Chairman Rand Paul, M.D.
U.S. SENATE COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS

Transcribed Interview of Dr. Ralph Baric

On April 10, 2026, Dr. Ralph Baric participated in a voluntary transcribed interview with Chairman Rand Paul's staff as part of the Committee's ongoing investigation into the origins of COVID-19 and risky taxpayer-funded life sciences research.

KEY FINDINGS: PART ONE

DARPA Solicited Gain-of-Function Research Proposals Under PREEMPT Program

Dr. Baric testified that the DARPA PREEMPT solicitation – which called on researchers to learn what makes a virus jump between species "down to the nucleotide level" – could be answered only one way: ***"That's a gain-of-function experiment. There's no other way to think about it."*** As for DEFUSE, the proposal he submitted with Peter Daszak of EcoHealth Alliance and Zhengli Shi of the Wuhan Institute of Virology, he confirmed that the step of inserting a furin cleavage site into a viral backbone was his to perform: ***"That part would be done by me."*** The furin cleavage site is the very feature of SARS-CoV-2 that first drew lab-origin scrutiny.

Undisclosed Baric Experiment Undercuts Key Argument in Proximal Origins Paper That COVID Wasn't Engineered

One of the main scientific papers arguing COVID arose naturally, **"The proximal origin of SARS-CoV-2,"** leaned on a simple assumption: if someone had engineered the virus, they would have built it to latch onto human cells as tightly as possible. Because the real virus doesn't grip in that "ideal" way, the paper treated that as a sign no one designed it. But years earlier, Dr. Baric had actually run an experiment and found the assumption was wrong. When a virus grips too tightly, it gets stuck and can't spread as well. So, a knowledgeable designer would deliberately avoid the "ideal" grip the paper assumed they'd use – meaning the very feature the **Proximal Origin paper** called proof of natural origin is something an engineer might choose on purpose. Dr. Baric said he reported the experiment to NIH and destroyed the materials.

On the Secret Feb. 1 Call — Unexplained Presence, and Conflicting Accounts of Whether He Spoke

Dr. Baric confirmed he was on the February 1, 2020, call with Dr. Fauci, Francis Collins, Jeremy Farrar, and the authors of "Proximal Origins" – yet he appears on no invitation list, could not recall who invited him, and said ***"I couldn't find how I knew about the meeting."*** Two participants have confirmed to the Committee they were unaware he was even on the call. Dr. Baric also gave conflicting accounts of whether he spoke at all. He first said he stayed silent to avoid ***"chang[ing] the direction of the conversation"*** – then, asked if he introduced himself, said ***"I think so ... we went around and introduced everybody in the room"*** and that he was ***"surprised that they didn't know I was there."***

Paid U.S. Intelligence Community Biodefense Advisor Sent a Taxpayer-Funded Mouse Model to Wuhan

Dr. Baric – who served for more than a decade as a paid member of the intelligence community's Biological Science Expert Group (BSEG) – confirmed he sent his U.S. taxpayer-funded mouse model to Dr. Shi at WIV. When China later tried to sell that model back to American scientists, Dr. Baric said, ***"What kind of crap is this? This is not ethical behavior."*** He cast the sharing as compelled – ***"I'm required to share ... with people who request it"*** – and added that if Congress objects, "you all should write regulations that prevent that."

Five Years to Disclose EcoHealth's USAID Funding on the 2015 WIV Paper with Dr. Shi

On November 7, 2015, Peter Daszak sent an email marked urgent – "Please acknowledge USAID PREDICT and our NIAID grant in the paper with Ralph Baric" – and Dr. Shi asked Dr. Baric to add it. The acknowledgment was not added until 2020 – five years later. Asked whether the delay was an attempt to conceal the USAID funding, Dr. Baric answered, ***"I don't know why I would have any interest in doing that."*** He acknowledged that only ***"90 percent"*** of the research associated with the 2015 paper was completed before the pause. Then-USAID Administrator Samantha Power testified before Congress in 2022 that the agency had ***"no evidence" it funded – and had "not authorized" – gain-of-function research*** – a claim the five-year delay and the eventual USAID acknowledgment cut against.

NIH Could Not Locate Its Own Gain-of-Function Review Records

During Dr. Baric's February 2020 meeting with Dr. Fauci, NIH officials requested copies of his research records – the documents NIH allegedly reviewed years earlier. By Dr. Baric's account, NIH officials ***"didn't know where the documents were."*** He also testified that the DARPA DEFUSE proposal was not raised in his conversation with Dr. Fauci.

Stenographic Transcript
Before the

COMMITTEE ON
HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS

UNITED STATES SENATE

UNCLASSIFIED
INTERVIEW OF DR. RALPH BARIC,
WILLIAM R. KENAN JR. DISTINGUISHED PROFESSOR IN THE DEPARTMENT OF EPIDEMIOLOGY, AND PROFESSOR IN THE DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY AT THE
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

Friday, April 10, 2026

Washington, D.C.

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UNITED STATES OF AMERICA

COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS

UNCLASSIFIED

INTERVIEW OF DR. RALPH BARIC,

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Room SVC-209

United States Capitol Building

Washington, D.C.

Friday, April 10, 2026

9:00 a.m.

APPEARANCES:

ON BEHALF OF THE WITNESS AND THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL:

CLARK ERVIN, Senior Counsel, Squire Patton Boggs

JAKE GREENBERG, Of Counsel, DLA Piper

DAVID T. LAMBETH III, Associate Vice Chancellor, Chief Governance Officer, Special Counsel, University of North Carolina

ON BEHALF OF HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS, MAJORITY STAFF:

WILLIAM HENDERSON, Majority Staff Director

HARRY KAZENOFF, Assistant Counsel

CHRISTINA SALAZAR, Deputy Staff Director and Chief Counsel

EXHIBITS:

P R O C E E D I N G S

MR. KAZENOFF: Good morning. This is a voluntary, closed-door transcribed interview of Dr. Ralph Baric, being conducted by the Senate Committee on Homeland Security and Governmental Affairs. This interview was requested by Committee Chairman Rand Paul as part of the committee's oversight investigation on government funding of risky research and the origins of the COVID-19 pandemic.

On March 18, 2026, the witness agreed to appear before the committee on April 10, 2026. For the record, during the transcribed interview the committee will be bound solely by Senate and Committee rules. We will adhere to them. Do you understand?

DR. BARIC: I agree, but I don't know what the Senate rules are.

MR. ERVIN: We've reviewed them.

DR. BARIC: I figured you all know, right.

MR. KAZENOFF: You are here voluntarily. Nevertheless, under Title 18 Section 1001 you are required to answer questions from Congress truthfully, including questions posed by congressional staff during this interview. Do you understand?

DR. BARIC: I do.

MR. KAZENOFF: Is there any reason that you would be unable to provide us today with truthful answers to our

questions?

DR. BARIC: Not that I know of, assuming that I remember.

MR. KAZENOFF: We will proceed to make introductions of the office conducting this interview today. Then we will explain how we intend to proceed. My name is Harry Kazenoff. I am the Assistant Counsel. And to my far right is Christina Salazar, Deputy Staff Director and Chief Counsel for the Majority Staff of the Committee. Additionally, we have Mr. William Henderson, Staff Director of the Majority Staff of the Committee.

Additional majority staff are present, but we do not currently intend for them to speak during the duration of this interview, though we reserve the right to amend, as needed. Any new majority staff who ask a question will introduce themselves for the record.

And with that, will the witness please state and spell their name for the record.

DR. BARIC: My name is Ralph Steven Baric. The spelling is R-A-L-P-H S-T-E-V-E-N B-A-R-I-C.

MR. KAZENOFF: Do you have any attorneys representing you, either in a personal capacity or under a limited capacity present with you today?

DR. BARIC: I do.

MR. KAZENOFF: For each counsel, please state and

spell your full name and identify the client you're representing.

MR. ERVIN: I'm Clark Kent Ervin with Squire Patton Boggs, and I'm Counsel to the University for purposes of this interview with Dr. Baric.

MR. LAMBETH: David Lambeth, Counsel for UNC Chapel Hill and Dr. Baric as an employee.

MR. GREENBERG: Jake Greenberg with DLA Piper. I represent the University of North Carolina at Chapel Hill and Dr. Baric.

MR. KAZENOFF: This interview will be conducted in two parts. The first portion of the interview will be conducted in an unclassified setting. Only unclassified information will be discussed during the first portion. We will not intentionally ask a question during the first portion of the interview that we believe could implicate classified information. However, if a question is asked that would require you to disclose classified information in your answer, or if you are genuinely unsure, please state that for the record and we will re-ask the question in the second portion of the interview.

At noon, we will recess and the witness and properly cleared majority staff and witness counsel will relocate to the Office of Senate Security where the second portion of the interview will be conducted in a sensitive

compartmented information facility. Do you have any questions about how we plan to proceed?

DR. BARIC: No.

MR. KAZENOFF: There is a court reporter taking down everything that is said and will make a written record of the interview. Please provide a verbal response. For the record to be clear it is important that only one person speak at a time. Do you understand?

DR. BARIC: I do.

MR. KAZENOFF: Counsel will have an opportunity to review the transcript and provide an errata expeditiously following the interview. We want to make clear that we are only bound by Senate and Committee rules and not any common law privilege, rules of civil procedure, or any equivalent extrinsic doctrines. Do you understand?

DR. BARIC: I do.

MR. KAZENOFF: This interview today is being conducted without prejudice to any future discussions the committee may require, and we reserve the right to request your participation in future interviews or depositions, should we need to. Do you understand?

DR. BARIC: Yes.

MR. KAZENOFF: Finally, we would ask that you not speak about what we discuss in today's interview outside of the room, to help us maintain the integrity of our

investigation. And we also ask that you not remove or make any copies or photographs of any materials or exhibits. Do you understand?

DR. BARIC: My wife is going to insist that she knows what happens in this meeting. I hope that's okay.

MR. KAZENOFF: Do you have any questions before we begin?

DR. BARIC: No.

MR. KAZENOFF: Thank you.

MS. SALAZAR: Well, thank you for being here, and we thank you for being here voluntarily. We appreciate it. I've been working with your counsel and thank you. We're going to conduct this in two parts. We have a lot of questions for you, but I intend for this to be conversational. We're happy you're here. We've obviously been looking at this for a long time. It is 2026. But we haven't had a chance to engage directly, but your team has provided us documents, and we appreciate that. So, you know, I wanted to kind of be up front with you, where I'm coming from, where the Chairman is coming from. I think a lot of people are like, "It's 2026. Why are we still talking about COVID, COVID origins?"

The reason that we asked you here today is because we feel like we don't have all the answers, not specifically from you but generally from our government. The other day

I accidentally went on Twitter, and there was a debate on Twitter again over whether it was a lab leak or not, renewed debate. So this is something that, you know, it's not settled. I don't know if it will ever be settled.

But from our perspective there are still a lot of outstanding questions about taxpayer-funded research. We shut down our economy. We withheld children from going to school. And those may have been necessary responses, may not have been. But in order for us to make changes or assess the situation we have to understand what happened. And that's why we're here, six years later.

So I just wanted to lay that out. We're not accusing anyone of anything. We're genuinely just trying to get to the truth, or at least try to understand it to the best that we can.

DR. BARIC: It's a pleasure to be here.

MS. SALAZAR: Thank you. I wanted to start, obviously, you gave testimony in the House.

DR. BARIC: I did.

MS. SALAZAR: And I wanted to just start -- I know this may be a loaded question, but is there anything from that testimony that you would like to, off the bat, clarify or generally -- and we may talk about that today, but I just wanted to see if there was any portions of that testimony that you wanted to clarify or provide any

statements on.

DR. BARIC: Nothing comes to mind, but if you have questions on that testimony I'll be glad to give you my current thinking.

MS. SALAZAR: Okay. Great. Well, let's start early outbreak. So when was the first you heard of the outbreak?

DR. BARIC: A notice went up on ProMed about a new respiratory infection in Wuhan on December 31st, and I immediately got phone calls from several collaborators who were letting me know about it. I didn't find out it was a coronavirus until about the 4th of January, when a colleague of mine at the University of Virginia asked me to participate in a phone call with some Chinese researchers to try to get them in contact with Gilead to set up trials with remdisivir.

MS. SALAZAR: And you said that was University of Virginia?

DR. BARIC: University of Virginia.

MS. SALAZAR: And who was that?

DR. BARIC: I knew you were going to ask that question. At some point the neuron will fire.

MS. SALAZAR: So you said that was January 4th?

DR. BARIC: Yeah, yeah. It's in the testimony, I think, in the House. Yeah.

MS. SALAZAR: And had you already been working with

Gilead?

DR. BARIC: Oh, we started working with Gilead in 2016 on a work on identifying broad-spectrum, small molecule inhibitors against the coronavirus family.

MS. SALAZAR: Okay. And I'm going to jump around, based on our conversation, so I'm going to go ahead and ask this now.

DR. BARIC: Sure.

MS. SALAZAR: Did you serve as an expert consultant for Gilead in terms of their patent dispute against AMMS?

DR. BARIC: No.

MS. SALAZAR: Oh, you didn't?

DR. BARIC: Not that I'm aware of.

MS. SALAZAR: Okay.

DR. BARIC: Oh, wait, wait. Which patent dispute is this? Is this in Europe?

MS. SALAZAR: Are there multiples? Yes.

DR. BARIC: Yes, okay. Sorry.

MS. SALAZAR: I didn't know there were multiple --

DR. BARIC: I had forgotten. They had asked me to make a statement about that, and I had forgotten about that, but make a statement about that, so I guess two or three years ago. And I haven't heard much about what was going on so I kind of left it behind. But yes, I gave them a written statement.

MS. SALAZAR: I was just wondering if that was the same, you know, the same type of research that you were engaged in on the 4th, or that you were discussing on the 4th. Is that the same?

DR. BARIC: Yes, that's the same. That's the same phone call, yes. That's absolutely true.

MS. SALAZAR: Okay. And so on the 4th you had that call, and then I know that you had a call, I think, with Erik Stemmy on the 7th?

DR. BARIC: Around the 7th. There were a lot of phone calls in the first three weeks of January. But certainly I did talk to him. The exact date, I'd have to look at my notes. I thought it was more around the 11th or 12th, but it could easily be the 7th.

MS. SALAZAR: Was that the first NIH employee that you had spoken to, or had you spoken with others?

DR. BARIC: Somewhere around those dates I also talked to Barney Graham at the VRC, because we'd been working since about 2017 on mRNA-LNP-based vaccines using MERS coronavirus as, in essence, a paradigm model for how to develop an effective vaccine against coronavirus.

MS. SALAZAR: Did you already have a vaccine developed with them, or was it still --

DR. BARIC: We had an mRNA vaccine for MERS coronavirus that had been tested in mice, both young and

old mice, and it was extremely effective. I think that data was immediately incorporated into the discussions, that I was not part of, but discussions at the Federal level, in terms of prioritizing which vaccines might go forward.

So the reason, I think, that we were particularly so excited about that data is that most of the vaccines that I have tested against coronaviruses, epidemic or pandemic, not pandemic, epidemic coronaviruses like the original SARS 2003 strain, or the MERS strain, worked effectively in young animals. But when you took them into aged animals, where the vaccines are less affected by about tenfold, the vaccines would fail. And the beauty about the VRC mRNA vaccine was that the neutralizing titers in the immune responses were as effective in the old animals as the young animals, so they were fully protected. And that was very impressive.

MS. SALAZAR: And so the VRC Moderna vaccine.

DR. BARIC: Yeah. Moderna certainly was engaged. Whether they actually manufactured the vaccine that was put in the animals or not, or whether NIH made that vaccine and put it in, I don't know.

MS. SALAZAR: And your vaccine, what was it called?

DR. BARIC: Oh, the Moderna vaccine?

MS. SALAZAR: No, no, no. Yours, the one that you had

worked with.

DR. BARIC: Oh, we compared it to a killed vaccine. We'd also tested alpha virus-based vaccines, Venezuelan equine encephalitis replicon particles. It was basically an RNA virus where the structural genes have been removed, so it's single hit. It can only infect one set of cells. It delivers the payload gene, in this case the coronavirus antigen. That induces an immune response that is either protective or not, depending on the model system.

The other was killed vaccines. In 2003, the NIH had purchased two, or the Federal Government had purchased two $20 million killed vaccines to test against SARS coronavirus.

MS. SALAZAR: What's a killed vaccine?

DR. BARIC: They took the SARS coronavirus and then they inactivated it with a chemical inactivation, a UV light. So they killed the virus so that all that was left was the antigenic preparation, and that's put in the animal. So killed vaccines are pretty commonly used in humans.

MS. SALAZAR: Okay. And the vaccine, the MERS vaccine, is that the CisVax [sic] vaccine that I saw in one of your grant proposals, was called CisVax?

DR. BARIC: CisVax?

MS. SALAZAR: I think. If you don't know.

DR. BARIC: I've read a lot of proposals. You're going to have to show me the proposal and then I can tell you.

MS. SALAZAR: If not, I was just trying to tie it back to something. Okay. So I have some notes, and I think your call was around the 7th.

DR. BARIC: I believe you, but I just don't recall the exact date.

MS. SALAZAR: Do you recall what you all discussed?

DR. BARIC: Not in any detail. I can probably give you an estimate of what we talked about, was that there was a new coronavirus that was being identified, and it would be logical for the NIH to contact me and talk to me about what it was. Although the 7th would've been a little early. I guess it was around the 7th or 8th that I actually got the sequence of the virus. Before that I'd been verbally told by the Chinese that it was 78 percent identical to the original SARS coronavirus 2003 strain.

MS. SALAZAR: And who told you that?

DR. BARIC: Ben Cao was on the line. It was Fred Hayden. I knew I'd eventually remember Fred's name from University of Virginia. That's going to happen a lot, by the way. And the other person on the call was Peter Horby from England.

MR. ERVIN: Do you mean Georgia?

DR. BARIC: No, not the Georgia guy, no. The reason they called me was that they had worked as sort of an international team to set up clinical trials for respiratory viruses, mostly focused on flu, and China -- flu or small molecule inhibitors. Sorry, I forgot the second part. And so they were very interested in initially talking about using remdisivir in their clinical trials, which they eventually did in January.

MS. SALAZAR: Which you were also involved in.

DR. BARIC: No. My role was to call up Gilead collaborators and say, "The Chinese want to talk to you," and that's what I did.

MS. SALAZAR: Did any of your research lead to --

DR. BARIC: We had a paper that was coming out in Nature Communications on January 10th, and so I called the journal and asked them if it was okay if I could share it with the Chinese and the other people on the call, so we did.

MS. SALAZAR: And so I have a little bit of information that might refresh your recollection. You just tell me if this sounds familiar. So Peter Daszak was also on the call. Does that refresh your --

DR. BARIC: Not with the Chinese.

MS. SALAZAR: Not with the Chinese. With Eric Stemmy.

DR. BARIC: Oh, he may have been. Yes, he may have

been.

MS. SALAZAR: And it sounds like, the notes that I have -- and again, if you don't recall this, just let me know -- it appears that you may have mentioned that you had some confidentiality issue with remdesivir, within Nature Communications.

DR. BARIC: Yeah.

MS. SALAZAR: Okay. And that you were willing to share what you knew with leadership at NIH, but that you couldn't share it. You had to have some kind of assurance that it wouldn't be shared more broadly.

DR. BARIC: I don't recall this, but he may have been wanting a copy of the paper that I just mentioned. I may have sent it to them. I don't see why I wouldn't. The big question would be whether Gilead would have a problem, not that I would have a problem with it.

MS. SALAZAR: So what's the confidentiality agreement when you're --

DR. BARIC: So when the journal tells you the paper is in press, they say you're not allowed to report it until it's published. So to send the paper around to other individuals in the final form could be breaking that confidentiality agreement.

MS. SALAZAR: And so what information did you have from the paper?

DR. BARIC: So the paper did a comparison of the effectiveness of remdisivir against two HIV drugs, lopinavir and another drug, which I'm blanking on. There had been several reports by Chinese researchers that the second drug was effective in treating SARS coronavirus. Personally, again, I'd have to reread the papers. I haven't read them in years. But my recollection is that the papers compared the treatment of this HIV therapy to historic controls. And so they didn't have as many males in the study, in the two comparisons. Males have more severe disease, so it looked like this HIV therapy was effective. It was ritonavir, the other drug.

And so the Chinese were planning on using massive treatment regiments in their population, using this HIV therapy, and the paper clearly shows that that therapy doesn't work.

MS. SALAZAR: They were going to use it on what?

DR. BARIC: Humans.

MS. SALAZAR: But for all coronaviruses? For flu?

DR. BARIC: Their cases of SAR-2, of COVID-19, in January of 2020.

MS. SALAZAR: So they were already publishing a paper.

DR. BARIC: No.

MS. SALAZAR: Okay. I just want to make sure I understand.

