- 1 ALDERSON COURT REPORTING
- 2 DESIRAE S. JURA
- **3** HVC012550
- 4 COMMITTEE ON OVERSIGHT AND ACCOUNTIBILITY,
- 5 SELECT SUBCOMMITTEE ON THE CORONAVIRUS PANDEMIC,
- 6 U.S. HOUSE OF REPRESENTATIVES,
- 7 WASHINGTON, D.C.
- 8 INTERVIEW OF: FRANCIS COLLINS, M.D.
- 9 Friday, January 12, 2024
- 10 The Interview Commenced at 10:07 a.m.

11	Appearances.
12	MEMBERS OF CONGRESS:
13	Brad Wenstrup, Ohio
14	Debbie Dingell, Michigan
15	Dr. Raul Ruiz, California
16	Morgan Griffith, Virginia
17	
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19	PANDEMIC:
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21	JOHN STROM, Majority Counsel
22	ERIC OSTERHUES, Majority Chief Counsel
23	Minority Chief Counsel
24	Minority Chief Counsel
25	Minority Counsel
26	Minority Senior Counsel
27	Minority Senior Counsel
28	Minority Staff Director
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30	For the U.S. DEPARTMENT OF HEALTH AND HUMAN
31	SERVICES:
32	TARA GANAPATHY, Senior Counsel
33	DARIA BERSTELL, Legislative Analyst
34	MARTA COOK, Senior Adviser
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36 Appearances (Continued).
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- 54 Senior Counsel and
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- 56 The White House
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61 Exhibits

62	Minority Exhibit No.	Page No.
63	A - National Institutes of Health,	
64	Gain-of-Function Research Involving	
65	Potential Pandemic Pathogens	64
66	B - U.S. Government Gain-of-Function	
67	Deliberative Process and Research	
68	Funding Pause on Selected	
69	Gain-of-Function Research Involving	
70	Influenza, MERS, and SARS Viruses,	
71	October 17, 2014	66
72	C - Framework for Guiding Funding	
73	Decisions about Proposed Research	
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76	D - Email dated 1 Feb 2020 from Jeremy	
77	Farrar to Anthony Fauci, and others,	
78	Bates commencing SSCP_NIH000791	77
79	E - Email dated 2/1/2020 from Lawrence	
80	Tabak to Francis Collins, and others,	
81	Bates commencing SSCP_NIH001902	79
82	F - Email dated 4 Feb 2020 from Jeremy	
83	Farrar to Anthony Fauci, and others,	
84	Bates commencing SSCP_NIH000751	83
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89	Farrar to Edward Holmes, and others,	
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94	virus risk worth taking,	
95	December 30, 2011	109
96	2 - August 13, 2014, U.S. rolls back	
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99	3 - Virus Evolution, Association between	
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104	Michael S. Lauer, MD, to Kevin	
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107	5 - Letter dated 24 April 2020 from	
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109	Drs. Aleksei Chmura and Peter Daszak,	
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116	7 - Letter dated 23 July 2021, from	
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120	8 - Letter dated July 28, 2021, from	
121	Francis S. Collins, M.D., Ph.D.	
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124	from Lawrence A. Tabak, D.D.S.,	
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142	to The Honorable Xavier Becerra,	
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147	PROCEEDINGS
148	Mr. <u>Benzine.</u> We can go on the record. This is the
149	transcribed interview of Dr. Francis Collins conducted by
150	the House Select Subcommittee on the Coronavirus Pandemic,
151	the Committee on Oversight and Accountability and the
152	Committee on Energy and Commerce under the authority
153	granted to them by House Resolution 5, House Rule 10, and
154	the Rules of the Committee on Oversight and Accountability
155	and Committee on Energy and Commerce.
156	This interview was requested by Chairman Brad Wenstrup,
157	Chairman James Comer, Chair Cathy McMorris Rodgers,
158	Chairman Morgan Griffith, and Chairman Brett Guthrie as
159	part of the Committee's oversight of the federal
160	government's response to the coronavirus pandemic.
161	Further, pursuant to House Resolution 5, the Select
162	Subcommittee has wide-ranging jurisdiction, but
163	specifically to investigate the origins of the coronavirus
164	pandemic, including but not limited to the federal
165	government's funding of gain of function research and the
166	executive branch policies, deliberations, decisions,
167	activities, and the internal and external communications
168	related to the coronavirus pandemic.
169	Pursuant to House Rule 10, the Committee on Oversight and
170	Accountability has jurisdiction to investigate any matter
171	at any time, and pursuant to House Rule 10 and 11, the

172 Committee on Energy and Commerce has jurisdiction for 173 public health service agencies, including the National 174 Institutes of Health and the entities it funds, as well as 175 federal biomedical research and development. 176 BY MR. BENZINE. 177 0 Can the witness please state his name and 178 spell his last name for the record? 179 А Yes, I'm Francis Collins, C-O-L-L-I-N-S. 180 Q Thank you, Dr. Collins. My name is Mitch 181 Benzine, and I am the staff director for the Majority staff 182 of the Select Subcommittee. I want to thank you for coming 183 in today for this interview. We recognize that you are 184 here voluntarily and appreciate that. 185 Under the Select Committee and Committee on Oversight and 186 Accountability's rules, you are allowed to have an attorney 187 present to advise you during this interview. Do you have 188 an attorney representing you in a personal capacity with 189 you today?

PAGE

190 A Yes, I do.

Mr. <u>Benzine.</u> Will counsel please identify themselves?
Mr. <u>Nassikas.</u> Good morning, Mr. Benzine. Its John
Nassikas, Cate Brandon, Eliza Buergenthal, and Olivia
Foster from Arnold & Porter on behalf of Dr. Collins.
Mr. <u>Benzine.</u> Thank you.

196 BY MR. BENZINE.

0

Is there also an attorney present

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198 representing the Department of Health and Human Services 199 with you today? 200 А Yes. 201 Mr. Benzine. Will counsel please identify themselves? 202 Ms. Ganapathy. Tara Ganapathy, senior counsel, HHS. 203 BY MR. BENZINE. 204 0 Is there also an attorney representing the 205 White House with you today? 206 А Yes. 207 Mr. Benzine. Will counsel please identify themselves? 208 Mr. Barstow. Kevin Barstow, White House counsel's office. 209 Mr. Benzine. For the record, can the additional staff 210 please introduce themselves with their name, title, and 211 affiliation. 212 Mr. Osterhues. Eric Osterhues, chief counsel, Select 213 Subcommittee for the Coronavirus Pandemic, Majority staff. 214 Ms. Brewer. Madeline Brewer, Majority counsel for the 215 Select Subcommittee. 216 , chief Minority 217 counsel, Select Subcommittee. 218 senior counsel, Energy 219 and Commerce Subcommittee on Oversight and Investigations, 220 Democrats. Minority counsel, Select 221

222 Subcommittee.

223	chief counsel for the
224	Minority, Energy and Commerce Committee, Subcommittee on
225	Oversight and Investigations.
226	Democratic staff director of
227	the Select Subcommittee.
228	Democratic senior counsel, Select
229	Subcommittee.
230	Ms. <u>Cook.</u> Marta Cook, senior advisor for oversight at NIH.
231	Ms. <u>Berstell.</u> Daria Berstell, Office of Assistant
232	Secretary for Legislative Analysis.
233	Mr. <u>Benzine.</u> Can the Members that are present in the room
234	please identify themselves?
235	Mr. <u>Wenstrup.</u> Brad Wenstrup, Ohio, Second District.
236	Ms. <u>Dingell</u> . Debbie Dingell, Michigan.
237	Mr. <u>Benzine.</u> Thank you all.
238	BY MR. BENZINE.
239	Q Dr. Collins, before I begin, I would like to
240	go over the ground rules for this interview.
241	The way this interview will proceed is as follows. The
242	Majority and Minority staff will alternate asking you
243	questions, one hour per side per round until each side is
244	finished with their questioning.
245	The Majority staff will begin and proceed for an hour, and
246	then the Majority staff will have an hour to ask questions.

247 We will then alternate back and forth in this manner until 248 both sides have no more questions. If either side is in 249 the middle of a specific line of questions, they may choose 250 to end a few minutes past an hour to ensure completion of 251 that specific line of questioning, including any pertinent 252 follow-ups. 253 In this interview, while one member of the staff for each 254 side may lead the questioning, additional staff may ask 255 questions. 256 There is a court reporter taking down everything I say and 257 everything you say to make a written record of the 258 interview. For the record to be clear, please wait until 259 the staffer questioning you finishes each question before 260 you begin your answer, and the staffer will wait until you 261 finish your response before proceeding to the next 262 question. 263 Further, to ensure the court reporter can properly record 264 this interview, please speak clearly, concisely, and 265 slowly. 266 Also, the court reporter cannot record nonverbal answers, 267 such as nodding or shaking your head, so it is important 268 that you answer each question with an audible verbal 269 answer. 270 Exhibits may be entered into the record. Majority exhibits 271 will be identified numerically, Minority exhibits will be

272 identified alphabetically.

- 273 Do you understand?
- 274 A Yes.

275 Q We want you to answer our questions in the 276 most complete and truthful manner possible. If you have 277 any questions or do not fully understand the question, 278 please let us know. We will attempt to clarify, add 279 context to, or rephrase our questions.

- 280 Do you understand?
- 281 A Yes.

282 If we ask about specific conversations or 0 283 events in the past and you are unable to recall the exact 284 words or details, you should testify to the substance of 285 those conversations or events to the best of your 286 recollection. If you recall only a part of a conversation 287 or event, you should give us your best recollection of 288 those events or parts of conversations that you do recall. 289 Do you understand?

290 A Yes.

291 Q Although you are here voluntarily and we 292 will not swear you in, you are required pursuant to Title 293 18, Section 1001 of the United States Code to answer 294 questions from Congress truthfully. This also applies to 295 questions posed by congressional staff in this interview. 296 Do you understand? **297** A Yes.

298 0 If, at any time, you knowingly make false 299 statements, you could be subject to criminal prosecution. 300 Do you understand? 301 А Yes. 302 0 Is there any reason you are unable to 303 provide truthful testimony today? 304 А No. 305 Q The Select Subcommittee follows the rules of 306 the Committee on Oversight and Accountability. Please note 307 that if you wish to assert a privilege over any statement 308 today, that assertion must comply with the rules of the 309 Committee on Oversight and Accountability. 310 Pursuant to that, Committee Rule 16(c)(1) states, "for the 311 Chair to consider assertions of privilege over testimony or 312 statements, witnesses or entities must clearly state the 313 specific privilege being asserted and the reason for the 314 assertion on or before the scheduled date of testimony or 315 appearance." Do you understand? 316 А Yes. 317 Ordinarily, we take a five-minute break at 0

318 the end of each hour of questioning, but if you need a 319 longer break or a break before that, please let us know and 320 we will be happy to accommodate. However, to the extent 321 that there is a pending question, we would ask that you

PAGE

finish answering the question before we take a break. Do

323 you understand? 324 А Yes. 325 Q Any further questions before we begin? 326 А No. 327 Mr. Nassikas. Mr. Benzine, just one quick note. You 328 mentioned to best recollection, that's an important one. 329 All of Dr. Collins' answers today are going to be to the 330 best of his recollection, and he will be very honest and 331 truthful in his answers. 332 And you cited 1001, as we've talked by phone, we just ask 333 that in whatever retelling you do of Dr. Francis' honest 334 comments today also kind of respects the truthfulness 335 that's embedded in 1001. 336 Mr. Benzine. Thank you. 337 BY MR. BENZINE. 338 I want to thank you for your years of work Q 339 in this space and for coming in voluntarily. I want to go 340 through a couple other baseline questions before we get 341 into your education and experience. 342 You are represented by personal counsel, but accompanied by 343 both Department and White House counsel. Are you aware 344 that those representatives do not represent your interests, 345 but instead those of the United States government? 346 А Yes.

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347 Q Are you aware that it is possible your 348 personal interests may diverge from those of the United 349 States government? 350 А Yes. 351 Q The representatives from the Department and 352 the Whitehouse may exert privileges on behalf of the 353 government and instruct you to not answer questions. Are 354 you aware that the decision to answer questions, even if 355 instructed not to, resides with you? 356 А Yes. 357 0 Are you aware that if you refuse to answer 358 any questions today, either as instructed or otherwise, the 359 Select Subcommittee has the authority to compel your 360 testimony? 361 А Yes. 362 All right, thank you. Q 363 Like I said, I want to run very briefly through education 364 and experience. Where did you attend undergraduate school 365 and what degree did you graduate with? 366 University of Virginia, wahoowa, a А 367 bachelor's degree of chemistry in 1970. 368 Q And where did you get your medical degree? 369 In between there, I got a Ph.D. in physical А 370 chemistry. But then I went to the University of North 371 Carolina for medical training, got my MD in 1977.

372 Q Thank you. 373 Mr. Nassikas. Where was your Ph.D. from? 374 The Witness. From Yale, oddly enough, since I believe 375 there are people in the room who also went there. 376 BY MR. BENZINE. 377 0 Who is your current employer and what is 378 your current job title? 379 А The National Institutes of Health. I'm 380 currently a distinguished investigator in the National 381 Human Genome Institute at NIH. 382 0 Do you currently hold or have you previously 383 held any honorary or academic positions? 384 А Before coming to NIH 30 years ago, I was on 385 the faculty at the University of Michigan for nine years. 386 Q And then do you currently hold or have you 387 previously held any positions on boards of companies or 388 nonprofits? 389 Way back in the 1980s, I was a cofounder of А 390 a small biotech company called Gene Labs, but that was 391 something that I left probably about 1991. Nothing since 392 then. 393 Q Thank you. When did you become director of 394 the NIH? 395 In 2009. А

396 Q And then in that role, who was your direct

18

397 report?

398	А	The Secretary of Health and Human Services.	
399	Q	And then understanding things change wildly,	
400	_		
400	but what were	kind of your standard roles and	
401	responsibiliti	es?	
402	А	They do change wildly. The National	
403	Institutes of	Health is the largest supporter of biomedical	
404	research in th	e world. As the director, it's my	
405	responsibility to survey what the scientific opportunities		
406	might be, and to be sure that we were doing everything		
407	possible to pursue those in a way that would make advances		
408	for the public in terms of alleviating suffering and saving		
409	lives.		
410	Q	While director, did you hold a security	
411	clearance?		
412	А	Yes.	
413	Q	At what level?	
414	А	Top secret.	
415	Q	Not SCI?	
416	А	You know, I don't recall.	
417	Q	Okay. During the pandemic, did you receive	
418	any classified	briefings regarding COVID-19 or China?	
419	A	Not about COVID-19.	
420	Q	I'm going to ask a really long list of	
421	names, and if	you can bear with me while I go through it of	

422	just "yes" or	"no" if you talked to any of these
423	individuals re	garding the origins of COVID, the Wuhan
424	Institute of V	irology, or EcoHealth Alliance. So the
425	general timefr	ame will be January 2019 until now.
426	А	Mm-hmm.
427	Q	As much as you can remember.
428	Mr. <u>Nassikas.</u>	And "yes" or "no" will be obviously to the
429	best of Dr. Co	llins' recollection.
430	The <u>Witness.</u>	Right.
431	Mr. <u>Nassikas.</u>	So you don't have to say that every time.
432	BY MR. BENZIN	Ξ.
433	Q	It can be "yes," "no," or "I don't recall."
434	And we can go back through it.	
435	Secretary Azar	c.
436	А	Yes.
437	Q	Admiral Giroir?
438	А	Yes.
439	Q	Dr. Kadlec?
440	А	Yes.
441	Q	Dr. Birx?
442	А	Yes.
443	Q	Dr. Redfield?
444	А	Yes.
445	Q	Dr. Raj Panjabi?
446	А	Yes.

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447	Q	Dr. Ashish Jha?
448	А	Yes.
449	Q	Jeff Zients?
450	А	Yes.
451	Q	Andy Slavitt?
452	А	Not to my recollection.
453	Q	Rob Flaherty?
454	А	Not to my recollection.
455	Q	Secretary Becerra?
456	А	Yes.
457	Q	Susan Rice?
458	А	Yes.
459	Q	Neera Tanden?
460	А	No, not to my recollection.
461	Q	Shalanda Young?
462	А	Again, the substance of your question was
463	about COVID or	igins, EcoHealth, or Wuhan. That would be
464	no.	
465	Q	Dr. Fauci?
466	А	Yes.
467	Q	Dr. Tabak?
468	А	Yes.
469	Q	Dr. Auchincloss?
470	А	Yes.
471	Q	Dr. Morens?

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472	А	No.
473	Q	Dr. Ping Chen?
474	А	No.
475	Q	Dr. Cliff Lane?
476	А	Yes.
477	Q	Dr. Michael Lauer?
478	А	Yes.
479	Q	Dr. David Christian Hassell?
480	А	No.
481	Q	Mr. Gray Handley?
482	А	Not to my recollection.
483	Q	Mr. Greg Folkers?
484	А	Not to my recollection.
485	Q	Dr. Eric Stemmy?
486	А	Not to my recollection.
487	Q	Dr. Emily Erbelding?
488	А	No.
489	Q	Dr. Tedros?
490	А	Yes.
491	Q	Dr. Jeremy Farrar?
492	А	Yes.
493	Q	Dr. Kristian Andersen?
494	A	Would an involvement in a conference call be
495	the sort of the	ning you're asking about?
496	Q	Yes, is that the only involvement?

497	A	Only in conference calls.
498	Q	Dr. Michael Farzan?
499	A	Only in conference calls.
500	Q	Dr. Eddie Holmes?
501	A	Only in conference calls.
502	Q	Dr. Ian Lipkin?
503	A	Yes.
504	Q	Dr. Andrew Rambaut?
505	A	Only in the call.
506	Q	Dr. Christian Drosten?
507	A	Only in the call.
508	Q	Dr. Ron Fouchier?
509	A	Only in the call.
510	Q	Dr. Marion Koopmans?
511	A	Only in the call.
512	Q	Dr. Peter Daszak?
513	A	No.
514	Q	Dr. Michael Worobey?
515	A	No.
516	Q	Dr. Jonathan Pekar?
517	A	No.
518	Q	Dr. James LeDuc?
519	A	No.
520	Q	Dr. Shi Zhengli?
521	A	No.

522 Q Dr. George Gao? 523 А No. 524 Dr. Ralph Baric? Q 525 А Not to my recollection. 526 Q Thank you. I want to go back through and 527 ask a few more specifics. So the answer only in the call 528 for Dr. Koopmans, Dr Fouchier, Dr. Drosten, Dr. Rambaut, 529 Dr. Holmes, Dr. Farzan, and Dr. Andersen is referring to 530 the February 1st conference call; is that correct? 531 А That is correct. There was another call 532 that involved Dr. Andersen later in the year. 533 Do you recall about when that was? Q 534 It would have been about July. А 535 Q Do you recall the substance of that one? 536 А It was initiated by a concern by Dr. Bloom. 537 Thank you. Going back up the list. Q 538 Dr. Farrar obviously has the conference call association. 539 Were there other communications with Dr. Farrar? 540 А There were. 541 Do you recall about when or how many? 0 Not specifically. No, I wouldn't be able to 542 А 543 lay them out precisely. 544 More than one, but less than five? Q 545 That would be about right. А 546 All right. And do you recall outside of the Q

547 conference call, which we'll talk about in more detail, do 548 you recall the contents of the conversations? Was it 549 origin-specific or did it get to anything else? 550 А It was also about the response --551 Q Okay. 552 А -- to the pandemic. And particularly the 553 urgency of identifying therapeutics and vaccinations. 554 0 Thank you. Dr. Lauer, do you recall the 555 contents of those conversations? 556 Dr. Lauer, as the director of extramural Α 557 research for NIH, had very significant responsibilities for 558 everything that NIH does. So I would, in the course of my 559 time as director, be in conversations with him almost every 560 other day about something. 561 In terms of COVID, well, a lot of what we were talking 562 about at that point was COVID. I can't tell you the number 563 of occasions or the topics. 564 Q Do you recall any conversations with him 565 regarding compliance efforts with EcoHealth? 566 Only after the fact. А 567 0 Okay. Dr. Lane, do you recall the contents 568 of those conversations? 569 А I talked with him a lot about what he was 570 doing to set up the clinical guidelines that all of the 571 docs were looking for to know what was the right way to

572 prevent and treat COVID-19.

573	Q	Dr. Auchincloss, do you recall those?
574	А	It would have been very limited. As
575	Dr. Fauci's deputy, I don't recall the content.	
576	Q	Dr. Tabak, do you recall those?
577	А	Dr. Tabak is my principal deputy whose desk
578	was 20 feet away from mine. We talked many times a day.	
579	Q	Do you recall any specific conversations
580	about origins,	Wuhan, or EcoHealth?
581	А	Not any specific ones.
582	Q	And then Dr. Fauci, any
583	specific understanding you probably talked often. Any	
584	specific conversations regarding origins, Wuhan, or	
585	EcoHealth?	
586	A	No specific conversations. But, yes, we
500		
587	were in touch	very regularly during the crisis of COVID-19.
	were in touch Q	
587		very regularly during the crisis of COVID-19. What about Susan Rice, do you recall those
587 588	Q conversations?	very regularly during the crisis of COVID-19. What about Susan Rice, do you recall those
587 588 589	Q conversations? Mr. <u>Barstow.</u>	very regularly during the crisis of COVID-19. What about Susan Rice, do you recall those
587 588 589 590	Q conversations? Mr. <u>Barstow.</u>	very regularly during the crisis of COVID-19. What about Susan Rice, do you recall those Dr. Collins, if you can answer this at a very
587 588 589 590 591	Q conversations? Mr. <u>Barstow.</u> general level, conversations.	very regularly during the crisis of COVID-19. What about Susan Rice, do you recall those Dr. Collins, if you can answer this at a very
587 588 589 590 591 592	Q conversations? Mr. <u>Barstow.</u> general level, conversations.	very regularly during the crisis of COVID-19. What about Susan Rice, do you recall those Dr. Collins, if you can answer this at a very that's okay, but do not reveal any specific It will be easy because I don't recall the
587 588 589 590 591 592 593	Q conversations? Mr. <u>Barstow.</u> general level, conversations. The <u>Witness.</u>	<pre>very regularly during the crisis of COVID-19. What about Susan Rice, do you recall those Dr. Collins, if you can answer this at a very that's okay, but do not reveal any specific It will be easy because I don't recall the t all.</pre>

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597 those three topics? 598 А Let me step back a moment. I have spoken 599 with Dr. Rice about other things. Now that I'm trying to 600 dredge through my memory, I am not sure I ever spoke to her 601 about COVID. 602 0 Okay. 603 А So maybe I would like to clarify that. 604 0 All right. Secretary Becerra, do you recall 605 the contents of those conversations? 606 А Of course I reported to Secretary Becerra 607 when he became Secretary. We met regularly to cover a wide 608 range of issues. I don't recall the specifics. 609 Mr. Zeintz, do you recall the contents of 0 610 those conversations? 611 Mr. Barstow. Dr. Collins, I would give you the same 612 instruction here. General topic is okay, but do not reveal 613 specifics about those conversations. 614 The Witness. Right. Well, as the person who was initially 615 leading the Biden administration's response to COVID, I 616 spoke with him about those topics. I won't go into the 617 detail. BY MR. BENZINE. 618 619 Q To the best of your recollection, were any 620 of the conversations regarding compliance on EcoHealth? 621 Mr. Barstow. Dr. Collins, I am going to step in here and

622 ask you not to answer that question.

623 Mr. <u>Benzine.</u> On what grounds?

- 624 Mr. Barstow. Executive branch confidentiality interest.
- 625 Mr. <u>Benzine</u>. Are you instructing him to not answer the 626 question?
- 627 Mr. <u>Barstow.</u> Yes, I am.
- 628 Mr. Benzine. All right.
- 629 BY MR. BENZINE.
- 630 Q Did you have any conversations with
- 631 Mr. Zeintz regarding the Wuhan Institute of Virology?
- 632 Mr. Barstow. Again, I am going to step in here and
- 633 instruct Dr. Collins not to answer that question.
- 634 BY MR. BENZINE.
- 635 Q Did you have any conversations with
- 636 Mr. Zeintz regarding the origins of COVID-19?
- 637 Mr. <u>Barstow.</u> Once again, I am going to step in here and
- 638 ask Dr. Collins not to answer that question.
- 639 BY MR. BENZINE.
- 640 Q Okay, going up the list. Dr. Jha, do you
 641 recall the contents of those conversations?
 642 Mr. Barstow. The same instruction, Dr. Collins.
- 643 BY MR. BENZINE.
- 644 Q Dr. Collins, did you have any conversations645 with Dr. Jha regarding the origins of COVID-19?
- 646 Mr. <u>Barstow.</u> I'm going to ask Dr. Collins to not to answer

647 that question.

648 BY MR. BENZINE.

649 Dr. Collins, did you have any conversations 0 650 with Dr. Jha regarding the Wuhan Institute of Virology? 651 Mr. Barstow. I am going to ask Dr. Collins not to answer 652 that question. 653 BY MR. BENZINE. 654 Dr. Collins, did you have any conversations 0 655 with Dr. Jha regarding EcoHealth? 656 Mr. Barstow. I am going to ask him not to answer that 657 question. 658 BY MR. BENZINE. 659 What about Dr. Panjabi, do you recall the Q contents of those conversations? 660 661 Mr. Barstow. The same instruction. 662 BY MR. BENZINE. 663 Dr. Collins, did you have any conversations Q 664 with Dr. Panjabi regarding the origins of COVID-19? 665 Mr. Barstow. I'm going to ask Dr. Collins not answer that 666 question. 667 BY MR. BENZINE. 668 Q Dr. Collins, did you have any conversations 669 with Dr. Panjabi regarding the Wuhan Institute of Virology? 670 Mr. Barstow. Once again I'm going to ask Dr. Collins not 671 answer that question.

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672 BY MR. BENZINE.

673 Dr. Collins, did you have any conversations 0 674 with Dr. Panjabi regarding EcoHealth? 675 Mr. Barstow. Once again, I'm going to ask him not answer 676 that question. 677 BY MR. BENZINE. 678 Do you recall the contents of the 0 679 conversations with Dr. Redfield? 680 Only in a very general way. А 681 Q Do you recall any specifics of conversations 682 regarding the origins, his perspective, or your 683 perspective? 684 А No. 685 What about Dr. Birx, do you recall the Q 686 contents of those conversations? 687 Mr. Barstow. The same instruction, Dr. Collins. 688 BY MR. BENZINE. 689 Dr. Collins, do you recall any conversations Q 690 with Dr. Birx regarding the origins of COVID-19? 691 Mr. Barstow. I am going to ask Dr. Collins not to answer 692 that question. 693 BY MR. BENZINE. 694 Dr. Collins, do you recall any conversations Q 695 with Dr. Birx regarding the Wuhan Institute of Virology? 696 Mr. Barstow. I will ask him not to answer that question as 697 well.

- 698 BY MR. BENZINE.
- 699 Q And, Dr. Collins, do you recall any
- 700 conversations with Dr. Birx regarding EcoHealth?
- 701 Mr. <u>Barstow.</u> And again, I will ask him not to answer that
- 702 question.
- 703 BY MR. BENZINE.
- 704 Q Do you recall the contents of the
- 705 conversations with Dr. Kadlec?
- 706 A Only in a very general way.
- 707 Q Any memory of --
- 708 Ms. Ganapathy. Dr. Collins, I'm going to step in and
- 709 instruct you to respond, but in a way that focuses on broad
- 710 themes, as opposed to getting into specifics of
- 711 deliberative discussions.
- 712 Mr. Osterhues. What about factual matters?
- 713 Ms. Ganapathy. Specifics of deliberative discussions.
- 714 Mr. Osterhues. Deliberative does not include facts.
- 715 Ms. Ganapathy. The content of deliberative discussions.
- 716 Mr. Osterhues. No, we went through this the last time.
- 717 We've gone through this before. I don't know if you really
- 718 understand what deliberative is. Facts are not
- 719 deliberative.
- 720 Ms. Ganapathy. So our position is that we are here
- 721 voluntarily today as an accommodation. We're not going to

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722 get into specifics of high level deliberative discussions. 723 So I'm instructing the witness to respond accordingly. 724 Mr. Benzine. All right. For both White House and 725 Department counsel, we are going to run through as many 726 questions as we can today, but if this continues, we are 727 going to end the interview and issue a subpoena to 728 Dr. Collins. So keep that in the back of your head as we 729 continue. 730 BY MR. BENZINE. 731 Q So you can answer the general conversations 732 that you had with Dr. Kadlec regarding origins, Wuhan, or 733 EcoHealth. 734 I don't recall the specifics at all. А 735 Q Do you recall the contents of the 736 conversations with Admiral Giroir? 737 There again, I don't recall the specifics. Α 738 And then what about the contents with Q 739 Secretary Azar? 740 I met with Secretary Azar regularly, and А 741 certainly we talked about the response to COVID, primarily. 742 0 Do you recall any specifics on origins, 743 Wuhan, or EcoHealth? 744 I don't recall. А 745 Thank you. I'm going to go through some Q 746 other departments and agencies that you may not have

747	specific conve	ersations with specific people, but I just
748	want to ask if you had any conversations with anyone	
749	affiliated with these agencies.	
750	Ms. <u>Brandon.</u>	About what topic?
751	Mr. <u>Benzine.</u>	The same three, origins, EcoHealth, or the
752	Wuhan Institute.	
753	Ms. <u>Brandon.</u>	Thank you.
754	BY MR. BENZINE.	
755	Q	Anyone affiliated with Fort Detrick?
756	A	No.
757	Q	Anyone affiliated with the State Department?
758	А	Not that I can recall.
759	Q	Anyone affiliated with the FBI?
760	А	What time period are we talking about?
761	Q	January until now.
762	А	I was interviewed by the FBI.
763	Q	Do you recall about when?
764	A	I think that was August of '23.
765	Q	Thank you. Any conversations with anyone
766	affiliated with the CIA?	
767	А	No.
768	Q	Anyone affiliated with the National Center
769	for Medical Intelligence?	
770	А	No, I don't know what that is.
771	Q	Anyone affiliated with the Department of

772 Energy? 773 On these three topics? No. А 774 And then anyone affiliated with the Defense 0 775 Threat Reduction Agency? 776 Hmm-mm. And, again, these are all to my А 777 best recollection. 778 Yes, absolutely. One final baseline 0 779 question. Have you had any conversations with anyone, 780 particularly anyone on that long list, regarding this 781 interview? 782 А No. 783 Thank you. Q 784 I want to ask about personal email and phone. Did you ever 785 conduct official business via a personal email? 786 А No. 787 What about a personal cell phone? Q 788 I have a single cell phone that's government А issued, which I'm allowed to use for a small part of the 789 790 time for personal purposes. 791 Thank you. What about any official business 0 792 over an encrypted messaging app, like Signal or WhatsApp? 793 Signal, I don't know what that is. А 794 WhatsApp, not official business. 795 Does NIH use Microsoft Teams or any other Q 796 messaging service on your desktop or laptop?

797 A Not on mine.

798 Q Did you keep or maintain more than one 799 calendar? 800 A No. 801 Q What about more than one email account? 802 A There were a lot of aliases, but they all

803 fed into the same inbox.

804 Q Perfect, thank you. I'm going to shift 805 gears and talk about the grant process a little bit at NIH. 806 And just to the best of your knowledge, answer these. If 807 you don't know, say so. And then I'm going to get into a 808 few more specific questions about foreign collaborators or 809 foreign labs.

810 We talked to any number of people through the kind of NIAID 811 grant process and then a couple people in NIH, Dr. Lauer, 812 Dr. Tabak, about the NIH grant process. And I just want to 813 very briefly run through proposal to funding, from your 814 point of view, what the process is.

