinese Academy of Sciences?

20 A Same thing. Dr. Gao is a member. But no, no direct.

21 Q The Academy of Military Medical Sciences?

22 A I don't -- no. I mean, unless like Liu, for example, is affiliated with them,  
23 which I don't know. But, no, I haven't had any conversations.

24 Q The Fifth Institute under the National Defense Ministry of China?

25 A I don't even know what that is, so, no.

1 Q I want to introduce what we'll mark as majority exhibit 1.

2 [Andersen Majority Exhibit No. 1

3 Was marked for identification.]

4 Mr. Benzine. This is --

5 Mr. Rowley. I'm sorry. These are multiple copies of just one page?

6 Mr. Benzine. Yes, just one page.

7 Dr. Andersen. Yep.

8 BY MR. BENZINE:

9 Q This is an email from Dave Morens --

10 A Yeah.

11 Q -- to Dr. Daszak, Dr. Garry, yourself, Dr. Holmes, Jason Gale, a reporter at  
12 Bloomberg, Dr. Rasmussen, Robert Kessler -- who I'm not sure if he's a doctor, so I  
13 apologize --

14 A Sure.

15 Q -- and Dr. Goldstein. And for the record, it is Bates-numbered  
16 GARRY0001774.

17 Do you remember this email?

18 A I remember this email, yes, I do.

19 Q We've talked about it, we just talked about your contacts with him.

20 A Yeah.

21 Q But who is David Morens?

22 A So I don't know David directly. Again, I got looped in as I think he has  
23 been -- he has known Peter Daszak for many years, and I believe he might have been  
24 involved in some of the grants from Peter. So I did not know David. I don't know if this  
25 is the first email I received from him, I can't remember that. But that was the first time I

1 was introduced to him.

2 I believe he is -- he's at the NIH, but what role he has at the NIH, I don't actually  
3 know. He has done, I believe -- so we worked a lot in Sierra Leone at the Kenema  
4 Government Hospital. I believe David has actually done some of the very early research  
5 on Lassa fever back in maybe even the '70s and '80s there. And, of course, that's a site  
6 we are working at, so he has been doing some of the foundational work there.

7 But I have not had any direct contact with David. I don't know David. I just met  
8 him 3 days ago, 2 days ago when I was at the CREID -- annual CREID meeting at the NIH,  
9 was the first time I actually met David in person.

10 Q All right. Thank you.

11 I want to read two parts of this email.

12 A Sure.

13 Q The first line says: "As you know, I try to always communicate on Gmail  
14 because my NIH email is FOIA'd constantly."

15 And then the last line says: "Don't worry, just send to any of my addresses, and I  
16 will delete anything I don't want to see in The New York Times."

17 And for the record, this email is originating from Dr. Morens' personal email  
18 account, his Gmail account, not his NIH email account.

19 A Yes.

20 Q Was it -- understanding that you hadn't really communicated with him  
21 before this time frame -- was it common to communicate with him via personal email  
22 instead of NIH email?

23 A Again, I've not communicated with David. I have been on a few email  
24 chains like this one, which is an email to -- from David to Peter Daszak that I am cc'd on,  
25 and I have probably responded back to some comments that they would have made on a

1 few occasions. But I've had no direct email contact with David.

2 Q I'm going to run through some of the same names that we did before.

3 A Sure.

4 Q But this time, to the best of your recollection, whether you've ever  
5 communicated with these people via a personal email or a personal cell phone instead of  
6 a work email.

7 A Well --

8 Mr. Rowley. At any time?

9 BY MR. BENZINE:

10 Q Over -- regarding COVID.

11 A Yeah. So just one clarifying thing, because I have been -- up until recently, I  
12 have always used my Gmail for work-related communication, and I have my official  
13 Scripps email was forwarding to my Gmail for the simple reason that I preferred using the  
14 Gmail interface to Outlook, but also because of my previous work at the Broad Institute  
15 and the Harvard, for example, where some people are still emailing me to those emails,  
16 and all of those forward to my personal Gmail, and everybody knows that I'm using my  
17 Gmail.

18 So I consider my Gmail to be, up until recently again, has been the one that I have  
19 primarily communicated with.

20 Q So I appreciate that. For clarity of the questions, we're more concerned if  
21 you're communicating with government officials over their Gmail --

22 A Okay, yeah.

23 Q -- versus your Gmail.

24 A Sure, sure, sure.

25 Q So if you've ever communicated with these people and noticed, to the best

1 of your recollection, that it was on a personal email account from them.

2 A Okay, yeah.

3 Q Dr. Collins?

4 A No.

5 Q Dr. Fauci?

6 A No.

7 Q Dr. Tabak?

8 A No.

9 Q Dr. Auchincloss?

10 A No.

11 Q Dr. Lane?

12 A No.

13 Q Dr. Morens?

14 A No -- well, this one, yes, but yeah.

15 Q Dr. Chen?

16 A Who's that?

17 Q Ping Chen.

18 A No.

19 Q You said you didn't --

20 A No.

21 Q Dr. Ian Watson?

22 A No.

23 Q Dr. Andrew Pope?

24 A No.

25 Q Dr. Victor Dzau.

1 A No.

2 Q Dr. Robert Redfield?

3 A No.

4 Q Dr. Michael Lauer?

5 A No.

6 Q And Dr. David Christian Hassell?

7 A No.

8 Q All right. Thank you.

9 So I want to shift gears from kind of the housekeeping questions to the origins of  
10 both COVID-19 and emerging pathogens generally.

11 A Sure.

12 Q Some baseline questions about the COVID-19 pandemic.

13 A Yeah.

14 Q Is investigating the origins of COVID-19 important?

15 A Yes.

16 Q Is discovering the origins of COVID-19 important?

17 A Yes.

18 Q Can you elaborate as to why?

19 A It's the first major pandemic in a lifetime over a hundred years ago, so  
20 logically understanding what caused this is an important question, both to get a better  
21 sense of just this pandemic itself, but also, more importantly, to understand the risk  
22 factors that led to this particular pandemic so we can prepare better for future  
23 pandemics.

24 Q How does the knowing the origins, to the best of our ability of finding the  
25 origins, help prepare for future pandemics?



1           A     For example, this current pandemic clearly appears to be linked to the illegal  
2 wildlife trade in China which we have for some time known to be a risk factor -- it has  
3 happened previously, not just in China but elsewhere -- and understanding those risk  
4 factors so we can go and mitigate -- for example, either regulating or banning wildlife  
5 trade -- is important.

6           We have known, again for a while, that this is a risk factor.   We have not known  
7 for a while that coronaviruses could, in fact -- let me rephrase that.

8           We knew that there was a risk to coronaviruses that could potentially cause novel  
9 pandemics because we have seen the emergence of multiple different coronaviruses,  
10 most importantly SARS 1 in 2002, and then with multiple separates below as later on too.  
11 But that never led to pandemics.   It was mainly somewhat contained epidemics.

12           What we have learned with COVID-19 is that the coronaviruses, and specifically  
13 the sarbecoviruses that we are dealing with here, have the potential to cause pandemics  
14 that can really disrupt just our daily lives.

15           So understanding again the risk factors leading up to those events is exceptionally  
16 important so we can -- so, again, we can help mitigate future risk of this happening again.

17           Q     Do you think we will ever know for sure where COVID-19 originated?

18           A     I think it depends on what the question is.   I think if you look at the  
19 scientific evidence, it points very clearly to the illegal wildlife trade in China.   So from  
20 that perspective, I think what we know is how this particular virus emerged.

21           We don't know the upstream events of that exactly.   We don't know exactly  
22 which animals we are talking about.   We don't know if they were farmed or if they were  
23 wild animals.   I think there's a lot of questions that we still need to clarify to get a more  
24 broad view of exactly how this pandemic emerged and originated.

25           But I will say, the level of details that we have linking this particular pandemic to

1 the illegal wildlife trade in China is at a level of accuracy that we typically don't get for the  
2 emergence of novel virus and even emergence of known viruses, like Ebola, for example.

3 Being able to identify individual intermediate hosts, especially when those animals  
4 have been removed prior to sampling, is virtually impossible, and it's not something we  
5 typically have for pandemics.

6 I will say on the origin of this particular pandemic, we have more clarity on the  
7 origin than we would typically do on epidemics because pandemics don't happen very  
8 often.

9 Q You might've hinted at the answer to the next question.

10 A Sure.

11 Q Do you believe the origin of COVID-19 is still unsettled?

12 A I still believe that there are many missing pieces in understanding more fully  
13 the origin of the pandemic.

14 To the question of, do I believe it came -- it's linked to the illegal wildlife trade in  
15 China, and specifically Huanan Seafood Market, versus, for example, an accidental lab  
16 accident, in whichever form that might take, absolutely. I think that the signs very  
17 clearly point to this being linked to the illegal wildlife trade in China.

18 Q Do you believe the intelligence community plays an important role in  
19 investigating the origins of COVID-19 or other emerging diseases?

20 A I think -- primarily I think it's a scientific question. Of course I believe that  
21 when things like this occur, we should use everything we have at our disposal to more  
22 fully investigate the origin, including the intelligence community. I have been very  
23 supportive of those investigations. So from that perspective, yes. But ultimately, I see  
24 it as a scientific question.

25 Q And you just kind of touched on this, but for clarity of the record, where do

1 you believe the origin of COVID-19 is?

2 A It's certainly in China. And I believe that, again, the scientific evidence  
3 clearly points to this being emergence from the illegal wildlife trade at the Huanan  
4 Seafood Market in Wuhan.

5 Q So not -- the market is not an epicenter or early superspreader, but the  
6 actual origin?

7 A The actual origin, yes. I believe that, again, the confluence of evidence,  
8 some of which is our own research but also other research, clearly points to the Huanan  
9 Seafood Market not just being the early epicenter but, in fact, also being site of the early  
10 emergence of the virus.

11 Q We'll spend some more time on it later. So we don't need to go too in  
12 depth right now. But can you briefly run through the why?

13 A Absolutely. I think primarily the risk factors up front is that we know that  
14 the sarbecoviruses, we know that a lot of them, we know they're highly diverse. We  
15 know they live in many animals in which we get into contact with frequently.

16 A very big risk factor here is the illegal wildlife trade, or wildlife trade in general,  
17 not just in China but across the world.

18 And we know that we, as humans, are very frequently exposed to these particular  
19 viruses.

20 Of course, the vast majority of these viruses do not lead to pandemics. They  
21 might lead to initial infections but don't actually further transmit in the human  
22 population.

23 That, in itself, is a big risk factor, and it means that we get into contact with these  
24 types of viruses frequently.

25 Compare that, for example, to a handful of scientists sampling bat caves in which

1 they can hope to sample maybe a few thousand samples on a single trip. We have  
2 orders of magnitude many more encounters with these types of viruses on a daily basis all  
3 across the world.

4 So that, in itself, is a really important data point here because it shows what is the  
5 prior risk of this happening, given no other evidence.

6 Now, we do have evidence?

7 So one key thing we can do is to look at where are the early cases, and the early  
8 cases clearly cluster around the Huanan Seafood Market.

9 We can look at how did we even realize there was a pandemic, or how did we  
10 realize there was an early outbreak of a novel coronavirus. That was made at the level  
11 of the hospitals in Wuhan, doctors there realizing that they had patients that had novel  
12 pneumonias, and they linked back to the Huanan Seafood Market.

13 So not only do we have the early cases clustering around the market, the early  
14 hospitalizations themselves also linked to the market.

15 Separate data point here is early excess deaths, which now take longer, but that  
16 also points to where were the majority of the early cases. And, again, while our  
17 resolution here is less, it's exactly the region of Wuhan, north of the Yangtze River, where  
18 the Huanan Seafood Market is located.

19 So the early epidemiological data clearly points to this particular market.

20 If we go inside the market itself, what we also know is that they sampled from the  
21 market itself. And when we look at where do we find the virus, the virus very  
22 specifically clusters in the areas of the market where we now know that they were selling  
23 illegal wildlife.

24 And the density, again, of the clustering here is very clearly located in places in  
25 which we now know too that they were selling things like raccoon dogs, civets, bamboo

1 rats, and other live animals, none of which were sampled from the market.

2 We know too that when we're looking at where do we have the majority of this  
3 clustering, we also find molecular evidence of these animals being present, like raccoon  
4 dogs, like civets, like bamboo rats, which means that in a situation in which we expect  
5 there to be, if it had come in via infected animals, we would expect to see evidence of the  
6 animal commingling with the evidence of the virus itself, and that's, in fact, exactly what  
7 we see based on some of this recently released data from the China CDC, but the data  
8 itself is from January, February 2020.

9 So you take all of those together and it paints a very clear picture of just the early  
10 epidemic, very specifically, by pointing to that market.

11 Then what we also see is that if we just look at the number of spillovers that we  
12 believe have happened here -- and this is based on early genetic data both on China but  
13 also from elsewhere outside China -- what you're sampling, the same sort of viruses that  
14 you see early in the epidemic, points to at least two spillovers, both of which are  
15 associated with the Huanan Seafood Market.

16 So you take all of that combined -- and I should say that Huanan Seafood Market is  
17 the only place in which we see this picture. There is no other area of Wuhan in which  
18 we can show the same association, it very clearly is the market.

19 We know the market itself based on, for example, social media check-ins, social  
20 media traffic, is that the Huanan Seafood Market is not a well-visited place in Wuhan  
21 compared to many other supermarkets and concert venues and whatever else we have.

22 So the Huanan Seafood Market itself is an extremely unlikely place for a  
23 superspreading event, for example, but is, in fact, exactly the place we would expect for a  
24 zoonosis because, again, we've seen it occur with SARS, with SARS 1.

25 We know the data from early case counts within the market is not supportive of

1 this merely being a superspreading event, that it is -- in fact, there is nothing suggesting  
2 that it is a superspreading event. Again, this is based on just early epidemiological data.

3 And then I think the final thing probably is just the timing of all of this where our  
4 own studies, as well as other studies, sort of time this in about mid-November or so of  
5 2019 -- mid- to late November, a little bit of uncertainty in this -- which is exactly the time  
6 of the SARS 1. SARS 1 also initially started in November of 2002.

7 And I think this timing aspect is really important because I don't fully understand  
8 the mechanisms of why it would be those months, but it probably has to do with bats, bat  
9 reproductive cycle, how the bats are roosting and how they get into contact with animals,  
10 other than farm them, and is funneled through to the -- via the wildlife trade.

11 Q Thank you. That's very helpful.

12 I want to talk a little bit about the early case definition, particularly like as they  
13 were testing people.

14 A Sure.

15 Q So my understanding, and please correct me if I'm wrong, is the early case  
16 definition was people with ties to the market. Is that --

17 A That is not correct, no. When we're looking at the way in which it is looked  
18 at, the WHO report, which is a retrospective analysis of this, tied to the market, was not  
19 required, and we know this for certain because there are several cases that are not  
20 directly tied to the market.

21 In fact, when we do this clustering analyses, and we see the cluster around the  
22 market, we can do that during all the early cases in December 2019, or we can just say,  
23 like, well, let's look at the ones that don't actually have a link to the market, so they  
24 reported no specific link to the market, they cluster even closer to the market itself, and  
25 they are closer to the market than if we just consider all the cases.

1           We also have several of the early cases are, in fact, not in this area of Wuhan.  
2           It's not to say that all the cases are clustering around the market. There are multiple  
3           cases that are detected elsewhere in Wuhan, including very far from the market itself.

4           Q    Thank you.

5           I want to shift away from COVID specifically to generally how novel viruses may  
6           appear and emerging pathogens may appear. We talked about this a little bit, so you  
7           can be brief.

8           What do origins of emerging viruses tell us to help prepare? How does the origin  
9           question specifically help prepare for future pandemics?

10          A    I mean, it's a question of, if airplanes fall out of the sky, we want to know  
11          why, so the next time hopefully we can fix the wing and say, like, it wasn't glued on  
12          properly, so let's get it glued on properly.

13          Pandemic origin research is the same, where we have the emergence of a novel  
14          pathogen. It's extremely disruptive. We have had probably close to 20 million deaths  
15          from this virus. The economic disruption is in the trillions.

16          We want to understand what led to this particular pandemic so we can  
17          understand the risk factors, so hopefully we can go in and mitigate.

18          We can't prevent them, and we have to realize that the emergence of novel  
19          pathogens in the face of climate change, deforestation, and changes in land use, as well  
20          as just population expansion, is that what we have observed over the last several years,  
21          with the emergence of COVID-19, is going to be a more recurring, frequent event in the  
22          future.

23          So we have to do everything we can to mitigate. And if we can  
24          understand -- again, we know the wildlife trade is a risk factor. This is not novel. We  
25          have now proven -- or not proven -- but we have very strong evidence indicating, here is

1 the biggest disruptive pandemic, links exactly to the wildlife trade.

2 We knew that was a risk factor, but there are specific sub risk factors within that.  
3 For example, are we talking about farm animals versus live-caught wild animals? Are we  
4 talking about risk factors around co-housing these animals prior to going down the chain  
5 of being sold at wet markets, for example. Is, again, that understanding these little risk  
6 factors will really help mitigate, because we can't -- a lot of this can't be banned, but it  
7 can be better controlled, and it can be better monitored.

8 For example, you can imagine that we say we will allow a certain trade of wild  
9 animals, but they have to be tested prior to going into the markets. So we set testing  
10 protocols in place. We have bigger regulation of where exactly are these animals  
11 coming from. We don't want them to be wild-caught, we want them to be farmed, and  
12 we want to have biosecurity on these farms.

13 These are the kinds of things that we can do based on just better understanding of  
14 what actually lead to these events.

15 Q Thank you.

16 So there are kind of -- let me know if this is correct -- two viable pathways for an  
17 emerging virus, at least two ways that a virus has gotten into human population, zoonotic  
18 or a laboratory research-related incident. Is that correct?

19 A That is correct, yes.

20 Q In, like, a sentence, what is a zoonotic event?

21 A A zoonotic event is a virus that moves directly from an animal into the  
22 human population.

23 Q Okay. And they have happened before?

24 A They have certainly happened before. And I think what's an important  
25 thing to understand here is that they happen extremely frequently, but we don't notice



1 most of them because these viruses don't go on to causing outbreaks, they don't go on to  
2 causing epidemics, they certainly don't go on to causing pandemics.

3 Luckily, these major public health emergencies are still relatively rare. So, again,  
4 they happen all the time, but they happen under the radar. We simply just do not  
5 notice them.

6 Q So are two of the big ones before SARS 1 and MERS, is that fair to say, two of  
7 the big zoonotic events before?

8 A No. All prior epidemics and pandemics have been zoonotic. And when  
9 we are talking about small clusters of outbreaks too are also, in the vast majority of cases,  
10 linked to zoonotic events. So, again, the zoonotic events are extremely frequent.

11 Q But pandemic, like, pandemic-wise, SARS 1 and MERS were zoonotic events?

12 A So they're not -- sure, but they're not pandemics.

13 Q Epidemics?

14 A We're looking at -- epidemics, yeah -- MERS, again, isolated clusters. If we  
15 talk about just -- I mean, these are just -- now you're just mentioning the coronaviruses.  
16 We have Ebolas and the Zikas and many others that we have to consider.

17 But we just focus in on the coronaviruses, then, yes, those are some of the major  
18 ones, but we also have the common cold coronaviruses which have been with us for a  
19 long time, which would have been a novel emergence from an animal host too, to cause  
20 potentially wide-scale and significant pandemics that have not been recorded in history.

21 Q Were some of the spillover prevention strategies that you mentioned  
22 regarding the wildlife trade instituted in China after SARS 1?

23 A I do not know the details of exactly what was instituted. But, yes, China  
24 had several efforts, including their national surveillance program for emerging pathogens  
25 that was set up as a result of SARS 1, which failed to detect SARS 2, because, again, this

1 was actually done at the level of the hospitals and not, like the China CDC would like to  
2 report, as part of the system.

3 There were regulations to the wildlife trade certainly immediately following the  
4 epidemic of SARS 1, similar to what was instituted almost immediately following the  
5 emergence of SARS 2, where wildlife trade, to a large extent, was banned.

6 The same thing happened, and I think in general this was not supposed to happen.  
7 SARS 1 was something that China certainly covered up for a long time and was, I believe,  
8 embarrassing, because, again, clearly linked to the illegal wildlife trade. And I think they  
9 did a lot of things to try and at least make it appear as if this was not going to happen  
10 again, except of course it did.

11 Q Do you think China covered up the emergence of SARS 2 at all?

12 A Covered up is a strong word. I will say, have they given us all the  
13 information on the emergence of this virus? No. Have they been obfuscating? Yes.

14 Q In your experience, what would you consider a laboratory or a  
15 research-related accident?

16 A There are multiple versions of laboratory accidents that could lead to human  
17 infections.

18 Q Would it be better if I just ask, like, four scenarios, and you can just say yes?

19 A Sure, yeah.

20 Q Okay. A researcher manipulating viruses in the lab and getting infected?

21 A That's a -- yes. That's a, quote/unquote, lab leak, yes.

22 Q A researcher conducting serial passage on a naturally occurring virus and  
23 getting infected?

24 A Yes.

25 Q A researcher simply working with a naturally occurring virus in the lab and

1 getting infected?

2 A Yes.

3 Q A researcher getting infected during field work and bringing it back to the  
4 lab?

5 A Well, that is where there is a gray zone, because if a researcher goes into a  
6 bat cave, versus if a farmer goes into a bat cave, if the researcher gets infected, that's not  
7 a lab leak. That's a natural occurring into an individual who is engaged in research  
8 activity.

9 But these kinds of encounters, again, happen frequently because people enter  
10 caves all the time. Cave tourism go into caves a lot more than researchers do.

11 So I will say this is a gray zone. It depends on where the infection happens.

12 I'll say in our papers on this, we have not specifically considered this particular one  
13 as a lab-associated accident because, again, it would be something that would happen in  
14 the field.

15 Q You discussed a little bit zoonotic spillover prevention strategies. What  
16 would laboratory- or research-related prevention strategies look like?

17 A Yeah. I think there is -- I'll say, a few things we have learned during the  
18 pandemic is that we have learned a lot about the diversity of coronaviruses, specifically  
19 SARS 1-like and SARS 2-like coronaviruses.

20 Prior to the pandemic, we didn't really know a lot -- we knew a lot about SARS  
21 1-like viruses, but we didn't really know a lot about SARS 2-like viruses. Multiple other  
22 very similar viruses, the BANAL viruses, for example, we have found these in pangolins,  
23 and we have found these in bats, and they're very like SARS 2.

24 We also know they can infect human cells. They utilize the ACE-2 receptors,  
25 similar to SARS 2. And I think that, in itself, raises some questions about how we survey

1 for these viruses, how we manipulate them in the labs, how we try to culture them in the  
2 labs.

3 Where previously this was typically done in a BSL-2 environment, biosafety level 2  
4 environment, maybe a biosafety 2+, as it's called, which is respiratory precautions, would  
5 probably be the way to do it.

6 And this is not just in China, to be clear. This is generally the standard for  
7 culturing novel bat viruses, not just coronaviruses. In fact, my own lab is approved to do  
8 this, although we have never done it successfully, but the approval of this is typically at  
9 biosafety level 2.

10 I think we need to reconsider that. I don't think we need to stop that work,  
11 because I think that work is what led to our antivirals, our vaccines. I think the work  
12 itself, I think, is very important. But I think we need to reconsider whether this should  
13 be at BSL-2 versus, for example, BSL-3.

14 And my own view on this is that given what we have learned during the pandemic,  
15 I believe that our biosafety levels around these viruses in general needs to be upgraded  
16 and better regulated internationally. The issue here is that there are no international  
17 standards for any of this, and I, frankly, think that it's time that we get those.

18 Q Thank you.

19 And the premise of this question, I'm not saying it hasn't been investigated  
20 thoroughly, but is it important to investigate both possible pathways thoroughly?

21 A I think that what's important to understand here is that there isn't one  
22 specific pathway that's being studied. Like, our own studies were not focused on  
23 understanding specifically a zoonosis versus a lab leak.

24 Our initial hypothesis -- my initial hypothesis -- was a lab leak. But the studies  
25 are agnostic to the potential emergence whether that be lab or the zoonosis.

1           Had all the early cases clustered around the Wuhan Institute of Virology would  
2 clearly point to the lab leak. Had any evidence of this particular virus or parts of this  
3 virus having been at, for example, the Wuhan Institute of Virology prior to the pandemic  
4 would very clearly point to a lab leak.

5           So the question itself is agnostic to where might it come from. And I think it's  
6 important to understand that our studies is just looking at what is the evidence and what  
7 does the evidence point to, and clearly it points to a natural emergence via the illegal  
8 wildlife trade in China.

9           Had it been a lab leak, had it been associated with the Wuhan Institute of  
10 Virology, I suspect that that's where the data itself would've led us to.

11          Q    I have about 10 or so minutes left in this hour. I'm going to run  
12 through -- and we can do this quickly -- kind of like when you first heard of what became  
13 COVID-19, what the process was.

14          A    Sure.

15          Q    So it was first reported December 30th, 2019, on ProMED, which I've now  
16 gotten wrong and right like three different times. There's PubMed and ProMED. I'm  
17 learning all kinds of things.

18          A    Sure.

19          Q    And then China first officially reported it December 31st. Is that around  
20 when you first learned?

21          A    I think I probably didn't. Like, maybe the 1st or the 2nd of January or so. I  
22 didn't get it directly from ProMED. I think I probably got it from colleagues, Twitter or  
23 something like that, yeah. But early new year.

24          Q    Do you recall when the genomic sequence was first publicly available?

25          A    January 10th, yeah.

1 Q Do you recall who made it publicly available?

2 A Yes. My colleague, Eddie Holmes, Wyatt Biological, which is now hosted by  
3 my lab actually, but my colleague, Andrew Rambaut.

4 Q Did he -- do you recall who he made it publicly available on behalf of?

5 A Fong Shun (ph), so, yeah, who is an independent researcher in China.

6 Q And the next day his lab was shut down for recertification. Do you know  
7 what that means?

8 A I have no idea what that means. I do know that the retaliation against  
9 Fong, in general, has been significant, yes.

10 Q Can you elaborate a little bit more on what the retaliation that you know of  
11 was?

12 A That I know of is that his career paths, his ability to be -- to do research, was  
13 severely hampered following that release of that genome.

14 Q So with that, and you said before China hid -- "hid" may be a strong  
15 word -- but SARS 1 data, has obfuscated some of the research into SARS 2. Is that  
16 common? Do you believe that's common in Chinese practice to gag or --

17 A This is not specific to China. We can look at our own response to SARS 2.  
18 Did we cover that up? To an extent, because we weren't really testing for it. I have  
19 seen the same sort of practices early. It's important that we understand early during an  
20 outbreak. We don't yet know it's going to be a pandemic. It's, generally speaking,  
21 chaos on the ground.

22 I've seen this personally. I was in West Africa during the Ebola outbreak, for  
23 example, just as that was emerging, during; after too. And it was the same sort of things  
24 where, I think, what will later be seen as obfuscation is common practice. And there's a  
25 few reasons why, which is that maybe it'll just go away. I mean, China closed down the

1 Huanan Seafood Market.

2 And if you look at the experience with SARS 1, in which they reacted very slowly,  
3 markets remained open during the early phase, and they were obfuscating. They did  
4 not -- I mean, they didn't notify the WHO, for example. That took months. Is that they  
5 acted much faster here. They shut down the market. Later on they shut down the  
6 wildlife trade. They also shut down Wuhan, the city itself.

7 And I think maybe they thought that while that should have been sufficient -- and  
8 had it been SARS 1, it would be, have been sufficient. We would never have had a  
9 pandemic. I think it would just have been stopped there, and then, well no big deal.  
10 Except this wasn't SARS 1, this was SARS 2.

11 So from that perspective I think is, again, is not just common practice. And I will  
12 say, a lot of the early communication and evidence that came out of China from Chinese  
13 researchers, as you say, these are Chinese researchers, it's not China the state we're  
14 talking about, it's not the CCP I'm talking about, I'm talking about Chinese researchers,  
15 early in January and to an extent in February too, via their own China CDC Weekly, for  
16 example, publishing really raw accounts just on what was going on, on the ground, the  
17 disease itself, the virus, identification of the virus.

18 So I will say, from that perspective, I think a lot of that was actually fast, and it was  
19 open. But, yes, there was obfuscation. There was probably the hope that maybe this  
20 won't go anywhere. And that has certainly continued and only massively increased to  
21 this day, has gotten much, much worse, of course, I would say, post that January,  
22 February of 2020.

1

2 [8:29 a.m.]

3

BY MR. BENZINE:

4

Q What has changed? What have you seen that's like post January,

5

February 2020 that's gotten worse?

6

A I think the restrictions on the flow of communication and data where I think

7

the -- I mean, just genome sequences from viruses, for example, stopped. Nothing else

8

came out of China for quite a while. And while I don't know the details, there were

9

regulations on what you can publish, who can publish, it needs to be approved at the

10

ministerial level. I think things like that, which happened post January and February,

11

and it really stifled, I think, a lot of the research that would then come.

12

Q Can you explain the importance of the sequence of the virus and what the

13

sequence can tell us?

14

A The sequence of the virus, first of all, most importantly, tells us what this

15

virus is. That just requires one genome. Once we have that first genome, we can start

16

to develop diagnostics, therapeutics, and vaccines. That's really critical. That just

17

requires one genome.

18

Once we start to get additional genomes, especially as they are associated with

19

early cases, is that we can start to get an understanding of the timing of these events.

20

And the reason for that is that while genomes mutate at a pretty constant rate, and it

21

allows us to do what's called a molecular clock, and then we can use that to figure out

22

what do we think is the most likely timing of the outbreak itself.

23

And I did -- in fact, I think I probably did the earliest. And Aleksei was on this, as

24

well as my colleague Andrew Rambaut, and the very earliest analyses we did pointed to

25

mid-November or so, late November, maybe even early December to the timing of this,



1 and that's only held up as we have gotten additional genomes.

2 Then we can start using these genomes, too, to understand how does this connect  
3 to the wider diversity of viruses out there; i.e., where is this most likely coming from?  
4 For example, identifying bats as the very likely reservoir of this.

5 It's easy, right? We can start to just look at is there anything unusual around this  
6 virus, but with the understanding that because this is a pandemic virus, it has to be  
7 unusual, quote, unquote, unusual. If it wasn't, it wouldn't lead to a pandemic.

8 We can look at novel features of this virus and try and get an understanding of  
9 what are some of the specific features of this virus that might make it more transmissible,  
10 for example, than SARS-1. The furin cleavage site is an example that's been talked  
11 about, which I certainly think is important. The receptor binding domain of a virus is  
12 also another critical importance.

13 But I think what's really important to understand here, though, is that all of these  
14 features come together to create a whole virus. It's not a single feature that makes this  
15 a pandemic virus. It's the whole virus that makes it a pandemic virus.

16 Importantly, what we know from previous lab leaks, for example, of SARS-1, flu of  
17 1978 -- '76 -- is a good example, too, is that because we already knew that this virus  
18 actually existed, we knew that it was in labs, we knew that if it was a natural emergence,  
19 it must have evolved over time with flu, for example, and it didn't.

20 So then it can't really be a natural emergence. It has to be associated with some  
21 sort of -- most likely associated with another activity. And probably the flu is associated  
22 with vaccine trials, probably with a challenged virus that then led to an epidemic. Not,  
23 quote, unquote, a lab leak, I would say, but associated with human activity.

24 SARS-1 is a good example where you have what's initially a novel virus but then  
25 we see it because it causes an epidemic and it gets cultured in labs and that can then lead

1 to lab leaks.

2 What's really important to understand here is that that virus has already, quote,  
3 unquote, been preselected from its human infectivity. That's why we're studying it.