DR. BARIC: Let me step back. So historically they published a paper showing that this drug combination might be effective against emerging coronavirus infections, using SARS as their model. We did a head-to-head comparison of remdesivir versus this drug, and had submitted it to Nature Communications for publication. And that was in 2019, and the paper was going to be published on January 10, 2020. On the 7th or so, or on the first call, they wanted me to share that paper with them so that they could evaluate what they were going to do for treating their COVID-19 patients.

MS. SALAZAR: At NIH.

DR. BARIC: No. China. We didn't have any cases on January 7th, 2020, in the U.S.

MS. SALAZAR: I just want to make sure I understand. You received information from the Chinese about the SARS-COVID-2 outbreak.

DR. BARIC: I told you that. I think it was around the 4th, that told me it was a coronavirus related to SARS, that was 78 percent identical.

MS. SALAZAR: Okay.

DR. BARIC: That means basically it has 6,000 nucleotides. So if you think about a tree, SARS coronavirus is on one branch of that tree, and SARS-2 is on a totally different branch of that tree.

MS. SALAZAR: Okay. And so your conversations with

Peter Daszak during that time, when did you start working with Peter Daszak? You had a relationship with him.

DR. BARIC: I got to meet him around 2004. I can't tell you exactly when. I mean, scientific meetings, you run into people all the time. But I would guess it would start around 2014 we ran into a meeting, I think at the NEIDL together, and had some discussions. And I visited his place afterwards. We had common interests, but we didn't effectively start working together until later in 2014, on some of the work on the 2015 paper, that was published in Nature Medicine.

MS. SALAZAR: Okay. Why don't we skip to that.

DR. BARIC: I mean, from my perspective, and just looking at it from a scientific perspective, he made major contributions into identifying emerging infectious disease hotspots around the world. He worked extensively with China on SARS coronavirus in 2003. He's sort of a microbial ecologist, very different field than I do. But we would have mutual interests to talk about emerging viruses.

MS. SALAZAR: And did he have people on the ground over in Wuhan in early 2020?

DR. BARIC: So I was not part of his RO1 grant that went from like 2014 to 2019. So on that grant, as you know, part of that money went to the Wuhan Institute of

Virology. So I guess you could say he had a collaborative group in China, and I would imagine that he had people moving back and forth between the two, the U.S. and China.

MS. SALAZAR: To your knowledge, he didn't an EcoHealth employee or anything like that?

DR. BARIC: You'd have to ask him those questions. I wouldn't know.

MS. SALAZAR: Okay. And then what about Ian Lipkin?

DR. BARIC: Yeah, another good friend from Columbia University. But what's the question?

MS. SALAZAR: So my understanding is that he also worked out of the Wuhan CDC at times.

DR. BARIC: Ian Lipkin, you'd have to look at his CV, but I believe he received a medal from China for his efforts in the original 2003 SARS coronavirus outbreak, helping them bring it under control. So he is also, not really a viral ecologist. He really does virus discovery, very interested in post-responses to viral infections. He's a global leader in really, I guess, the last 15 years, developing new technologies for rapid detection of unknown pathogens in the environment.

MS. SALAZAR: Are you aware of him working out of the Wuhan CDC?

DR. BARIC: He told me he'd worked extensively with people in China during the 20- -- I didn't ask him details

about whether it was with Wuhan Institute of Virology or not. Again, he would be the person you'd need to ask that of.

MS. SALAZAR: And then going back real quick to the RO1 grant. You weren't an official collaborator, or PI, co-PI, until later on. But you did provide a letter of support --

DR. BARIC: Yes.

MS. SALAZAR: -- for the initial grant in 2014. Is that right?

DR. BARIC: Well, I may have. It wouldn't surprise me if I did. If he asked me, I would've, yes.

MS. SALAZAR: Okay. And then did you provide any mouse models or anything like that prior to your involvement formally later on?

DR. BARIC: To Peter?

MS. SALAZAR: To Peter or to, with --

DR. BARIC: Okay. Around 2013 or 2014, Zhengli Shi identified two new sarbecoviruses called SHC014 and WIV1. She was able to culture WIV1 in cell culture, and they published a paper in Nature on that. And we met at a meeting and we had some discussions. Ultimately, she provided me with the sequences, and we used that, of the spike, going at the spike like a protein. And so we build chimeric viruses.

They also, when the paper was finally being written, they had developed what are called pseudotype viruses. These are, in essence, single-hit replicon viruses that are pseudotyped with the spike like a protein, of different coronaviruses. And they showed that WIV1 could infect and use human H2 receptors. But they also showed that SHC014 could not. So when she provided us with those reagents and we recovered viruses, we showed that SHC014, in fact, could use that human receptors for entry. And because they also provided their SHC014 pseudotype data in the paper and provided the virus sequences for this, they were included on the manuscript, and I think their grant was cited. So that's how that worked.

MS. SALAZAR: And is that the 2015 paper?

DR. BARIC: That's the 2015 paper, yeah. Did you all read that? I'm just wondering, if you read my grants you must be almost numb.

MS. SALAZAR: I'm not a scientist. But I am familiar with it. So let's turn to that paper. So that was a topic of, and I'm sure you've read the FOIAs about you since, a topic of great discussion. Early in 2020, February 2020, it seemed like all of a sudden that paper was sent around among several people. I think Fauci sent it out on February 1st to a number of people within the NIH.

DR. BARIC: I wouldn't know when he did that, but I

believe you.

MS. SALAZAR: Were you ever asked about that paper by anyone?

DR. BARIC: Yes. On the 13th of February, I believe, 13th or 14th -- again, exact day is going to be difficult for me to recollect without notes in front of me -- but on the 13th or 14th I was up in D.C. for a progress report meeting on a grant and also giving a talk at some meeting. So we scheduled a meeting for about an hour with his leadership team, and I met him either at his office or at one of the NIH buildings for the extramural program.

MS. SALAZAR: Okay. So that meeting was the 13th or 14th?

DR. BARIC: 13th or 14th, yes.

MS. SALAZAR: It's not the 11th?

DR. BARIC: It might be the 11th. I don't think it's the 11th.

MS. SALAZAR: Yeah. That's another topic that we wanted to discuss, because I think there's been some confusion just in our documents of when the meeting actually occurred. I think it's been on some calendars for the 11th.

DR. BARIC: I know those emails have been FOIA'd multiple times, and it says exactly when I was supposed to meet them and where. So I would guess that they're in the

packet that we sent.

MR. LAMBETH: I'd be surprised if you didn't have them. If you don't, we can certainly get them for you.

MS. SALAZAR: So you were here, physically, in the country on the 11th.

DR. BARIC: Yeah. As far as I know.

MS. SALAZAR: I feel like you would probably remember that. In early 2020, I guess from January to February to that meeting, were you in the United States the entire time?

DR. BARIC: Yes, to the best of my recollection.

MS. SALAZAR: If you weren't, I feel like you would've remembered, right?

DR. BARIC: I would think so. But you have to realize what January and February were like for me. I had constant calls going on. And so it was a blur. It really was a blur.

MS. SALAZAR: One of the calendar invites that we have says that the purpose of the discussion, for you coming in, was to discuss basic research that is gain-of-function, that will further understanding of coronaviruses and corona vaccine development, and two, to address the slowness of the U.S. government P3CO process. Does that sound like the conversation that you had?

DR. BARIC: The first part, absolutely. I don't

recall much in the discussion of the slowness of the P3CO process. But if it says it in the email then at some point they may have wanted to discuss that. I don't know. Was that something that I said?

MS. SALAZAR: No, it wasn't. But in the agenda items that we've seen from other officials, that's the agenda that was on there. But from your House testimony it sounded like that wasn't necessarily what was discussed.

DR. BARIC: I don't recall that part being in the House, so I think the House testimony is actually accurate.

MS. SALAZAR: So can you let us know what you all talked about and who was present?

DR. BARIC: Well, Fauci was present for about 5 to 10 minutes max. He got called away for a phone call in a SCIF, and so he left pretty early in the meeting. There was some basic discussion about the new virus. Ultimately, they got to, I think, what they really wanted to talk about was gain-of-function related experiments, or I think it should be potential gain-of-function related experiments, that were associated with this 2015 and 2016 paper. I was a little surprised that they didn't seem to have the paperwork that was involved in my presentation on why I thought this might be more of a loss-of-function than a gain-of-function phenotype. And so then I think a day or so later I sent them all those documents.

MS. SALAZAR: So they just didn't have them?

DR. BARIC: I don't know. They seemed surprised to me.

MS. SALAZAR: Surprised about --

DR. BARIC: They seemed uncertain, not surprised. "Uncertain" would be the better word, about the status of these documents, which surprised me.

MS. SALAZAR: So that paper was in 2015. It was NIH-funded research.

DR. BARIC: If I were to guess, institutional memory, retired, and they didn't know where the documents were, would be my guess.

MS. SALAZAR: Is that frequent at NIH?

DR. BARIC: It's frequent everywhere in the world. Institutional memory is key.

MS. SALAZAR: I would expect, as a government entity that funds a lot of IT modernization efforts and systems for agencies, I'm a little shocked that they don't have a way to pull up taxpayer-funded applications.

DR. BARIC: Well, it wouldn't be the application. It would be a specialized series of documents associated with P3CO review. Again, this would have been very early on, too, so the formalized structure for that review wasn't, I think, finalized until '16 or '17, I think, with the NSABB stuff.

MS. SALAZAR: But there was a structure.

DR. BARIC: There certainly was a structure. They reviewed it, responded, and then asked for responses from me, and then I gave those responses.

MS. SALAZAR: And could you tell us a little bit about, at the time, what that process was like, in terms of the P3CO process?

DR. BARIC: So in, was it, October 2014, the Obama administration put out the pause. The pause effectively was set up two ways. One way was that if a grant was submitted that had the potential for gain-of-function research it would be reviewed before they funded it. And the second class was if you were already doing P3, or research that might fall under the category, you had the option to either pause it voluntarily or continue it. And in the case of SHC014-WIV work, we paused it voluntarily. The third category was waivers. And so the NIH approved three groups, to my knowledge, to continue to develop a MERS coronavirus mouse model for countermeasured studies.

MS. SALAZAR: And you were one of them?

DR. BARIC: And we were one of them.

MS. SALAZAR: Do you know who the others were?

DR. BARIC: I think one group was out of the University of Utah. I can't remember the fellow's name.

MS. SALAZAR: Were they individual exemptions, or was

it across the board?

DR. BARIC: I don't know about their exemptions. Mine was an individualized exemption. I don't know what theirs were. I didn't receive their paperwork.

MS. SALAZAR: And what was the process for seeking an exemption at that time?

DR. BARIC: I don't remember that, as well. I can't remember the details of that, as well. All I can tell you is that the exemption was approved right before Christmas of 2014.

MS. SALAZAR: Okay. And so back to the mid-February meeting, were they just like, did we review it and we were okay with it?

DR. BARIC: No. They knew that they had approved it. Again, I would've expected them to have the documents in the meeting, right. That would have made sense. They didn't have the documents, and I don't know why.

MS. SALAZAR: And they didn't seem to be aware of documents?

DR. BARIC: No. They were aware that there were documents that existed. They didn't seem to have a copy of them, and that surprised me. So I immediately said, "I'll be glad to send you the copies," and the university did, so we did.

MS. SALAZAR: Good thing you guys had a copy.

DR. BARIC: Well, yeah, really.

MS. SALAZAR: I mean, was the conversation, were they worried? What was the tone of it? I mean, we see -- and again, these have been FOIA'd -- there's a spur of sending out that paper, within hours, to multiple different people. Now, you know, a lot of the emails don't have commentary, but it's on February 1st. We know what else happened on February 1st.

DR. BARIC: Well, I think you need to put it in context. So in China there was a massive social media barrage of speculation that the 2015 virus was the cause of the pandemic. NIH had to become aware of that at some point, and they would immediately then be worried whether everything was done properly. They had to be. And it's five years back, so again, these are things that are not going to be at the top of anyone's mind. But at the same time, they're going to want to know was everything done properly. So yeah, I think naturally that they would be concerned, naturally they'd want to know, is that virus the cause of the pandemic or not? I mean, if they didn't ask those kinds of question, they would be really irresponsible.

MS. SALAZAR: That's kind of irresponsible that they didn't have the paperwork too.

DR. BARIC: Well --

MS. SALAZAR: That's just my commentary.

DR. BARIC: I would guess that most large organizations will take a while to find the paperwork.

MS. SALAZAR: So they asked you to provide the paperwork. I mean, did you alert them that this was an accusation that it could have been the 2015 virus? You know, where did that come from?

DR. BARIC: Initially it came from the Chinese, social media speculation about what was the cause of the pandemic. The question certainly came up, and I can tell you the same thing that I told them, as far as this virus differs from the SARS coronavirus-2 strain by over 6,000 nucleotides, which means that it's incredibly different. So there's no way it could ever be associated with the emergence of this virus. It's just not possible. Same thing with the WIV1 virus. That's been validated by I don't know how many independent investigators around the globe. When they compare the sequence they say it is not the cause of the pandemic.

MS. SALAZAR: Okay. So what else was discussed in the meeting?

DR. BARIC: We discussed the P3CO documents. I sort of told them why we felt that the data didn't demonstrate a gain-of-function phenotype, and that was because there was no change or increased replication of the virus in human

cells. There was no increased pathogenesis in mice. Alternatively, there was a loss of disease severity in mice, and so that's a loss-of-function phenotype.

MS. SALAZAR: And who made those decisions from NIH?

DR. BARIC: Well, again, my job is to send the document to the NIH. It goes into a black box.

MS. SALAZAR: Who did you send it to?

DR. BARIC: Oh, that will also be on my email chain. I don't remember her name. But you should have that also in the email documents.

MS. SALAZAR: So you sent all of these documents to NIH after your meeting.

DR. BARIC: Yeah. I don't think the university did. I thought it was through me. Do you remember?

MR. LAMBETH: In February 2020, yes, I believe you sent them to NIH. That's my recollection.

DR. BARIC: That would be my recollection.

MS. SALAZAR: Do you recall who you sent it to, because I don't think I've seen that.

MR. LAMBETH: I will try to find it.

DR. BARIC: I have no problem telling you the name. I just can't remember it off the top of my head.

MS. SALAZAR: So who else was there in the meeting? Fauci left after a couple of minutes.

DR. BARIC: He left after a few minutes. I think it

was his second in command that was doing most of the questioning, and I can't remember his name. Again, the email should have a list of all the people that were going to be there.

MS. SALAZAR: Was it Hugh Auchincloss?

DR. BARIC: Yes. Thank you. Yes. Yes.

MS. SALAZAR: And so was Dr. Fauci there when -- I mean, did he ask you anything specific? Was he part of the conversation at that time? Or did he just say hello and leave?

DR. BARIC: No, no. I think he participated in terms of introducing, asking the question about the new virus and my thoughts about it, I guess, in terms of what I knew at the time, which wasn't a whole lot. But I knew some things.

MS. SALAZAR: Okay. Do you know who Matt Freeman is?

DR. BARIC: Yeah, I trained him, yeah.

MS. SALAZAR: I'm going to read you -- again, this has been FOIA'd -- he sent, in a Slack message, and I'm just going to read it out loud. "I talked to Ralph for a long time last night. He sounds beat. His ACE2 mice are breeding up but not ready for anyone to have. He said he sat in Fauci's office talking about the outbreak," and I'm going to ask you, is it chimeras?

DR. BARIC: Chimeras.

MS. SALAZAR: Chimeras. I figured it out. "Clearly he is in other kinds of meetings than we are invited to. I joked about his link to WIV but he wasn't very amused. He said that Shi's paper was not approved by the Chinese government and that she may be arrested for it. That's not a good look for anyone. So we just go ahead and keep our head down and get this virus working." So does this reflect what the conversation was?

DR. BARIC: It's a Slack message that people write. It's not to me. Yeah. Certainly the first part, for sure. Ask specific parts of the question.

MS. SALAZAR: So why would --

DR. BARIC: Sorry. I can't remember.

MS. SALAZAR: -- Dr. Shi be arrested, because she didn't have the paper approved by the Chinese government?

DR. BARIC: Again, I don't know for the fact why he said that. However, I'm not 100 percent sure that she ever got approval from the Chinese government to send me the sequences. That would be my guess. That would be my guess.

MS. SALAZAR: So is that something that they have to formally approve?

DR. BARIC: I believe so, yes. And any other attempts to get things out of China. So, for example, a guy named Hongkui Deng made an ACE2 mouse model back in 2005, and I

met him. He was at Peking University, and said he'd be glad to share his mice with us. And so we started to do the paperwork, but the Chinese government never allowed it to go through, so the whole thing crashed. So from what I hear from other researchers, it's not an uncommon problem.

MS. SALAZAR: But that paper had been published.

DR. BARIC: That's correct.

MS. SALAZAR: For years. Five years.

DR. BARIC: Yes. Well, no. Yes. Well, I'm talking in the range of around 2006 or 2007. I'm giving you an example of what sort of barriers exist to get samples out of China.

MS. SALAZAR: But the paper that we're discussing, it was 2015?

DR. BARIC: It's 2015. That's correct.

MS. SALAZAR: And so I guess it's just the Chinese government, I hear they monitor people a lot. They wouldn't have seen that Shi, I mean, Shi was published. It was public.

DR. BARIC: How would I know? How would I know the answer to that question?

MS. SALAZAR: Did you have discussions with her in that time frame about the paper?

DR. BARIC: We certainly shared the preprint of the paper for her to comment on. And it said clearly in the

paper that she sent us the sequences.

MS. SALAZAR: No. So when there were these allegations in 2020, early 2020, that that virus could have started the pandemic, did she reach out to you, or did you reach out to her about those accusations?

DR. BARIC: I have not reviewed my emails from her back in 2020 or so, in a year or so.

MS. SALAZAR: So you communicate with her often, or did you?

DR. BARIC: No. Not really. I mean, in reality, oftentimes my relationship with her is described as a long-term collaborative effort. In fact, we've only published three papers together. One was the 2015 paper, one was 2017 or '18 or so, when we were both working with another collaborator, and I didn't realize she was collaborating with him as well until I saw a draft of the paper.

MS. SALAZAR: Who was it?

DR. BARIC: That was Fang Li.

MS. SALAZAR: Fang Li. Okay.

DR. BARIC: And then there was a 2020 or so paper that we published together using the mice that we sent her.

MS. SALAZAR: Okay. You sent her those mice when?

DR. BARIC: It took a couple of years to get all that paperwork through. It was around 2017 or '18.

MS. SALAZAR: Okay. And did she pay you for them?

Was it a contract?

DR. BARIC: No. The agreement was the first paper she writes we'd just be included on it.

MS. SALAZAR: Okay. Is that how it works?

DR. BARIC: That's how I did it. I don't think there's any standardized process. Sometimes we share reagents and we don't ask anything. But if they're going to use a mouse model, which would be a central point for their paper and for countermeasure development, I thought at least in the beginning, at least one paper we should be an author on.

MS. SALAZAR: So is that like what in-kind support is, or a gift? I've seen that referenced a couple of times, where there's a gift of something, and it's acknowledged in a paper.

DR. BARIC: I don't know if it's a gift or not. I mean, NIH regulations say that if you publish in scientific journals you need to share reagents with people who ask for them. And for many journals they also require that you share reagents with people who ask for them. She's also been a collaborator who, you know, shared sequences with us before they were published, so it seemed like an appropriate thing to do.

MS. SALAZAR: What kind of sequences did she share before?

DR. BARIC: The spike genes of SHC014 and WIV1.

MS. SALAZAR: Okay. And she sent it to you via --

DR. BARIC: It was electronic.

MS. SALAZAR: Via email?

DR. BARIC: Yeah, I think so, yeah.

MS. SALAZAR: Okay. And is it that she just attaches it as an attachment.

DR. BARIC: Just a series of nucleotides, 4,000 nucleotides in length.

MS. SALAZAR: Was that the only sequence she sent you or is that a frequent thing?

DR. BARIC: Later on she sent some plasma DNA with the spike gene on them. It says that in the paper, in the acknowledgements section.

MS. SALAZAR: And that's non-electronic?

DR. BARIC: Huh?

MS. SALAZAR: That's not sent electronically?

DR. BARIC: No, no. That's actually a piece of DNA on a filter paper.

MS. SALAZAR: On a filter. So is that just mailed?

DR. BARIC: It was mailed.

MS. SALAZAR: Okay. It doesn't have to be kept at a certain temperature. It's just regular mail.

DR. BARIC: No. I mean, by the time she sent it to us we'd already synthesized the genes and had them and started

to make viruses by that time, so we didn't ever actually use the plasma.

MS. SALAZAR: And so do you have to report this kind of stuff to NIH if they're funding portions of a grant, or the whole grant? Because we're aware of --

DR. BARIC: This is before or after? Certainly the NIH knows because a paper, a progress report will have the existence of the viruses that are there. And then it's published, and NIH has access to the paper, as well. So they get this information, yes.

MS. SALAZAR: But it's not something that you --

DR. BARIC: I don't believe there's a formalized process for DNA on a filter paper. If there was a pathogen, for example, then there are intricate processes involved.