815 A An investigator who has a research idea
816 writes a proposal following the guidelines that NIH puts
817 forward about what's expected to be included, submits that
818 often at a particular date where there's a deadline for
819 receipt. That is then looked at by the scientific staff at
820 NIH to decide whether it's an appropriate kind of question
821 that fits within NIH's mission. And, if so, which

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institute should it be assigned to. There are 27

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823 institutes, et cetera. 824 At that point, then it is assigned to a peer review study 825 section of other experts in that area of science, all of 826 whom are to do this with complete confidentiality. And 827 these are not government employees, these are the experts 828 that seem to know most about that area. 829 The grant then is reviewed by that study section. There's 830 an active discussion about its pros and cons, and it gets 831 assigned a score, a priority score. That is the closest 832 point, then, of figuring out whether it's going to get 833 funded, but it's not the whole final story. 834 There's a second level of review where the advisory council 835 in each of the 27 institutes and centers has an advisory 836 council, that then does a look over all of the grants that 837 came through in that previous four months, and decides 838 whether there should be some adjustment of exactly where 839 the cut should be about what gets funded and what doesn't. 840 In case there's something that's really high priority and 841 didn't quite make it as far as the priority score, well, 842 maybe that one will be prioritized. 843 Once that decision is made, the award is decided and the 844 grants administrator reaches out to the investigator and 845 sets up the grant with appropriate oversight.

846 Q Is it possible to receive a fundable score

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847 and not subsequently receive funding?

848 Yes. A fundable score is sort of a hard А 849 thing to say precisely what that should be. It depends on 850 the institute on that particular cycle on the congressional 851 budget. 852 0 But just because a grant has gone through 853 the peer review process and gotten the stamp of approval 854 that it can receive funding does not mean that it will 855 receive funding? 856 А The second level of review is real. It 857 would be very unusual for something that got an extremely 858 positive peer review to be pulled out and not funded. But 859 it's more the things on the margin where there can be some 860 adjustment. 861 And then is it the Institute or Center Q 862 director that makes the final funding decision? 863 Officially, it's the director who signs off А 864 on that, recognizing, of course, that the real work has 865 been done by the advisory council and by the staff. 866 And then you, as NIH director overseeing it 0 867 all, could you ever make a funding decision? 868 А No. 869 Q Could you overrule any previously made 870 funding decisions? 871 А That would be extremely unusual.

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872 Q But it's within your authority? 873 It probably is in a very exceptional А 874 situation. Keep in mind, though, that the work is almost 875 entirely done at the institute level, not at the director's 876 level. 877 0 Thank you. We've asked a number of people 878 regarding the vetting or certifying process of foreign labs 879 that receive U.S. dollars. Do you know what that process 880 is? 881 А I do not. 882 To your knowledge, does NIH certify foreign 0 883 labs that receive U.S. dollars? 884 А I don't know that. 885 Q I guess my next question, if you don't 886 know -- if they're receiving U.S. money, how would NIH kind 887 of make sure they follow the right BMBL standards or things 888 like that? 889 А That would be up to the staff to do that. I 890 trust my staff when I was NIH director to have that kind of 891 subject matter expertise. 892 BY MR. STROM. 893 Q Is that staff resident at your Office of 894 Director or is it more likely in the institutes? 895 In the institutes. А 896 Mr. Nassikas. Just for the record, who are you?

897 Mr. Strom. Sorry, John Strom, senior counsel, House Energy 898 and Commerce Committee, Oversight and Investigation 899 subcommittee. 900 Mr. Nassikas. Thank you. 901 Mr. Strom. Sorry. 902 BY MR. BENZINE. 903 0 The kind of same questions that I imagine 904 are similar answers. The process for vetting a foreign 905 collaborator, do you know what that is? 906 А Only in the sense that the peer review 907 process is going to look to see whether a proposal is being 908 conducted by people who have the appropriate expertise. 909 Do you know if, during that process or Q 910 otherwise, foreign collaborators go through a national 911 security review? 912 I do not, no. Α 913 Do you know if there are any countries that Q 914 are kind of off limits for receiving NIH dollars? 915 Off limits? Not that I know of. А 916 Do you know if NIH partners with any other 0 917 U.S. agencies to assist in any of these processes? 918 А NIH does do collaborations with other parts 919 of the government. We've done the Human Genome Project was 920 a joint effort between NIH and the Department of Energy.

921 Q Again, what we're trying to figure out is

922 if, like, you get a proposal that has a foreign lab on it, 923 if NIH would do all the work themselves, or if they would 924 call the State Department, or if they would call some other 925 department to try to determine if that foreign lab is 926 reputable. 927 А I don't know. 928 Q Okay, moving on to kind of why we're here. 929 I want to talk about, first, how pandemics emerge and get 930 into COVID-19 a little bit. 931 So our general understanding is kind of two viable pathways 932 for a pandemic spillover, zoonitic or some type of 933 laboratory research-related accident; is that correct? 934 Very broadly correct? 935 А Very broadly correct. I'm trying to think 936 if there might be some other pathway, but those seem 937 reasonable. 938 And in zoonotic, there's kind of the, like, Q 939 direct from an animal to a human, and then from an animal 940 to an intermediary host to a human, depending on how 941 many -- there could be multiple middle steps in there. Is 942 that generally accurate? 943 А That's generally accurate. 944 Q So there's been kind of -- the two really 945 big coronavirus spillovers before this were SARS 1 and 946 MERS, both of which had fewer than 10,000 cases worldwide

947 over now two decades.

948 А Mm-hmm. 949 And COVID-19 is close to, at least what we 0 950 know of, 800 million. I guess one of the curiosities we 951 have is, why such a big difference? Is it just kind of 952 obviously one was 2002, this is 2023, there's more 953 traveling, there's more human movement. But is there a 954 functional difference in the virus that makes it so 955 much -- the case numbers so much higher? 956 А I'm not a virologist. I'm not an infectious 957 disease expert. My understanding is that it was the 958 ability of SARS-CoV-2 to be so transmissible, so 959 contagious. 960 Q And then back to kind of the zoonotic 961 pathway. And, again, I'm going to say it 10,000 times 962 today. I'm not even not a virologist, I'm just not a 963 scientist. So hang with me on some things. 964 А Okay. 965 For the kind of stereotypical zoonotic Q 966 outbreak, obviously there aren't a whole lot of wild animal 967 farms in major cities. There's obviously markets, but not 968 the farms themselves. And our understanding is that you 969 would normally see the farms in -- we'll use China and like 970 southeastern China, a few cases sprout up in there, animals 971 travel up the road a little ways, a few cases more, until

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972 it gets into a metropolitan area, and then it explodes. Is 973 that close? 974 I don't have the expertise to assess that А 975 statement. 976 Q All right, thank you. We'll skip ahead a 977 couple, then. I want to get just kind of a definitional 978 understanding on what a laboratory or research-related 979 accident would be. I think there's a bit of a 980 misconception that it has to be like some mad scientist in 981 the lab, like, building a bomb that spills over, right, 982 versus kind of, like, what the more stereotypical science 983 is. 984 So just in these scenarios of just "yes" or "no," if you 985 think it would be a laboratory or research-related 986 accident. 987 A researcher intentionally manipulating viruses in the lab 988 and getting infected. 989 А Who's getting infected? 990 The researcher is, the person doing the 0 991 manipulating. 992 А That sounds like an accident. 993 Q What about a researcher in the lab 994 conducting serial passage of a virus and getting infected? 995 Again, if the researcher gets infected, А 996 that's an accident.

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997 0 What about just a researcher sampling or 998 sequencing viruses and getting infected? 999 First of all, you would not expect just А 1000 sequencing would be a risk. That's not something that's an 1001 infectious agent. 1002 0 What about sampling, getting it from 1003 environmental samples and taking out viruses? 1004 А I think there's an occupational risk if, for 1005 instance, a researcher is working in a wildlife 1006 environment, of getting infected. Is that an accident or 1007 is that an occupational risk? I'm not sure I could call 1008 that an accident in that sense. 1009 Mr. Nassikas. Mr. Benzine, maybe I'm the only one who 1010 doesn't get it. What's the underlying question again? 1011 Mr. Benzine. If these would be considered a lab accident. 1012 Ms. Brandon. Or naturally occurring. 1013 BY MR. BENZINE. 1014 Or naturally occurring. Q 1015 That sounds more naturally occurring, А 1016 because it didn't even sound like you were limiting it to a 1017 lab. 1018 Q And then the final one, a researcher getting 1019 infected during field work and bringing it back to the 1020 laboratory?

1021 A I wouldn't call that a lab accident.

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1022 A few more high-level questions. One of the Q 1023 primary purposes of this Subcommittee is to investigate 1024 what happened from -- during this pandemic to thinking 1025 about how we can prepare for future pandemics. 1026 А I'm with you. 1027 0 A large question of that has been the 1028 origins of this virus, obviously, so we can protect better 1029 from both pathways. We see NSABB coming out with more 1030 stringent lab recommendations. A couple -- I think it was 1031 like 30 virologists a couple days ago wrote that they 1032 wanted more laboratory guidelines. And then obviously the 1033 question of wet markets and wildlife trading, how we can 1034 better regulate that. 1035 So what do the origins of a pandemic like COVID-19 tell us 1036 to prepare for a possible future pandemic? 1037 We do not at the present time know exactly А 1038 what happened that led to the SARS-CoV-2 emergence. 1039 Certainly one would, therefore, want to look at the 1040 possible ways that this came to be, and make sure that 1041 those are not happening now without oversight. 1042 Understanding you're not a virologist, but 0 1043 obviously, you've been in the space for a long time, what 1044 would some zoonotic spillover prevention strategies look 1045 like?

1046 A Zoonotic spillovers happen when there is

1047 close interaction between humans and animals that are 1048 infected. To the extent that our world seems to provide 1049 more opportunities for that to happen, we are more at risk. 1050 Certainly such things as wet markets, especially if they 1051 contain wild animals, are putting people at risk who are 1052 close by. So I would have to say that certainly would be 1053 an area that we should try to regulate very carefully. 1054 0 And then kind of the laboratory side of the 1055 equation, what would those prevention strategies look like? 1056 А One would want to have in place policies

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1057 that require stringent attention to the laboratory controls 1058 if experiments are being done on potential pandemic 1059 pathogens.

1060 Q Do you think there should be increased 1061 laboratory regulations on novel pathogens? So we hear the 1062 potential pathogen language a lot, and the definition is 1063 already capable of infecting humans. Do you think there 1064 should be any more restrictions placed on unknown 1065 pathogens?

1066 A I'm not the expert. I think it is good that 1067 NSABB has been reconsidering that very question.

1068 Q Moving forward to when COVID first struck, 1069 first reported on ProMED on December 30th, and then China 1070 publicly confirmed it December 31st, 2019. When did you 1071 first become aware of the outbreak?

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1072 I can't precisely state the date, but it was А 1073 shortly after the 1st of January. 1074 Do you remember how you learned? 0 1075 А I don't remember precisely, but I am sure it 1076 was one of the infectious disease experts at NIH. 1077 0 And then do you recall when the genomic 1078 sequence of COVID-19 was first made public? 1079 А I believe it was January 10th. 1080 And then what's kind of the importance of Q 1081 having the sequence of the virus? 1082 А Well, as a guy who has worked a lot on 1083 genome sequences, this is basically providing you with the 1084 blueprint of whatever organism you're talking about, in 1085 this case the virus. So it's providing you with a window 1086 about its origin, about its biological mechanism, and 1087 potentially about ways that we might prevent its spread or 1088 help people who are already infected. It's central. 1089 My kind of, again, layman understanding is Q 1090 that the sequence being different from having an actual 1091 virus isolated, it tells you what to plan for, but not 1092 exactly what it looks like; is that right? 1093 А It's like you have the blueprint for the 1094 house, but you're not walking in the front door. 1095 That's a good analogy. I appreciate that. Q 1096 Could you tell from -- and again, I'm sorry if this is kind

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1097 of a non-educated question. But can you tell from the 1098 sequence itself that it's a coronavirus or do you have to 1099 do any more studying? 1100 А It has to be compared with everything we 1101 know about all other viruses that have ever been studied. 1102 And it's fairly straightforward with that database of other 1103 viral genome sequences to say this is a coronavirus. 1104 0 In Dr. Farrar's book titled Spike, he talked 1105 about the sequence in it and he wrote, "Eddie Holmes has 1106 taken screenshots from social media in China about the 1107 coronavirus sequence. They suggest the full genome was 1108 known by a genomics company in China by December 27, 2019, 1109 and that that was reported to the Chinese CDC and the 1110 hospital who provided the sample on the 27th and 28th of 1111 December." 1112 Were you aware of that? 1113 А No. 1114 Did Dr. Farrar ever tell you that on Q 1115 conference calls or anything? 1116 А No. 1117 0 Were you aware of the NIH ever receiving the 1118 sequence prior to January 10th? 1119 А No. 1120 Similarly, in our interview of Dr. Daszak Q 1121 this past November, he testified stating that he was aware

1122 of a coronavirus 20 percent divergent from SARS 1 $\,$

1123	circulating in	China by December 30th. Were you aware of
1124	that?	
1125	А	No.
1126	Q	He said that was kind of odd specificity,
1127	because COVID-1	9 ended up being pretty close to 20 percent
1128	divergent of SA	ARS 1, and that it would kind of show that at
1129	least China kne	ew a little bit more than what they were
1130	leading on, and	d possibly had the sequence prior to January
1131	10th.	
1132	Do you recall	any conversations regarding that, China
1133	potentially have	ving a sequence prior to it becoming publicly
1134	available?	
1135	А	No.
1136	Q	And then do you recall who eventually made
1137		
	the sequence pu	ublicly available?
1138	the sequence pu A	oblicly available? Only what I heard, that Eddie Holmes played
1138 1139		Only what I heard, that Eddie Holmes played
	A	Only what I heard, that Eddie Holmes played
1139	A a critical role Q	Only what I heard, that Eddie Holmes played e in that.
1139 1140	A a critical role Q on behalf of a	Only what I heard, that Eddie Holmes played e in that. And did you hear anything about him doing it
1139 1140 1141	A a critical role Q on behalf of a	Only what I heard, that Eddie Holmes played e in that. And did you hear anything about him doing it Chinese researcher?
1139 1140 1141 1142	A a critical role Q on behalf of a A Q	Only what I heard, that Eddie Holmes played e in that. And did you hear anything about him doing it Chinese researcher? Only secondhand.
1139 1140 1141 1142 1143	A a critical role Q on behalf of a A Q	Only what I heard, that Eddie Holmes played e in that. And did you hear anything about him doing it Chinese researcher? Only secondhand. Did you hear anything about that Chinese

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1147 the features of the virus that has been in the news a lot 1148 is the furin cleavage site and everyone discussing kind of, 1149 like, its impact on the virus. It's never been seen before 1150 and the SARS-related lineage has been seen, I think, in the 1151 family above it. 1152 Looking at the sequence, can you tell that it had a furin 1153 cleavage site? 1154 А Again, I'm depending on the experts on 1155 looking at the protein sequence that would be coded for by 1156 the genome. The experts say that looks like it would be a 1157 furin cleavage site. 1158 And then in all your conversations regarding 0 1159 this, again, understanding you're not a virologist, do you 1160 know what the furin cleavage site does? 1161 А Only that I read papers that suggest it was 1162 an important way to help the virus get inside the cell. 1163 Does that mean it would make it more Q 1164 transmissible? 1165 Potentially. But, again, I'm not the Α 1166 expert. 1167 Again, we just very briefly -- and you had 0 1168 no knowledge of it, to be fair, of the Chinese researcher 1169 who allowed Dr. Holmes to publish the sequence had his lab 1170 shut down for recertification. There are also numerous 1171 reports of doctors who discussed the outbreak being forced

1172 to sign NDAs in China and are being gagged or silenced, and 1173 the original whistleblower, Dr. Li Wenliang, who eventually 1174 passed away, was one of those who was forced to sign a 1175 nondisclosure agreement. Do you have any knowledge of any 1176 of those actions? 1177 А No, I do not. 1178 Q When we were going through the really long 1179 list of names, I mentioned Dr. Ping Chen. Before I 1180 mentioned her, had you ever heard of her? 1181 А I had heard of her. 1182 Do you know generally who she is? 0 1183 Only that she works in the National А 1184 Institute of Allergy and Infectious Disease and had some 1185 role with examining the Wuhan Institute of Virology. 1186 0 So she was stationed in Beijing for NIAID up 1187 until mid-December of 2019, and then toured the Wuhan 1188 Institute of Virology, and facilitated at least one other 1189 tour of the Wuhan Institute of Virology in 2017. And this 1190 may not be -- I guess you said you didn't have any 1191 discussions with her. So you never met with her after the 1192 pandemic broke out? 1193 А No. 1194 Q Do you recall meeting with her after the **1195** tour?

1196 A No.

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1197 So this is more of, like, an observation 0 1198 than a question, but she seems to be kind of a valuable 1199 witness for NIH and NIAID and the U.S. government in 1200 general. She was in China when the outbreak was starting, 1201 and had been to the Wuhan Institute of Virology, and no one 1202 we have spoken to has met with her. That's just kind of 1203 interesting. I don't know what that means, but you 1204 haven't, either, so we can move on. 1205 Early on, we talked about Dr. Stemmy, too, and he was the 1206 program officer for the EcoHealth grant that has been -- I 1207 don't even know the sequence of events at this 1208 point -- semi-terminated, terminated, suspended, went 1209 through all the oversight mechanisms. Early on, he was in 1210 communication with Dr. Daszak regarding information on 1211 COVID-19. Did you ever hear anything about that? 1212 А No. 1213 And then, again, Dr. Chen in January 2020 Q 1214 was in conversations with Dr. Shi at the Wuhan Institute 1215 regarding COVID-19. Did you ever hear anything about that? 1216 А No. 1217 All right. I'm going to switch and discuss 0 1218 gain of function research and try to lay some -- try to 1219 discuss definitions first. 1220 А Good. 1221 And put -- talk definitions first, and put Q

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1222 kind of, like, policies for later. So this is just 1223 baseline definitions of the various aspects here. 1224 The first definition I have, which I pulled off the NIH 1225 website, is it's just gain of function is defined as a type 1226 of research that modifies a biological agent, so that it 1227 confers new or enhanced activity to that agent. Does that 1228 sound like a fair definition for gain of function research? 1229 А Let's be really careful. Context is 1230 critical. There's been so much confusion about this, so 1231 I'm glad we're going there to talk about the definitions. 1232 Gain of function in some scientific conversations is quite 1233 broad. I would even argue piano lessons are a gain of 1234 function, because they train your brain to do something it 1235 didn't do before. Certainly in biology, an experiment 1236 where you modify a bacterium so that it can digest an oil 1237 spill, which can be a good thing, that's a gain of 1238 function. You're trying to contribute to that bacterium 1239 that it wasn't able to do before. 1240 But here today, I think we are mostly talking about gain of 1241 function as it relates to potential pathogens, particularly 1242 potential pandemic pathogens. There, let's be really 1243 careful to say that has to be defined in a very precise 1244 way, which has been carried out by a series of experts, and 1245 a lot of harm gets done when the definition is not 1246 carefully attended to when statements are made about

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1247 whether something was or was not.

1248 And I agree with that, and I'm going to get 0 1249 to the kind of P3CO version of the definition --1250 А Good. 1251 -- in a second. This definition was on Q 1252 NIH's website. It has since been taken off NIH's website, 1253 and we'll talk about that, too. But I take it from how you 1254 just described kind of the broad level gain of function, 1255 you agree with that definition for the broad level of the 1256 term? 1257 If it was clear that it was talking about А 1258 the broad level of the term. It would be unfortunate if 1259 somebody took that definition and said, well, that also 1260 describes gain of function for pathogens. That would be a 1261 mistake. Context would be broad in that case. 1262 If I was a researcher, could I conduct this Q 1263 broad level of gain of function on a pathogen while also 1264 simultaneously not meeting the definition of an ePPP? 1265 If you're working on a potential pandemic А 1266 pathogen, you have to be guided and constrained by the P3CO 1267 definition and all that entails. 1268 Q And I agree. I'm trying to figure out if 1269 there's daylight between -- that only applies to human 1270 viruses which we already discussed, so it would be a 1271 discrete set of viruses or a discrete set of pathogens.

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1272 If working on viruses not known to already infect humans, I 1273 mean, theoretically, I could conduct research that modifies 1274 that agent, whatever that agent is, so that it confers new 1275 or enhanced activity to that agent. I guess I'm just 1276 trying to understand if there's research that could fit 1277 this definition of gain of function without fitting the 1278 ePPP PC30 definition.

1279 A I think what -- if you're talking about 1280 research on any particular virus that has the potential in 1281 any way of being pathogenic, then you have to consider 1282 whether this meets P3CO or not. And the answer may well 1283 be, no, it doesn't, but the question ought to be, is it in 1284 that zone or not.

1285 Q Okay. That was going to be the next 1286 definition of -- the P3C0 definition of it as a potential 1287 pandemic pathogen, one that has likely a wide and 1288 uncontrollable spread in humans and likely to cause 1289 significant morbidity and/or mortality in humans resulting 1290 from the enhancement of the transmissibility and/or of 1291 virulence of that pathogen. So that's the definition you 1292 are using?

1293 A That's right.

1294 Q And I guess my point is, that's very 1295 limiting, that there could be dangerous research that 1296 doesn't meet that definition. And I think potentially

1297 inherently trying to have novel viruses be able to infect 1298 human cells is potentially dangerous, that kind of has some 1299 potential to create a human pathogen. I'm going to ask you 1300 one more time and then I'll move on. 1301 But there's got to be a bucket of research that would be 1302 modifying biological agents, so that it confers new or 1303 enhanced activity to that agent that does not meet the P3 1304 definition. 1305 А The P3 definition would implicate a very 1306 high level of stringent review, but lots of research that 1307 doesn't meet that definition would still require, because 1308 of biosafety regulations, to be carried out in a special 1309 facility, like a BSL2 or 3 or 4. So there is some 1310 oversight of the kind of thing you're asking about. 1311 Q Thank you. 1312 Mr. Benzine. I think that is a good place for us to break 1313 for our hour. We can go off the record. 1314 (Recess.) 1315 All right. We can get started. We can go 1316 back on the record. 1317 Just to start with, could any additional Members who have 1318 since joined just identify themselves, please? 1319 Dr. McCormick. Dr. Rich McCormick from Georgia's Sixth. 1320 Thank you. 1321 BY

1322 0 Dr. Collins, I'm chief 1323 Minority counsel for the Select Subcommittee. Thank you 1324 for coming in. We really appreciate it. 1325 I have some questions on some discrete topics, but before I 1326 get to them, just a few quick narrow questions about a few 1327 things that were discussed in the last round. Actually, 1328 before I go to that, Mr. Barstow has a remark. 1329 Mr. Barstow. So I think we just wanted to clarify 1330 something that was covered in the last hour. Mitch asked 1331 Dr. Collins if he had conversations on three topics, COVID 1332 origins, EcoHealth Alliance, and the WIV with a series of 1333 administration officials and other non-administration 1334 people. 1335 Dr. Collins said yes, that he had conversations with Debbie 1336 Birx, Raj Panjabi, Ashish Jha, Jeff Zeintz, and Susan Rice. 1337 I want to clarify for the record that I think Dr. Collins 1338 was referring to general discussions about COVID issues 1339 with those officials, and not on the three topics that 1340 Mitch listed, which was, again, COVID origins, EcoHealth 1341 Alliance, and the WIV. 1342 Is that right, Dr. Collins? 1343 The Witness. That's correct. And again, I made a 1344 misstatement about Susan Rice. I never spoke to her about 1345 COVID at all. So I hope that got corrected. 1346 . Great. Thank you, both.

1347 BY .

1348 We had one small question in the same space, 0 1349 which is Dr. Michael Farzan, I think there was a "yes" 1350 answer there, and it sounded as if the yes was based on the 1351 large February 1st conference call with the whole group. 1352 And our understanding, and we spoke to Dr. Farzan, he was 1353 not on that call. So knowing that, if that were the case, 1354 would that change that "yes" to a "no"? 1355 That would definitely change that "yes" to a А 1356 "no." I was apparently mistaken. I thought he was on the 1357 call, but I will take your correction. 1358 He had other conversations with folks who 0 1359 were on that call, but he himself was not on that call. 1360 А Thank you for helping me correct that. 1361 Absolutely. And just a quick sort of Q 1362 comment and question with respect to Dr. Ping Chen. Our 1363 understanding is that she was not in China when the 1364 outbreak occurred. She came back to the United States from 1365 her role in December of 2018, so she would not have been there at the time or had contemporaneous knowledge of the 1366 1367 outbreak itself. 1368 And an additional clarification, to the extent you're 1369 aware, our understanding is her visit to the WIV BSL4 lab, 1370 that that lab was brand-new at the time, and is not the

1371 same lab where EcoHealth Alliance with the sub-awards of

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1372 Wuhan Institute of Virology conducted chimeric work with 1373 SARS-related viruses. In our understanding, that was in a 1374 BSL2 or 2-plus Wuhan Institute lab, which is in a 1375 completely different physical location from the BSL4. I 1376 don't know if you understand similarly.

1377 A I don't have any firsthand knowledge about1378 that.

1379 Q Okay, great. I would like to start with a 1380 discussion that picks up right where you left off with the 1381 Majority, which is gain of function research and different 1382 definitions of that term. You may end up covering some of 1383 the same ground you've already covered, I hope you don't 1384 mind, but I'm going to ask you to do it.

1385 There was and still is a grant at NIAID to an organization 1386 called EcoHealth Alliance, which was to study bat 1387 coronaviruses. That grant originally included a sub-award 1388 to the Wuhan Institute of Virology. Are you, at this 1389 point, generally familiar with what that grant was and is?

1390 A In a general way.

1391 Q There was certain lab work done at the Wuhan 1392 Institute of Virology under that sub-award that has been 1393 the subject of significant scrutiny and attention, and a 1394 lot of that scrutiny is focused on whether or not that work 1395 was or was not gain of function research.

1396 And it feels to us as if, in addition to the controversy

1397 that has existed there, there has been a substantial amount 1398 of confusion about that issue. And it feels to us as if a 1399 lot of that confusion has been caused by the fact that 1400 different people certainly that this Subcommittee has 1401 spoken with, have insisted on using the same term, gain of 1402 function, the same three words, to mean completely 1403 different things at different times with different 1404 definitions. So I would like, if you don't mind, for you 1405 to help me untangle some of that here. 1406 We have heard folks, and folks at NIH actually have 1407 probably been the most consistent on this issue, so kudos 1408 to you. But we have heard folks use the term gain of 1409 function in at least three different ways. We have heard a 1410 layman's definition, which is basically just a literal 1411 usage. It's simply saying, was something modified in a way 1412 such that there has been a gain of function? 1413 And sometimes people seem to use that to include loss of function or change of function, but regardless, it seems to 1414 1415 be a very casual, literal way of using the term. I think 1416 you were discussing that a little bit with our Majority 1417 colleagues. Are you generally familiar with that usage of 1418 the term? 1419 А In common everyday language by non-experts, 1420 absolutely.

1421 Q

Great. We have also heard people use the

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1422	term gain of function in the context of the 2014 Federal
1423	Gain of Function Moratorium. And this now has all sorts of
1424	specifics built into it, only applies to certain viruses
1425	and its mammals and the respiratory route. Are you
1426	generally familiar with that usage of the term?
1427	A Yes, I am.
1428	Q Thirdly, we have heard folks use the term
1429	gain of function in the context of the 2017 P3CO framework,
1430	which is the most detailed set of definitions of the three.
1431	Now it's humans and there is a concept of a potential
1432	pandemic pathogen which is a multi-part definition and
1433	there are carve-outs. Are you generally familiar with that
1434	usage of the term?
1435	A Yes.
1436	Q Great. I would like to talk about each of
1437	those three and how they differ from each other and whether
1438	some of them might be more or less useful from each other.
1439	Starting with that layman's definition, I will introduce an
1440	exhibit that I think is a good example of that. So that
1441	will be Minority Exhibit A.
1442	(Minority Exhibit A was
1443	identified for the record.)
1444	If you could pass those around, please,
1445	and I will give you a moment to look that over. In the
1446	meantime, we've had an additional Member join us, and if

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1447 that Member could just identify themselves, please? 1448 Dr. Ruiz. Congressman Dr. Raul Ruiz. 1449 The Witness. Doctor, nice to see you. 1450 BY 1451 Q Take your time and look that over. I will 1452 only be focusing on a small part, but take your time to 1453 familiarize yourself with it. 1454 А Okay. 1455 Great. So just to start with, I think the Q 1456 Majority alluded to this web page also. I don't really 1457 know what this is. It's from the NIH website. You were 1458 the director of NIH. It's some kind of public toolkit 1459 maybe or something to that effect. Whatever it is, is it 1460 right that it is not a regulation or formal policy of any 1461 kind? 1462 It's attempting to explain for people who А 1463 want to understand what is the current position of NIH 1464 about gain of function research involving potential 1465 pandemic pathogens, so there's no way to be confused about 1466 that. 1467 0 All right, great. So if I point your 1468 attention on the first page under the header 1469 Gain-of-Function Research, I'm going to just read a brief 1470 excerpt of that out loud.

1471 "The term gain-of-function research describes a type of

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1472 research that modifies a biological agent, so that it 1473 confers new or enhanced activity to that agent. Some 1474 scientists use the term broadly to refer to any such 1475 modification." 1476 As far as you can recall, in your time as director, did 1477 that definition have any regulatory significance? 1478 А I think that was more just a standard use of 1479 language that people might use in a conversation. 1480 Was it something that NIH would have 0 1481 implemented in a formal sense? 1482 А No. 1483 Okay. Separately from that, I'm not sure Q 1484 whether it's a useful definition. You use the example 1485 about learning to play the piano, great, that's helpful. 1486 In addition, we learned recently about some research that 1487 was done last year, where there was a genetic modification 1488 of bacteria to allow the bacteria to detect tumors. That's great, and that's exciting. That is also technically under 1489 1490 this layman's usage. 1491 Under the broad context of the words. А 1492 0 That would be gain of function under this 1493 usage; is that right? 1494 А That's right. 1495 Okay. So I'm not sure that this definition Q 1496 gets to what we, as a Subcommittee, are worried about. I

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1497 think we are all focused on pathogens and on research that 1498 makes those pathogens more dangerous. And I think for that 1499 we would have to look at definitions 2 and 3, the 1500 Gain-of-Function Moratorium and the P3CO framework. Do you 1501 generally agree with that observation? 1502 А Yes, I do. 1503 0 Great. So in that case, I will introduce as 1504 Minority Exhibit B, the 2014 Gain-of-Function Moratorium. 1505 (Minority Exhibit B was 1506 identified for the record.) 1507 BY 1508 And I imagine you're familiar with it, but Q 1509 you're welcome to take a moment to glance it over. 1510 А Okay. 1511 Great. So the operative language in this Q 1512 policy is on the second page or the first page of text, 1513 depending on how you look at it, in italics. It's just one 1514 paragraph. I'm going to read it out loud because it's 1515 helpful for the transcript to show what we're talking 1516 about. 1517 That reads, "new U.S. Government funding will not be 1518 released for gain-of-function research projects that may be 1519 reasonably anticipated to confer attributes to influenza, 1520 MERS, or SARS viruses, such that the virus would have 1521 enhanced pathogenicity and/or transmissibility in mammals

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1522 via the respiratory route. The research funding pause 1523 would not apply to characterization or testing of naturally 1524 occurring influenza, MERS, and SARS viruses, unless the 1525 tests are reasonably anticipated to increase 1526 transmissibility and/or pathogenicity." 1527 So just an initial question. Am I right that this was a 1528 formal binding policy that was implemented while you were 1529 at NIH? 1530 А That's correct. 1531 Q And this set of definitions, as we just saw, 1532 is a lot more specific. Can you tell us just a little bit 1533 about what this policy is, your understanding of how it 1534 came to be? You may or may not have been central to its 1535 crafting, but your understanding of the context of policy? 1536 А The policy was intended to allow time for 1537 deeper consideration about what kind of oversight ought to 1538 be applied in circumstances where the risks might be more 1539 significant. The decision was to include not just 1540 influenza, which had been the original concern, but also 1541 SARS and MERS, and also to include this in terms of 1542 mammals, but very explicitly to say this is limited to 1543 circumstances that would increase pathogenicity and/or 1544 transmissibility. Basically saying that NIH is not to 1545 prepare during this time to fund new grants that proposed 1546 those kinds of experiments.