4 Most viruses, as I said, the vast, vast, vast majority of viruses we don't notice. So  
5 we don't study them in labs because we don't know about them. And that's why the lab  
6 leak of a novel virus versus the lab leak of a known virus is probabilistically very, very  
7 different.

8 But very importantly is that if we had had any evidence of SARS-2, for example, of  
9 parts of SARS-2 having been used for research before, we could have seen that directly  
10 from the sequence itself, and we could have, based on that, could, for example, have  
11 associated it with research activity. It's just SARS-2 doesn't actually have any of those  
12 features.

13 Mr. Benzine. Thank you.

14 My time is coming to a close, but if you will absolve me of a couple extra minutes,  
15 I will take them.

16 I'm going to introduce majority exhibit 2.

17 [Andersen Majority Exhibit No. 2

18 Was marked for identification.]

19 BY MR. BENZINE:

20 Q This is a page from Dr. Farrar's book called "Spike." Have you read his  
21 book?

22 A I have not read it in detail, but, of course, I have been involved in the -- I was  
23 interviewed. Not by Jeremy himself, I should say, but by the author.

24 Q Okay.

25 In the middle of the page on the right-hand side --

1 A Yep.

2 Q -- underneath the little coronavirus dots, it says, "Eddie" -- I'm presuming  
3 that's Eddie Holmes --

4 A Yes.

5 Q -- "has screenshots taken from social media in China about the coronavirus  
6 sequence. They suggest the full genome was known by a genomics company in China by  
7 27 December 2019."

8 A Correct.

9 Q Were you aware of that?

10 A Not at the time, no. But, yes -- no. At the time, no, I was not aware of  
11 that. But I believe this -- Eddie -- I think Eddie has showed me some of the text  
12 messages of whatever he had. So I believe this information to be accurate, but I did not  
13 know it at the time.

14 Q That was going to be my next question. Did Dr. Holmes share any  
15 information suggesting this to be true?

16 A He did, yeah. Not -- I can't remember when he did that. It certainly  
17 wasn't in January and February, for example, it was later, especially because there's been  
18 so much focus on who released the first genome and all for around that time.

19 Q Why -- and I'm now asking you to speculate -- but would there be a reason  
20 to hold off on the sequence between the 27th of December and January 10th?

21 Mr. Rowley. By who?

22 Mr. Benzine. By China.

23 Dr. Andersen. Yeah. I think -- well, the thing -- again, so this is not specific to  
24 China.

25 Now, I'll say Eddie and I, for example, disagree on this, because I think Eddie

1 believes that because they had it on the 27th of December, they should have released it  
2 on the 27th of December.

3 And I can see the argument for that, but what's really important is that we didn't  
4 know. I don't think they knew at that time. They just have a wild genome, but we find  
5 novel wild genomes when we start looking for wild genomes. It doesn't mean they  
6 caused of disease.

7 I don't think they knew how good the quality of the genome was. So that  
8 requires additional sequencing. So I think there is a quality step that needs to go  
9 through to say, like, look, we need to make sure that this evidence is actually accurate.

10 And also, importantly, we need to show that actually, yes, this is probably what's  
11 causing a novel cluster of outbreaks, and that takes time. And, also, all of this needs to  
12 go through all kinds of approval levels.

13 Again, none of this is specific to China. The same would be true here in the  
14 United States. We do this work. We have sequenced probably close to 100,000  
15 genomes now of SARS-2. And when we see a novel variant emerging, for example, like  
16 the alpha variant, is that there were delays between us detecting that and us being able  
17 to release the genome for the simple reason that we have to alert the public health  
18 authorities. They need to talk to their bosses. They need to get the sign-off on the San  
19 Diego County Public Health, going to the California Public Health, going to the CDC.  
20 These things take time.

21 So I think that's why one needs to understand that, look, there is going to be some  
22 delays built into this process.

23 Do I think that China could have released the evidence earlier? Yes, absolutely.  
24 But how much earlier? They did on, again, the 10th, basically, because Eddie forced  
25 their hand, which I deeply appreciate.



1 the leaders and the drivers of the call and of the paper as well?

2 I will say, from our point of view here in the minority, when we look at the  
3 documents that we have received from yourself and elsewhere, it does not really look to  
4 us like that is the case. It seems like Dr. Jeremy Farrar was pretty central to the call  
5 coming together and to the idea that there would be logic in writing a paper on the  
6 origins of SARS-CoV-2, and then subsequently in the process of the paper being written  
7 and where is it going to be published and what would the communication be.

8 So that's our perception, and that Drs. Fauci and Collins were on the call, asked,  
9 perhaps, a couple questions, are on some of these emails, but were not driving the events  
10 in the same way.

11 So let me just ask as a threshold matter, is that generally your recollection as well?

12 A That's generally correct, yes.

13 Q Okay.

14 So what I'd like to do is go through some documents and just explore the extent to  
15 which they are consistent with that understanding.

16 A Sure.

17 Q So I'm going to introduce what will be marked as minority exhibit A.

18 [Andersen Minority Exhibit A

19 Was marked for identification.]

20 BY MR. PELLEGRINI:

21 Q I'll give you a second to just glance at it.

22 A Yep.

23 Q I will say the documents that I will be showing you will be marked in the  
24 bottom right-hand corner with "Garry" and then a particular number. You can likely  
25 deduce that we received them from Dr. Garry. So they will be documents that are, in

1 most cases, identical to documents that we also received from you.

2 A Yep.

3 Q It was just easier, the format in which he gave them to us, for us to print.

4 A Sure.

5 Q And so in this case we have the document Bates stamped Garry 6, and this is  
6 from February 1st of 2020. These emails run in reverse chronological order. So the  
7 back of the page is the earliest communication. And I just kind of want to direct you to  
8 some of this email. This is from Dr. Farrar, and it's to a relatively large group, which I  
9 take to be the attendees on the subsequent conference call. I don't know if you have a  
10 similar impression.

11 A Yeah, I do. Of course, what's important here is that I can't actually  
12 remember everybody who was on that conference call because not everybody chimed in  
13 on the conference call itself.

14 Q That makes sense.

15 And in Dr. Farrar's email, which you can see on the back page here marked Garry  
16 7, it looks like he's sort of setting the scene for the call. And I think I want to start at the  
17 bottom of that email. It looks like Dr. Farrar is providing an agenda for the call.

18 A Yes.

19 Q And he's assigning different tasks to different people, which we can deduce  
20 from the initials there.

21 A Yep.

22 Q And it looks like he's assigning himself a few jobs. He is going to give the  
23 introduction to the call. He's going to lay out the focus of the call, the desired outcomes  
24 of the call. And then at the end he's going to summarize the call and give next steps  
25 from the call.

1 Do you agree with my reading of that?

2 A That is correct, yes.

3 Q Great.

4 And then a little bit above that in bold he says, towards the top of that page: "I  
5 will be on email throughout. Email Paul or I, Paul if any problems."

6 The only Paul I see in the cc line is Paul Schreier, who has a Wellcome email  
7 address. Is it fair to assume that that is Paul?

8 A I don't know of any other Paul.

9 Q Sure.

10 A So I assume so, yes.

11 Q And so being at Wellcome, I would take it that that's a colleague of  
12 Dr. Farrar's at the Wellcome Trust?

13 A Correct. Yeah, Dr. Farrar is the head of the Wellcome Trust.

14 Q And then Dr. Farrar says: "If you cannot make it, I will phone you  
15 afterwards to update." And then his very top email there on the first page, Dr. Farrar is  
16 sending dial-in details.

17 So just sort of putting together the wholeness of that email, Dr. Farrar is laying out  
18 the agenda, making an introduction, giving the focus and the outcomes, the summary,  
19 the next steps.

20 A Yes.

21 Q He's serving as tech support for anybody who has trouble on the call. He's  
22 going to call anybody who misses the call afterward. And he's giving the dial-in, which,  
23 from the +44, I take to be a British number.

24 A Right.

25 Q Does it sounds from all of that as if it was Dr. Farrar's call?



1 A This was Dr. Farrar's call, yes.

2 Q Okay, great.

3 I'm going to introduce what I will mark as minority exhibit B.

4 [Andersen Minority Exhibit B

5 Was marked for identification.]

6 Mr. Rowley. Did you say B?

7 Mr. Pellegrini. B, as in boy. We're going by letters here on our side.

8 BY MR. PELLEGRINI:

9 Q I'll give you a moment to look that one over.

10 A Uh-huh.

11 Q So this is the same day, and it looks as if maybe this is just an email  
12 discussion occurring right after the call.

13 A Correct.

14 Q Okay. And the document, which is Bates numbered Garry 25, at the  
15 bottom of the first page, we have an email from Dr. Farrar, and there's a paragraph in the  
16 middle of his email that starts with: "We on this call."

17 Do you see that paragraph?

18 A Uh-huh.

19 Q I'm just going to read out loud the second half of that paragraph, which says:  
20 "In order to stay ahead of the conspiracy theories and social media, I do think there is an  
21 urgency for a body to convene such a group and commission some work to draft, quote,  
22 'to understand the evolutionary origins of 2019-nCoV, important for this epidemic and for  
23 future risk assessment and understanding of animal/human coronaviruses.'"

24 And then his next sentence talks about, in other words, a completely  
25 open-minded and neutral question.

1           So it sounds to me, but I would appreciate your point of view, as if this is the  
2 beginning of sort of a process in Dr. Farrar's mind where he's thinking, hey, there would  
3 be value in somebody examining from a scientific point of view the evolutionary origins of  
4 this virus.

5           Does that sound fair?

6           A     With the caveat that I don't know because Jeremy Farrar would be the only  
7 one to know.

8           I don't actually think he's talking -- so just to give a little bit more background  
9 here, I think it's important, because the conference call is separate from the paper  
10 proximal origin.

11          The conference call was called because Jeremy Farrar had reached -- and, actually,  
12 let's -- let me give this -- because we all outlined this in an email to John Cohen in July of  
13 2020, the details of exactly what led to this particular conference call.

14          Mr. Pellegrini.   Can we go off the record for one moment?

15          Dr. Andersen.   Sure.

16          [Discussion off the record.]

17          Mr. Pellegrini.   Let's go back on the record.

18          Mr. Rowley.     Well, can we stay off for just a second?

19          Mr. Pellegrini.   We'll go back off the record, please.

20          [Discussion off the record.]

21          Mr. Pellegrini.   We can go back on the record.

22          Dr. Andersen.   So you have this in your own exhibits where we outline all of this  
23 in July of 2020.

24          So Jeremy Farrar had heard rumors about a potential association with the Wuhan  
25 Institute of Virology.   I don't know the details about that, but he had heard these rumors

1 in early January 2020.

2 And he reaches out to his old colleague and friend Eddie Holmes, who is also a  
3 colleague, a friend of myself, asks Eddie about these rumors because Eddie Holmes is one  
4 of the most respected scientists, has written books on -- the primary books on viral  
5 emergence.

6 Jeremy asks Eddie: Is there anything to these rumors? Eddie takes a quick look  
7 at the data and basically says to Jeremy: No, I don't think so. And then leaves it there.

8 And I think this appeared, like based on -- I'm, obviously, not privy to those  
9 conversations, but this happens on January 27th, according to what Eddie and Jeremy  
10 later said.

11 I get prompted -- I have been looking at just the genome in general but mostly  
12 focused on just understanding the virus. I hadn't really consider the origin question yet.  
13 I get prompted to do that a little bit more specifically by my chairman on the 30th of  
14 January.

15 I take a quick look at it, and I'm aware of some of the work at the Wuhan Institute  
16 of Virology, but I don't really see anything sort of that concerns me. But I decide to take  
17 a closer look after being prompted by, again, my chairman at the institution.

18 I do so and I start seeing things that concerns me, the furin cleavage site, for  
19 example, but also just a few things that to me looked unusual at the time.

20 What's really important to understand here is that I'm an expert on viral evolution  
21 and emergence. I study the emergence of viruses. But I'm not a coronaviruses expert.  
22 I certainly wasn't at the time. I had not studied coronaviruses previously in any great  
23 detail. So there were many things around just the diversity of coronaviruses that was  
24 unfamiliar to me at the time.

25 When I see these things, it's late at night, I think probably on the 31st, so a day

1 after. Because it's late at night and because I know Eddie is in Australia, he's going to be  
2 up, he's awake, and he's a trusted colleague. So I reach out to him and I explain to him  
3 in some detail what my very, very early findings were and why I was concerned about it.

4 And Eddie's expertise and my expertise, while it certainly overlaps a lot, and  
5 understanding viral emergence, I have a little bit of a broader background, having done a  
6 lot of wet lab work, including manipulating viruses as part of my Ph.D., for example, and  
7 understand the wet lab side of things a fair bit better than Eddie does. But then he  
8 understands the ecology side better than I do.

9 And I sort of explained to Eddie that, look, we can't just dismiss this possibility out  
10 of hand because of the type of work that was ongoing at the Wuhan Institute of Virology  
11 and knew about biosafety levels. And I talked to Eddie here, and he sort of realizes that  
12 his early dismissal of this was probably not the correct thing to do.

13 He does not name -- he doesn't mention Jeremy's name on this initial phone call I  
14 have with Eddie. In fact, I think he calls him his handler. And I think this comes from  
15 the fact that, again, I think when Jeremy heard these, quote, unquote, rumors, I believe  
16 it's the intelligence community in the United Kingdom, he's talked about burner phones in  
17 his book. So I believe Jeremy was working at a level in which he didn't want  
18 interference, potential interference.

19 So Eddie contacts Jeremy. Jeremy then contacts me the next day, and that's  
20 when I realize it's Jeremy Farrar, because, again, I didn't know that based on the  
21 conversation with Eddie. We talk about my concerns and talk about, like, look, we need  
22 to get a group together to discuss these concerns that I have, and we need to select  
23 people that are unconflicted. So we did.

24 Ralph Baric, for example, is a name that came up. We all know Ralph. Ralph is  
25 a very important coronavirus biologist. But we also knew that Ralph had very close

1 associations and collaborations with the Wuhan Institute of Virology, for example. So if  
2 this did, in fact, originate from a lab, then, of course, he would not be a person to have on  
3 a call like this.

4 Peter Daszak is another person that, of course, came up for the same reasons,  
5 because they had been co-publishing.

6 I should say that I'm not at that time, I'm not familiar with grants going to the  
7 Wuhan Institute of Virology or anything about that. But we're talking about just  
8 publications they co-published.

9 So we get a group of international scientists. These are primarily from Europe.  
10 I actually think maybe all of them are from Europe -- Christian Drosten, Ron Fouchier,  
11 Marion Koopsman -- that have different perspectives on coronaviruses and  
12 gain-of-function research from Ron Fouchier, for example. And we decide to set up this  
13 conversation for me to essentially walk through my concerns and then we discuss it.

14 And Jeremy gets all of this set up. He, I'm sure, has been in touch with Tony  
15 Fauci at the time, reaches out to Dr. Fauci, asks him to call me.

16 I have a quick phone call with Dr. Fauci. I sort of relay what I have found and  
17 what the early views of this is, round receptor-binding domain, the furin cleavage site, a  
18 few other features.

19 And he, Dr. Fauci, specifically mentions the furin cleavage site in his email to me  
20 following that telephone call, but he also makes it clear that he will contact the  
21 intelligence community and sort of run it up the chain in the United States Government.  
22 I don't know the result and outcomes of any of those other than the White House Office  
23 of Science and Technology Policy did establish a meeting on February 3rd to look into this  
24 as well.

25 But following that call, essentially what I recall Dr. Fauci saying is to the effect

1 of -- and I'm paraphrasing him here -- but basically saying that, look, if you think this came  
2 from a lab, then you should really consider writing a paper on it so it can be peer  
3 reviewed and judged by the community.

4 And I relayed back to Dr. Fauci that I feel that it's too premature. We need to  
5 look at this more closely. We can't just publish a paper just based on no analysis at the  
6 time. And, of course, he understands that and looks forward to the conference call in  
7 which scientists can get a chance to discuss my findings.

8 And that's the purpose of the conference call, which, again, is completely  
9 organized by Jeremy. Jeremy runs the call. I honestly don't remember Drs. Fauci or  
10 Collins even chiming in on the call itself. I'm sure they probably had questions. But  
11 this is not their area of expertise and they were just there to hear the scientists discuss  
12 what I had brought up. And the discussion is primarily between myself and Andy  
13 Rambaut, Eddie Holmes, Christian Drosten, Ron Fouchier, and Marion Koopsman. Those  
14 are the main factors I remember here.

15 At that time, as I had relayed, was that this was not for the purpose of drafting a  
16 paper. I think Eddie was probably more focused on a paper already at that stage. I  
17 was more like, look, I just want to talk about this, and then I want to do some more  
18 analyses, and I want to look into this closer.

19 I think what -- if I have to -- and, again, I can't because I don't know exactly what  
20 Jeremy means, of course. But I actually think he's likely talking about his later efforts to  
21 have the WHO look into this because he wanted to -- he thought this was an important  
22 question, and he thought it important that it would be something that an international  
23 body would take up as a conference and have a group of experts discuss this.

24 And I know that later on he does put some pressure on the WHO to, in fact,  
25 organize this, and I actually think that's what he's referring to in this particular email.



1 No need to super rush. Pass to Jeremy and let decide where to share it. Perhaps to  
2 the WHO group."

3 So as a reader, that seems to us as if this is a conversation about -- it's phrased  
4 here as a careful report, but it seems like what will subsequently become the proximal  
5 origin paper. Is that fair?

6 A Yeah, that's fair. But as you can see, here it's talked about as a report.  
7 Again, I think this is -- and he's even mentioning the WHO group. So I guess what I just  
8 said about this actually being for the idea of convening a WHO group to consider this  
9 particular question, clearly that's what this refers to, yes.

10 Q For sure. But it does sound like it's a report that would at this point be  
11 thought of as being written by yourself --

12 A Correct.

13 Q -- and your three co-authors.

14 A A report but not a paper.

15 Q Got it.

16 And it is at this point framed as, to the extent we do write that, let's give it to  
17 Dr. Farrar and let him decide where to share it.

18 A Yeah, yep.

19 Q And he may share it with the WHO for the reasons you described?

20 A Correct, yes.

21 Q Okay.

22 A But, again, the important aspect here is that -- have a report.

23 Q Yep.

24 A So something that we consider to be internal to get the conversation going,  
25 yes, as he was working on it.



1 Q As distinguished from a fully published peer-reviewed paper?

2 A Correct.

3 Q Great.

4 A Correct.

5 Q All right.

6 I'd like to introduce what will be marked as minority exhibit D.

7 [Andersen Minority Exhibit D

8 Was marked for identification.]

1

2

BY MR. PELLEGRINI:

3

Q And so this document labeled Garry 146 is from a few days later. This is now February 7th at the top of the chain, and it's still yourself and your co-authors.

5

The chain itself is a little bit long. I'm really only going to focus on the third page, which is labeled Garry 148. You're welcome to glance at the whole thing if you'd like to.

7

There's an email towards the bottom of page 148 that -- again, it's from

8

Dr. Holmes -- and it looks like what he's doing is copying and pasting an email that he's

9

received from Dr. Farrar. And I'll just read it out loud. It's from Jeremy.

10

A Yep.

11

Q And then in quotations: "Do you think in the report possible to dampen

12

down further the conspiracy idea and make totally neutral? Talking with Marion last

13

night and with the WHO meeting next week, both wondering whether actually publishing

14

this sooner, but ruthlessly on the science, is worthwhile to put that flag down." End

15

quote.

16

So my read of that is Dr. Farrar is communicating with Dr. Holmes and sort of doing two things. You tell me if you have a similar impression.

18

It seems like first he is offering a big picture strategic thought as to where the

19

paper's emphasis might lie. In other words, is it possible in the report to dampen down

20

further the conspiracy idea?

21

And then separately he's talking to Marion -- that's Marion Koopsman. Is that

22

right?

23

A That's Marion Koopsman, yeah.

24

Q And she is associated with WHO? Is that --

25

A She is. She is. I mean, Marion is a big figure in the emerging infectious

1 disease field. She is a professor in Amsterdam, I believe, and is actually the boss of Ron  
2 Fouchier. But she also has a WHO hat on and is often involved at the WHO level, yes.

3 Q Got it. Great.

4 And the report being referred to here, as we discussed, the word report is still  
5 what is being used, but it is what would subsequently become the proximal origin paper?

6 A Correct, yes. But -- yes. Yes.

7 Q And so is it fair to say that Dr. Farrar at this point is weighing in with  
8 directional substantive opinions about where the paper should ultimately head?

9 A Not a paper. Again, he's talking about a report here.

10 I think what this -- and, again, with the caveat that I don't know what Jeremy  
11 himself means. But my recollection, at the time of the events, this is February 6th, is  
12 that there were a lot of conspiracy theories that were associated with a lab leak, things  
13 like bioweapons, for example. And the problem that we saw with that is that there are  
14 legitimate reasons for why we need to consider a lab origin as a plausible way in which  
15 this pandemic could have started.

16 And it's important to have that discussion and to frame that in scientific language  
17 of here's why we need to consider it and here's how we could investigate it further and  
18 have a scientific conversation about that devoid of the conspiracy theories around  
19 bioweapons and things that I believe, as a scientist, could be dismissed at the time.

20 But the issue around the lab leak, for example, or the, quote, unquote, lab leak,  
21 which is -- I don't know why we started calling it lab leak -- but a research-associated  
22 incident, is that there are multiple different versions of that, as we talked about already,  
23 and some of them are more reasonable than others.

24 Some of them I considered very early on to be unreasonable and, in fact,  
25 problematic, because if I brought up the possibility of like, look, I think this could have



1           Q    This document is Bates stamped Garry 194.  It's another instance of a  
2 relatively lengthy email chain where I'm only going to focus on a very small piece of it.  
3 It's a conversation amongst yourself and your co-authors.

4           A    I remember this email.

5           Q    And a few pieces I do want to focus on starting on the very back page.  
6 That's number 201.

7           So in the middle of that page, we have an email from Dr. Farrar, and it says:  
8 "When can you update?  Lancet, Nature, NEJM.  Will all review immediately after quick  
9 QC.  Will share with WHO."

10          What is your understanding of what he's saying there?  In other words, Lancet.  
11 What is Lancet?

12          A    Well, these are journals.  So I think basically what he is suggesting there is  
13 that we should consider publication as opposed to the idea of a report, which is what has  
14 been talked about up until then.

15          Q    And these are particular publications that are well-known, I assume, in the  
16 field?

17          A    Correct, yes.

18          Q    Okay.

19          A    These are some of the top publications.  Lancet and the New England  
20 Journal of Medicine are top medical journals, and Nature is a top general science journal.

21          Q    Okay.

22          And if we sort of keep flipping through the document here, on page 199, at the  
23 bottom of that page, Dr. Holmes writes -- and I'm just going to read the first sentence of  
24 the email:  "Jeremy wants us to publish our report somewhere.  Thoughts?"

25          A    Yes.

1 Q Is it fair to say you wouldn't know personally, but just reading it, from your  
2 own recollection, that at this point Dr. Farrar wanted you all to publish your report  
3 somewhere?

4 A He would like to -- yes. I get the sense that from this, Jeremy Farrar -- and,  
5 again, Eddie and Jeremy know each other. They were communicating at the time. At  
6 this point, Jeremy is probably talking to Eddie and saying like, look, guys, I really think you  
7 should consider publishing this, not just an internal report but actually as a peer-reviewed  
8 scientific paper, yes.

9 Q I gotcha. Okay, great.

10 And then on page 195, the last piece of this conversation for our purposes, at the  
11 top of the page Dr. Rambaut has an email, and this is consistent with what we just talked  
12 about. The first line of that email: "Jeremy is pushing us to get a paper ready to go.  
13 Probably Nature."

14 A Correct.

15 Q Does that sound consistent with, essentially, what you just said?

16 A Yes.

17 Q Okay.

18 A Then I have some comments on that, though.

19 Q Sorry?

20 A I mean, because my reply to that is: Sounds good. At this stage, seems a  
21 little more like a school project than a full-on scientific paper to me, but we can definitely  
22 get it into shape.

23 Q Yeah, could you talk a little bit about what you meant by that?

24 A I basically -- so I think of the group of the authors here, I had raised an  
25 original hypothesis that -- well, the original, original hypothesis was engineering. But

1 basically I raised the hypothesis that this could possibly be a lab leak.

2 And I think we -- I felt at the time that the drafts that we had were not substantial  
3 enough to be considered a scientific paper. That's because I'm probably a little more  
4 detail oriented than most people. I probably felt that -- I mean, I was working around  
5 the clock at the time.

6 But I probably also felt that, look, I want to spend some more time on this just  
7 doodling around more, to do additional analyses. I was pretty convinced at that time of  
8 a cultured version of a lab leak, a cultured virus, to be a very plausible hypothesis. So I  
9 think that's probably what I'm referring to.

10 And, again, I'm the one holding back a little bit at this stage. And that continues.  
11 I had several other comments to that effect.

12 Q Okay.

13 And so in terms of trying to figure out who is where, at least from this  
14 conversation, it's Dr. Farrar sort of affirmatively pushing to get a paper published.  
15 Yourself, a little more hesitant to go down that path.

16 A Correct. I mean, I'll say -- like, so what's important to understand here is  
17 that Jeremy is -- when Andrew is saying he's pushing, it's that I'm sure he's putting  
18 pressure on us to, like, look, guys, you really should consider getting a paper on this, but  
19 on whatever we do, on the science of this. There is no push to, like, you must publish a  
20 paper or you have to whatever, right, because these are -- again, these are -- both  
21 Andrew and Eddie are personal friends and have been for decades.

22 So his focus is on -- because he has a bigger picture view, he knows what's going  
23 on at the WHO, he also knows what's going on in the U.K. Government, probably in the  
24 U.S. Government, too, which we don't have any insights to, and he feels that, like, look,  
25 having a strong, good, scientific paper that has really looked at these particular

1 hypotheses, added some evidence to it, added our expertise to saying, like: What do  
2 you guys think? You should think of that as a paper, not as a report.

3 I just think it's a little premature at this stage, which it is. It's 10 days prior to us  
4 actually -- almost 10 days prior to us having a draft, a paper that we then submit to  
5 Nature for consideration and, in fact, also put online at the time.

6 Q And so that whole back and forth that you just described is where Dr. Farrar  
7 thinks X, you personally think Y.

8 A Yeah.

9 Q It does not appear from the email traffic -- I'm curious about your  
10 recollection -- that at this point I see nothing in here saying: And Dr. Fauci is pushing us  
11 to get another paper out as well, or Dr. Collins. It does not seem that way.

12 A Again, there is no involvement at any stage of the production of the paper  
13 from Drs. Collins or Fauci.

14 I believe, though, that because Jeremy was trying -- putting some pressure on the  
15 WHO to get this conference where this could be considered, I think he might have  
16 communicated with Collins on this separately. Because I remember that we talked at  
17 the time that Collins was helping Jeremy basically to get a conference set up with the  
18 WHO, and probably from that side Jeremy from the U.K. side, maybe Collins from the U.S.  
19 side, putting some pressure on the WHO to consider the origin questions in general.

20 Q But you would not have personal knowledge of --

21 A I would not have personal knowledge. I did not have any personal  
22 communication with Fauci or Collins as part of this other than the email chain that is  
23 going on with the participants of the call in which I think Dr. Fauci has a single question,  
24 which relates to potential passage in animals, yes.

25 Q I would like to introduce minority exhibit F.



1 [Andersen Minority Exhibit F  
2 Was marked for identification.]

3 BY MR. PELLEGRINI:

4 Q There will be a certain amount of repetition here. So I appreciate your  
5 patience.

6 A Sure.

7 Q So this is a shorter chain. It's Bates numbered Garry 265. Still amongst  
8 yourself and co-authors. And only really going to talk about the very first email here on  
9 the front page at the top.

10 A Yep.

11 Q You got an email from Dr. Holmes, and I will just read out loud his second  
12 paragraph, which simply says, the first sentence: "Jeremy still wants us to write  
13 something."

14 Jeremy, being Dr. Farrar. Is that fair?

15 A That is correct, yes.

16 Q And I know that you did not write this email, but do you read it as suggesting  
17 that at this point, Dr. Farrar still wanted you all to write something?

18 A Correct.

19 Q All right.

20 And it does not say: "Tony and Francis still wants us to write something." Is  
21 that right?

22 A That is correct, yes.

23 Q And I think, as you just explained, you do not have a recollection of Drs.  
24 Fauci or Collins being involved in the paper at this point?

25 A Again, Drs. Fauci or Drs. Collins, other than suggesting that we should

1 consider writing a scientific peer-reviewed paper as part of the conversations on  
2 February 1st, and the phone call I had with Dr. Fauci the day before, had no involvement  
3 in the drafting of this particular paper.

4 Q Okay. Thank you.

5 I'm going to introduce minority exhibit G.

6 [Andersen Minority Exhibit G

7 Was marked for identification.]

1

2

BY MR. PELLEGRINI:

3

Q So this is now February 14th, this document, which is Bates numbered Garry

4

283.

5

Yourself and your co-authors. Again, sort of a long conversation. I can just sort

6

of pick us up on -- well, let's see if you recall this conversation. There is a general

7

discussion on -- really throughout the whole chain. I'll try to characterize it. You tell

8

me if I'm sort of getting it right.

9

There was a paper released I think by an author in China suggesting that a lab

10

origin is -- was possible or plausible, something to that effect. Do you have a

11

recollection of that?

12

A I think it's this -- so I was actually in the desert at the time. So I was in my

13

Jeep driving the Mojave Road. So my access to -- I did not have access to a computer or

14

to -- and very limited cell phone reception in and out every once in a while. So I was on

15

my phone at the time.

16

If I remember correctly, this was a Chinese researcher who put a preprint online

17

and, essentially, had noticed the same thing that we did, which was that the Wuhan

18

Institute of Virology is there and there are cases. I do believe he got the location of the

19

lab itself wrong, though.

20

But, yes, he, essentially outlined what we had outlined, which is that there is a lab

21

there, and that Wuhan is the site of the emergence.

22

Q And I think there was some discussion in here about particular types of work

23

that are done at the Wuhan CDC but not the Wuhan Institute of Virology.

24

A Right.

25

Q And there is discussion about whether or not to include a mention of that in

1 your own report or paper, and it looks like Dr. Holmes feels like if you do include that  
2 information, he'll need to recuse himself because he's an author on whatever it is you're  
3 discussing.

4 That's at the bottom of page 284.

5 A Okay. Yes.

6 Q And the reason I bring up all of that is further up on that page, Dr. Holmes  
7 says: "I'll check with Jeremy. I'm now about as tarnished as Ian."

8 A Right.

9 Q My read of that exchange, but I would appreciate your point of view, is that  
10 that question Dr. Holmes raised about whether or not to include this information and  
11 subsequently whether or not to recuse himself, he is saying let me go check with  
12 Dr. Farrar about all of that.

13 A Yeah. So I don't know what Eddie is referring to.

14 Q Okay.

15 A I suspect that it's referring to whether he would think that Eddie's previous  
16 publications with the Wuhan Institute of Virology would mean that he has conflicts of  
17 interest to publish the paper.

18 Q That's similar to how we read it as well.

19 A Okay, yeah. It does not have to do -- we had conversations about the  
20 Wuhan CDC, but the Wuhan CDC is just any, like any regional lab, and it wasn't even clear  
21 that it was actually operational at the time. So ultimately that's why we ended up just  
22 not mentioning -- just not talking about the Wuhan CDC, because it just doesn't make any  
23 sense.

24 Q And so then if I could, at the bottom of the first page, there is an email from  
25 Dr. Garry saying: "Maybe I missed it. Did Jeremy nix Ian or is he still on?"

1 I read that as the question of whether or not Dr. Ian Lipkin, who joined your paper  
2 late -- is that right?

3 A Yeah, that's what -- yes. That's a typical Bob comment, though, because  
4 Jeremy was not the one who was deciding who was an author and who was not an  
5 author. We decided that.