MS. SALAZAR: What about for a mouse model?

DR. BARIC: Intricate.

MS. SALAZAR: So do you have to get it approved?

DR. BARIC: You have to get all kinds of approval from China, and you have to get approval to ship -- well, the person who did that in my lab at the time did all that paperwork. But you had to have export approvals to send the stuff, and so it took -- all I remember is it took about a year and a half to get all the paperwork done to ship the mice.

MS. SALAZAR: But the Federal Government was aware, by export. I mean, it's not like they were unaware that this was being shipped. You had to fill out export control documents.

DR. BARIC: I think that's correct, yes.

MS. SALAZAR: Through like the Commerce Department.

DR. BARIC: I do not know the details.

MR. LAMBETH: Yes.

DR. BARIC: Thank you.

MS. SALAZAR: So, I mean, I've seen comments where people seemed shocked that the mice ended up there. From your standpoint, is that valid?

DR. BARIC: No.

MS. SALAZAR: Okay. Can you elaborate?

DR. BARIC: Well again, the whole purpose of open science is that reproducibility is key. And so if you publish an important paper, people oftentimes ask you for those reagents to either do extensive additional studies or to actually repeat the studies. And so reproducibility is key, and to do that, that's why the NIH wants you to share reagents with people that ask for things.

MS. SALAZAR: But the NIH was also concerned when they later learned that potentially these mice were being sold or -- I mean, was that not a concern later on, in 2020?

DR. BARIC: I don't know if NIH was concerned. I know

that Ralph Baric was pissed off.

MS. SALAZAR: Can you tell me a little bit about that?

DR. BARIC: Well, come on. You share an important reagent for countermeasure development to the Chinese that's important early on in their response to a pandemic that's sweeping the world, and then they try to sell it back to U.S. scientists? What kind of crap is this? This is not ethical behavior.

MS. SALAZAR: How did you find out?

DR. BARIC: Matt Freeman sent me an email with a little thing saying, "Hey, the Chinese are selling your mice."

MS. SALAZAR: And did you confront --

DR. BARIC: We did. I let the university know and we confronted them, yes, and they killed the mice, from what they told us.

MS. SALAZAR: How many?

DR. BARIC: I have no idea how many mice they killed.

MS. SALAZAR: But, I mean, do you know who was doing it?

DR. BARIC: Again, in the email list, the name of the company is listed.

MR. LAMBETH: I think it was like Genentech, some form of Genentech, something like that.

DR. BARIC: Yeah, I don't remember the name.

MS. SALAZAR: But they got it from WIV --

DR. BARIC: Yes.

MS. SALAZAR: -- and they then were -- did they pay her?

DR. BARIC: I have no idea.

MS. SALAZAR: Did you ever ask her?

DR. BARIC: All I told her is that those mice needed to be destroyed.

MS. SALAZAR: And did she confirm that they were?

DR. BARIC: They confirmed with the university.

MR. LAMBETH: We certainly have emails confirming. Of course, that's all we have that they were all --

MS. SALAZAR: Yeah. How do you confirm that, you know, mice were --

DR. BARIC: Yeah, how do you confirm that?

MS. SALAZAR: Okay. I mean, so there was generally a sense of trust prior?

DR. BARIC: Well, the whole purpose, again, of open science is to ensure integrity of the process. And I think that was not a validation of the integrity. That was inappropriate behavior by Chinese scientists.

MS. SALAZAR: And I think, you know, I think part of the problem is that a lot of these things are funded with taxpayer dollars, so people get upset when they find out that that's, right, some of the development of the model is

funded with taxpayer funds, U.S. taxpayer funds?

DR. BARIC: Well, that would have been a decade earlier, but yeah, sure.

MS. SALAZAR: Yes. And then --

DR. BARIC: Those mice were also shared with other U.S. investigators, as well, so it's not like this is -- it's not a fair assessment to say that because you gave it to the Chinese you didn't appropriately use U.S. taxpayer funds. In reality, the regulatory framework of the United States government is that I'm required to share.

MS. SALAZAR: With the Chinese?

DR. BARIC: With people who request it. Now, if you don't want that to happen then you all should write regulations that prevent that.

MS. SALAZAR: We have a bill called the Risky Research Act, but I don't know if that addresses that directly. Can I have the --

DR. BARIC: I don't think it does.

MS. SALAZAR: If you have suggestions, I mean, we would love suggestions on the bill and also what kind of --

DR. BARIC: I'd be glad to give you my suggestions on the bill.

MS. SALAZAR: Okay. Can we go back to the 2015 paper? There was a correction issue, right --

DR. BARIC: Yes.

MS. SALAZAR: -- in 2020. I forget.

DR. BARIC: Yeah, I think it was -- can you remind me what the correction issue was?

MS. SALAZAR: Right. So there was a USAID grant.

DR. BARIC: Added to it. Wasn't it something like that?

MS. SALAZAR: Right. Yeah. And it was in 2020. So they added it.

DR. BARIC: They added it that late?

MS. SALAZAR: I believe so. Do you have the document?

MR. KAZENOFF: Yes, let me find it.

MS. SALAZAR: We have so much stuff it's hard to find it. I mean, do you recall that being a conversation in 2020?

DR. BARIC: I recall that we added a grant at a later date to it. I thought it was earlier than that, but I believe what you tell me.

MS. SALAZAR: Okay. And what is the process for adding? Is it something that happens frequently? Is it something that happens --

DR. BARIC: No, it's usually an author will say, "I forgot to include a grant on the acknowledgment line. Can you put that grant onto the acknowledgement line."

MS. SALAZAR: Is it something that typically happens five years later?

DR. BARIC: Not typically, but it does happen.
MS. SALAZAR: Okay. And who makes that request?
DR. BARIC: I mean, in terms of who requests it with the journal?
MS. SALAZAR: The journal or --
DR. BARIC: That would be me.
MS. SALAZAR: Do you have to get anything approved with the NIH or anything?
DR. BARIC: No.
MS. SALAZAR: Okay. So did you make the request?
DR. BARIC: Sure.
MS. SALAZAR: And do you know why you made it at that time?
DR. BARIC: The other author wanted me to add the grant to the line, and they said they'd forgotten it. I had to reason to disbelieve them.
MS. SALAZAR: And was it Zhengli Shi?
DR. BARIC: I think -- this is the AID grant?
MS. SALAZAR: Yes.
DR. BARIC: I would guess it's Peter Daszak.
MS. SALAZAR: Okay. And so we have a document that shows that Peter Daszak asked for that, for Zhengli Shi to acknowledge that grant back in 2015.
DR. BARIC: And she didn't.
MS. SALAZAR: Right.

DR. BARIC: Okay. Was I on that email?

MS. SALAZAR: You were, and I don't like talking about an email unless you have it in front of you, so we'll get you that. But are you aware of that?

DR. BARIC: Well, if I was on the email then I was aware of it.

MS. SALAZAR: Okay. Do you recall it?

DR. BARIC: No.

MS. SALAZAR: Okay.

DR. BARIC: I recall that there was an issue about a grant that they wanted added.

MS. SALAZAR: Okay.

DR. BARIC: And that was in 2015. So that's what I must have recalled.

MS. SALAZAR: Okay. But it wasn't added. Was there any reason why you would not have added it at that time?

DR. BARIC: Not that I know of.

MS. SALAZAR: Okay. So here's the email. Your response is dated November 7, 2015, and it's back to Dr. Shi.

[Exhibit No. 1 shown.]

MS. SALAZAR: And you asked her, "Was work performed under these grants?" So did she not answer? Because it looks like the initial email was from Peter Daszak that same day and it says, "Urgent. Please acknowledge USAID

PREDICT and our NIAID grant in the paper with Ralph Baric." And she does ask you to do that.

DR. BARIC: Well, if she asked me to do it, then I would've done that, yes.

MS. SALAZAR: So is there a reason why that correction wasn't issued until 2020?

DR. BARIC: Not that I know of.

MS. SALAZAR: Okay. Was it an attempt conceal the USAID funding?

DR. BARIC: I don't know why I would have any interest in doing that.

MS. SALAZAR: Okay. Was that the only USAID -- I mean, part of this is it's hard for us to understand, too, because it seems like there are different funding streams that all contribute, for very different work, and, you know, I don't know if you're familiar with my boss's questions to Samantha Power on this, but he asked her if USAID funding had ever -- let's see, I have it here. I don't want to misstate it -- I mean, he said, "Does USAID fund gain-of-function research? We have no evidence that USAID has funded gain-of-function research, and we certainly have not authorized gain-of-function research." Then Senator Paul talked about the paper, and her response was that she just said, unequivocally, that USAID has not authorized gain-of-function research. Do you agree with

her statement?

DR. BARIC: I don't know what was in this grant. My guess is that USAID paid for surveillance work that picked up samples that ultimately were used with, you know, in terms of sequence discovery and that sort of thing that we used, and they wanted to acknowledge the fact that the discovery portion of the grant, that that contributed to the discovery portion of the grant. But again, this is not my grant, and it's not in the RO1 that they had with Daszak and Shi were not my grant, so I don't know the intricacies of what was in each and why they felt it was appropriate.

MS. SALAZAR: In the paper there is a section that makes it clear that the work was done prior to the pause. Is that right?

DR. BARIC: Prior to what?

MS. SALAZAR: Prior to the pause.

DR. BARIC: Yes, that's correct.

MS. SALAZAR: Why was that statement included? Was it because there was a concern that it could be perceived that there was gain-of-function work occurring after the pause?

DR. BARIC: I don't recall the exact reason why we put that statement in. It may have been because the journal wanted it written in that it was started prior to the pause. It's technically accurate and honest, and I think that's the most important thing for the reason why the

statement is in the paper.

MS. SALAZAR: Was all the work done before the pause, or was it that it was --

DR. BARIC: It was 90 percent done before the pause. We had resurrected the virus, I think, in, I don't know, February, March, April of 2014, and had done a lot of work on them.

MS. SALAZAR: And so was it NIH's position that anything that was created prior to the pause, you could do any type of work after the pause and it wouldn't be considered gain-of-function?

DR. BARIC: No. That's not correct at all. They reviewed it. Again, you're asking me to describe NIH policy that occurred behind a closed door. So the details of the discussion about what's gain-of-function or what's not is dependent on NIH. My role is to provide them with the information of what I think. They don't have to accept that at all.

MS. SALAZAR: Have they ever not?

DR. BARIC: Yes.

MS. SALAZAR: In what cases?

DR. BARIC: I think a grant with Fang Li, they said there were a couple of things they didn't want us to work on. They suggested we find different viruses in all of the experimental plan, which we did.

MS. SALAZAR: And what grant was that? Was it a coronavirus grant?

DR. BARIC: Definitely.

MS. SALAZAR: Okay.

DR. BARIC: And Fang Li would've been on it. So there are two Fang Li grants, one that I led that he was co-PI on and one that he led that I was co-PI on. We can provide you with those numbers, but I can't tell you what they are off the top of my head.

MS. SALAZAR: And what's your relationship with Fang Li?

DR. BARIC: He's a friend.

MS. SALAZAR: A friend. Okay. And you've all worked together so you all have grants together?

DR. BARIC: We have a grant that is pending at NIH right now, 2 percentile, that is paused right now. We're waiting to see, from what I understand, of whether or not there's a potential GOF experiment in it or not.

MS. SALAZAR: A potential what?

DR. BARIC: Gain-of-function experiment.

MS. SALAZAR: Oh, okay. So it's under the gain-of-function pause.

DR. BARIC: Well, as told to me, as told to Fang Li, actually, there is one experiment that they think needs to be reviewed by the new committee that is formed after the

Trump administration formed that committee.

MS. SALAZAR: Which hasn't been formed.

DR. BARIC: That's correct.

MS. SALAZAR: So it's indefinitely paused.

DR. BARIC: It is in purgatory, yes.

MS. SALAZAR: Okay. And what is the work, specifically?

DR. BARIC: Most of the work was on mouse hepatitis virus. One of the aims included some merbecoviruses, specifically two merbecoviruses called MERS-422 and MjHKU4. And there's some mouse data in there that they want to have reviewed.

MS. SALAZAR: Is there a process for --

DR. BARIC: Is there a process? I have no idea. All I know is that the Trump administration has formed a committee to come up with final policy recommendations for what is gain-of-function and what's not. And so in the grant, because there was no structure except the existing 2016 structure, we said depending on however those reviews work, we will work within the context of the new structure, because we have no idea of what they're going to say is GOF or not.

MS. SALAZAR: Which was kind of what happened before, right, that it was an NIH decision, or was there more interaction previously?

DR. BARIC: You need to put that sentence in context. I'm not sure what you're referring to.

MS. SALAZAR: Well, you said that you didn't know how the P3 -- or I can't remember -- the process worked prior, when it was an NIH decision, and you just sent them what you believed, and then they would make the ultimate decision.

DR. BARIC: Well, you would realize it would be a conflict of interest if I participated in such a discussion. We would have a very different conversation here, and the conversation would be do you think it's right that I would be in the committee meeting advocating for my own research. And I don't think that's right.

MS. SALAZAR: Well, and I think, you know, we are aware you weren't in the committee meeting, but there were discussions back and forth, and there were --

DR. BARIC: No. I sent them a document. They reviewed it. They asked for clarification, and then I responded to that. And then they approved it in April of 2015.

MS. SALAZAR: Did you ever write the limitations of the work?

DR. BARIC: Describe the limitation you're referring to.

MS. SALAZAR: We'll get that document. But did you

ever, basically what logs you had to report and immediately stop work?

DR. BARIC: Say that again.

MS. SALAZAR: Did NIH ever adopt your language that you had provided to them on stopped work and at what point you would have to?

DR. BARIC: Oh, are you talking about parameters that we might use to determine whether we would pause the research in place --

MS. SALAZAR: Right.

DR. BARIC: -- notify NIH, and then yes, have a discussion about what to do, including destruction of viruses. I don't know if they implemented that as a policy or not. They might well have, because one of my documents would have been one of the first ones that they reviewed. Against, that's a decision that NIH has to come up with, not me.

MS. SALAZAR: And I think they did. But, you know, I think -- and that's a question that we have is, is it appropriate or not. It sounds like NIH didn't even keep documents of those interactions.

DR. BARIC: I think that's probably a misstatement on your part.

MS. SALAZAR: Okay.

DR. BARIC: They may not be aware they had the

documents at the time. But if I gave the impression that they didn't have the documents, that's probably not correct.

MS. SALAZAR: Okay.

DR. BARIC: There seemed to be the upper administration didn't know where the documents were.

MS. SALAZAR: Okay. Have they tried to find them?

DR. BARIC: How would I know? I would hope they would.

MS. SALAZAR: So can we go back to early January. Let's go back to February, February 1st. Were you on the Proximal Origins call?

DR. BARIC: You mean the call that NIH had on the origins?

MS. SALAZAR: The one that the authors of Proximal Origins were on the initial call, February 1st.

DR. BARIC: I was on a call around February 1st.

MS. SALAZAR: Not February 3rd.

DR. BARIC: Again, the people that were on the call that I was on, and maybe that's the best way to say it, was Jeremy Farrar, Fauci, the three evolutionary biologists --

MS. SALAZAR: Who?

DR. BARIC: Kristian Andersen, Bob Garry, and the guy from Australia.

MS. SALAZAR: Eddie Holmes?

DR. BARIC: Eddie Holmes. Thank you. You notice I have a problem with names.

MS. SALAZAR: I mean, this sounds like the Proximal Origins call.

DR. BARIC: I don't know if it was the Proximal Origins call. The purpose of the call was to discuss -- oh, the other person was Ron Fouchier, as well, and Ian Lipkin may have been on the call, as well. Whichever that call was, I was on, okay.

MS. SALAZAR: Did you speak?

DR. BARIC: No.

MS. SALAZAR: Who invited you to that call?

DR. BARIC: I don't recall.

MS. SALAZAR: You're not on any of the invitation lists, and it's a question. And you don't recall?

DR. BARIC: I don't recall. I actually looked at all my records and I can't find the reason why I was on the call.

MS. SALAZAR: Do you recall what was discussed on the call?

DR. BARIC: Yeah. The purpose of the call was to talk about origins and potential origins. Most of the discussion was led by the evolutionary biologists, who were actually probably the most key, important people in the room. And what they said was that they thought it was

extremely unlikely that there was any evidence of genetic engineering of the virus, but that they had trouble distinguishing between natural evolutionary processes in cell culture versus animals. And that became sort of the consensus, that it evolved by natural evolutionary processes.

MS. SALAZAR: And then what else did they discuss. Natural origin, that it evolved naturally?

DR. BARIC: Well, that's natural origin process that either occurs through nature or natural evolutionary processes that might occur in cell cultures. They're really hard to tell apart.

MS. SALAZAR: I'm not a scientist, so natural origin, to me genetically engineered or accidental release? And correct me.

DR. BARIC: So accidental release would have fallen under the category of natural evolutionary processes in cell culture.

MS. SALAZAR: That could have been adapted in the lab.

DR. BARIC: That's correct.

MS. SALAZAR: And so that was the focus of the call. But it sounds like you didn't speak.

DR. BARIC: That's correct.

MS. SALAZAR: It's surprising because you're an expert in this field.

DR. BARIC: Not really.

MS. SALAZAR: Oh, you're not? Okay.

DR. BARIC: So before that I had made a presentation to a group that talked about three possibilities for the origin of the virus. If I spoke, I could change the direction of the conversation, and I wanted to hear what the evolutionary biologists had to say.

MS. SALAZAR: What was the presentation that you're referring to?

DR. BARIC: I think this falls under the category that is later today, although you have made the document public.

MS. SALAZAR: It was provided to us, and, you know, I'll go ahead and my team is going to --

DR. BARIC: I have no problem talking about the paper, but it sounded like it fell under the category of this was this afternoon.

MS. SALAZAR: Well, I mean, this is something that I would like to put on the record, because --

MR. ERVIN: Let's see what the question is.

MS. SALAZAR: Yeah. I think that's fair. BSEG is not classified. We've had this conversation with -- and this isn't on you, but, you know, people like to talk about it like it's classified. It's not classified.

DR. BARIC: Can I ask a point of clarification?

MS. SALAZAR: Mm-hmm.

DR. BARIC: So certainly when BSEG started it was not classified. But I recall being told it was classified sometime later.

MS. SALAZAR: I'm not going to use the individual's name, but I'll just show you the name. This is an individual who is on that committee, who is, that is his law firm website that publicly says that he is a member. So that's one of many examples.

DR. BARIC: Yeah, he was certainly a member early on, and early on in BSEG they actually encouraged people to put their membership on that committee. And then later there was discussions that said that they wanted us to strip all that off of our material.

MR. ERVIN: And just to note, this is a March 2015 doc.

MS. SALAZAR: Right.

DR. BARIC: [redacted] also stepped down from that committee at some point. I don't remember the exact date, but he stepped down from it, yeah.

MS. SALAZAR: Also we've confirmed --

DR. BARIC: I'm sorry I just mentioned his name, if you'd redact that.

MS. SALAZAR: We will redact that. I don't want there to be any confusion. We've looked at NARA documents that are publicly available online that mention the ODNI

Biological Science Expert Group. And this isn't on you, but there's this secrecy about this group that has caused a lot of confusion and frustration probably among you, as well. But this isn't classified, and I am fine to hold back our questions, generally, on that until later, even ones that aren't classified, just so everyone feels comfortable. But we will be going through a classification review of that transcript, and it's not classified, so I just want to flag that. But I think we have made it public, sir. Are you at least comfortable talking about the presentation here, the presentation that was given? It was public.

MR. ERVIN: I think it would be better to discuss it in the classified session, since there's going to be a classified session anyway.

MS. SALAZAR: Okay.

MR. ERVIN: We have 4 1/2 hours --

MS. SALAZAR: Can I just ask, that presentation, did you present three different potential origin options?

DR. BARIC: Yes.

MS. SALAZAR: And what were they?

DR. BARIC: Natural origins, laboratory escape, and genetic engineering.

MS. SALAZAR: Okay. And then was that your position -- when you presented it, was it these are all of the

possible options? Was it these are the likely options? This is one I think is more likely than not?

DR. BARIC: Oh --

MS. SALAZAR: At that time did you have a position?

DR. BARIC: Yes. I put it in that order. Most likely natural origin, I couldn't rule out laboratory escape. Genetic engineering was unlikely, but it needed to be reviewed by evolutionary biologists.

MS. SALAZAR: Okay. And so you didn't speak on the February 1st call because of that presentation.

DR. BARIC: That's correct.

MS. SALAZAR: Okay. Were you there in your capacity? Were you on the February 1st call in your capacity as a member of the other group?

DR. BARIC: No.

MS. SALAZAR: I'm just trying to understand.

DR. BARIC: I wish I could understand too.

MS. SALAZAR: I mean, I find it very odd that there's no record, because we have records that have been FOIA'd. I mean, every other person there's some kind of record of them being invited.