1547 And a nuance of this policy that I think 0 1548 sometimes gets lost, am I right that this is a 1549 forward-looking test? In other words, the moment of 1550 decisionmaking is before the research in question has 1551 occurred; is that right? 1552 А Exactly. This is about new U.S. government 1553 funding will not be released. 1554 0 So it is not as simple as looking at a chart 1555 that summarizes work that has already happened and asking 1556 yourself, well, what happened in the experiment? For this 1557 purpose, it's about thinking what was reasonable to 1558 anticipate at the time that the work was being proposed? 1559 Correct. А 1560 All right, great. We focused mostly on 0 1561 NIAID grants in our previous conversations. There's 1562 probably a limit to which you would be familiar with the 1563 inner workings at NIAID and how they implemented this 1564 policy. But our 30,000 foot level of understanding is, at 1565 least in the division we're interested in, there was a 1566 committee called the Gain-of-Function and Dual Use Research 1567 of Concern Committee, whose job it was to ask themselves 1568 these types of questions when the pause was in effect. 1569 Our understanding is, with respect to the particular 1570 EcoHealth Alliance grant that has been of so much interest 1571 to so many folks, that that committee in the summer of 2016

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1572	asked themselves that very question, and that the answer
1573	that they produced was that, no, that the work in question
1574	was not subject to the 2014 pause.
1575	I don't know if you have a similar understanding, knowing
1576	that you, yourself, would not have been involved with that
1577	decision?
1578	A I don't have any firsthand information.
1579	Q Is that your general understanding from
1580	afar?
1581	A From afar, that's my understanding.
1582	Q Great. I think it makes sense perhaps to
1583	look at the third definition, which is the 2017 P3CO
1584	framework, so I will introduce as Minority Exhibit C, that
1585	framework.
1586	(Minority Exhibit C was
1587	identified for the record.)
1588	BY
1589	Q And I will give you a moment to look it
1590	over. This is longer, and I am not going to be asking
1591	about the whole thing, so there is no reason to read it
1592	front to back, but feel free to familiarize yourself.
1593	All right. So I'm going to do something similar. I'm not
1594	going to read the whole thing out loud, but there are two
1595	key definitions that I do want to read just for clarity.
1596	On the first page of full text under Scope and Definitions,

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1597 I will read part A, which is, "A potential pandemic 1598 pathogen (PPP) is a pathogen that satisfies both of the 1599 following: 1. It is likely highly transmissible and 1600 likely capable of wide and uncontrollable spread in human 1601 populations; and, 2. It is likely highly virulent and 1602 likely to cause significant morbidity and/or mortality in 1603 humans." 1604 Paragraph B tells us that, "An enhanced PPP is defined as a 1605 PPP resulting from the enhancement of the transmissibility 1606 and/or virulence of a pathogen. Enhanced PPPs do not 1607 include naturally occurring pathogens that are circulating 1608 in or have been recovered from nature, regardless of their 1609 pandemic potential." 1610 That's the end of that. So it may be that you had a little 1611 more involvement in this framework. Could you briefly just 1612 sort of describe for us what it is, what its purpose is, 1613 what its context was at the time it came into effect? 1614 So we talked a moment ago about the pause А 1615 which had as part of its plan that that was going to 1616 provide an opportunity for experts to look at this 1617 situation and come up with something that would be a more 1618 longstanding policy. That was a careful, deliberative 1619 process, driven particularly by the National Science 1620 Advisory Board for Biosecurity, NSABB, and which led them 1621 to this set of recommendations pretty much, although that

1622 went through another iteration by review by OSTP, and then 1623 finally a review and ultimate publishing of the framework 1624 by HHS.

1625 Importantly, this incorporated a lot of public input with 1626 opportunities for a lot of debate about how best to set in 1627 place the appropriate kind of policy that would have the 1628 greatest opportunity to recognize proposals that needed 1629 special scrutiny without creating such a bureaucratic 1630 nightmare that it would slow down other kinds of research 1631 that really were not of sufficient concern to justify that. 1632 That's how this came to be.

1633 Q Thank you. What are some important or 1634 relevant for you distinctions between this policy and the 1635 2014 pause? In other words, we see here talk about humans 1636 as opposed to mammals. Any other distinctions and their 1637 significance?

1638 A I think a couple main ones. One is, as you 1639 said, this refers to humans. The other was the scope of 1640 potential pathogens. Including in 2014, as we looked at a 1641 moment ago, was influenza, SARS, and MERS. This covered 1642 all potential pathogens of whatever group. So it was 1643 broader in that regard.

1644 Q Am I right that on the other side of the 1645 coin, a similarity between this P3CO and pause is that, 1646 again, they are both forward-looking?

1647 A Absolutely. This was an attempt to say from 1648 this point going forward, what are going to be our criteria 1649 for deciding whether research should get started or not, 1650 whether it should be funded or not.

1651 Q And I guess another distinction to point out 1652 is that the pause was just that, it was a pause. In other 1653 words, work subject to it simply could not occur during 1654 that three-year time. And this is a little bit different. 1655 It seems to describe a framework for further scrutiny 1656 before the work can occur?

1657 A Which was always the intent, that the pause
1658 would need to inspire a process, which this represents,
1659 that would allow a way for such research to be at least
1660 considered and not simply taken off the table.

1661 Q A similar question here that we discussed in 1662 the context of the 2014 pause, which is, again, from afar, 1663 our understanding is there's a somewhat similar process for 1664 sending a particular proposal for further P3CO review. And 1665 it involves a very complex set of events, peer reviewers 1666 and program officers are involved, at least in the NIAID 1667 context.

1668 And whatever that process, our understanding is that in the 1669 context of the EcoHealth grant in question, that that 1670 question was asked by the relevant folks and there was a 1671 decision made that that work also did not require referral

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1672 under the P3CO framework.

1673 From a distance, I know, is that also your general 1674 understanding?

1675 A That's my understanding.

1676 Q Great. Is it right to say that for you, 1677 when you think about or use the term gain of function in 1678 your professional capacity as director in forming a 1679 conversation like this, that you, depending on the time in 1680 question, are thinking in the context of either the 1681 definition in the moratorium, the pause, or the P3CO 1682 framework, as the case may be?

1683 A I am very sensitized to making sure in any 1684 conversation about gain of function, that the context is 1685 made explicit. If we're talking about a pathogen, then 1686 what time, what year are we discussing? Let's be sure we 1687 are applying the appropriate term of art to be sure we're 1688 not going to get confused.

1689 Q And I guess to repeat something that you 1690 already said, there's a substantive reason for that 1691 distinction. The first definition that we looked at is so 1692 broad that it captures work that is not reasonably thought 1693 of as being of concern.

1694 A And therefore, would not be appropriate to 1695 subject to a very high-level complex review when it carries 1696 no significant risk.

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1697 Great, thank you. I would like also to 0 1698 pivot to a different topic, which is the Proximal Origin 1699 paper, which I imagine is a paper that you are, at this 1700 point, generally familiar with; is that right? 1701 А Yes. 1702 0 Great. I will say at the outset, I don't 1703 think it makes sense to get into all the details of the 1704 science of that paper with you. As you pointed out at the 1705 beginning, you, yourself, are not a virologist and we have 1706 done all of that with the authors. We have flown around 1707 the country and we have sat with them and we have discussed 1708 full-length glycans and receptor binding domains and 1709 pangolins and furin cleavage sites. I am not going to do 1710 that with you unless you really, really want to. 1711 А It would be interesting, but probably not 1712 productive. 1713 Okay, great. What I do think might make Q 1714 sense is to spend a little bit of time on the separate 1715 question on who organized this paper. Of course, the 1716 authors wrote the paper, but there has been some degree of 1717 attention on the question of whether anybody else had the 1718 idea that the paper should be written or played an 1719 organizing or coordinating role in the process of 1720 publication.

1721 I will say that that question is probably a little bit more

1722 of interest to our colleagues in the Majority than to 1723 ourselves, but we have tried to take a very close look at 1724 it, and our view is based on documents and interviews with 1725 folks who were involved, that it does seem like Dr. Jeremy 1726 Farrar, who is a British scientist, was playing something 1727 that looks like that sort of a role with respect to this 1728 paper. 1729 I'll just pause there. From 30,000 feet, to the extent you 1730 were even able to see, is that your general recollection? 1731 А That is my general recollection. 1732 Okay. So I'm going to go into a little bit 0 1733 more detail. This Proximal Origin series of events 1734 occurred over a few different phases, not all of which 1735 involved you. Our understanding is there was a phone call 1736 between Dr. Kristian Andersen and Dr. Fauci right there at 1737 the end of January. Our understanding is that that 1738 conversation, you were not a part of that; is that right? 1739 А That's correct. 1740 All right. But we do understand that coming Q 1741 out of that conversation, Dr. Farrar went and set up a 1742 larger conference call for February 1st. That one had all 1743 sorts of international folks on it who had expertise, I 1744 guess, in evolutionary virology. 1745 There's been some question of how that call came to be and 1746 whose call it really was. We have a couple of documents, I

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1747 think, that help tell the story of that call, so I will 1748 introduce one of those as Minority Exhibit D. And this 1749 document, for the record, is Bates numbered NIH 791. I 1750 will give you a moment to look that over. 1751 (Minority Exhibit D was 1752 identified for the record.) 1753 The Witness. Okay. 1754 BY 1755 All right. So these email chains go in Q 1756 reverse order. In other words, the back is whatever 1757 happened first. I'm actually going to confuse you more by 1758 starting at the top of the first page with the most recent 1759 set of conversations. I just want to note it seems here 1760 that this provides a little bit of color into how you came 1761 into the conversation. 1762 You can see Dr. Fauci on the first page emailing this 1763 larger group, responding to an existing email chain and 1764 saying, "Please include Francis Collins on all subsequent 1765 correspondence regarding this call." And then Dr. Farrar 1766 says, "Francis, Call me." 1767 So anything you generally recall. That sort of speaks for 1768 itself, as far as how you came into it, but anything you 1769 would like to add about those discrete events? 1770 I don't have precise recollection of the А 1771 series of events here, but I was informed by Dr. Fauci that

1772 this call was going to happen, and that he thought I should 1773 join, since I, at that time, served as his supervisor, and 1774 with obviously incredible attention at that moment about 1775 what's happening with the pandemic. So I agreed to do so. 1776 Q Great. On the second page of the document, 1777 Bates labeled 792, we have an email from Dr. Farrar that 1778 sort of lays out exactly how this call was scripted to go. 1779 And so I'm just going to point to a few different aspects 1780 of that. 1781 Dr. Farrar says that, "I will be on email throughout," and 1782 to email Paul or I if there are any problems. We know from 1783 CC line that Paul works for Dr. Farrar at Wellcome Trust. 1784 I won't quiz you on that. 1785 Dr. Farrar says, "If you cannot make it, I will phone you 1786 afterwards to update." And there's an agenda down below 1787 where Dr. Farrar is assigning roles and he has assigned 1788 himself the introduction, the focus, and the desired 1789 outcomes, as well as the summary and next steps. 1790 So that feels pretty clearcut for us as leaders that 1791 Dr. Farrar was managing this conference call. Is that 1792 generally what you recall as well? 1793 А Absolutely, yes. 1794 Great. And I will say that that is Q 1795 consistent with what other folks who were on the call have 1796 said to us as well.

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1797 There's one more email on this February 1st call making 1798 sort of a similar point, but I do think it's worth looking 1799 at, so I will introduce that as Minority Exhibit E. 1800 (Minority Exhibit E was 1801 identified for the record.) 1802 BY 1803 Q I will give you a moment to look that over. 1804 It's not too long. 1805 А Mm-hmm. 1806 Q All right. So this one is Bates labeled 1807 NIH1902, and we see down at the bottom of the first page, 1808 an email from Dr. Farrar to Dr. Fauci. The subject is 1809 Conference details, and Dr. Farrar asks, "Could you join? 1810 Trying to set up an initial call with," and then he's got a 1811 list of names. 1812 Is it fair to deduce that the call Dr. Farrar is referring 1813 to there is what would become the February 1st conference 1814 call? 1815 А Yes. 1816 Great. And then Dr. Fauci forwards that on 0 1817 to yourself, and you reply that you will join. And then 1818 there's a discussion of whether Dr. Tabak will or will not 1819 join. You note that it would be fine with you if he did 1820 but, "I note Jeremy says he wants to keep this a 'really 1821 tight group'."

1822 So I don't really know how else to measure who controls a 1823 call, other than who it is that decides if it's big or 1824 small or who is on it. Is it fair for us to read this as 1825 being consistent with what we just talked about, that 1826 Dr. Farrar was sort of the manager and organizer of the 1827 call? 1828 А He was the convener. 1829 0 Great. And our impression, and part of this 1830 is from Dr. Farrar's book, which I don't have, I'm not 1831 going to show you, but we talked about it a little bit 1832 earlier where Dr. Farrar spoke at length about he was 1833 deeply concerned about what he was hearing about the 1834 possibility of where this virus came from. 1835 And so I just want to know if you recall. Our 1836 understanding is it's not that Dr. Farrar was sort of an 1837 administrative organizer, and only that he had substantive 1838 expertise and concerns about the topic at hand; is that 1839 right? 1840 That's correct. А 1841 I spoke over you. Is that correct? 0 1842 That's correct. А 1843 Great. All right. So after that call, what Q 1844 we have heard is that --1845 I'll pause there. We've got an additional 1846 Member that joined us. So if that Member wouldn't mind

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1847 identifying themselves?

1848 Mr. <u>Griffith.</u> Morgan Griffith, Chairman of the Oversight1849 Investigations Subcommittee of Energy and Commerce.

1850 _____ Thank you.



1852 0 So after the first February 1st call, we 1853 have heard that the authors of the paper went off and they 1854 wrote the paper. And as far as the paper itself goes and 1855 whether there was anybody other than the authors who was 1856 helping them along, we spoke to Dr. Kristian Andersen, one 1857 of the coauthors. He told us that Dr. Farrar was a father 1858 figure to the paper, which is sort of a strange phrase, but 1859 helps us understand who was what.

1860 And he also told us that you played no role at all in the 1861 paper. Dr. Robert Garry has called Dr. Farrar an amazing 1862 leader of the paper and told us that you did not influence 1863 the paper. Dr. Ian Lipkin joined a little late, but told 1864 us that nobody suggested to him that you were even involved 1865 in the paper.

1866 So as far as the paper itself goes, is that generally 1867 consistent with your recollection of your own role or lack 1868 thereof?

1869 A That is correct.

1870 Q Great. We have seen in the emails that the1871 authors would sometimes share drafts of the paper with

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1872 Dr. Farrar, and Dr. Farrar would sometimes forward those 1873 drafts on to yourself and/or Dr. Fauci. If you recall, as 1874 a recipient of those forwarding emails, did you see your 1875 role as more of you were meant to receive it and then go 1876 into the document and somehow edit, or was it more of an 1877 FYI type of thing? 1878 А It was for information, not for me to edit 1879 it. 1880 Q Okay. We can look at an example that I 1881 think is helpful. So I will introduce Minority Exhibit F. 1882 (Minority Exhibit F was 1883 identified for the record.) 1884 BY 1885 I will give you a moment to look that over. Q 1886 That one is Bates labeled NIH751, and I will not quiz you 1887 on the contents of the draft that is attached. 1888 So my only question is, in this example, it's two or three 1889 days after that February 1st conference call. It seems to 1890 be an example of exactly what we just talked about, which 1891 is Dr. Holmes sends whatever his current draft is to 1892 Dr. Farrar; Dr. Farrar forwards it to yourself, and 1893 Dr. Fauci says, "a very first rough draft from Eddie and 1894 team." 1895 To the extent that you recall, is this the situation that 1896 you just said, in other words, Dr. Farrar is sending it to

1897 you as an FYI?

1898 A Yes.

1899 Okay. There has been some discussion with 0 1900 respect to the substance of the paper. I know it's not 1901 your field of expertise, but there has been a thought or a 1902 conversation about whether these authors flip-flopped. In 1903 other words, as of that February 1st conference call, the 1904 theory goes that they were convinced that the virus 1905 originated in a lab, and just days later, they changed 1906 their mind and said it could not possibly have come from a 1907 lab. And the only intervening event was a conversation 1908 with yourself and Dr. Fauci, and there must be something 1909 not quite right about this whole thing. 1910 I just want to look at one example to examine the extent to 1911 which that was or was not the case, and so I will introduce 1912 Minority Exhibit G. 1913 (Minority Exhibit G was 1914 identified for the record.) 1915 BY 1916 I will give you a moment to look that over. 0 1917 That is Bates labeled REV411. 1918 А Okay. 1919 So this is now at February 8th. We are a Q 1920 week away from that original February 1st conference call. 1921 It's another example of Dr. Farrar forwarding on a draft,

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1922 except this time it's to a larger group that includes some 1923 of the folks who were on that conference call who are 1924 virologists or evolutionary virologists; is that right? 1925 Dr. Fouchier, as an example? 1926 А Yes. 1927 0 So Dr. Farrar is asking for a little bit of 1928 input as to the contents of the draft. I think, if you 1929 recall, but I would think it's fair to assume that he's 1930 looking for that input from folks such as Dr. Fouchier for 1931 whom this is their field, rather than yourself? 1932 That's correct. А 1933 All right. And in the draft itself, maybe 0 1934 just starting on REV413, the second page of the paper under 1935 the header Origin of 2019 nCoV. I'm just going to run 1936 through from a very, very high level what the draft seems 1937 to be doing at this moment in time, which is they're 1938 examining three possible origin scenarios, one being 1939 natural selection in humans, the other being natural 1940 selection in an animal host, and the third being selection 1941 during passage. In other words, a laboratory origin. We 1942 can just see those from the headers that flow on to the 1943 next page. 1944 At the very end of the paper, under the header Limitations 1945 and Recommendations, the draft tells us that, "The

1946 evolution scenarios discussed above are largely

1947 indistinguishable and current data are consistent with all 1948 three."

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1949 So is it fair to perceive as a reader that, at this point 1950 on February 8th, the authors were still taking the 1951 position -- I know that everybody had ruled out whatever 1952 that HIV theory was and deliberate creation and design in 1953 the laboratory off to the side, bioweapon off to the side. 1954 But when we talk about the possibility, for example, of a 1955 serial pathogen in a lab, the authors at this point were 1956 saying it's impossible to tell, we're perfectly open to 1957 that possibility.

1958 A That's correct.

1959 Q All right. I think there's a point worth 1960 making also about the final version of the paper itself. I 1961 don't think I'm going to introduce it, I'm just going to 1962 mention for your recollection, they have a couple of very 1963 conclusory phrases in that paper, such as: Our analysis 1964 clearly shows that SARS-CoV-2 is not a laboratory construct 1965 or purposely manipulated virus.

1966 As I said, we have had very detailed conversations with the 1967 authors of the paper. Their choice of exact words had a 1968 set of meanings for them that are not always obvious for 1969 the reader, particularly somebody who doesn't have that 1970 preexisting scientific background.

1971 For example, when they use the phrase laboratory construct,

1972 it turns out that what they had in their minds, according 1973 to them, was a virus whose backbone was identifiable as 1974 being from the Wuhan Institute of Virology. There are 1975 particular viruses that that lab worked with frequently 1976 that were well-known in the community. And they said, 1977 well, we didn't mean really any kind of laboratory 1978 construct, we meant specifically which one. 1979 So those types of nuances, I think, would it be fair to 1980 say, number one, not readily apparent from the words 1981 themselves and, number two, would not have been so apparent 1982 to you at the time as a reader? 1983 Would not have been. А 1984 They also had a few conclusions that could 0 1985 be read reasonably to conflict with each other. In one 1986 place, they say that they do not believe any type of 1987 laboratory-based scenario is plausible. In another place, 1988 they tell us that it is impossible to prove or disprove 1989 whether or not this was a result of serial passage in a 1990 lab. 1991 I think it is reasonable for a reader to get a little bit 1992 tangled up about how those can fit together, and I don't 1993 know whether at any point you have experienced a similar 1994 degree of confusion in the nuances of this paper. 1995 I do think careful reading of this does make А 1996 one a little unclear about how those two statements were

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1997 both intended.

1998 I think my own understanding related to the question about 1999 whether this was human engineered from scratch and this 2000 work done by these world experts strongly argue that is 2001 not.

2002 Q So that's a really helpful and important 2003 point that we've heard elsewhere, and my question will have 2004 you restate almost what you just said. But is there an 2005 extent to which the conversation -- when this conversation 2006 started, it was more focused on either the HIV theory or 2007 the idea of a bioweapon or deliberately engineered virus 2008 more so than a nuance such as serial passage?

2009 A The original question was, does this genome 2010 look like something that might have been put together 2011 intentionally by an investigator as opposed to deriving 2012 from a natural zoonotic event.

2013 Q And that first possibility of being 2014 intentionally put together does not, in and of itself, 2015 capture all possible lab origins, for example, selection 2016 during passage would be an example?

2017 A It does not.

2018 Q Great. Unless there's anything more you 2019 would like to add on the substance, I promised you I 2020 wouldn't drag you into it, and then I dragged you into it. 2021 There is just one more point that's related to this paper.

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2022 It has been suggested that either yourself or Dr. Fauci, or 2023 some combination of both, somehow bribed the authors of 2024 this paper to write an anti-lab leak paper in exchange for 2025 subsequent \$9 million grants that went to Dr. Andersen and 2026 Dr. Garry. We out of a feeling of due diligence asked the 2027 authors about this. Dr. Andersen told us that the 2028 allegations are false and that he had not even talked to 2029 you about his grant application. And we had an exchange 2030 with Dr. Garry that I will read out loud because I think 2031 it's helpful. 2032 We asked Dr. Garry, "Did Tony Fauci or Francis Collins ever 2033 threaten you or bully you or intimidate you into concealing 2034 or altering the findings of your paper or in any other 2035 way?" Dr. Garry said no. 2036 We asked Dr. Garry, "Did Drs. Fauci or Collins ever 2037 threaten to revoke or offer to provide federal funding from 2038 you in any way?" Dr. Garry said no. 2039 We asked, "Are you aware of any efforts by Drs. Fauci or 2040 Collins to suppress scientific inquiry into the origins of 2041 the virus?" Dr. Garry said no. 2042 And lastly, we asked, "Is there any version of this 2043 question that I haven't asked you yet to which the answer 2044 would somehow be yes?" Dr. Garry said, there is not. 2045 So I will ask you as well. Did you, in any way, ever 2046 threaten to withhold federal funding from the authors of

2047 this paper or promise to award federal funding to the 2048 authors of this paper if they changed or suppressed their 2049 findings?

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2050 A Absolutely not. I want to categorically and 2051 unequivocally say there was no such efforts to put pressure 2052 on the authors, in terms of any funding decision. And I 2053 want that to be absolutely clear.

2054 Q Thank you.

2055 With that, I will turn to my colleague, 2056

2057 Thank you.

2058 BY

2059 Q Good afternoon, Dr. Collins. You spoke a
2060 little bit in the first hour with the Republicans about the
2061 grant-making process at NIH, and I'm not going to go into
2062 all the details of that, but I do have a couple questions
2063 just to make things clear for the record.
2064 You mentioned the initial peer review or study section that
2065 is the initial group that will review for substance the

2066 grant application. And it's my understanding that the 2067 scientists and academics who make up that study section are 2068 not NIH staff, correct?

2069 A That's correct.

2070 Q And are they fully vetted for potential 2071 conflicts of interest and to ensure they have the HVC012550

2072 appropriate expertise prior to joining the study section? 2073 А Yes. 2074 And it is also my understanding that the 0 2075 advisory council or board, depending on the institute 2076 changes the title, but that that advisory council or board 2077 is also made up predominantly of people who are not NIH 2078 staff? 2079 А That's correct. 2080 Q And are those members of the advisory 2081 council or board also fully vetted for potential conflicts 2082 of interest and to ensure they have the appropriate 2083 expertise prior to joining the advisory council or board? 2084 А Yes, that's correct. 2085 Q And I spent a good amount of time reviewing 2086 the NIH grant process and I saw several references in 2087 various different websites and documents about the 2088 grant-making process that mentioned preventing conflicts of 2089 interest. So it seems that is a very high priority for 2090 NIH? 2091 Absolutely. А 2092 0 And that's to protect the integrity of the 2093 grant application process, correct? 2094 So it's above reproach. А 2095 Thank you very much, Dr. Collins. Q 2096 I think with that we can go off the record.

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2097 (Recess.)

2098 Mr. Benzine. We can go back on the record, and in a 2099 minute, Chairman Griffith wants to ask a few questions, but 2100 I want to state one thing very clearly for the record that 2101 this Committee has never made any allegations that you or 2102 Dr. Fauci bribed any of the authors to write the paper. 2103 Thank you. 2104 BY MR. GRIFFITH. 2105 Good to see you, Dr. Collins. Q Thank you. 2106 А 2107 I've got some tough questions for you, but 0 2108 we appreciate you. 2109 So here's one that I got out of the Fauci depositions. 2110 We're talking about all of this stuff, and it seems that he 2111 didn't know a whole lot about stuff and he would say, well, 2112 that would have been my Deputy Director Auchincloss's 2113 responsibility, or that was Francis Collins. 2114 So my question comes up, what is the role that Dr. Fauci 2115 used to perform? What was his job description? What's he 2116 supposed to be doing? Because it didn't sound like he was 2117 doing much of anything except sitting on top of the heap. As the director of the National Institute of 2118 А 2119 Allergy and Infectious Diseases, he carried a very heavy 2120 load of responsibility for overseeing what NIH's research 2121 program was for all infectious diseases as well as allergy.

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2122 And there's a bunch of immunology in there as well. 2123 When you consider the scale of that, the number of grants 2124 that his institute is supporting on any given day, 2125 thousands of them, he absolutely had to depend on subject 2126 matter experts in his institute which were an amazing group 2127 of extremely talented people. 2128 So I think as an effective leader, he needed to identify 2129 the areas that needed his attention and trust the expertise 2130 in his institute to handle almost all the rest of it. 2131 But when we asked him about whether he was 0 2132 aware of the EcoHealth Alliance grant and that they were 2133 doing sub-grants to Wuhan Institute of Virology, he seemed 2134 to indicate that he didn't have any knowledge at all of 2135 that process, didn't know, wouldn't have known if they were 2136 doing it, had a sub-grantee that was a foreign entity, even 2137 went so far as to say if you mentioned Wuhan to him in a 2138 general sense that he wouldn't have known what was there, 2139 whether it was a university, disavowed knowledge in advance 2140 of all the stuff that happened with COVID-19, disavowed 2141 knowledge of knowing what the Wuhan Institute of Virology 2142 was, and that there might have been some other entity that 2143 was in Wuhan. 2144 If you had just said Wuhan to him, he would have said, oh,

2145 it's a city in China. That just struck me as somebody that 2146 wasn't really paying attention. 2147 I understand that he may not know every little thing in 2148 every grant, but shouldn't he have at least been aware that 2149 he we were doing business at the Wuhan Institute of 2150 Virology?

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2151 A I don't think so, given the complexity of 2152 what his institute was trying to support across many 2153 different diseases, including work in other countries. 2154 Q Do you know if the EcoHealth Alliance was 2155 the only time that we had money that ended up getting into 2156 the Wuhan Institute of Virology? Were there other grants?

2157 A I don't know.

2158 Okay. Gain of function, and it's in the 0 2159 same vein. You all had posted at the time, and we had 2160 submitted an exhibit that showed what you all had on your 2161 website as the definition of gain of function. And I 2162 understand you talked about this earlier, but I wasn't 2163 here. And then Dr. Fauci had a different definition. 2164 I recognize both are valid. I'm not picking -- or picking 2165 on that. But my concern is, is that we don't -- from a 2166 policy standpoint, we don't appear to have a single 2167 definition that we're using when we're doing grants. 2168 So under the definition that was on the website, some of 2169 what they were doing in Wuhan might have been gain of 2170 function. By the definition with the three Ps and that 2171 process, they weren't. And I get that and I respect that,

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2172 but from a public perspective, that started a huge brouhaha 2173 in this country.

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2174 Shouldn't the NIH through all of its different departments 2175 have one definition of what gain of function is, and that's 2176 the one that ought to be posted?

2177 А We did talk about this earlier, and it 2178 clearly depends on context, Congressman, because you can't 2179 stop scientists from using the term gain of function in 2180 other ways that isn't necessarily sensitized to how precise 2181 that needs to be when you're talking about a pathogen. 2182 As I said earlier, look at what we're doing for cancer 2183 right now. We're saving people's lives with something 2184 called CAR-T cells. And that is giving gain of function to 2185 an immune system.

2186 I'm not against doing gain of function when 0 2187 it's not a pathogen. But the other is more debatable and 2188 I'm not here to debate that today. What I'm asking is, 2189 shouldn't there be a definition? Contextual, maybe at the 2190 cocktail party, it makes sense. Contextual, when you have 2191 certain Senators who are looking at the definition on the 2192 NIH site and then asking questions and you have this huge 2193 brouhaha, which if you would have had one definition 2194 wouldn't be a problem.

2195 Further, when you're giving out grant money, I think it 2196 would be a whole lot easier for those thousands of people

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2197 receiving grants, thousands of entities receiving grants, 2198 to know what the definition is and what is and isn't 2199 allowed. 2200 First, let's get the definition straight and then what is 2201 and isn't allowed. 2202 A I take your point that we need to be really 2203 clear about this, and that's exactly what -- starting back

2204 in 2013 with the original idea about a pause, and then the 2205 definition of P3CO, that's exactly what NIH --

2206 Q And I just --

2207 Mr. <u>Nassikas.</u> Can he finish his answer, Congressman?
2208 Mr. Griffith. That's fine.

2209 The <u>Witness.</u> I think you can't stop scientists who are not 2210 even working on infectious disease from saying the words 2211 gain of function now and then, because they're thinking of 2212 it in a different context. But for anybody who is doing 2213 research on a potentially infectious agent, they know that 2214 the definition NIH is going to go by is P3CO. That is not 2215 hard to find.

2216 BY MR. GRIFFITH.

2217 Q And I know you're not in charge anymore, so 2218 you can't make these things. But as a policy guy, I'm 2219 trying to figure out if we shouldn't, Congress, dictate 2220 that you post what you're doing if it's going to be on a 2221 pathogen, because that's what caused a -- we had a lot of 2222

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discussion in the previous depositions about that, because 2223 that's what caused a huge distrust by the American people 2224 when the spat occurred between Senator Paul and Dr. Fauci. 2225 And it was all based on the misunderstanding, grant you, I 2226 understand it was a misunderstanding, but it was because 2227 the NIH was unclear in its own documents as to what gain of 2228 function is, and I think there ought to be a definition. 2229 Even if it has to be multiple pages, it should be there. 2230 In the previous session, Congressman, we А 2231 actually looked at that definition. I think it is very 2232 clear and it's not hard to find. But I take your point, 2233 there has been a lot of confusion. 2234 Let me switch gears or stay in the same kind 0 2235 of vein because it's where I'm concerned, and that is 2236 vetting labs that we're doing work with. I think we do 2237 fair in the United States of America. I'm not saying we're 2238 perfect, we've obviously had problems. In my time on 2239 Energy and Commerce, we have seen some of those problems, 2240 not always NIH labs, but labs in general. 2241 Shouldn't the NIH, for all those thousands and thousands of 2242 grants that it awards through whatever divisions, shouldn't 2243 we be vetting the labs if some of our money is going there, 2244 so that we don't have a situation? Because no matter what 2245 happened at the lab in Wuhan, most people recognize -- let 2246 me stop there.

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2247 You would agree that most people recognized that BSL2 in 2248 Wuhan did not really mean the same thing as BSL2 might have 2249 meant in the United States, that they didn't have the 2250 proper filtration in their air systems, et cetera. 2251 Wouldn't you agree with that? 2252 А I don't have those details. 2253 Q But -- and then that begs the question. 2254 Shouldn't we -- and I'm looking at it as a policy maker, 2255 and I respect that you have a slightly different role. But 2256 shouldn't we, as a country, want to have a consistent 2257 pattern of where our research is being done, particularly 2258 if we're dealing with pathogens, and the labs actually are 2259 safe? 2260 А Absolutely. The question is, what is that 2261 policy, and how do you make sure you do something that's 2262 effective, but not so onerous that it makes really 2263 important research impossible. 2264 And shouldn't it be the NIH's job to do Q 2265 that, or should Congress have to step in? And I'm willing 2266 to step in, but should Congress be doing it or should NIH? 2267 Because these are really complicated А 2268 scientific questions in terms of exactly what the right 2269 answers ought to be, I would very much hope this could be a 2270 process that is based upon that science.

2271 Q And I'm happy to do it based on science, but

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2272 maybe legislate.