6 So I don't -- I honestly don't know what -- I can't remember when Ian became part  
7 of the paper. Maybe around probably a few days earlier than this.

8 Q As a reader, that email sure sounds like Dr. Farrar is exercising some degree  
9 of control over who is or is not a co-author.

10 A He's absolutely not. That was at the authors, yeah, unless Bob has a  
11 different recollection. Again, I was in the desert at the time. But I very much doubt so.  
12 I think that Bob has -- sometimes he says things that to me doesn't really make any sense.  
13 There's also no comment back. There's no reply as far as I can see to that particular  
14 question.

15 Q Well, it looks like above Dr. Holmes says: "He's on."

16 A Okay, yeah.

17 Q Which seems as if it refers to the question of whether or not Dr. Lipkin --

18 A Is part of the paper, but not whether Jeremy nixed him or not. Because,  
19 again, Jeremy is not the one who -- he had heard separately from Ian Lipkin that he was  
20 working on this question, too, and that's why he suggested to Andrew -- to Eddie that,  
21 you know what, Ian is working on this, too. Maybe he can be part of your efforts.

22 And then Eddie sends around an email asking: Are you all okay with Ian being  
23 part of this because he's also working on it? And then we all chimed in and said: Yes,  
24 that's fine. I think I maybe said so in not so nice terms. But Eddie was fine to have him  
25 on as a co-author.

1           And, again, the decision on who is a co-author on a paper is, obviously, made  
2 among the authors, not somebody like Jeremy Farrar.

3           Q    Okay, great.

4           I'd like to introduce minority exhibit H.

5    [Andersen Minority Exhibit H

6    Was marked for identification.]

7                                  BY MR. PELLEGRINI:

8           Q    So it's yourself and your co-authors.   It's Bates labeled Garry 288,  
9 February 15th.   Dr. Lipkin is on this chain.

10          A    Yes.

11          Q    So he is at this point a co-author.   And it looks like you all are almost  
12 finished with the paper at this point.

13          A    Correct.

14          Q    An email from Dr. Holmes at the top of the first page says, in the middle of  
15 that email:   "I'll pass to Jeremy to see if he has any final comments and wants to be  
16 acknowledged."

17                So is it fair to read that as any reader would, which is Dr. Holmes, it sounds like,  
18 will pass the paper to Dr. Farrar for any comments and possible acknowledgment?

19          A    Correct.   Yes.

20          Q    Okay.

21                And it appears at this point, at least from Dr. Holmes' point of view, that only  
22 Dr. Farrar is being included in that way.   Does that seem like a fair reading of the email?

23          A    That is correct, yeah.   I mean, obviously, we acknowledge -- Dr. Farzan is  
24 acknowledged in the paper based on early conversations that I had with him in which I  
25 felt like his thoughts helped me direct my thinking on this particular question.

1           But, yes, the only other one that would, I will say, be at a level of which you could  
2 consider acknowledging because he has helped advise us through the process, although  
3 he has not been involved in any of the scientific discussions around the paper, the  
4 structure of the paper, the paper itself, it was just general leadership and, essentially,  
5 helping us think more clearly about, for example, suggesting that you should consider this  
6 as a paper and not a report.

7           Q    Okay.

8           I'm going to introduce minority exhibit I.

9   [Andersen Minority Exhibit I  
10    Was marked for identification.]

11   BY MR. PELLEGRINI:

12           Q    So this document, Bates numbered Garry 306, is dated February 16th.  
13 Yourself and your co-authors.

14           A    Yep.

15           Q    Another long-ish conversation, and I will focus on the top of page 307. It's  
16 an email from Dr. Garry, and the second sentence of that email is: "Jeremy has been  
17 amazing leader. Should be author."

18                           Is that consistent with the idea that Dr. Farrar was a leader, an amazing leader of  
19 the paper? Without suggesting there's anything wrong with that, but to the extent of  
20 who is or is not a leader.

21           A    Yes. Again, I mean, to the extent of a father figure helping us sort of  
22 navigate the process itself, yes. Typically, would that justify authorship? Probably not.  
23 So I disagree with Bob Garry that he should be an author. But, yes, he did play that role  
24 model, leadership model, if you want.

25           Q    And it's not your email. So I know speculation can be tricky, but at least at

1 this point, Dr. Garry is in a state of mind of identifying folks who have been leaders and  
2 mentions Jeremy. Does not appear to mention Drs. Fauci or Collins. Do you agree  
3 with that?

4 A I agree with that, and, again, there would be no grounds for even  
5 acknowledging Drs. Collins or Fauci because they had played no role in the paper itself.

6 Q Okay.

7 I'm going to introduce minority exhibit J.

8 [Andersen Minority Exhibit J

9 Was marked for identification.]

10 BY MR. PELLEGRINI:

11 Q This document is Bates numbered Garry 492, February 17th. Yourself and  
12 co-authors, as well as Dr. Farrar.

13 My questions will be about the first page of this document.

14 A Sure.

15 Q The email there at the top is from Dr. Farrar, and I'll read it.

16 "Sorry to micro-manage, micro-edit, but would you be willing to change one  
17 sentence from, 'It is unlikely that SARS-CoV-2 emerged through laboratory manipulation  
18 of an existing SARS-related coronavirus,' to, 'It is improbable that SARS-CoV-2 emerged  
19 through laboratory manipulation of an existing SARS-related coronavirus?'"

20 So that seems to me as if Dr. Farrar is asking for a -- essentially, a line edit to the  
21 paper. Is that fair?

22 A That is correct, yes.

23 Q Okay.

24 And ultimately, you all, as co-authors, agreed to make that change, presumably on  
25 a scientific basis?



1           A    The difference between unlikely and improbable, to me that doesn't mean  
2   the same, which is why I remember introducing it, sending him an email back and said,  
3   sure.  But, again, he's also asking for our permission.  And that, to be clear, is his only  
4   contribution to the content of the paper itself.

5           Q    Do you have any recollection of Drs. Fauci or Collins requesting line edits to  
6   the paper?

7           A    Absolutely not.

1

2 [9:41 a.m.]

3 Mr. Pellegrini. I'd like to introduce minority exhibit K.

4 [Andersen Minority Exhibit K

5 Was marked for identification.]

6 BY MR. PELLEGRINI:

7 Q So this is a conversation document Bates-numbered GARRY 541. We're on  
8 February 17th here. Again, yourself and your co-authors, as well as Dr. Farrar. I think  
9 it's an extension of the same chain that we just looked at.

10 A Uh-huh.

11 Q I just would like to take a look at the bottom of the second page. That's  
12 page 542. Starting with an email from Dr. Garry, it says, "Ian" -- and that's Dr. Lipkin,  
13 right?

14 A That's Dr. Lipkin, yes.

15 Q Okay.

16 "Ian suggested a press release" -- because, if I could, at this point the paper is  
17 essentially done. We're talking about the release of the paper. Is that correct?

18 A Preprint.

19 Q The preprint?

20 A Preprint, yes.

21 Q Okay.

22 So Dr. Garry says, "Ian suggested a press release. It's very appropriate under the  
23 circumstances. Who will draft?"

24 And in the email above that, Dr. Farrar says, "I can get our Wellcome team in it  
25 now, not in Wellcome's name, but to get done ASAP."

1           So, just in terms of reading the email and understanding who's saying what, is it  
2 right that Dr. Farrar here is offering to have his folks at the Wellcome Trust write the  
3 press release for the paper?

4           A     Probably not to write it, but to help write it, correct.   Although that didn't  
5 happen.   But, yes --

6           Q     Okay.

7           A     -- that's the suggestion.

8           Q     Okay.

9           And then at the top of the first page, 541, Dr. Farrar says in his second paragraph,  
10 "As soon as the institutions or other that have to approve a press statement/release are  
11 back, would be very important to coordinate the lay messages from the piece, preferably  
12 before the narrative gets written and broadcast by others."

13           So my only question is, is it right to infer that, at this point, Dr. Farrar is helping to  
14 coordinate and be thoughtful about the messaging of the paper's release?

15           A     Correct, I think the conclusions of the paper, yes.   He is, again, knowing his  
16 area of expertise, being outward-facing, that he is offering to help us essentially with  
17 what we conclude in the scientific paper and help with the lay language around that.  
18 Which, again, didn't actually happen.

19           Q     Right.

20           A     But that's the offer here, yes.

21           Q     Do you have any recollection of Drs. Fauci or Collins helping you to  
22 coordinate the messaging of the paper?

23           A     They did not.

24           Q     Okay.

25           A     Dr. Collins did ultimately end up writing a blog post after the paper was

1 published as a peer-reviewed paper.

2 Q I'd like to introduce minority exhibit L.

3 [Andersen Minority Exhibit L

4 Was marked for identification.]

5 BY MR. PELLEGRINI:

6 Q And this is another excerpt from Dr. Farrar's book. That's twice today.

7 And I will just focus on a little bit of the paragraph underneath the three coronavirus

8 images.

9 A Yes.

10 Q And I'm just going to read a portion of that paragraph. And this is

11 Dr. Farrar speaking.

12 "My overriding concern was to get to the bottom of the origins of the virus as  
13 quickly and calmly and scientifically as possible. The first task was to discreetly gather a  
14 panel of top-class scientists to ponder aloud about what we were dealing with. I set up  
15 a conference call."

16 Is that consistent with the idea that Dr. Farrar set up the conference call?

17 A That is correct. That is, in fact, what happened.

18 Q Okay. Great.

19 So, almost done with my, sort of, round of questions here. I would just like to

20 ask a couple of yes/no questions that --

21 A Sure.

22 Q -- should go relatively quickly.

23 So did Dr. Farrar organize the conference call?

24 A He did not. Oh, sorry. Dr. Farrar. He did.

25 Q He did. Okay.

1 A Yes.

2 Q Did Dr. Fauci or Dr. Collins organize the conference call?

3 A They did not.

4 Q Did Dr. Farrar play a substantive role as you and your co-authors drafted the  
5 paper?

6 A Not in the drafting of the paper itself, but as a leadership in helping us think  
7 about how we should think of this as a paper, yes.

8 Q Did Drs. Fauci or Collins play a similar leadership role in the paper?

9 A They played no role in the paper.

10 Q Okay.

11 Did Tony Fauci or Francis Collins ever threaten you or bully you or intimidate you  
12 into concealing or altering the findings of your paper or in any other way?

13 A They did not.

14 Q Did Drs. Fauci or Collins try to suppress scientific inquiry into the origins of  
15 COVID in the context of this paper or other contexts?

16 A Not only did they not do that, they encouraged scientific inquiry into the  
17 origins of the COVID-19 pandemic.

18 Q Did Drs. Fauci or Collins ever threaten to revoke or withhold Federal funding  
19 from you in any way?

20 A They did not.

21 Q To be really clear, did Dr. Jeremy Farrar -- I know he played a leadership role  
22 in the paper, organized the call. But did he at any point threaten you or bully you into  
23 taking a particular point of view on the virus's origins?

24 A Not only did he not do that, he was highly encouraging in a scientific  
25 approach to address the origin of the COVID-19 pandemic.

1 Q Okay.

2 Well, with that, we can go off the record.

3 [Recess.]

4 Mr. Benzine. We can go back on the record.

5 BY MR. BENZINE:

6 Q I want to ask a few questions based off the last hour of questioning.

7 You were asked a lot about Dr. Farrar's role in the report and then the paper and  
8 the process leading up to, including: He suggested journals; he coordinated with  
9 Dr. Holmes on certain things; he suggested direction and scope, one drafting change,  
10 suggested press and messaging strategy.

11 Why wasn't he credited?

12 A Again, Jeremy Farrar was not substantially involved in the paper itself, the  
13 science of the paper, the writing of the paper. He suggested one specific change, which  
14 we incorporated.

15 Typically, acknowledgements are for when you're acknowledging people that have  
16 been involved in discussions around the paper, discussions around scientific concepts in  
17 the paper, which is the reason why Dr. Mike Farzan is acknowledged.

18 I believe that Eddie Holmes asked Dr. Farrar himself if he felt like he should be  
19 acknowledged in the paper, and I believe that Dr. Farrar himself suggested that he should  
20 not.

21 Q Thank you.

22 You were also asked about if Dr. Fauci or Dr. Collins had a similar role to Dr. Farrar,  
23 as -- I think you put it as like a father figure to the paper.

24 A Right.

25 Q And you said they didn't have that kind of similar role.

1           A    They did not.  The only role, again, that they had was that they were  
2 participants on the initial conference call, were interested in the question of the origin,  
3 and had suggested that we consider drafting a peer-reviewed publication on the topic.

4           Q    Were you on every communication Dr. Farrar had with Dr. Fauci and  
5 Dr. Collins?

6           A    I wouldn't know.  I don't believe so, no.

7           Q    Every phone call Dr. Fauci had with --

8           A    No.  I was only on that one phone call.

9           Q    Okay.  So you don't know the extent that Dr. Farrar could've been  
10 coordinating with Dr. Fauci and Dr. Collins behind the scenes?

11          A    I would assume that, given that Eddie Holmes was in frequent contact with  
12 Dr. Farrar, that would have been known.  And, to the best of my knowledge, and given  
13 the process here, I have no reason to believe that either would've been involved in that.  
14 But do I know for certain?  No, of course not.

15          Q    Okay.

16          A    A couple others on my first round.  I asked if you had spoken to some people.  
17 Have you spoken to Dr. Ian Lipkin since April 6th?

18          A    Since April 6, 2020?

19          Q    2023.

20          A    Oh, 2023?  I sent him an email because he has recently had surgery.  I did  
21 not hear back from Ian.

22          Q    Okay.

23          A    So, no.

24          Q    Have you spoken to Dr. Farzan since April 21, 2023?

25          A    No.

1 Q Have you spoken to Dr. Garry since June 9 --

2 A I have.

3 Q About what?

4 A Our research. We are close collaborators, so we communicate frequently  
5 on ongoing research. We had an annual meeting last week. So, yes, we are talking  
6 about --

7 Q Did you have any communications with Dr. Garry regarding this interview?

8 A This interview directly? He is aware that I had this interview today, yes.

9 Q Have you spoken to him about the answers that he gave during his  
10 interview?

11 A I have not.

12 Q Okay. Thank you.

13 I want to move to the Wuhan Institute of Virology and some questions  
14 surrounding the research that was going on there.

15 The Wuhan Institute has a biosafety level 4 laboratory within it. Can you explain  
16 really briefly just the various levels of biosafety?

17 A Sure.

18 There's biosafety level 1, which is a general lab. No special precautions required  
19 other than sterile techniques and things like that.

20 And then there's biosafety level 2, which requires hoods. And there's a version  
21 of this which is biosafety level 2-plus, in which respiratory precautions like masks, for  
22 example, are worn. Things like gloves need to be worn in BSL-2, for example.

23 Then there is biosafety level 3, which is -- I'm not entirely familiar with what the  
24 specific requirements are, but that's the next level up, in which you can start handling  
25 what would be considered dangerous pathogens.



1           And then you have -- and I should say that biosafety level 3, there is a number of  
2 those labs. They are quite abundant. For example, here at Scripps Research, we have  
3 those facilities. So many institutions have those.

4           Then there's the final biosafety level, which is biosafety level 4, which is dedicated  
5 to just handling the most dangerous pathogens, like Ebola, Lassa. And Wuhan Institute  
6 of Virology, I believe, is the only such facility in China.

7           Q    Have you ever collaborated professionally with the Wuhan Institute of  
8 Virology?

9           A    I have not.

10          Q    Have you ever been to the Wuhan Institute of Virology?

11          A    I have not.

12          Q    All right.

13                I want to go ahead and introduce majority exhibit 3.

14                                [Andersen Majority Exhibit No. 3

15                                Was marked for identification.]

16                                BY MR. BENZINE:

17          Q    This is a fact sheet produced by the U.S. Department of State and discusses  
18 activity at the Wuhan Institute of Virology. It was published January 15, 2021.

19                Are you aware of this document before I just showed it to you?

20          A    I am aware of this document, although I do not recollect the exact content of  
21 the document. Only in broad terms.

22          Q    On page 2, there's a line that starts with the number 1, "Illnesses inside the  
23 Wuhan Institute of Virology." And the first bullet reads, "The U.S. government has  
24 reason to believe that several researchers inside the WIV became sick in autumn 2019,  
25 before the first identified case of the outbreak, with symptoms consistent with both

1 COVID-19 and common seasonal illnesses."

2 Would an outbreak inside a lab be a data point suggesting to a laboratory  
3 incident?

4 A Illness within a laboratory in the middle of one of the most severe flu  
5 seasons in 10 years would not specifically suggest COVID-19 inside that laboratory, no.

6 Q If those three researchers had what became COVID-19, would that suggest a  
7 laboratory accident?

8 A That would certainly be a very strong data point towards a lab-associated  
9 accident, should there be three researchers in November of 2019 that have confirmed  
10 COVID-19, absolutely.

11 Q Are you aware of recent reports regarding sick researchers at the Wuhan  
12 Institute of Virology?

13 A I am aware of recent speculation to that extent, yes. I am not aware of any  
14 verifiable evidence or credible reports to that effect, no.

15 Q All right. Thank you.

16 I want to introduce majority exhibit 4.

17 [Andersen Majority Exhibit No. 4

18 Was marked for identification.]

19 BY MR. BENZINE:

20 Q This is a cable from the U.S. Department of State that discusses the Wuhan  
21 Institute of Virology.

22 Are you aware of this document?

23 A I am aware of this document, yes.

24 Q The summary on the first page, the last line says that the Wuhan Institute of  
25 Virology "had a shortage of highly trained technicians and investigators required to safely

1 operate a BSL-4 laboratory and a lack of clarity in related Chinese government policies  
2 and guidelines."

3 What is your interpretation of that statement?

4 A Sorry. Where is this?

5 Q At the bottom of the paragraph marked no. 1, "Summary and Comment."

6 A I'm reading this that, as the date on which this is published, there is a lack of  
7 trained staff to do some of the BSL-4 operations that they want to do.

8 Q Is it important to have technicians that are properly trained on BSL-4  
9 conditions?

10 A If you're doing BSL-4 work, then, yes, that requires trained technicians.

11 Q To your own knowledge and recollection, was the Wuhan Institute of  
12 Virology working with novel SARS-like coronaviruses?

13 A The Wuhan Institute of Virology was working with novel SARS-like  
14 coronavirus in the sense that they were sequencing sampling from bats and had managed  
15 to successfully culture three of them, yes.

16 Q Were they doing any chimeric or recombinant work?

17 A They were, yes.

18 Q Under what biosafety level would you do chimeric or recombinant work on  
19 SARS-like coronaviruses?

20 A Typically, I believe this would -- the work itself was done on a BSL-2. And I  
21 believe that the animal work related to that, which large quantities of viruses could be  
22 produced, would've been done at BSL level 3.

23 Q Is that what, to your knowledge, the Wuhan Institute was -- the level it was  
24 doing at?

25 A That is specifically what I'm referring to, yes --

1 Q Okay.

2 A -- based on the published record from the lab itself.

3 Q Okay.

4 A Yeah.

5 Q I want to move on and introduce majority exhibit 5 and talk a little bit about  
6 gain-of-function research and EcoHealth.

7 [Andersen Majority Exhibit No. 5

8 Was marked for identification.]

9 BY MR. BENZINE:

10 Q So this is the NIH website for gain-of-function research involving potential  
11 pandemic pathogens. And just for clarity of the record, this is the version that was last  
12 reviewed July 12, 2021.

13 Under the heading "Gain-of-Function Research," it says, "The term  
14 'gain-of-function research' describes a type of research that modifies a biological agent so  
15 that it confers new or enhanced activity to that agent."

16 Do you agree with that definition?

17 A I have very little thoughts on what definitions on gain-of-function research  
18 really means. I don't engage in gain-of-function research. That is not my area of  
19 expertise.

20 Q Okay. You don't engage in it at all?

21 A Gain-of-function research?

22 Q Yeah.

23 A No.

24 Q Okay.

25 Then we can skip ahead a little bit and move on to questions about EcoHealth.

1 Prior to the pandemic, were you aware of EcoHealth Alliance?

2 A Prior to the pandemic? Yes.

3 Q Have you ever worked collaboratively with EcoHealth before?

4 A I have not.

5 Q Have you met EcoHealth president Peter Daszak?

6 A I have.

7 Q When did you meet him?

8 A Probably -- must have been the first meeting of these CREID centers, so NIH  
9 annual meetings, which is -- probably the first one was maybe in 2021.

10 Q Does Dr. Daszak also have a CREID center?

11 A Yes, he does.

12 Q Do you have any personal feelings about Dr. Daszak?

13 Mr. Rowley. "Personal feelings," what do you mean?

14 Mr. Benzine. Like, how do you feel about him personally, not as a scientist?

15 Mr. Rowley. You mean, does he like him?

16 Mr. Benzine. Yeah.

17 Dr. Andersen. I have no comments to that.

18 BY MR. BENZINE:

19 Q What about his EcoHealth generally?

20 A I have been critical in general of some of the statements and claims they  
21 have made in pandemic preparedness and have written a paper to that effect with my  
22 co-authors Eddie Holmes and Andy Rambaut, published, I believe, in 2018 in the journal  
23 Nature, which outlined, while we found that the type of work that EcoHealth Alliance  
24 engages in, which is understanding the diversity of viruses in the biosphere, primarily in  
25 bats, while that is important, is not a direct way to prevent pandemics. They can help us

1 inform. They can help inform policy. They're important for basic research reasons.  
2 But we felt that it's much more important to focus directly on the animal-human interface  
3 in terms of surveillance -- more surveillance, less prediction.

4 And we wrote a paper on that, which was primarily because of some of the global  
5 virome projects that were led by Dr. Daszak and the EcoHealth Alliance that we were  
6 critical about. And that continues to this day.

7 Q In some of your emails, you refer to them as "EgoHealth"?

8 A Correct.

9 Q Can you explain that a little bit? I believe you said Dr. Holmes coined the  
10 term, but can you explain that a little bit more?

11 A Dr. Holmes coined the term, and I think it's a term of endearment. You  
12 know, Peter has a bubbling personality, I guess, and I guess that's why Dr. Holmes  
13 referred to it first as that, and then we all took that up.

14 Q Okay.

15 A I'll say, we don't do that today. This is in private conversations.

16 Q You testified earlier that you received Federal grants before. Did any of  
17 these grants involve collecting any sequences in viruses?

18 A They do.

19 Q Do you publish the viral sequences that you collect?

20 A We do.

21 Q Have you ever not published a viral sequence that you've collected?

22 A I don't think so. I think all of -- again, my lab engages in open science. We  
23 publish our data as publicly available via our website and via publicly available resources  
24 like NCBI.

25 Of course, some of the raw data may contain viruses that we haven't yet

1 assembled. But of any, like, particular viral genome, no, we release those in real-time,  
2 open access.

3 Q In your knowledge and experience over the course of your career, is that  
4 routine? Do most researchers publish every virus they sequence?

5 A Typically researchers do that, although the timeframes of this is different.  
6 Many do so -- well, I'll say, actually, most people do so associated with publications. So,  
7 once they have a publication, they at the same time release the sequences we are talking  
8 about. We do it differently, because, as I'm saying, we do this prior to publication and  
9 typically in real-time. But that's not necessarily the standard in the field.

10 Q What is the, kind of -- understanding that publication timelines can change --

11 A Yeah.

12 Q -- what's the, kind of, standard operating procedure on how long it takes  
13 from conducting the experiment to published?

14 A Oh, it varies wildly. It can be in a matter of weeks to years.

15 Q So it would be possible that someone has sequenced a virus in 2019 and still  
16 not released the sequence?

17 A Sure. Of course.

18 Q Okay.

19 Do researchers routinely publish every experiment they conduct?

20 A They do not, no.

21 Q In your experience, if a grant application is denied by the Federal  
22 Government, are there other avenues to receive funding?

23 A Yes. Private foundations, other ways in which to obtain funding. Yes.

24 Q And, in your experience, is it common to begin some of the work you're  
25 proposing prior to submission of the proposal?

1 A It varies. At times, sure.

2 Q Okay.

3 A For very ambitious work, typically not.

4 Q Okay.

5 I want to shift, and some of my questions will be the same as what minority  
6 counsel has asked, but shift to the February 1st conference call and introduce majority  
7 exhibit 6.

8 [Andersen Majority Exhibit No. 6

9 Was marked for identification.]

10 BY MR. BENZINE:

11 Q Again, there will be some similar questions, but just --

12 A Sure.

13 Q -- answer them how you already have.

14 So this is an email chain with Dr. Farrar. It has Dr. Fauci, the other members of  
15 the conference call on it, and Bates-marked REV0000756 through 758. And on the page  
16 marked 757 is the agenda and roster that we've already kind of talked about.

17 When did you first learn of this call? Was it when the roster was sent out,  
18 February 1st?

19 A No. I knew that the call was going to happen, because Eddie, myself had  
20 talked about it, and I talked to Jeremy Farrar. When I initially talked to him, we talked  
21 about setting up -- that he was setting up the conference call. So that's when I became  
22 aware. This is where I became aware of all the details surrounding the conference call.

23 Q Was it -- this email with the details and participants was sent by Dr. Farrar.  
24 Was it Dr. Farrar who invited you to the call?

25 A Officially Dr. Farrar was the one who invited me to the call, correct, yes.



1 Q "Officially" is a qualifier. Were there unofficial conversations?

2 A Again, we were separately talking -- Eddie Holmes, myself -- talking about  
3 the need to have a conference call to discuss the findings that I've had --

4 Q Okay.

5 A -- which included Jeremy Farrar. So, yes, that, you can call it unofficial.  
6 But this is when I get the email about the call itself.

7 Q And, for clarity, you were on the call?

8 A I was on the call.

9 Q Were there any subsequent calls with this group regarding origins of  
10 COVID-19?

11 A With this particular group?

12 Q Uh-huh.

13 A No.

14 Q Okay. So there were --

15 A Not to my recollection.

16 Q -- there were no subsequent calls that included Dr. Collins or Dr. Fauci?

17 A Not related to this. There was a later call that included those, which had to  
18 do with a preprint from Dr. Jesse Bloom which was unrelated to any of this.

19 Q Uh-huh.

20 A But on this one, no, there were no further teleconference calls that they  
21 were part of.

22 Q All right.

23 And what, to the best of your recollection, and briefly, what did you present on  
24 the call?

25 A I presented the main findings I had, which was some of the features that I

1 found to be unusual in the viral genome, including the receptor binding domain, the furin  
2 cleavage site, the damage, one site which is a restriction site, and also just outlining some  
3 of the research that have been ongoing at the Wuhan Institute of Virology. And I had a  
4 presentation, which you have as part of your exhibits too.

5 Q Regarding the Wuhan Institute of Virology, what did you present?

6 A Just in broad terms, the fact that they were culturing viruses from bats, or  
7 attempting to culture viruses from bats, isolate viruses from bat samples, which is not  
8 easy, in BSL-2; and, also, some of their chimeric work using BWIV-1, for example, which is  
9 a common backbone that they are using; as well as just the general strategies around  
10 creating chimeric viruses, much of which I believe was done in BSL-2 and, as I mentioned,  
11 animal work in BSL-3.

12 But those were my, sort of, concerns around the research and the reason, of  
13 course, for why we need to consider a potential lab leak as a scientific hypothesis, yes.

14 Q Do you do any chimeric work in your lab?

15 A We don't do chimeric work, but we have done -- I've done so in the past, as  
16 part of my Ph.D. We have done work on Zika virus, for example, where we have  
17 introduced naturally occurring mutations into what's called clones of the virus and then  
18 cultured those. That's completed work, but that's what we have done in the past.

19 Q Does chimeric work come with more risks than just culturing?

20 A Chimeric work requires culturing.

21 Q Okay.

22 A Chimeric work is -- you know, "risk" is a nebulous term, but in chimeric work  
23 you can work with high amounts of the virus, versus when you culture or attempt to -- I'm  
24 saying "culture." Really, what I should say is "attempt to isolate" a virus.

25 So, for example, if you have a bat sample from which you have sequenced the

1 viral genome -- so you know that this virus was in that sample. You don't know whether  
2 the virus is active, whether it can actually be cultured, right? But you know that at least  
3 there's some evidence to suggest that that virus is in that sample.

4 And what you then try to do is, you take that very sample and you put it on top of  
5 cells, typically Vero cells, and then you attempt to isolate the virus -- so, basically, getting  
6 the virus from that sample to actively replicate in the cell culture itself such that you can  
7 isolate the virus.

8 Q Okay.

9 I want to introduce majority exhibit 7.

10 [Andersen Majority Exhibit No. 7

11 Was marked for identification.]

12 BY MR. BENZINE:

13 Q This is an email chain between yourself, Dr. Fauci, and Dr. Farrar from  
14 January 31st of 2020 and Bates-numbered REV0000750 through 753.

15 On the page marked 751, Dr. Farrar tells Dr. Fauci, "You can phone  
16 Kristian Andersen," gives him your number.

17 A Yeah.

18 Q "He is expecting your call now."

19 Was this the first time that you had ever spoken to Dr. Fauci, like, personally?

20 A Probably. Yeah. I wonder if I've talked to him on, like -- I mean, as  
21 opposed to --

22 Q Outside of conferences or --

23 A Sure. Yes. Yes. Yes. Absolutely, yes.

24 Q After you speak, on the page marked 750 --

25 A Yeah.

1 Q -- Dr. Fauci sends an email back, where he kind of outlines that you both  
2 talked about your concerns that you've discussed here today and that, if they are  
3 validated, he would have to talk to the FBI and Jeremy Farrar would have to talk to MI5.

4 Did that surprise you?

5 A No, it did not surprise me because, in fact, I was -- when I initially was  
6 concerned with, you know, the early findings that I had, I was, myself, considering, what  
7 do I need to do here? Right? If I believe this could've come from the lab, who am I  
8 supposed to contact?

9 And I thought about -- I have some brochures and pamphlets from, like, the FBI, I  
10 believe. So I was like, am I supposed to call the FBI? Am I supposed to call the CIA?  
11 What am I even supposed to do here?

12 All of that sort of -- I didn't go through with any of that because then, ultimately,  
13 Jeremy Farrar -- I talked to Eddie, right? And Jeremy Farrar then set up the conference  
14 call, and then it was sort of moving from that direction.

15 But none of this surprises me, no. Whether he did it, of course I don't know.  
16 But, as I've previously mentioned, the White House Office of Science and Technology  
17 Policy set up a conference call on February 3 --

18 Q Uh-huh.

19 A -- where I raised many of the same concerns that I had, although the idea of  
20 engineering at that stage was largely -- I had largely dismissed that at that point.

21 Q The next email up, you say, "Thanks, Tony. In addition to Eddie and Bob,  
22 we have Mike Farzan onboard."

23 A Yeah.

24 Q Is this discussing setting up the larger conference call?

25 A This is the conference call that Jeremy is organizing that I'm talking about,

1 yes.

2 Q To your knowledge, was Dr. Farzan invited to the conference call?

3 A I don't believe he was invited to the conference call. I think Jeremy just did  
4 not get his email, something like that. So I don't believe he was invited, and he wasn't  
5 on the conference call.

6 Again, I had separate conversations with Mike Farzan, which is why I mentioned  
7 that we have them onboard, because I probably asked him -- when I talked to Mike, I said,  
8 look, Jeremy is organizing this conference call, would you be willing to be on that, and he  
9 probably said yes, although I don't recollect that conversation.

10 Q Okay.

11 We can move to majority exhibit 8, an email chain that has you and Dr. Fauci and  
12 Dr. Farrar on it that I'm sure is burned into your mind at this point.

13 A Yeah.

14 [Andersen Majority Exhibit No. 8  
15 Was marked for identification.]