DR. BARIC: That's absolutely true. I looked at all my calendars. I looked at all of my emails for the House Subcommittee meeting, and I couldn't find how I knew about the meeting.

MS. SALAZAR: You were on it.

DR. BARIC: I was definitely on it. With the names I mentioned, I was definitely on that meeting. No question.

MS. SALAZAR: And you reviewed your calendar to make sure there were no other calls?

DR. BARIC: I did.

MS. SALAZAR: Okay. So you were on the February 1st call. You don't know how you were invited.

DR. BARIC: If the people that I mentioned were on that February 1st call, then I was there, yes.

MS. SALAZAR: Okay. The February 3rd call.

DR. BARIC: Okay.

MS. SALAZAR: That's the National Academies.

DR. BARIC: That's the National Academies, yes.

MR. ERVIN: So I think you're saying that you're unclear whether the call you're talking about was on February 1st or 3rd, right?

DR. BARIC: No. So there was definitely a call on February 1st, right. At the House meeting I was unsure whether they were talking about that meeting or whether they were talking about the WHO meeting. Subsequent to that, I did see other documents from other people who, in some of this whole process of review, that the February 1st call was there, and people like Jeremy Farrar and others were there, and I know I was on that call.

MS. SALAZAR: So I'm going to read a couple of other folks from that call. Kristian Andersen, you said.

DR. BARIC: Mm-hmm.

MS. SALAZAR: Bob Garry.

DR. BARIC: Mm-hmm.

MS. SALAZAR: Christian Drosten.

DR. BARIC: I don't recall him, but he would be a logical person.

MS. SALAZAR: Do you know who he is?

DR. BARIC: Yeah.

MS. SALAZAR: Tony Fauci.

DR. BARIC: Yep.

MS. SALAZAR: Ron Fouchier.

DR. BARIC: Yep.

MS. SALAZAR: Eddie Holmes.

DR. BARIC: Yep.

MS. SALAZAR: Marion -- I'm bad at pronouncing names -- Koopmans?

DR. BARIC: She'd be logical.

MS. SALAZAR: Okay.

DR. BARIC: I know her well.

MS. SALAZAR: Patrick Vallance.

DR. BARIC: No, I wouldn't have remembered him.

MS. SALAZAR: Okay. Anyone else?

DR. BARIC: I thought something I read said Ian Lipkin

was also on that call, so I thought he was on it, as well. He may not have been.

MS. SALAZAR: Francis Collins?

DR. BARIC: Yeah, I think he was there.

MS. SALAZAR: Okay. And you don't know how it was organized.

DR. BARIC: No.

MS. SALAZAR: Do you have a relationship with Jeremy Farrar?

DR. BARIC: No.

MS. SALAZAR: Have you ever spoken with him prior to the call?

DR. BARIC: If I did it was a one-off event or an email or something, but it's not somebody I would normally communicate with.

MS. SALAZAR: Okay. So on the February 3rd call, which is the National Academies call, you did speak in that call. Correct?

DR. BARIC: Mm-hmm.

MS. SALAZAR: And you had, you know, confrontations -- I think that's how Kristian Andersen --

DR. BARIC: Is this the Kristian Andersen conference?

MS. SALAZAR: Yeah, I don't want to misspeak, but I think that's generally how he described it, and someone will hand me a paper so I can correct the record if I'm

wrong on exactly how he framed it. He framed it as, let's just say, a negative interaction. And again, this is him recalling it after the fact. He did not know you were on the call.

DR. BARIC: Which call are you talking about?

MS. SALAZAR: The February 1st call.

DR. BARIC: He may not have, yeah.

MS. SALAZAR: And he, I think the way he phrased it is he felt like you were using all of the information to then attack him on the February 3rd call.

DR. BARIC: See, I don't ever recall attacking him on the February 3rd call.

MS. SALAZAR: Okay. What was your --

DR. BARIC: I may have pointed something out that he wasn't aware of in coronaviruses, but that's not attacking somebody. That's just providing scientific information.

MS. SALAZAR: What was it?

DR. BARIC: I don't recall 100 percent. You know, again, did he mention? It would be helpful to me if you'd say what it was.

MS. SALAZAR: Yeah. "I should mention that Ralph Baric pretty much attacked me on the call with NASM, essentially calling anything related to potential lab escape ludicrous, crackpot theories. I wonder if he, himself, is worried about this too."

DR. BARIC: Yeah. Personally, I think he's got the wrong person on the call.

MS. SALAZAR: What do you mean?

DR. BARIC: He's attributed that comment to me rather than other people.

MS. SALAZAR: On the February 3rd call?

DR. BARIC: Yeah.

MS. SALAZAR: Who was it?

DR. BARIC: I would say it's more likely to be Peter Daszak.

MS. SALAZAR: Okay. So was that something that Peter Daszak expressed on the call?

DR. BARIC: I recall that people challenged the idea that it could be a lab leak.

MS. SALAZAR: But at that point you were not -- I think you've rated it as more likely natural, but you weren't -- what would you rate it?

DR. BARIC: I never ruled out lab leak possibility. I don't see how anyone can. And the reason that is, is that they've published papers saying that they did their work at BSL-2. Biological Safety Level 2 is less stringent than Biological Safety Level 3. So there are many more laboratory-acquired infections at BSL-2 than at BSL-3. And so if you're working with viruses than use human receptors and growing human cells, and you're doing it at BSL-2, you

cannot ever conclusively say that there was not a laboratory leak.

MS. SALAZAR: So you think that he was referring to Peter Daszak, so when he's saying, "I wonder if he, himself, is worried about this too."

DR. BARIC: I have absolutely no concerns about, no hesitation to tell you that I was not involved in the creation of this virus in any way. I'm 100 percent certain.

MS. SALAZAR: So that February 3rd call, what was the purpose of it?

DR. BARIC: I think the NIH had asked the National Academy to get together a group to put together a document about the COVID-19 virus.

MS. SALAZAR: Were you a member of the National Academies at that point?

DR. BARIC: Two thousand --

MS. SALAZAR: -- '21, I think.

DR. BARIC: It would've been 2020. I think I became a National Academy member in '21.

MS. SALAZAR: April of 2021, I think.

DR. BARIC: I think you know me better than I do.

MS. SALAZAR: We did prepare.

[Laughter.]

MS. SALAZAR: So how does that work with the National

Academies? So you can be an inducted member --

DR. BARIC: Sure.

MS. SALAZAR: -- but you can also participate in National Academy work.

DR. BARIC: It's not uncommon for both the National Academy of Sciences and National Academy of Medicine to ask experts to participate in developing documents.

MS. SALAZAR: So what's the difference between being an inducted member versus being an expert that's asked --

DR. BARIC: Well, an inducted member has to go through the review process by formal members and then voted on by the entire Academy about whether they should be included in that honorary group or not.

MS. SALAZAR: And what does that mean? Are there privileges that are --

DR. BARIC: The process is, as described to me when I first became a member, very esoteric and difficult to understand. But each section in the National Academy will open up a -- begin the process of thinking about new members to induct into the National Academy for their section. And members will nominate individuals. Those individuals will be presented to that section, in terms of a five-minute review of what they did, why it's significant, and where science would be should they not have existed. So you're looking for people who made

significant contributions to science.

Then they do straw polls to down-select the most heavily supported individuals. Those are then taken to a larger committee and presented to the entire Academy from all the different sections. That group then ultimately makes the final list for voting, and then they do voting the beginning of April. Like the voting will probably end in the next few days, if it hasn't already ended for this next year's nominees that are being inducted. And then they're announced probably sometime within the next week or two, depending on the Academy. That's the process.

MS. SALAZAR: And so your understanding is that was convened by NIH?

DR. BARIC: No. You're confusing induction into the National Academy of Sciences with sponsored research that the National Academy does for Federal institutions. So the NIH wanted the National Academy to form a group that would review the COVID outbreak. That group will include National Academy members as well as individuals who are not National Academy member but knowledgeable experts in the field.

MS. SALAZAR: I guess my question is, why was NIH convening this group? Because the same members, right, Dr. Fauci, Francis Collins were in other groups.

DR. BARIC: I think, again, you need to talk to the

National Institute of Health, because they're the ones who arranged for this group to be formed through the National Academy and the process involved. Typically, the group that is asking the National Academy to respond to a request from an outside group, people from that outside group will explain on the first day of the meeting what the topic is and why they're interested in it, and that sort of thing.

MS. SALAZAR: Was it just NIH, or were there other agencies that were involved in calling this meeting?

DR. BARIC: I wouldn't have paid attention to that.

MS. SALAZAR: Were you familiar with the other people that were attending the meeting?

DR. BARIC: Some of the people, for sure.

MS. SALAZAR: Let's see. Diane Griffith?

DR. BARIC: I know her well.

MS. SALAZAR: Okay. How long have you known her?

DR. BARIC: Twenty years, until she passed away recently.

MS. SALAZAR: Tom Inglesby?

DR. BARIC: Yes.

MS. SALAZAR: How do you know him?

DR. BARIC: He's a member of the National Academy, journal editor.

MS. SALAZAR: Stanley Perlman?

DR. BARIC: Good friend for 30 years.

MS. SALAZAR: Kathy Brinsfield from ODNI?

DR. BARIC: Less. Not somebody that I would recognize on the street.

MS. SALAZAR: Why was ODNI on that call?

DR. BARIC: I have no idea.

MS. SALAZAR: Did they announce themselves?

DR. BARIC: I have no recollection of that.

MS. SALAZAR: And then Ian Watson from OSTP?

DR. BARIC: I know him, yes.

MS. SALAZAR: And then some National Academy members. Do you have any reason to believe that there were individuals from other agencies that were involved but not maybe overtly listed?

DR. BARIC: I was surprised that the ODNI member was there. So if an ODNI member was there, there may have been more members from other intelligence groups there, as well, but they wouldn't have risen to my level of attention.

MS. SALAZAR: Is that common for the National Academies?

DR. BARIC: I've only been on a few committees. I don't recall that being common.

MS. SALAZAR: Okay.

DR. BARIC: I can't say for certain. I mean, National Academy does a lot of work with the Federal Government, so they could do much more sensitive research with different

members of the intelligence community and different groups. I just am not knowledgeable enough to know the answer to that question.

MS. SALAZAR: And were you ever involved in any National Academies work that involved the intelligence community?

DR. BARIC: No. That's the first time I realized that I recognize them, because they were in that email, they were there. Now, whether they participated in any calls beyond the first one is whole nother question. You'd have to look at downstream emails.

MS. SALAZAR: And then I missed a couple that I'm seeing right now. Robert Bull?

DR. BARIC: Who?

MS. SALAZAR: Robert Bull, FBI.

DR. BARIC: I don't think I know him, but that gets on this other topic area where everybody used first names.

MS. SALAZAR: Robert Kadlec, Bob Kadlec?

DR. BARIC: Yeah.

MS. SALAZAR: And how do you know Bob Kadlec?

DR. BARIC: Senator Burr formed a group to look at origins, and Bob was leading that, and I participated in a phone call with him, responding to Senator Burr's request to answer or give comments on his review of origins.

MS. SALAZAR: It was a HELP Committee report from a

few years ago, I think?

DR. BARIC: It may have been, yeah.

MS. SALAZAR: And was it like a group call?

DR. BARIC: He had a group of people there. Some of the legal team was here on that call, as well. It was a Zoom call.

MS. SALAZAR: Who else?

DR. BARIC: Senator Burr was on the call.

MS. SALAZAR: Other experts, or was it just you?

DR. BARIC: I think it was me, yeah.

MS. SALAZAR: Did you provide written feedback? Was it just verbal?

MR. LAMBETH: We may have also had other UNC officials on that call that have some expertise. I don't recall if they were on that.

DR. BARIC: I don't think they were on that.

MS. SALAZAR: You had probably met Senator Burr before. He was a Senator from your state.

DR. BARIC: I don't think I had met him before, no.

MS. SALAZAR: But did you know Dr. Kadlec before?

DR. BARIC: I may have run into Bob in my other life.

MS. SALAZAR: What do you mean?

DR. BARIC: In the things we're going to talk about this afternoon.

MS. SALAZAR: Okay. So you knew Bob Kadlec. Okay.

Again, did anyone ever come to you and ask you, after this third call, whether or not you were on the Proximal Origins, the February 1st call?

DR. BARIC: Ever?

MS. SALAZAR: Yes.

DR. BARIC: Certainly the House Committee asked, and that's when I realized that I might be confused about which meetings I was on.

MS. SALAZAR: But you are confident you were on the February 1st call.

DR. BARIC: Well, I recognize most of the names on the call, and I know what they talked about, so I was on that call.

MS. SALAZAR: And did you communicate with anyone else that was on that call following the call, about the call, like Ron Fouchier?

DR. BARIC: No, I don't recall that. I know that Kristian Andersen sent me an email later, to get together to talk about something, but I don't think it ever occurred. I like Kristian Andersen.

MS. SALAZAR: Do you know him well?

DR. BARIC: Not that well, but we met at meetings, and I enjoyed talking with him. I think he's a good scientist.

MS. SALAZAR: There's some that believe that you may have been a reviewer of Proximal Origins.

DR. BARIC: That's not true.

MS. SALAZAR: Okay. You were not a reviewer of Proximal Origins.

DR. BARIC: One hundred percent certain.

MS. SALAZAR: Do you know anyone who was?

DR. BARIC: No.

MS. SALAZAR: Would you tell me if you did? Was Ron Fouchier a reviewer, to your knowledge?

DR. BARIC: The reason I'm hesitating is not because I know anyone who reviewed it. The reason I'm hesitating is I was thinking about the confidentiality agreements that journals ask to reviewers about not making their -- you know, they're anonymous reviewers, and they're supposed to remain anonymous. And I was thinking about, well, if I did know them, would it be under the confidentiality agreement that the journal had done.

MS. SALAZAR: But that wouldn't apply --

DR. BARIC: That actually doesn't apply here, no. So that's what I was thinking about. Sorry. You sent me down a rabbit hole. But no, I do not know any reviewer for Proximal Origins.

MS. SALAZAR: And you are not aware of Ron Fouchier being a reviewer.

DR. BARIC: No. He'd be a logical person, I think, yeah.

MS. SALAZAR: Have you ever seen the reviewer comments?

DR. BARIC: No, I haven't.

MS. SALAZAR: I'm not going to share them with you.

DR. BARIC: I'd love to look at them. I can give you my comments.

MS. SALAZAR: Yeah, no. Good one, though. Okay. But the question, because I think some have referred to you as "Deep Throat."

DR. BARIC: I've heard that rumor.

MS. SALAZAR: You have? Are you "Deep Throat"?

DR. BARIC: [Laughs.] No.

MS. SALAZAR: Was it you who sent the anonymous email to Jon Cohen?

DR. BARIC: Jon Cohen asked me that, too, and I said no.

MS. SALAZAR: Okay. Because you were on the call, which it seems like the perception of the folks from Proximal Origins is that whoever sent that email must have heard the deliberation on that call in order to have written that email.

DR. BARIC: That review?

MS. SALAZAR: No. Now I'm talking about the email to Jon Cohen. I switched.

DR. BARIC: Am I on that email?

MS. SALAZAR: The anonymous email to Jon Cohen.

DR. BARIC: Oh. Could I see that?

MS. SALAZAR: Yep. There's a Proton address, too. You can confirm whether or not that's your Proton address.

DR. BARIC: I don't have a Proton address.

[Pause.]

DR. BARIC: Did Tony Fauci have a private call with the three evolutionary biologists before the meeting on the 1st?

MS. SALAZAR: So Eddie Holmes, Kristian Andersen, and --

DR. BARIC: Bob Garry.

MS. SALAZAR: Was Bob Garry on that call on the 31st?

MR. KAZENOFF: On the 31st --

MS. SALAZAR: So yeah, I believe there was a call on the 31st, and that was Eddie Holmes, the Aussies reaching out with Kristian Andersen, to let Dr. Fauci know that he thought that, or they were concerned that it was engineered.

DR. BARIC: You know, being on that call, that was not a decision of that group that it was engineered.

MS. SALAZAR: Did they discuss it?

DR. BARIC: Yes. The main problem that the evolutionary biologists were running into was about that time they only had 8 to 15 full-length genomes of the virus

sequenced, and they had no other sequences of related viruses. There was a rumor that a pangolin virus existed with 100 percent identity, or close to 100 percent identity to SARS-2. That turned out not to be true, as the pangolin, called the pangolin GD strain, which was about 90 percent identical, I believe, is the virus they were talking about. It has a receptor binding domain that is almost identical, nearly identical to SARS-2, but it does have a couple point mutations in it. And the reason that's important is that that meant that there were natural isolates in nature that had that sequence, which means it's not engineered.

MS. SALAZAR: Okay.

DR. BARIC: It was later then found that the BANAL strains on the Cambodian-Thailand-Chinese border --

MS. SALAZAR: This is --

DR. BARIC: BANAL-52 and BANAL-1-something or another, also had receptor binding domains that were virtually identical to SARS-2. So there's two bad viruses and pangolin virus within the clade, within that branch of SARS-2 that had identical receptor binding domains, which means that it's not engineered.

MS. SALAZAR: Would your opinion change if you knew that they WIV was conducting work on pangolin viruses around 2019, 2018?

DR. BARIC: It would depend on what strain they had. It would depend on what strain they had.

MS. SALAZAR: Is that conversation that you've had with anyone?

DR. BARIC: Let's take that into the afternoon.

MS. SALAZAR: Would that change your opinion?

DR. BARIC: It would depend on what data was present. Certainly the pangolin strains were identified, and I think the first paper that was published was in September of 2019, by non-WIV researchers.

MS. SALAZAR: And who was that?

DR. BARIC: I --

MS. SALAZAR: What organization?

DR. BARIC: I don't know. The authors were from Chinese groups. We could find the paper, but that was the first report. In fact, the whole genesis around the pangolin strains, these pangolin strains, is confusing because the group that published first had one sequence. And then, if I understand it correctly, those sequences and samples were picked up, I believe, by WIV researchers, or another group, and they published a completely different set of sequences. So one paper is in a very infrequently read journal, and then the other was in Nature.

MS. SALAZAR: What's the other journal?

DR. BARIC: Again, I can't remember. So there's an

issue about -- it's not clear why they found two different virus sequences in the same samples.

MS. SALAZAR: Okay.

DR. BARIC: I did actually make a molecular clone of a pangolin GD strain, and we published it --

MS. SALAZAR: Can I have the document back? I think we showed you the part that is relevant to our discussion. You look too interested over there.

[Laughter.]

DR. BARIC: Are we peeking?

MS. SALAZAR: Yep, go ahead.

MR. HENDERSON: Just a clarification. On this email that you just reviewed, did you write this?

DR. BARIC: I told you, that's, what did they call it, "Deep Throat."

MS. SALAZAR: Did you write this?

DR. BARIC: No, I did not write it.

MR. HENDERSON: Okay. It wasn't clear.

DR. BARIC: Let me be clear. One hundred percent certain I did not write that email.

MR. HENDERSON: And had you seen it before it was just showed to you?

DR. BARIC: No. Jon Cohen actually asked me whether I had written it, and I also told him, no, I did not write it.

MR. HENDERSON: That was the question.

DR. BARIC: What I can't remember is whether he showed me the email or not.

MR. HENDERSON: Okay. That was the question you'd answered, is that you said you told him no. You didn't tell us no. So I just wanted to get that on the record. Thank you.

DR. BARIC: Yeah. Let me be 100 percent clear. No, although I like the name.

MS. SALAZAR: So you said that you -- can we get the notes from that call, because I seem to recall that some of the folks on that call were 50/50. It was not clear that they were leaning more towards --

DR. BARIC: There was an hour discussion, and certainly in part of that discussion is going to be discussion about whether or not it could be engineered. And the answer is, from a technical point of view, yes, it could be engineered. There are some key things that you have to have. The first and most important is a full-length molecular clone of that virus.

MS. SALAZAR: Both ends?

DR. BARIC: What?

MS. SALAZAR: Is it --

DR. BARIC: You have to have a full-length molecular clone of SARS coronavirus. If you have that and it doesn't

have a furin cleavage site, you could drop in a cleavage site, using that clone. So technically, it could be engineered, and it should be discussed.

MS. SALAZAR: Do you have any reason to believe that they don't have that capability?

DR. BARIC: There is no evidence that they had a molecular clone of that virus. They only had one molecular clone. They weren't very good at reverse genetics. And the molecular clone they had WIV1. And WIV1, they would take spike genes of other sarbecos and drop it into that clone because they had a difficult time making more clones. The problem with coronavirus is part of the genome sequence is really toxic in bacteria, so you have to come up with ways around that.

And so best example of this is a virus emerged in southern China called SADS coronavirus, 2016 or so. It caused 100 percent or 99 percent mortality in piglets. It's related to a virus called HKU2. They were trying to make a molecular clone for that virus for three or four years. We started around 2019, made a clone, published it before them.

MS. SALAZAR: And why were they trying to do that?