2273 All right. I've got some conflict of interest questions. 2274 One of the areas that Energy and Commerce is interested in 2275 understanding and strengthening are the conflict of 2276 interest disclosures for federally funded researchers. To 2277 most laymen, it would seem that scientists like Peter 2278 Daszak, Eddie Holmes, Ralph Baric, Linda Weiss, Bob Gary, 2279 et cetera, who have been extremely vocal and active in the 2280 public and governmental discussions about the origins of 2281 SARS-CoV-2 all had significant conflicts of interest when 2282 they weigh in on origins. 2283 Some of these scientists have collaborated with the Wuhan 2284 Institute of Virology, others are relying on access to bat 2285 caves and viruses that are collected from China, others 2286 have made their careers, their reputations, and their 2287 livelihoods conducting and proliferating the kind of gain 2288 of function research that many believe could have possibly 2289 started -- many believe could have possibly started the 2290 pandemic. I know that's not your position, but many 2291 believe that. So they aren't totally disinterested 2292 experts. They have skin in the game? 2293 In litigation, we solve this problem by disclosing to 2294 jurors that experts are hired by the parties to the lawsuit 2295 because knowing that is relevant for a jury to consider 2296 when evaluating the expert's testimonies.

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2297	So is it your opinion that Dr. Daszak has a conflict of	
2298	interest when discussing the origins of SARS-CoV-2, given	
2299	his ties to the Wuhan Institute of Virology?	
2300	А	I'm not sure I can speculate on that. It
2301	would depend on the setting in which he was expressing his	
2302	view.	
2303	Q	Well, how about to this Subcommittee, or to
2304	this Committee and my Subcommittee?	
2305	A	I don't think I'm not in a good position
2306	to assess that.	
2307	Q	How about Ralph Baric?
2308	А	I would have to give the same answer. I
2309	don't know the context.	
2310	Q	Eddie Holmes?
2311	А	The same answer.
2312	Q	All right. So here's my position on that.
2313	And, look, nobody is accusing you or Dr. Fauci of bribing	
2314	people. But when it comes to those thousands and thousands	
2315	of grants, you all are the are you all the biggest in	
2316	the world on giving grants for medical research?	
2317	A	Yes.
2318	Q	Okay, I thought that was the case, and I'm
2319	glad that's the case. That being said, you all are kind of	
2320	like Darth Vader when you walk in the room. Somebody might	
2321	not be in trouble, but they don't want to get in trouble.	

of trouble.

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They're going to scurry off to the side and try to stay out

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2324 So when you all issue an opinion on something or statements 2325 are made that -- about, you know, we highly 2326 disregard -- and I'm paraphrasing, but disregard a lab leak 2327 theory, don't you think that would make people 2328 uncomfortable who might be on the fence or might want to 2329 keep an open mind on that? Don't you think it would make 2330 them uncomfortable that maybe if they challenge the giant 2331 of research and the two people that are leading it, that 2332 they can get in trouble? 2333 I don't think so. I think it's a scientific А 2334 organization. Part of the way we operate is by encouraging 2335 challenges. I would honestly want to support that, 2336 encourage exactly that kind of contrary view.

2337 And I know you would, but I fear that maybe Q 2338 the power of those two offices is so great that 2339 notwithstanding your intent -- because I know your heart is 2340 a good heart. I'm not challenging that at all -- that you 2341 may inadvertently have influenced some of the discussion on 2342 origins early on. Can you see that as a possibility? 2343 Ms. Brandon. Congressman, could I ask a clarifying 2344 question?

2345 Mr. <u>Griffith.</u> Sure. I'm asking him if he is willing to
2346 recognize that there is a possibility based on the strength

2347 of his office and his organization that scientists might 2348 have been hesitant to challenge the clear position coming 2349 out of their institution that the natural source was the 2350 only real likely source? Ms. Brando<u>n.</u> I understand. 2351 2352 Dr. Collins, did you ever tell the authors of Proximal 2353 Origin --2354 Mr. Griffith. No, I'm not asking him if he told. I'm 2355 asking him if it's a possibility he thought it might 2356 influence somebody. It's not a matter of direct telling. 2357 What I'm asking is, is he willing to recognize the 2358 possibility that his merely stating that would make some 2359 scientists question whether they should go in the direction 2360 to look for a source other than the natural source. 2361 Ms. Brandon. Sir, I'm just trying to clarify that. To my 2362 knowledge, I don't think Dr. Collins ever suggested that 2363 there was a natural origin to these authors before they 2364 wrote the paper. 2365 Mr. Griffith. Oh, okay. 2366 BY MR. GRIFFITH. 2367 0 Is that accurate? 2368 А State the statement again?

2369 Q I'm going with her question, so she'll have 2370 to restate it.

2371 Ms. <u>Brandon</u>. Prior to the February 1 phone call or during

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2372 the February 1 phone calls, did you express an opinion that 2373 you thought that the origins of COVID were natural? 2374 The Witness. No. 2375 BY MR. GRIFFITH. 2376 Q But after the February 1 phone call, you 2377 did? 2378 А Based upon the conclusion of the experts. 2379 0 And wasn't there an email out there 2380 somewhere that indicated that you needed to shut down the 2381 lab leak theory? Because -- go ahead, answer and I'll 2382 follow up. 2383 We should take a minute to talk about what's А 2384 meant by lab leak. 2385 Q Any kind of a lab accident. I'm not saying 2386 anything intentional. I'm saying something that happened 2387 at the lab. I'm not including -- we've got a discussion 2388 with Dr. Fauci. I'm not including a person who worked at 2389 the lab who went out into the field and came back with the 2390 virus. I'm talking about something that happened in the 2391 lab. 2392 Mr. Nassikas. And Dr. Collins is going to answer your 2393 question, but he has to put the context. 2394 Mr. Griffith. I understand. 2395 The Witness. We're talking now about early sort of late 2396 winter, early spring 2020. In my mind, the question that

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the experts were trying to address primarily was, was this virus human engineered. Was it, in fact, created from

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2399 scratch by somebody who was trying to create a really 2400 dangerous pathogen.

I thought the evidence was strongly against that. That is one kind of way that the lab leak was being utilized by some people, and I thought that kind of use of lab leak was not something that should continue to be propagated, and yet it was in some settings.

2406 So in answer to your question, yes, I was very much opposed 2407 to the idea that the continued assertion that this virus 2408 had been human engineered should be just left unchallenged. 2409 It needed to be challenged.

2410 Q This went further than challenging it. You2411 said it ought to be put down, didn't you?

2412 A Well --

2413 Q Put a stop to it right away?

2414 A By that, I meant that we should do what we 2415 can to get the truth out there, as opposed to statements 2416 that were reckless and speculative that were not based on 2417 evidence.

2418 Q How do you explain the furin cleavage site
2419 and the 12 nucleotides that show up in this coronavirus
2420 that don't show up anywhere else prior to this?

2421 A I can't explain it. I can certainly point

2422 to the fact that furin cleavage sites have appeared in 2423 other coronaviruses, not beta coronaviruses, but other 2424 coronaviruses, so there is some way in which that can 2425 happen naturally. I can't explain how it happened with 2426 SARS-CoV-2.

2427 Q And do they always have those 12 nucleotides
2428 when they have the furin cleavage site? Because that's
2429 what made it really contagious, I understand.

2430 A The furin cleavage site has to be a certain 2431 series of amino acids, so 12 nucleotides, that's four amino 2432 acids, and that's generally what it takes to make a furin 2433 cleavage site.

2434 Q All right. Slightly switching again.
2435 A Fine.

2436 It bothers me, and Dr. Fauci said this in Q 2437 his hearing. What he said didn't bother me, but it 2438 triggered thoughts in my mind. He said we need to -- he 2439 was keeping an open mind, he believes that it's a natural 2440 source, and that we need to continue looking for the 2441 natural source, but to keep an open mind on the other if 2442 you could find evidence. And he said one of the problems 2443 was that we couldn't find any evidence of a lab incident. 2444 Maybe that's a better way of using that word, a lab 2445 incident, because the Chinese wouldn't cooperate. 2446 And as a recovering attorney, did a lot of small courtroom

2447 cases for decades, sometimes the lack of behavior or the 2448 lack of evidence tells me something. And here's what I'm 2449 seeing and I would your comment on it. 2450 The Chinese have not done extensive scouring for animals. 2451 They haven't really been looking hard for the source. You 2452 agree with that? 2453 А I agree with that. 2454 0 If they didn't believe it was a lab leak, 2455 wouldn't it be in their interest to look for that source 2456 and find that source, so that they could say, look, it 2457 wasn't us? 2458 Actually, I wouldn't agree. А 2459 Tell me why. Q 2460 А I think it's in the Chinese's best interest 2461 for this to be unresolved. If it was a lab leak, they're 2462 responsible. If it was a natural origin in a wet market 2463 that was selling wild animals that they were not supposed 2464 to be doing, they're responsible. So they love it that 2465 this hasn't gotten resolved. 2466 And I understand that, but their level of 0 2467 culpability is greater if it's in a facility that they own, 2468 as opposed to a natural source. And it seems to me that 2469 their failure to look strenuously for the natural source 2470 indicates that they know it's a lab leak.

2471 A I don't agree. I think they're just as

2472 culpable.

2473 We will disagree on that. 0 2474 Mr. Griffith. Give me just a minute. All right. I will 2475 yield back. 2476 Mr. Benzine. Thank you, sir. 2477 I want to introduce Majority Exhibit 1. 2478 (Majority Exhibit No. 1 was 2479 identified for the record.) 2480 BY MR. BENZINE. 2481 Q So this is an op-ed that you, in addition to 2482 Drs. Fauci and Dr. Gary Nabel, wrote December 30, 2011 in 2483 The Washington Post, I believe in response to 2484 Dr. Fouchier's experiments on avian influenza in ferrets. 2485 I will give you a minute to flip through, you don't need to 2486 read it word for word, but I guess the first kind of 2487 question is, do you remember drafting this article? 2488 А It was 12 years ago, but I vaguely remember 2489 it. 2490 Do you remember if it was, like we've heard Q 2491 a lot of things in science, drafted by committee seems to 2492 be a term that floats around. Do you remember who was the 2493 lead drafter, or was this all kind of done together? 2494 I don't remember. А 2495 The line that I want to talk most about is Q 2496 on the first page and starts the third paragraph.

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2497 Mr. <u>Nassikas.</u> One second. If you could let him finish his
2498 scan.

2499 The <u>Witness.</u> Okay. Sorry, go ahead.

2500 BY MR. BENZINE.

2501 Q The start of the third paragraph is, "Given 2502 these uncertainties, important information and insights can 2503 come from generating a potentially dangerous virus in the 2504 laboratory." The rest of the article talks about kind of 2505 the risk/benefit analysis and ensuring the information is 2506 used for good. And I want to talk about each of those. 2507 I guess, generally, what kind of important information 2508 could come from generating a potentially dangerous virus in 2509 the laboratory?

2510 А Once again, I'm not a virologist, but the 2511 argument has been made that if you were trying to 2512 anticipate a future dangerous pandemic, it helps to know 2513 what you're looking for. So if, under carefully controlled 2514 conditions, you can study a virus like influenza and 2515 discover that certain changes in its genome might be 2516 associated with greater human risk, then you know in your 2517 surveillance you should be looking for those kinds of 2518 changes.

2519 Q Does that logic also apply to like we've 2520 talked about, kind of the difference between an already 2521 known human pathogen and a novel virus? Does that logic **2522** apply to novel viruses as well?

2523 A It's harder to see that, if that's not a 2524 virus that you are currently planning to do surveillance 2525 for.

2526 Q So I guess in the EcoHealth context, the 2527 vast majority of what they do and specific in that grant is 2528 surveillance work going, collecting samples, bringing them 2529 back, and testing to see if they could infect either ACE2 2530 mice or humanized mice. I learned on Monday that those are 2531 different things. That a humanized virus is kind of the 2532 entire mouse ecosystem is now a human ecosystem.

2533 A Immune system.

2534 Q Immune system, versus the ACE2, just 2535 changing the ACE2 receptor in the mouse. So a lot of what 2536 they did were changing out spike proteins on an already 2537 understood backbone to see if the new spike protein could 2538 pierce the ACE2 receptor. That seems potentially dangerous 2539 to me. Does that sound dangerous to you?

2540 A The goal of those experiments, again, was to 2541 try to understand whether what happened with SARS and what 2542 happened with MERS might happen again, in a careful way, to 2543 assess what's the property of a virus in that family that 2544 is most likely to be a concern.

2545 Q The article also touches on the risk/benefit
2546 analysis. And from what we've kind of gleaned, that falls

2547 in the P3 realm that in addition to -- like, NIAID would 2548 make the determination of whether or not it met the P3 of a 2549 potentially enhanced pandemic pathogen. And then the P3 2550 board would do a risk/benefit analysis on whether or not 2551 the proposed research was worth the risk. Is that correct? 2552 А I think you said something I don't quite 2553 agree with. 2554 0 Okay. 2555 А That this was in the P3 realm. 2556 Q No, not this. That the risk/benefit 2557 analysis falls under the P3 realm. 2558 The point of the policy is to try to put in А 2559 place a very high level deliberative body that could assess 2560 whether the benefits are worth the risk. 2561 So it would be the P3 board's job to Q 2562 determine risk/benefit, not the NIAID grant officials? 2563 I think the pathway was pretty clear that if А 2564 NIAID officials observed an incoming application that 2565 appeared to be in this place as described by P3CO, they 2566 would flag it, and then the higher level review would need 2567 to happen before funding. 2568 Q What has been unclear and we're trying to 2569 figure out is where that bifurcation happens, where we're 2570 no longer talking about just does this research propose

2571 working within ePPP versus a determination made of whether

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2572 or not it's worth it.

2573	And our understanding from NIAID is that they don't look at		
2574	whether or not	the research is worth it. The research	
2575	comes in, ePPP	check, send it up to the P3, P3 does the	
2576	risk/benefit.	Does that sound right?	
2577	A	Certainly NIAID is involving in assessing	
2578	whether the science is compelling. That's what the peer		
2579	review process does, so they're not abandoning that.		
2580	Q	It's unclear to us whether or not a	
2581	risk/benefit analysis takes place unless something is		
2582	referred to the P3.		
2583	A	No, I would not agree with that.	
2584	Q	Okay.	
2585	A	All peer review involves risk/benefit. The	
2586	risk might be you spent money and got nothing useful, and		
2587	the benefit is going to be you're going to advance human		
2588	knowledge. So that's happening to everything that NIH		
2589	looks at.		
2590	Q	The third kind of big thing that is	
2591	mentioned in this article is ensuring that the information		
2592	that comes from this research is used for good, the kind of		
2593	dual use conce:	rns. How does NIH go about that?	
2594	A	I'm not that familiar with the precise	
2595	policies about	dual use research of concern, DURC as it's	
2596	called. So I o	can't actually quote you the precise way in	

2597 which that oversight happens.

2598 Who at NIH would be in charge of that? 0 2599 Every institute has to have some А 2600 capabilities in that space. I can't tell you exactly who 2601 that person would be. 2602 0 Okay. For research that has been flagged, 2603 does NIH review publications prior to them being published? 2604 А Not ordinarily. But if something has been 2605 flagged, as was the case 12 years ago with influenza, that 2606 might happen. 2607 Okay. I guess, again, that's kind of what 0 2608 we're trying to figure out. If a research proposal is 2609 going forward prior to a researcher potentially publishing 2610 a roadmap on creating a dangerous virus, if the U.S. 2611 government is given the opportunity to weigh in. 2612 Certainly at the level of reviewing the Α 2613 proposal, yes. 2614 Q Okay. 2615 At the level of reviewing all publications А 2616 before they appear, not unless it's a special circumstance. 2617 Influenza is an example. 2618 Q Like this one, NIH was able to review the 2619 Fouchier publication prior to publishing. 2620 That was reviewed by a group. I don't А 2621 recall, it might have been the NSABB because they were in

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existence at that time, or it might have been some other ad

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2623 hoc group. 2624 Mr. Benzine. Thank you. 2625 BY MR. STROM. 2626 Q Dr. Collins, from the 2011 article through 2627 to the '14 pause, it sounds like, and I think you mentioned 2628 in talking with Mr. Griffith, there's a sort of an ongoing 2629 discussion about some sort of deliberative pause on gain of 2630 function experiments. 2631 So my understanding is that in 2014, as these deliberations 2632 were underway, NIH rejigged or made adjustments to the 2633 NSABB's composition budget and mission statement or 2634 charter. Do you recall those events? 2635 I don't. А 2636 Okay. I'm going to give you this article Q 2637 here to try to see if it will refresh your recollection. 2638 We'll pass these around. 2639 (Majority Exhibit No. 2 was 2640 identified for the record.) 2641 BY MR. STROM. 2642 So as you're reading it, I can sort of 0 2643 summarize it, and for the record, give the title. It's a 2644 Reuters article called "U.S. rolls back oversight of 2645 potentially dangerous experiments," it was published August 2646 13, 2014, so it's almost two months to the day before the

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2647 pause goes into effect.

2648 Real quick, is there more than one copy 2649 for the Minority if possible? 2650 Mr. <u>Strom.</u> I made 10 copies or so. They're making their 2651 way around.

2652 Thanks, John.

2653 Mr. <u>Strom.</u> And just to note, the article itself is only 2654 about three-and-a-half pages long. 13 is just ads. 2655 BY MR. STROM.

2656 Q So just to give you the layman's view. In 2657 reading this article, it sounds as if, in the aftermath of 2658 the controversial influenza experiments, the NSABB had made 2659 a recommendation that I think really ran counter to sort of 2660 the core principles of sort of open scientific publication 2661 of wanting to share methods of replicability and concerns 2662 like that, because of the potential dual use nature of the 2663 research. Is that consistent with your understanding? 2664 Yeah, maybe I wouldn't have called it ran А 2665 counter. I think they tried to balance whether this, as a 2666 scientific event, was important and I think they thought it 2667 was. But was it creating a risk because of the possibility 2668 that others might try to replicate.

2669 Q Sure. And then the last paragraph on the 2670 first printed page says, "In the last two years, members of 2671 the NSABB found their responsibilities reduced and their

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meetings canceled, and nearly a dozen were abruptly dismissed, according to seven current and former board members, and a Reuters review of agency documents."

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2675 The article also says that there was a reduction in the 2676 responsibilities of the board and that its charter was 2677 modified, and then that its budget was cut from around 2678 \$300,000 to just about \$150,000.

2679 So the impression it gives is that as this discussion is 2680 gearing up, and it came under the Obama administration, is 2681 a discussion about whether it's appropriate to have a pause 2682 or to put more guard rails on it is that NIH or NIAID are 2683 sort of systematically dismantling their oversight board, 2684 their recommendation board.

2685 So I guess my question would be, is that sort of -- to the 2686 best of your recollection, what led you -- what led NIH to 2687 dismiss these 11 members of the board? Let's start with 2688 that.

2689 A I have no recollection of this.

2690 Q And then, do you recall what caused NIH to 2691 change the board's charter?

2692 A I do not know.

2693 Q And then a similar question. Do you recall2694 what caused NIH to half the NSABB's budget?

2695 A I do not know.

2696 Q And then --

2697 BY MR. BENZINE.

2698 Who would have the authority to remove 0 2699 members from NSABB? 2700 I would have to look at their charter. I А 2701 don't remember whose authority that's under, whether that's 2702 NIH or the department. 2703 BY MR. STROM. 2704 0 The NSABB reports to the NIH Office of 2705 Science Policy, I believe, that is part of your broader --2706 А They staff it. 2707 They staff it? 0 2708 I would have to look at the charter to see А 2709 to whom they actually report. 2710 Q Sure. So I guess, to your recollection, was 2711 there a sense at NIH that a pause wasn't needed, opposition 2712 to pausing this kind of research? I'm just trying to 2713 understand why they would make these adjustments to an 2714 outside advisory board or recommendations, while at the 2715 same time that obviously there are people within the Obama 2716 administration who are deeply concerned about the nature of 2717 this kind of research. 2718 I can't really come up with an explanation А 2719 for the changes that you're mentioning. I do have to point 2720 out the NSABB became the most critical first part of 2721 figuring out what they should do that led ultimately to

2722 P3CO. So they were not exactly pushed aside. They were 2723 asked to take on a very critical role. 2724 And you don't recall if the membership 0 2725 changes were related to that new role that they were taking 2726 on? 2727 А I don't recall. **2728** Q Thank you. 2729 BY MR. BENZINE. **2730** Q So the Minority introduced the deliberative 2731 gain of function pause as Exhibit B. 2732 А Okay. 2733 I'm not going to ask about the language in Q 2734 it, but if you want to have it in front of you. 2735 Were you involved at all in the conversation leading to 2736 this policy? 2737 I probably was at a high level, not in a А 2738 detailed level. I don't recall precisely what role I was 2739 asked to play. 2740 We can skip through some of them and move Q 2741 along to the P3, which I believe the Minority introduced as 2742 Exhibit C. 2743 Were you involved at all in this? 2744 I was involved in terms of knowing it was А 2745 going on, making sure that the appropriate plans were in

2746 place about how to get the right groups to look at this.

2747 0 Can you go into a little bit more detail on 2748 that? What do you mean by the right groups to look at 2749 this? 2750 А That this began with the NSABB effort, and 2751 that it also then needed to be reviewed at the level of 2752 OSTP and the department. 2753 Was NIH involved at all in the drafting of Q 2754 the operative language? 2755 А No. 2756 Q Do you know who was? 2757 The original draft was from NSABB. Those А 2758 are individuals who are not government employees. 2759 And then approved by OSTP and then approved Q 2760 by HHS? 2761 А Correct. 2762 It's our understanding that NIAID, and it's Q 2763 a department-wide policy, but that NIAID and NIH are the 2764 only ones to ever submit anything to the P3. Is that 2765 consistent with yours? 2766 I can imagine that being the case. They're А 2767 the ones who support this kind of research. 2768 Q And it would seem maybe a little contrary to 2769 understanding that because NIAID is the prime, and NIAID 2770 and NIH are the primary users of the language, that they

2771 weren't involved in the drafting of the language. Is that

2772 odd to you?

2773 No, I think you wanted to have the most А 2774 objective expert input on how to do this. 2775 Okay. And the Minority talked a little bit Q 2776 about it, and I just want to make sure I have it clear. So 2777 in order to meet the definitions in the P3CO, the 2778 underlying prerequisite is the pathogen proposed being 2779 worked on is known to infect humans; is that right? 2780 А That's right. 2781 Q And then the proposed research would have to 2782 make that pathogen more highly transmissible or virulent; 2783 is that right? 2784 Potentially. А 2785 All right. Reasonably anticipated or Q 2786 something, I think, is the language. And we talked about 2787 this briefly, but just again for clarity, this language 2788 wouldn't apply to research on novel viruses, even creating 2789 chimeras, because the novel virus is not known to have 2790 infected humans; is that right? 2791 According to this definition, that's right. А 2792 0 Do you believe that there should be 2793 oversight of that type of work? 2794 That's a complicated question that I think А 2795 deserves a deep look, and has been looked at again by the 2796 NSABB in more recent deliberations.

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2797 0 Thank you. I want to talk a little bit 2798 about the Wuhan Institute of Virology and just your 2799 knowledge of what was going on there, if there was any. 2800 And if there's not, let us know. 2801 А This could go quite quickly. 2802 0 Perfect. So the Wuhan Institute was China's 2803 first -- or involved China's first BSL Level 4 laboratory. 2804 They also had 2 and 3. Is that your understanding? 2805 А That's my understanding. 2806 Q And at least in the United States, there's 2807 various levels of research that can have each BSL4, and 2808 it's like a pathogen with no known human -- or no known 2809 solution, I guess is an easy way to put that. 2810 The Office of the Director of National Intelligence, in 2811 response to a statute from Congress signed by the 2812 President, issued a declassified memo on the Wuhan 2813 Institute of Virology. Have you read that memo? 2814 А I don't believe I have. 2815 Okay. In it, it describes a relationship Q 2816 between the Wuhan Institute and the People's Liberation 2817 Army of China. Do you have any knowledge of that 2818 relationship? 2819 А I do not. 2820 And then it also describes that the Wuhan Q 2821 Institute first possessed SARS-CoV-2 in late December of

2822 2019. Do you have any knowledge of that?

2823 A I do not.

2824 We've kind of discussed that already, that 0 2825 Dr. Holmes, the Chinese CDC, Dr. Daszak, at least a couple 2826 other people, including the Wuhan Institute, had sequenced 2827 the virus, and knew it was a coronavirus by late December. 2828 But the notification to the world was an unknown pneumonia 2829 which, looking back and having that information, certainly 2830 seems like a misstatement, if not an outright lie. Does it 2831 concern you that they kind of had this base of knowledge 2832 and then weren't reporting it?

2833 A It concerns me.

2834 Q Were you involved in any conversations 2835 regarding lack of transparency from China during the 2836 outbreak?

2837 A No.

2838 ODNI also reported that scientists at the Q 2839 Wuhan Institute have created chimeras of SARS-like 2840 coronaviruses through genetic engineering involving 2841 techniques that would make it difficult to detect 2842 intentional changes. Were you aware of that? 2843 А No. 2844 Are you aware of the capability to Q 2845 synthesize viruses without being able to tell that they

2846 were synthesized?

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2847 Yes, absolutely. I'm a molecular biologist. А 2848 0 So I guess you are the expert in this kind 2849 of area of being able to synthesize those things, and you 2850 just have knowledge of not being able to leave a trace. A 2851 lot of people have said that just looking at the genome, 2852 you can tell that it wasn't -- a Proximal Origin study, you 2853 can tell it wasn't an intentionally manipulated virus. But 2854 scientists are capable of intentionally manipulating 2855 viruses without leaving fingerprints, so how do you think 2856 you can come to that statement? 2857 А The sequence of SARS-CoV-2 would not have 2858 been predicted to be a particularly effective and 2859 infectious virus. Somebody who was aiming to design this 2860 from scratch would never have chosen the particular 2861 sequence of nucleotides that this virus represents. 2862 And we've heard that, too, and we've also Q 2863 heard from the interview that a scientist at DARPA who used 2864 to be at the National Center for Medical Intelligence under 2865 the Defense Intelligence Agency, and he told us through 2866 their research that scientists don't necessarily seek 2867 perfection, that it's specifically in the pandemic 2868 preparedness realm that when you're trying to see if a 2869 virus has the potential for spillover, you understand that 2870 Mother Nature usually isn't capable of perfection. 2871 So when you're synthesizing the viruses and piecing it

2872 together, you're actually trying to mimic recombination in 2873 nature, not necessarily designing a virus from scratch. Is 2874 that consistent with your understanding? 2875 А It still wouldn't fit this situation. 2876 Q Why not? 2877 А Because the sequence of this virus would not 2878 be arrived at by recombination between what we knew at that 2879 time. 2880 Q It couldn't have? 2881 А It would not fit. 2882 Okay, why? 0 2883 Because what we knew about the infectious А 2884 nature of coronaviruses would have predicted that this 2885 virus wouldn't work. 2886 Q The ODNI report also said that Wuhan 2887 researchers probably did not use adequate biosafety 2888 precautions at least some of the time prior to the pandemic 2889 in handling SARS-like coronaviruses. Do you have any 2890 knowledge of that? 2891 А I don't. 2892 0 And the final section says, "several lab 2893 researchers fell ill in the fall of 2019 with symptoms, 2894 some of their symptoms consistent but not diagnostic of 2895 COVID-19, and the IC continues to assess that this

2896 information neither supports nor refutes either hypothesis

2897 of the pandemic's origins."

2898 Do you have any knowledge of ill researchers at the WIV?2899 A Not at all.

2900 Mr. Griffith. I've got a follow-up question.

2901 Mr. Benzine. Absolutely. Yes, sir.

2902 BY MR. GRIFFITH.

2903 0 So we've got these scientists, they're 2904 working on sequences. They're not trying to create 2905 something that's going to go out and be a pandemic or a 2906 pathogen to human beings. They're just trying to say, what 2907 happens if we do this. And doesn't that happen a lot of 2908 times in science? People say, let's see what happens if we 2909 rearrange this, this way, not expecting it to be a 2910 pandemic, not trying to make a pandemic, just goofing 2911 around in the lab trying to say, hey, what happens if we do 2912 this?

2913 A For them to have landed on this particular 2914 sequence out of all the entire universe of possible tweaks 2915 they might play with, that just stretches the imagination.

2916 Q And that's what we do in science, isn't it,
2917 stretch the imagination?

2918 A To a point.

2919 Mr. Griffith. All right.

2920 Mr. Benzine. We can go off the record.

2921 (Lunch recess taken.)

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2922 AFTERNOON SESSION 2923 We can go back on the record. 2924 BY 2925 Dr. Collins, starting with a few questions 0 2926 about a few topics that were discussed in the previous 2927 round. 2928 А Mm-hmm. 2929 0 One of them is, just for the record, there 2930 was some discussion in our initial round about the extent 2931 to which there has or has not been an accusation made 2932 against yourself and Dr. Fauci about a \$9 million grant. 2933 There is a mention that that accusation has not been made. 2934 Just for the sake of the record, it's helpful, I think, for 2935 me to read that in Select Subcommittee hearing on 2936 investigating the origins of COVID on March 8th of last 2937 year, there was an exchange between Congressman Jordan and 2938 Nicholas Wade who was a witness at that hearing. And the 2939 topic at hand was the extent to which the authors of 2940 Proximal Origin either did or did not change their views 2941 for some reason other than science. 2942 Mr. Wade said, "Well, if you're looking at the timeline on 2943 May 21st, just a few weeks after the nature med -- the 2944 nature medicine argument had come out, two of the 2945 signatures of the origin email to Dr. Fauci, that's 2946 Dr. Andersen and Dr. Garry, were awarded a \$9 million

2947 grant."

2948	Mr. Jordan responded, "So there's 9 million reasons why
2949	they changed their mind. I know you would get to it, I
2950	read that last night, three months after, so three days
2951	after they say it came from a lab, they change their
2952	position. And the only intervening event, the conference
2953	call with Dr. Fauci and Dr. Collins, again a call that
2954	Mr. Redfield was not allowed to be on, the head of CDC and
2955	on the Coronavirus Task Force, and then three months later,
2956	shazam, they get 9 million bucks from Dr. Fauci."
2957	That's the end of the quote. I think it's difficult to
2958	read that quote in any other way than from what you and I
2959	had discussed, and I just thought that would be helpful for
2960	the record.
2961	Mr. Benzine. Sorry, just a question for clarity
2962	of the record.
2963	Sure.
2964	Mr. <u>Benzine.</u> Was Mr. Jordan the Chairman of the Select
2965	Subcommittee?
2966	He is certainly not the Chairman of the
2967	Select Subcommittee.
2968	Mr. <u>Benzine.</u> Thanks. We can move on.
2969	I will say if the distinction rests on
2970	whether or not he is a Member of the Select Subcommittee,
2971	that distinction probably is not that meaningful for

2972 Dr. Collins when those sorts of comments are made.

2973 Mr. <u>Benzine.</u> My point is to be clear what didn't come from 2974 Chairman.

2975 Certainly, we agree with that.

2976 Mr. <u>Benzine.</u> All right, thank you.

2977 BY .

2978 Q My first sort of substantive clarification. 2979 This website definition of gain of function. We will come 2980 back to it again, sorry, I don't know how many times we can 2981 have the exchange, but our understanding is there was no 2982 confusion amongst staff or at the director level or amongst 2983 grantees about whether or not that was somehow an operative 2984 definition of gain of function; is that correct?

2985 A That's correct.

2986 Q Okay. The regulated community, as well as 2987 the agency itself, understood at all times that the 2988 operative definitions were found in the 2014 pause for 2989 those three years, and then in the P3CO framework from 2017 2990 onward; is that right?

2991 A That's correct.

2992 Q Great. A somewhat minor technical point.
2993 There was a very brief mention of BSL levels and the extent
2994 to which, for example, a BSL2 in the United States might be
2995 something different from BSL2 in China.