16 BY MR. BENZINE:

17 Q So I won't ask you if you remember the email because --

18 A I do, yes.

19 Q Yep. It's Bates-numbered REV0000797 through 803.

20 On 797, in the middle there, you state, "The unusual features of the virus make up  
21 a very small part of the genome, so one has to look really closely at all the sequences to  
22 see that some of the features potentially look engineered."

23 Which features, at that time, were you talking about?

24 A Yeah, I'm talking about, like, the furin cleavage site, the receptor binding  
25 domain, and a few things associated with that, the BamH1 restriction site that I

1 mentioned, as well as some features associated with that -- basically, what I then end up  
2 presenting the next day at that conference call.

3 Q And a little further down, in the second paragraph, you write, "I should  
4 mention that after discussions earlier today, Eddie, Bob, Mike, and myself all find the  
5 genome inconsistent with expectations from evolutionary theory."

6 Who are Eddie, Bob, and Mike?

7 A Eddie Holmes, Bob Garry, and Mike Farzan.

8 Q Okay.

9 What --

10 A For the record, let me just read out the full paragraph, if that's okay?

11 Q Yeah.

12 A "We have a good team lined up to look very critically at this, so we should  
13 know much more at the end of the weekend. I should mention that after discussions  
14 earlier today, Eddie, Bob, Mike, and myself all find the genome inconsistent with  
15 expectations from evolutionary theory. But we have to look at this much more closely,  
16 and there are still further analyses to be done, so those opinions could still change."

17 Q Thank you. So, sticking with it, was it the furin cleavage site and the RBD  
18 that looked inconsistent from evolutionary theory?

19 A Yeah, so it's important -- a little bit of academia with this, right? I don't say  
20 it's inconsistent with evolutionary theory.

21 Q Expectations from evolutionary theory. Excuse me.

22 A Expectations from evolutionary theory, which is different.

23 The reason why, just to be clear, the things that had stood up -- let's just talk  
24 about the receptor binding domain and the furin cleavage site.

25 This particular receptor binding domain, at the time, we had not seen a version of

1 that. But early analyses on that, our own as well as those of Ralph Baric and others,  
2 suggested that it was a good binder to human ACE-2, as well as multiple other species,  
3 but definitely human ACE-2.

4 And, again, it was a novel site. We had not -- especially the contact residues.  
5 This is part of the virus, right, the contacts, that ACE-2 receptor on the human cells. And  
6 the contact residues specifically were different in SARS 2 than they were, for example,  
7 SARS 1, yet they appeared to be a good binder.

8 So I was perplexed by that. We had not seen that site before. Of course, the  
9 furin cleavage site itself, which we had not seen in sarbecoviruses before.

10 But it's important, again, to understand that that's the extent of the early  
11 considerations, because, of course, furin cleavage sites are broadly, you know, seen in  
12 coronaviruses, including many betacoronaviruses, which I didn't know at the time.

13 But that's basically my comments. And when I'm saying the genome is  
14 inconsistent with expectations from evolutionary theory, it's a bit of a fancy way of  
15 basically saying, like, look, guys, I think this could be engineered.

16 Q All right.

17 And then Dr. Fauci says, "Thanks, Kristian. Talk soon on the call" --

18 A Correct.

19 Q -- I'm assuming, referencing the conference call where you presented --

20 A Yes.

21 Q -- these thoughts.

22 A He's talking about the conference call that Jeremy Farrar organized  
23 for the -- that same day or the day after?

24 Q I think it's the same day.

25 A Yeah, maybe it's the same. It's confusing because there's Australian emails

1 in our -- yeah, this may be the same, yeah.

2 Q The timestamps are --

3 A Yeah.

4 Q -- hard to follow.

5 A Confusing. Yes.

6 Q On the conference call -- we talked a little bit about it -- what do you recall  
7 Dr. Fauci saying, if he said anything?

8 A I honestly don't remember Dr. Fauci, Collins -- I believe there might've been  
9 other NIH contingents on the call too. They probably had some questions, but I don't  
10 recollect that they -- they certainly didn't add anything of substance to the scientific  
11 discussion.

12 Again, the discussions were: Jeremy said a few things to sort of set up the call  
13 and "here's what we're going to do," but, otherwise, the conversation was just between  
14 myself, Eddie Holmes, Andy Rambaut, Christian Drosten, Ron Fouchier in particular, so  
15 among the experts present on the call.

16 Q Okay.

17 I want to introduce majority exhibit 9.

18 [Andersen Majority Exhibit No. 9

19 Was marked for identification.]

20 BY MR. BENZINE:

21 Q This is a letter from the law firm Hogan Lovells to Congressman James Comer  
22 and Congressman Jim Jordan, dated August 18, 2021. And it was in response to a letter  
23 from those two Congressmen to you --

24 A Yes.

25 Q -- on July 29, 2021.



1 Moving to page 3 of the annex is when they start discussing the February 1st  
2 conference call.

3 A Correct.

4 Q Primarily, without delving into attorney-client privilege, were you consulted  
5 in the drafting of this letter?

6 A Yes. I mean, with the institution, yes.

7 Q Okay.

8 A Yes.

9 Q In -- let me find it.

10 Can we go off the record for just a second?

11 [Discussion off the record.]

12 Mr. Benzine. Okay. We can go back on the record.

13 BY MR. BENZINE:

14 Q At the end of the first paragraph, the last sentence, it says --

15 A On page 3?

16 Q On page 3, yes.

17 A Yes.

18 Q Or, the end of the first paragraph under the February 1st conference call  
19 section.

20 It says, "Dr. Farrar moderated the discussion while Dr. Fauci asked questions of  
21 the other participants about plausible origins of the virus, raising the possibility that the  
22 genomic features of SARS-CoV-2 could've been engineered."

23 Do you recall what questions Dr. Fauci asked?

24 A I do not, no.

25 Q Okay. Do you recall Dr. Collins saying anything on the conference call?

1           A    I do not, no.

2           Q    Was there --

3           A    But, again, I assumed he probably had questions.    But I don't recall what  
4 those questions would be or if he even did have questions.

5           Q    Can you describe what happened on the call after you presented your  
6 preliminary findings?

7           A    It was a scientific discussion between, again, myself and my colleagues.

8                    On this side, Eddie Holmes, Andrew Rambaut, probably Bob Garry as well,  
9 although I don't actually remember Bob's specific involvement in that, but certainly with  
10 Eddie Holmes and Andrew Rambaut, discussing our findings, discussing what we were  
11 looking at.

12                   And then on the other side, especially Ron Fouchier, Christian Drosten, and  
13 Marion Koopmans, as well as Stefan Pohlmann, I think, essentially giving their view on the  
14 evidence that I had presented.    And they were mostly of the opinion that they just did  
15 not find a lab leak to even be plausible at that stage.

16                   But I will say that, certainly, they seemed to be unfamiliar with a significant  
17 proportion of the type of research ongoing at the Wuhan Institute of Virology which I  
18 mentioned several times on this particular conference call.

19           Q    What were their rationales when they said that a lab accident wasn't  
20 plausible?

21           A    I think -- so, again, they are coronavirus specialists and experts at the time  
22 that worked on those viruses a lot.    That's not to say that my colleagues, in particular  
23 Andrew Rambaut and Bob Garry, had not; they had worked on coronaviruses prior.

24                   But I think their views on it was mostly that, on the potential tissue culture  
25 passage, for example, of an attempt to isolate a novel virus is incredibly difficult.    They

1 didn't think that that was very plausible, that that could actually be done.

2 And then, on the, sort of, more engineering side were Ron, especially, who's an  
3 expert of gain-of-function research and has done a lot of this type of research, was -- just  
4 did not think that, like, anybody just wouldn't do it this way. And he had very detailed  
5 notes in which he sort of puts down his thoughts on why he really doesn't think that this  
6 could've been a lab leak, which we certainly took into consideration, but much of that we  
7 had discussed previously. We still felt that it was necessary to take a much closer look  
8 and do a scientific approach to this, as opposed to dismissing it out of hand.

9 Q At the end of the call, was there any direction on a path forward?

10 A Probably, maybe, there was a talk about Jeremy Farrar would later, as I've  
11 already mentioned, try and get a group convened under the WHO. There may have  
12 been some talk about those as next steps.

13 I don't remember whether there was any specific discussion around, look, Kristian,  
14 you guys should go write a paper, for example. We ultimately ended up doing that, and,  
15 of course, you know, some of that was informed by some of the conversations from the  
16 conference call but is a separate product to the conference call. The purpose of the  
17 conference call was not to write a paper. It was to discuss the findings that I had raised.

18 Q Understanding that, do you recall any mention of writing a report, any  
19 written product, on the conference call?

20 A Yes. I think we agreed that probably I would take the lead on basically  
21 writing down some summary points from the conference call itself, which I believe I did.  
22 And I think maybe the earliest version of this is probably the day after, maybe. Yeah.

23 Q But not a discussion of whether or not those notes or report would turn into  
24 a paper?

25 A No. Those conversations -- I mean, at least from my perspective. I think

1 probably Eddie Holmes early on saw this as being important to write a paper on it. But  
2 as is clear from my documentation, I was more skeptical of that path.

3 Q Uh-huh.

4 I'm going to go in chronological order of some events.

5 A Sure.

6 Q So, moving to the February 3rd meeting with the OSTP --

7 A Yeah.

8 Q -- and National Academies, I want to introduce majority exhibit 10.

9 [Andersen Majority Exhibit No. 10

10 Was marked for identification.]

11 BY MR. BENZINE:

12 Q This is the agenda for a February 3, 2020, meeting hosted by the National  
13 Academies and the White House Office of Science and Technology Policy, and  
14 Bates-numbered REV0000809 through 810.

15 Do you remember receiving this agenda?

16 A I do, yes.

17 Q Were you invited to this meeting?

18 A I was, by Andrew Pope, I believe.

19 Q And did you attend the meeting?

20 A I did.

21 Q It says on here that there's a Zoom link. Was it virtual or in person?

22 A It was virtual.

23 Q Going down the agenda, I just want to ask if, like, you remember the  
24 different stages and what happened.

25 Was Andrew Pope present, or present on the Zoom, and did he do the welcome

1 and introduction?

2 A I assume so. I don't recall.

3 Q All right. Were Dr. Kelvin Droegemeier and Dr. Christian Hassell present?

4 A I don't remember Chris Hassell, but I certainly remember Dr. Droegemeier.

5 Q To the best of your recollection, what did he say?

6 A I think we mostly -- I think it was mostly just related to just the emerging  
7 situation around the coronavirus. But I don't remember -- none of these were specific  
8 to any one point, including Dr. Fauci, who then spoke afterwards.

9 Q So that was my next question. Was Dr. Fauci present at this?

10 A I believe so, but I don't recall. I'll say, the only thing that I really do  
11 remember -- actually, I don't, to be perfectly honest. Because I think I've been on later  
12 calls with the National Academy of Sciences where Kelvin has definitely been present and  
13 said a lot. I might be mixing those up.

14 Q Right.

15 A So, in all honesty, I can't remember any of the comments made by any of  
16 these individuals here. But I believe they were all present, yes.

17 Q Okay.

18 On the back, it says, "Determine next steps." Do you remember what the next  
19 steps were of this meeting?

20 A I think it was to produce a letter to the sponsor. So, again, the request  
21 came from the White House Office of Science and Technology Policy. I believe this was  
22 in response to -- specifically in response to a preprint that had talked about uncanny  
23 similarities between COVID-19 and HIV -- a preprint that was clearly wrong and also  
24 withdrawn.

25 But then I do believe that, based on the considerations that I had raised with the

1 conference call organized by Jeremy Farrar, I think that Dr. Fauci probably had talked to  
2 Dr. Pope as well, because I got an opportunity to present -- some of the same findings  
3 that I had done on the February 1 conference call I also presented on this February 3  
4 conference call.

5 Q Okay.

6 A Yeah.

7 Q Did you have any conversations with Dr. Fauci after this meeting regarding  
8 the February 3rd meeting?

9 A About these meetings?

10 Q Uh-huh.

11 A No. I've had a -- I've had, I believe -- following all of these meetings, I  
12 believe I have had a conference call about Dr. Bloom's preprint, on which Dr. Fauci was  
13 present.

14 Q Uh-huh.

15 A And then I have had two phone calls with Dr. Fauci, I believe 2021 and 2022,  
16 one of which was -- it was mostly to understand the emerging evidence on just the virus  
17 itself, including the origin but certainly not specific to. And that also included  
18 some -- you know, basically talking about, you know, what did we actually find in terms of  
19 these early discussions on February 1.

20 Q Do you remember the dates of the phone calls that you had with Dr. Fauci in  
21 2021 and 2022?

22 A I do not.

23 Alanna, do we have those?

24 I do not. I believe they were in 2021 and maybe in 2022.

25 Q And you gave it briefly, but do you recall the substance of either of those

1 phone calls?

2 A Again, it was to discuss the emerging evidence that we had on better  
3 understanding the origin of the pandemic, but also understanding just the virus itself and  
4 its evolution, which has been most of what my work has been focused on.

5 Q To the best of your recollection, did you discuss the subsequent papers to  
6 "Proximal Origin" that you had been working on with Dr. Fauci?

7 A No. I mean, I submitted them to -- because we are funded by the NIH, so  
8 when we have preprints and papers going out, we submit them to our program officers.  
9 And I believe our program officers had discussed the preprints and papers with Dr. Fauci.

10 Q Okay.

11 I now want to introduce majority exhibit 11.

12 [Andersen Majority Exhibit No. 11

13 Was marked for identification.]

14 BY MR. BENZINE:

15 Q So this is going back to the February 3rd meeting.

16 A Yeah.

17 Q An email from Dr. Pope to a whole bunch of people --

18 A Yeah.

19 Q -- and Bates-numbered REV0000807 through 808.

20 I want to, as best as we can, draw your attention to the "To" line of the email and  
21 ask you if you recall certain people on this meeting.

22 A I recall Dr. Bedford, Trevor Bedford. I recall Dr. Peter Daszak. And I recall  
23 Ralph Baric.

24 Q Do you recall --

25 A And probably Dr. Stanley Perlman as well.

1 Q Do you recall if Dr. Tom Inglesby attended this?

2 A I do not. Is he on the list?

3 Q He is. The middle of the fourth line.

4 A Yeah. I don't -- I don't recall.

5 Q What about Dr. Ian Watson?

6 A Who is Ian Watson?

7 Q He worked at Health and Human Services.

8 A Oh. No.

9 Q What about Dr. Robert Kadlec?

10 A I -- I -- I don't.

11 Q On, it's about in the middle of the block, five lines down, there's an all-caps  
12 email, KATHRYBR?

13 A Uh-huh.

14 Q And the end of that email address is @dni.gov. Do you remember anyone  
15 from the Office of the Director of National Intelligence attending this meeting?

16 A I do not.

17 Q Then, on two lines further down, kind of in the middle of the line, there's an  
18 email, rlbull@fbi.gov. Do you remember anyone from the Federal Bureau of  
19 Investigation at this meeting?

20 A I do not. I think, if I remember correctly, there was a big conference room  
21 at the National Academy of Sciences where I think there were a lot of different people.  
22 So maybe they -- and maybe there's a separate one with Dr. Droegemeier. So maybe  
23 they're a part of that. I don't remember any of them being part of this.

24 Q Okay.

25 I want to introduce what -- we'll use them together, but they will be exhibits 12



1 and 13.

2 [Andersen Majority Exhibit No. 12

3 was marked for identification.]

4 [Andersen Majority Exhibit No. 13

5 Was marked for identification.]

6 BY MR. BENZINE:

7 Q So exhibit 12 is -- it's labeled "Confidential Draft," and it is a draft of the  
8 letter from the National Academies to OSTP in response to the February 3rd meeting that  
9 we've been talking about.

10 A Uh-huh.

11 Q The second is the final, published version of that letter --

12 A That's right.

13 Q -- exhibit 13.

14 A Yeah.

15 Q Does that seem accurate to you, that exhibit 12 is the draft of exhibit 13?

16 Mr. Rowley. Well, he can't say that without examining them.

17 Mr. Benzine. We can give him a minute.

18 Dr. Andersen. I think I commented on a draft at some point, which I believe is  
19 probably this one.

20 Mr. Benzine. Uh-huh.

21 Dr. Andersen. But then the final paper, or the final letter, then happened  
22 without -- I don't think I saw any of those drafts. So I don't know if there's been other  
23 drafts to this one --

24 Mr. Benzine. Okay.

25 Dr. Andersen. -- specifically, but I assume that at least part of this is based on

1 that one over here.

2 Mr. Benzine. So --

3 Mr. Rowley. You know, Counsel, I'll just point out that the drafts are not  
4 identical. I don't know whether --

5 Mr. Benzine. No, I know. There were clearly changes made between the draft  
6 and the final.

7 Dr. Andersen. Yeah. Exactly.

8 Mr. Benzine. The final was February 6th. The first draft was February 4th.  
9 The committee is not in possession of all the drafts in between. So we will stipulate --

10 Dr. Andersen. And neither was I.

11 Mr. Benzine. Yeah.

12 Dr. Andersen. I don't -- yeah.

13 BY MR. BENZINE:

14 Q On -- so you just kind of said it. Do you remember, as a result of the  
15 February 3rd meeting, working on a letter like this? Maybe not this exact draft, but a  
16 letter like this?

17 A I was not working on a letter. I had a few comments on a draft that I saw,  
18 but I didn't have -- I don't think I added anything to the draft specifically. I think I just  
19 saw a draft and had some email comments.

20 Q Do you remember what the comments were?

21 A That I had?

22 Q Uh-huh.

23 A Yes. I think we had to -- because, again, the meeting was called specifically  
24 about the HIV uncanny similarities. And I remember that I thought it would be helpful  
25 to add some language around, look, there are versions of this which are inconsistent with

1 all evidence that we have and can essentially be dismissed. But, of course, there's more  
2 reasonable versions of the lab leak that one should consider. But I thought that it was  
3 important to have some comments around, like, let's -- you know, bioweapons, for  
4 example, right?

5 I believed that that should be part of the letter. I don't believe it became part of  
6 the letter, though.

7 Q I don't think so.

8 A I think the letter is very open-ended in general.

9 Q The draft of the letter includes a Footnote 5 that states, "Possibly add brief  
10 explanation that this does not preclude an unintentional release from a  
11 laboratory studying the evolution --

12 A Correct, yes.

13 Q -- of related coronaviruses."

14 Do you think that footnote is maybe -- or that draft of a footnote, potential  
15 footnote, might've been the result of your comment?

16 A I think so. And I actually think there's -- because there's -- I do believe that  
17 to be the case.

18 There's also an in-line comment that says, "Ask experts to add specifics about  
19 binding sites."

20 Q Uh-huh.

21 A I believe that refers to the fact that I brought up the important aspect  
22 around the receptor binding domain and how that appeared to be a good binder of  
23 human ACE-2.

24 So I think there are several things in here which probably relates back to some of  
25 the things that I raised during the meeting, specifically that Footnote 5 that you

1 mentioned. Yeah.

2 Q Between the February 1st call, the February 3rd meeting, and the February  
3 4th draft, how active were you with that group of participants in further studying  
4 COVID-19?

5 A What participants?

6 Q Of the February 1st call. So you mentioned Dr. Drosten, Dr. Farzan,  
7 Dr. Holmes.

8 A Oh. We had emails going back and forth, but, other than that, no  
9 further -- I think maybe I had conversations with Mike Farzan. But we were working  
10 around the clock, between Bob Garry, Andrew Rambaut, Eddie Holmes, and myself, so  
11 very frequent contact with them just in terms of getting stuff done. But nothing further  
12 with any of the other participants on the phone call.

13 Q So, in -- I'll use the draft -- the line right before which you said: "The initial  
14 views of the experts is that the available genomic data are consistent with natural  
15 evolution."

16 A Yeah.

17 Q So that would be consistent with, you've had conversations between  
18 February 1st and February 4th where you changed your mind?

19 A So the initial views of the experts is that the available -- oh, because you  
20 mean their -- my "the expectations from evolutionary theory"?

21 Q Uh-huh.

22 A Yes, the idea that what I had observed early on was inconsistent with the  
23 expectations from evolutionary theory was put in the ground by then, because, in fact, it  
24 wasn't.

25 There were several things about the furin cleavage site I had realized. For

1 example, initially, I thought it was pretty much a perfect furin cleavage site. It's not.  
2 It's actually a pretty bad one. So I realized it was out of frame, for example, which an  
3 engineer would basically never do.

4 So, yes, my opinion on, like, being inconsistent with evolutionary theory had been  
5 put in the ground. And the engineering aspect of that too, I basically said, okay, that  
6 doesn't make sense.

7 But, of course, there is the version of the lab leak which has to do with a cultured  
8 virus, which I was definitely still considering and probably at the time found the most  
9 likely explanation.

1 [10:51 a.m.]

2 BY MR. BENZINE:

3 Q So, just for clarity, between February 1st and February 3rd/4th --

4 A Yeah.

5 Q -- inconsistencies you had discussed away, and --

6 A Exactly. There are, in fact, no inconsistencies with the expectations on  
7 evolutionary theory. That was simply just me needing to look more carefully at the  
8 body of evidence that I didn't have at the time I wrote that.

9 Q And, by then, genetic engineering, in your view, was off the table?

10 A Was basically off the table, yes, correct.

11 Q But other versions of a lab-related incident were still possible?

12 A Not just that. I think I probably at the time still found it to be the most  
13 likely explanation, yes.

14 Q Thank you.

15 I have a few minutes left. So we'll do one more line of questions and  
16 then -- well, actually, I have 5 minutes left. So we're going to go off the record to avoid  
17 having to stop in the middle of a line of questioning.

18 A Okay.

19 Q And we can take a short break, and then we can -- off the record.

20 [Recess.]

21 Mr. Pellegrini. We can go back on the record.

22 BY MR. PELLEGRINI:

23 Q Dr. Andersen, I'd like to talk a little bit about the "Proximal Origin" paper  
24 itself --

25 A Sure.

1 Q -- and the different arguments inside of that paper. And so I think what I'd  
2 like to do is just introduce the paper as an exhibit so that we have it in front of us. And  
3 so that will be minority exhibit M.

4 [Andersen Minority Exhibit M  
5 Was marked for identification.]

6 BY MR. PELLEGRINI:

7 Q Not that you need to see it, I wouldn't think, at this point.

8 A Uh-huh.

9 Q Okay. So, first, before we even get into the nitty-gritty of the paper, I'd like  
10 to just talk a little bit about what was going on at the time. And you've touched on this  
11 in a few different ways. But there were various theories floating around that ended up  
12 not panning out, and some of them, I think it's fair to say, were a little bit out there.

13 I think one of them had to do with HIV. Could you just explain, for example,  
14 what that theory was?

15 A Yes. I think we need to talk about hypotheses, right? And I think there  
16 are two main hypotheses which were predominant at the time, and that continues to this  
17 day.

18 One is zoonosis, which is the natural origin in which a virus moves from an animal  
19 into the human population, likely by an intermediate host.

20 Then there is the lab-leak hypothesis, which is a multitude of different ideas,  
21 hypotheses, speculations, theories around how a virus may have been associated with  
22 research-based activity and, from there, emerged in the human population.

23 Because it's not a single theory, there are multiple different versions of this, which  
24 you can sort of say range from the idea of a bioweapon, which was quite predominant at  
25 the time -- there was a lot of talk about that, not just in the United States, you know,

1 talking about this as part of what was happening in China, but also in China as part of this  
2 was a U.S. bioweapon that came in via military games, for example.

3 So there was a lot of what I would consider to be conspiracy theories around how  
4 the pandemic -- and, at the time, it was clear that this would become a pandemic, but,  
5 you know, again, early on, it wasn't clear yet.

6 And then there was just a lot of speculation on that, I think most of which is just  
7 not helpful because it's not science-based. And a science-based hypothesis needs to be  
8 testable, it needs to be supported by evidence, it needs to be supported by data. And  
9 most of these were pure speculations that, you know, in my opinion, are unhelpful.

10 So I think our, you know, job as researchers is to separate out all these different  
11 ideas that are floating around and then getting them set into a group of different  
12 categories in which we can scientifically consider each and every one of them.

13 And, based on our own work, we basically separated it into four different  
14 hypotheses: the idea that it could've been a bioweapon, which -- and I'm just reading  
15 from our notes, the earliest, earliest notes we have on what would then -- later, some of  
16 those thoughts would go into the "Proximal Origin" paper.

17 Q Could I ask, could you describe a little bit the concept of a bioweapon --

18 A Yep.

19 Q -- and the underlying scientific theory of what that would entail?

20 A Sure. Yeah. So a bioweapon would be a way in which a scientist would  
21 specifically create a virus for the purpose of doing harm. In other words, somebody  
22 would have created SARS-CoV-2 for the purpose of creating SARS-CoV-2 and causing the  
23 COVID-19 pandemic.

24 That can be dismissed, because it doesn't make any sense. First of all, scientists  
25 are not even close to being able to just conjure up viruses. We can't just say, well, if you



1 put these features in, then you're going to get that virus on the other hand. That's not  
2 how science works.

3 And, specifically, too, if you look at bioweapons of the past and bioweapons  
4 research, it's on viruses that we know are dangerous. Like, SARS-1 would probably be a  
5 starting virus somebody would use at most. Ebola, other viruses that have been used in  
6 research in the past, as well as many bacteria like anthrax, for example. So that would  
7 be the starting point if you're talking about a bioweapon.

8 I think that's a -- can we definitely prove that that's exactly how any bioweapons,  
9 you know, evil scientist would do it? No, of course not, because I don't do that, and, you  
10 know, there's many things that are possible. It's just it is not plausible, right? They just  
11 don't make any sense.

12 And really importantly here is this idea of somebody creating SARS-CoV-2 with the  
13 intent of creating SARS-CoV-2, which I believe, based on any of the early evidence, could  
14 be dismissed, and I never considered that a likely possibility, right?

15 Q Great. Okay. So, understanding that --

16 A Yeah.

17 Q -- if we then shift a little bit to -- we talked earlier about zoonosis and natural  
18 origins as compared to research-related incidents.

19 A Yep.

20 Q When we think about zoonosis, could you -- and I think you've already done  
21 some of this -- give us a little bit of context about past viruses and their emergence and  
22 the extent to which those have occurred in nature and how that might affect the way that  
23 we approach the SARS-CoV-2 question?

24 A Yeah. I think, again, if we go back to what is the body of evidence that lets  
25 us conclude that something is a zoonosis, we're already there with SARS-2, right? So the

1 evidence base for these previous emergence events would be less detailed, I would say,  
2 primarily, than what we've seen for SARS-2.

3 But specifically what we mean here is that a virus, for example, Ebola virus, we  
4 don't actually know what the host of Ebola virus is, where it lives out in nature, but we  
5 believe it's bats. And I think we can reasonably say, because we know other related  
6 viruses, fetal viruses like Marburg, for example, we do know that they come from bats.  
7 So the hypothesis that Ebola very likely is coming from bats is a reasonable one, but it's  
8 by no means proven, right?

9 And what then happens is that you have an infected bat; maybe you come in with  
10 a specific variant of Ebola which can, in fact, infect humans; and then that moves directly  
11 from the bat into a first human case and, from there, then from that human case into  
12 additional cases, and then from there, then goes on to cause outbreaks, epidemics,  
13 pandemics, depending on the virus itself.

14 That's how pandemics of the past, epidemics of the past happened. How do we  
15 really know? Well, we make that judgment based on available evidence. Have we  
16 proven any one of these to definitely being zoonosis? No, I don't believe we have. In  
17 fact, I can't think of a single one in which we have proven it beyond any reasonable  
18 doubt.

19 SARS-1, for example, we know that animals that were in fact sold at the markets  
20 had very similar, although not identical, viruses to what we observe in humans. So the  
21 idea is that probably civets, raccoon dogs, badgers probably served as that intermediate  
22 host that acted as a conduit from they got into contacts with bats that had the virus, the  
23 bats gave it to those animals, it now gets probably to grow to higher titers, larger  
24 amounts in these animals, and now all of a sudden can probably also spread via the  
25 respiratory route as opposed to just the oral-fecal route, likely in bats. And then they

1 co-house these animals via holding centers, via transports into wild markets, for example,  
2 and then they get sold there. And then people get infected as a result of that.

3 But, again, if you're looking at SARS-1 as the example, for example, is that, again,  
4 the viruses we found in animals are actually not exactly the same we find in humans.  
5 And there's even speculation that maybe humans infected some of these animals. I  
6 personally don't really believe in any of that. I don't think it's the most parsimonious  
7 explanation, given the evidence that we do have, but this is an active area of research  
8 that we are certainly looking into.

9 And, also really importantly, just figuring out what is the location of where we  
10 think these animals come from. Because, for example, if you're looking at the viruses  
11 that are most similar to SARS-1, if you look at the viruses that are most similar to what we  
12 ultimately end up finding in humans, are, in fact, from civets in Hubei province, which, of  
13 course, is where Wuhan is, and not in Guangdong, which is where we saw the first human  
14 cases.

15 So these are the kind of examples of zoonosis. And, again, what's really  
16 important to understand here is that these are the ones we know about, because this is a  
17 continuous process -- evolution of viruses, recombination of viruses in huge animal  
18 reservoirs. You know, you can count the number of bats in the entire world and the  
19 number of rats in the entire world; it's a lot. And these viruses infect these animals,  
20 they recombine, they evolve, and we get into contact with them.

21 And as we certainly funnel them through our food chain via wildlife trade, for  
22 example, fur farming, factory farming, we get into contact with these. And these viruses  
23 try to jump into us all the time and are successful at times but maybe they can't lead to  
24 infections, so we merely brush them off. Maybe they'll lead to a single infection, but  
25 they don't lead to disease. Maybe they do lead to disease, but it's a mildly limiting

1 disease and, importantly, does not transmit onwards from there. Or maybe they cause  
2 a small cluster of cases but then die out because it's not very transmissible in humans,  
3 right? These things happen all the time, and they totally go under the radar.

4 So this is, again, a continuous process. It's a constant process. It's a process in  
5 which these viruses are trying to get into the human population all the time. It's just  
6 they're mostly unsuccessful -- until, of course, there is a virus that, just by happenstance,  
7 happens to be that virus that has all the different components and is just good enough to  
8 then, for example, cause the next pandemic.

9 Q And you've previously spoken about the seafood market and the role that  
10 you feel like the evidence suggests it played --

11 A Right.

12 Q -- in the outbreak. So we don't, I think, need to go back over that.

13 With the way that the "Proximal Origin" paper tackles zoonotic situations, it seems  
14 like that is generally broken out into little subcategories --

15 A Sure, yeah.

16 Q -- intermediate host or reservoir host. Can you talk about the difference  
17 between those two scenarios and what you would look for to judge whether one or the  
18 other might be more likely?

19 A Yeah. So we considered -- so, again, we considered three -- well, really, we  
20 considered four hypotheses in "Proximal Origin." One is specific engineering, which we  
21 up front say that we believe that today they can basically dismiss that possibility. And  
22 then we discussed three main theories, two of which are natural origin and the last of  
23 which is tissue culture passage or passage in a tissue culture of animals.

24 The natural origin we spread into two different theories. One is, essentially, this  
25 idea that it jumps from a bat into an intermediate host and then directly into humans

1 from there, and by the time it jumps into human at that stage, you basically have  
2 SARS-CoV-2 itself. There is very little evolution happening of the virus itself before it  
3 takes off in the human population. For example, the furin cleavage site, right? It's not  
4 something that is acquired in the human population. The virus already had that feature  
5 acquired, either in the bat reservoir or, I think slightly more likely, in the intermediate  
6 host.