DR. BARIC: I mean, they had a virus that caused 99 percent mortality in piglets that could destroy their swine industry, so obviously it was important for them to develop

the reagents that they could use to develop countermeasures and vaccinate swine.

The other issue, just to go on on that, you know, it's hard to imagine a better reservoir species for emerging virus than a swine. And the swine population, they have billions of swine in China, so you have this massive reservoir. And you have a virus that drops into those, and that virus can use, although not very well, it can use the human receptor for entry.

MS. SALAZAR: So I've seen SADS come up a lot when people are talking about pan-corona vaccines.

DR. BARIC: I wouldn't include it in a pan-corona vaccine because --

MS. SALAZAR: Am I mistaking it with PEDV?

DR. BARIC: It's a lower probability virus. Okay. So for a pan-coronavirus vaccine you have pan-coronavirus beta coronavirus vaccines and alpha coronavirus vaccines. So this is an alpha coronavirus. So the only thing that people have really worked on extensively are pan-beta coronavirus vaccines, focused heavily on SARS coronavirus and MERS coronavirus. So I don't imagine that that would be included in any pan-beta coronavirus vaccine.

Now, for pan-alpha coronavirus vaccines, the classic human coronaviruses are 229E and LN63. SADS would be something that you might want to consider. But the fact of

the matter is that those viruses, in general, in Clade 1, in alpha-coronavirus group have been much less well studied. And so the threat potential and where that exists really is a guess.

MS. SALAZAR: And then where does PEDV -- what is PEDV?

DR. BARIC: What?

MS. SALAZAR: P-E-D-V.

DR. BARIC: Oh, porcine epidemic diarrhea virus.

MS. SALAZAR: What is that?

DR. BARIC: That's a virus that evolved, that emerged in Europe, I don't remember exactly what year. It moved across Europe and got into Asia and Southeast Asia around 2008 or so. It caused massive pandemics in China, and then eventually it arrived here in the United States in 2012.

MS. SALAZAR: Did you do any work on that?

DR. BARIC: We worked with Linda Saif's group to develop a molecular clone for porcine epidemic diarrhea virus.

MS. SALAZAR: And did WIV, that you know of, have that, or were they working on that?

DR. BARIC: I would be surprised if they weren't working on it. I don't know if they published on it or not. Linda Saif has swine models, gnotobiotic swine models that she can study viral pathogenesis and vaccine

performance. Really her area of expertise. I was glad. I like her a lot. We helped her students develop a molecular clone and then we didn't work on it anymore.

MS. SALAZAR: Okay. I'm going to show you another email here that you're on. It's dated October 24, 2018. It's from Fang Li to you.

[Exhibit No. 2 shown.]

MS. SALAZAR: And it says, "It was nice chatting with you in Wuhan. My student" -- and I don't know how to pronounce this individuals name --

DR. BARIC: 2018. Okay. What's this about?

MS. SALAZAR: -- "has emailed you the information about PEDV. My postdoc, C-H-U-M-I-N-G, will email you the information about the MERS-like CoV-422 soon." Do you recall that email?

DR. BARIC: Not really, but Fang Li does structural biology and develops biochemical assays, to look at spike receptor interactions. So I would guess that both of those are around that topic.

MS. SALAZAR: Okay. Did you work on either of those two?

DR. BARIC: We had published a paper on MERS 422. I don't think Fang is an author.

MS. SALAZAR: Okay. So do you know what his postdoc was emailing you about?

DR. BARIC: I'd have to see the postdoc's email.

MS. SALAZAR: Are you familiar with those two individuals?

DR. BARIC: With Fang? Absolutely.

MS. SALAZAR: No, with the postdoc and his student.

DR. BARIC: Chuming, yes. Qibin, if he emailed me, I'm familiar with his name.

MS. SALAZAR: Okay. Did you ever receive any of these viruses from --

DR. BARIC: No. No one in the United States had MERS 422. We synthetically resurrected it in my lab.

MS. SALAZAR: And so who had it outside of the United States?

DR. BARIC: I don't believe anyone had it. I would have to review the Chinese papers again that were published. The Chinese published a couple of papers on different MERS strains. I don't think they used 422, and I don't think they made molecular clones for either of them.

MS. SALAZAR: Okay. And did you ever receive any biological samples by hand from any of Fang Li or Fang Li's postdocs?

DR. BARIC: Fang Li sent me reagents in the mail. We had collaborative grants together, so certainly we collaborated and exchanged samples on occasion, yeah.

MS. SALAZAR: Reagents of what?

DR. BARIC: Well, the grants were formulated in such a way that he would do biochemical studies and then we would do some more validation studies in the context of live viruses.

MS. SALAZAR: Are you aware of any association between Fang Li and Yusen Zhou, Z-H-O-U?

DR. BARIC: Again, you should ask Fang Li those questions.

MS. SALAZAR: Are you aware of Dr. Zhou?

DR. BARIC: You'd have to give me more context to what they do.

MS. SALAZAR: The doctor that's married to Lanying Du that passed away, that was the earliest coronavirus vaccine in China from AMMS?

DR. BARIC: Oh, the person that committed suicide? I did not know him. I may have met him, but I did not know him.

MS. SALAZAR: Did you know his wife?

DR. BARIC: No. Again, I may have met him, so the one time I was in Wuhan. I had dinner with a lot of people. Some of them used American names. Some of them didn't. I can't remember everybody's name.

MS. SALAZAR: And when did you go to Wuhan?

DR. BARIC: I think it was 2018.

MS. SALAZAR: Okay. And when you were in Wuhan, you

were there for a conference?

DR. BARIC: Yes.

MS. SALAZAR: And did you go initially to Asia for the Wuhan conference, or did you go from another conference?

DR. BARIC: There was a conference in, if I remember correctly, it was a conference in Hong Kong, and I went from Hong Kong to Wuhan for a second conference.

MS. SALAZAR: And then did you go with any other Americans?

DR. BARIC: I mean, there's a picture of the people at that conference, and there are several Americans there. Do you want me to mention their names?

MS. SALAZAR: Yes.

DR. BARIC: That's too bad. Jim Crowe. He's not going to be happy with me. He was there, as well. He's a Vanderbilt researcher who works on monoclonals. I think Peter Daszak was there, as well. Those are the two that immediately come to mind.

MS. SALAZAR: Fang Li?

DR. BARIC: I can't remember if Fang was there or not.

MS. SALAZAR: I think he was, because in this email he said, "It was nice chatting with you in Wuhan."

DR. BARIC: There we go.

MS. SALAZAR: And so Peter Daszak was there, and we have some emails that suggest that Zhengli Shi was also in

the group.

DR. BARIC: She was definitely there.

MS. SALAZAR: Did you all discuss -- and now we'll move to DEFUSE -- did you all discuss DEFUSE while you were there?

DR. BARIC: This is the DARPA proposal?

MS. SALAZAR: Yes.

DR. BARIC: Oh, I don't know if we discussed the DARPA proposal. Is that, by that time it had been rejected, or was it under review?

MS. SALAZAR: It had been rejected.

DR. BARIC: Yeah. I'm sure that it came up in terms of it being rejected, but, you know, it happens on grants.

MS. SALAZAR: So the DARPA DEFUSE proposal has obviously been the subject of a lot of discussion. I know that for a lot of people it is hard to understand how it did not come up earlier in the conversations. So I'm going to ask, when did you raise, for the first time, with the United States government officials that you were interacting with -- I mean, you interacted with Erik Stemmy on the 7th, Fauci on February 11, 2020. Did DARPA DEFUSE come up in that meeting?

DR. BARIC: No.

MS. SALAZAR: Is there a reason why?

DR. BARIC: I hadn't remembered the grant. That

shocks you, doesn't it?

MS. SALAZAR: It does shock me.

DR. BARIC: Do you know how many grants I write?

MS. SALAZAR: I don't.

DR. BARIC: A lot.

MS. SALAZAR: Okay. But this grant, I mean, especially with all the conversations of the furin cleavage site, I mean, nothing about that grant.

DR. BARIC: Yeah. So from my perspective, let's talk about the grant for a minute. Let's make sure we put it in perspective. So DARPA was interested in addressing a problem about the warfighter. And I think there's, what, about 250,000 troops and their families across the globe. Many of those soldiers go into wild areas of the world where they come in contact with pathogens. So they can then infect members of their group, they can take the virus back to the base, and they can bring it back to the United States. So this is a real threat, potential threat to the public of the United States, because of where they go.

So DARPA came up with a proposal that they wanted to know, down to the nucleotide level, what regulates a virus jumping between species and then develop countermeasures for it. Now, if you want to know, down to the nucleotide level, what drives a cross-species jumping event, you are talking gain-of-function experiments.

MS. SALAZAR: So is that what DARPA was -- I mean --
DR. BARIC: Yes.
MS. SALAZAR: -- they explicitly --
DR. BARIC: The part one was they wanted to know what the threat potential was in certain wild areas of the world, so you did surveillance.
MS. SALAZAR: So are you talking about what the DARPA PREEMPT program --
DR. BARIC: Yes.
MS. SALAZAR: -- that they specifically said "we want you to do gain-of-function research."
DR. BARIC: They said they want you to know, down to the nucleotide level what drives cross-species jumping events.
MS. SALAZAR: And that's gain-of-function research.
DR. BARIC: That's a gain-of-function experiment. There's no other way to think about it. You can do loss-of-function, but it doesn't prove that it's jumping across there. All you say is you knock that mutation out, it loses the ability. Gain-of-function proves it, and it's causal. So in my opinion, when I read that, that's exactly what they're asking for. They mention in there that this could involve gain-of-function research in their announcement. So part one of that grant was to do surveillance in China, looking in that case for viruses.

As part of the thought process, there were two questions. There were two ideas that came forward. One was why don't sarbecoviruses have furin cleavage sites. And I've studied coronaviruses all my life. I know sarbecoviruses. I've seen zoonotic strains. They don't have furin cleavage sites. MERS strains do. Human coronaviruses do. Feline coronaviruses do. Why don't sarbecos? There should be sarbecos out there that have furin cleavage sites, so they were going to look for them.

Once they found them and they sequenced it they were going to work on it with pseudotypes. They were going to drop those spike genes into pseudotypes and ask what's -- we were also going to look at the receptor binding domain, obviously, and I think we hypothesized in there that there should be strains with 25 percent variation in spike that could still use the ACE2 receptor. And those are obviously of interest because if you're interested in developing pan-sarbecovirus vaccines or drugs you want, in essence, the bookends of the heterogeneity that exists in the virus subgenus, right. You want strains that you know and strains that are very different, because you have no idea what would emerge in the future. So if you have breadth then you have a better chance of developing something that could be used immediately.

So those are two major features. The first part would

be then to find sarbecoviruses. If we found the sarbecovirus with a furin cleavage site it would be dropped into a pseudovirus, and its biological characteristics evaluated by the Chinese. They would remove the furin cleavage site. They would introduce changes into the receptor binding domain and look in the context of those pseudotypes, which is the safe system, to ask questions about what the role of those mutations were in tropism and entry of viruses in receptor usage.

Following gleaning that data, we would then use a zoonotic sarbecovirus as a receptacle to drop the spike genes of some of these viruses, and if we found one with full-on furin site we would put it in there and evaluate its biology. We would also remove that furin cleavage site and ask what the effect was on pathogenesis in replication. So it's a loss-of-function first.

At the end of that there was speculation that if the furin cleavage site looked like it was having effect on replication of pathogenesis we would consider putting it into a gain-of-function scenario where we would drop it into a null backbone. So that's how the experiment was written.

MS. SALAZAR: And who was going to be doing that work?

DR. BARIC: That part would be done by me.

MS. SALAZAR: Okay.

DR. BARIC: Well, at least that's the way the grant was written initially. Whether that would have functionally happened is a fair question, because if the Chinese discovered the virus, the question always exists whether they would share it with me to do that work or not.

MS. SALAZAR: If you were on the proposal, you would have expected that they would?

DR. BARIC: I would have, but I would also be uncertain that they would do that.

MS. SALAZAR: And so you said that it would be -- this was gain-of-function. This proposal -- because this is the first time I'm hearing that -- because, I mean, PREEMPT, there were grants that were funded. So DEFUSE wasn't. But this is the first time I'm hearing that the actual call, the BAA was asking for --

DR. BARIC: It was asking to understand cross-species movement of viruses down to the nucleotide level. And my interpretation of that was gain-of-function, and they discuss gain-of-function. Now, I found it very interesting that the letter that they provided shortly thereafter said that the experiments were DURC. DURC is Dual-Use Research of Concern. involving 15 pathogens, none of which is a coronavirus. So I never saw that letter in the review. Now, Peter Daszak may have gotten that letter, but we were told the main reason the grant was rejected was that we

proposed to do intervention studies in the bat caves, and they had said they wanted to do this in a more controlled setting.

MS. SALAZAR: In the laboratory?

DR. BARIC: In a laboratory setting.

MS. SALAZAR: So when you say in a bat cave, what does that mean?

DR. BARIC: It means one approach was to take double-stranded RNA and spray it in the bat cave and then induce innate immune responses in bats, so that those innate immune responses would control virus infection and virus titers would go down. So the idea would be the soldiers, before they went into a cave, they may spray the cave to lower the titer of the virus in the cave so it's less likely that they'd be infected. DARPA has kind of wild experiments.

MS. SALAZAR: But where was that portion? So I think --

DR. BARIC: Well, that would've had to have been done in China because it was based on the strains that would be found in the cave complex that they were doing their discovery work.

MS. SALAZAR: I recall that there was some Michigan --

DR. BARIC: Yeah. There was a Michigan group that had these kind of sprayers --

MS. SALAZAR: But that was part --

DR. BARIC: Yeah, that was part of it, but the Michigan group also had a vaccine vector where we would put in viral antigens to try to immunize the bats.

MS. SALAZAR: And I think that there was, in the actual proposal, there was discussion about going to caves in Michigan. So to me that sounds like we might have been doing this in the United States as opposed to China.

DR. BARIC: If they were doing it in Michigan, what they were doing were pilot experiments to see if the approach, especially the double-stranded RNA approach, reduced virus titers for North American strains. And there's no sarbecoviruses in North America at this time.

MS. SALAZAR: So what they would be spraying in the caves would not be the gain-of-function?

DR. BARIC: No.

MS. SALAZAR: Okay. Why is that?

DR. BARIC: So gain-of-function, you're talking about a live virus.

MS. SALAZAR: What would they be spraying?

DR. BARIC: They're spraying a small, double-stranded RNA molecule that induces host innate immune responses. That's host defense molecules that prevent virus infection, or limit virus replication.

MS. SALAZAR: Why are they trying to do these two

different tasks? So they're doing something to gain function and they're doing something to spread --

DR. BARIC: No. So you're confounding experiments. The first aim, again, is to sort of walk through this process of what makes a threat virus, how do you identify it, and how do you then try to counter that threat approach.

MS. SALAZAR: With, so --

DR. BARIC: So there were two approaches that were discussed, that were presented in that grant. One was the use of small molecule, double-stranded RNA to induce, let's call it innate immunity. These involve proteins that are induced in every one of our cells that regulate the replication and pathogen assists of viruses, and bacteria for that matter. So most people in the scientific community feel that what determines whether you live or die following a virus infection is the efficiency of inducing these innate immune molecules that regulate virus replication efficiency. And there's about 1,000 different genes that host cells make that target key steps in virus replication to knock it down. And it all starts with interferon signaling. Okay, that's the basis for it.

MS. SALAZAR: But this is all under one proposal. You're saying that these were separate technical aims.

DR. BARIC: That's correct.

MS. SALAZAR: So when you have a separate technical aim you just have two completely separate experiments that are never going to meet, that have zero connectivity? That, to me, I don't know, but that doesn't make logical sense to me that you would have -- why wouldn't you have separate --

DR. BARIC: I think you're making an incorrect intuitive leap. I was trying to describe the two approaches that were being used to control viruses in a cave setting. The other approach was that having identified strains of viruses that had spike genes that could infect human cells and potentially cause human disease, those spike genes would be isolated and placed in virus vaccine vectors that would then be delivered to the bats in the cave, is the second approach. The first approach is immediate innate immune knockdown so that the virus burden in the cave goes down and it's less likely that a soldier will be infected. The second approach is to immunize the bats in that cave so that a virus burden would be very, very low, and it would be long-term protection so the cave could be used for a much longer period of time. So they are linked but they're different approaches to abrogate virus replication.

MS. SALAZAR: Okay. Would this have been subject to the gain-of-function pause in 2017?

DR. BARIC: So the short answer is no, up to a point, okay.

MS. SALAZAR: What's the point?

DR. BARIC: I'm going to get to that. So if you go back to the NSABB P3CO regulations, the regulations state that viruses, like flu, SARS, and MERS coronavirus, are highly pathogenic viruses, and highly transmissible viruses are covered by this program. And if you do anything on these particular viruses that are highly pathogenic or highly transmissible, and you do any manipulation to increase that, then that's considered gain-of-function and regulated by those documents, based on my read of them.

There are exemptions to that gain-of-function regulation framework. The first is that if you work with zoonotic viruses, like WIV1, which has never been show to infect a human being, that has never shown to be transmissible in humans, it is not subject to the gain-of-function regulatory framework. It has to be reviewed, but the review process would require that it be -- the review process would, based on the regulations, say it's not subject to those gain --

MS. SALAZAR: But how do you know what you don't know?

DR. BARIC: Secondly, if you're doing work that's related to the development of vaccines or serology, it's also except from the gain-of-function policy.

MS. SALAZAR: Or national security. That was also an exemption.

DR. BARIC: I don't know what you mean by that.

MS. SALAZAR: Yeah. I'm just saying it was. I wasn't --

DR. BARIC: So anyway, all the work with pseudotypes was not subject to gain, right. These are single-hit vectors that can't cause disease. As soon as we made full molecular clones, or chimeras, they were done in a WIV backbone, which meant that they're putting a zoonotic spike into a zoonotic strain, to eventually identify vaccine formulations that would be used in the cave, that's not subject to gain-of-function.

MS. SALAZAR: It's not.

DR. BARIC: That's not, according to my records. And in the grant in the very beginning it says that's not subject to gain-of-function. Now, if I remember correctly there is one sentence in there somewhere that says that we will consider potentially moving spike gene, or furin cleavage site into SARS coronavirus. That is definitely gain-of-function and would have to be reviewed before anything else was done. But that occurred boom, boom, boom, boom. You know, we're talking about eight steps down the line, where you gain a significant amount of data about the role of each spike, its ability to use different

receptors, and the role of the furin cleavage site in the ability of that virus to replicate and cause disease, before you do anything about moving it into another strain. So there was a huge amount of data that would be available to say this could be safe or we shouldn't do this.

MS. SALAZAR: So is it only gain-of-function in that scenario if you know it's --

DR. BARIC: Well, again, you're dealing with -- okay. So prior to 2015 paper, we had little if any evidence to indicate that any bat sarbecovirus was capable of replicating efficiently on the human receptor, especially in the context of a primary cell derived from the lung, the airways of a human. And so there was no data to support the idea that these were important threat viruses. After that paper, it said that there are threat viruses, followed by the WIV1 paper, that said there are threat viruses in nature, in bats, that can have the potential to cause serious human disease. We don't know for sure.

A good example of this is there are strains that use the DPP4, no, let's say the ACE2 receptor of SARS coronavirus, and you put them in K18 mice that overexpress that ACE2 molecule, you can find genome equivalents but no live virus. In other words, the virus gets in, it makes a bunch of those progeny RNA molecules, but it doesn't make any progeny viruses so it can't spread.

So the idea that just the virus receptor interaction and entry is the whole key to driving a virus to become a pandemic is just nonsense, and it's always been nonsense. In the case of coronaviruses, there are 49 genes in each of our bodies that regulate disease severity, and the person who gets really sick has a very common loci on chromosome three, with five genes on it, that we inherited from Neanderthals, according to the reports, based on people that do the sequence comparisons. And if you have that loci you're going to get really sick with sarbecoviruses.

MS. SALAZAR: But so --

DR. BARIC: And it's nothing to do with entry. You can have scenarios where the virus grows to the exact same titer, and one person dies and the next person doesn't even know they're sick.

MS. SALAZAR: But so the actual moving, the cleavage site --

DR. BARIC: Yes.

MS. SALAZAR: -- into WIV1 --

DR. BARIC: Yes.

MS. SALAZAR: -- is that gain-of-function?

DR. BARIC: Um --

MS. SALAZAR: Because do you know what is --

DR. BARIC: It would depend on the outcomes of all the earlier experiments, right. So remember, one of those

experiments was to take the virus that had the furin cleavage site in it, resurrect that virus, put it in animals, see what the effect was. Remove the furin cleavage site, see what the effect was. If the furin cleavage site is driving a massive disease phenotype, then that results in a judgment question about whether you would do the next experiment. And it also would then demand the importance of having it reviewed before you proceeded.

MS. SALAZAR: Okay.

DR. BARIC: Before you proceed.

MS. SALAZAR: So are you saying that we can never say whether a grant proposal was proposing to do gain-of-function until we get all the way up to the point where you actually almost do it?