2996 Our understanding is that the levels themselves are

2997 internationally recognized, the differences might be in 2998 different countries what the appropriate levels are for 2999 different types of work. Is that also your general 3000 understanding? 3001 А I'm not an expert, but that's my 3002 understanding. 3003 Q Great. Back to Proximal Origin for a 3004 moment. The timeline of those events I think can sometimes 3005 get a little muddy. Is it right that -- you've already 3006 explained it, but one more time -- you, as a virologist, in 3007 that whole sequence are more or less relying on -- you not 3008 being a virologist, sorry. 3009 Thank you. Α 3010 Q You not being a virologist, for the 3011 transcript, are relying on what the virologists and 3012 evolutionary virologists are telling you at any given 3013 moment. 3014 So early in that conversation, somebody says something to 3015 the effect that, gosh, we should take a look at serial 3016 passage. Their state of mind would be, hey, somebody

3017 should take a look. And if later folks do that analysis 3018 and say, we don't think that that's plausible, I would 3019 think that your state of mind would be, well, I suppose 3020 that that's not plausible.

3021 Is that generally right?

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3022 That's generally right. I have to be guided А 3023 by the experts because I'm not a virology expert myself. 3024 Great. And with respect to furin cleavage 0 3025 sites, which I don't think it's possible to discuss furin 3026 cleavage sites any more than I have in the last year. So 3027 we were told by the authors of Proximal Origin that at the 3028 time of the February 1st conference call, when those folks 3029 are sort of raising an alarm that, hey, we're looking at 3030 these mutations, they look potentially like they may have 3031 been inserted, that they were not aware at that moment the 3032 extent to which furin cleavage sites are observed up at the 3033 genus level in beta coronavirus, sarbecoviruses they're 3034 saying, oh, my gosh, we've never seen this, but they were 3035 not yet aware of the extent to which furin cleavage sites 3036 would exist one level above that. 3037 So you may not remember whether or not that is the case. 3038 You tell me. 3039 I don't have a clear recollection. А 3040 It does seem clear from their point of view Q 3041 that that's a piece of information that they collected as 3042 the process went on that contributed to an evolution in 3043 their own points of view. 3044 In addition, Dr. Andersen told us that this particular 3045 furin cleavage site with the PRRA, I think, or the amino 3046 acids, he said it's a bad furin cleavage site.

3047 In other words, if you were sitting around trying to dream 3048 up a good furin cleavage site, this is not what that would 3049 look like, and that factored, again, into their thinking 3050 that this was very likely not something that a human had 3051 designed or engineered. 3052 А That's my understanding as well. 3053 A little bit of discussion about the P3CO Q 3054 framework. It's a clarification for me because I agreed 3055 with the Majority that we have sometimes tried to 3056 understand exactly what happened when. I'm going to try to 3057 summarize what I think is right, but then you can tell me 3058 if I'm right or wrong. 3059 There is, of course, a cost/benefit analysis for any given 3060 proposed work at the proposal and award stage; is that 3061 right? 3062 А Yes. 3063 Great. And then in addition to that, or Q 3064 separately from that, the question of whether or not a 3065 particular grant would be referred for P3CO review, that 3066 is, I think, a definitional question, right? That question 3067 looks at whether the definitions that we looked at about 3068 ePPP are met. Is that right? 3069 А That's correct. 3070 And then if that definitional requirement is Q

3071 met, then the P3CO committee that conducts the further

3072 review, they would then engage in some sort of balancing 3073 cost/benefit analysis separately about whether this work is 3074 worth it when weighed against the risks that are presented; 3075 is that right? 3076 That's correct. А 3077 0 Great. We're happy about that. 3078 There was also a little dialogue about P3CO and the 3079 requirement that the pathogen in question be able to infect 3080 humans, and you affirmed that that is correct, and that's a 3081 distinction as opposed to the 2014 pause. 3082 А Mm-hmm. 3083 But it is not just that it be able to affect 0 3084 humans. There are all sorts of other criteria in the 3085 definition that must also be met. If some of them come to 3086 mind for you and you could repeat them, that would be 3087 great. 3088 Highly transmissible and highly virulent. А 3089 And I think there's something about wide and 0 3090 uncontrollable spread? 3091 Leading to wide and uncontrollable spread. А 3092 0 Great. Is it right -- again, a very brief 3093 back-and-forth about the extent to which either NIAID or 3094 NIH were consulted in the crafting of P3CO. Am I right to 3095 assume that you would not personally know for a fact the 3096 extent to which individuals at either of those agencies

3097 were or were not consulted in that process?

3098 A I would not, and I'm glad you're raising it 3099 again. When it was asked before, I'm not sure it came 3100 across that I would not have been in a position to know 3101 whether there was some consultation with NIAID or other 3102 parts of NIH. That's not something that I would have 3103 necessarily been informed about.

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3104 0 Thank you. This is just a pure science 3105 question. When we think and talk about novel viruses, I 3106 know you're not a virologist, I'm asking at a very 3107 superficial level. But if you do have an understanding, 3108 our sense is that there are almost an unquantifiable number 3109 of novel viruses that exist somewhere out there in the 3110 universe. And the fraction of those that in their current 3111 state are capable of directly jumping into a human and 3112 infecting a human, I think is thought to be relatively low. 3113 Is that your general sense?

3114 А That's correct. There is actually a project 3115 that's trying to do a better job of cataloging viruses, the 3116 Virome Project, as you might guess. And the vast majority 3117 of those viruses are not capable of infecting human cells. 3118 Q Thank you. Some discussion, back on the 3119 substance of Proximal Origin, and you had talked about how 3120 the particular sequence would not have been predicted to be **3121** a particularly effective virus and certain conclusions can

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3122 be drawn from that fact.

3123	And I guess it's just an observation or question, which is,
3124	we have found in our conversations with the authors of the
3125	paper that there is a limit to what you can deduce from
3126	that. In other words, you can deduce that probably the
3127	sequence is not a product of the human mind, it is not a
3128	product of intelligent design, it was not dreamt up by a
3129	person.
3130	But there is an extent to which it is difficult to be sure
3131	about whether other forms of lab work were or were not
3132	necessarily that they occurred involving naturally
3133	occurring viruses. And I'm just pointing out that possible
3134	distinction and whether you've ever considered that nuance.
3135	A I think I'm on record about that, that I am
3136	convinced, based on the sequence, that the original arising
3137	of this virus was a natural event. But I can't exclude the
3138	possibility that there was secret study going on at the
3139	Wuhan Institute of Virology or somewhere that studied the
3140	virus and potentially played some role, but I have no
3141	evidence to support that.
21/12	O Thank you A alight nivet to talk to a new

3142 Q Thank you. A slight pivot to talk to a new 3143 but related topic, which is a zoonotic origin pathway. In 3144 general, you touched on a little bit at the beginning of 3145 the day. I would like to ask a few questions about it. 3146 I think our work often is very focused on possible lab

3147 accident origin and what exactly that might look like. I 3148 don't think we have spent as much time talking about a 3149 zoonotic origin, but that theory, I think, has been fleshed 3150 out in detail elsewhere. And so could you maybe just, to 3151 the extent you have an understanding, talk a little about 3152 historical context for zoonotic jumps with coronaviruses, 3153 or more broadly than that.

3154 А When you look at the nature of pandemics 3155 that have affected humans, as long as we've known about it, 3156 the vast majority have been on the basis of a natural 3157 zoonotic origin. Many of those were influenza. Certainly 3158 with SARS, we understand that to have been zoonotic through 3159 an intermediate host, probably a civet cat, where with MERS 3160 it appears that was also zoonotic maybe with camels as the 3161 intermediate host. Those are pretty well worked out. 3162 So while it has been the case there have been lab 3163 accidents, let me not try to say that's not also something 3164 that's happened historically. When you look at the major 3165 sequence of events associated with a pandemic, it has 3166 generally been a naturally occurring zoonotic transfer from 3167 some animal maybe through some other species to a human. 3168 Q And what might that pathway typically look 3169 like, whether it's in a setting that's more the animal's 3170 natural habitat or in a setting where it's the human's 3171 natural habitat? What might it look like?

3172 These are often circumstances where humans А 3173 have come in close proximity to habitats that have 3174 traditionally been animals, whether that's a bat cave in 3175 China, as we think probably was the place where SARS and 3176 MERS originally got started, or whether it was, as in 3177 Ebola, maybe a different kind of animal interaction, we 3178 still don't know. 3179 So, yeah, usually this is one of the consequences of the 3180 way in which the world has been developing with more and 3181 more opportunities for humans and wild animals to come in 3182 close contact in ways they might not have in the past. 3183 To the extent that you have a sense, does 0 3184 China have any general characteristics or traits that might 3185 make it ripe for zoonotic spillover event? 3186 I don't want to overgeneralize compared to А 3187 all other countries in the world. But certainly China, 3188 with both the existence of lots of animals that share 3189 enough biology with humans that they might have the 3190 potential of this kind of a viral jump, and that proximity 3191 with population increasingly close to some of those 3192 habitats. 3193 And I guess I especially have to bring up, because there 3194 still seems to be a strong reason to look at the wet market

3195 at circumstances where wild animals are being butchered and 3196 sold in a circumstance where they have not necessarily been

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3197 examined to see if they might be carrying some pathogen. 3198 So I think that flows nicely into a 0 3199 conversation about SARS Co-2 and what a natural spillover 3200 might have looked like in this case. Do you have a sense 3201 at all of research or data points that are out there that 3202 have examined that question, whether it's the context of 3203 the seafood market case clusters, or anything else that 3204 comes to mind? 3205 А Yes, I do. And I think that data is 3206 actually really interesting and highly relevant, and it 3207 surprises me in some ways it hasn't gotten more attention. 3208 So, for instance, there's two papers published in Science

3209 Magazine in 2022 looking specifically at the epidemiology 3210 of the first cases of SARS-CoV-2 in Wuhan. And by a series 3211 of analyses, which again, I'm not an expert on, but this is 3212 in a peer-reviewed paper, pointing to the west edge of the 3213 Wuhan market as the most likely place where this seemed to 3214 be emerging in a pretty compelling story.

3215 Along with that, recognition that there were actually two 3216 slightly different SARS-CoV-2 viruses. They differed by 3217 just two single nucleotide changes but they basically then 3218 make two lineages, and the argument being that would be 3219 something you might expect to see in an animal-to-human 3220 passage but not so likely if it was a single accident in a 3221 laboratory. 3222 Then more recently, with data that was perhaps accidentally 3223 put up on the internet, but was seen by a French 3224 Investigator, Debarre, swabs that were taken from the 3225 market in or around January and then analyzed for their DNA 3226 content showed many of those, particularly in the west part 3227 of the market, positive for SARS-CoV-2. And many of them 3228 also positive for animals.

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And in particular, the raccoon dog, which we know is a species that can, in fact, be infected by SARS-CoV-2 and can transmit it, is present in a number of those swabs as well. That doesn't prove that the virus was in that animal, but it certainly says they were in very close physical proximity.

3235 I think if you were -- stepping aside from all of the other 3236 contentiousness in trying to sort out what do you think the 3237 odds are of this having been a purely natural origin with 3238 animals in the wet market having been the point at which 3239 the virus reached humans, versus postulating some other 3240 event like a lab event, you would go towards the former. 3241 Occam's Razor says that if you have a tough situation with 3242 two different opportunities to explain it, you're generally 3243 going to be right to pick the one that is the most 3244 straightforward. In this case, I think that's what this 3245 is.

3246 So again, I'm totally open to new data that would change

3247 this, and I wish we had more data from the Wuhan Institute 3248 of Virology about what exactly is going on in late '19 and 3249 2020. Absent that, just looking at what we have right now, 3250 my sort of way of looking at this would say that this is a 3251 natural origin all the way through. 3252 0 For other not perfectly analogous, but 3253 similar incidents, such as SARS 1 or MERS, was it 3254 instantaneous that folks were able to pin down the point of 3255 origin or reservoir host? 3256 А No, I'm glad you asked. This is a very 3257 long, drawn-out process, in those instances, years. 3258 Recognizing the case of Ebola, for instance, we still don't 3259 know what the actual intermediate host was. This is hard, 3260 hard work, and it can only really be done with full 3261 cooperation of the geographic sites that you want to study, 3262 and that's not been possible so far for SARS-CoV-2. 3263 Is it reasonable to think that in this case, Q 3264 particularly with the cooperation or lack thereof that you 3265 mentioned, that it would take significant time, if at all, 3266 to be able to do all of that tracing successfully? 3267 It would take significant time and a lot of А 3268 cooperation and a lot of resources. 3269 Perhaps worth noting, because the natural 0 3270 versus lab conversation, I think often there's this very 3271 sharp line that gets drawn between them such that nothing

3272	could ever cross that boundary. For example, and I think
3273	you talked about some version of this earlier.
3274	If you had a lab worker, goes out, does field work in a
3275	cave, collects a natural virus, brings it back to the lab,
3276	is simply handling it in some manner, no additional type of
3277	manipulation of any kind, but somehow gets infected, that

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3278 that virus, that would seem like it would be perhaps a lab 3279 accident involving a natural virus and not fit cleanly into 3280 the either bucket. Does that seem reasonable?

3281 А It does, although I think that's unlikely, 3282 given that we don't currently have evidence of viruses that 3283 were out there occurring naturally that would be able to 3284 cause that level of illness without something else along 3285 the way, that intermediate host.

3286 Q Does that go back to that brief exchange 3287 about novel viruses, that it's pretty unusual for a totally 3288 novel natural virus to be able to jump directly into a 3289 human host?

3290 It is. А

I think that is it for our questions this 3291 3292 round. So unless there's anything more, I think we can go 3293 off the record.

3294 (Recess.)

3295 Mr. Benzine. We can go back on the record.

3296 BY MR. BENZINE.

3297 0 Dr. Collins, John is going to ask some 3298 questions, but I want to clear the record once again that 3299 this Committee, the Chairman being the only one that can 3300 speak for this Committee, has not made any accusations that 3301 you nor Dr. Fauci have bribed anybody to change any 3302 evidence. Thank you. 3303 Out of curiosity, how many people work for you, or worked 3304 for you, at NIH? 3305 А About 46,000. 3306 Q If one of them made a statement that you 3307 disagreed with, would it be fair to ascribe that statement 3308 to you? 3309 А No. 3310 Q Thank you. 3311 BY MR. STROM. 3312 So I would like to follow up on our Q 3313 colleagues' questions about some of the early epidemiology. 3314 I am going to try to minimize exhibits just to be concise. 3315 But the Chinese, through the WHO China joint team, the 3316 Chinese side of that team did a retrospective case search 3317 as part of their origins investigation and were only able 3318 to identify 177 cases in December of 2019. 3319 Given sort of the exponential growth that we subsequently 3320 saw in January and February, does that sound like it's a 3321 reasonably complete set of early cases?

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3322 A I'm not in a position to really have an3323 opinion about that.

3324 Do you think it's accurate that the 0 3325 Chinese -- the first confirmed case that they have 3326 disclosed they date to December 8th. Is it plausible to 3327 you that, given again this exponential growth that we saw, 3328 to go from one case, maybe a handful of cases if they 3329 missed some of the other ones, to these millions and 3330 millions or hundreds of thousands of cases in such a short **3331** period of time?

3332 A I'm not an epidemiologist. You would have3333 to ask somebody with better expertise than mine.

3334 Q So you mentioned, and I believe the two 3335 papers you're citing is one, the lead author is Michael 3336 Worobey, the other is Dr. Pekar, Steven Pekar maybe, I 3337 forget his first name. You cited two Science papers or two 3338 Nature papers.

3339 A Science.

3340 Q The Worbey paper being one and the other 3341 being Jonathan Pekar's modeling paper?

3342 A I do not recall who the first author was.
3343 Q Okay. So one of the issues you mentioned
3344 that you found compelling is that the genetic evidence, the
3345 swabs that were collected in January that were positive for
3346 SARS-CoV-2 also had animal DNA in them.

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One, I guess as a practical matter, if taking the Chinese at their word that the first cases are December 8th, is a swab collected in early January or even, I believe some of the collections were done as late as March or April, going to be indicative of the origins of the virus? А Hard to be totally clear. But if there's an ongoing infection in an animal species that's present on site, then you might expect that you could find that not just in one moment but over the course of time. Q Because there's an infected animal population that's circulating the virus? Mm-hmm. А So I'm going to try to avoid making this an 0 exhibit, but let me know if it's more comfortable for you

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3361 to look at. This is a paper by Jesse Bloom who I know 3362 you're familiar with titled Association between SARS-CoV-2 3363 and the metagenomic content of samples from the Huanan 3364 Seafood Market. And I'm just going to read a segment of 3365 the abstract. I'm happy to make it an exhibit if you 3366 prefer.

3367 Mr. <u>Nassikas.</u> I think it would helpful for us to see it.
3368 Mr. <u>Strom.</u> We will make this Majority Exhibit 3.
3369 (Majority Exhibit No. 3 was
3370 identified for the record.)

3371 BY MR. STROM.

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3372 You can just read the abstract is fine, Q 3373 since that's all I'm going to ask you about. 3374 So you mentioned -- and I believe the French researcher 3375 you're talking about talking is a woman named Flo Debarre. 3376 There was, I think, a difference in approach between her 3377 and Crits-Cristoph, and now this other group and Dr. Bloom. 3378 So I'm just wondering, Dr. Bloom's analysis, the key phrase 3379 to me would be, "None of the samples with double-digit 3380 numbers of SARS-CoV-2 reads," and that would mean I believe 3381 21 samples, "have a substantial fraction of their 3382 mitochondrial material from any non-human susceptible 3383 species. Only one of the fourteen samples with at least a 3384 fifth of the chordate mitochondrial material from raccoon 3385 dogs contains any SARS-CoV-2 reads, and that sample only 3386 has 1 out of approximately 200 million reads mapping to 3387 SARS-CoV-2. 3388 "Instead, SARS-CoV-2 reads are most correlated with reads 3389 mapping to various fish, such as catfish and largemouth 3390 bass." The result is "that while metagenomic analysis of the environmental samples is useful for identifying animals 3391 3392 or animal products sold at the market, co-mingling of 3393 animal and viral genetic material is unlikely to reliably 3394 indicate whether any animals were infected by SARS-CoV-2."

3396 that basically the samples that are in the market seem to

So understanding it's still a live issue, it seems to me

3397 be -- seem not to have any animal DNA in them. Is that a 3398 fair reading of this?

3399 A That's not so. He as much as says there is 3400 raccoon dog in some of these samples, and there were other 3401 species as well.

3402 Q Correct. But one 1 of 200 million reads,3403 that strikes me as a fairly insignificant amount.

3404 А Jesse Bloom is a very careful scientist. 3405 This is a great example of the kind of scientific debate 3406 that ought to happen when you have data that's somewhat 3407 unprecedented and you're trying to figure out what it 3408 means. For him to take down this pathway that the 3409 quantitative levels of SARS-CoV-2 versus some animal are an 3410 important indicator of whether they actually coexisted. 3411 It's not something that everybody, I think, would agree 3412 with. When you're talking about swabs that have been 3413 sitting around for potentially days or weeks, there's so 3414 many other variables.

3415 So I see what he's saying, but I don't think a conclusion 3416 that he's drawing would necessarily be agreed to by other 3417 experts.

3418 Q But I guess the other -- so I guess the 3419 counter argument is that, don't worry about the fact that 3420 the COVID positive samples didn't correlate, weren't found 3421 with any animal material?

3422 А That's not true. 3423 0 Okay. 3424 They were found with animal material. He's А 3425 trying to make a quantitative case as opposed to yes/no. 3426 Q Sorry, I didn't mean to talk over you. If you're asking, were there samples that 3427 А 3428 had SARS-CoV-2 and raccoon in the same swab, the answer is 3429 yes. 3430 Q Right. It just seems that that's a very, 3431 very small amount to then confidently -- to base confidence 3432 off of, I quess. 3433 Again, to try to turn this into a А 3434 quantitative argument about how many reads, I think is 3435 going beyond the way in which this data had been collected, 3436 and ascribing significance to it that a lot of people 3437 wouldn't necessarily accept. 3438 I don't know the answer to this, so -- do Q 3439 you not feel like perhaps the proponents that have pointed 3440 to this as some sort of smoking gun of a natural origin 3441 aren't making the same mistake that I'm apparently walking 3442 into? 3443 I hope nobody's making a mistake. А 3444 Q Sure. 3445 I hope everybody is trying to look at the А 3446 data that we have, which is unfortunately not nearly as

3447 complete as we wish it was, and trying to assess, of the 3448 various options, what seems most likely. In fact, the 3449 Occam's Razor.

3450 The swabs from the market, in my view and in the view of 3451 most virologists, tip in the direction this really was 3452 natural. It probably happened at the wet market. 3453 0 So you accept the Chinese representation 3454 that there were only 177 cases in December as more or less 3455 like a good-faith effort to identify all the cases? 3456 А I have no way of assessing whether that's 3457 good faith or not.

3458 Hypothetically, if there's more than 177 0 3459 cases, obviously we don't know if they have connections to 3460 the market or not, but that would be relevant to your 3461 analysis. So if you think it's a relatively complete set 3462 of early cases, then it's a true preponderance tied to the 3463 market. But if they missed thousands of cases for whatever reason, intentional or accidental, wouldn't it be then 3464 3465 likely that you lose that sort of tight nexus to the 3466 market?

3467 A Not necessarily. It could be the cases they
3468 missed are very much like the ones they found. And, again,
3469 this is hypothetical about whether they missed a lot or
3470 not. I have no reason to think that they did.

3471 Q No reason to think that they missed early

3472 cases?

3473 А No. 3474 All right. 0 3475 Mr. Strom. I might have a few more questions on that, but 3476 I'll let you get on. 3477 BY MR. BENZINE. 3478 0 I'm going to switch gears and talk about 3479 EcoHealth and the enforcement and oversight mechanisms that 3480 happened throughout 2020. 3481 When did you first become aware of EcoHealth's existence? 3482 I don't have an absolutely clear А 3483 recollection. I know I did in April of 2020. I'm not sure 3484 I knew about it before then. 3485 So it would be -- I'll rephrase it. Did you Q 3486 know about EcoHealth prior to the pandemic? 3487 А No. 3488 Did you know about Dr. Daszak prior to the Q 3489 pandemic? 3490 А No. 3491 Sitting here today -- this is kind of a very 0 3492 broad question before we get into the specifics. 3493 Obviously, NIH and NIAID and HHS have gone through all 3494 kinds of things with EcoHealth in the way of -- in the past 3495 four years. What's your perspective on them as a grantee 3496 institution?

3497 А That's such a broad question and it would be 3498 pretty speculative. I'm not sure how to answer. 3499 Okay. Do you think they are worthy of 0 3500 getting U.S. taxpayer dollars? 3501 А That all depends on what's the scientific 3502 value. So it would have to depend on the specific 3503 instance. 3504 0 It doesn't depend on their past practice? 3505 А It would be a factor for sure. 3506 Q Again, like John, I'm going to try to limit 3507 the amount of paper that I flood you guys with. 3508 On May 28, 2016, Dr. Greer and Dr. Stemmy wrote to 3509 EcoHealth regarding the potential of some of their 3510 experiments falling under the gain of function deliberative 3511 pause. Are you aware of that letter? 3512 I am aware the question was raised at that А 3513 point. I don't know that I know the letter. 3514 Were you aware that the question was raised Q 3515 post-pandemic? You weren't involved in the original 3516 process? 3517 А No, I was only aware long after the fact. 3518 Thank you. Similarly -- well, I want to ask Q 3519 about this. Dr. Daszak wrote back and regarding the 3520 concerns proposed adding a condition to his award, that

3521 pretty much if the viruses they work with show a greater

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3522 than 1 log growth, that he would immediately stop the work 3523 and report it to NIAID. You're aware of that addition? 3524 Long after the fact. Yes, I'm aware now. А 3525 Q During NIH's enforcement is when you became 3526 aware? 3527 А Well after --3528 Ms. Ganapathy. I'm just going to step in here. 3529 Dr. Collins, to the extent that your response would require 3530 disclosing internal deliberative communications, I would 3531 instruct you not to do that. But to the extent that you 3532 can respond, please do so. 3533 The Witness. I can't tell you exactly the timing of when 3534 that particular condition came to my attention, but it was 3535 certainly long after the onset of the pandemic. 3536 BY MR. BENZINE. 3537 Dr. Daszak testified that he took that 0 3538 condition from Dr. Baric at UNC. Were you aware of that? 3539 А No. 3540 He also said that it was originally kind of Q 3541 designed by Dr. Baric, and then he had it in some of his 3542 grants to NIAID. Is that common, that a grantee would come 3543 up with their own special award condition? 3544 А I would not know the answer to that. 3545 Presumably, since the enforcement action and Q 3546 this came to your attention, have you discovered that

3547 specific award condition in any policy or manuals that NIH 3548 or NIAID has? 3549 No, I have not. But I wouldn't necessarily А 3550 have been looking. 3551 Okay. The next letter, July 5, 2018, from Q 3552 Dr. Stemmy to EcoHealth, and this is after the P3 came into 3553 effect. So they rereviewed EcoHealth's experiments under 3554 the new P3 definition. 3555 Were you aware of that letter at the time? 3556 А No. 3557 0 Did you become aware of that letter during 3558 the pandemic? 3559 Long after, yes. А 3560 Q Those were kind of like the major letters 3561 sent pre-2020 in the EcoHealth situation. After the 3562 pandemic started, after the enforcement action started, did 3563 you have any discussions with anyone at NIAID regarding **3564** those letters? 3565 А No. 3566 Did you have any discussions with anyone at 0 **3567** NIAID regarding the decision on the gain of function pause 3568 did not apply to EcoHealth? 3569 А No. **3570** Q What about the decision that the PC30 did **3571** not apply to EcoHealth?

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3572 A No.

3573	Q	Moving into 2020. Before we start with
3574	individual let	ters, we asked Dr. Lauer and he testified
3575	that he would	not sign or send a letter that he disagreed
3576	with. Do you have any reason to doubt that assertion?	
3577	А	No.
3578	Q	Do you agree with every enforcement action
3579	the NIH took against EcoHealth?	
3580	A	Yes.
3581	Q	I want to introduce Majority Exhibit 4.
3582		(Majority Exhibit No. 4 was
3583		identified for the record.)
3584	BY MR. BENZINE.	
3585	Q	So this is a letter from Dr. Lauer to
3586	EcoHealth and	Columbia. It's pretty well-established by
3587	now that Colum	bia was a mistake, but primarily EcoHealth,
3588	and this lette	r severed the Wuhan Institute of Virology's
3589	relationship w	ith EcoHealth pursuant to that grant. Were
3590	you previously	aware of this letter?
3591	А	I was not aware when it was sent. I have
3592	seen it more recently.	
3593	Q	Who made you aware of the letter?
3594	А	As part of trying to prepare for these
3595	conversations.	
3596	Q	Are you more

3597 Mr. Benzine. I'll introduce it as 5. 3598 (Majority Exhibit No. 5 was 3599 identified for the record.) 3600 BY MR. BENZINE. 3601 This is a letter from Dr. Lauer to EcoHealth Q 3602 from April 24, 2020 terminating the EcoHealth grant. Is 3603 this one that you're maybe more familiar with? 3604 А I am now. 3605 Q When did you become familiar with this one? 3606 А I don't recall when I first saw it. 3607 Do you recall how the decision to terminate 0 3608 the EcoHealth grant came to be? 3609 Ms. Ganapathy. Just one second, Dr. Collins. I'm going to 3610 instruct you to respond to the extent you can do so without 3611 disclosing deliberative communications. 3612 The Witness. In a general way, I'm aware of how this came 3613 to be. BY MR. BENZINE. 3614 3615 How did it come to be? Q 3616 Ms. Ganapathy. The same instruction. 3617 The Witness. I was informed about the fact that this was 3618 going to happen by Dr. Tabak. 3619 BY MR. BENZINE. 3620 Did Dr. Tabak tell you who he heard it from? Q 3621 А I'm not able to answer that.

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3622 I'm going to run through the sequence of 0 3623 events that we have gotten from previous testimony, and you 3624 can just respond "yes" or "no" if this is your understanding of the events. 3625 3626 А I might need counsel to advise me about 3627 that. 3628 Ms. Ganapathy. Dr. Collins, you can respond "yes" or "no," 3629 but nothing further. 3630 The Witness. Thank you. 3631 BY MR. BENZINE. 3632 Our understanding from previous testimony 0 3633 from both Dr. Tabak and Dr. Fauci was that Mr. Meadows, as 3634 chief of staff, instructed HHS OGC, who instructed 3635 Dr. Tabak, who instructed Dr. Lauer to terminate this 3636 grant. Is that also your understanding? 3637 Ms. Ganapathy. One second. Actually, just to clarify the 3638 instruction. Dr. Collins, you can respond "yes" or "no." 3639 To the extent you don't actually know, you should say that. 3640 The Witness. I don't actually know. 3641 BY MR. BENZINE. 3642 But you heard from Dr. Tabak that the grant 0 3643 was going to be cancelled? 3644 А Yes. 3645 Did you have any conversations within NIH Q 3646 regarding whether or not NIH had the ability to cancel this

3647 grant?

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3648	А	I don't recall that specific kind of	
3649	question. This	s was a very unusual situation, however.	
3650	Q	Do you recall any conversations about how to	
3651	cancel grant?		
3652	Ms. <u>Ganapathy</u>	_ Dr. Collins, the same instruction as	
3653	previously.		
3654	The <u>Witness.</u>	I think I can't answer that one.	
3655	Mr. <u>Benzine.</u>	Are you instructing him to not answer?	
3656	Ms. Ganapathy	Yes.	
3657	BY MR. BENZINE.		
3658	Q	After the letter was sent, do you recall any	
3659	conversations with anyone at NIH or NIAID regarding whether		
3660	or not they agreed with the cancellation of the grant?		
3661	A	I don't recall those conversations.	
3662	Q	Do you recall so you said that you became	
3663	aware of the e	fforts to terminate the grant from Dr. Tabak.	
3664	Do you recall about when that was?		
3665	А	Within the afternoon of April 24th.	
3666	Q	So the date this letter was sent?	
3667	A	Yes.	
3668	Q	Was that order of events kind of strange,	
3669	that Dr. Tabak	would inform you of action within a few	
3670	hours of it being taken?		
3671	A	The impression I had was that this needed to	

3672 be done very quickly.

3673 Q Why?

3674 A I think that's in the space I can't respond 3675 to.

3676 Q I am going to ask the question again. It's 3677 her job to tell you if you can't respond.

3678 $\,$ Why were you under the impression that this couldn't be

3679 done, or had to be done quickly?

3680 Ms. Ganapathy. And, Dr. Collins, I am going to instruct

3681 you to not respond to the extent it would require

3682 disclosing deliberative communications.

3683 The Witness. I think I can't respond.

3684 BY MR. BENZINE.

3685 Q To the extent you know, was it because the

3686 President was giving a press conference?

3687 Ms. Ganapathy. The same instruction as previously,

3688 Dr. Collins.

3689 BY MR. BENZINE:

3690 Q You can answer "yes" or "no."

3691 The Witness. Which instruction?

3692 Ms. Ganapathy. So, Dr. Collins, once again, I would just

3693 instruct you to only respond to the extent it would not

3694 disclose substantively your discussions, your deliberative

3695 discussions about this grant.

3696 The Witness. Then I had better not respond.

3697 BY MR. BENZINE.

3698	Q "Yes" or "no" is not deliberative. I'm the		
3699	one telling you the deliberation. "Yes" or "no" is not a		
3700	deliberative answer.		
3701	Mr. <u>Nassikas.</u> What was the question, then?		
3702	BY MR. BENZINE.		
3703	Q Was it your understanding that the grant		
3704	needed to be terminated quickly because the President was		
3705	giving a press conference?		
3706	The <u>Witness.</u> Counsel, can you advise me whether a "yes" or		
3707	"no" is acceptable?		
3708	Ms. <u>Ganapathy.</u> Dr. Collins, you can respond "yes" or "no"		
3709	as to whether or not that was your understanding.		
3710	The <u>Witness.</u> Yes.		
3711	Mr. <u>Benzine.</u> Thank you. Welcome to Congress.		
3712	The <u>Witness.</u> Such fun.		
3713	Mr. <u>Benzine.</u> I am going to introduce Majority Exhibit 6.		
3714	(Majority Exhibit No. 6 was		
3715	identified for the record.)		
3716	BY MR. BENZINE.		
3717	Q So this is a letter from July 8, 2020 again		
3718	from Dr. Lauer to EcoHealth reinstating and then		
3719	immediately suspending the grant, pending the answers to a		
3720	number of questions. When we interviewed Dr. Tabak, he		
3721	said this letter was kind of written by committee and that		

3722 you were involved in that committee. Is that a fair 3723 characterization? 3724 I was aware of it. I would not say that I А 3725 played much of a role. 3726 Could you describe your role? Q 3727 А I was the NIH director. I knew that this 3728 was an action that Dr. Lauer was proposing to take, and I, 3729 by my best recollection, wanted to know what the plan was. 3730 Q Were you involved at all in the drafting of 3731 the letter? **3732** A I don't think I was. **3733** Q Okay. 3734 А I have no recollection of that. 3735 Q Do you recall any specifics on the 3736 conversations regarding the letter? **3737** A No. 3738 Again, I'm going to skip ahead a little bit Q 3739 in the timeline, but there were a number of letters between 3740 July 8, 2020 and my next one of July 23, 2021. I will 3741 introduce that as Majority Exhibit 7. 3742 (Majority Exhibit No. 7 was 3743 identified for the record.) 3744 BY MR. BENZINE. **3745** Q So again, another letter from Dr. Lauer to 3746 EcoHealth, this time July 23, 2021. Were you aware of this HVC012550

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3747 letter at the time it was sent?