7 Then there's a second version of this where the virus jumps into human via some,  
8 you know, animal species, but then it has low-level transmission in the human population  
9 and gets a chance to evolve as part of that process. And it goes undetected, either  
10 because we just don't detect it or because it simply just doesn't cause disease -- of which  
11 there are many viruses, right, that don't cause disease, so we just don't see it at all. And  
12 then maybe at some point it acquires some of the new, you know, features of  
13 SARS-CoV-2, like a furin cleavage site, for example, likely via recombination with host  
14 genes. It requires that, and then it takes off as a pandemic. And that requires this,  
15 like, slow -- what we can basically think of as a slow fuse in the human population, ending  
16 up in a take-off point in which it takes off in the human population.

17 I was -- I mean, my evolution on, sort of, just likely hypotheses are going from, you  
18 know, engineering to culture to actually natural. And then I was in favor of this slow  
19 fuse, where I thought maybe this could be linked to fur farming, mink farms, for example,  
20 in China, and then sort of with a slow fuse in the human population.

21 I'll say, given the evidence we have today, we can basically dismiss that. I think  
22 it's highly unlikely that that's the conduit. I think it's the one in which it moves from the  
23 bat into an intermediate host and then, from there, into the human population. I think  
24 that's the one that is consistent with all the data and is, in fact, very well supported by the  
25 existing data.

1 Q If I could ask, the slow fuse being less likely now with data, what sort of data  
2 gives that indication?

3 A I'll say data with, you know, much more pointing to the Huanan Seafood  
4 Market, for example, around the early cases. Serology studies done early in Wuhan, for  
5 example, that show, like, no, we don't actually see any evidence of that. The fact that,  
6 really, the sort of two main lineages that we see that are associated with the Huanan  
7 Seafood Market and that we believe to be separate spillover events really all points to,  
8 like, no, that's inconsistent with the idea in which it has the slow fuse, right?

9 And also just I think it's because then how did it actually slowly fuse into the  
10 human population, given what we know, that most transmission chains of SARS-CoV-2 go  
11 dead, right? So, if you had a setting on a farm, for example, and you might get an  
12 infected worker, but the likelihood of that actually starting a transmission chain that then  
13 goes on in the human population from there is highly unlikely. In fact, I think the  
14 estimates are 90 to 95 percent of times they'll just die out, right? Until, of course, you  
15 hit a big city. Then this changes, right?

16 So that's the epistemological data. It's genomic data. It's just, from my  
17 perspective, too, it's just a better understanding of coronaviruses and their emergence  
18 and just general emergence of viruses, what do we actually think is most likely. And  
19 that's why it almost certainly has got to be number one.

20 Q Okay. Great.

21 So, then, spending a little bit of time on the paper's treatment of lab-focused --

22 A Right.

23 Q -- scenarios -- and you have said this, but for my own understanding. I  
24 don't have a scientific background, so if I misstate any of this, you just correct me.

25 A Yeah.

1 Q But the lab scenarios can be, themselves, divided into subcategories --

2 A Correct, yeah.

3 Q -- and so there's I think what the paper refers to as laboratory construct or  
4 purposefully manipulated virus. Now, I read that to be when you use the word  
5 "engineered."

6 A Yeah. It's a little bit of an unfortunate language, I would say. When we're  
7 talking about a laboratory construct, really what we're talking about is that, at a place like  
8 the Wuhan Institute of Virology, we're pretty much always using the same backbones,  
9 right, like WIV1, for example. That's a laboratory construct. It's something people  
10 have published on. They're saying, look, we have this cloning system, for example.  
11 That's a laboratory construct, right? And, clearly, this ain't that. So that's what we are  
12 specifically referring to.

13 Purposefully manipulated virus goes back to this idea that you purposefully want  
14 to create SARS-CoV-2. We had discussions around should we say bioweapons in the  
15 paper, and we agreed, actually, let's not, because there's just no reason. But that's  
16 essentially what that's referring to, right? It's something that you purposefully create a  
17 virus for the purpose of creating a virus like SARS-CoV-2.

18 Q Where does the term "engineering" fit with those first two?

19 A I'll say it's -- I mean, the way in which the language is here, it would fit under  
20 that language, right? But we could've added a line specifically about engineering, right,  
21 which we don't. We call it a purposefully manipulated virus, which is a different  
22 meaning. Engineering is part of that, right --

23 Q Okay.

24 A -- but it's a different meaning.

25 Q And is building a chimeric virus -- under which of these rubrics would that

1 fall under?

2 A I mean, it would fall under the purposefully manipulated virus, right? But,  
3 again, that's not actually what we are referring to here.

4 I'll say, really early drafts of this paper -- well, my own notes on this, right,  
5 following the conference call, talked about: bioweapon, highly unlikely; specific  
6 engineering, unlikely; tissue culture passage, the data is consistent with; spillover from an  
7 animal host, the data is consistent with. Right?

8 So that's sort of the way in which we have structured our thinking. And if you  
9 look through the earlier drafts of our paper, as you can see, we use slightly different  
10 language and slightly different words, right, to describe these different things.

11 Q All right. So -- and we can tackle passage next --

12 A Sure.

13 Q -- but starting with engineering or construct or purposeful manipulation --

14 A Yeah.

15 Q -- I'll try to define what I understand to be the paper's arguments against  
16 that scenario, and then you can --

17 A Right. Sure.

18 Q -- correct me.

19 A Yep. Yep.

20 Q But it seems as if there are two main arguments in that regard, the first  
21 being, okay, the virus's receptor binding domain mutations at the key amino acid residue  
22 sites would have been predicted by a computational model to be suboptimal in their  
23 binding affinity.

24 A Right.

25 Q Okay.



1           And then, secondly, SARS-CoV-2 does not reflect the use of a known viral  
2 backbone, which one would expect to be the case.

3           A     Right. So those are the main two arguments, right, but, of course -- and,  
4 again, the importance is, this is a short paper, right?

5           Q     Yeah.

6           A     Specifically, it's a short paper that we were asked to shorten further. But I  
7 think what's important, too, here is that you look at that furin cleavage site, for example,  
8 right --

9           Q     If it's okay, I will head to --

10          A     Oh, okay. Fine.

11          Q     -- furin cleavage site. No worries.

12          A     But, yeah, those are some of the main arguments, that if you just look at the  
13 architecture of the virus itself -- the furin cleavage site, receptor binding domain, all these  
14 things -- it's that, is this one of that example, where it's just messy enough but it just  
15 works well enough, that really points to nature? That's what evolution does all the time,  
16 right? It never makes perfect, but it's these weird solutions that just work well enough.

17                 And, of course, what we have since seen is huge evolution of the virus itself, right?  
18 So, clearly, it wasn't well-adapted to the human population, right, once it got a chance to  
19 take off.

20          Q     So, to just drill down for a second on the receptor binding domain and the  
21 predicted binding affinity of those mutations --

22          A     Yeah.

23          Q     -- to test if I understand it correctly, the idea is, if somebody were to design a  
24 virus from scratch --

25          A     Yep.

1 Q -- they would never have rationally chosen this particular design --

2 A Right.

3 Q -- because they would have consulted the models, which would have told  
4 them this was not an optimal binding.

5 A Yeah. We knew, based on, you know, much of the great research that  
6 Dr. Baric did with SARS-1 is that based on that were predictions of here's the optimal way  
7 in which a sarbecovirus will bind into the human ACE2 receptor. That is described in the  
8 literature, right? So, if you were to design a new receptor binding domain, presumably  
9 you would choose that, right? That would be the logical way to do it.

10 And SARS-2 doesn't have that at all. It has a completely different solution, right,  
11 which we had never seen before. Yet it still appeared to bind well to the human ACE2  
12 receptor -- which we now know, yes, it does bind well to the human ACE2 receptor, but it  
13 binds well to a lot of other ACE2 receptors, right, not just human.

14 So, yeah, that's the idea behind, like, if you were to build this from scratch, you  
15 would take the solution that you already know works well. Because that's how science  
16 is done, molecular biology is being done.

17 Q Okay. Great.

18 And so what, if anything, does that argument tell us about the possibility of, for  
19 example, chimeric work to test the emergence potential of natural viruses?

20 A Chimeric work -- I mean, if they took a totally novel virus, created a totally  
21 new cloning system, for example, and put in totally new things, of course that would be  
22 indistinguishable from a natural emergence, right? The thing is, though, that, again, it's  
23 just not how science is being done. I mean, if you look at the Wuhan Institute of  
24 Virology, you look at their papers, right, they always did it the same way, right?

25 That's not to say that you couldn't possibly create a totally novel virus with no

1 scars (ph). Of course you can, right? I mean, but that's pure speculation. If you look  
2 at what they've previously done -- which is what I was very focused on in the beginning,  
3 because it was just like, I just have to find any piece of this virus or features of this virus  
4 that have been used before -- cloning sites, you know, backbones, whatever, right, that  
5 they've used previously. Because, again, they're always doing it -- pretty much always  
6 doing it the same way, right? If I could just find that, it would nail the lab origin, right?  
7 And I just couldn't because it doesn't exist, right? It's just not out there.

8 Q So I think that dovetails nicely into that second half of the engineering  
9 argument, which is, the virus's backbone is not known, has not been previously described.

10 A Right.

11 Q Can you talk a little bit about why you would expect that would be the case if  
12 it were a laboratory engineering for purposes of this conversation?

13 A Yeah. Again, that's because that's how science is being done. If you have  
14 stuff that works, you keep using stuff that works.

15 And the Wuhan Institute of Virology, for example, has been using WIV1 as a  
16 backbone, as well as a few other backbones, so WIV1 is sort of a workhorse there that  
17 they keep using for different papers to test, you know, receptor binding domains, for  
18 example, spike proteins. They subclone it into WIV1. And this is not WIV1, right?

19 There are other described systems out there from Ralph Baric and other authors  
20 too, and this is not that either.

21 And that's the expectation based on the published work that you have based on  
22 the way in which they do it.

23 But even so, too, is that they use a specific set of restriction enzymes, for example,  
24 in most of their work. And, again, this virus does not contain those restriction enzymes,  
25 right? So, even if they were to take a backbone that we haven't heard about and

1 haven't seen before, they are not even using the kind of system, BAC cloning system, as  
2 they are called, B-A-C cloning systems, as they used previously.

3 Q And restriction enzymes are a method by which to conduct genetic  
4 engineering?

5 A Yeah, these are basically molecular scissors. So you can precisely cut out  
6 genetic material using restriction enzymes. But --

7 Q Is it correct --

8 A -- restriction enzymes are not the only way to do this. There are seamless  
9 cloning technologies that, for example, Ralph Baric has been pioneering and using a lot.  
10 But, again, that's not -- the vast majority of work that you see at the Wuhan  
11 Institute of Virology is not using these types of technologies.

12 Q Is there an extent to which the Wuhan Institute of Virology possessed bat  
13 virus sequences that, themselves, were not published or known in their entirety by the  
14 rest of us?

15 For example, RaTG13 --

16 A Sure.

17 Q -- was released by Wuhan Institute of Virology in January, I think, of 2021?

18 A Yeah.

19 Q And as I've learned recently, the "13" indicates the year in which they  
20 collected the sample.

21 A Yes.

22 Q So, at least in that case, there was an 8-year gap during which Wuhan  
23 Institute possessed that particular sequence and the rest of us didn't know that.

24 A No, so we did, right? Because they had released fragments of that  
25 sequence, right? The famous 4991 sample, which they released in 2016 I think, which,

1 you know, you could see that that's the most closely related, but it ain't SARS-2. That's  
2 the fragment where, you know, initially they just got the fragment and then getting the  
3 full genome of the virus, which I believe they probably got most of that in 2018.

4 Q Uh-huh.

5 A And, as we know from the work with Eddie Holmes, is that they actually put  
6 it on NCBI, right? But it was on their embargo and then they forgot about it, and then it  
7 was released together with the other things they had, right?

8 So is it possible that they could've had a novel virus that we don't know about?  
9 Of course it is. We're not dismissing that possibility. We're just saying that the idea  
10 that they would do that and that that would then somehow end up in, you know, the next  
11 pandemic being associated with wildlife and things like that, in our opinion, given how  
12 viral emergence works, it's just not possible.

13 Q That's a little bit of my question, or it's a version of it.

14 A Yeah.

15 Q Is there an extent to which that argument has a human component to it?

16 A Of course. It's our interpretation, right? It's our interpretation. People  
17 can agree or disagree. And there are certainly a lot of scientists that disagree with our  
18 interpretations of the data. That's a question of, how do you interpret the data?

19 And that's why we publish it in the scientific literature. It's peer-reviewed, which  
20 means that the expert that saw this paper -- which, I should say, because you have our  
21 earlier versions of the paper where you can see some of the wording, for example, is  
22 softer, one reason for that being that, by the time we published that first version, right, I  
23 was still thinking that certainly the tissue culture passage was quite plausible, right? -- is  
24 that the process of peer review means that you incorporate changes, you shorten it  
25 down, you make some of the language punchier because you don't have three sentences

1 to write the same thing, you only have one. You only have so many references you can  
2 put in, so you can't reference all the different work that has been ongoing, right -- is that  
3 that's just part of peer review, scientific publishing.

4 And then we put that out there and saying, like, this is what we think. And some  
5 of it, we say, like, we feel that the evidence allows us to dismiss this. Others, we say,  
6 our opinion is that -- for example, we say that we do not believe that any type of a lab  
7 leak is plausible. But we also make it clear that the evidence does not allow us to prove  
8 or disprove any of the versions of the lab leak -- of the emergence events that we discuss  
9 in here, including the lab leak.

10 And we still -- to this day, that is still the case, except, though, that the evidence  
11 has only gotten stronger for a natural emergence of this, because we didn't have all the  
12 data available to us at the time. But additional evidence has only further strengthened  
13 the conclusions that were made in this particular paper.

14 Q Okay.

15 So, then, pivoting to passage -- and that has a slightly different set of arguments  
16 attached to it.

17 A Sure.

18 Q I'll try to lay those out, or my understanding of them --

19 A Yeah.

20 Q -- that the initial position is that passage seems awfully unlikely, it seems, to  
21 the authors.

22 A Yes.

23 Q And I think I've tracked three distinct arguments in that regard, the first  
24 being the significance of the pangolin receptor binding domain.

25 A Right.

1 Q I'll just list them, and then we can talk about them --

2 A Sure, sure, sure.

3 Q -- in order.

4 A Yeah, yeah, yeah.

5 Q The second being the existence of furin cleavage site, and third being the  
6 predicted O-linked glycans.

7 A Yep.

8 Q So, just chatting about each of those in order, the pangolin receptor binding  
9 domain, can you talk just for a moment about what that was and the significance of it?

10 A Yeah. I think what's -- or, actually, let me talk about the evolution of the  
11 thinking of this, which is why the pangolins are being brought up. Because, initially,  
12 when I raised these concerns, remember that I said the main two things I picked up on  
13 was the receptor binding domain and the furin cleavage site.

14 Now, the receptor binding domain, by the time we wrote this, they said,  
15 well -- they existed on these pangolin viruses. So, clearly, that's natural, right? But --

16 Q And just for clarity for all of us, the pangolin receptor binding domain has six  
17 identical --

18 A Correct.

19 Q -- key amino acid mutations.

20 A Yes, which have now also since been identified in bat viruses, right? So,  
21 clearly, this is a natural feature.

22 The reason why we specifically bring up that argument here is that -- initially,  
23 again, I was concerned about engineering, but could, you know, pretty quickly dismiss  
24 that version of it. But I thought that, yeah, but, you know, this receptor binding domain,  
25 which has found its own way to bind pretty well to human ACE2 receptors, right -- is that,

1 could that have been a result as passage of the virus on, for example, human lung cells,  
2 right, or cells expressing human ACE2? And you do a serial passage of that, and that will  
3 look like evolution out in the wild too, right? But now it's actually specifically for  
4 humans. And that would fit, right?

5 And I thought, well, this has a new receptor binding domain we have never seen.  
6 These residues are unusual, in the sense that they look to bind well but they clearly are  
7 not what we have predicted, so it's not engineering, right? But it could be this passage  
8 idea.

9 That argument totally falls apart as soon as you see that pangolin virus, right?  
10 Once you see that, actually, that pangolin virus has exactly the same binding residues  
11 here, that argument just falls apart.

12 And it took me a while to, first of all, realize that because realizing the importance  
13 of the pangolin -- really incomplete data, so initially I didn't actually look at it, right?  
14 And it just took a while to go, sort of, like, oh, actually, that doesn't make any sense  
15 because of this receptor binding domain. Right?

16 So that's one really key version of that.

17 Now, the other reason, right -- so that's why we talk about the pangolin receptor  
18 binding domain, right?

19 Q Just a question --

20 A Yeah.

21 Q -- a question about the pangolin.

22 A Yeah.

23 Q What, if anything, does the existence of the pangolin, in this case the  
24 pangolin receptor binding domain, the same mutations -- I know that later those same  
25 mutations have been found in bat viruses.



1           A    Yep.

2           Q    Got it.  What, if anything, does that indicate about the possibility of  
3 passage work using a natural virus, hypothetically in this example the pangolin virus in  
4 question, in humanized cells?  If you did that work, would that not have the same --

5           A    That would look -- yeah, that would look like this.  And I'll come to that  
6 argument, because that's an important one, right?  I'll come to that.  Because that's  
7 actually not spelled out in the paper, right?

8           Q    Okay.

9           A    But, again, the importance of the pangolin really here is that this feature is  
10 natural, right?  So the idea that this is a result of a passage thing, it just doesn't hold  
11 water.  Does it directly disprove the passage?  No, it does not.  Right?  And, again, as  
12 we say, we can't prove or disprove anything here, right?

13           The other reason -- then we mentioned the furin cleavage site, right?  The  
14 reason why we bring this up is that, in my earlier conversations with Mike Farzan, he had  
15 mentioned that, well, when you passage coronaviruses, they have a tendency to pick up  
16 furin cleavage sites.  Or at least I thought that's what he said to me.  And I was like,  
17 holy crap, right?  This has a furin cleavage site; I think it could've been passage, right?  
18 And that totally fits with that.

19           The thing is, that just isn't true.  In fact, the opposite is true.  This virus loses the  
20 furin cleavage site.  We didn't know that at the time, right?  We now know that.  But  
21 Mike had told me -- or I thought he told me this.  Maybe he didn't, actually.  Maybe I'm  
22 just misremembering.

23           But I spent a long time trying to, like -- what was Mike talking about?  What is  
24 the reference for him saying that that occurs?  And not only could I not find it, the  
25 reference I did find showed that, well, if you already have the furin cleavage site and then

1 you passage it, then that virus can grow out. But that's completely different, right?

2 So this idea that I had, like, again, I had with the receptor binding domain, I had  
3 with the furin cleavage site, I initially thought that actually these could be the result of  
4 passage. But, specifically, what the data show is that, actually, it's not, right?

5 Q So there's a lot there to unpack. I'm going to try to divide it up.

6 A Yeah.

7 Q One is to pivot for a moment away from this. The more recent information  
8 that postdated this paper but that we've heard about elsewhere and that you just  
9 mentioned seems to indicate that the furin cleavage site in SARS-CoV-2, when passed in  
10 culture in, I think, human or humanized cells --

11 A Well, in provided Vero cells, which are actually green monkey cells.

12 Q Okay.

13 A They're primate cells. But this is what's typically used across the field,  
14 including at the Wuhan Institute of Virology.

15 Q That, in that situation, the furin cleavage site goes away?

16 A Yes. It's lost.

17 Q Which is -- you mean -- which reflects sort of the opposite outcome --

18 A Correct.

19 Q -- of the idea that it is a result of passage work.

20 A Exactly. Yep.

21 Q Okay.

22 A Yep. Yep.

23 Q Coming back to the paper's treatment of furin cleavage site, I just want to  
24 briefly touch on it. There are two components of that.

25 There is this mention that furin cleavage sites have really only been observed after

1 prolonged passage with low pathogenicity avian flu viruses; and then, separately, the  
2 point that, to develop furin cleavage site in passage, you would've had to isolate a very,  
3 very similar virus, which nobody has described doing.

4 A Right. Right.

5 Q For that first avian flu point -- and I know that different folks maybe had  
6 emphases on different parts of this paper, so to the extent you can speak to it.

7 A Sure.

8 Q But is it that that avian flu situation is simply where the development of the  
9 furin cleavage site has previously been observed in passage?

10 A Yeah.

11 Q Or is it that that is the only condition under which that can happen?

12 A Has been observed.

13 Q Okay.

14 A And to be perfectly honest, we do mention -- well, I'm not actually sure  
15 that -- I'm not actually sure that avian flu can pick it up in tissue culture passage. But it's  
16 the hallmark of Highly Pathogenic Avian Influenza that they pick up this furin cleavage site  
17 as a result of passage through chicken farms, right? I mean, they call it passage. It's  
18 very rapid transmission through chicken farms. There is this stepwise acquisition of a  
19 furin cleavage site as part of that process, which happens, again, in chicken farms. And,  
20 in fact, that's why we mention that we find that, if this is acquired as part of an  
21 intermediate host, it probably requires a dense animal population.

22 I will say that, while I feel that our conclusions are fully justified, given additional  
23 knowledge, I actually -- we see, for example, that SARS-2 itself picks up parts of human  
24 genes along the way, right, as part of these recombination events. I think it's very likely  
25 that SARS-2 could just have picked up a host gene.

1           For example, this specific genetic sequence that creates the furin cleavage site is  
2 found in raccoon dogs, right? In fact, we even found it in these samples from the  
3 Huanan Seafood Market. There is that very same sequence that is identical to basically  
4 the, quote/unquote, insertion that creates the furin cleavage site in a raccoon dog gene,  
5 right?

6           So I think, like, some of our conclusions here, I think there are probably other  
7 possibilities that could create the same that wouldn't require, for example, a dense  
8 population of intermediate hosts.

9           Q    Okay. Great.

10          And then the other -- it's almost mentioned in passing, but with respect to furin  
11 cleavage site, the idea that that would've required isolating a progenitor virus --

12          A    This is the key argument, actually. We should obviously have spelled that  
13 out, right? Because this goes back to what I've been talking about, the idea of these  
14 viruses trying to spill over into us all the time, versus scientists doing a field trip here and  
15 a field trip there and then magically ending up picking up the next pandemic virus,  
16 is -- you know, it's like standing in front of a goal, and you have Peter Schmeichel there,  
17 and you say, like, okay, I'll give you three tries to score against him, and you're me, not an  
18 actual, you know, seasoned football player. You probably can't do it, right? But you're  
19 saying, like, okay, let's take the city of San Diego, put them in front of Peter Schmeichel,  
20 and then say, okay, you each have 10 tries. It's more likely you will score a goal in that  
21 situation.

22          That's not to say that I couldn't score a goal. Maybe I can, right? But just in  
23 terms of prior probabilities, given no other evidence whatsoever, the idea that these  
24 scientists go out, picks up the next pandemic virus, takes it back to the lab, actually  
25 manages to isolate it -- because that's very hard, right -- accidentally infect themselves,

1 and all of this, as we also describe, being associated with early cases in a wet market, it  
2 just doesn't make any sense to me scientifically. Right?

3 And that's why -- I think why, right -- because, again, it's a consensus sentence,  
4 and the paper was written quickly, and did we spent a lot of time on, like, how do we  
5 exactly do -- no, we didn't, right? But that's why we say, and we truly believed at the  
6 time, is, like, we just don't believe that any of these lab-leak hypotheses are possible.

7 They're not impossible, right? And we make that clear. We said, we can't  
8 prove or disprove anything here, right? Which is the case of all other epidemics and  
9 pandemics too, right? But we just, we personally, as experts in this particular field, we  
10 just don't find it to be possible.

11 People can agree and disagree on that, and people certainly have. And they're  
12 entitled to, right? That's why you publish the papers.

13 Q The last major, sort of, topic here from the paper itself is the O-linked  
14 glycans.

15 A Yeah.

16 Q And, first, just a threshold point. There's discussion about predicted  
17 O-linked glycans.

18 A Yep.

19 Q If I understand correctly, at the time, they were predicted --

20 A Yep.

21 Q -- which means exactly what it sounds like. It has since been, it sounds like,  
22 confirmed that --

23 A I think it's confirmed, yeah. I do think -- we actually predict them here,  
24 yeah. Yeah, I think they're confirmed to indeed be O-linked glycans.

25 I don't think, though, they're mucin shield, as we describe here.

1 Q Well, that's -- so, if you could talk a little bit about the significance of the  
2 glycans --

3 A Yeah.

4 I think the way in which we put significance to it here is that mucin shields are  
5 typical ways for viruses to basically shield features that would be recognized by the  
6 human immune system, and by putting sugars, glycans, on there, then the immune  
7 system can recognize it. HIV, for example, does this constantly, right? And viruses use  
8 these mucin shields, so basically you have a lot of these glycans just covering a whole area  
9 so it basically can't be recognized. And that's the idea of a mucin shield -- which Ebola,  
10 for example, is a very big feature of Ebola.

11 This is just a few glycans. And this is mostly a comment that Bob introduced, the  
12 idea of this mucin shield. And we discussed that, look, it's very few, but maybe it could  
13 be. And it's one of Bob's expertise, right?

14 But I actually think -- I don't think it's a mucin shield. I don't really think that this  
15 specifically suggests the presence of an immune system like we describe here. I think  
16 it's much more likely that those glycans actually regulate the cleavage of the furin  
17 cleavage site itself.

18 And that's based on -- you know, somebody reached out to me after this paper  
19 and saying, like, oh, you know what, that proline that you have in that furin cleavage site,  
20 I have done work in, like, grisulphulate (ph) or something like that and have described  
21 biochemically how that prolines leading to those glycans actually regulate the cleavage.

22 And I think that's -- we didn't know that at the time, of course. But I think that's  
23 the more likely explanation for what do these glycans actually do.

24 Q Okay.

25 A And that's what we describe here.

1 Q All right.

2 So, now understanding and having walked through most of the paper, can you just  
3 track for us a little bit the arc of your own thinking on this whole topic, from the very  
4 beginning of the story that we discussed earlier --

5 A Yep.

6 Q -- through today?

7 A Sure.

8 I mean, initially, I didn't consider it, right, because early cases linked to the market,  
9 you know, whatever. I knew about some of the work at the Wuhan Institute of Virology,  
10 but, eh, whatever.

11 Then again, I started looking at it more closely. And this actually only happened,  
12 I think, a day before I contact Eddie Holmes and then ended up with, you know, the  
13 phone call with -- that initial phone call with Fauci and the teleconference. This is, like,  
14 in a matter of maybe just 2 days, right?

15 But then I started looking at it close again, first of all, just to tie the research that  
16 they did, right, and these features that have been identified. And, initially, I was  
17 like -- the engineering idea saying, like, somebody basically plugged in these particular  
18 features -- although I should say that really early on I didn't really distinguish between  
19 engineering and tissue culture, for example. That only came later. But I was definitely,  
20 you know, engineering.

21 Bioweapon, I didn't consider these, right? That doesn't make sense with a novel  
22 virus, so it's not that.

23 But then my evolution on that is that, again, realizing additional things around a  
24 furin cleavage site, for example, that it's, in fact, not perfect. It's pretty crappy, right?  
25 It appears to be out of frame -- exactly what an engineer wouldn't do. And, of course,

1 some of the conversations we had on the conference call, as well, with Fouchier and  
2 Drosten, for example, right, making some of these same points, but also conversations we  
3 just had internally via some of the Zoom calls we had with the authors, right? That idea  
4 of, like, engineering goes away within just, I don't know, a day or two, 3 days, I mean, you  
5 know, I don't know, but quickly. So I saying, like, that's probably not the one.

6 But then, because, as I mentioned, with the furin cleavage site, I thought could be  
7 gained -- and this was after these conversations with Mike Farzan -- this could be gained  
8 in tissue culture, the receptor binding domain was unusual-looking but looked to be a  
9 good binder, really locked me into, like, this tissue culture passage or animal culture  
10 passage. We call it tissue culture passage, but really what we're also considering is  
11 through animals here, right? But that requires a lot more work, so tissue culture is the  
12 more likely one to me here.

13 And I hold on to that thought for quite some time, probably -- I mean, certainly  
14 through us submitting the paper for publication in Nature on February 17th, which is also  
15 why the language around "we do not believe that any type of laboratory-based scenario  
16 is plausible," that's not in that initial submission. And we are totally open to, like,  
17 there's three different -- we don't make any decisions on "we think this is more likely than  
18 that one." We just say, we can't prove or disprove anything, you know, and we should  
19 get all this different data, but it's actually possible that no further data will help us clarify  
20 that.

21 And I think that's because, like, I, in particular, was still, like, thinking about, again,  
22 that tissue culture version. I think Andrew Rambaut, for example, was like, "Kristian,  
23 that doesn't make any sense." I think Eddie was probably also at that point, "That  
24 doesn't make any sense." But I was holding on to that one.

25 And one reason for that was that I was a little slow on realizing the importance of



1 that receptor binding domain. I think even after I had seen like, oh, you basically have  
2 the same in pangolins, I think even at that point I thought that, yeah, but it could still be  
3 like result of tissue culture passage. And, of course, it can't, right? It just took me too  
4 long to realize that, I'll say.

5 Again, I was also driving the Mojave Road right when this came out, right? So I  
6 didn't think too much about some of this stuff.

7 But then, you know, my sort of understanding of just, you know, this would really  
8 require them to have this virus. You don't have any evidence that they did. It's very  
9 unlikely that they actually did, for all the reasons that I already discussed, right? Which  
10 is sort of a, you know, increasing knowledge on my end.

11 As well as continuing to just do analyses, right? Is there anything unusual about  
12 the genome itself, in terms of the way in which it uses bases, codons, like, all these  
13 different things, right, that we are looking at? And we just come up empty every time.  
14 Right? And that is not what you would expect had it been linked to a lab. You would  
15 expect to see at least some evidence.

16 That doesn't mean that if you don't see any of that evidence, and all the evidence  
17 is, in fact, fully consistent and even suggestive of a zoonosis, it doesn't mean that you  
18 have proved or disproved anything, right? Which is the language we're using here and  
19 which is the language I've continued to use, because I don't believe we are at the stage of  
20 a proof. Right?

21 But just because you keep an open mind to saying, like, should additional evidence  
22 occur -- confirmed COVID-19 in November of workers in Zhejiang GIS lab (ph)? Of  
23 course, right? Which is why, as a scientist, that's the scientific process, right?

24 But given the mountain of evidence that points to that market in the middle of  
25 Wuhan -- by the time we wrote this, we obviously knew more about the cases, right,

1       which we also describe here, but now we know even more about those cases, as well as  
2       the clustering inside the market itself, right? -- is that the accumulation of evidence here  
3       just continues to further and further support these early conclusions that we put forward  
4       here.

5             Q     Great.

6             And one discrete question, and then one more, and then I'll wrap up.   The  
7       discrete question, which I forgot to ask about -- the BamHI restriction site.

8             A     BamH1, yeah.

9             Q     BamH1.   That did not even, it seems, make it --

10            A     Right.

11            Q     -- past -- can you explain why that one was knocked out right away?

12            A     Yeah.   I think, you know, Eddie referred to us as loons if we even, you  
13       know, mentioned that.

14            And the BamH1 stood out -- so BamH1 is one of these molecular scissors I talked  
15       about, right?   And BamH1 is, in fact, one of the ones they have previously used at the  
16       WIV, but -- we see it in SARS-CoV-2.   But it's because of a single difference between  
17       SARS-CoV-2 and RaTG13, for example.   It's just because of a single difference between  
18       those two that that creates a BamH1 site, which is present in SARS-2 but it's not present  
19       in RaTG13.

20            I should say, actually, that -- because I do remember this, talking about this  
21       now -- that I think especially Francis Collins was like, "But that nails it for a lab leak,  
22       doesn't it?"   And it doesn't, because, again, the difference is so minor.   And, in fact,  
23       given, like, the binal viruses, for example, they have exactly that restriction enzyme too.  
24       So we know it's just totally natural, right?