DR. BARIC: No. I'm saying in the context of a grant proposal where the agency asks you specifically to learn, down to the nucleotide level, what causes the phenotype, yes, you do all those experiments.

MS. SALAZAR: Okay. So are you saying that all of the other entities that were awarded grants --

DR. BARIC: I have no idea what they were awarded. All that I know is that we were not awarded.

MS. SALAZAR: Okay. I mean, you were not awarded, but there was discussion post the denial about doing a smaller proposal, separating it out.

DR. BARIC: I mean, that's pretty routine. But I don't believe that, at least from the U.S. side, I don't believe there was any grant written, that I'm on, where we proposed to do experiments of furin cleavage sites. Yet, the reason why I became less interested in it was we discovered that if you add trypsin exogenously to the cultures, viruses that you couldn't culture could now be cultured. And that's because cleavage of S1/S2 boundary, cleavage of the spike, is essential for the virus to get into the cell. And if it can't be cleaved, the virus replicates exceptionally poorly, if at all. But if you add trypsin, which is a protease, into the media, you could take viruses that you couldn't culture and now you could culture them.

So to some extent I was more interested in being able to have a range of coronaviruses. So, for example, remdisivir was tested in about 12 or 13 coronaviruses, including many different sarbecos, from Clade 1 and Clade 2. So we had a really good idea that it would work against an unknown, and it turned out to be effective against SARS-coronavirus-2 when used appropriately.

MS. SALAZAR: So let's go back, though. I mean, you said you don't recall.

DR. BARIC: There's a lot of things I didn't recall. What are you talking about?

MS. SALAZAR: The DEFUSE proposal. So in all of these conversations --

DR. BARIC: Oh yes, yes.

MS. SALAZAR: -- I mean, you were on -- it was on --

DR. BARIC: The first time --

MS. SALAZAR: -- let me finish my question. On the Proximal Origins call, was the furin cleavage site a topic of discussion?

DR. BARIC: You mean the February 1st call?

MS. SALAZAR: The February 1st call.

DR. BARIC: Yes, it was.

MS. SALAZAR: Okay. And that didn't spur, you remembered the grant, which was discussed --

DR. BARIC: No. Again, you have to put it in context. The context is I was asked to write a section of the grant that was maybe two pages long, maybe three. It was done over about a one- to two-week period of time, and then I didn't look at that grant again.

MS. SALAZAR: But there were other people on that grant, and it was controversial when it was released, but we're not even there yet.

DR. BARIC: I was trying to tell you, when I remember the grant it was when it was released, and I was surprised. And then I looked at it and then I remembered the whole grant, yes.

MS. SALAZAR: So did you find out about it for the first time on September --

DR. BARIC: That was when DRASTIC sort of released it.

MS. SALAZAR: Was it DRASTIC, or someone released it, but I think it was September 2021.

DR. BARIC: That might true, correct.

MS. SALAZAR: So up until that point, you had no discussions about the DIFFUSE proposal.

DR. BARIC: Not that I'm aware of. I was busy on other things.

MS. SALAZAR: There were other people on that grant, so Peter Daszak.

DR. BARIC: Yes, he would have been there.

MS. SALAZAR: But he never raised it. To me it's odd that you wouldn't recall that.

DR. BARIC: If he would've raised it, I would've remembered it then, because he would've put it in context.

MS. SALAZAR: And he would've told you, right.

DR. BARIC: Yeah. I think you have to think about where the focus of the research community was. My focuses, at the time, were to rapidly develop mouse models so that we could test mRNA-LNP-based vaccines against SARS-2, to work with Gilead to get their drug forward into clinical trials, to get molnupiravir, a second drug that was FDA approved for use in humans, into clinical trials.

MS. SALAZAR: But, you know, part of the conversation --

DR. BARIC: Yeah, hindsight is always 20/20 in this case. So you can look at a document and say why can't I remember.

MS. SALAZAR: No. I mean, I think part of the conversation, though, for a long time, was, I mean, the debate over whether it was a natural original, a lab leak, you know, accidental or not. I mean, this was a conversation that was happening in the public. There were multiple papers authored. We had Proximal Origins. People were shamed and called conspiracy theorists. I mean, is that not true?

DR. BARIC: That's true.

MS. SALAZAR: I mean, my understanding is you received threats. You know, like it's not like no one was talking about this. And, you know, even if you may not have remembered it, how many people were on that grant? Amy Sims, so she never said, "Oh, remember that grant that we were on?"

DR. BARIC: Amy Sims left the lab right before the pandemic started.

MS. SALAZAR: Have you ever spoken to her since?

DR. BARIC: Off and on, yeah.

MS. SALAZAR: And she never raised it with you?

DR. BARIC: No, she didn't.
MS. SALAZAR: And where is she now?
DR. BARIC: She is at Pacific Northwest Laboratories.
MS. SALAZAR: Peter Daszak never raised it?
DR. BARIC: I can't say he never raised it. I can say that I don't recall him ever raising it in the time frame we're talking about.
MS. SALAZAR: Zhengli Shi?
DR. BARIC: I don't communicate with her that much, so no.
MS. SALAZAR: Tonie Rocke?
DR. BARIC: I don't know.
MS. SALAZAR: Do you talk to Tonie Rocke?
DR. BARIC: No.
MS. SALAZAR: So no one from the government either raised this with you?
DR. BARIC: No. Not that I'm aware of.
MS. SALAZAR: Okay. I mean, it is --
DR. BARIC: I mean, do you have records that I could look at? I'd be glad to look at them. And I'm sorry, but again, I guess the other issues you need to put this in context are, Kristian Andersen, in the Proximity [sic] Origins paper, made a pretty articulate argument why he thought it was not engineered. And it's based on, one, you have to have a molecular clone that would be identical or

nearly identical to SARS2, which did not exist. It certainly did not exist in my lab. The second thing you needed to do is to explain its weird insertion into the spike of the S1/S2 boundary. And it's an out-of-frame insertion that puts in four residues, when in reality there's only three residues that need to be introduced into it if you wanted to make a furin cleavage site there. And so why are there four residues there? Why is it out of frame? That doesn't make sense. So why is there a proline residue? Prolines cause kinks in proteins, so that can be very disruptive.

MS. SALAZAR: So you thought that the Proximal Origins argument was well articulated?

DR. BARIC: In terms of the furin cleavage site, yes. And they argued that the most likely event was a recombination event, I think with a virus called HKU9, that had identical region.

MS. SALAZAR: The paper, generally.

DR. BARIC: Oh, the paper, generally, I disagreed with the idea that you could completely rule out the lab leak, and actually wrote a commentator, commentory piece -- what's the word?

MR. ERVIN: Commentary.

DR. BARIC: Thanks. A commentary piece that was published in Immunity, May 2020, that stated, equivocally,

that it is unlikely that the lab leak hypothesis will go away because the safety procedures at the WIV, and I cited their paper where they worked with viruses at BSL-2.

MS. SALAZAR: Have you ever done any gain-of-function work for DARPA?

DR. BARIC: For DARPA? No.

MS. SALAZAR: For DoD?

DR. BARIC: No.

MS. SALAZAR: For any other Federal agency?

DR. BARIC: Besides the NIH? I mean, technically, the work that we did with MERS, where we were given a waiver, as far as I know it was never really reviewed for GOF. It decided that it was in the national interest to develop a mouse model so that countermeasures could be developed against MERS. The virus has a 35 percent mortality rate. It could transmit to people, and it could transmit through asymptomatic spread. So there's a threat potential there. I think NIH made the right call in that case, that you develop the appropriate reagents so that you can move countermeasures forward to protect the public.

MS. SALAZAR: Okay. So have you ever done gain-of-function research under any other federally funded grant?

DR. BARIC: No.

MS. SALAZAR: Have you ever, you know, created a virus or provided sequences or done something under a contract

where you were not the one that was actually conducting gain-of-function research, but the overarching experimental research was --

DR. BARIC: Can you put that into a direct example, rather than this global thing that requires me to remember everything that I did in the last 40 years of my life?

MS. SALAZAR: The only gain-of-function that you have ever done or been involved in is the one that you received an exemption for.

DR. BARIC: Every gain-of-function? Once the pause occurred, anything that we did that had potential for gain-of-function was reviewed by the NIH, yes.

MS. SALAZAR: I mean, so you only did that kind of work for NIH.

DR. BARIC: Yes.

MS. SALAZAR: The pause only applied to NIH.

DR. BARIC: Yeah, I mean, that's the major funding source for me.

MS. SALAZAR: Is it the only funding source?

DR. BARIC: I said the major funding source, yes.

MS. SALAZAR: What are your other funding sources?

DR. BARIC: I've been supported by companies before. I've been supported by foundations like Burroughs Wellcome Trust. I have received money from the Cancer Institute of NIH. I did get DARPA money, now that I remember it, one

time. It was a DARPA grant that was funded to Pacific Northwest Labs to study dengue virus, and so we did work with them on dengue virus.

MS. SALAZAR: And was that in -- that was early 2013? Is that the Prophecy program?

DR. BARIC: Prophecy program?

MS. SALAZAR: Prophecy program, or the P3 program?

DR. BARIC: Can I see that?

MS. SALAZAR: No, you can't, because it's my notes. The Prophecy program was exploring the evolution of viruses in the hope of predicting viral mutations and ultimately developing drugs and vaccines in advance of need. So that was around 2013.

DR. BARIC: Was that a -- I think that was a different grant that didn't get funded, if I remember correctly.

MS. SALAZAR: And it looks like we have an email that shows that --

DR. BARIC: Who's on it?

MS. SALAZAR: It's to you. It's someone from DARPA. DARPA researcher John Julius emailed you and Amy Sims on March 14, 2013, and wanted to speak to you for that program, about your experience in modeling host pathogen interactions and the ability to predict genetic variations within a viral population, particularly with coronavirus model systems.

DR. BARIC: Yeah, okay, I remember that. No, it's a different thing.

MS. SALAZAR: So you didn't end up --

DR. BARIC: That was never funded. Yeah, we discussed it with them, and I actually think a proposal was written, and they were thinking about funding it, and then the program officer left, and the next program officer said they weren't interested in it, and that was the end of it.

MS. SALAZAR: So then the dengue program, it was under the Pandemic Prevention Path, the platform P3.

DR. BARIC: It's funny around that grant. That grant went to the Pacific Northwest Labs, and then they asked me to participate on dengue virus with it. So I don't know the name of the request.

MS. SALAZAR: Okay. Have you ever done any work with any laboratories in Sri Lanka?

DR. BARIC: Sri Lanka.

MS. SALAZAR: Mm-hmm.

DR. BARIC: A good collaborator that I have, who is Aravinda de Silva, who came from Sri Lanka, has connections there. And I've been funded with Aravinda and Eva Harris for a variety of dengue research and Zika research. So serum samples, we've gotten serum samples from both Sri Lanka and from the Philippines and from Nicaragua to do studies on flavivirus evolution, and identifying major

neutralizing epitopes for the development of therapeutic antibodies in vaccines. But I have never been to Sri Lanka or the Philippines. I have been to Nicaragua for a meeting with a P01 that I had, and currently have with Eva Harris, that studies dengue virus pathogenesis. It studied dengue virus pathogenesis in children in Nicaragua for the past 20-some years. It's the longest-running natural infection cohort on dengue virus, which has identified a large number of important features associated with what drives pathogenesis, and has informed the vaccine development. Currently we're funded with Aravinda to develop next-generation protein-designed vaccines against dengue.

MS. SALAZAR: And what agency funds the work that you had done --

DR. BARIC: NIH.

MS. SALAZAR: -- with Sri Lanka?

DR. BARIC: Yes.

MS. SALAZAR: Okay. Going back to PREEMPT, did you ever receive any funding through the PREEMPT program, either as a direct awardee, subcontractor, subawardee?

DR. BARIC: This is the PREEMPT --

MS. SALAZAR: The PREEMPT --

DR. BARIC: This is a DARPA grant we're talking about? No, I never have.

MS. SALAZAR: Autonomous -- ATI?

DR. BARIC: What do you mean, ATI?

MS. SALAZAR: ATI, the company Autonomous Therapeutics International? Someone say yes or tell me if that's the correct name. Have you ever done any work with them?

DR. BARIC: I don't know. You're going to have to give me more context. I can't remember it off the top of my head.

MS. SALAZAR: Let's go back to funding. Did you always receive funding for work that you did?

DR. BARIC: What do you mean?

MS. SALAZAR: I mean, I think we talked about this a little bit earlier, but, I mean, would there always be a funding stream for work that you did? If you created a virus or did anything like that, would you always be paid for it, and how would you track that?

DR. BARIC: So the way research grants work is that there are several aims, sub-aims. And research grants are always written in the context of being more fluid than contracts. So discoveries that you make in the context of doing the science may cause direction changes, which are then typically reported to the NIH, in your progress reports. So are you asking me if -- from how I just answered that, what's the context of the question?

MS. SALAZAR: So if you were going to, you know, transfer any kind of biological material, would there

always be like a material transfer agreement?

DR. BARIC: Oh, absolutely. Well --

MS. SALAZAR: That may or may not --

DR. BARIC: Yes.

MS. SALAZAR: -- are there cases where there may not be?

DR. BARIC: Well, sometimes for large program project grants there would be a universal MTA created among all of the researchers so that you can share reagents. That's one form. And the other form is somebody will call and ask you for reagents and you do an MTA agreement.

MS. SALAZAR: Going back to --

DR. BARIC: I would say that 99 percent of them were done as MTA agreements. There would probably be outliers, occasionally, but that would be on existing projects where collaborations exist through a grant, and reagents are needed to further the aims of the grant.

MS. SALAZAR: Did you have a UBMTA with NIH-RML? What's the date on this? It's from 2023, on pangolin beta coronaviruses, where it looks like you would be providing original material to Vincent Munster from RML. Pangolin coronavirus was the original material, and the transmittal fee to reimburse the provider for preparation and distribution costs amount is zero. Is that something that was executed?

DR. BARIC: I recall sending them WIV1 and SHSC014 for studies in bats. It's possible that we sent them the pangolin coronavirus. I'd have to check the MTA agreements.

MS. SALAZAR: I guess, is that something that's published, the pangolin beta coronavirus? What is that?

DR. BARIC: I had mentioned it previously. It's called pangolin coronavirus GD strain, and it was published in Nature Microbiology.

MS. SALAZAR: And do you know what RML was doing with that?

DR. BARIC: RML, again, I'd have to look at the MTA agreement that would tell me what was in it. We would have to pull it from the MTA. I can tell you that during the pandemic we did hundreds of MTA agreements with research institutions in the United States. If you ask me if I can remember this one directly, I can't, because if I had a person in my lab who I would say, "Take care of this MTA agreement," and they would do it.

MS. SALAZAR: Is it typical that the transmittal fee would be zero? I just don't know.

DR. BARIC: It depends on how much money I would have.

MS. SALAZAR: Okay. Like what does that range sometimes look like?

DR. BARIC: Whatever the shipping cost are.

MS. SALAZAR: Okay. And how much are shipping costs?

DR. BARIC: You know, I haven't shipped anything. I have somebody else I have to do it. We have a person who's trained as a shipper, and they take care of it.

MS. SALAZAR: Okay. I want to go back to the DARPA question on PREEMPT. I'll show you this email, and I don't have another copy of it right now. But it is dated March 7, 2019. It's from Vineet Menarchery, and you have a couple of other folks on here from Autonomous Therapeutics.

[Exhibit No. 3 shown.]

MS. SALAZAR: It says, "Ralph, I've been working on a DARPA proposal with Autonomous Therapeutics on MERS-CoV with a quick turnaround. They're funded for another DARPA project to generate therapeutic interfering particles, and are looking to apply their approach for MERS on this specific supplement call. We have been chatting for a few weeks, and they are interested in both in vitro and in vivo experiments with their MERS-CoV targeted TIPs. I am currently planning to work with them on the in vitro side, but suggest they talk directly to you about the DPPR 288/330 model."

DR. BARIC: Okay.

MS. SALAZAR: Do you recognize this?

DR. BARIC: Within the contest of Vineet, yes.

MS. SALAZAR: Did you end up doing work with --

DR. BARIC: I don't know. I don't believe that I ever had -- I mean, this is an easy thing for us to test, to see if we had money from them. But I'm 99 percent sure that we never received any money from this group. The other possibility would be that Vineet asked me to send him the mouse model. The 288/330 is the mouse model that I talked about for MERS earlier. And so if he had that agreement with them and he wanted it, he's a former postdoc, I would've sent it to him in a second.

MS. SALAZAR: Because I believe this is a PREEMPT-funded.

DR. BARIC: It might be, but I'm not funded on it.

MS. SALAZAR: Okay.

DR. BARIC: We can check it to make sure. I think we should. But is it not firing any memory for me.

MS. SALAZAR: Okay.

DR. BARIC: Oh, I put a line on your --

MS. SALAZAR: That's find.

DR. BARIC: Is it okay? I put a market on your paper.

MS. SALAZAR: Do you have unpublished sequences?

DR. BARIC: Of --

MS. SALAZAR: Of anything.

DR. BARIC: Of anything? Oh, probably. Well, I had a research assistant professor back in 2010 do a study in bat caves in Maryland as part of the Regional Centers for

Excellence in Biodefense. It wasn't my grant. It was his grant. And he collected bat samples from bat hibernacula in the Maryland/West Virginia border and did deep sequencing on them. So he published that, and I believe he put all the sequences available to the public. But I can't 100 percent say for certain that he did that, since it was about 15 years ago or so. So there may be sequences there.

We have sequenced fecal samples from norovirus-infected patients that we may not have published the sequences of those noroviruses yet.

As part of our grant with Eva Harris, and the Philippines study, where Sanofi Pasteur vaccinated kids in the Philippines and a bunch of them got infected, my lab sequenced all the viruses that were present in those patients, and that has not yet been published.

So the short answer is yes, I do. If you're asking the broader question, do I have unpublished sequences for sarbecoviruses -- unpublished. Unpublished means that --

MS. SALAZAR: Not publicly available.

DR. BARIC: Yeah, right. So the answer is no. I have sequences for sarbecoviruses that we've recovered that we have not published yet, but we got those sequences from the published literature.

MS. SALAZAR: Okay. And have you ever been asked not to publish a sequence?

DR. BARIC: I have chosen not to publish some work.

MS. SALAZAR: Have you chosen to not at the urging of another?

DR. BARIC: No.

MS. SALAZAR: Okay. So I guess what is the work that you've chosen not to, and can you tell me why?

DR. BARIC: I'd prefer to talk about that this afternoon.

MS. SALAZAR: Is it classified?

DR. BARIC: No.

MS. SALAZAR: Can you tell me why? I mean, there's no difference. If it's not classified -- I don't want you to have a false sense of security that if we talk about that, it's not classified, it's not. You know what I mean? It's the same as saying it in here.

MR. LAMBETH: I know it's fine for you to talk about it.

DR. BARIC: Do you know what I'm going to talk about?

MR. LAMBETH: Maybe we should confer, but I think I do.

DR. BARIC: Maybe we should confer. The reason -- I don't know how to say this.

MS. SALAZAR: Would you like to confer?

MR. LAMBETH: Yeah.

DR. BARIC: Let's confer, yeah.

MS. SALAZAR: Let's go off the record.

MR. LAMBETH: Five minutes or less.

[Recess.]

MS. SALAZAR: We're back on the record. It's 11:38.

MR. LAMBETH: Sorry. Before Dr. Baric begins his answer I just wanted to say that one of the examples he will give he believes could implicate national security. It's not classified, but we will ask that it be redacted, and are happy to confer about that later.

DR. BARIC: Okay. So I'll give the straightforward ones first. When we published the 2015 paper, we did not include the full-length sequence of the chimera. And the reason we did not do that is that I initiated a conversation with NIH program and their research journal to request that that sequence not be provided so that no other person would have an exact template for how to build chimeric viruses. I never shared with the Chinese how we did it. I never provided them with the sequence. I never trained anyone from their job in coronavirus reverse genetics. So that's one example of where we specifically did not provide a sequence until after the pandemic started, when several researchers wrote Nature Medicine and said, "We want to look at the sequence to determine whether it's the cause of the pandemic."

MS. SALAZAR: And what was the sequence?

DR. BARIC: The sequence of the SHC014 chimera. So we provided that, and we also put the WIV1 sequence up in PubMed and they analyzed that sequence and agreed that it was not the cause of the pandemic.

MS. SALAZAR: And that was your decision, solely. No one encourage you or suggested?

DR. BARIC: Nobody encouraged me or suggested it. In this case I approached the journal because, again, going back to the transmissible flu studies, it was not just the creation of the transmissible flu virus that was considered sensitive information. It was the details of the technology which also was dual-use. So it's not necessarily just the creation of the entity or the pathogen that's gain-or-function or dual-use. The methodology can be sensitive, and I felt that it was best that we did not provide that information. So that's one example.

MS. SALAZAR: Okay.