3748 A No.

3749 When did you become aware of this one? 0 3750 А I'll need a minute to read it. 3751 I don't recall having seen this before. 3752 0 Okay. In this letter, Dr. Lauer -- on page 3753 2 at the very bottom, Dr. Lauer requests the year 5 3754 progress report from EcoHealth that was due at the end of 3755 the fiscal year 2019, September 30, 2019, and at this point 3756 was 22 months late. 3757 Sorry, where is that? А 3758 It's under Reports. "We are also writing to Q 3759 notify you that a review of our records indicates that 3760 EcoHealth Alliance is out of compliance with requirements 3761 to submit the following reports that are outlined in the 3762 NIHGPS" -- I don't know what the acronym stands for -- "the 3763 Federal Financial Report and the Interim Research Performance Progress Report." That would be their year 5 3764 RPPR. 3765 3766 Okay. А 3767 Mr. Nassikas. What's the question? 3768 BY MR. BENZINE. 3769 At this point in time, it was 22 months Q

3770 late, it was due September 2019. July 23, 2021. Dr. Lauer
3771 told us this was the first time that they asked for it.

3772 When did you become aware that they were that late on a **3773** progress report? 3774 Not at this time. I found out that it was А significantly late. I did not know about this letter. 3775 3776 Q Okay. Do you recall who told you that they 3777 had been late on their progress report? 3778 I do not recall. А 3779 0 But you know it was after, significantly 3780 after July 23, 2021? 3781 А Yes. 3782 After you were told, did anyone provide a 0 3783 briefing regarding the missing progress report? 3784 А I don't recall that. 3785 Q Dr. Daszak's testimony was that EcoHealth 3786 attempted to submit the progress report but was locked out 3787 of NIH's system. Dr. Lauer's testimony was that NIH did a 3788 forensic analysis and found no evidence that EcoHealth was unable to submit the progress report on time. Do you have 3789 3790 any knowledge of that? 3791 I do not. А 3792 Mr. Benzine. I want to go ahead and introduce Majority 3793 Exhibit 8. 3794 (Majority Exhibit No. 8 was 3795 identified for the record.) 3796 BY MR. BENZINE.

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3797 0 This time it's a letter from you, so 3798 hopefully it's a little bit more familiar than Dr. Lauer's, 3799 to former Ranking Member Comer on July 28, 2021. And I 3800 will give you a minute to flip through. 3801 А Please. 3802 Okay. 3803 This is just kind of, like, I know how the Q 3804 game is played, I write letters for my bosses all the time. 3805 But I was wondering your involvement in the drafting of 3806 this letter? 3807 As you can see, it's highly technical. I А 3808 would not have a letter go out with my signature without my 3809 having reviewed it, but I was not the primary author. 3810 Q Do you know who was? 3811 I do not. А 3812 Do you know anybody that was involved in the Q 3813 drafting of the letter? 3814 I do not. А 3815 I want to go to page 5. In the beginning of Q 3816 the third paragraph, I think you just kind of gave the 3817 answer to this, but it starts, "Results of the WIV 3818 experiments under the EcoHealth Alliance grant were 3819 reported to NIAID and published contemporaneously in 3820 peer-reviewed scientific literature to inform the global 3821 scientific community of these findings," when five days

3822 earlier Dr. Lauer was saying that EcoHealth hadn't produced 3823 everything to NIAID. 3824 But you said that you were unaware that the report was 3825 late, so that would -- I don't know if you want to expound 3826 on that at all. This sentence reads to me like NIAID was 3827 aware, everything EcoHealth had done had reported to NIAID, 3828 which by the time this letter was written was not true. 3829 But you were not told that it was not true? 3830 А Yeah, I would have not had any reason to 3831 know that. 3832 I appreciate that, thank you. 0 3833 Mr. <u>Benzine.</u> I want to introduce Majority Exhibit 9. 3834 (Majority Exhibit No. 9 was 3835 identified for the record.) 3836 BY MR. BENZINE. 3837 It's just a one-and-a-half page letter. Q 3838 While you look at it, it's an October 20, 2021 letter from 3839 Dr. Tabak to Mr. Comer again. And in this letter, it's 3840 notifying Congress that the year 5 progress report was, in 3841 fact, turned in, it was turned in on August 3, 2021, and 3842 that in that progress report, EcoHealth described a limited 3843 experiment that had an unexpected result where, one, a 3844 chimera they created resulted in mice becoming sicker than 3845 those infected with the underlying virus.

PAGE

3846 Ms. Ganapathy. Could you give the witness a moment to

- 3847 review the letter?
- 3848 The Witness. Thank you.
- 3849 Okay.

3850 BY MR. BENZINE.

3851 Q Were you previously aware of this letter?
3852 A I think I have seen it, but not particularly
3853 aware of it.

3854 Q So not involved in the drafting?

3855 A Not that I recall.

3856 Q All right. Where I want to start, before 3857 talking about the research that the letter talks about, is 3858 the very last page. The last big paragraph talks about 3859 RaTG13 and BANAL-52 as being the two closest viruses, but 3860 neither of those would have possibly been COVID-19, which I 3861 think everyone agrees with.

3862 The next line down is, "The analysis attached confirms that 3863 the bat coronaviruses studied under the EcoHealth Alliance 3864 grant could not have been the source of the SARS-CoV-2 and 3865 the COVID-19 pandemic."

3866 As we have discussed at length, in some interviews, it is 3867 unclear if RaTG13 or BANAL-52 were ever studied with U.S. 3868 funds. But the statement strikes me as awfully certain 3869 when there is no way to be certain. You have been doing 3870 this a long time. In your experience, do grantees or 3871 researchers publish every experiment that they conduct? 3872 A No, I suppose not.

3873 Do they publish every virus that they 0 3874 collect or sequence? 3875 А They would certainly be inclined to publish 3876 those that were of particular interest. But not every single one? 3877 Q 3878 А Sometimes the data is not good enough to be 3879 published. 3880 Q Okay. So this is a statement that says 3881 unequivocally "the bat coronaviruses studied under the 3882 EcoHealth Alliance grant could not have been the source of 3883 SARS-CoV-2." 3884 Understanding that researchers do not publish every 3885 experiment that they conduct, do not publish every virus 3886 that they collect or sequence, that's a pretty certain 3887 statement, would you agree? 3888 Ms. Brandon. Mitch, this refers to an attached analysis. 3889 Do you have that analysis? 3890 Mr. Benzine. I can get it, but really all it says is the 3891 bat coronavirus studied under the EcoHealth grant could not 3892 have been COVID-19. 3893 Mr. Nassikas. It's saying the analysis attached confirms 3894 that. So none of us are looking at that analysis. 3895 Mr. Benzine. I'll introduce it in the next hour. Ms. Brandon. Thank you. 3896

3897 Mr. Benzine. Moving back to the front page of this, and 3898 I'll introduce Majority Exhibit 10 to go along with it. 3899 (Majority Exhibit No. 10 was 3900 identified for the record.) 3901 BY MR. BENZINE. 3902 0 We don't need to read the whole thing 3903 because it is awfully long, but it is the year 5 progress 3904 report that EcoHealth submitted. We can just flip to page 3905 15 under Specific Aim 3. 3906 So I want to read Dr. Tabak's letter a little bit first, 3907 and then come back to this one. So the fourth paragraph 3908 down, "The limited experiment described" --3909 Mr. Nassikas. Wait, where are we again? I'm sorry. 3910 Mr. Benzine. Tabak's letter, the fifth paragraph. 3911 Mr. Nassikas. Of the first page? 3912 Mr. Benzine. Yes. 3913 BY MR. BENZINE. 3914 "The limited experiment described in the Q 3915 final progress report provided by EcoHealth Alliance was 3916 testing if spike proteins from naturally occurring bat 3917 coronaviruses circulating in China were capable of binding 3918 to the human ACE2 receptor in a mouse model. All other 3919 aspects of the mice, including the immune system, remained 3920 unchanged. 3921 "In this limited experiment, laboratory mice infected with 3922 SHC014 WIV1 bat coronavirus became sicker than those 3923 infected with the WIV1 bat coronavirus. As sometimes 3924 occurs in science, this was an unexpected result of the 3925 research, as opposed to something that the researchers set 3926 out to do. Regardless, the viruses being studied under 3927 this grant were genetically very distant from SARS-CoV-2." 3928 I now want to flip to this very long paragraph that you can

PAGE

3929 read while I summarize.

3930 A Let me read it first, if you don't mind.

3931 Q Yeah.

3932 A We're on page 15?

3933 Q Yes, sir.

3934 A Okay.

3935 So in this paragraph, they describe an 0 3936 experiment where they took a known backbone with one, and 3937 dropped in spike proteins from different coronaviruses to 3938 test if it could connect with the ACE2 receptor. 3939 My rudimentary understanding is that the seven mice, the 3940 control group infected with just WIV1, five survived. But 3941 of the eight mice that were infected with the chimera of 3942 WIV1 and SHCO14, only two survived. So as EcoHealth wrote, 3943 "These results suggest that the pathogenicity of the SHC014 3944 is higher than other tested bat SARSr-CoVs in transgenic 3945 that express hACE2."

3946 Understanding Dr. Tabak kind of very -- summarized this

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3947 experiment, do you think they're the same experiments? 3948 Mr. Nassikas. Is there really a basis for Dr. Collins on 3949 the fly here to be answering these questions, Mr. Benzine? 3950 Maybe you want to establish the basis if he has reviewed 3951 this in detail, studied it, talked about it, analyzed it. 3952 BY MR. BENZINE. 3953 I am trying to figure out if what EcoHealth 0 3954 reported would fall under the definition of gain of 3955 function. 3956 А Is that the question? 3957 0 Yes. 3958 А No. 3959 Why not? Q 3960 А None of these viruses had been shown to be 3961 transmissible to humans. This is under P3CO. 3962 Under the P3CO definition, but not NIH's Q 3963 gain of function definition. 3964 Well, we've talked about that, haven't we? А 3965 Q Yes. 3966 That that gain of function definition, which А 3967 was on the website, is intended for general applications 3968 that did not relate to potential pathogens. 3969 When we asked Dr. Tabak the same question, Q 3970 your previous deputy -- I'll read the question. 3971 "What's described in the EcoHealth year 5 progress report

gain-of-function research?

3972

3973

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3974 "Answer: The generic broad description of what a gain of 3975 function is, yes." 3976 Do you agree with Dr. Tabak?

would fit the definition, the broad definition of

3977 A I think he's saying the same thing that I
3978 did in somewhat different words. There is a generic
3979 description of gain of function which is utilized in
3980 scientific and public conversation, but is not appropriate
3981 to apply that to a circumstance where we're talking about a
3982 potential pathogen. Let's keep those separate.

3983 Q Okay. I want to introduce -- I think the 3984 Minority already introduced it -- Minority Exhibit A.

3985 A Which one?

3986 Q This one. So this is the NIH website, 3987 pulled off the Wayback Machine. It has since been updated. 3988 But this version was active as of July 12, 2021 with this 3989 definition.

3990 You testified earlier, and it caught me and I wrote it 3991 down, that it's important to be sure that we apply the 3992 appropriate term of art, that ePPP would be the appropriate 3993 term of art when talking about --

3994 A PC30 --

3995 Q -- PC30?

3996 A -- would be the appropriate term of art to

3997 describe how gain of function should be interpreted with 3998 the pathogen.

3999 Q And the Minority brought up, and we asked 4000 Dr. Fauci similarly his testimony in the Senate and 4001 Chairman Griffith brought it up, too, where he said the NIH 4002 does not now and has not ever funded gain-of-function 4003 research in Wuhan.

4004 That would not be the term of art in your understanding?
4005 A I'm sorry, I don't understand the way you
4006 phrased the question.

4007 Q So in Dr. Fauci's testimony saying that NIH 4008 does not now and has not ever funded gain-of-function 4009 research in Wuhan, in that statement, gain of function 4010 would not be the appropriate term of art?

4011 Be careful. I think we're talking about А 4012 gain of function having different definitions depending on 4013 the context. I think P3CO is the definition of gain of 4014 function if you're talking about a pathogen. His statement 4015 was clearly talking about Wuhan. So when he said gain of 4016 function, I assumed he is thinking that PC30 criteria would 4017 not have been the kind of funding that would have been 4018 allowed at Wuhan.

4019 Q And I guess our point is, if someone was
4020 watching that hearing and Googled NIH definition of gain of
4021 function, this is the website that would have come up.

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4022 This was active July 12, 2021. That testimony is May 11, 4023 2021. And as we have been going through this 4024 investigation, we have kind of come across and we have 4025 heard some of it today of no laboratory construct, or no 4026 laboratory-based scenario is plausible. That's what's 4027 written on paper or said out loud is not what people meant 4028 to say. And it strikes us as kind of the experts should 4029 write or say what they mean to say.

4030 A And so should everybody else.

4031 Q I agree. And you said that when talking 4032 about a pathogen, people should automatically flip to the 4033 P3CO definition. If the gain of function definition 4034 modifies a biological agent, would a pathogen fall under 4035 biological agent?

4036 A I've got to look at the whole document here, 4037 not just that paragraph, which is kind of providing an 4038 historical recognition that gain of function has been used 4039 in lots of ways. But if you read the whole document, it's 4040 about gain of function involving potential pandemic

4041 pathogens and you get the P3CO.

4042 Q I understand that, and I am willing to
4043 stipulate in every single interview for all mankind that
4044 what EcoHealth did, did not fall under the P3CO definition.
4045 A Thank you.

4046 Q That it was reviewed, but did not fall under

4047 the P3CO definition. What they did absolutely falls under 4048 this definition.

4049 A And so does an awful lot of other research
4050 that has nothing to do with pathogens. So I don't know
4051 where you're going with this.

4052 Q I will stipulate that, too. What I'm going 4053 with is, when experts testify, they should be clearer in 4054 their testimony. When people write Congress letters, they 4055 should be clear in their letters. And saying EcoHealth did 4056 not conduct gain-of-function research in Wuhan is not 4057 clear.

4058 A We should all be clear.

4059 Q Thank you.

4060 Mr. <u>Nassikas.</u> And Dr. Collins has said that context is 4061 important, Mr. Benzine. I think he's asked and answered 4062 this about 20 times today.

4063 Mr. <u>Benzine</u>. And I appreciate the continued efforts.
4064 We can keep Minority Exhibit A in front of you and flip to
4065 what will be Majority Exhibit 11.

4066 (Majority Exhibit No. 11 was

4067 identified for the record.)

4068 BY MR. BENZINE.

4069 Q This is the same website, but on the back,
4070 you'll see that it was last reviewed October 20, 2021. So
4071 the same day that Dr. Tabak sent that letter to Congress,

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4072 the gain of function page on NIH's website was changed. Do 4073 you have any knowledge of that? 4074 I do not. А 4075 Q Who would have the authority to change the 4076 NIH's website? 4077 А It's handled through the Office of 4078 Communications. 4079 And who runs that office? 0 4080 А The chief of Communications. 4081 Q Who is that? 4082 At this time? That would have, I think, А 4083 been Renate Myles. 4084 Okay, you can put those aside. Q 4085 I want to talk about staying in the EcoHealth lane. That 4086 experiment has come under the microscope for more than just 4087 whether if or if not it is gain of function. That under 4088 their grant terms, the one-log growth term, that experiment 4089 exhibited a more than a one-log growth, and EcoHealth's 4090 position is that they reported that experiment in year 4 4091 and that satisfied their condition. 4092 NIH's position, as we've heard from Dr. Lauer and 4093 Dr. Tabak, is that the year 5 report and the year 4 report 4094 showed different experiments. Do you have any knowledge of 4095 that?

4096 A I don't have any expertise to contribute to

4097 that.

4098 Q Is that your understanding of NIH's 4099 position? 4100 А I'm not entirely sure. You have just told 4101 me what their position was. I did not know it. 4102 0 Okay, so you did not have conversations with 4103 Dr. Tabak or Dr. Lauer regarding the year 4 versus year 5 4104 experiments? 4105 А There may have been some general reflections 4106 on that some time ago, but I don't think it was 4107 determinative. 4108 Okay. This past summer, EcoHealth's grant 0 4109 was reinstated, NIH cut the China portion out, cut the WIV 4110 out, WIV was eventually debarred and EcoHealth's grant was 4111 reinstated. Were you involved in that decision? 4112 No. Just to remind you, I was not the NIH A 4113 director at that point. 4114 Yes, but NIH director emeritus? I don't Q 4115 know if they call you in to discuss anything. 4116 They do not. А 4117 Okay. Q 4118 А And they shouldn't. 4119 Then we will skip ahead a little bit. Q 4120 Were you involved in that decision? The Wuhan Institute 4121 was suspended from receiving federal funds while a

debarment proceeding occurred. Were you involved at all in

4123 the suspension?

4122

4124 A No.

4125 Q And then they were eventually debarred for 4126 receiving federal funds for ten years. Were you involved 4127 at all in that decision?

4128 A No.

4129 Q I will move forward and talk about
4130 everyone's favorite conference call and introduce Minority
4131 Exhibit E.

4132 Mr. Nassikas. Which is?

4133 Mr. Benzine. This email.

4134 The Witness. Okay, with the funny font.

4135 Mr. <u>Benzine.</u> For the life of me, I can't tell you why.
4136 Every now and then, we get an email in funny font. I don't
4137 know if it's just because of the inbox it was pulled from.
4138 BY MR. BENZINE.

4139 Q But you discussed this a little bit and how 4140 you got all the conference call, and that kind of thing. 4141 So the bottom email from Dr. Farrar to Dr. Fauci with who 4142 is going to be joining the call and the call-in details. 4143 Dr. Fauci forwards it to you. How were you made aware of 4144 this call?

4145 A I was, I think -- again, it's four years 4146 ago -- initially informed by Dr. Fauci that the call was

4147 happening. And then, I think I got this email forwarded 4148 about what the agenda was going to be from Dr. Farrar, who 4149 was clearly the person organizing the call. 4150 Q Did Dr. Fauci ask you to join the call? 4151 А Yes. 4152 0 Prior to being asked to join the call, did 4153 you express interest in joining the call? 4154 А I don't think I knew it was happening until 4155 he reached out. Again, I was his boss. It would not be 4156 unusual for him to feel that his boss should be included in 4157 something of this magnitude. 4158 Do you know how many conference calls Q 4159 Dr. Fauci had on a weekly basis? 4160 А A ton. 4161 Q How many others did he invite you to? 4162 Very few. А 4163 Going a little bit up. Dr. Tabak joins in Q 4164 and says, "Would you like me to join?" You say it's fine 4165 "but I note Jeremy says he wants to keep this a 'really 4166 tight group'. Tony, what do you think?" 4167 Do you recall any conversations with Dr. Fauci regarding 4168 Dr. Tabak joining the call? 4169 А I do not remember. 4170 Did Dr. Tabak eventually join the call? Q 4171 А He did.

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4172 Q And we talked to him at length, and learn 4173 something new in every single one of these interviews. But 4174 he's an expert in O-linked glycans? 4175 А That's correct. 4176 Q And do you recall if he discussed that 4177 expertise on the phone call? 4178 I believe he did make a comment. А 4179 Q Did you discuss anything on the phone call? 4180 А Almost nothing. 4181 Q Almost nothing? 4182 I was listening. I might have made a А 4183 comment about, oh, that's interesting. I had no substance 4184 to contribute. 4185 Q We talked about this with Dr. Fauci, and I'm 4186 sure you're aware, Dr. Redfield has testified that he was 4187 not included in the call, and the reason for not being 4188 included was that he had already expressed his kind of 4189 thought process that this may have come out of a lab. Did 4190 you ever have any conversations with Dr. Redfield about the 4191 call? 4192 А No, I was unaware. 4193 Q No conversations with him after the call, 4194 either? 4195 Eventually. He was the director of the CDC. А 4196 Q I mean about the call, any conversations?

4197 А No. 4198 Mr. Benzine. We can go and do Majority Exhibit 12. 4199 (Majority Exhibit No. 12 was 4200 identified for the record.) 4201 BY MR. BENZINE. 4202 0 So this is Majority Exhibit 12. It's an 4203 email chain with Dr. Fauci, Mr. Grigsby, Mr. Harrison, 4204 Dr. Kadlec, and you, and it's Bates marked SSCP NIH1796 4205 through 1798. 4206 А Will you give me a minute to review? 4207 0 Yes. 4208 А Okay. 4209 I want to focus on page 1797, the long email Q 4210 from Dr. Fauci. 4211 Mm-hmm. А 4212 So this is kind of, and he said this as Q 4213 well, his recounting of the conference call to what would 4214 be, I guess, his boss, Brad Harrison being chief of staff 4215 of HHS? 4216 Correct. А 4217 0 Dr. Kadlec being the Assistant Secretary for 4218 Preparedness and Response. There's one particular line. 4219 He goes through it, "The call with Jeremy Farrar went very 4220 well." You joined, several other highly credible

4221 scientists dispelled the HIV gene sequence pretty quickly,

4222 dispelled the kind of like intentional release pretty 4223 quickly. 4224 But then he talks -- and it's a sentence that starts, "The 4225 suspicion," about a third of the way through the paragraph. 4226 А Mm-hmm. 4227 0 "The suspicion was heightened by the fact 4228 that scientists in Wuhan University are known to have been 4229 working on gain-of-function experiments to determine the 4230 molecular mechanisms associated with bat viruses adapting 4231 to human infection, and the outbreak originated in Wuhan." 4232 Do you recall any conversations regarding, however you want 4233 to define gain-of-function research, occurring in Wuhan on 4234 the conference call? 4235 I do not recall that conversation. А 4236 Q Do you recall any conversations regarding 4237 the suspicion that it originated in Wuhan and there's a 4238 high containment laboratory also in Wuhan? 4239 I don't recall it. А 4240 Do you recall anything else that was Q 4241 discussed on the conference call? 4242 Mostly about the sequence that we were Α 4243 analyzing and trying to understand what it told us about 4244 its possible origins. 4245 Do you recall anyone discussing drafting a Q 4246 paper on the conference call?

4247 I don't recall that we got to that point. А 4248 There is -- and I'm not going to introduce 0 4249 it. If you don't remember, that's fine. There's some 4250 emails with you where Dr. Farrar asks you and Dr. Fauci to 4251 get on a call after the conference call. Do you recall 4252 that? 4253 I recall there was a quick check-in. I А 4254 don't remember what the contents were. 4255 Okay. Q 4256 Mr. Benzine. I want to introduce Majority Exhibit 13. 4257 (Majority Exhibit No. 13 was 4258 identified for the record.) 4259 BY MR. BENZINE. 4260 Q I sincerely apologize for the very tiny 4261 font. Apparently it's very hard to produce Slack messages. 4262 But these are Slack messages that include Dr. Andersen, 4263 Dr. Rambaut, Dr. Holmes, eventually Dr. Gary, but they're 4264 from February 1, 2020. And I'll give you a minute to skim 4265 the whole thing, but I am only going to ask about a couple. 4266 Mr. Nassikas. Maybe read them out loud, the ones you're 4267 interested in. 4268 Mr. Benzine. Yes, I will. 4269 BY MR. BENZINE. 4270 There's a blue bubble in the middle that Q 4271 says "Latest messages." I'm just going to be operating

above that.

So Dr. Andersen says, yes --

4272

4273

4274 Mr. Nassikas. Hold on just a second. The Witness. I'm trying to figure out the date. 4275 4276 BY MR. BENZINE. 4277 0 It's February 1st. 4278 All of this. А 4279 All of it is. February 2nd begins at the 0 4280 very bottom. 4281 А Okay. But February 1st is sort of partway 4282 down the page. So are the first entries here at the top of 4283 the page also February 1st? 4284 Yes, they are. You can see kind of the time Q 4285 stamp. Well, I can read the time stamp. After the bubble, 4286 it says, 14:57. And before the bubble, it says, 14:52. 4287 Α I see. 4288 So all February 1st in chronological order. Q 4289 А Okay. 4290 The first message from Dr. Anderson says, Q 4291 "Yes, call," referring to the conference call. They're 4292 talking about it a little ways. 4293 The first message from Dr. Holmes there with the orange 4294 avatar says, "Big ask!" And then Dr. Andersen says, 4295 "Destroy the world based on sequence data. Yay or nay?" 4296 Do you remember what the big ask was?

4297 А I don't. I'm puzzled. 4298 I know there were conversations after this 0 4299 with Dr. Farrar about getting the WHO involved in the 4300 origins investigation. That's my kind of operating 4301 presumption of what the big ask was, but I don't know. 4302 А Can't tell. It's two words. 4303 Q All right. 4304 Mr. Benzine. With that, we can go off the record. Thank 4305 you. 4306 (Recess.) 4307 We can go back on the record. 4308 BY 4309 Dr. Collins, I will just have two quick ones Q 4310 about topics discussed in the previous round. 4311 The first is with respect to the EcoHealth year 5 report 4312 and the specific experiment that you were looking at and 4313 the specific conclusion that there had been an increase in 4314 pathogenicity in the chimera as compared to the full-length 4315 backbone. Then there was a discussion about the 4316 implications for that fact -- for whether or not the 4317 experiment could be labeled gain of function. 4318 I just want to reemphasize two points, one which you have 4319 already made crystal clear, that the layman's usage of gain 4320 of function is not useful or productive in the context of 4321 that conversation. Is that right?

4322 A That's correct.

4323 Great. But then, secondly, with respect to 0 4324 that term under the 2014 moratorium or P3CO framework, I 4325 just wanted to point out again, the nuance that because 4326 those are both forward-looking policies, it would not be 4327 possible to look at the results of an experiment, and then 4328 deduce from those results whether or not the work in 4329 question does or does not fall under those policies. 4330 Instead, the key moment and the key test is before the work 4331 has occurred, and you've got to ask yourself, is it 4332 reasonably anticipated that in the future, there will or 4333 will not be an increase in pathogenicity or 4334 transmissibility. Do I understand that correctly? 4335 А That's correct. 4336 Great. One other minor point with respect Q 4337 to -- it's really not your problem, in a sense, but you 4338 were discussing it. The question of Dr. Fauci's previous 4339 remarks, particularly in the context of the Senate hearing, 4340 on the question of gain of function and clarity or lack of 4341 clarity. We did this with Dr. Fauci, I'll do it again here 4342 just for the sake of thoroughness. 4343 That in the hearing that I think has been discussed, where 4344 at one point in the hearing, he made a remark that NIH has

4345 not and does not fund gain-of-function research in Wuhan 4346 Institute.

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4347	At another point in that hearing, a different Senator,		
4348	Senator Marshall, asked Dr. Fauci whether there are		
4349	national security implications with something as		
4350	theoretically lethal as viral gain of function, to which		
4351	Dr. Fauci said, "Sure there is. That is why we have		
4352	committees, we have a P3CO committee."		
4353	In a subsequent hearing a few months later, Dr. Fauci and		
4354	Senator Paul discussed this topic again, and Dr. Fauci said		
4355	to Senator Paul, "Senator, with all due respect, I disagree		
4356	with so many of the things that you have said. First of		
4357	all, gain of function is a very nebulous term. We have		
4358	spent, not us, but outside bodies, a considerable amount of		
4359	effort to give a more precise definition to the type of		
4360	research that is of concern that might lead to a dangerous		
4361	situation. You are aware of that. That is called P3CO."		
4362	So the only point I wanted to make is that in the context		
4363	of both those hearings, Dr. Fauci did refer specifically to		
4364	the P3CO framework. And is it reasonable for you to assume		
4365	as a listener that if somebody says, P3CO, a listener could		
4366	reasonably perceive that they are describing the P3CO		
4367	framework?		
4368	A Yes, he made a good statement.		
4369	Q Great.		
4370	And with that, I will turn it over to our		
4371	ranking member.		

4372 Dr. Ruiz. Thank you.

4373 BY DR. RUIZ.

4374 Dr. Collins, I am Dr. Raul Ruiz, Ranking 0 4375 Member of the Select Subcommittee on the COVID pandemic, 4376 and an emergency physician. And I wanted to really 4377 emphasize that our Select Subcommittee and this team is 4378 very interested in a lessons-learned, forward-looking 4379 investigation that can help us prevent future pandemics and 4380 help us better respond in order to save lives in future 4381 pandemics.

We have spent a lot of time having to combat accusations and assumptions that target individuals' previous behavior that are based on assumptions. We constantly want to -- Democrats want to constantly focus on moving forward with lessons learned to have concrete solutions that will actually make a difference in the lives of Americans for when that next pandemic comes to be.

4389 So having said that, I want to ask you a few questions on 4390 the COVID-19 vaccine development and rollout. We know from 4391 media reporting about how impressive the COVID-19 vaccine 4392 development process was compared to the typical process. 4393 So to help us fully understand that, can you walk us 4394 through the typical process of vaccine development approval 4395 and distribution?

4396 A Certainly. So, Congressman, initially you

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4397 decide what is the infectious disease that you're seeking 4398 to try to target with the vaccine. In the pre-mRNA days, 4399 that meant you had to figure out a strategy to try to 4400 generate some kind of a vaccine that would inspire an 4401 immune response. And that might mean using some other 4402 carrier virus like an adenovirus or it might be actually 4403 trying to purify a protein subunit of that pathogen that 4404 would not itself be infectious, but might inspire the 4405 immune system to make antibodies in T cells. 4406 That was a long, drawn out, complicated, often high failure 4407 process. It often wasn't clear exactly which part of the 4408 pathogen you should target. You wanted something where 4409 immunity would be protective, always easy to say that with 4410 limited knowledge about most of these pathogens. But you 4411 would do that, and that would require oftentimes months or 4412 even years of effort to come up with a strategy that looked 4413 as if, in an animal model like a mouse, it seemed to be 4414 generating antibodies that might be protective, might even 4415 be neutralizing.

4416 Having achieved that, if you did, and having been able to 4417 show no unexpected side effects of a serious nature, then 4418 you would begin to move forward to possible human clinical 4419 trials. That requires a great deal of intense oversight by 4420 the people who have done the research, and by the FDA to 4421 decide whether this is in fact justified in terms of safety

4422 issues.