25            But it just didn't make sense as an argument, because there was also some

1 conservation around the site that initially had me concerned, which I just realized was -- it  
2 was just wrong. There wasn't actual conservation. But it was such a subtle difference,  
3 which I describe here, actually, in our early notes, that it just doesn't make any sense.  
4 And that's why it didn't make it into the paper.

5 Q Great. Thank you.

6 A But we certainly looked at it closely, I will say. It wasn't just BamH1 we  
7 looked at, although -- because that's the type of work I've done in the past, is using these  
8 molecular scissors to, you know, pluck things in and out of retroviruses, again, as part of  
9 my Ph.D. work, right?

10 So I looked very, very closely at that, saying, like, they use all these different  
11 things. Are there any patterns that would be consistent with that? And there just  
12 isn't, despite what, you know, some authors have published on.

13 Q Okay. Great.

14 Our last question, I think, is: We want to stay forward-looking in terms of things  
15 we can do to prevent the next pandemic.

16 A Sure.

17 Q You've touched a little bit on this, but, in both the wildlife stream as well as  
18 lab safety stream, could you just briefly sketch what, in your mind, might be some useful  
19 reforms?

20 A Well, I think the first thing we need to do is to rebuild trust, right? As a  
21 scientist, I can't work in the environment we are in right now. There is no -- I mean, if  
22 we can't trust -- if there's no trust among scientists, if there's no sharing of data, because  
23 there's no incentives to it -- and, in fact, the incentives are to hide evidence, to obscure  
24 evidence -- that ain't gonna work, right?

25 And that's why I think that, from our perspective, we really need to focus in on the

1 science here, not speculation. We can speculate all day long about what could lead to a  
2 pandemic, but if we don't have any evidence of any of it actually having happened, it's  
3 just speculation. It also happens, in this case, to be accusations, right?

4 That needs to change. And that's not specific to whether we are talking about  
5 laboratory safety or whether we're talking about wildlife trade. That just happens to be  
6 about trust, right? WHO, for example, international mediators, scientists being able to  
7 work with other scientists, no matter what country they come from. And that is not  
8 happening right now, right? We can't work with Chinese scientists, and Chinese  
9 scientists can't work with us. That's very unfortunate.

10 The other thing that needs to happen is that the wildlife trade needs to have some  
11 checks and balances in place, which need to be realistic. A full ban on the trade is not  
12 realistic, right? Because a lot of people depend on these sources either as an income  
13 stream or as a way in which just to get food. I certainly see this a lot in my work in West  
14 Africa, for example.

15 So we can't ban it, right? But we can put some checks and balances in place such  
16 that we can make it safer. For example, as I previously mentioned, maybe we can  
17 institute testing of animals that are going into wet markets, for example. And these  
18 need to be internationally agreed upon, and we all need to agree we want to do this.

19 We also need to agree on just sharing early data on anything that we suspect  
20 could be an outbreak, which could, you know, at any time lead to a pandemic. We don't  
21 know at the early stage, right? So having these things in place for early sharing of data,  
22 open-minded discussions without blame, without, you know, disincentivizing the sharing  
23 of that data, is critically important.

24 And then I think we need, you know, international frameworks for  
25 gain-of-function research, for example. But I think "gain-of-function" is a very bad word

1 to use here. I think we need to have international regulation around, like, research with  
2 potential pandemic pathogens.

3 I think we need to have registration requirements in place -- for example,  
4 bio-safety committees always requiring the review of this type of work. Maybe there  
5 needs to be, on some of the ones that goes into a different level, and saying, actually, we  
6 believe that this could include some more substantial risk that we need higher-level  
7 approvals for. That needs to be in place and, I think, needs to be within the framework  
8 of an international framework, right?

9 We're not even close to any of that.

10 I think there is a lot of talk about, you know, this idea that all virology research  
11 must be stopped because it's dangerous. I think it's completely, you know, ignorant, to  
12 be perfectly honest. The reason why we have vaccines and antivirals is because of that  
13 research. You can't stop basic research for a process that will continue to happen as  
14 part of, you know, wildlife.

15 So that idea, I don't think -- but that's not to say that we shouldn't have better  
16 frameworks for doing it. Of course I think we should. But the idea that we can just  
17 ban it and then the risk somehow goes away -- not only does the risk not go away, it  
18 increases, because it limits our ability to actually do the required work.

19 Q Great. Thank you.

20 With that, we can go off the record.

21 [Recess.]

1

2 [12:42 p.m.]

3 Mr. Benzine. All right. We can go on the record.

4 I want to introduce majority exhibit 14.

5 [Andersen Majority Exhibit No. 14

6 Was marked for identification.]

7 BY MR. BENZINE:

8 Q This is a March 26th, 2020 memo produced by the U.S. Department of State  
9 Bureau of Intelligence and Research. Have you ever seen this memo before?

10 A I don't think so.

11 Q In the paragraph underneath the title, it says. "U.S. scientists say," and the  
12 next paragraph, "U.S. scientists studying."

13 Were you consulted by the United States Department of State prior to March 26,  
14 2020?

15 A I don't think so. I think this is probably based on our publication.

16 Q You were never on a phone call with anyone from the Department of State?

17 A There was a phone call which was -- there was a phone call which was -- I  
18 don't know if that was State. There was, like, Senators on, and I can't even  
19 remember -- I don't think it was before March 26th, though.

20 Q Okay.

21 A So, no, I don't -- again, I think they're probably referring to our -- to our  
22 paper here. Seems most likely to me. I don't recall being on a call around that time.

23 Q Okay. Thank you.

24 So we've talked a lot about proximal origin and given very good answers on a lot  
25 of the questions, so I'm going to skip over some of the stuff --

1 A Sure.

2 Q -- and we can move this along.

3 Briefly can you explain how the idea of the paper came to be? So you've talked a  
4 little bit about it, a report first and then some suggestions to peer review and publish it.  
5 Can you go into a little bit more detail?

6 A Yeah. That, I mean -- so, again, this was among discussions of the  
7 authors -- Eddie Holmes, Andrew Rambaut, Bob Garry, and myself -- that instead of  
8 considering this as a report on internal document in which we summarized some of the  
9 findings that we had, that we should really consider this to be a peer-reviewed  
10 publication because it would help -- it would help sort of, you know, focus the  
11 conversation about this, this important question.

12 Q We talked about this a little bit too and -- I'm going to rephrase the question.  
13 Was the idea of an internal report regarding what you knew about the origins of  
14 COVID-19 floated on the February 1st conference call?

15 A I mean, I don't -- when we say "report," I think, you know, we send around a  
16 draft, right, to the participants on the conference call, and then a report or some sort of  
17 draft documents to help, I guess, direct the conversations that Jeremy Farrar, for  
18 example, was hoping to have with the WHO.

19 Again, for me, I was more interested in just looking at it closer and having some  
20 conversations among scientists initially.

21 Q Did the initial report -- would it be fair to characterize that the initial report  
22 turned into proximal origin?

23 A Yeah. I think -- I mean, if you look at the early, like, if you look at our  
24 summary immediately following the meeting, there are then, you know -- those  
25 summaries then get filled in with additional information and discussions, right, and

1 ultimately all of this is what ends up morphing into a peer-reviewed scientific paper, yes.

2 Q While you were drafting proximal origin, did you use forms of  
3 communication other than email to talk to your co-authors?

4 A Yes. We had -- most of this was Zoom calls, for example, and probably  
5 comments in, like, Google Docs, Slack channel, which we have produced related to the  
6 emails. So those would be the communication forms, yeah.

7 Q If you know, does Scripps Research own the Slack channel or --

8 A They do not, no.

9 Q Who owns the Slack channel?

10 A I do.

11 Q Okay. Is it your testimony that every Slack message revolving around  
12 proximal origins has been produced to the committee?

13 A They've not been produced for the simple reason that I don't have the ability  
14 to do so.

15 Q Why?

16 A Because it requires download of the full Slack channel, which requires  
17 consent from everybody who is on that Slack channel, as well as a court order to do so.

18 Q Okay.

19 Mr. Rowley. And, Mitch, we've talked about that offline, you and I have. If you  
20 need further information, I'm happy to provide it to you.

21 Mr. Benzine. Okay.

22 BY MR. BENZINE:

23 Q So I think you testified, and you can correct me if this isn't a fair  
24 characterization, that Dr. Fauci suggested a peer-reviewed paper of some kind. When  
25 did that suggestion happen?



1           A    That happened -- again, the first phone call I had with him, which was  
2 immediately prior -- I think the day prior, right, to the conference call itself where I  
3 relayed my initial concerns and findings.

4           He specifically suggested considering writing a peer-reviewed publication on it,  
5 and specifically I remember him saying that if you think it came from a lab, you should  
6 write this up as a peer-reviewed paper, so it can be judged by the peer community  
7 basically, yeah.

8           And then those were, you know, as far as I remember, was that their  
9 encouragement of thinking about this in scientific term, which is the way, of course, a  
10 publication write, were probably voiced on the conference call as well.

11          Q    So that was my next question. In addition to the January 31st call that you  
12 had with Dr. Fauci, did he make a suggestion for a peer-reviewed paper on the February  
13 1st call as well?

14          A    I think he -- I mean, I can't remember exactly, but I think, again, certainly  
15 encouraged to, you know, follow the scientific process on this which ultimately ends up in  
16 peer-reviewed publications.

17          Q    Did his suggestion change your outlook on writing a paper?

18          A    It did not, no.

19          Q    To your recollection, did Dr. Collins make similar suggestions about drafting  
20 a peer-reviewed paper?

21          A    I think, again, encouragement to follow the scientific process which typically  
22 ends up in a peer-reviewed paper.

23                Did he specifically mention that you should definitely write a peer-reviewed  
24 paper? Probably not, but, again, I don't -- I don't recall exactly.

25          Q    But Dr. Fauci did specifically mention a peer-reviewed paper?

1           A    He did when I had the first call with him, yes, and he specifically mentioned  
2 that if I believed this was a lab leak, I should consider writing a peer-reviewed paper on it.

3           Q    Did you ever feel -- so you've said today and your emails say too that you  
4 had some hesitation about publishing proximal origins at least?

5           A    The early versions -- yeah, early versions of it, early drafts of it, yes.

6           Q    Did you ever feel directed by Dr. Farrar to publish?

7           A    No. I think, you know, Eddie Holmes, who is a co-author, definitely put  
8 pressure on me in saying, look, Kristian, we really need to, you know, get this into a  
9 peer-reviewed paper right now. It was coming from Eddie Holmes, and Eddie was right.  
10 It's just -- you know, I think by the time it was published, I still felt it was a little bit too  
11 fast, right? Maybe used another week, for example.

12                    But in retrospect, Eddie was absolutely right. It was ready to go. It was ready  
13 to -- to be submitted as a peer-reviewed publication at that time.

14                    But, yeah, especially early on in the conversations, the first week of February, for  
15 example, there were these talks about a potential pangolin genome which -- a pangolin  
16 virus genome, which was reported to basically be almost identical to SARS-CoV-2.

17                    It's like, look, we got to wait for that evidence, but, of course, if that's there, that's  
18 really important, right? So we don't want to publish before we have that evidence, so  
19 let's just give it a little bit of time, which is what we did. By the time we published, we  
20 knew that actually those sequences were -- it was just incorrectly reported.

21           Q    So your hesitation was more that the paper just wasn't ready versus --

22           A    Exactly, right.

23           Q    -- publishing something --

24           A    Oh, not -- not --

25           Q    Your hesitation was more that the paper wasn't ready, not that it wouldn't

1 stand up to a peer review?

2 A Absolutely, yeah. I think, you know, my group publishes papers, right, we  
3 have a lot of very good papers, and that's our focus on everything we do. So the idea of  
4 a peer-reviewed publication, absolutely. It's just, again, I felt, early February, certainly I  
5 was, like, look, we know that there's likely more data coming out which is relevant to this  
6 question, so let's wait on that, which everybody was agree on -- was in agreement with,  
7 right?

8 But the idea of a peer-reviewed publication is not something I didn't want to do.  
9 It's just I thought the state of the drafts of what eventually will become proximal were not  
10 ready at the time.

11 Q I'm going to introduce majority exhibit 15.

12 [Andersen Majority Exhibit No. 15

13 Was marked for identification.]

14 BY MR. BENZINE:

15 Q It's the final version of the proximal origin paper, which has been previously  
16 introduced?

17 A Yep.

18 Q Not that you need to read it again, but --

19 A Sure.

20 Q -- I want to go through briefly, because we've spent some time on it --

21 A Yeah.

22 Q -- some of the ideas in here and first start again to get a little bit more clarity  
23 on the final sentence in the "To the Editor" block, that, Our analyses clearly show that  
24 SARS-CoV-2 is not a laboratory construct or a purposefully manipulated virus.

25 A Right.

1 Q And I just want to like break it down a little bit, knowing that you've already  
2 kind of talked about this --

3 A Yeah.

4 Q -- where, what you intended with "laboratory construct and purposefully  
5 manipulated virus."

6 A Yeah. "Laboratory construct," basically, what we are referring to there is  
7 the idea of a chimeric virus, right, like WIV-1 backbone, for example, or some of the  
8 laboratory constructs, that we have to create these kinds of viruses from Ralph Baric's  
9 work, for example. That's specifically the intended meaning of "laboratory construct."

10 "Purposefully manipulated virus," the intended meaning of that is the idea that  
11 somebody would create SARS 2, with the intent of creating SARS 2 bioweapons, for  
12 example, would be that. That's what we mean with a "purposefully manipulated virus."

13 Q So -- and I'm not saying -- like, I'll get to furin cleavage sites, but -- so would,  
14 as kind of Dr. Garry initially suggested, would dropping a furin cleavage site into a novel  
15 coronavirus, which category would that fall into?

16 A Well, it would -- well, kind of both --

17 Q Okay.

18 A -- right? Again, the language here is not very precise. I would say  
19 engineering could've been mentioned in here too, right? Well, we could just have said  
20 engineering.

21 But the meaning is a little different here because we don't actually specifically talk  
22 about engineering, right? We talk about the idea of laboratory constructs and  
23 purposefully manipulated viruses.

24 If you ask me today where would this fall in under, it would fall in under either.

25 Q Okay.

1 A It's not the intended meaning at the time, but it would fall in under either.

2 Q Was there a reason to not include engineering, or was it just that you  
3 thought it would encompass both of these?

4 A Honestly, I don't know. I think it's -- I remember there's been, like, some of  
5 this language, I think laboratory construct, purposefully, I think probably  
6 Andrew Rambaut brought this up at some point, and then that's what ends up in the  
7 paper.

8 Q And how were you able to -- you said that the idea of genetic, of kind of  
9 directed engineering --

10 A Yeah.

11 Q -- either in whole or in part --

12 A Yeah.

13 Q -- you were able to move past pretty quickly.

14 A Yeah.

15 Q What was the rationale for that?

16 A So I stated previously there are many reasons why that just does not make  
17 sense. First of all, this virus contained no evidence of having been used or been present  
18 prior to the pandemic. It doesn't use the kind of cloning systems or the technologies  
19 that are most commonly used from the WIV.

20 The features themselves appear to be natural features and not engineered  
21 features. They're sub optimal. They're not inserted in a way in which you would  
22 expect a designer would do.

23 And those are the basically the reasons why we felt that this is a justified  
24 argument, that it just doesn't make sense to think of this as an engineered virus.

25 Q I'd like to introduce majority exhibit 16.

1 [Andersen Majority Exhibit No. 16  
2 Was marked for identification.]

3 BY MR. BENZINE:

4 Q It's an email chain amongst yourself and --

5 A Yeah.

6 Q -- many of the other scientists and Bates-numbered REV0000735 through  
7 738. And I just want to pay attention to the top of 735, the email from Dr. Fouchier.

8 A Yep.

9 Q I do not -- he states, I do not understand Andrew's argument -- meaning  
10 Andrew Rambaut -- the sequence data -- in Andrew's words -- the sequence data clearly  
11 and unambiguously rules out any form of lab construct or engineering of the virus.

12 Back to Dr. Fouchier, who says, molecular biologists like myself can generate  
13 perfect copies of viruses without leaving a trace. The arguments for and against  
14 passaging and engineering are the same if you ask me.

15 What does this mean?

16 A So this means that there are seamless cloning technologies which,  
17 quote/unquote, do not leave scars in their -- in the viral genome, and molecular biologists  
18 are capable of creating such things. Ralph Baric developed many of these technologies,  
19 for example. He, himself, argues against this was being done here, right?

20 But the reason why we feel that it just doesn't make sense is for the same reason  
21 that I just mentioned, right, is that it's not the technologies that they're very commonly  
22 using, and the virus itself looks to be -- again, the features that are, quote/unquote,  
23 special to this virus, look evolved, not engineered.

24 And so that's the reason, and that's the reason why I disagree with Ron on this  
25 point because I actually do think it's important to distinguish them. And I think most

1 people would agree that we should distinguish engineering from passage, whether that in  
2 animals or tissue culture, yeah.

3 Q I want to go to, along the same vein, majority exhibit 17.

4 [Andersen Majority Exhibit No. 17  
5 Was marked for identification.]

6 BY MR. BENZINE:

7 Q This is a bit of the Slack conversation.

8 A Yeah. Just read it. Yes.

9 Q I just want to draw your attention to the bottom where Dr. Garry's second  
10 message from the bottom --

11 A Yep.

12 Q -- you can also synthesize bits of the genes de novo with perfect precision  
13 and add them back in without a trace.

14 A Yeah.

15 Q So this is the same thing that Dr. Fouchier is arguing --

16 A Yes. Yes.

17 Q -- and you agree that that's not what happened here, but disagree that it  
18 probably should've been mentioned in --

19 A No. I think, like -- I think that can -- that could be done, right? In fact, my  
20 own lab does it, like, we do -- not for viruses, but we use these seamless cloning  
21 technologies too, so I'm well aware of these technologies.

22 It still does not -- to me, it's whether you use, again, whether you use a seamless  
23 cloning technology or whether you use the normal approach that they use with the WIV,  
24 they would both fall in under engineering.

25 And, again, engineering, we feel, can be dismissed based on the arguments I've

1 already put forward.

2 Q We've talked about it a lot so, again, I'll be brief. Three of the main reasons  
3 that you and your co-authors put forth that COVID-19 didn't come from any laboratory  
4 scenario --

5 A That we did not find it plausible, correct, yes --

6 Q That you didn't find it plausible?

7 A -- our personal opinion.

8 Q -- are the nonoptimal receptor binding domain, and that it was found in  
9 naturally occurring viruses, the presence of a furin cleavage site in naturally occurring  
10 coronaviruses, and that it was out of frame, and that any manipulation would've probably  
11 used a preexisting backbone? Is that --

12 A Those are some of the key arguments, but as I've also described to you, to  
13 your colleagues previously, is that there's a lot of underlying arguments around just the  
14 emergence of viruses and how does that emergence happen, the early case data, for  
15 example, pointing to the Wuhan Seafood Market, and so on and so forth.

16 You need to take -- there's no single piece of evidence that allows you to make a  
17 strong conclusion. You have to take all the evidence into consideration, including  
18 evidence of how does viral emergence even work in the first place.

19 Q First I want to talk about the receptor binding domain a little bit --

20 A Sure.

21 Q -- and introduce majority exhibit 18.

22 [Andersen Majority Exhibit No. 18

23 Was marked for identification.]

24 BY MR. BENZINE:

25 Q These were produced by you to us and at least appear to be peer-reviewed



1 comments from either Nature or Nature Magazine. It's unclear. Do you --

2 A This is from Nature, yeah.

3 Q From Nature?

4 A Yeah.

5 Q Do you recall about the date frame of when this would've been occurring?

6 A Like when this?

7 Q Yeah.

8 A Probably early -- probably early March.

9 Q Okay.

10 A Like when did we submit the paper? Yeah, probably like the first week of  
11 March.

12 Mr. Rowley. We provided those dates to you.

13 Mr. Benzine. Where are the dates on these two? I just -- like, it's not dated on  
14 the paper, so for the record --

15 Mr. Rowley. Not on the paper, but on the Word version, there was an indication  
16 of the dates.

17 Mr. Benzine. Okay.

18 Dr. Andersen. Yeah.

19 BY MR. BENZINE:

20 Q In referee number 1's comments, question number 6 at the bottom of the  
21 first page says, There are two recent reports about coronaviruses in pangolins. The  
22 authors might want to comment on these.

23 Is this the RBD pangolins, or is this the 99 percent pangolins?

24 A This is the 99 percent pangolin, yes.

25 Q Okay.

1 A I assume. I assume.

2 Q Because you said there's nothing in these reports that changes our  
3 statements regarding the potential role of pangolins, so --

4 A Correct.

5 Q -- what did you mean by that?

6 A So there's -- there was speculation that pangolins could be the intermediate  
7 host of the virus, and we felt that these sequences did not change that, right? So we  
8 didn't mean -- we didn't think that those sequences specifically pointed to pangolins.  
9 They didn't show that they were or even suggest that they could've been a likely  
10 intermediate host. But, of course, it all didn't disprove that they weren't the  
11 intermediate hosts.

12 Q I'll ask about the next one. On referee 2, page 3 --

13 A Yeah.

14 Q -- that referee again in the first block there -- second block there, asks about  
15 the pangolin sequences. Once the authors publish their new pangolin sequences, a lab  
16 origin will be extremely unlikely.

17 And then you write back in the second paragraph, unfortunately, the newly  
18 available pangolin sequences do not elucidate the origin of SARS-CoV-2 or refute a lab  
19 origin.

20 A Correct.

21 Q These are the same -- you're talking about the same pangolin sequences?

22 A We are talking about the same pangolins, yeah.

23 Q So this isn't -- these rebuttals from you aren't about the pangolin RBD, it's  
24 about the pangolin as an intermediate host?

25 A This is about -- just to be clear, these are not from -- unlike what the

1 sub -- you know, the Select Committee stated in their recent conversation -- or  
2 production, is that these are not my answers, right? These are answers from the  
3 authors. So this is from all the authors that we worked together on --

4 Q Okay.

5 A -- on phrasing these. But, yes, this is referring to the fact that these new  
6 pangolin sequences, and we must've probably knew at the time that they were not, in  
7 fact, you know, identical to SARS-CoV-2 -- although I can't really remember, right -- is that  
8 they don't allow us to refute a potential lab origin, specifically tissue culture passage,  
9 right, as we describe in the paper.

10 Q Okay. So this is --

11 A Because the referee basically says that once we have these pangolin  
12 sequences, then we don't even need to consider a lab origin anymore. And we disagree  
13 with that. We think we do, as we described.

14 Q I want to move on and briefly talk about the furin site, and we've talked  
15 about it a lot. What -- can you explain what a furin site -- furin cleavage site does?  
16 Briefly.

17 A Sure. A furin cleavage site is just a string of amino acids that makes it a  
18 target for proteolytic cleavage proteins, proteins that if you have the spike protein of the  
19 virus, there's a long protein which allows the virus to bind to the human ACE-2 receptor  
20 but not to be internalized into the cell.

21 To be internalized into the cell, that spike protein needs to be cleaved into what's  
22 called S-1, spike 1, S-2, spike 2, and then it can fuse into the cell and infect the cell.

23 And in something like SARS 2, this can be mediated by an enzyme that's called  
24 furin. And that's why this is a furin cleavage site, because furin, as well as other  
25 proteolytic enzymes -- it's not just furin -- can use this site to cleave that, and, in fact, can

1 do so when a new virus is being produced. Before furin leaves that cell, it's cleaved.

2 So once it then infects a new cell, it can bind to it immediately, internalize  
3 immediately, and infect the cell immediately. Something like SARS 2 -- SARS 1 can't do  
4 that because it does not have that furin cleavage site.

5 Q Is it fair to characterize as, the furin cleavage site makes it more infectious?

6 A I don't think that's fair, no. I think the furin cleavage site, I think, is an  
7 important component of SARS 2 and a function of SARS 2. We know it's important for  
8 its pathogenesis. We know that specifically it's required probably for transmission of  
9 this virus too, but it's not a, quote/unquote, way to increase the transmission of a virus,  
10 for example.

11 Q So there --

12 A Yeah.

13 Q -- there could be a virus with a furin cleavage site that is not good at  
14 transmitting --

15 A Oh, absolutely. I'm sure there are many --

16 Q Yeah.

17 A -- many. And, in fact, there could be viruses without furin cleavage sites  
18 that also transmit very well.

19 Q Can you tell strictly from the sequence of COVID-19 that it has a furin  
20 cleavage site, or does it require more --

21 A We can say it has a predicted furin cleavage site. Certainly in our early  
22 drafts, I think we talk about it as a predicted site, because we don't actually know if it's  
23 functional. But I think probably by the time we published the final paper, I think it was  
24 broadly known at the time that, yes, it is also functional.

25 But, yeah, we could predict it, but we don't know until we've done experiments

1 that it's actually functional.

2 Q And we've touched on the next couple a little bit, but I want to ask again.  
3 Is there a way to tell if a virus gains a furin site through natural evolution versus  
4 laboratory passage?

5 A I mean, again, there would be certain -- again, if you insert the site into the  
6 virus, which has been done for all the viruses, including coronaviruses, then typically  
7 people use what we know to be a good furin cleavage site.

8 There are multiple versions of a furin cleavage site, right? There's optimal ones  
9 and there's sub optimal ones. And when research have done this in the past, they do  
10 with, like, we know that this is an optimal furin cleavage site. We know it will definitely  
11 be cleaved by furin. That's what people insert.

12 This is not that, right? It's a sub optimal site. It is good enough to be cleaved  
13 by furin, but it's not a great site and, in fact, has since evolved to become a beta site in  
14 things like Omicron and alpha and other variants, right.

15 Q Beyond just inserting it --

16 A Yeah.

17 Q -- is it possible, or has it been done before -- two separate questions -- to  
18 gain it in a coronavirus just through either culture or animal passage?

19 A I don't believe so. So, again, this is where, you know, my early thinking was  
20 this, that I thought it was possible, but I just think that -- because, again, I've looked, you  
21 know, everywhere for a reference that would suggest that it can be gained during  
22 passage, for example, and I just haven't found anything.

23 And, again, what's important here for SARS 2, specifically we know that it has a  
24 tendency to actually lose it as its passage in tissue culture.

25 Q Can you explain the importance of that --

1 A Yeah.

2 Q -- how in, like, why continued passage and it loses a furin site means, like, is  
3 a data point against it being gained in a laboratory?

4 A Yeah. So -- well, it's -- if it loses it in a laboratory, then it ain't going to gain  
5 it, right? It's one or the other.

6 The fact that it even loses it is interesting because -- and it probably has to do with  
7 the fact that furin cleavage sites are probably important for respiratory transmission of a  
8 virus, which is probably also why they're pretty rare in bats, right, because bats don't  
9 transmit viruses between themselves in the respiratory route. They do this with the  
10 good old fecal-oral route.

11 And that's different than that in mammals. That's why a lot of coronaviruses in  
12 rodents, for example, have furin cleavage sites because that's a respiratory route. In  
13 bats it's not a respiratory route, so there the furin cleavage sites are rarer, although still  
14 present.

15 When you're in tissue culture, that's a totally artificial selection environment,  
16 right? It's nothing to do with a respiratory route, for example.

17 The furin cleavage site itself probably makes the virus less stable, and that's  
18 probably detrimental in tissue culture. And that means that if there is a version of the  
19 virus that emerges in this tissue culture experiment that doesn't have the furin cleavage  
20 site, then they'll out-compete all the other viruses in the same cell, and very quickly you'll  
21 end up with basically having viruses that -- viral particles that don't have that furin group,  
22 so --

23 Q Okay. I want to introduce majority exhibit 19.

24 [Andersen Majority Exhibit No. 19

25 Was marked for identification.]

1 BY MR. BENZINE:

2 Q It's an email chain with yourself, Dr. Holmes, Dr. Rambaut, and Dr. Garry,  
3 and Bates-numbered GARRY0000098 through 104, and I want to go to the page marked  
4 100. And right in the middle of the page is a long email from Dr. Garry, and at the  
5 bottom, he says, Bottom line, I think that if you put selection pressure on a coronavirus  
6 without a furin cleavage site in cell culture, you could well generate a furin cleavage site  
7 after a number of passages. But let's see the data, Ron. It will infect a lot better if it  
8 can effectively fuse at the cell surface and doesn't have to rely on endosomal cleavage  
9 and receptor-mediated endocytosis?

10 A Yeah.

11 Q Do you agree with that statement, that you could put enough pressure on a  
12 coronavirus to generate a furin cleavage site?

13 A I think as a -- as a hypothesis, I think it's a good hypothesis. I mean, again,  
14 this is basically akin to what I was saying at the time, especially -- and I can't remember if I  
15 put that in an email or just mentioned it in conversation, but typically these are passaged  
16 in the presence of trypsin, which is an enzyme that will cause that cleavage to happen in  
17 the absence of a furin cleavage site.

18 It's, in fact, I think -- I believe it's required for, like, passaging SARS 1. And so my  
19 idea, which is similar to what Bob is saying here, is that if you did that experiment in the  
20 absence of trypsin, you would probably select for a virus that would have a furin cleavage  
21 site.

22 The problem is just that it's just wrong, right. For SARS 2 specifically, it doesn't  
23 gain it, it loses it, right? And while it's a good hypothesis, as Bob says, but "Let's see the  
24 data, Ron" -- I actually think it's Mike that this -- this idea comes from. I don't think Ron  
25 said that it could -- that furin cleavage sites could happen in tissue culture.

1           It's just that, again, in fact, there is no evidence to suggest that if you passage a  
2 coronavirus, you will gain a furin cleavage site. And specifically we know that if you  
3 passage SARS 2, it loses a furin cleavage site.

4           Q    I'm curious how those two are related, like, if the argument is that you're  
5 taking a novel coronavirus, passaging it until it gains a furin cleavage site --

6           A    So I don't think you can do that. I think it's just the wrong hypothesis.

7           Q    Okay.

8           A    Yeah. I think it's -- I mean, it's an idea that Bob puts out there, right, as  
9 something to consider. I think that if you put selection pressure, right -- I mean, we are  
10 speculating here, and I just don't think you can do it.

11          Q    And why?

12          A    Because there's no evidence to suggest that if you passage a virus -- a  
13 coronavirus that doesn't have a furin cleavage site, that it gains a furin cleavage site.

14          Q    No published evidence?

15          A    No published evidence --

16          Q    Okay.

17          A    -- yes, yes. And we have to go with published evidence, right, or at least  
18 have seen experiments or heard about or whatever, because, yes, I don't -- we thought  
19 that at the time because, again, I believe that based on the conversation I had with  
20 Mike Farzan -- he mentioned it -- maybe I was wrong because, again, as I'm saying, there  
21 is just no evidence for that actually.

22          Q    But it's still operating under the assumption that people are publishing  
23 everything that they're doing?

24          A    No. It's just like -- no. I mean, if -- if -- there's a lot of papers on  
25 coronaviruses, right? So if -- if coronaviruses would gain furin cleavage sites based on



1 passage, which experiments that happen all the time with all kinds of coronaviruses,  
2 right, I would expect that something like that would be in the published literature, yeah.

3 Q Okay. I want to go to kind of the third primary argument. I understand  
4 you said there were a lot of other things that went in that --

5 A Sure.

6 Q -- maybe didn't make it past the cutting-room floor.

7 A Yeah.

8 Q That it didn't use a preexisting backbone?

9 A Yeah.

10 Q So in essence that means, and correct me if I'm wrong, that if it -- we'll use  
11 the Wuhan Institute as an example -- if their preexisting backbone is WIV-1, this doesn't  
12 use that?

13 A And all the backbones, right? There's a lot of -- not just the one that the  
14 Wuhan Institute of Virology was using commonly but all the backbones that we knew  
15 about out there, i.e., published, of course.