DR. BARIC: The second example, which is the reason why I'm reluctant to talk about it here, because I do not want to be responsible as the one who releases it to the public. If you all choose to do that then you can accept the responsibility of that.

Sometimes in science you come across findings that are potentially concerning. And so in this case, Fang Li had been doing studies using biochemical approaches to identify

the most optimal receptor binding domain possible to grab either the human ACE2 receptor or the mouse ACE2 receptor. The thought in the field from him, as a biochemist, was that would be the most optimal and most dangerous form of virus. I disagreed with him, because in reality, biochemical interactions are, in essence, a bell-shaped curve. If they can't interact very well, the virus can't get in. If they react too well, that interaction can't come apart. So the virus can't get in, and the virus, as it tries to release, gets caught up in what's called a dominant negative effect, and it will prevent virus replication.

And the reason I knew this is I had overexpressed receptors before, with mouse hepatitis virus. And because there was so much receptor there, the virus, as it got in, it replicated fine, but when it came out all the spikes were stripped off of the particle. So if the interaction is too great it kills the virus.

Anyone who might want to do nefarious work in science, wanted to create something, is going to think that the most efficient interaction is where you want to go. So I tested that hypothesis and showed that I was right, that the super-binding things were just as deleterious as the really poor-binding ones. I subsequently told NIH and destroyed those viruses. I have never told anyone, and I would

recommend that this committee not release that, because then you will be responsible for telling terrorists what to do.

MS. SALAZAR: [redacted]

DR. BARIC: [redacted]

MS. SALAZAR: Are you aware of [redacted]?

DR. BARIC: That's a shock to me. No, I was not.

MS. SALAZAR: Okay.

DR. BARIC: Yeah. Again, this would have been -- there would never have been any sharing of data with him. It would have been uncommon. In fact, it was surprising to me that about a month ago he actually raised the topic with me, "Do you think maybe that if we had super, high-affinity binding that might not be good?" I just said I didn't -- yeah, so.

MS. SALAZAR: And those are the only two?

DR. BARIC: Yeah, those are the two examples.

MR. HENDERSON: What was the time frame on that second example?

DR. BARIC: Oh, this was done around 2010 or '11. Yeah, a long time ago.

MS. SALAZAR: Okay. Have you ever done any work with the National Bioforensic Analysis Center, NBFAC?

DR. BARIC: I've been there.

MS. SALAZAR: When were you there?

DR. BARIC: Soon after they started that facility I was there. I can't remember exactly why I was there. I remember having a tour.

MS. SALAZAR: Have you ever done any work --

DR. BARIC: Uh --

MS. SALAZAR: So you did --

DR. BARIC: Yeah, if you have an email that suggested I did, I'd appreciate it, because I don't want to be put in the scenario where you're asking me to recall an event from 13 years back, and then I state it incorrectly.

MS. SALAZAR: Did you consult on a report that NBFAC, or NBACC, as they call it, National Biodefense Analysis and Countermeasures Center of DHS did on a final report for severe acute respiratory syndrome, coronavirus-2 genomic analysis on June 11, 2020?

DR. BARIC: I think this is an afternoon discussion.

MS. SALAZAR: It's not classified.

DR. BARIC: But it may have been associated with --

MS. SALAZAR: I can tell you it's definitely not classified.

DR. BARIC: Yeah, but my answer might be.

MS. SALAZAR: Okay. Fair enough.

DR. BARIC: I'm uncertain.

MS. SALAZAR: I don't want you to say anything --

DR. BARIC: Here's the problem, is I'm uncertain, and if I answer it and I'm wrong, then I have violated something.

MS. SALAZAR: For just me, I just want everyone to have on the record that the document that I am looking at is unclassified. But I don't want you to tell us anything that you're not sure about, so we'll save it.

MR. HENDERSON: Well, the email, as you said, is unclassified, but whatever you ask about whatever the answer --

MS. SALAZAR: I know. But I'm saying I have a document that --

MR. HENDERSON: Yes, that's unclassified.

DR. BARIC: Will you let me look at the details of that?

MS. SALAZAR: I mean, if you're not going to be able to answer it right now I don't want to waste our time.

DR. BARIC: I'm talking about this afternoon. Yeah, please.

MS. SALAZAR: Okay. I just want to make sure that we get to everything. Early in 2020, did you ever have any concerns about the safety of SARS-CoV-2 vaccines that were being developed?

DR. BARIC: So coronavirus vaccines induce Th2 immune

pathology using killed vaccines plus alum. So I talked at a WHO meeting early on in the pandemic to say that alum-based vaccines, which have a tendency to -- I probably need to explain what a Th2 immune response is.

MS. SALAZAR: We don't really have to. We'll look it up.

DR. BARIC: Okay. So basically there's a massive inflammatory response that has the potential to be life-threatening, and the SARS coronavirus vaccines, from 2003, that the NIH had purchased, were both adjuvanted with alum. And we published papers showing that that drives a strong Th2 immune response. So my concern, and I expressed this to the WHO and to other groups, was that we needed to look carefully for vaccine-induced immune pathology.

Ultimately, we published a paper with the VRC. That was one of the experiments we set up to do, where we took mRNA vaccines and we took killed vaccine preparations with alum and compared them head-to-head for the ability to induced Th2 responses. The mRNA vaccines did not cause it. The recombinant protein, or the killed vaccines plus alum caused a big Th2 response.

Now, the Chinese vaccines were killed vaccines with alum, which I think was inappropriate. The mRNA vaccines, though, were tested for that using homologous virus challenge.

MS. SALAZAR: Okay. So at this point --

DR. BARIC: At that point, the downstream question is whether if you have significant amounts of virus variation and you're infecting the original Wuhan mRNA vaccine, will breakthrough infection induce an immune pathology phenotype, and those are the kinds of things we're interested in studying now.

MS. SALAZAR: Okay. Let's see. William had a follow-up question, so I'll let you do that one.

MR. HENDERSON: Back to the February 1st call, you said that you did not recall and could not figure out how you got added to that call. Was there any suggestion or implication or direction to you not to speak up on that call?

DR. BARIC: So again, I'm kind of surprised that they didn't know I was there.

MS. SALAZAR: Did you introduce yourself?

DR. BARIC: I think so, yes. I think so, yeah. I think we went around and introduced everybody in the room. My problem is I couldn't find the link that told me exactly how I got on that call, and I think it may have been a personal, like a phone call, you need to be on this call, here's the link, or something like that. But I can't find a record of it, and I've looked incredibly hard.

MS. SALAZAR: Is there any chance that someone dialed

you in, patched you in?

DR. BARIC: No. No.

MR. HENDERSON: So there was no suggestion that you should remain silent or not?

DR. BARIC: No. Again, I was silent because I had sort of felt that maybe I caused the whole meeting to occur because I had talked about it earlier. And I wanted to hear what independent people thought. Otherwise, I could drive the whole direction of the meeting, and that was not right. At least that was my -- if it's flawed thinking, then I apologize. But I don't think it was flawed thinking.

MR. HENDERSON: And back to the DARPA proposal, had you done any of the work that you were proposing to do under that proposal prior to the application?

DR. BARIC: No. We've never dropped a furin cleavage site into a coronavirus like that.

MR. HENDERSON: Were you aware of any of the other applicants having done the work prior to?

DR. BARIC: Yeah, I think maybe we should take a second and review the furin cleavage site, because you seem to think it is the critical event that drove SARS-2 to be pathogenic. So in the coronavirus literature, furin cleavage sites have a mixed history. So in feline enteric coronavirus, if that virus has a furin cleavage site it's

asymptomatic. It's an enteric disease. It's when you lose the furin cleavage site that it becomes a fulminant, deadly disease that is 100 percent fatal in cats. So loss-of-function of that furin cleavage site kills you dead, the cat.

In mouse hepatitis virus, a couple of researchers had removed the furin cleavage site and said what happens to the pathogenesis? There was no change.

Another group, taking pseudoviruses, had introduced furin sites into the SARS-coronavirus 2003 strain, and the only thing they found was slightly increased infectivity. Nothing big. Nothing that said "eureka."

So now let's compare SARS from 2003 and SARS-2, and let's ask the question, what experiments were done to prove that the furin cleavage site drove severe disease in SAR-2 pathogenesis. What they did was a loss-of-function experiment. They deleted those four residues that were introduced by whatever means, and they asked what happened to the virus. It was less pathogenic, and it was less transmissible. Eureka. Furin cleavage site causes that phenotype. Except when you look at the other figures in the paper, where it shows that it also knocked down the ability of other proteases to cleave at that S1/S2 boundary.

So it wasn't a furin cleavage site-specific knockout.

It was a global protease knockout. And that's what a loss-of-function experiment does. The only way to really prove it is to take a virus that doesn't have a furin cleavage site and stick it in. That's gain-of-function. It's causality. You know for a fact.

I can make the argument in this room, and I can argue it in front of scientists, that the introduction of the furin cleavage site in SARS-2 attenuated its pathogenesis and increased its transmissibility, and that was to its benefit. And that's not what you hear.

I've looked at a bunch of these different protease studies that people did, where they knocked out the sequence. They were making global proteolytic cleavage knockouts on the spike. And if you don't cleave S1/S2 efficiently, you knock down replication and pathogenesis.

I also say that SARS-coronavirus-2 had the same R rate 0 that SARS coronavirus 2003 had, early in the pandemic. They both transmitted efficiently. The difference was one transmitted very late only, after severe disease occurred -- that was 2003 -- and in 2019, that strain transmitted before you got disease. And that's why it's a pandemic and the other one was not.

Sorry, I know that went long. You're probably mad at me.

MS. SALAZAR: No, I'm mad at him.

DR. BARIC: But I think it was important to say in this meeting that be careful what you read in an abstract, or even what you hear from the scientific community, because they're not always right. There is uncertainty in a lot of things, and this particular issue has uncertainty around it.

MS. SALAZAR: Fair enough. How well did you know Dr. Fauci? In his deposition with the House he claimed to barely have known you.

DR. BARIC: I met him, or interacted with him, basically, four times. The first time was the NIH was putting together a meeting on MERS coronavirus to help provide or articulate a strategy for NIH to move forward to help protect the public against a future pandemic. As one of the organizers of that meeting I met him at the meeting, where he gave the introductory talk for five minutes. Then he left the meeting in the first presentation. So 10 minutes, maybe, before the meeting I talked with him.

Then, as part of the Red Dawn group, which you must be aware of, there was the Princess, Princess Diamond I think was the name of the cruise ship, where the U.S. government was trying to bring back the passengers from that cruise ship. And on the Red Dawn call Dr. Fauci was there, Redfield was there, and we had a long discussion about how to safely bring them back by air travel.

There was a lot of discussion about whether aerosol transmission was possible, and in the 2003 outbreak, toilets can result in aerosolized feces, and in Hong Kong it infected, I don't know, 400 people in a single apartment complex, and the plume spread across to two other apartment complexes. So if you think about the toilets in airplanes, the first thing you think of is you worry about potential aerosol and affecting everybody on the plane. So that was the discussion. That lasted about an hour.

I did participate in that call and discussion. So did he. My understanding is they put in barriers to prevent aerosolization from the bathrooms, based on that call.

Then the next time was in his office, on the 13th or the 11th, sometimes between the 11th and 13th.

So those are the times. So I personally think his comments are pretty accurate. Let's be clear. Coronaviruses were not the lead pathogen that caught the interest of the director of the NIH probably until 2019.

MS. SALAZAR: Okay. But had you emailed with him back and forth? Surely he knew who you were. Was it your understanding that he requested the meeting with you on the 11th or 13th?

DR. BARIC: I'm sure that once somebody gave him the paper, he wanted to talk to me. But again, you know, I have trouble remembering names. The number of people he

meets has got to exceed what I do by at least 100-fold. So I would be shocked if he felt that he knew me closely, because that's not true. That's just not true.

MS. SALAZAR: Did you have a copy of RaTG, the genome before 2020?

DR. BARIC: No. Yeah, so that was first published in 2013 as a sequence fragment, that I didn't notice. And then they came out with a sequence, I think, in, what, 2017, 2018, somewhere around there. It did not catch my notice. I mean, oftentimes, every once in a while we do searches on sequences, to see if there's anything interesting out there that we might want to work on. But it didn't catch our attention. So it didn't come to my attention fully until they published their paper in January of 2020.

And so I agree with people like Elaine Chen and others that have looked at the sequence information around that virus and say that I don't know. Like she has reported, we could not recreate the full-length sequence that they provided, based on the sequence information that they provided. There were gaps, in other words. It was not complete. Some of it was very good, where they had good coverage, so they had a lot of coverage of that particular chromosome and then they cloned out a specific plasma DNA of that region and sequenced it. So there are regions that

are really good and the spike is really good.

Polymerase has gaps in it. We can't close those gaps based on their sequence, using all kinds of different program to try to do it. Now, they may have an in-house program that they used, but personally I think they used a reference sequence and they guessed, to fill the gaps. That's my gut feeling.

MS. SALAZAR: And I had asked you if you had ever not published something. So that's part of what happened in this case. I understand it was partially uploaded and then it was under embargo. So have you ever had a sequence or something under embargo that then you withdrew? I just want to make sure that my initial question of you didn't publish anything is complete, because I understand that you can submit something.

DR. BARIC: You can pull it off, yeah. I don't believe we have ever, no. I mean, why would we? We were using public sequences to build viruses. It's not like we were doing this de novo.

MS. SALAZAR: Okay.

DR. BARIC: Just to let you know, we have ordered a molecular clone for RaTG13. That genome is heavily debilitated. We eventually isolated it. We have not finished submitting the paper.

MS. SALAZAR: Okay. And when did you isolate it?

DR. BARIC: Maybe two and a half years ago.

MS. SALAZAR: Okay. Do you think that Dr. Shi and WIV had the technical capability of doing the work proposed in DEFUSE on their own?

DR. BARIC: With WIV1, absolutely.

MS. SALAZAR: Okay.

DR. BARIC: I mean, they had the molecular clone.

MS. SALAZAR: So they couldn't have.

DR. BARIC: Yeah. They had a molecular clone. They've dropped different spike genes in it. So it's the question of basically, I don't know, I'd have to look at the S1/S2 junction. But it would be three or four amino acids that they'd have to drop in. They certainly would have that technology.

MS. SALAZAR: And one last question before we have to break. Do you find it odd that the WIV database went down when it did?

DR. BARIC: I mean, if they really wanted to conclusively demonstrate that the virus did not come out of the laboratory, they could have made that available. The problem is for example, is they may have things in there that they don't want to share, and the immediate thing that comes to mind is the Mojiang mine in Yunnan, where six miners were infected with virus. Two reports from Chinese researchers say it's a SARS coronavirus-like virus. Some

of those patients were in the acute phase, and the Chinese are too good not to have sequenced those viruses.

MS. SALAZAR: And it went down before, right? I can't remember.

DR. BARIC: They may not have published them. But the important thing for the U.S. government to realize is they are as good as us in recombinant DNA technology. It is no longer the U.S. is massively in the lead. So their deep sequencing capability is second to none. Their capacity to sequence at least some of those viruses from those patients should have been done.

Now, they claimed that it's a fungal infection. Fungal infections can occur after acute infection. The virus has cleared and then you get a fungal infection. Okay. So they didn't lie. They just didn't tell the whole truth.

MS. SALAZAR: Probably.

DR. BARIC: So they may have sequences of those viruses, and then you might say, eureka, those are the SARS-2 strains, but they didn't transmit. They were super virulent, and they did not transmit. So they might have things in there that they feel are very sensitive, and their government may feel that are very sensitive. So yeah, I would've liked to have seen it, certainly. But again, I think anybody thinking logically from a national

security point of view and national sovereignty, that they may lock it down. I don't think it was the right thing to do. I think they should have made it available.

MS. SALAZAR: Okay.

MR. LAMBETH: Are we about to go off?

MS. SALAZAR: Yeah.

MR. LAMBETH: Just one thing before we go off the record. We did check UNC's records and there is no record of Autonomous Therapeutics funding the Baric Lab.

MS. SALAZAR: Okay, thank you. I appreciate that. Okay. We'll go off the record. We're going to take a break. We will move. You will be read in, and then we will go back on the record.

[Whereas, at 12:04 p.m., the unclassified interview was concluded.]

Interview with Dr. Ralph Baric – April 10, 2026

Committee Errata

Page	Line	Correction
2	11	Insert “Committee” after “Affairs”
3	3	Change Exhibit No. 1 to page 46
3	4	Change Exhibit No. 2 to page 84
3	5	Change Exhibit No. 3 to page 117
3	5	Strike “Menarchery” and insert “Menachery”
3	5	Exhibit 3 change “Re: DARPA Project”
10	6	Insert “time” after “first”
13	18	Insert “that was the” after “so”
14	22, 23, 24	Strike “CisVax” and replace with “CISVax”
16	24	Strike “Eric” and replace with “Erik”
17	10	Strike “. You had to have” and replace with “without”
19	5-6	Strike “SARS-COVID-2” and insert “SARS-CoV-2”
21	4	Insert “have” after “didn’t”
22	5	Strike “RO1” and insert “R01”
25	20	Insert “one,” before “to”
25	21	Insert “the” after “further”
33	16	Change “Freeman” to “Freiman”
33	23	Strike end quote and insert “--” ” after “and”
41	10	Change “Freeman” to “Freiman”
42	25	Strike “that’s”
43	15	Insert “Review” after “Research”
44	11	Strike “Mr. Kazenoff” and insert “Ms. Krynen”
47	8	Insert “to” after “attempt”
47	20	Insert “ ” She says, “ ” after “?”
56	7	Strike “.” and insert “?”
56	13	Insert “to me it’s” after “so”
56	14	Strike “to me”
61	1	Strike “You” and insert “And you”
63	17	Strike “in” and insert “on”
64	22	Strike “NASM” and insert “NASEM”
66	4	Strike “so”
74	3	Strike “.” and insert “?”
76	3	Missing exhibit, proton email to Cohen <#25209.1>
76	14	Strike “Mr. Kazenoff” and insert “Ms. Krynen”
77	24	Strike “they” and insert “the”
89	8	Strike “.” and insert “?”
99	14	Strike “.” and insert “?”
104	12	Strike “,”
104	13	Strike “remembered” and insert “to remember”
104	13	Strike “was”

105	8	Strike “DIFFUSE” and insert “DEFUSE”
105	14	Strike “.” and insert “?”
106	8	Strike “original” and insert “origin”
110	16	Insert “lifting of the” after “The”
112	10	Strike “Pandemic Prevention Path, the platform P3” and insert “Pandemic Prevention Platform, the P3 program”
117	8	Strike “Menarchery” and insert “Menachery”
117	20-21	Strike “DPPR 288/330” and insert “DPP4 288/330”
118	10	Strike “a”
118	18	Strike “find” and insert “fine”
120	13	Insert “if” after “,”
122	6	Strike “encourage” and insert “encouraged”
124	8	Strike “his” and insert “this”
125	16-17	Strike “syndrome, coronavirus-2” and insert “syndrome coronavirus 2”
126	9	Strike “Mr. Henderson” and insert “Mr. Ervin”
126	13	Strike “--” and insert “is unclassified”
126	14	Strike “Mr. Henderson” and insert “Mr. Ervin”
134	4	Strike “RaTG” and insert “RaTG13”
134	16	Strike “Elaine” and insert “Alina”
136	8	Strike “couldn’t” and insert “could”

Errata Provided by Counsel to Mr. Baric

1. Page 1 – I should be identified as "Senior Partner," as opposed to "Senior *Counsel*."
2. Page 3, line 5: "Menarchery" should read "Menachery"
3. Page 13, line 12: "affected" should read "effective"
4. Page 21, line 4, It should read, "To your knowledge, he didn't *have* an EcoHealth employee…"
5. Page 33, line 16: "Freeman" should read "Frieman"
6. Page 41, line 10: "Freeman" should read "Frieman"
7. Page 41, line 23: "Genentech" should read "GemPharmatech"
8. Page 45, line 16, It should read, "I had *no* reason to disbelieve them…"
9. Page 53, line 16, It should read, *Again*, that's a decision…"
10. Page 58, lines 17-24, Per line 23, the committee agreed to redact mention of [redacted] name.
11. Page 64, line 22: "NASM" should read "NASEM"
12. Page 98, line 15, "…which has never been *shown*…"
13. Page 98, line 25: "except" should read "excepted"
14. Page 108, line 25: "equivocally" should read "unequivocally"
15. Page 117, line 8: "Menarchery" should read "Menachery"
16. Page 118, line 15: "is it" should read "it is"
17. Page 118, line 19, "…I put a *mark* on your paper."
18. Page 121, line 14: "their" should read "the"
19. Page 121, line 19: "job" should read "lab"
20. Page 122, line 18 through Page 124, line 23, We'd asked that the whole discussion be deleted on national security grounds.
21. Page 131, an "errant" "O" in the middle of the page.
22. Page 135, line 4, "program*s.*"
23. [Missed the page and line] "Elaine Chen" is referenced once, and should read "Alina Chan"

From: Baric, Ralph S[/O=UNC EXCHANGE/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=RBARIC]
Sent: Sat 11/7/2015 1:10:30 PM (UTC-05:00)
To: 石正丽[zlshi@wh.iov.cn]
Cc: Menachery, Vineet D[[redacted]@email.unc.edu]
Subject: RE: URGENT - please acknowledge USAID PREDICT and our NIAID grant in the paper with Ralph Baric

Hi Zhengli, Was work performed under these grants? Ralph

From: 石正丽 [mailto:zlshi@wh.iov.cn]
Sent: Saturday, November 07, 2015 2:25 AM
To: Baric, Ralph S
Cc: Menachery, Vineet D
Subject: Fw: URGENT - please acknowledge USAID PREDICT and our NIAID grant in the paper with Ralph Baric

Dear Ralph,

Congratulations again for the Nature Medicine paper.