4423 That would lead to a phase 1 trial where you would enroll a 4424 small number of subjects, maybe a dozen or a couple dozens. 4425 This was not in a phase 1 trial generally trying to assess 4426 whether you're protecting somebody against the disease. 4427 It's mostly trying to say, is it toxic, is there some 4428 unexpected and unfortunate side effect, and could you at 4429 least say you've seemed to have raised some antibodies? 4430 If that looks promising -- and again, most vaccines fail at 4431 that point. But if it does look promising, then you go on 4432 to a phase 2 trial, which is a larger number of 4433 individuals, perhaps 100 or so, maybe a couple hundred to 4434 see whether this holds up in a larger population. And, 4435 again, looking to see are there any unexpected side 4436 effects. 4437 If that's good, then it's time to really do a definitive 4438 trial which may be tens of thousands of individuals in the 4439 circumstance where they're at risk for the disease, and so 4440 you can see whether, in fact, the vaccine reduced their 4441 likelihood of falling ill. That's what ultimately was the 4442 defining trial for the mRNA vaccines for COVID-19. 4443 But what I'm laying out there, in the old days before we 4444 did this for COVID-19 with mRNA, in the old days that was a 4445 five or ten-year effort, sometimes even longer. 4446 There's one other part of this also that then often

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4447 resulted in an even longer delay is, what do you know? 4448 Your strategy actually worked, your phase 3 trial looks 4449 good. Now people need the vaccine. And now you've got to 4450 start setting up the manufacturing which could readily take 4451 you many more months, doing this in a facility where you 4452 know the control capacity is absolutely squeaky clean and 4453 has the capacity to be able to produce enough doses to 4454 reach out and immunize a lot of people. 4455 One of the, I think, very important aspects of what was 4456 done with COVID was Operation Warp Speed, basically 4457 deciding we're going to have that time at the end, so let's 4458 do the manufacturing even before we know if the vaccine is 4459 going to work. And if it doesn't, we'll throw those doses 4460 out. But if it does work, we haven't lost that time. 4461 I hope that's sort of a general answer to your question. 4462 So -- yes. But what, in your opinion, were Q 4463 the major differences between the standard process and the 4464 ways that COVID-19 vaccines were developed and approved? 4465 Multiple ways. Again, I think the А 4466 availability of the mRNA strategy, which didn't get 4467 invented overnight, it's been 25 years. 4468 Q Can you describe that strategy of the mRNA? 4469 You mentioned the other adenovirus --4470 А Yes. 4471 -- vector, but how about this one? Q

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4472 A Well, basically mRNA is the RNA that codes 4473 for protein. So if one has a particular sequence of RNA 4474 letters, you know what protein that will make and you can 4475 actually design it to make a protein that you want to have 4476 produced, and it means you don't actually have to have the 4477 virus growing in your lab in order to start the process of 4478 making the vaccine.

4479 So you can, as was done here, make an mRNA that codes for 4480 the most important part of that spike protein, and you 4481 could expect therefore, if that finds its way into a cell 4482 in an animal or ultimately a human, the protein is going to 4483 get made. So you have a very quick pathway towards 4484 generating the kind of immunogen that you think the immune 4485 system is going to respond to in a way that raises 4486 antibodies and T-cells.

4487 Q So that's a lot faster than growing the4488 virus in a lab.

4489 А Right, or trying to clone it and stitch it 4490 into an adenovirus, or worse yet, trying to make purified 4491 proteins subunit, which Novavax eventually was able to do 4492 with COVID-19, but it was many months after. So mRNA as a 4493 major advance in terms of the speed is a big part of this. 4494 The other advances, I think, included the ability because 4495 of that to go from a design to a phase 1 trial in 63 days. 4496 Normally, that's a year. The way in which the phase 3

4497 trial was designed, I will tell you was also a big 4498 important part of this by the design of a master protocol, 4499 so that all of the vaccine manufacturers agreed to follow 4500 the same design which had to be randomized, double-blind, 4501 controlled. And agreeing with the same end points, and 4502 agreeing that the numbers of participants had to be at 4503 least 30,000 in order to be sure you had power to say

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4504 whether it had worked or not.
4505 Having that standardized saved a lot of time, because a lot

4506 of vaccine trials maybe aren't quite as carefully designed 4507 and you get a result and the FDA says, I don't know if I 4508 quite believe that yet. This was done in a way that was 4509 going to be absolutely definitive, and it was.

4510 Q Okay.

4511 A And then there was the warp speed on the 4512 manufacturing part. And of course, this took a lot of 4513 resources. We would not have been able to do any of this 4514 without a huge investment on the part of the United States 4515 government on behalf of the whole world to try to do this 4516 in record time.

4517 Q How did NIH work with FDA and other federal 4518 agencies to expedite the process of vaccine approval and 4519 manufacturing distribution? So in other words, what steps 4520 were taken to ensure that the vaccine would be safe for 4521 children, pregnant people, and the elderly? 4522 So if you can answer the first one in terms of how did NIH 4523 work with the FDA?

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4524 A That was a very close relationship. For me 4525 as the NIH director, working with FDA was absolutely 4526 essential from the get-go. I mentioned the importance of 4527 having a master protocol for the vaccine trial design. FDA 4528 was intimately involved as we sat around the table to 4529 figure out what that should look like.

4530 Ms. <u>Ganapathy.</u> Dr. Collins, just one thing. I am just 4531 going to step in. Please respond, but to the extent that 4532 this would require disclosing any specific deliberations,

4533 we instruct you not to do so.

4534 The <u>Witness.</u> I got that. I think what I've said so far is 4535 all a matter of public record, but I'll be careful.

4536 Ms. Ganapathy. Yes.

4537 The <u>Witness.</u> So FDA, because they were going to be in the 4538 position of deciding whether the trial was going to give 4539 them sufficient evidence to rule yes or no, having their 4540 input in terms of the actual design of the trial was quite 4541 critical.

4542 BY DR. RUIZ.

4543 Q So there was a lot of talk about the vaccine 4544 safety issues. What steps were taken to ensure that the 4545 vaccine would be safe for children, pregnant people, and 4546 the elderly?

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4547 Very important questions. Certainly the А 4548 design of the original trials was done with special 4549 attention to the fact there might need to be a different 4550 way of looking at safety questions for children or for 4551 pregnant women or for the extremely old -- although as I 4552 recall, I don't think we excluded people on the basis of 4553 old age, but we certainly did in terms of children and 4554 pregnancy.

4555 Those -- once you could see in the large-scale trial on all 4556 of the other adults that this appeared to be both highly 4557 effective, 95 percent, in preventing symptomatic disease 4558 and with very little in the way of concern about safety 4559 issues, then we certainly wanted to make sure this could be 4560 made available also to these other groups. So separate 4561 trials quickly introduced with children, with pregnant 4562 women, and ultimately, those also turned out to be highly 4563 beneficial, as one could see.

4564 Q And also, there's mention of concerns of how 4565 this was expedited and there were shortcuts, or it was 4566 developed so fast that there was some way we didn't really 4567 know the full extent of its safety. How did you ensure 4568 vaccine safety even as the vaccine development process was 4569 expedited?

4570 A It is an interesting paradox, isn't it,4571 Congressman? I think everybody wanted to have this done as

4572 quickly as possible, but then became worried that it was 4573 done as quickly as possible.

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4574 I think the design of the vaccine trial allowing a period 4575 of observation after the vaccination of at least two 4576 months. If you look at circumstances where there has been 4577 a serious safety issue with the vaccine, it is usually 4578 apparent in that timeframe. So the design specifically was 4579 put in place to try to capture anything of that sort. If 4580 it was common enough to happen in 30,000 or half of those 4581 of the people who actually got the vaccine, you would 4582 expect it to turn up.

4583 Q Generally, how does research on what makes a 4584 virus more or less transmissible contribute to the 4585 development of vaccinations?

4586 Well, certainly for COVID-19 with the А 4587 continual arrival of new variants that emerged and sort of 4588 took over the population of viruses which says they were 4589 more transmissible than the ones that came before, they 4590 wouldn't have done that. That was an education about how 4591 this virus's transmissibility came over the time with 4592 natural evolutionary pressures get better and better. 4593 That certainly required us, thinking about the vaccine 4594 development, to respond to that, and to try to be sure that 4595 as people needed additional immunization, because we 4596 certainly found out that these vaccines don't last forever,

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4597 that it would be best to do so with a booster that reflects 4598 what is the kind of virus they're now likely to encounter 4599 as opposed to where we started.

4600 Q And how had prior research on coronavirus 4601 transmissibility contributed to the development of 4602 vaccinations for SARS-CoV-2? And do you think that also 4603 helped expedite?

4604 A If we had not already had a big program at 4605 NIH on coronaviruses based on SARS and MERS, the previous 4606 examples, including an effort to try to see whether mRNA 4607 vaccines would work, we would never have been able to 4608 respond as quickly as we did.

4609 Q So the NIH funding for the underlying4610 research is important.

4611 A Absolutely.

4612 Q And it's also important for future pandemic4613 preparedness.

4614 A It is. I wrote an editorial in Science 4615 Magazine as I was preparing to step down as NIH director 4616 about lessons learned from COVID-19. And that was a big, 4617 important one, that you have to invest not just in the 4618 acute need of today, but in the basic science that prepares 4619 you for what might be coming next, so that you're not 4620 caught off guard.

4621 Q So cutting funding to NIH on these type of

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4622 research and development programs would be detrimental to 4623 the public safety for any future pandemic in terms of 4624 putting us behind in vaccine development? 4625 А Seriously detrimental and shortsighted. 4626 0 And being detrimental would also mean more 4627 lives lost potentially in a future pandemic without the 4628 therapeutic or modalities or the vaccines? 4629 А We are going to see other pandemics in the 4630 future. We should learn every time this happens about how 4631 to prepare for the next one. I think we saw opportunities 4632 that now ought to be invested in, such as figuring out what 4633 are the most likely pathogens for the next one? Could we 4634 actually start now with building the first steps in vaccine 4635 preparation or in therapeutics or diagnostics? A whole 4636 plan like that was put together. Unfortunately, it was not 4637 provided with resources. 4638 So when a new virus emerges, what basic Q 4639 understanding do scientists need about a virus and how it 4640 replicates in order to begin the development of vaccine development? 4641 4642 We need to understand its basic biology. Α 4643 Viruses are clever little stretches of nucleic acid, but

4644 they're often not immediately obvious in terms of how they 4645 do what they do. They have their own set of genes that 4646 help them replicate, that help them get inside human cells, 4647 that help them package themselves so they could get into 4648 the next set of human cells. All of that basic science is 4649 critical if you're going to be successful in coming up with 4650 both vaccines and with therapeutics.

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4651 Q And how did NIAID acquire that information 4652 about SARS-CoV-2?

4653 А They already had the foundation of 4654 information about coronaviruses in the same class because 4655 of SARS and MERS, and that put NIAID ahead of where they 4656 otherwise would have been. They already knew something 4657 about how the basic genes that are involved in this 4658 particular class of coronaviruses and what they do, and 4659 that enabled them very quickly to be able to predict what 4660 would be the best mRNA sequence to use.

4661 That happened in 48 hours. The design of the vaccine that 4662 has saved 3 million lives in the United States alone, maybe 4663 including mine because I got this, too, was done in 48 4664 hours with just having the sequence of the virus and all 4665 the knowledge they already had about this family of 4666 coronaviruses. And they could say, this is the exact 4667 sequence we want to make.

4668 And then a trick there. Barney Graham -- just a real hero 4669 under the circumstance, but most people don't know his 4670 name -- had already studied other coronaviruses like this 4671 and had figured out, if you want to make a really good 4673

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4672 vaccine, you don't want to use exactly the same protein sequence that the virus makes. You want to make a little 4674 tweak to it. You want to put in a couple of proteins in just the right place which makes it fold in a way that it's

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4677 profound. All of the other mRNA vaccine strategies used 4678 Barney's idea. I don't know if our vaccines would have 4679 worked without that.

better for the immune system to recognize it. That was

4680 Q That's incredible. He definitely deserves 4681 some recognition for that.

4682 А He does.

4683 So we've talked just now and earlier about 0 4684 the significance of using mRNA technologies to develop the 4685 COVID-19 vaccine. But what potential does the use of mRNA 4686 technologies hold for future vaccine development?

4687 A lot. And it's not just for infectious Α 4688 disease.

4689 Yeah, talk to me. Q

4690 Certainly for infectious disease, we now А 4691 have a platform, if you can call this a platform, I think 4692 for developing a vaccine for almost anything. And it's 4693 being applied in places where we've had a real hard time 4694 getting a good vaccine, like tuberculosis or malaria. MRNA 4695 opens that up.

4696 But cancer is the other place where there's a huge amount

4697 of excitement. People have worked on cancer vaccines for a 4698 long time, and it has been pretty frustrating because the 4699 timetable is so long. If you got cancer today and somebody 4700 took out that tumor and then tried to analyze it and 4701 figured, oh, here are some aspects of that tumor that the 4702 immune system should have seen, but it didn't. Let's try 4703 to rev it up by making you a personal vaccine that will 4704 allow the immune system to wake up. 4705 But by the time you get there, it's like a year later 4706 because it's so slow. With mRNA, the cycle time now 4707 becomes actually practical in this space, and there are a 4708 lot of researchers doing that where they're getting pretty 4709 excited. 4710 Q I'm an emergency medicine physician and that 4711 really excites me, too. 4712 Right. Especially for people with stage 4 Α 4713 disease where we don't do much to help them. Immunotherapy 4714 might be the way we can cure people even at that stage. 4715 That's incredible. Do you think that Q 4716 Congress is investing enough in mRNA technologies as 4717 compared to other forms of research at the NIH? 4718 А I think it is an area that everybody 4719 identifies as high priority. But when only about 20 4720 percent of the grants that come to NIH can be funded right 4721 now because of the budget, that means there's still some

4722 pretty good science, probably really good science, that's 4723 being left on the table.

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4724 And is there research being done on this 0 4725 technology now, before an outbreak is imminent? Are we 4726 using this research in identifying what one may think that 4727 the next pandemic is and then better prepare for that? 4728 А I don't know the precise details about how 4729 much that's been possible. There was a big plan to do a 4730 lot of that and it was not resourced. At a smaller level, 4731 I am sure there are some efforts going on with, for 4732 instance, influenza since most of us expect influenza is 4733 likely to emerge with another bad one before long. 4734 And what role, if at all, did you play in Q 4735 developing the strategy for how vaccine distribution should 4736 be prioritized? 4737 I had no role in that. А 4738 You had no role in that? Q 4739 А I was part of the Operation Warp Speed team, 4740 but that was not my assignment. So I was aware that people 4741 like -- were deeply engaged in trying to work out that 4742 part, but I did not have input. 4743 Q I want to move now towards therapeutics. 4744 А Yes. 4745 That's something that I know that hasn't Q 4746 been as advanced as our quick development of vaccines, and

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4747 we are still looking for some good therapeutics to match 4748 different patient populations and needs. So I would like 4749 to focus on the ongoing work of developing therapeutics for 4750 COVID-19 in future novel viruses. 4751 Although the public health emergency concluded last year, 4752 it is important that we continue to stay on top of 4753 COVID-19, which continues to pose a threat to the medically 4754 vulnerable including the elderly and the immunocompromised. 4755 An important way we continue to reduce the threat of 4756 COVID-19 to these populations is by investing in the 4757 development and availability of therapeutics. 4758 Could you explain for us the work NIH has conducted to 4759 develop COVID-19 therapeutics? 4760 А I would be glad to. I had the 4761 responsibility as the NIH director to try to be sure that 4762 the therapeutic efforts were not happening in some 4763 uncoordinated scattershot way, and that meant pulling 4764 together an unprecedented public/private partnership called 4765 ACTIVE, an acronym that stood for Accelerating COVID-19 4766 Therapeutic Interventions and Vaccines. Vaccines was in 4767 there, too. 4768 This was set up in about two weeks primarily by me in late 4769 March of 2020, and grew to involve 20 other pharmaceutical 4770 companies that had the greatest interest in this, an

4771 executive committee that I cochaired with Paul Stoffels of

4772 Johnson & Johnson, and meetings that went on amongst 4773 various subgroups essentially around the clock. It was an 4774 incredibly impressive, everybody drop everything, work 100 4775 hours a week to try to figure out what could we do to try 4776 to find both vaccines and therapeutics.

4777 One's original hope, of course, is that there is going to 4778 be a drug that's already been given to people for something 4779 else and is known to be safe that will turn out to work. 4780 Repurposing has got to be your first order of business but 4781 you have no guarantee that's going to work. It worked in 4782 some modest ways. Remdesivir, the first drug that got 4783 approved for really sick people in the United States, that 4784 was repurposed and that was an NIH study done in the space 4785 of just three months after the pandemic hit our shores. 4786 Steroids, that was the UK. They came up with that before 4787 anybody else, and that turned out also to be a valuable 4788 intervention for people in the ICU but was not good as a 4789 treatment for people with milder illness. What we did with ACTIVE was to look at what are the 4790 4791 possible drugs that somebody would say might have activity 4792 here, and then try to prioritize which ones should go into 4793 rigorous trials, and there were about 800 of those 4794 suggestions and we had a group of experts looking at every

4795 one of those saying, does this one look promising or is 4796

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4797 And ultimately, it came down to testing 20 million of those 4798 in rigorous randomized trials, in clinical trial networks 4799 we had to set up from scratch because they weren't there. 4800 This was incredibly intense. It involved these master 4801 protocols. 4802 Most of those failed. Hydroxychloroquine failed, 4803 ivermectin failed. That's important to know, isn't it, not 4804 just what worked, but also what didn't work, so that people 4805 won't put their hopes and trust in it. 4806 Monoclonal antibodies went into that, and with the initial 4807 virus a lot of those looked really good and saved some 4808 lives, but then the virus had to mutate and then the 4809 monoclonal antibody had to be redesigned. 4810 There were a few other drugs that were repurposed that 4811 worked reasonably well. Anticoagulants, interestingly. 4812 Because the virus caused this problem with 4813 hypercoagulability, it turned out that was actually a good 4814 thing to give for people who were in the hospital, not for 4815 people who were doing okay at home. But once you got in 4816 the hospital and you were sick enough, you were at risk for 4817 a big clot. So that also happened. That was all approved. 4818 But looking for the home run, there wasn't a home run in 4819 repurposing.

4820 Q In terms of anticoagulants, can I just ask4821 you for my own personal knowledge, when you say

4822 anticoagulants in the hospital, are you talking about 4823 Coumadin or aspirin? Because there was a lot of aspirin in 4824 early outpatient regimens. 4825 А This was full heparinization. 4826 Q Oh, full heparinization, in the hospital? 4827 А In the hospital, because we ran a trial of 4828 full versus low dose heparin and the full was slightly 4829 better. So it was a big deal. And aspirin did not seem to 4830 provide the same protection. I think that was another 4831 trial. 4832 0 Even in outpatient settings? 4833 I don't remember. I'm sure that got tested. А 4834 I don't remember that it turned out to be important or I 4835 would probably know. 4836 Q Okay. Please continue. 4837 But of course, what we all wanted was a Α 4838 highly effective oral agent, and we didn't have one in the 4839 medicine cabinet that was already developed, so that had to 4840 be invented. And that's where Paxlovid came along. Pfizer 4841 built upon some efforts they had previously done with SARS, 4842 so they weren't starting totally from scratch. They had 4843 sort of a framework of what a molecule might look like. 4844 I will say, NIH helped in a certain way by giving them 4845 other information we had. And that drug turns out to be 4846 pretty good. It's highly effective and fortunately it

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4847 works in virtually all of the various strains, because it 4848 doesn't work on the spike proteins, it works on another 4849 part of the life cycle.

4850 So I would say a lot of lives, we don't know how many, have 4851 been saved by Paxlovid. When I got COVID back in February, 4852 I sure took it. I hated the bad taste in my mouth, but I 4853 was okay anyway to have the chance to experience that. 4854 It's certainly the case that I wish we had a longer list 4855 there, but that was a really important story. We ran a 4856 workshop about, okay, what should we be doing to try to 4857 accelerate this? And here, as you probably know, if you're 4858 going to develop a drug, you've really got to know the 4859 lifecycle of this virus so you know where its Achilles heel 4860 is where you can find a small molecule that will interfere 4861 with that. So that's a lot of really deep basic science to 4862 build on. I wish we were doing that for some of the other 4863 future pandemics, but we're simply not.

4864 Q Why not?

4865 A We don't have the resources.

4866 Q So more resources would aid in better

4867 preparation?

4868 A Yes.

4869 Q And cutting resources to the NIH and your 4870 research would harm our ability to better prepare for the 4871 next pandemic? 4872 A Absolutely. I wrote another paper about 4873 this with my 31 coauthors who are all part of this active 4874 partnership, including FDA, including people from all these 4875 companies, that got published about a year ago. And it has 4876 a whole box that says, lessons learned. Here's what we 4877 should be doing. When I look at that list now, I'm really 4878 troubled.

4879 Q I would love to see that box.

4880 A Happy to share.

4881 Mr. Nassikas. We'll get a copy to you.

4882 Dr. Ruiz. Please.

4883 BY DR. RUIZ.

4884 Q And you touched on this a little earlier, 4885 but to what extent did NIH's work to develop COVID-19 4886 therapeutics build off of the body of research NIH had 4887 generated in the years prior to the pandemic?

4888 Oh, in many incredibly important ways, in А 4889 every possible way. I mean, basic virology but certainly 4890 specific virology about coronaviruses. The things like 4891 what Barney Graham already knew about that protein idea. 4892 But also, in terms of the mRNA platform, that's 25 years of 4893 initially a lot of skepticism about whether this would 4894 work, and whether it would be safe. A Nobel Prize has now 4895 been given for the people who persisted Katalin Kariko and 4896 Drew Weissman, but that was all efforts that we supported

4897 along the way.

4898 And as well as clinical trial design, that's something we 4899 had learned a lot about in the previous years and so we 4900 knew how to do it in a fashion that it would be rigorous 4901 and then compelling.

4902 And one final thing I would say. The other thing I was 4903 very compelled about was if you're going to do a trial of 4904 this sort, based on everything we've done in the part, it 4905 has to involve people of diverse backgrounds. If you're 4906 going to convince the public that this vaccine is safe for 4907 them, they've got to look at who took part in the trial and 4908 say, are there people there that look like me? 4909 And I cannot tell you how many Saturday mornings I spent 4910 talking to people running the trials asking them, what does 4911 your diversity look like? And if it's not what the country 4912 looks like, there's a problem. And this isn't just a nice 4913 thing to have. This is essential to have, both for 4914 understanding whether it works and also convincing people 4915 that they've been represented in a critical way in figuring 4916 out if this is safe.

4917 Q I appreciate you saying that. We'll have 4918 some questions about that in the near future. And the 4919 reason why I appreciate you saying that is because I 4920 actually have a bill that would help alleviate barriers for 4921 underrepresented populations in clinical trials. And so we

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4922 are working through that as well in a very bipartisan way 4923 with a colleague of mine on Energy and Commerce. 4924 So now I would like to turn to the development of new 4925 COVID-19 therapeutics. 4926 А Mm-hmm. 4927 0 So what benefits would new therapeutics 4928 options offer to COVID-19 patients, particularly the 4929 medically vulnerable and those with long COVID? 4930 А Well, just talking about acute COVID illness 4931 to begin with, long COVID, I think at the moment, we have 4932 one very successful drug, Paxlovid, and one that's also 4933 been FDA approved, although there are some concerns about 4934 whether it is as ideal for reasons I don't need to get 4935 into. But that's a pretty short list for a pandemic that 4936 continues, as we all know, to spread around the world. We 4937 are hearing the wastewater levels now are as high as 4938 they've been in a year. So we ought to have a larger menu 4939 there, and that's a lot of hard work that needs to be done. 4940 Paxlovid, by the way, is a drug that interacts with other 4941 drugs, and so there's certainly plenty of people who, when 4942 you look at the list of drug interactions, are simply not 4943 candidates. And that's unfortunate. In the ideal world, 4944 you want a drug that has no side effects, is 100 percent 4945 effective, and doesn't interact with anything else. We 4946 don't have that.

4947 Q So you discussed some of this a few moments 4948 ago, but is there anything that you would like to add 4949 regarding NIH's ongoing work to develop COVID-19 4950 therapeutics? Like, what can we do now to help, as 4951 Congress?

4952 А Again, if we had the resources to fund more 4953 basic virology about the classes of viruses that are most 4954 likely to cause future pandemics so we could really work 4955 out in advance the life cycle of each of those viruses and 4956 understand where are the vulnerable places that a drug 4957 could turn out to be beneficial, then we would be well 4958 ahead. That is happening at a much slower pace than it 4959 should.

4960 Q And what does the current research and 4961 development landscape look like for new COVID-19 4962 therapeutics?

4963 You know, I don't know that it looks А 4964 particularly promising at the moment. Because Paxlovid is 4965 out there, industry may feel like this is therefore a 4966 pretty tough community to be able to land another success 4967 story. It really is one of those places where you need the 4968 whole ecosystem of public and private to try to push this 4969 forward when there may be a fairly high risk of failure. 4970 Do you think the fact that the SARS-CoV-2 Q 4971 virus mutates very often, does that affect the impetus to

4972 want to pursue this type of research?

4973 I think, if anything, it should increase the А 4974 interest, because as SARS-CoV-2 comes up with new ways to 4975 decorate itself with a different spike protein, the 4976 protection from the vaccines can wane. So far what we have 4977 seen is, at least for Paxlovid, the drugs however maintain 4978 pretty high effectiveness because they operate on a part of 4979 the viral lifecycle that doesn't change, at least not much 4980 from variant to variant.

4981 You asked about long COVID, and there again, this is an 4982 incredibly heartbreaking situation. Well, let's just say 4983 all of COVID is heartbreaking when you consider all of the 4984 people's lives that have been lost and families that have 4985 been devastated.

4986 But long COVID, as an additional terribly difficult 4987 consequence of this now affecting an untold number, but 4988 probably millions of people, we still, despite Congress 4989 having provided significant resources three years ago to 4990 NIH, haven't quite figured out what is going on. And it's 4991 probably different between individuals. It's not one 4992 condition. It's probably multiple different ways that 4993 being infected with this virus leaves you with consequences 4994 that linger on.

4995 Maybe the virus is still hiding there somewhere. There are 4996 some indications of that, although it's really hard to

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4997 prove. Maybe it is this effect on the vascular system, 4998 maybe it's that your immune system got revved up and can't 4999 figure up how to calm down and so you're walking around 5000 months after the infection is gone with your body still 5001 fighting off an infection which makes you feel terrible. 5002 We don't know. 5003 But a lot more is being learned, and again the program that 5004 NIH put together following more than 40,000 people is 5005 beginning to shed a lot of light on that. I know people 5006 are frustrated that we don't have answers yet. It's really 5007 hard to get those answers. 5008 Anything else before we move on to the other 0 5009 topic, in terms of steps the federal government and 5010 Congress could consider to foster the development of 5011 therapeutics and other medical countermeasures for 5012 potential future outbreaks, including of novel viruses? 5013 I would love to mention also diagnostics, А 5014 because I think that maybe hasn't gotten as much attention, 5015 but can be absolutely critical for managing an outbreak or 5016 a pandemic. 5017 As you know, with SARS-CoV-2, we got off to a slow start in 5018 terms of having diagnostics that gave you a rapid 5019 turnaround. There is another place where I got personally

5021 this as a serious problem and identified a way to provide

very involved when Senators Blunt and Alexander identified

5022 some additional resources.

5023	And this was a great opportunity to tap into the creativity
5024	and the vision of people in academia and in small
5025	businesses, so we set up a shark tank, and we called it
5026	that, and invited people who had great ideas about how to
5027	do a fast turnaround of SARS-CoV-2 tests, maybe that could
5028	even be done at home, to come forward and show us what they
5029	got.
5030	And we went through hundreds of applicants and ultimately
5031	winnowed down the ones that looked most promising, and
5032	that's why there are tests on the pharmaceutical shelves
5033	that we are all taking advantage of. It wouldn't have
5034	happened, at least not at that speed, without that very
5035	creative government program which looked a lot like venture
5036	capital.
5037	Q Yeah.
5038	A And it worked and we still have that program
5039	now being applied to other diseases. And it's
5040	certainly it was recently applied to monkey pox, for
5041	instance, but could be applied to other emerging pathogens
5042	if we could keep it going, because we have the whole
5043	framework and we know how to do it.
5044	Q Now let's talk about diversity in clinical
5045	trials.
5046	A Let's.

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5047 Q As a physician and public health expert, one 5048 of my top priorities in strengthening our nation's research 5049 capacity is ensuring that our population of clinical trial 5050 participants is diverse and inclusive of historically 5051 underrepresented communities, including of communities of 5052 color, vulnerable populations, a wide range of age groups, 5053 et cetera.

5054 Dr. Collins, I understand this is a priority of yours as 5055 well, as you mentioned earlier. Could you explain how NIH 5056 worked to ensure diversity in clinical trials for COVID-19 5057 medical countermeasures including the vaccines?

5058AWe basically said you have to do this or5059you're not going to get funded. It has to be very clear.5060Too many times, I think, in the past, it has been, well,5061you know, you really ought to try when you're doing a5062clinical trial to enroll diverse people. But there's no5063real teeth to it.

5064 NIH has now determined to apply that kind of rigor and 5065 actually to require people running trials to report 5066 regularly whether they're achieving it with the chance that 5067 they might actually have their funding slowed down if they 5068 can't come forward with a successful strategy.

5069 Q And why has it been important for NIH to 5070 ensure diversity in their clinical trials or a diverse 5071 population in COVID-19 clinical trials?

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5072 A For two reasons. One is it's really 5073 critical to understand whether a particular intervention is 5074 going to work across different groups. We're all 5075 different. Each of us has a unique kind of biology, and 5076 certainly across groups you don't want to lose the chance 5077 to discover that.

5078 And secondly, if you want confidence on the part of the 5079 public that a particular result is something that applies 5080 to them, then they need to be able to be convinced that 5081 people like them were part of what you did. That was the 5082 argument with the vaccine trials.

5083 And I will tell you, at the beginning of those trials, the 5084 first couple of weeks of report, 92 percent or something 5085 like that of the people enrolling were young white men. 5086 And that was great, but that was not the answer that we 5087 needed.

5088 And so it took a lot of arm twisting and a lot of 5089 reminders, that's not going to be good enough, this has to 5090 change, and an insistence on seeing every week how are you 5091 doing? And some of the centers that were being supported, 5092 because there were many of them across the country, figured 5093 out how to do this and they were allowed to expand their 5094 recruitment and some of the others couldn't and they shrank 5095 theirs.

5096 Q One of the reasons I find the work of

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5097 ensuring appropriate representation of communities of color 5098 in COVID-19 clinical trials to be incredibly important is 5099 the disproportionate harm the pandemic inflicted on these 5100 populations, and it was due to a multitude of reasons. 5101 Dr. Collins, is there any perspective you would like to 5102 share with us on the pandemic's disproportionate impact on 5103 the communities of colors in the U.S.?

5104 А It was very clear at the outset when you saw 5105 the impact in morbidity and mortality that communities of 5106 color were suffering a disproportionately large amount of 5107 that. And there are multiple reasons, as you said, all of 5108 which are troubling and heartbreaking. Access to medical 5109 care was not equivalent. People who were basically needing 5110 to make a living couldn't necessarily stay at home for two 5111 or three weeks or more to stay out of harm's way. The idea 5112 that you could achieve a certain level of isolation just 5113 wasn't feasible.

5114 So you put all those things together with our health care 5115 system and its limited outreach to all peoples, and the 5116 outcome was heartbreaking to see.

5117 If you needed one more compelling example of how our health 5118 care system does not provide benefits to everyone equally, 5119 there it was.

5120 I think just as a slight counter example that maybe it 5121 could have been better when it came to the vaccines -- and

5122	maybe it was helpful in a significant way that the trials
5123	really were diverse. When you looked to see what was
5124	happening by, say, summer of 2021 when vaccines had been
5125	available for free to anybody who wanted them, actually
5126	diverse communities were embracing that pretty much like
5127	everybody else.
5128	So and that would not have been predicted a few years
5129	earlier given understandable skepticism in the part of some
5130	communities about whether medical research is always being
5131	done for their benefit.
5132	Q Did you run into any barriers in getting a
5133	more diverse population into your clinical trials?
5134	A Yeah, people said this is hard.
5135	Q And why did they say it was hard?
5136	A If you're setting up a trial site and you're
5137	asking for volunteers, the easiest way to do so is to put
5138	information out in people's traditional modes of when you
5139	put something in the paper or something, an email, that
5140	doesn't reach everybody. And again, because of history,
5141	some groups are going to be much more suspicious about a
5142	trial that maybe is not in their best interest.
5143	Q How about transportation?
5144	A And there's transportation.
5145	Q How about hours of the trial or
5146	A Hours of the trial, people have to get off

5147 work. All of those things, you're absolutely right. 5148 How about financing or any kind of payment 0 5149 to be included into participation when they're working hard 5150 and try to pay the bills? 5151 А And you're asking them to give up time. 5152 Yes, those are all serious factors. 5153 0 And this is my last question. For NIH's 5154 broader universe of research work, are there lessons we 5155 should take away from the work of ensuring diverse 5156 populations in COVID-19 clinical trials and, for example, 5157 on the importance of additional education, outreach, and 5158 investments and recruitment efforts? 5159 That's another great question. One of the А 5160 things we did with the COVID vaccine trials was to work 5161 with communities, a program called CEAL, C-E-A-L, Community 5162 Empowerment Alliance. 5163 Basically recognizing that if you are really asking groups 5164 to trust that this is something they want to take part in, 5165 you need to have people that are part of their community 5166 engaged as partners. That's a lesson that I think we have 5167 learned over and over again, and we sure learned it in that

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5168 space.