16 Q So it, again, rests on the assumption that there weren't unpublished  
17 backbones?

18 A Of course, yes.

19 Q Okay.

20 A It rests on that, but, again, we -- scientific arguments are based on evidence  
21 and data. If you speculate that there might be an unpublished backbone out  
22 there -- you shouldn't dismiss that possibility, right, but without any evidence to actually  
23 support that claim, it's just speculation, and in my opinion, that's not a scientific method,  
24 right?

25 And especially because, again, the Wuhan Institute of Virology was really doing it

1 the same way pretty much all the time. So now we are talking about all of a sudden  
2 they did it a completely different way.

3 That's not to say that they couldn't have. They could have. It's just we have  
4 nothing to suggest that they actually did.

5 Q I want to introduce majority exhibit 20.

6 [Andersen Majority Exhibit No. 20

7 Was marked for identification.]

8 BY MR. BENZINE:

9 Q So this is an email chain between yourself, Dr. Holmes, Dr. Garry,  
10 Dr. Rambaut, and Bates-numbered GARRY0000272 through 274.

11 Before we get to what's in the email chain, do you recall how Dr. Lipkin got added  
12 as an author?

13 A I think Dr. Lipkin had talked to Dr. Farrar and had been, like, working on  
14 similar things, and then Dr. Farrar mentioned that Eddie's working on something. So  
15 Eddie talked to Jeremy, and then Eddie sent an email around and said, right, look, Ian is  
16 working on some of this stuff, are you guys okay with him being an author? And then,  
17 yes, we agreed to that.

18 Q Okay. On page 273 --

19 A Uh-huh.

20 Q -- Dr. Holmes, it's kind of the middle of the page email, it's got a big external  
21 sender box over it. It says, From Ian about the February 7 summary.

22 I assume that's referencing maybe still the report at that point --

23 A Yeah --

24 Q -- not the final paper?

25 A -- that report, like whatever, yes --

1 Q Yeah.

2 A -- yes, yes.

3 Q Think we should add him as an author. Safety in numbers. In his own  
4 mind, he brings a lot of gravitas, plus because he is involved in the gain-of-function, I  
5 think it adds weight. Happy to be overruled though.

6 Is this the email that you were just referencing where --

7 A The backbone site, yeah, that must be the -- I mean, I think we should have  
8 add him as an author, so there must be some other email, like, suggesting that we should  
9 maybe --

10 Q My guess would be Dr. Holmes just didn't put a question mark at the end of  
11 that. That's how I read that. Think we should add him as an author.

12 I don't --

13 A I don't, yeah, but I mean, right where -- I mean, there must be an email prior  
14 to this where we talked first about, like, Ian.

15 Q The email prior is on the last page, and it's Dr. Lipkin to Dr. Holmes with  
16 some thoughts about the paper.

17 A Okay, okay, okay, yes, okay, yeah, okay, I get it, yeah. Yeah, Yeah. Yeah,  
18 yeah. So that's probably the email where we all agree, using different words, to include  
19 Ian as an author, yes.

20 Q Do you agree that Dr. Lipkin adds gravitas to the authorship?

21 A I think he is an -- you know, he has done important work and including  
22 collaborated with Chinese authors. He's a well known individual within sort of the  
23 emerging infectious disease field. So from that perspective, adding Ian as an author,  
24 yes, that helps add to the weight of the paper and the authors, and, like, look, these are  
25 really experts to have looked at this, yes.

1 Q At the top of the first page, 272, Dr. Garry, at the very top email, says, yes,  
2 very interesting, publish.

3 It's not quite clear what he's referring to.

4 I predict Kristian will soon have some better dN/dS data to add productively to the  
5 mix as well. Stay agnostic. Hope Ian can as well.

6 What -- I'm asking you to speculate, but was there a fear that Dr. Lipkin wasn't  
7 agnostic?

8 A I don't think so. I mean, there's another mention -- I think -- I think Eddie  
9 initially mentioned that he thought that Ian probably believed -- believed it came from  
10 the lab, similar to what I did at the time.

11 But was there any fear that Ian would somehow move it in a certain direction?

12 No. No, I don't think so.

13 Q Okay. Are you -- generally, are you aware of Dr. Lipkin and Dr. Holmes'  
14 relationship today?

15 A I think it's very poor.

16 Q Do you know why?

17 A I think -- honestly, I -- well, I think there's been, like, Ian has made some  
18 statements that I think Eddie disagrees with and prob- -- I mean, he certainly made the  
19 statements around him knowing about the pandemic in mid December or something like  
20 that, which I just don't believe for a second because it just doesn't make any sense. And  
21 he is -- you know, his claims for that are basically just misstatements of dates in papers.

22 So I think that has led to some conflict between the two. And, again, I'm not  
23 actually -- I, myself, you know, don't have a relationship with the doc- -- Dr. Lipkin.

24 Q Okay. Thank you.

25 I want to introduce majority exhibit 21.

1 [Andersen Majority Exhibit No. 21  
2 Was marked for identification.]

3 BY MR. BENZINE:

4 Q This is another email chain with yourself, Dr. Holmes, Dr. Rambaut, and  
5 Dr. Garry, Bates-numbered GARRY0000263 through 264.

6 At the bottom of the last page -- so flip over to 264 -- Dr. Holmes writes, Ian Lipkin  
7 just called, very worried about the furin cleavage site and says the high ups are as well,  
8 including Intel. Also saw the restriction site. Actually, he was most vexed that he  
9 wasn't part of our discussion group. Classic. I think I'll send to (sic) the doc. I still  
10 have no power. Could be a week.

11 Who do you think Dr. Holmes is referencing when he says "high ups"?

12 A Very worried about the furin cleavage site, I mean, maybe it's because,  
13 again, I had brought up -- we had brought up the concerns to Dr. Fauci and Dr. Collins, so  
14 maybe Ian has had conversations with them around this time and that they were worried  
15 about it, saw that as a potential sign of lab origin.

16 Mr. Rowley. The question is calling for speculation.

17 Do you know who that refers to?

18 Dr. Andersen. I do not know who that refers to.

19 BY MR. BENZINE:

20 Q Okay. Similarly, at the top of the first page, so 263, Dr. Garry says, but if  
21 Lipkin says higher ups are concerned and Intel involved, it's consistent with what we all  
22 know too.

23 Does that help frame that it might've been Dr. Fauci and Dr. Collins that are the  
24 higher ups?

25 A I -- I -- again, I wouldn't speculate on that. I don't know. I mean, it was

1 clear that the White House Office of Science Technology Policy at that February 3rd  
2 conference call, Dr. Fauci, in my initial email to me, talked about contacting the  
3 intelligence community both here and in United Kingdom.

4 So that's what my assumption is, that when we're talking the higher ups here, the  
5 White House was aware of this. They organized -- again, asked to organize that  
6 February 3rd conference call. So this is all consistent with that being that.

7 Q Okay. At this point did you have any firsthand knowledge of the  
8 intelligence community being involved?

9 A I did not, no.

10 Q Okay. I want to shift back, and if you need to reference the paper itself,  
11 you can --

12 A Sure.

13 Q -- but you may not have to. The paper says, we acknowledge M. Farzan for  
14 discussions. That's --

15 A Yeah.

16 Q -- Dr. Michael Farzan?

17 A Correct.

18 Q Why was he acknowledged at the end of the paper?

19 A Because I had conver- -- I had a few conversations with Dr. Farzan just about  
20 my early thoughts on the virus. Mike Farzan was my co-chair. He was at the  
21 Scripps Research Florida campus, and he was co-chair of the immunology department  
22 which I'm under. And he's also importantly discovered the ACE-2 receptor for SARS 1,  
23 so he knew a lot about coronaviruses.

24 So I had several conversation -- I say several -- maybe I had two or three  
25 conversation with Mike about some of my early thoughts of a potential lab-related origin

1 as well as the stable evolution of the virus. And Mike really helped me steer sort of just  
2 my own -- own thinking on this, and that's why he's -- he's acknowledged.

3 Q What were -- what did the conversations consist of briefly?

4 A Just scientific --

5 Q Was it one conversation, two conversations?

6 A So I can't remember. I think it's -- I don't think it was just one. I think it  
7 was definitely two, two or three conversations, and it was just about, you know, the furin  
8 cleavage site we talked about, as I have already mentioned, that I think I got this potential  
9 idea that maybe it could gain it during tissue culture from Mike himself.

10 We talked about the binding into the ACE-2 receptor because Mike is also a  
11 structural biologist as well as an immunologist. So this idea that, look, we think this is a  
12 good binder to human ACE-2, for example, and sort of got his insights on that.

13 So it was just a scientific conversation to -- to further my own understanding of  
14 coronaviruses at the time.

15 Q During his transcribed interview, Dr. Farzan was asked if he was aware that  
16 you were going to acknowledge him in the paper.

17 A Right.

18 Q And he said, I was not aware of that prior to publication.

19 A Right.

20 Q Why didn't you tell him?

21 A I -- you know, you don't always tell people that they're acknowledged in a  
22 paper because acknowledge -- obviously, if they had been authors, they would have  
23 been directly involved. So maybe I did not reach out to Mike because I had told him  
24 that we are going to be working on a paper, and it was obvious based on my  
25 conversations with him that I would thank him. It's something that you typically do with

1 your colleagues that you feel like has helped -- helped you clarify your thoughts on -- on a  
2 scientific topic.

3 Q So it's not uncommon to acknowledge someone without their knowledge?

4 A Oh, that's done all the time. You don't reach out to people and say, like, is  
5 it okay that I acknowledge you for this? That's -- well, I typically don't do that, right,  
6 because people know that if you're working on a paper and you talk to them, you actually  
7 have insightful comments. Then from my experience, you don't -- you don't ask for  
8 permission to do that because acknowledgement is just an acknowledgement. It's not  
9 an authorship which is obviously very different.

10 Q Okay. I want to introduce what will be majority exhibit 22.

11 [Andersen Majority Exhibit No. 22

12 Was marked for identification.]

13 BY MR. BENZINE:

14 Q This is an email chain between yourself and Clare Thomas.

15 A Yeah.

16 Q First, who is Clare Thomas?

17 A Clare Thomas is the editor at Nature Mag- -- I mean, Nature.

18 Q I want to go to the email, it starts at 266 but with spacing flows heavily on to  
19 267 --

20 A Yeah.

21 Q -- and says briefly, Dear Clare, I wanted to reach out to see if there would be  
22 any interest in receiving a commentary hypothesis piece on the evolutionary origins of  
23 SARS-CoV-2.

24 Was this you pitching proximal origin to Nature?

25 A Yeah. But before we had a draft ready, right? I was asking if there would



1 be potential interest at the journal for such a piece, yeah.

2 Q Okay.

3 A But this is before we had -- this is 5 days before we actually are at final  
4 version of the --

5 Q In one of the previous emails that we've talked about introduced by the  
6 minority staff, Dr. Farrar suggested Lancet, Nature, and the New England Journal of  
7 Medicine?

8 A Correct, yes.

9 Q Did you reach out to Lancet and the New England Journal of --

10 A I did not, no. I think we all thought that Nature would be a good journal for  
11 this.

12 Q Okay.

13 A Yeah.

14 Q On the only complete paragraph on 267 it says, you write, prompted by  
15 Jeremy Farrar, Tony Fauci, and Francis Collins, Eddie Holmes, Andrew Rambaut,  
16 Bob Garry, Ian Lipkin, and myself have been working through much of the primarily  
17 genetic data to provide agnostic and scientifically informed hypotheses around the origins  
18 of the virus.

19 We are not quite finished with the write-up, and we still have some loose ends,  
20 but I wanted to reach out and see if this might potentially be of interest. We see this  
21 more as a commentary/hypothesis as opposed to a more long-form letter or article.

22 What did you mean by "Prompted by Jeremy Farrar, Tony Fauci, and Francis  
23 Collins"?

24 A I mean specifically that -- again, as I've already explained, is that they  
25 prompted us to the idea of seriously considering the origin of the virus and to consider

1 producing a paper on that.

2 And, again, as I even say here, that to make -- you know, provide agnostic and  
3 scientifically informed hypotheses around the origin of the virus. That's specifically  
4 what I mean by "prompted."

5 And, again, remember my first conversation with Tony Fauci, where he specifically  
6 suggests that if I think this came from the lab, I should consider writing a scientific paper  
7 on it.

8 Q So that's what the -- the prompt he was referencing that --

9 A That's the prompt --

10 Q -- that first conversation?

11 A Correct. That -- that -- that is referring -- and as you can see from my  
12 emails, that Drs. Fauci and Collins, right, have no influence and no play in our -- played no  
13 role in the drafting of the paper itself.

14 Q I would like to introduce majority exhibit 23.

15 [Andersen Majority Exhibit No. 23

16 Was marked for identification.]

17 BY MR. BENZINE:

18 Q Again an email, that email chain that you're probably very familiar with.

19 A Yeah.

20 Q It is notes after the call and -- with many of the participants from the call,  
21 and Bates-numbered REV0000812 through 817. I want to go to page 813, the large  
22 email. It's is an email from yourself.

23 A Yep.

24 Q And in the middle paragraph, you write, our main work over the last couple  
25 weeks has been focused on trying to disprove any type of lab theory, but we are at a

1 crossroad where the scientific evidence isn't conclusive enough to say that we have high  
2 confidence in any of the main three theories considered.

3 So the three theories, going back, are direct zoonosis, through an intermediary  
4 host, and then some kind of laboratory passage? Is that correct?

5 A That is probably correct. Although -- yes, that is -- that is -- yes, I believe  
6 that to be --

7 Q What did you mean by we've been focused on trying to disprove any type of  
8 lab theory?

9 A So specifically what I'm referring to here is just the scientific method, right?  
10 Scientific method consists of raising a hypothesis and then testing that hypothesis. A  
11 scientific hypotheses must be falsifiable in the sense that if you can falsify it, you have  
12 disproved it, so you know it's not true.

13 My initial hypothesis, as I've already made clear, was that of a lab origin. So  
14 that's the hypothesis. And what I'm describing here -- I've used the word "disprove."  
15 Should more correctly have used the word falsify, which is that we have been trying to  
16 falsify, seeing like, here's our hypothesis, can we actually falsify it.

17 And as I correctly point out, and as we correctly point out in the paper too by  
18 saying we cannot prove or disprove any version of any of these hypotheses, that's exactly  
19 what I'm stating here, right? Focused on trying to disprove, i.e., test our hypothesis of a  
20 potential lab origin.

21 And we are at a crossroad where the scientific evidence isn't conclusive enough to  
22 say that we have high confidence in any of them. And so in other words, we can't prove  
23 or disprove any of the hypotheses, as we also state in the paper.

24 Q Was it ever a goal of proximal origin to dismiss all lab leak theories?

25 A To dismiss all lab leak theories? No. I think -- I mean, that refers to the

1 same question, which is that it was our original hypothesis that we are testing. So is  
2 there a way -- is there grounds for us to dismiss a lab origin based on available evidence,  
3 and the answer is no.

4 And just to be clear, as we mentioned in the emails, right, is that the purpose of  
5 proximal origin, as is clear from the emails, was to take an agnostic, scientific look at the  
6 available evidence and see where that pointed to in terms of the origin as described.

7 Q Thank you.

8 I want to introduce exhibit 24.

9 [Andersen Majority Exhibit No. 24

10 Was marked for identification.]

11 BY MR. BENZINE:

12 Q Again, an email chain between yourself, Dr. Holmes, and Clare Thomas,  
13 Bates-numbered REV0000258 through 265. And I want to draw our attention to page  
14 261, and in your email to Clare Thomas in the middle of the page, you write,  
15 Unfortunately, none of this helps refute a lab origin, and the possibility must be  
16 considered as a serious scientific theory, which is what we do, and not dismissed out of  
17 hand as another conspiracy theory. We all really, really wish that we could do that.  
18 That's how this got started, but, unfortunately, it's just not possible given the data.

19 Is this the same situation?

20 A That's exactly the same situation, right, that, again, obviously we all wished  
21 that we could say it's definitely this, it's definitely not that, right? But as we describe,  
22 we can't. We describe that -- that's what I referred to here in the email. I say it  
23 directly. It's in the paper too. Yeah.

24 Q So it's not a wish that it didn't come from a lab. It's a wish that you could  
25 prove it one way or another?



1 Q Did you -- is it -- whose job is it to suggest reviewers for the peer review?

2 A You suggest -- I mean, you can suggest reviewers when you submit a paper.

3 I don't know if we did, but the reviewers are selected by the editor. And we don't know  
4 who the reviewers are, they're anonymous.

5 Q Okay.

6 A So that whole -- and of course Eddie is wrong to say it's a slam dunk because  
7 the paper was, in fact, rejected.

8 Q And I'll have a few questions about that, but --

9 A Sure.

10 Q -- we'll get there.

11 A Uh-huh.

12 Q So to be clear, you don't recall whether or not reviewers were suggested or  
13 included --

14 A No, I don't know because that -- Eddie actually was the one who submitted  
15 it, and, again, I was in the desert at the time, so I don't -- I don't actually -- or, no, I don't  
16 actually know if he suggested that as part of the submission process. I don't think so  
17 because I don't remember that we discussed potential reviewers.

18 Q Okay.

19 A I think we just sent it in. We didn't exclude any -- I don't think we -- we  
20 selected any, but, again, Eddie would be the one to ask.

21 Q I want to finish this up for the most part on the proximal origin piece. As  
22 we're sitting here, to your knowledge and recollection, did Dr. Fauci ever provide  
23 comments or edits to any draft of the proximal origin paper?

24 A He did not, other than the final version which he said congratulations or  
25 good job, something like that.

1 Q And to your knowledge or recollection, did Dr. Francis Collins ever provide  
2 comments or edits to any draft of the proximal origin paper?

3 A He did not. Same thing. After the final paper, said good job.

4 Q And then beyond the one edit that we've already talked about, did  
5 Dr. Jeremy Farrar provide additional comments or edit to any draft of the proximal origin  
6 paper?

7 A He did not, no.

8 Q All right. I want to introduce majority exhibit 26.

9 [Andersen Majority Exhibit No. 26

10 Was marked for identification.]

11 Ms. Rutan. Twenty-seven?

12 Mr. Benzine. Twenty-six, right?

13 BY MR. BENZINE:

14 Q Another email chain, yourself, Dr. Holmes, Dr. Rambaut, Dr. Garry, and  
15 Bates-numbered REV0002866 through 2873.

16 A Yes.

17 Q On page 2872, right in the middle, there's an email from Dr. Holmes,  
18 February 5th at 10:47. Do you see that one?

19 A Yeah.

20 Q And I believe the animals he is referencing are pangolins?

21 A Correct, yes.

22 Q And then he says, "Should I tell Jeremy" -- meaning Dr. Farrar -- "to hold on  
23 sending the summary out to the group while we investigate more, or does that really  
24 matter? He did say that more wildlife needed to be studied. He sent it to the  
25 Bethesda boys."

1           Who is Dr. Holmes referencing when he says "Bethesda boys"?

2           A     I don't know, but I assume he means the NIH folks and -- them, so that  
3 would be my best guess, yeah.

4           Q     The next email up from Dr. Rambaut, his first line, perhaps say we are adding  
5 new information, see whether he wants to hold off. I suspect Bethesda will be sending  
6 it around already.

7           Is it your same presumption that he's referencing NIH?

8           A     That's my assumption, yes.

9           Q     I'd like to move on to majority exhibit 27 -- actually, let's go off the record  
10 here.

11          [Discussion off the record.]



1

2 [1:50 P.M.]

3 Mr. Pellegrini. Okay. So we can go back on the record.

4 Dr. Andersen, I just have some follow-up questions about things that we've  
5 chatted about here today. The first thing I'd like to do is introduce minority exhibit N.

6 [Andersen Minority Exhibit No. N

7 Was marked for identification.]

8 BY MR. PELLEGRINI:

9 Q This is an ODNI declassified report on the origins of SARS-CoV-2. Are you  
10 familiar with or have you previously seen this document?

11 A I have, yes.

12 Q Okay.

13 It's like 18 pages long. I'm just going to take you to one particular paragraph on  
14 page 8 of the report. In the upper right-hand corner, there's a box, and I'll read it out  
15 loud. The header is: WIV illnesses in fall 2019 not diagnostic. The intelligence  
16 community assesses that information indicating that several WIV researchers reported  
17 symptoms consistent with COVID-19 in autumn 2019 is not diagnostic of the pandemic's  
18 origins. Even if confirmed, hospital admission alone would not be diagnostic of  
19 COVID-19 infection.

20 So do you interpret that to mean that even if we knew that there were  
21 researchers that had particular symptoms and even went to the hospital, without  
22 knowing what exactly it is they had, you would not be able to ascertain the origins of the  
23 virus?

24 A Correct.

25 Q Okay.

1 Clarifying something. There has been previous discussion of your early  
2 conversation with Dr. Fauci, and Dr. Fauci said something to the effect of, okay, if you,  
3 Dr. Andersen, think that this came from a lab, you should write about that. You should  
4 publish on that.

5 I just want to be clear. That statement from Dr. Fauci, it sounds like, was  
6 predicated specifically on the idea that the virus may have come from a lab?

7 A That is correct, yes.

8 Q Okay.

9 This is sort of a general coronavirus question. As I understand it, which is  
10 relatively little, there are a few endemic human coronaviruses, not SARS-CoV-2, but four  
11 others?

12 A Yep.

13 Q And some number of those, I'm not clear on the exact number, possess furin  
14 cleavage sites?

15 A Correct.

16 Q Is that right?

17 A Yes.

18 Q Perhaps not the exact --

19 A A difference sequence but, in fact, those are more optimal furin cleavage  
20 sites, yeah.

21 Q Is there any -- what, if any, significance does that fact tell us about  
22 advantages or not advantages of having a furin cleavage site for coronavirus success in  
23 humans? Does it tell us anything at all, or no?

24 A Not really because they don't all have it or they don't all not have it. I think  
25 it just tells you that there's a variety of different coronavirus in humans, some of which

1 have furin cleavage sites and some of which do not. So clearly, there's multiple  
2 strategies in which a virus can be quote, unquote, successful in the human population,  
3 which is unrelated to whether they have a furin cleavage site or not.

4 Q Great.

5 I'm going to ask some questions about a few specific exhibits that the majority  
6 showed you, and so you will need to refer back to those documents.

7 I'd like to start with majority exhibit 21. And that's document Bates stamped  
8 Garry 263. I'll give you a minute to flip through.

9 A Okay.

10 Q So there was some discussion on both pages of this document about the  
11 phrase higher-ups or high-ups, the higher-ups are concerned, the high-ups are worried.

12 A Right.

13 Q I just want to be clear that you, yourself, have no idea who the higher-ups  
14 are.

15 A We -- no. I mean, we referred to -- I think in some of my own emails even  
16 referred to the higher-ups, and it's a nebulous term, right.

17 Q In this particular email -- because I think there may have been a little bit of  
18 guessing going on in the last round.

19 A Yes.

20 Q But that was guessing, right?

21 A Correct. I do not know what we are talking about when we're saying, for  
22 example, Ian Lipkin, very worried about the furin cleavage site and says that the high-ups  
23 as well. I don't know specifically who we're referring to there.

24 Q If you could go to majority's exhibit 22, and that document is labeled REV  
25 266. On the second page of that, number 267, you had a discussion about the first

1 sentence on that page, prompted by Jeremy Farrar, Tony Fauci, and Francis Collins.  
2 You've discussed this at length today, but I'm going to ask you to discuss it one more  
3 time.

4 Those three individuals, this sentence notwithstanding, those three folks are not  
5 on equal footing when it comes to their involvement with the proximal origin paper. Is  
6 that right?

7 A That is correct. Yeah, again, they all prompted us in the sense that they all  
8 suggested that consider writing a scientific paper on it. Of course, Jeremy was, you  
9 know, was, as I'm saying, like a father figure in that process, which Drs. Fauci and Collins  
10 were not, which is probably why I mentioned Jeremy first.

11 Q And I think you said Dr. Fauci and Collins had essentially no involvement in  
12 the actual writing of the paper.

13 A They did not have any involvement in the writing. Again, their only  
14 involvement was to suggest we consider writing a paper.

15 Q If you could go to majority exhibit 23, which is numbered REV 812. And on  
16 the second page of that document numbered 813, we've got this relatively long email  
17 from you.

18 A Yeah.

19 Q There was some focus on a particular sentence in that email, which I will  
20 read part of that sentence: Our main work over the last couple of weeks has been  
21 focused on trying to disprove any type of lab theory.

22 I thought your explanation was actually quite interesting in the sense that as a  
23 reader, reading that for the first time, there's almost a sense of, whoa, they're singling  
24 out the lab origin theory. But while that is, perhaps, literally true, the reason for that is  
25 because that is the theory that you initially believed to be true.

1           A    Correct, yes.  Again, I'm writing to all the scientists here.  I think any  
2 scientist reading this sentence I think will understand what I'm saying, which is that the  
3 scientific method is to pose a hypothesis, which needs to be falsifiable.  If a hypothesis is  
4 not falsifiable, it's, in fact, not a scientific one and that falsification of that becomes that if  
5 you can falsify the hypothesis, you have disproven it.  And that's what I'm referring to  
6 here.

7           But as I correctly state, it's that we cannot do that based on available evidence,  
8 and the reason why I single out the lab leak here is that that was, indeed, our initial  
9 hypothesis.

10          Q    If I could ask you to look at majority exhibit 25, which is numbered Garry  
11 306.

12          There was some discussion of the suggestion of peer reviewers.

13          A    Right.

14          Q    And those of us who are not familiar with that process, to the extent that a  
15 paper's authors makes suggestions about an individual peer reviewer, what is the  
16 purpose of suggesting peer reviewers?  I presume it is not to get an easier review for  
17 your own paper.  Is that right?

18          A    That's correct.  I mean, it's to help their editor a little bit thinking about  
19 potential peer reviewers by saying, like, look, here are some people that we think are  
20 good, that we think have the necessary skill set to review this paper, because those  
21 reviewers remain anonymous.  We don't know who they are, right.

22          So I, for example, have peer reviewed papers that come from people that I know,  
23 but I'm not particularly more favorable or critical because they don't know it's me peer  
24 reviewing it.  It's just that I may have been suggested because they know I have the  
25 requisite skill set.

1           But, again, the peer reviewers themselves are selected by the editor who is then  
2 the only one who knows who they actually are.

3           Q    Great.

4           And if I could ask you to look at the majority exhibit 26, which is numbered REV  
5 2866.  And on page number 2872 towards the back --

6           A    Oh, I'm sorry.  I thought you said --

7           Q    No, it starts with 2866.

8           So at 2872, which I think is the last page, more or less, here, we previously  
9 discussed that in a few places on this page, there is the phrase Bethesda boys?

10          A    Right.

11          Q    Bethesda will send it around.

12          Those emails that we discussed are from Dr. Holmes and Dr. Rambaut.  I just  
13 want to be clear that you, yourself, would not have personal knowledge of the extent to  
14 which whoever the Bethesda boys are -- and we can just assume for this conversation  
15 that that's Dr. Fauci or Dr. Collins or somebody at NIH -- you, yourself, would not know if  
16 those folks sent the draft around or to whom or if at all.  Is that right?

17          A    No, I don't know.  But, again, we have a February 4 draft, which is the first  
18 sort of a little bit more mature draft of the original conclusions.  So I assume that that's  
19 what this is referring to.

20          Q    Sure.  And Dr. Rambaut says:  I suspect Bethesda will be sending it round  
21 already.

22          A    Yeah.

23          Q    I just want to confirm that's Dr. Rambaut guessing, really just guessing.  
24 And you, yourself, two degrees removed, would not have any knowledge of any of that.

25          A    Correct.  And I also don't know what sending it around -- sending it round

1 even -- I don't know what that means.

2 Mr. Pellegrini. We can go off the record.

3 [Recess.]

4 Mr. Benzine. All right. We can go on the record.

5 I'd like to pick up a little bit where we left off and introduce majority exhibit 27.

6 [Andersen Majority Exhibit No. 27

7 Was marked for identification.]

8 BY MR. BENZINE:

9 Q It is an email chain with yourself, Dr. Holmes, Dr. Rambaut, Dr. Garry, and  
10 Bates numbered REV 823 through 826.

11 Starting at the page --

12 A I don't think that -- the people you just mentioned on the email, that's not  
13 correct.

14 Q Oh, you're right. It is Dr. Farrar, yourself, Dr. Fauci, and Dr. Holmes.

15 A Correct.

16 Q All right. Pardon me.

17 Going to the page that ends in 824, it's an anonymous email on July 25, 2022, to  
18 Jon Cohen. Who is Jon Cohen?

19 A Jon Cohen is a reporter at Science.

20 Q He then appears to forward it to you?

21 A Correct.

22 Q Do you recall seeing this anonymous email?

23 A I do.

24 Q A brief summary is that the anonymous email alleges that you and the other  
25 co-authors took credit for ideas that weren't acknowledged in proximal origin. Would

1 you agree to that? Not agree to that statement, agree to that summary.

2 A That is what --

3 Q They're alleging?

4 A -- the anonymous email is alleging, yes.

5 Q What is your response to that?

6 A It's simply false.

7 Q On the page -- the first page, 823, you forward Jon Cohen's email, the  
8 anonymous email. And then at the very back is a draft of a response. You forwarded  
9 all of that to Dr. Fauci.

10 A Correct.

11 Q Why did you forward it to Dr. Fauci?

12 A So this happened before any of my emails with Dr. Fauci, for example, had  
13 become publicly available. I don't think -- there was no public knowledge on that  
14 conference call on February 3rd -- or February 1st, which was a confidential conference  
15 call, a private conference call. We needed to reply back to Jon to say, actually, what this  
16 person is alleging is not correct for these reasons, and that required us to acknowledge  
17 that, yes, there was, indeed, a February 1st conference call.

18 And I wanted to give Dr. Fauci a heads-up such that he was aware that we were  
19 going to tell a reporter that, yes, there was a conference phone call on February 1st.

20 I also, importantly, remind Dr. Fauci, as you know, we considered the theory that  
21 SARS-CoV-2 could have been allowed to escape and, therefore, did what any good  
22 scientist should do, investigate likely hypotheses and let the data decide. As you know,  
23 the data strongly suggests that this is a natural virus, and clearly this person gets a lot of  
24 things wrong about how this all played out.

25 And then I mentioned that we need to get back to Jon, and we're doing so



1 tomorrow. I invite him to see -- say that please let me know if you have any comments,  
2 questions, or concerns, which he did not. I just got his auto reply.

3 Q So that was going to be one of my questions. Did Dr. Fauci ever respond to  
4 this letter?

5 A No. I just got his auto reply saying I'm busy.

6 Q Why were there concerns about making the February 1st conference call  
7 public?

8 A I typically don't make, you know, what I consider to be private conference  
9 calls. I keep those to myself, and I think it's only right that -- to let people know that I  
10 will -- that if I make that information publicly available, that they know I will do so.

11 Q I want to introduce majority exhibit 28.

12 [Andersen Majority Exhibit No. 28

13 Was marked for identification.]

14 BY MR. BENZINE:

15 Q It's an email chain with Dr. Holmes, yourself, Dr. Garry and Dr. Rambaut and  
16 Bates numbered Garry 600 through 607, and I want to go to page 602.

17 At the bottom of the page, Dr. Holmes, his second line says: Despite this, I'm  
18 100 percent sure it is Ron who leaked it. He was the most angry, and I still think it was,  
19 like, Baric who emailed Jon Cohen.

20 Is that Ron, as in Ron Fouchier?

21 A I assume that's what Eddie is referring to, yes.

22 Q Do you remember seeing -- getting this email?

23 A Yeah. Yes, I do, yeah.

24 Q Do you agree with Dr. Holmes that it could have been Ron Fouchier?

25 A I think it's better to not speculate who. Again, it's an anonymous emailer.

1 I don't know who that would be.

2 Q Okay.

3 Did you ever get told why Nature originally rejected proximal origin?

4 A I did. They -- I mean, we have -- you have it in the exhibits, right? It's part  
5 of their -- they give us the reason.