You may have read the email sent by Peter. I didn't think about the acknowledgement number of USAID-PREDICT and NIAID grant because Peter is not the coauthor of the paper. As my funding is partly supported from EHA, it'll be appreciated if your can add these two projects in the acknowledgements.

Sorry to bring you this incovinience.

Best regards,

Zhengli,

P.S., The tentative date of our meeting in Wuhan will be held from 19th to 22th October, 2016. Much appreciated if you can reserve these dates for this meeting.

-----原始邮件-----
发件人: "Peter Daszak" <daszak@ecohealthalliance.org>
发送时间: 2015年11月7日 星期六
收件人: zlshi <zlshi@wh.iov.cn>, "Aleksei Chmura" <[redacted]@ecohealthalliance.org>, "Alison Andre" <[redacted]@ecohealthalliance.org>
抄送:
主题: URGENT - please acknowledge USAID PREDICT and our NIAID grant in the paper with Ralph Baric

Zhengli,

I know there's a paper coming out next week. Can you make sure that USAID-PREDICT and our NIAID grant are listed in the acknowledgements!!??

Even if proofs have already been corrected, they'll be able to change it online, so please contact Ralph and the Editor if you can

Cheers,

Peter

Peter Daszak
President

EcoHealth Alliance
460 West 34th Street – 17th Floor
New York, NY 10001

[redacted](direct)
[redacted]fax)
www.ecohealthalliance.org

EcoHealth Alliance leads cutting-edge research into the critical connections between human and wildlife health and delicate ecosystems. With this science we develop solutions that promote conservation and prevent pandemics.

[redacted]

Message

From: Fang Li [redacted]@umn.edu]
Sent: 10/25/2018 9:07:54 PM
To: Baric, Ralph S [rbaric@email.unc.edu]
Subject: Re: recommendation letter

Hi Ralph,

I would appreciate it if you could send the letter sometime next week.

Best,
Fang

On Fri, Oct 26, 2018 at 1:44 AM, Baric, Ralph S <rbaric@email.unc.edu> wrote:

> Hi Fang, I would be delighted to do this. Any idea of the timeline for this? Nice seeing you in WuHan. ralph
>
> **From:** Fang Li <[redacted]@umn.edu>
> **Sent:** Wednesday, October 24, 2018 10:45 PM
> **To:** Baric, Ralph S <rbaric@email.unc.edu>
> **Subject:** recommendation letter
>
> Dear Ralph,
>
> It was nice chatting with you in Wuhan. My student Qibin has emailed you the information about PEDV. My postdoc Chuming will email you the information about the MERS-like CoV 422 soon.
>
> On a separate note, I wonder whether you could write a recommendation letter for me and send it to Johns Hopkins University (who is looking for a cryo-EM person and shows interest in me). Please email the letter to: Shirley J. Crow, [redacted]@jhmi.edu. I would appreciate it very much.
>
> Please see attached my updated CV.
>
> Best,
> Fang
> --
> **********
> Fang Li, Ph.D.
> Associate Professor
> Department of Veterinary and Biomedical Sciences
> University of Minnesota Twin Cities
> [redacted], [redacted]@umn.edu
> [redacted]
> **********

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****
Fang Li, Ph.D.
Associate Professor
Department of Veterinary and Biomedical Sciences
University of Minnesota Twin Cities
[redacted], [redacted]@umn.edu
[redacted]
****

Message

From: Menachery, Vineet [[redacted]@UTMB.EDU]
Sent: 3/7/2019 11:46:47 PM
To: Baric, Ralph S [rbaric@email.unc.edu]
CC: Paul Leon [[redacted]@autonomoustherapeutics.com]; Timothy Notton [[redacted]@autonomoustherapeutics.com]; Ariel Weinberger [[redacted]@autonomoustherapeutics.com]; Baric, Toni C [[redacted]@med.unc.edu]
Subject: DARPA Project

Ralph,

I have been working on a DARPA proposal with Autonomous Therapeutics on MERS-CoV with a quick turn around.

Ariel and Pau (CCed) are funded for another DARPA project to generate therapeutic interferring particles and are looking to apply their approach for MERS on this specific supplement call.

We have been chatting for a few weeks and they are interested in both in vitro and in vivo experiments with their MERS-CoV targeted TIPs. I am currently planning to work with them on the in vitro side, but suggested they talk directly with you about the DPP4 288/330 model.

I do not think my lab has the capacity to do the in vivo mouse experiments and they prefer the 288/330 model. If the TIPs work in mice, we would extend the work to marmosets at UTMB.

They will contact you directly and I know they are on a short turn around time; I cced Toni as well to see if you'd have time in your schedule. I'll be doing harvests in the morning, so no need to include me on any of the calls.

Thanks

VDM

From: Jeremy Farrar <[redacted]@wellcome.ac.uk>
To: Edward Holmes <[redacted]@sydney.edu.au>
Cc: "Kristian G. Andersen" <[redacted]@scripps.edu>, "Fauci, Anthony (NIH/NIAID) [E]" <afauci@niaid.nih.gov>
Subject: Re: The authors who wrote the paper saying that SARS-CoV-2 is not human engineered first tried convincing Anthony Fauci of the opposite.
Date: Tue, 28 Jul 2020 03:36:51 -0400
Importance: Normal

Thanks Eddie.

I will recheck emails and phones, I will try and do that today.

I think it really starts on the 8/9th January and the calls you and I had with China and the original sequence.

And others were also on those calls – Francis Collins, Mike Ferguson, Patrick Vallance.

I would suggest we get the sequence of events absolutely right before replying.

Best wishes Jeremy

From: Edward Holmes <[redacted]@sydney.edu.au>
Date: Tuesday, 28 July 2020 at 08:30
To: Jeremy Farrar <[redacted]@wellcome.ac.uk>
Cc: "Kristian G. Andersen" <[redacted]@scripps.edu>, "Fauci, Anthony (NIH/NIAID) [E]" <afauci@niaid.nih.gov>
Subject: Re: The authors who wrote the paper saying that SARS-CoV-2 is not human engineered first tried convincing Anthony Fauci of the opposite.

Hi Jeremy,

Here is the exact time-line which I have now checked.

1. Jan 26. You call me (I was in Switzerland) to talk about some concerns coming out the US that the virus might be a lab escape. Patrick Vallance might have been on that call, I can't recall. You later forward me an email from Marc Lipsitch and others containing some comments from Richard Ebright. I take a quick look at the sequence and say that I saw no evidence for lab escape in SARS-CoV-2 because it's pattern of variability was the same as in RaTG13.

2. Jan 31. Kristian contacts me to say that he has spotted some strange things in the issue - specifically the furin cleavage site and restriction sites - that we was concerned about. Given our conversation earlier that week, I called you and informed you of Kristian's findings. We then decided to have a broader discussion with key parties on this ASAP. I think Kristian told Tony at this point but he can confirm. You and I then decided that Ron Fouchier, Christian Drosten and Marion Koopmans would be good to include. Christian also wanted Stephan Pollmnan involved.

3. Feb 1 (6 am on Feb 2 for me). We have the conference call and then start an email chain about how we should deal with this. Writing it up for a paper was on the agenda and discussed. I have all the emails on this.

For Tony's benefit a revised draft of the email to Jon is pasted below.

I can't for the life of me see what we have done wrong here. I strongly believe we have just tried to get on top of a very vexing question as quickly and openly as possible.

Cheers,

Eddie

Hi Jon,

Here are the facts:

1. In early Feb we had spotted some features in the SARS-CoV-2 genome that at the time appeared unusual - particularly the furin cleavage site and the receptor binding domain.

2. At this stage we thought it was wise to ask for other expert's opinions on this, so a conference call was arranged. There were indeed other coronavirus experts on the call. It is worth pointing out that the senior author on our paper - Bob Garry - has published a significant number of papers on coronaviruses, including on the SARS spike protein, and even commented on this on the virological.org website prior to the call taking place (https://virological.org/t/analysis-of-wuhan-coronavirus-deja-vu/357). Importantly, our study was an evolutionary study based on genomic information, which is the only way to investigate the origins of SARS-CoV-2 - we believe all the authors on our paper have a strong demonstrated record in answering exactly those types of questions for a multitude of viruses.

3. Clearly, some people on the call were very strongly of the opinion that the possibility of a lab escape was ridiculous and listed reasons why it should be dismissed out of hand (although there was also some initial confusion about whether we were referring to the crazy HIV origins theory that had just been touted - obviously we were not). Some of those comments we agreed with, others we did not. A take-home message from the call was that we should investigate further and write a scientific paper to clearly set-out the background on the topic and our findings. Indeed, one the of emailed agenda items for discussion after the call was "Advice on whether KA, AR, RG and EH should publish this".

4. We eventually wrote up our findings as a scientific (peer reviewed) paper. Critically, drafts of this paper were sent to all the people on the call, including those with the information that has been emailed to you. We have attached our first draft of what would eventually become our paper from Feb 7, which was circulated to everyone on the call. As you can see, it is essentially the basis of our final study and people on the call commented on it.

5. Very shortly after the call, the pangolin data came out. This was critical and as Eddie wrote in an email to everyone on the call on Feb 9th:

"Personally, with the pangolin virus possessing 6/6 key sites in the receptor binding domain, I am in favour of the natural evolution theory."

and Rndrew Rambaut replied to this stating:
"I am of the view that the natural selection hypothesis is the most likely (specifically the non-bat reservoir). And as Eddie mentioned this is becoming more likely from day to day with the pangolin story."
6. Hence, it is completely and utterly false to claim that we (1) all thought it was a lab escape, (2) that we were corrected ("schooled") in our views by the coronavirus experts on the call, and (3) then submitted a Nature paper without anyone else knowing about it. The truth is that we had a range of views among us, our paper included the pangolin data that was not available at the time of the call, and we circulated drafts of our document to everyone.

7. We categorically deny that we were "spreading the rumor" that the virus was human engineered. At the time, there were indeed rumours - which persists to this day - that SARS-CoV-2 was an engineered virus, but these certainly did not

come from us. As you know, the White House OSTP asked for expert opinions on this question too (spurred by the HIV nonsense preprint), and Kristian was part of that panel (https://www.the-scientist.com/news-opinion/lab-made-coronavirus-triggers-debate-34502). Our study directly addressed these rumours in a scientific way by considering that a lab escape could have occurred. We did not dismiss this possibility out of hand, but we scientifically investigated it.

We strongly reject the idea that we should not have raised nor discussed the possibility of lab escape: as scientists we have to present all the data and discuss it openly. That's what we did. To not have considered or mentioned the possibility of a lab escape would have been negligent. Is the person who emailed you seriously suggesting that we should not have discussed these issues? Wouldn't that be a cover-up? Indeed, the great irony is that 99.9% of the feedback we have received on our paper - including death threats - are people accusing us of dismissing the lab escape theory too quickly. Can you imagine if we had not mentioned - or considered - it all as suggested by some "coronavirus experts"?

This clearly appears to be a case of sour grapes based on half-truths and likely stimulated by your recent (great) article with quotes from us on the questions you raised with Dr. Zhengli. It's telling that the person who emailed you is anonymous. We have absolutely no problem with people knowing that our views on this issue have evolved as more data have appeared - and continues to evolve to this day, should more data become available. That's science. And it's the only way to do it well. Indeed, we have told this to many people: the way we set this up was a study of alternative hypotheses equally weighted priors, which we tested - our posterior clearly favors the hypothesis that this is a natural virus. As far as we can tell we are only 'guilty' of following the proper scientific method - but maybe we offended an ivory tower "coronavirus expert" in the process. It likely won't be the last time.

Best,

Eddie and Kristian

PROFESSOR EDWARD C. HOLMES FAA FRS
ARC Australian Laureate Fellow

THE UNIVERSITY OF SYDNEY
Marie Bashir Institute for Infectious Diseases & Biosecurity,
School of Life & Environmental Sciences and School of Medical Sciences,
The University of Sydney | Sydney | NSW | 2006 | Australia
T [redacted]
E [redacted]@sydney.edu.au

On 28 Jul 2020, at 4:54 pm, Jeremy Farrar <[redacted]@wellcome.ac.uk> wrote:

Thanks for forwarding this and the other emails.

I would like to get the sequence of events absolutely right from the start. Eddie the start goes back to the calls you and I had on the 8/9th January.

Can we get that sequence of events right and agreed before a substantive reply goes back to Jon?

Jeremy

On 28 Jul 2020, at 02:07, Kristian G. Andersen <[redacted]@scripps.edu> wrote:

Dear Tony,

I am sorry to be contacting you, as I know you have critically important priorities, including developing a vaccine for COVID-19. **We just received the email below from Jon Cohen** (from Science) about our conversations back in February investigating the **origins of SARS-CoV-2**. As you know, we considered the theory that SARS-CoV-2 could have been a lab escape and therefore did what any good scientist should do - investigate likely hypotheses and let the data decide. As you know, the data strongly suggests that this is a natural virus and clearly this person gets a lot of things wrong about how this all played out.

We need to reply back to Jon, which would have to include confirming that this meeting did indeed take place with you and Jeremy present. Please let me know if you have any comments or concerns in this regard.

At the very end of this email, I have added a draft email that Eddie put together. I have a few clarifying points that I will add and then Eddie and I will reply back to Jon.

Again, sorry to take up your time - please let me know if you have any comments, questions, or concerns. **We are planning to email Jon tomorrow afternoon**.

Best,
Kristian

Kristian G. Andersen, PhD
Professor | Scripps Research
Director of Infectious Disease Genomics | Scripps Research Translational Institute
Vice President | Viral Hemorrhagic Fever Consortium
Principal Investigator | Center for Viral Systems Biology
Principal Investigator | West African Emerging Infectious Disease Research Center

The Scripps Research Institute
10550 North Torrey Pines Road, SGM-300A
Department of Immunology and Microbial Science
La Jolla, CA 92037

p: [redacted]
t: [redacted]
e: [redacted]@scripps.edu
w: www.andersen-lab.com

Assistant: [redacted], [redacted]@scripps.edu
Image removed by sender.

---------- Forwarded message ---------
From: **Jon Cohen** <[redacted]@aaas.org>
Date: Mon, Jul 27, 2020 at 3:02 PM
Subject: Re: The authors who wrote the paper saying that SARS-CoV-2 is not human engineered first tried convincing Anthony Fauci of the opposite.
To: Kristian G. Andersen <[redacted]@gmail.com>, Edward Holmes <[redacted]@sydney.edu.au>

Here's what one person who claims to have inside knowledge is saying behind your backs...

Jon

On Jul 25, 2020, at 7:22 AM, ofu8ledu8z <ofu8ledu8z@protonmail.com> wrote:

[EXTERNAL EMAIL]
Hello Jon

Released by Chairman Rand Paul

Given your recent mentions of the origin of SARS-CoV-2 I thought you might be interested to hear the bizarre back-story of the paper "The proximal origin of SARS-CoV-2" (https://www.nature.com/articles/s41591-020-0820-9).

In summary, four of the authors managed to organize a conference call with Anthony Fauci and others, after quietly raising the alarm (or "spreading the rumor", as Jeremy Farrar apparently put it) that the virus **WAS** in fact human engineered. On the call were two world-class virologists who actually work on coronaviruses, who set them straight in great detail. That seemed to be the end of the affair.

But, incredibly, Andersen et al. turned around and submitted the Proximal paper to *Nature* with the exact opposite claim, i.e., that the virus was **NOT** human engineered. They used (without acknowledgment, of course) all the arguments provided by the coronavirologists on the initial call in which they had tried to raise the human-engineered alarm.

I don't think it would be too hard to verify all this, if you feel like digging a little. If you're wondering if this could all possibly be true: ask yourself how this group of authors, none of whom work on coronaviruses, could have such detailed arguments about why SARS-CoV-2 was not human-engineered. The answer is that they couldn't (and didn't) - they were schooled by the coronavirus experts on the call.

For the phone conference, Anthony Fauci called in Jeremy Farrar (Director of the Wellcome Trust). Farrar asked the coronavirus experts to join the call to listen to the claims. The call took place on a Saturday in early February (either the 1st or 8th, I'm not sure but I could probably find out). On the call making the claim were: Kristian G. Andersen, Andrew Rambaut, Edward C. Holmes, Robert F. Garry, but not Ian Lipkin.

The coronavirus experts listened for a while and both quickly concluded that the reasoning was completely flawed, that the non-coronavirus virologists had no idea what they were talking about, and that the human-engineered claim was totally wrong. One of the coronavirus experts was entertaining guests that day and told the people on the conference call that they wanted to give their opinion and then go back to the guests. So they told them it was nonsense, gave them a list of reasons why, and got off the call. The other coronavirus expert stayed on the call, gave a similar opinion and the morning afterwards sent a detailed list of the reasons why the claim was certainly wrong.

After the paper with the exact opposite claim was received at *Nature*, senior editor, Clare Thomas sent it out for review to some of the best people in the world... Not surprisingly, this happened to include a very close colleague of one of the experts who had been on the conference call. You can perhaps imagine the shock. Thomas was quickly appraised of the situation and *Nature* rejected the paper. It was then sent to *Nature Medicine*, where it was soon published.

One author on the paper was not on the conference call: Ian Lipkin. It's not clear how much of the back-story he is aware of. It might be worth giving him a call to ask, in case you feel like investigating. If his co-authors left him in the dark as to what actually happened and he's worried about the possible fallout he may want to help.

I apologize for mailing you without revealing my name (at least for now). I work in the field and have heard this story from two people who were on the initial call with Fauci. I'm not keen to be personally involved, but I find the situation so outrageous, hypocritical, and shameless that I also find I can't keep silent. It doesn't change anything with respect to knowledgeable thinking about the origin of the virus, of course, but it's a pretty ugly situation that I (obviously) think should be exposed.

----- EMAIL REPLY DRAFT -----

Hi Jon,

Here are the facts:

1. In early Feb we had spotted some features in the SARS-CoV-2 genome that at the time appeared unusual - particularly the furin cleavage site and the receptor binding domain.

2. At this stage we thought it was to wise ask for some other expert opinion on this, so a conference call was arranged. There were indeed some coronavirus experts on the call who we chose.

3. Clearly, some people on the call were very strongly of the opinion the possibility of a lab escape was ridiculous and listed reasons why it was unlikely (although there was also some initial confusion about whether we were referring to the crazy HIV origins theory that had just been touted - obviously we were not). Some of those comments we agreed with, others we didn't. There as a long email discussion about what the data said. A take-home message from the call was that we should go away and write something to clearly set-out the background science on the issue.

4. So, we eventually wrote up a paper. Critically, however, drafts of this paper were sent to all the people on the call, including those that have leaked out the information. I've attached here the draft of the document from Feb 7 that was circulated to everyone. As you can see, it is essentially the basis of the document and people on the call commented on it.

5. Very shortly after the call the pangolin data came out. This was critical. As I wrote in an email to everyone on the call on Feb 9th:

"Personally, with the pangolin virus possessing 6/6 key sites in the receptor binding domain, I am in favour of the natural evolution theory."

6. Hence, it is completely and utterly false to claim that we all thought it was a lab escape, we were corrected in our views by the coronavirus experts on the call, and then submitted a Nature paper without anyone else knowing about it. The truth is that we had a range of views among us, our paper included the pangolin data that was not available at the time of the call, and we circulated drafts of our document to everyone.

I also strongly reject the idea that we should not have raised nor discussed the possibility of lab escape: as scientists we have to present all the data and discuss it openly. That's all we did. To have not mentioned the possibility of lab escape would have been negligent. Is the person who emailed you seriously suggesting that we should have not discussed these issues? Wouldn't that be a cover-up? Indeed, the great irony is that 99.9% of the feedback I've had on the paper - including death threats - are people accusing me of dismissing the lab escape theory too quickly!! Can you imagine if we had not mentioned it all?

This is clearly just case of sour grapes based on some half-truths. It's telling that the person who emailed you is anonymous. I've absolutely no problem with people knowing that my views on this issue have evolved as more data have appeared. That's science. Indeed, I've told this to many people: the way see it is that we set-up an hypothesis and then tested it. As far I can tell we are only 'guilty' of following the proper scientific method.

Hope this helps.

Eddie

<Summary.Feb7.pdf>