6 Q Can you elaborate?

7 A Yeah.

8 Q I don't --

9 A We can find that because I would rather just use their words. Maybe I  
10 don't have it.

11 They -- I think they rejected the paper because I think the reviewers felt that  
12 probably -- I mean, reviewer two was pretty critical about our conclusions of the paper  
13 and felt that they should have been stronger, and I think he had relayed those concerns  
14 to the editor, and I think that that would have been the reason.

15 Q The conclusions that -- what do you mean?

16 A Basically that we -- because, again, we kept the possibilities of -- remember  
17 the submitted version to that was open-ended, agnostic as to whether it could have been  
18 a lab passage of the two versions of the natural origin that we discuss. And I think the  
19 editor probably felt that that was too open-ended. That was clearly what -- especially  
20 reviewer two pointed that out in their review, which we disagreed with.

21 Q You, and correct me if I'm wrong, said something along the lines earlier that  
22 the line: We do not believe that any type of laboratory-based scenario is plausible was  
23 added at some point?

24 A Correct. That was added to the final version of -- this was added after it  
25 went over to Nature Medicine, yes.

1 Q Did Nature Medicine add the line?

2 A No.

3 Q How did that process play out? How did that line get added?

4 A That's based on our edits to the paper. Again, as the editor at Nature  
5 Medicine states, is that he thought that the paper had grown significantly since the one  
6 he had seen from Nature. We had to shorten it. You need to trim this back down,  
7 more or less, to the size of the Nature version while retaining the major changes in  
8 response to the reviewers.

9 And some of the responses to the reviewers was that the reviewer felt that we  
10 could be more specific on, for example, that lab origins were less likely than we initially  
11 entertained, and I agreed with that. I think we all agree with that, and those were  
12 changes that we incorporated.

13 So that includes that we don't believe that any type of lab origin is plausible. It's  
14 something that was added in response to the reviewers, our own thinking of the topic,  
15 and then getting it published in Nature Medicine, as opposed to Nature.

16 Q Proximal origin, we talked a lot about, had two kind of primary conclusions.  
17 I know I'm boiling it down but two primary conclusions. The first one: Our analysis  
18 clearly show that COVID-19 is not a laboratory construct or a purposefully manipulated  
19 virus.

20 Do you still stand by that statement?

21 A I do, yes.

22 Q And the second one: However, since we observed all notable COVID-19  
23 features, including the optimized RBD and polybasic cleavage site in related coronaviruses  
24 in nature, we do not believe that any type of laboratory-based scenario is plausible.

25 Do you still stand by that statement?

1 A I do, yes.

2 Q You brought it up a little bit earlier, and I want to ask questions about the  
3 Jesse Bloom --

4 A Sure.

5 Q -- conference call. So we have it -- I want to introduce as exhibit 29  
6 Dr. Bloom's paper --

7 A Yes.

8 Q -- that this was about.

9 [Andersen Majority Exhibit No. 29

10 Was marked for identification.]

11 BY MR. BENZINE:

12 Q This is a June 22, 2021, preprint paper by Dr. Jesse Bloom regarding early  
13 2020 COVID-19 sequences that had been removed from a sequence database. My  
14 understanding is that it had been -- it's been edited a few times or updated a few times  
15 since then, but the meeting question was about the June 22nd version?

16 A Yeah, this is a -- yes, correct. Yes, it's about this one, yeah.

17 Q Can you -- what did Dr. Bloom's paper say, generally?

18 A It basically -- well, the main thing is that he had found these wall sequence  
19 data that were requested to be removed from NCBI servers, submitted by Chinese  
20 scientists from the Wuhan University. And despite them having requested it to be  
21 removed, which it was on the front end of NCBI as not findable, Dr. Bloom managed to  
22 still obtain the sequences by going directly to the cloud servers of NCBI.

23 They stated, just to be clear, it had already been reported in table form in the  
24 original paper. Table 1 of Dr. Bloom's paper is nearly identical to Table 1 of the original  
25 paper that Wang had authored, I think it is, and then he did analyses on this. He makes

1 several accusations of Chinese scientists, including stating that there's no scientific  
2 reasons for why they might have requested a removal, which is just false. There are  
3 many scientific reasons for why one would want to, need to, in fact, remove data,  
4 including, as we still later know, is that it's a mundane reason for why they did so.

5 He makes accusations that they do that removal to obscure the evidence of the  
6 data relevant to their origin. He makes accusations around this is basically abusing the  
7 trusted structures of science and various other accusations and statements related to the  
8 intent of why these authors may have requested the removal of the data.

9 He then makes several analyses, which I must say I find flawed. I did at the time.  
10 I still do. And, in fact, the scientific statements that he makes, for example, around  
11 there being evolutionary events upstream of the Huanan Seafood Market, now shown to  
12 be wrong as I pointed out at the conference call.

13 And basically what the paper finds is that it just finds the frequency of early  
14 lineages, lineage A and lineage 2 in Wuhan in January and February because, in fact, this  
15 data is not actually early. It's from January and February, right. It's exactly as we  
16 already knew based on existing data.

17 Q So you hit on a couple of my questions already.

18 A Sure.

19 Q So I can skip over them.

20 He also writes -- he writes: Understanding the spread of COVID-19 in Wuhan is  
21 crucial to tracing the origins of the virus.

22 A Correct.

23 Q Including identifying events that led to infection of patient zero.  
24 Do you agree generally with that statement?

25 A Absolutely I agree with that, yes.

1 Q Does Dr. Bloom's paper provide any information regarding the origins of  
2 COVID-19?

3 A It does not, and I want to point out that Dr. Bloom appears to agree with me  
4 on that point. I just want to read for the record a tweet from Dr. Bloom June 24th.  
5 This is, obviously, a publicly available document. I'm getting lots of questions -- I'm  
6 reading from Dr. Bloom's tweet. I'm getting lots of questions if my preprint about some  
7 SARS-CoV-2 sequences that were removed from Sequence Read archive tell us anything  
8 about lab accident versus natural zoonosis.

9 I posted summary of my preprint below -- and he links to a previous twitter  
10 thread -- but did not directly address this point explicitly.

11 Next tweet: The answer is no. Capital letter no. The people using it to  
12 strongly support either argument are those that have become so emotionally invested in  
13 their opinion that they have lost the ability to analyze anything objectively outside of the  
14 framework of that argument.

15 I agree with Dr. Bloom. His paper does, in fact, not tell us anything about  
16 whether this is a lab accident or a natural zoonosis.

17 Q I want to introduce exhibit 30.

18 [Andersen Majority Exhibit No. 30

19 Was marked for identification.]

20 BY MR. BENZINE:

21 Q This is an email chain. The top page has Dr. Bedford, Dr. Collins, Dr. Tabak,  
22 Dr. Fauci, Alan Embry, yourself, Dr. Bloom, Dr. Garry, Rasmus Nielsen, and Sergei Pond.

23 And at the very back, on the bottom of page 1152, is an email from Dr. Collins to  
24 yourself and Dr. Garry and those other people that I mentioned --

25 A Yep.

1 Q -- cc'ing Dr. Fauci, Dr. Bloom, Dr. Embry, and Dr. Tabak, and invites you to a  
2 conference call to discuss Dr. Bloom's paper. That's the paper that we just were  
3 discussing.

4 A Right. Just to be clear, this states it's a preprint, right.

5 Q Preprint.

6 A Yeah.

7 Q Did you end up attending this teleconference?

8 A I did, yes.

9 Q Can you -- well, I'll go ahead and introduce exhibit 31, and we can use that to  
10 talk about what may or may not have happened at the teleconference.

11 [Andersen Exhibit No. 31

12 Was marked for identification.]

13 BY MR. BENZINE:

14 Q So this is a memo written by Dr. Bloom, and as Dr. Bloom himself writes, it's  
15 not contemporaneous but, instead, written about six months later?

16 A Yes.

17 Q Have you seen this memo before?

18 A I have.

19 Q Have you read it?

20 A I have.

21 Q At the bottom of the first page, he starts talking about you a little bit?

22 A He does.

23 Q And writes: The meeting became extremely contentious. Kristian  
24 Andersen strongly objected to my preprint, and he said he found it deeply troubling.

25 Can you walk us through the conference call prior to when you started

1 making -- when you started stating your objections to his paper, if Dr. Bloom has that  
2 correct? What happened prior to it getting contentious?

3 A Steve Sherry, for example, gave the reason for why they had requested  
4 these sequences be removed, and there was a conversation around -- which Dr. Bloom  
5 then later on here mixes up, but I talked about, for example, the need for data producers,  
6 such as myself -- to be clear, Dr. Bloom himself is not involved in work that -- where one  
7 would sequence a virus like SARS-CoV-2 from patients, for example. I made it clear that  
8 my lab does this, and we do this for multiple different viruses.

9 There are many reasons for why when we request data to be deleted is, in  
10 fact -- or removed is, in fact, removed. The reason for that being that researchers might  
11 realize that they don't have the right ethics approvals to release that data. They might  
12 realize that the data is contaminated or is, in fact, the wrong data. There might be  
13 IT-related reasons for why data needs to be removed but mostly to protect the, you  
14 know, patient confidentiality in human self-take research is the main reasons for why  
15 when somebody like me or somebody else requests this kind of data to be removed, we  
16 need to trust that it is, in fact, removed.

17 And I brought up several points related to that where I made it clear that I was  
18 perplexed and kind of found it troubling that NCBI, when they had been requested to  
19 remove this data, had, in fact, not done that. And I talked to some length about  
20 whether a researcher trying to obtain data which had been removed from the front end,  
21 in other words, the end that you use of NCBI if you go on the database, trying to still  
22 recover the data despite the data not being available there could be considered a hacking  
23 attempt.

24 So all of these things were discussed up front. These were mostly comments  
25 that I made directed against NCBI, and I made it clear that I found it troubling, again, that



1 their policies allowed for a data request of removal where the data was, in fact, not  
2 removed.

3 Q Do you remember the rationale the Chinese scientist gave for deleting or  
4 having this data removed?

5 A They were trying to update the data, I assume, and then they mentioned  
6 that because they wanted to move it to a different server, which they then later did.  
7 This to me seemed like a standard -- like updating data on NCBI is, unfortunately, a lot  
8 harder than it should be, and they wanted to move it, I assume, to a Chinese database.

9 Q You touched on it a little bit, but I want to go through at least the three  
10 objections that Dr. Bloom said that you stated, and we can walk through each of them  
11 and see if -- what happened here.

12 A Yep.

13 Q It's in -- he lays them out in the last paragraph on the first page --

14 A Yep.

15 Q -- that since the data was deleted, it would be unethical for anyone to  
16 analyze it further. Was that kind of what you were just talking about?

17 A That was what I was talking about. So this is conflating things, right.  
18 What I find -- there's two things here, right. First of all, I find it deeply troubling that,  
19 again, if a data request is being requested for removal, that it is, in fact, not removed.  
20 The deeply troubling aspect of this has to do with the fact that I find the paper itself to be  
21 unethical. It's not the fact that he is analyzing sequences that are deleted, per se. It's  
22 that he is directly accusing Chinese scientists of -- well, you know, obscuring, you know,  
23 removing data to obscure their existence even though that data was always available in a  
24 table form.

25 And he also, again, accused them of abusing the trust of science. This is not

1 scientific language, and I find it unethical to launch such accusations of scientists in peer  
2 review -- in scientific papers. That's the unethical part.

3 Q Okay.

4 The second objection Dr. Bloom says that you made was that you contended that  
5 the phylogenetic analysis in the preprint were not interesting because there was nothing  
6 unusual about the phylogenetics of early SARS-CoV-2 sequences in Wuhan.

7 Can you explain that one a little bit more?

8 A So, again, this is conflating things, right. What I pointed out was that their  
9 phylogenetic analyses -- and just to be clear, phylogenetics is my area of expertise. It's  
10 not Dr. Bloom's area of expertise. But the phylogenetic analyses that were performed in  
11 the paper were, in my opinion, much too basic and did not support some of the  
12 conclusions that were made in the paper.

13 For example, that because we had not seen lineage A at the market, there must  
14 be evolutionary events upstream of the market, which I pointed out that some of the  
15 technical analyses did on that, for example, rooting strategies were inappropriate to  
16 answer that question.

17 Further, giving sampling biases early on in a pandemic, it's very plausible that  
18 lineage A was, in fact, at the market. We had just missed it. When I say we, what I  
19 mean is early Chinese researchers going in. And, in fact, we know this to be the case.  
20 Lineage A has since been identified at the market, which completely invalidates the entire  
21 scientific argument put forward in the paper allowing for the upstream events.

22 And, again, these are the things that I pointed out to him, that his analysis just do  
23 not justify those conclusions.

24 Q And then it says -- Dr. Bloom says that that point was strongly disputed by  
25 Dr. Nielsen?

1 A Yep.

2 Q And that you and Dr. Nielsen began yelling at each other over Zoom.

3 A Yes.

4 Q Can you explain that one a little bit more?

5 A I have no idea why he would say that. He says it's the strongest memory.

6 There was no yelling. I'm not a yeller. I don't yell. Was there robust scientific

7 disagreement? Absolutely. But that's not yelling.

8 Q The third objection you state is in -- it starts in the middle of the top  
9 paragraph on the second page: Finally, Kristian objected to my preprint because he said  
10 that there was already intense criticism of scientists, such as himself. He needed  
11 security outside his house, and my preprint would fuel conspiratorial notions that China  
12 was hiding data and, thereby, lead to more criticism of scientists, such as himself.

13 First, I want to state absolutely and unequivocally that there should not be any  
14 threats made against you ever.

15 Second, can you explain this one more? You don't need to explain the security  
16 around your house. I think that's pretty self-explanatory, but what you meant by this  
17 statement.

18 A I think, again, this is going back to the unethical aspect of the preprint, right.  
19 I think stating that there is no scientific reason for why they would remove this data, for  
20 example. And just to be clear, the data was always available. Let me just read from  
21 one of Dr. Bloom's own tweets.

22 The data itself was always available in Table 1 of the original paper. Here's a  
23 tweet from Stephen Goldstein on June 22nd. He re-tweets a tweet from David Fisman,  
24 who says: Remember kids, and um regimes. The internet is forever.

25 And it's basically linking to Dr. Bloom's threat on his preprint.

1           Stephen Goldstein states: Yes, this was so secretive all the information is  
2 available in Table 1 since August 2020.

3           And then he points to the original paper.

4           Dr. Bloom chimes in also on June 22nd. Says: Right, but it's not findable,  
5 usable as a table of mutations in a paper on diagnostics. If the data were on the SRA,  
6 people would have been analyzing it long ago in phylogenetic analyses. As it was, no  
7 one noticed a table of some mutations buried in a paper on diagnostics.

8           So Dr. Bloom himself says that, yes, the data was always available in Table 1.  
9 That's why Dr. Bloom's Table 1 is nearly identical to Table 1 in the original paper.

10           That means that if Chinese scientists would, in fact, remove data to obscure the  
11 evidence, they probably wouldn't publish a paper on it. They certainly wouldn't put it in  
12 Table 1. This was pointed out multiple times, not just by myself but also by my  
13 colleague Dr. Garry, for example, that the accusations put forward in this particular paper  
14 were problematic in the sense that, first of all, the data was, in fact, not obscured  
15 because it was always available.

16           Again, from a personal level, I find many of the statements made here to be  
17 deeply unethical and, frankly, have nothing to do in a and should not be in a scientific  
18 paper. And my comments on this was that I was trying to tell him that, basically, look,  
19 you need to understand that making these accusations against scientists is problematic  
20 because if you want to keep working -- I talked to your colleague before about the  
21 importance of trust and the importance of working together. To more deeply  
22 understand the origin of the pandemic, we need to work with Chinese scientists. If we  
23 can't do that, we don't go anywhere.

24           And here, this paper is specifically accusing them. I found that deeply troubling,  
25 and I tried to explain to him how I saw that and so did Dr. Garry.

1           To that response, Dr. Bloom basically leaned back in his chair, something like this,  
2           and said, well, if this is a problem, I'm just going to take it on me.   And that's where I  
3           was -- frankly, I was shocked by that comment because -- and my comment to that was  
4           that I was trying to make him understand that this is not about you.

5           Mr. Pellegrini.   I'm sorry.   I didn't hear what you said Dr. Bloom said.   Could  
6           you just repeat that.

7           Mr. Andersen.   He basically said that if there is going to be a problem with this  
8           preprint, I'll just take it on me, on himself, Dr. Bloom.   I'm paraphrasing here.   I can't  
9           remember his exact words.   And he leaned back in his chair.

10           And I tried to explain to him, Dr. Garry tried to explain to him, and, in fact, at this  
11           stage, Dr. Fauci also chimed in on this as to trying to explain to him that this is not about  
12           him.   It's not about a single scientist.   It's about the scientists he's accusing here.   It's  
13           about other scientists working on the same questions as him.

14           And I told him in confidence that, for example, from my own perspective is that I  
15           have gotten several threats, harassments, even death threats that have gone to the level  
16           of my institutions early on, as part of this, had to have security outside my house, security  
17           outside my lab.   To this day, my name is still not on the building, for example, because I  
18           continue to get threats.

19           And I used that as a way to try and make him understand that this is not about  
20           you.   This is about a bigger question, and it's not that we shouldn't publish the papers.  
21           It's the aspect of this where we are accusing other scientists.   Specifically accusing them  
22           of obscuring evidence, which clearly they weren't, because the evidence was always  
23           available.   And for abusing this trusted structure of science.

24                           BY MR. BENZINE:

25           Q   Thank you.   I appreciate the context.

1           Going a little bit further still on this memo, and then we can move on from it, the  
2 third paragraph on the second page Dr. Bloom writes, Kristian Andersen then said that he  
3 was a screener at bioRxiv.

4           A     Bio archive.

5           Q     Bio archive.

6           And so he could delete the preprint or revise it in a way that would leave no  
7 record that this had been done.

8           Do you recall?

9           A     Not only did that not happen, that is, in fact, not even possible. I want to  
10 refer to the co-founder of the bio archive, Richard Sever here, chiming in on this very  
11 specifically. So he has a tweet from Dr. Alina Chan referencing the Vanity Fair article in  
12 which was based on Dr. Bloom's notes here, and Dr. Chan says: Is threatening other  
13 scientists to delete or revise their preprints considered appropriate behavior for a bio  
14 archive preprint screener?

15           Richard Sever here chimes in and says: There's no way a screener can delete or  
16 revise a preprint. Affiliates can flag a paper if they have a concern, but the final decision  
17 is ultimately made collectively by the in-house team.

18           All of this is publicly available, and he goes into further details around this.

19           Now, Dr. Bloom himself mentions -- so here is a tweet. Also, this is from  
20 March 31st where Dr. Bloom states that -- again, paraphrasing here from his own notes:  
21 The meeting became contentious. One NIH-invited outside scientist -- he's talking about  
22 me here -- explicitly suggested that I withdraw or revise preprint. He said he could  
23 implement this via his capacity as bio archives screener if I just sent him email giving  
24 thumbs up to do so.

25           Now, Richard Sever here chimes in and says that, actually, he thinks that what

1 happened was that I had offered my help to help Jesse revise his preprint prior to that  
2 going online if he wanted to.

3 Bloom says: This is correct. Summary I wrote, obtained by Vanity Affair,  
4 written mostly in response to question of whether Fauci or Collins asked me withdraw  
5 preprint, which, as I said in thread quoted above, did not happen. I regret paraphrasing  
6 Kristian's statement in that summary.

7 So, as I mentioned, not only is it not possible for me to revise or delete a preprint,  
8 however, it is correct that I was a screener at the bio archive. In fact, I was one of the  
9 initiators of this initiative at the bio archive.

10 So what I -- yes?

11 Mr. Rowley. Counsel, are you certain that the rules will not allow you to accept  
12 exhibits? I have -- I can represent to you that I participated in a congressional  
13 investigation not long ago where, in fact, the committee members did accept a new  
14 exhibit from me and made it part of the record.

15 Now, if you don't want that, then that's fine. It just seems to me that  
16 Dr. Andersen has been reading from some various materials here, including tweets. We  
17 offered to make it part of the record if you want it. If you don't want it, we'll withdraw  
18 the offer, but it does seem to me that it would be simple to accept it as an exhibit.

19 Mr. Benzine. No. We definitely appreciate you reading it, but it's not our  
20 practice to accept outside exhibits. It has nothing to do with this interview. It is our  
21 standard practice.

22 Mr. Andersen. The accusations that have been leveled at me from the  
23 committee as well, right, this directly disproves those.

24 So but, again, just to go back to what is being said here is that what I did do was to  
25 offer that if, based on the comments from myself and many others, whether those having

1 to do with what we found to be unethical -- and I still find it to be unethical -- or whether  
2 it was of technical concerns, which I brought up, which have been proven to be correct, if  
3 you wanted to revise it before it went online, I could help him in that process because I'm  
4 a screener at the bio archive.

5 However, if he wanted that help, he had to email me first. He did not want that  
6 help. He did not want to revise it. He didn't email me. I played no role in the  
7 screening of his preprint, as his preprint went online I think just a couple days later.

8 BY MR. BENZINE:

9 Q Have you and Dr. Bloom had any conversations about this since this memo  
10 became public?

11 A Not about this. I've had multiple conversations with Dr. Bloom, but we  
12 have not discussed any of this.

13 Q All right. I appreciate that.

14 A Other than -- I should say I did point out when he walked back his  
15 statements here in tweets, I strongly pointed out that the accusations, for example, made  
16 in the Vanity Fair article, as well as in his own notes were, in fact, false.

17 Q Thank you.

18 I have a couple conclusory questions and then a couple on another topic and then  
19 we can wrap up in the next probably 15 minutes.

20 A Sounds good.

21 Q What -- in your opinion, what data would confirm a zoonotic origin?

22 A I don't think there's any data that could. At this stage, unfortunately, I  
23 don't think there's any data that could confirm zoonotic origin. I think the data we have  
24 allows us to strongly conclude that the data points to a zoonotic origin with very, very  
25 high confidence. But actual proof I, unfortunately, don't think at this stage.



1 Q Would a progenitor virus be as close to proof as possible?

2 A Of course, but I think we've already seen this based on some other -- the  
3 recent conversations around early data from the Wuhan Institute and also from the  
4 Huanan Seafood Market that if such a virus were to be found, people would probably just  
5 claim that either the animal got infected by humans or, in fact, it was the virus that was in  
6 the Wuhan Institute of Virology.

7 So I think in terms of constituting a complete proof, I don't think we'll ever get.

8 Q Are there any data that would, in your opinion, confirm a laboratory or  
9 research-related --

10 A Absolutely. Any evidence of that virus being at the Wuhan Institute of  
11 Virology prior to the pandemic would absolutely nail it for a lab leak. I think potential  
12 evidence around confirmed COVID-19, early COVID-19 cases being at the Wuhan Institute  
13 of Virology, importantly, that would have to be verifiable and confirmed evidence, not  
14 pure speculation. Of course, that would be very strong evidence, too, for a lab-related  
15 accident.

16 Q What about pieces of COVID-19? If like this exact furin site was found at  
17 the Wuhan Institute of Virology, would that be enough for --

18 A It wouldn't constitute proof, but I would certainly take that into  
19 consideration as strong evidence of potential lab-associated origin, yes.

20 Q And then after all the testimony you have provided today, is it at all possible  
21 that COVID-19 was the result of a laboratory or research-related incident?

22 A The possibility still exists. It's always been the possibility of a  
23 lab-associated accident. However, I don't find that plausible given the mountain of  
24 evidence that we have that points directly to the illegal wildlife trade in China.

25 Q I have a few more questions and then we can wrap up.

1 A Sure.

2 Q The intelligence community has been investigating the origins of COVID-19  
3 since early 2020. Are you aware of these efforts?

4 A I am.

5 Q On May 26, 2021, President Biden announced that he directed the  
6 intelligence community to redouble their efforts to investigate the origins of COVID-19  
7 and deliver an assessment in 90 days. Are you aware of that announcement?

8 A Yes.

9 Q On August 27, 2021, the Office of the Director of National Intelligence  
10 released an unclassified summary of this assessment. Are you aware of that summary?

11 A I am.

12 Q Have you read that summary?

13 A I have.

14 Q And on October 29, 2021, the Office of the Director of National Intelligence  
15 released a full declassified assessment. Are you aware of that assessment? And have  
16 you read that assessment?

17 A That's that one, right?

18 Q Yes.

19 A Yes.

20 Q At any point in this process, were you contacted by anyone in the  
21 intelligence community to assist in these assessments or investigating origins of  
22 COVID-19?

23 A Yes.

24 Q Which agencies?

25 A CIA and FBI.

1 Q What did the contact look like?

2 Mr. Andersen. They contacted you, right?

3 Ms. Rutan. Yes.

4 Mr. Andersen. They reached out via counsel at my institution.

5 BY MR. BENZINE:

6 Q When did you -- what did the interaction look like? Was it a meeting?

7 Phone call? What was it?

8 A In-person meeting with several agents.

9 Q When?

10 A 2021. I don't know. I mean, prior to the report.

11 Q Prior to the -- so was it during the 90-day period? Was it between --

12 A Yes.

13 Q -- May 26th and October?

14 A Yes.

15 Q Okay.

16 And just the CIA and FBI?

17 A There was a local jurisdiction that reached out, too. I think it was local FBI.

18 But once I told them that I've already been talking to the FBI and CIA, I didn't have any

19 further contact. So, yes, I believe that only those two agencies.

20 Q And just one meeting?

21 A No. There has been -- there was one primary meeting with the CIA first

22 and then one meeting with the FBI and then I have had several contacts with a single

23 agent from the FBI -- sorry, from the CIA following that.

24 Q Can you explain those contacts a little bit?

25 A It is a CIA agent interested in questions related to just, you know, the origin

1 of viruses, including SARS-CoV-2. Those contacts have not occurred since probably  
2 2021, maybe early 2022. None of those were productive. I have given them material.  
3 For example, following our proximal origin paper, a whistleblower from China reached  
4 out to me and said that they had data dating back to I believe 2018, and that they had  
5 found SARS-CoV-2 in it.

6 So if that had, in fact, been true, that would, obviously, be very important. I  
7 analyzed that data. There were, in fact, no SARS-CoV-2 in that dataset. It was just  
8 misclassifications based on informatic analyses, but I shared that sequence data, for  
9 example, with the CIA.

10 Q Do you remember where it alleged that -- the whistleblower alleged that  
11 that data was housed? Was it the Wuhan Institute of Virology or was it the Wuhan  
12 CDC?

13 A No, I don't believe that this was specifically the Wuhan Institute of Virology.  
14 I remember it was from China, but I don't actually -- I think it was a company in China but  
15 not that it was specifically linked to the Wuhan Institute of Virology.

16 And, again, this person thought that there was SARS-CoV-2 reads in this dataset  
17 from, I believe, 2018, but it turned out to just be misclassifications. There weren't  
18 actually any reads.

19 Q Did you tell the FBI and the CIA substantially what you told us here today?

20 A Correct. I mean, obviously, I have had less information at the time on  
21 evidence we know today, but, yes, I gave my expert opinion on likely origin scenarios,  
22 how we consider different origin scenario, what the evidence base is, yes.

23 Q Do you know anyone else that has been consulted by anyone in the  
24 intelligence community?

25 A I believe that my proximal origin authors. I know Dr. Garry has stated so

1 publicly, but I believe that most, if not all of them have talked to the intelligence  
2 community but -- and I believe there was a recent conference in Switzerland, a Nitto  
3 meeting or Nitto meeting, a meeting for coronaviruses. I know that the FBI was present  
4 there and had conversations with people about SARS-CoV-2.

5 I don't know whether it's specifically about the origin, but I know there was  
6 conversations there.

7 Q Other than these two direct interactions and then the one kind of  
8 semi-recurring one, do you keep or maintain any other relationship with any component  
9 of the intelligence community today?

10 A I do not, no.

11 Q All right. Thank you.

12 Mr. Benzine. We can go off the record.

13 [Recess.]

1

2 [2:57 p.m.]

3 Mr. Pellegrini. We can go back on the record.

4 Dr. Andersen, I just have one follow-up question. When we discussed the  
5 Jesse Bloom preprint situation and the conference call around that, I just want to confirm,  
6 neither Dr. Fauci, nor Dr. Collins at any point suggested that Dr. Bloom should need to  
7 revise his preprint. Is that right?

8 Dr. Andersen. That is correct, and, in fact, Dr. Fauci went out of his way to state  
9 that if Dr. Bloom chose to do so based on the comments from experts such as myself,  
10 Dr. Fauci did not have any involvement in that. So, no, they did not offer any opinions  
11 on what Dr. Bloom should or should not do.

12 Mr. Pellegrini. Okay. Thank you.

13 We can go off the record.

14 [Discussion off the record.]

15 Mr. Rowley. Dr. Andersen, there have been public allegations that you changed  
16 your opinion about the source of the virus --

17 Mr. Pellegrini. I'm sorry. I just want to clarify, we are not on the record  
18 currently? Is that right?

19 Okay, great.

20 Mr. Benzine. Is it a question addressed to Dr. Andersen or a question addressed  
21 to me?

22 Mr. Rowley. Dr. Andersen.

23 Mr. Benzine. For what purposes?

24 Mr. Rowley. We -- I have a question for him. The ground rules we established,  
25 I thought, at the beginning of this, was that if I had follow-up questions, I could ask

1 follow-up questions. Is there a problem with that?

2 Mr. Benzine. What I interpreted was clarifying questions during the rounds of  
3 questioning, not just a unilateral question.

4 Mr. Rowley. Is there some rule against me asking a question?

5 Mr. Benzine. I mean, the rules are set by the chairman. What's your question?  
6 Is it like --

7 Mr. Rowley. I was about to ask the question.

8 Dr. Andersen, there have been some public allegations that you have changed  
9 your opinion about the source of the virus because of a \$9 million grant. Would you like  
10 to respond to that?

11 Dr. Andersen. Yeah. I'll say those allegations are, of course, false. There's no  
12 connection between, for example, the drafting of proximal origin and the CREID grant  
13 that we received in 2020. That grant was written in June or submitted, applied for, in  
14 June of 2019, was reviewed and scored in November 2019, prior to the pandemic, with  
15 counsel at the NIH, in which they make funding decisions in January 2020, prior to any of  
16 the events leading, for example, to the February 1 conference call.

17 And there is no way in which funding of a grant -- this particular grant, I'm the PI  
18 on that, as we've already discussed, co-PIs, both Dr. Garry and Dr. Sabeti, with  
19 collaborators in West Africa through four different countries. But, of course, there is no  
20 connection between the publications of papers and the award of that grant.

21 It's simply an example of experts in emerging infectious diseases, studying  
22 emerging infectious diseases, get awarded a grant on emerging infectious diseases, and  
23 to continue that work with West Africa.

24 Mr. Rowley. And prior to the award of the grant, have you had any  
25 conversations with Dr. Fauci about the grant?

1           Mr. Andersen. I have not, no.

2           Mr. Rowley. Have you had any conversations with Dr. Collins about the grant?

3           Mr. Andersen. I have not, no.

4           Mr. Benzine. All right.

5           Mr. Rowley. No other questions.

6           Mr. Benzine. For the record to be clear, the committee never accused

7 Dr. Andersen of getting a grant in exchange for the paper.

8           We can go off now.

9           [Whereupon, at 3:02 p.m., the interview was concluded.]



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Certificate of Deponent/Interviewee

I have read the foregoing \_\_\_\_ pages, which contain the correct transcript of the answers made by me to the questions therein recorded.

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Witness Name

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Date