5169 Q So in other words, employ and work with 5170 people that are similar to the communities that are 5171 underrepresented in order to have better clinical trials

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5172 that can lead to better clinical outcomes in that 5173 population. But in the case of a pandemic, since it's a 5174 highly transmissible pandemic, doing that will actually 5175 prevent the transmissions to the general public and in our 5176 entire nation? 5177 А You are exactly right. 5178 Q So, in other words, eliminating programs 5179 that foster diversity inclusions and equity into the 5180 federal government workforce, into the public health 5181 aspects or any of the other agency aspects would hinder our 5182 ability to foster that kind of good outcomes for 5183 individuals in the general public, all of Americans, in the 5184 case of a pandemic? 5185 А Pandemics only get under control if you can 5186 actually reduce the likelihood of infection across the 5187 whole population. 5188 And by defunding programs that foster Q 5189 diversity so you have more of the federal government 5190 reflective of the diverse populations in our country, 5191 you're hindering that effort? 5192 If you're not having effective outreach to А 5193 everybody, you're not going to have an effective control in 5194 a pandemic. 5195 And so effective outreach. A more effective Q

5196 outreach would be done by people who belong to those

5197 different -- or identify culturally with those communities? 5198 That is --А 5199 Especially the hardest to reach communities. 0 5200 А And the evidence certainly supports that. 5201 Q The evidence. I like how you always bring 5202 it back it to the evidence because I too am an 5203 evidence-based physician. So I appreciate you saying that. 5204 Dr. Ruiz. And with that, I'll turn it back. 5205 . I know we only have a few minutes left in 5206 the round, but I think my colleague, _____has a couple 5207 questions. 5208 I think we can get through this together, 5209 Dr. Collins. 5210 The Witness. Okay. 5211 BY 5212 It's been very well-publicized that Q 5213 Dr. Fauci received threats against himself and his family over the course of the COVID-19 pandemic. You mentioned to 5214 5215 the Washington Post that you also received threats. Is 5216 that true? 5217 А That's true. 5218 Do you recall anything specific leading to Q 5219 or causing these threats to begin? 5220 I think oftentimes they were after some А 5221 appearance I made in a public way or maybe on a media

5222 program.

5223 Q What was the nature of the threats that were 5224 made to you?

5225 A They were highly diverse. The ones that 5226 were most troubling were threatening physical harms. Most 5227 troubling were not limited to threatening me, but also my 5228 family.

5229 Q And how did those threats impact you and 5230 your life and your family's life?

5231 А It's been a source of considerable concern 5232 and it still is today. Certainly upgraded our security 5233 system. I have had the experience of having police 5234 knocking on my door at 1:00 in the morning to say, you 5235 might need to know there's been a credible threat. There 5236 is at least one instance of someone who ended up in jail 5237 because of the credibility of the threats to both me and my 5238 daughters.

5239 Q And that's a horrifying experience. I think 5240 you have everybody's sympathies in having to deal with that 5241 just for doing your job. But similarly, are you aware that 5242 other scientists also received threats based on the work 5243 they were doing during the COVID-19 pandemic? 5244 A Certainly Dr. Fauci. I have heard of 5245 others. I believe Kristian Andersen mentioned in one of 5246 his public statements that he had also been targeted.

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5247 And it seems that this hostile atmosphere 0 5248 for scientists and this treatment that they may be getting 5249 could hinder the advancement of science and specifically 5250 pandemic preparedness. Is that your understanding? 5251 А I think we can expand that to an even higher 5252 level of what's happened in terms of science distrust. 5253 Just at the point where the scientific response to COVID I 5254 think will be seen historically as one of the most 5255 remarkable achievements that science has ever mounted for 5256 anything in the last course of human history. Ironically, 5257 this has also coincided with the general deterioration and 5258 trust in science by the public. 5259 You may or may not be aware, but there have Q 5260 been actual studies into the effects of this environment 5261 and what it does to scientists and their work. So I am 5262 just going to go over a little of the of that with you and 5263 then get your take on it. 5264 There was a GAO report titled Pandemic Origins, 5265 Technologies, and Challenges For Biological Investigations. 5266 This was released in January of 2023. In it, it said, 5267 "Researchers may experience unwanted attention or pressure 5268 because of their involvement in pandemic origin 5269 investigations and leave the field or refuse to 5270 participate."

5271 $\,$ When you hear that, what does that mean to you and what

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5272 impact do you see it having?

5273 A It's very troubling. And it's across the 5274 board in terms of the whole public health response. I've 5275 talked to public health officers in communities who, in 5276 trying to do their job, found signs put up saying they 5277 should be put in jail.

5278 This demonization of people trying to do the best they 5279 could in the face of a terrible pandemic is not something I 5280 thought America would do. It seems like hating other 5281 people is the most un-American action you could think of, 5282 but now it seems to be commonplace.

5283 Q And I think it's helpful to also hear from 5284 the scientists themselves. Nature published an article in 5285 October 2021 titled "'I hope you die': how the COVID 5286 pandemic unleashed attacks on scientists." This article 5287 included dozens of researchers who shared their stories 5288 about death threats or threats of physical or sexual 5289 violence.

5290 Nature also released an associated editorial with this 5291 piece where they said, and I quote, "Institutions at all 5292 levels must do more to protect and defend scientists and to 5293 condemn intimidation."

5294 They also said, "Taking steps to support scientists who 5295 face harassment does not mean silencing robust, open 5296 criticism and discussion. The coronavirus pandemic has

5297 seen plenty of disagreement and changing views as new data 5298 have come in as well as differing stances on which policies 5299 to adopt. Scientists and health officials should expect 5300 their research to be questioned and challenged and should 5301 welcome critical feedback that is given in good faith, but 5302 threats of violence and extreme online abuse do nothing to 5303 encourage debate and risk undermining scientist 5304 communication at a time when it has never mattered more." 5305 I think this echoes some things you've said earlier today 5306 about encouraging robust debate among scientists. However, 5307 threats do nothing for the debate. 5308 Is there anything you would like to comment on that? 5309 I think what you read is a really good А 5310 statement. It captures both parts of this. Yeah, science 5311 can only be successful if there's open debate about what is 5312 true and what is not true. And science is focused on 5313 trying to find truth, and truth does exist. The idea that 5314 there is no such thing as truth, no scientist I know would 5315 adhere to that. We are not post-modernists. But 5316 obviously, when it comes down to a discussion, it's about 5317 the data, it's about the interpretation of the data. It

5318 should never become a personal attack, especially one that 5319 threatens somebody's physical safety.

5320 Somehow that line, perhaps encouraged by social media, is5321 now getting crossed every day, every hour, every minute

5322 with no consequences. It's just normal behavior now. It 5323 breaks my heart.

5324 Are there any actions that you think the 0 5325 United States government can be taking to ensure we have a 5326 properly staffed and qualified workforce for scientific 5327 research and specifically pandemic preparedness? 5328 А I worry that the way in which these risks 5329 are now perceived, people who might have contemplated going 5330 into the public health may be thinking twice about that. 5331 The best way I guess to counter that is to be sure that 5332 appropriate safety protections are there when they are 5333 needed, but maybe also to encourage people to see this is 5334 still, despite all of that, an amazing time to be involved 5335 in public health and medical research. We are learning so 5336 much. It is just exciting to be part of that endeavor. 5337 I don't want that to get lost in all of the things we have 5338 been talking about in terms of the negative sides. This is 5339 the golden era for medical research, whether it's 5340 infectious disease or cancer or rare diseases like sickle 5341 cell that we are now curing. Anybody who wants to be part 5342 of something truly exciting where they make a contribution 5343 to human flourishing, this is where you want to be. 5344 That sounds like that would be something 0 5345 wonderful for all of our bright young scholars and 5346 scientists to hear to encourage them to go into public

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5347 health, medical, scientific research fields.

5348 If you want to wake up in the morning А 5349 feeling like you're doing something that matters, come on, 5350 we've got that. 5351 Absolutely. I think that is a great place Q for us to end, Dr. Collins. 5352 5353 So we can go off the record. 5354 (Recess.) 5355 Mr. Benzine. All right, we can go back on the record. 5356 BY MR. BENZINE. 5357 Before I ask you a couple more questions 0 5358 about Proximal Origin, I want to unequivocally state, and 5359 the Chairman would be absolutely the first person to state 5360 that we denounce any threats against anybody's lives. I 5361 don't know if you know, but he has been shot at on the 5362 baseball field where Mr. Scalise was shot and credited with 5363 saving Mr. Scalise's life. 5364 А I remember that. 5365 What some of the other people in this room Q 5366 know now, after Monday and Tuesday, is that I have gotten 5367 similar ones particularly after a hearing where people 5368 don't like what I have to say, either. And so I just want 5369 to put it out there that we are unequivocal in denouncing

5370 all threats.

5371 I want to ask a few very brief questions on the paper, the

5372 Proximal Origin, which we talked about earlier a bit, but I 5373 assume you are aware of the paper. 5374 A Yes. 5375 Written by Dr. Andersen, Dr. Gary, Q 5376 Dr. Lipkin, Dr. Holmes, and Dr. Rambaut. 5377 First, there is -- significant is too strong an adjective, 5378 but probably in the neighborhood of five to eight times 5379 they sent drafts either to you or Dr. Fauci through 5380 Dr. Farrar mostly. Did you ever edit or suggest any edits 5381 to the paper? 5382 А No. 5383 And to your knowledge, did Dr. Farrar ever Q 5384 edit or suggest any edits to the paper? 5385 А I would not know that. 5386 And then also, to your knowledge, did Q 5387 Dr. Fauci ever edit or suggest any edits to the paper? 5388 Not to my knowledge. А 5389 All right. Thank you. Q 5390 Mr. Benzine. I want to introduce Majority Exhibit 14. 5391 (Majority Exhibit No. 14 was 5392 identified for the record.) 5393 BY MR. BENZINE. 5394 It looks like a long letter but really we Q 5395 are only going to talk about one part of the letter and I 5396 will direct you to it.

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5397 For the record, this is a January 11, 2022 letter from Mr. 5398 Comer and Mr. Jordan to Secretary Becerra. The appendix is 5399 where we are going to focus. It starts on what would be 5400 page 4-ish of the letter. And these are mostly now 5401 produced emails to the Committee, but I want to flip to 5402 page 12 and 13 of the appendix. 5403 А Is that the number on the bottom of the 5404 page? 5405 Q Yes, sir. 5406 А Mm-hmm. At the very end. 5407 Yes. So unfortunately, despite having asked 0 5408 for this now numerous times, the Department has refused to 5409 provide this email to us. So this is a transcription of 5410 it. In 2021, Minority staff were allowed to go to HHS, 5411 view these emails in camera and transcribe them. So as you 5412 can see, the email up top with the gray boxes, the gray 5413 boxes and then the words underneath it. And so this is --5414 А I don't understand the process, but okay. 5415 I promise the substance of the email is Q 5416 what's underneath it. 5417 So it's an email from you to Dr. Fauci, Dr. Tabak, 5418 Dr. Lane, and John Burklow from April 16, 2020 and reads, 5419 "Wondering if there is something NIH can do to help put 5420 down this very destructive conspiracy, with what seems to 5421 be growing momentum." And then it has a link to a Bret

5422 Baier story about the coronavirus outbreak starting in the 5423 Wuhan lab. 5424 And then you continue, "I hoped the Nature Magazine article 5425 on the genomic sequence of SARS-CoV-2 would settle this. 5426 But probably didn't get much visibility. Anything more we 5427 can do? Ask the National Academy to weigh in?" 5428 Do you recall sending this email? 5429 А I do. 5430 Q First, kind of a baseline question, is the 5431 possibility that COVID-19 originated from some type of 5432 laboratory accident a conspiracy theory? 5433 Let me make it clear that at the time this А 5434 email was written, my focus was on the question about 5435 whether this virus had been human engineered. And based on 5436 the detailed analysis of the experts, I felt that that had 5437 been convincingly excluded as a possibility. 5438 Mr. Strom. Can I ask for clarity? When you say human 5439 engineered, do you mean almost like de novo from scratch? 5440 The Witness. From scratch. For people to continue to put 5441 that forward, therefore, in the face of strong evidence 5442 against it, I'm not a fan in retrospect of the word 5443 conspiracy, but it was certainly a speculation that was not 5444 based on evidence and it was potentially confusing and 5445 harmful.

5446 BY MR. BENZINE.

5447 And I appreciate that, and I appreciate the 0 5448 clarification on the de novo construction. But we're just 5449 trying -- there's no reason you should know this, but any 5450 number of people have been censored, silenced, for saying 5451 even the possibility of a lab leak, not a de novo 5452 construction, but the possibility of a lab leak was 5453 possible. 5454 So I'm just trying to ask, if in your opinion, the 5455 possibility of a lab leak, putting aside de novo 5456 construction, is a conspiracy theory? 5457 I think you would have seen in emails back А 5458 in February that I was among those wondering about the 5459 possibility of whether this virus had been under study in a 5460 lab. So I wouldn't have called that hypothesis a 5461 conspiracy. But to say that it was de novo engineered, 5462 that crosses the line. 5463 And respectfully, that's not what I'm Q asking. I'm just asking if it's a possibility, yes or no? 5464 5465 Mr. Nassikas. He was answering your question, Mr. Benzine. 5466 BY MR. BENZINE. 5467 All it's calling for is a "yes" or "no." Is 0 5468 the possibility of a lab leak a conspiracy theory? 5469 А You have to define what you mean by a lab 5470 leak.

5471 Q Putting aside de novo, the possibility of a

5472 laboratory or research-related accident, a researcher doing 5473 something in a lab, getting infected with a virus, and then 5474 sparking the pandemic. Is that scenario a conspiracy 5475 theory? 5476 А Not at this point. 5477 0 Thank you. Going down the email, you said 5478 that, "I hoped the Nature Medicine article on the genomic 5479 sequence of SARS-CoV-2 would settle this." I presume 5480 that's refers to Proximal Origin? 5481 А Yes. 5482 And settle this, what you're referring to in 0 5483 that email is kind of the de novo construction of a virus, 5484 not necessarily the lab leak overall? 5485 А Correct. 5486 Okay. And then, "Anything more we can do?" Q 5487 What did you mean by that statement? Obviously, you 5488 followed it with, "Ask the National Academy to weigh in?" 5489 But I'm trying to understand the thought process. 5490 Yeah, I was offering one option. I think, А 5491 from reading this email, trying to reconstruct my mindset, 5492 and this is almost four years ago, was concerned that what 5493 had already been scientifically deduced about this virus 5494 had not been as widely appreciated as maybe it should be. 5495 At any point, did you tell or suggest Q 5496 Dr. Fauci to take any action pursuant to this email?

5497 A No.

5498	Q	The next day, April 17, 2020, Dr. Fauci was
5499	asked the question at a White House press conference	
5500	regarding the origins of the virus and cited to Proximal	
5501	Origin. It then got significantly more visibility because	
5502	it was cited on the White House lawn. Did you instruct him	
5503	to do that?	
5504	А	No.
5505	Q	Did you know he was going to do that?
5506	А	No.
5507	Q	I want to shift gears and run through some
5508	topics really quickly.	
5509	From January 14, 2021 through February 10, 2021, the WHO	
5510	sent a team to	China to investigate the origins of
5511	COVID-19. Are	you generally aware of that investigation?
5512	А	I'm generally aware.
5513	Q	Did you read the report?
5514	А	No.
5515	Q	Were you involved at all in the planning or
5516	setting up of the trip?	
5517	А	No.
5518	Q	It was reported that the U.S. submitted
5519	three names to be a part of the trip. Do you recall those	
5520	names?	
5521	А	No, I do not.

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5522 0 The team was comprised of 17 international 5523 scientists and 17 Chinese scientists. The only American 5524 was Dr. Daszak of EcoHealth Alliance. We have talked about 5525 Dr. Daszak an awful lot today. You obviously had a lot 5526 of -- combed through some of his things during the 5527 enforcement process. 5528 You were asked kind of broadly about Dr. Daszak and 5529 conflicts of interest earlier by Chairman Griffith. I want 5530 to ask specifically on this one, do you think Dr. Daszak 5531 had a conflict of interest in going on this trip? 5532 It is not my place to assess how WHO А 5533 evaluated that. 5534 Okay. You said earlier that you met with Q 5535 the FBI this past August, August of 2023. 5536 I think that's about the time. А 5537 Was that the only time that you were 0 5538 contacted by anyone in the intelligence community regarding **5539** COVID-19? 5540 The best of my recollection, yes, that was А 5541 it. 5542 And did you tell the FBI substantially what 0 5543 you told us today? 5544 Almost identical. А **5545** Q Thank you. One final question on origins, 5546 and then we are going to talk about some of the mitigation

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5547 measures and things.

5548 A Okay.

5549 Q And move on from there.

5550 We have talked about this an awful lot, I think I know the 5551 answer to the question, but I want to ask it. Is the 5552 origin of COVID-19 still unsettled science?

5553 A Yes.

5554 Q I am going to skip through some of these 5555 questions. And so I apologize for bouncing around on 5556 topics, but in the spirit of time, we'll ask you some more 5557 specific ones.

5558 In the realm of masking, obviously masks became this big 5559 to-do during the pandemic. One of the specific aspects 5560 that we are interested in is the science and data that 5561 supported it for children. So the WHO recommended against 5562 masking children less than five because masks are, I'm 5563 quoting, not in the overall interest of the child, and 5564 against children 6 to 11 from wearing masks because of 5565 again, quoting, the potential impact of wearing a mask on 5566 learning and psychological development. 5567 The United States recommended masking kids as young as two, 5568 so directly contradicted the WHO's recommendation on that. 5569 Do you recall what science or data backed up that

5570 recommendation --

5571 A I have no knowledge of that.

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5572 Q Okay. There are now studies coming out 5573 regarding learning loss from both school closures and 5574 childhood mask wearing -- for masks specifically, kids not 5575 being able to see adults form words and things like that 5576 and it's causing speech issues. Are you aware of those 5577 issues?

5578 A In a general way, yes.

5579 Q Do you agree that there's learning loss and 5580 other unintended consequences of mask wearing?

5581 A I have to depend on the experts who assess 5582 those things who have evidence, they say, that that's the 5583 case.

5584 Thank you. Moving on to social distancing Q 5585 and the various regulations surrounding that. On March 5586 22nd, 2020, the CDC issued guidance describing social 5587 distancing to include remaining out of congregant settings, 5588 avoiding mass gatherings, and maintaining a distance of 5589 approximately six feet from others when possible. We asked 5590 Dr. Fauci where the six feet came from and he said it kind 5591 of just appeared, is the quote. Do you recall science or 5592 evidence that supported the six-foot distance?

5593 A I do not.

5594 Q Is that I do not recall or I do not see any 5595 evidence supporting six feet?

5596 A I did not see evidence, but I'm not sure I

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5597 would have been shown evidence at that point.

5598 Q Okay.

5599 A I was not involved in that conversation.
5600 Q Since then, it has been an awfully large
5601 topic. Have you seen any evidence since then supporting
5602 six feet?

5603 A No.

5604 Q We as a staff took a trip to Los Alamos and 5605 Lawrence Livermore National Laboratories in New Mexico and 5606 California, and beyond the nuclear stuff that they do and 5607 the radiation stuff that they do, they also have 5608 epidemiologists and various other experts on staff.

5609 A Mm-hmm.

5610 Q And they told us that one of the things that 5611 their through computing and their epidemiologists could do 5612 would be remodel a sneeze, and say how far the droplets go 5613 and how fair air flies and things like that. Do you ever 5614 recall NIH partnering with the National Labs during the 5615 pandemic?

5616 A Not that I recall.

5617 Q Okay. In this kind of realm, you -- at 5618 least recently, it became public, a kind of town hall you 5619 did, where you were asked about various mitigation 5620 measures. Do you know what I'm talking about? 5621 A I assume you're talking about a Braver

5622 Angels meeting back in the summer?

5623 Q Yes, is that when it originally occurred, it 5624 was over the summer?

5625 A Yes, July.

5626 Q During this, you said, As a guy living 5627 inside the Beltway feeling a sense of crisis trying to 5628 decide what to do in some situation, or in the White House, 5629 with people who had data that was incomplete, we weren't 5630 really thinking about what that would mean to Wilk and his 5631 family in Minnesota a thousand miles away from where the 5632 virus was hitting so hard. We weren't really considering 5633 the consequences in communities that were not New York City 5634 or some other big city.

5635 The public health people, we talked about this earlier, if 5636 you're a public health person and you are trying to make a 5637 decision, you have this very narrow view of what the right 5638 decision is and that is something that will save a life. 5639 It doesn't matter what else happens. So you attach 5640 infinite value to stopping the disease and saving the life, 5641 you attach a zero value to whether this actually totally 5642 disrupts people's lives, ruins the economy, and has many 5643 kids kept out of school in a way that they never quite 5644 recovered."

5645 Do you think that that calculation, the infinite value to 5646 the public health measure versus the zero value to the

5647 other kind of unintended consequences was a mistake? 5648 I'm glad you're asking. I made those А 5649 comments in the context of what it was like in March or 5650 April of 2020. People have forgotten just how devastating 5651 the situation was with trailer trucks pulling up outside 5652 the morque because the morque couldn't handle all the dead 5653 bodies, thousands of people dying every day. 5654 I am a public health person, I'm a physician. I swore the 5655 Hippocratic Oath. I was speaking about myself in that 5656 quote. For me trying to make a decision or contribute to a 5657 decision about mitigation measures, my number 5658 one -- basically my sole concern had to be saving lives. 5659 That's what I was there for. 5660 I knew there were other parts of the government that were

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5661 also a part of making big sweeping decisions, and I counted 5662 on them to cover such things as the economy, such things as 5663 education. But that was not my role, that was not why I 5664 was there.

5665 So I'm unapologetic for focusing on saving lives. I think 5666 that was my responsibility, that was my calling. And 5667 especially at that point, that felt very compelling. 5668 Keep in mind, in terms of the harms that were done that 5669 you've described with prolonged closures of schools, those 5670 were state and local decisions. The government made 5671 general recommendations. States had to decide what to do.

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5672 Q And I definitely appreciate and remember the 5673 early days, too. It was terrible, especially up in New 5674 York.

5675 So you touched on something that I think when we are 5676 looking forward to future pandemics that we want to 5677 incorporate is kind of ensuring a whole of government 5678 response when it's needed, that it's not just a public 5679 health emergency. Decisions that are made in the public 5680 health space have an economic, national security, foreign 5681 affairs, educational ramifications. Do you think it's 5682 important to have kind of all the voices at the table when 5683 determining what steps are needed?

5684 A Yes. And not just at the federal level, but 5685 particularly because of our federalist government, the 5686 states and localities having that same diversity of 5687 viewpoints that captures all of the consequences of the 5688 decision.

5689 Q And having all those viewpoints at the table 5690 would kind of eliminate the risk of any one overruling all 5691 the others. Is that fair?

5692 A That's the way it ought to work.

5693 Q Again, I don't know the answer to these 5694 questions, so if they're no, just let me know. Another 5695 situation we are investigating that a Member on this 5696 Committee actually called medical malpractice is the New

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5697 York nursing home order that directed nursing homes to 5698 accept COVID-19 patients and sometimes not even test them 5699 for COVID-19. 5700 Did you have any conversations with Governor Cuomo during 5701 the pandemic? 5702 А No, I did not. 5703 What about any conversations with former New Q 5704 York Health Commissioner Howard Zucker? 5705 А No. 5706 Q Again, bouncing around on all kinds of 5707 topics. 5708 That's okay. А 5709 We're just going through these. Another Q 5710 thing that we are evaluating going forward is having -- and 5711 some of this might just be to avoid public misperceptions, 5712 which I think is actually an important goal, of definitions 5713 on what a death and what a case and what a hospitalization 5714 actually are. So we have heard a lot, and I think Dr. Birx 5715 mentioned pretty early on, of an individual dying with 5716 COVID versus from COVID. Are you aware of that kind of 5717 distinction? 5718 А I am aware there was a discussion about how 5719 best to define those situations. 5720 What do you recall about that discussion? Q 5721 А That it was complicated.

5722 Q And I know it's not, when we talked to
5723 Dr. Fauci and there is kind of like our understanding, and
5724 he agreed, the three buckets of like a very clear COVID
5725 death which probably never happened, right, there's almost
5726 probably no American that's completely healthy, catches
5727 COVID, and then passes away.

5728 A There were a few.

5729 0 A few. The middle ground where there's some 5730 kind of intervening event, catching COVID exacerbates what 5731 you already have and you pass away. And then the very 5732 extreme on the other side, that you have COVID, you're 5733 unaware, you get in a car accident and you pass away. 5734 I think from our side, we agreed the first two in there are 5735 a COVID death, the last one not being so. Would you agree 5736 with that?

5737 A I would agree with that.

5738 Another thing. Hospitalizations, in Q particular, is that during the pandemic, maybe still, I'm 5739 5740 not aware, but hospitals would test everyone coming in for 5741 COVID to obviously get an accurate case count, but then 5742 would record it as a COVID hospitalization regardless of 5743 the rationale for actually being in the hospital. One of 5744 the things we want to look at is better defining what a 5745 hospitalization means. So I guess I'm asking -- I am going 5746 to put it in hypothetical terms again just so we can kind

5747 of get that.

5748 Someone breaking their leg, not knowing they have COVID, 5749 going and getting tested for COVID. Would that be a COVID 5750 hospitalization? 5751 А Got to be careful in terms of not 5752 generalizing that particular instance. Did they break 5753 their leg because they were really sick and were trying to 5754 climb upstairs to go to bed and tripped? So --5755 Okay. Q 5756 А Careful attention to those details. 5757 Understanding those details matter, would 0 5758 you agree that there were probably COVID hospitalizations 5759 through how the hospitals tested for it, that the patient 5760 wasn't there for COVID? 5761 А I don't know how hospitals were doing that 5762 or how they were categorizing them. I'm uncomfortable 5763 answering. 5764 Do you think in a future pandemic that there Q 5765 should be clear, established definitions for case 5766 hospitalization and death counts? 5767 I think an effort should be made to do the А 5768 best you can, recognizing as we've just been talking about, 5769 there may not be bright lines in every situation. 5770 Thank you. The Ranking Member talked about Q 5771 COVID vaccines a lot, and I've heard the Chairman say any

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5772 number of times that millions of lives were saved by COVID 5773 vaccines, and that broadly they are very safe and 5774 effective. I will ask, you detailed your involvement in 5775 Operation Warp Speed, so I don't need to ask about that. 5776 But were you involved at all in the FDA processes for EUA 5777 or full biologics approval? 5778 А No. 5779 0 One of the things we hear an awful lot is 5780 kind of -- and we discussed this in other aspects, but is 5781 kind of the, like, maybe overmessaging the kind of noble 5782 lie, to say -- say something with the effort of getting 5783 more people vaccinated, that it's a slight mistruth for a 5784 noble goal. Some of that has come up in the vaccine 5785 aspect. Like I said, it saved millions of lives, safe and 5786 effective, but were there breakthrough cases for the 5787 vaccine? 5788 Of course. А 5789 And breakthrough hospitalizations? Q 5790 А Yes. 5791 And breakthrough deaths? 0 5792 Yes. Α So it would be kind of unfair to make 5793 Q 5794 unequivocal statements that there weren't; is that fair?

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5795 A It would also be unfair to make unequivocal5796 statements that vaccines don't benefit anybody in terms of

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5797 preventing hospitalization or death because that would not 5798 be true.

5799 Q And I agree. In July 2021, President Biden 5800 had a town hall and said, if you're vaccinated, you're not 5801 going to be hospitalized, you're not going to be in the ICU 5802 unit, and you're not going to die.

5803 So we just kind of walked through that there were 5804 breakthrough cases, there were breakthrough

5805 hospitalizations, there were breakthrough deaths. Do you
5806 think that statement is maybe unfair?

5807 A I think I can't judge how the President 5808 decided how to phrase his point. I think he was trying to 5809 make the case that vaccines are going to be highly 5810 beneficial. Beyond that, I am not in a position to judge 5811 the words that he chose.

5812 I would say, July of 2021, at that point, about 85 percent 5813 of the people who were dying were unvaccinated.

5814 Q And I agree with that, too. From our 5815 perspective, sometimes the unequivocal statements when they 5816 are proven wrong lead to maybe some hesitancy on some 5817 people's part. I was promised I wouldn't get hospitalized 5818 and then my friend got hospitalized and maybe the vaccine 5819 doesn't work as well, from what we have been hearing from 5820 constituents.

5821 Mr. Nassikas. Mr. Benzine, what President Biden is saying

5822 there obviously was stated in good faith with good 5823 intentions and contrasts pretty starkly with what the 5824 former President said. 5825 Mr. Benzine. In fairness, John, the White House is here. 5826 If they want to defend the President, they can. I would 5827 prefer you didn't. 5828 Mr. Nassikas. That's fine. I am just wanting you to be 5829 honest with the record here. 5830 Mr. Benzine. I mean, if you want me to read it again and 5831 ask him again if it's true, I'm more than happy to. 5832 Mr. Nassikas. Take your time, however you want to take it 5833 up. 5834 BY MR. BENZINE. 5835 Q After the full biologics approval, there 5836 were some vaccine mandates that went into the effect. DoD, 5837 CMS, OSHA, OPM, Head Start. Were you involved in any of 5838 those? 5839 А No. 5840 As I just kind of laid out, like promises to Q 5841 things, and we have seen a downtick in a lot of the 5842 childhood vaccinations post COVID-19, which we are 5843 obviously concerned about. Do you think mandating vaccines 5844 could contribute to vaccine hesitancy on traditional 5845 vaccinations?

5846 A I don't know.

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5847 Q One of the other things we have seen is, and 5848 as much as you are familiar, are you familiar with the 5849 VAERS system? 5850 А Yes. 5851 And it's the U.S. government's way to track Q 5852 adverse events to vaccines; is that right? 5853 It is. А 5854 0 Our understanding is that it is pretty flawed, that it contributes to a decent amount of 5855 5856 overcounting, that you don't have to be a physician to 5857 enter. There aren't really very many standards to enter an 5858 adverse event into VAERS. Is that true? 5859 А That's true. Plus, there is no way to 5860 correlate the adverse events with the actual receiving the 5861 vaccine. 5862 Very true. Do you think that VAERS system Q 5863 needs to be reformed? 5864 I wish it was renamed. А 5865 We can start there. What would you name it? Q 5866 I don't have an alternative, but the name А 5867 currently leads people to believe that this is an 5868 accumulation of circumstances where the vaccine caused an 5869 adverse event. The vast majority of what's in that 5870 database are correlation, but not causation. **5871** Q One of the things we are looking at is

5872 reforming it, trying to limit it -- maybe not limit is the 5873 right word, but ensure that the reporting that goes into it 5874 is accurate and then vetted by CDC and FDA. 5875 А Mm-hmm. 5876 So in addition to renaming, do you agree Q that we could reform the system a little bit? 5877 5878 А I think some reforming would be a good 5879 thing. 5880 Q All right, thank you. I want to shift gears 5881 and talk about immunity. And my understanding, two kinds. 5882 Kind of infection derived immunity and vaccine acquired 5883 immunity. My general understanding, I guess depending on 5884 the pathogen and how much it can evade either of those, is 5885 the way out of a pandemic is to get enough immunity so that 5886 if there is a case it can't spread very well, that there's 5887 enough blocking it. Is that fair? 5888 А That's fair. 5889 I am pretty sure I know the answer to this 0 5890 question, but are you aware of the Great Barrington 5891 Declaration? 5892 А Yes, I am. 5893 Q How did you become aware of the Great 5894 Barrington Declaration? 5895 On October the 5th or 6th of 2020, a time А 5896 where we still didn't have a vaccine, didn't know if we

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would have one, this was announced by the group, the three individuals that had authored it, and was immediately brought to the attention of the Secretary of Health and Human Services.

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5901 Q Do you know how it was brought to the 5902 attention of Secretary Azar?

5903 I believe through Dr. Scott Atlas. А 5904 0 And he was at the White House at the time? 5905 А Yes. 5906 Q Do you know how it got to Dr. Atlas? 5907 I believe, from what I have read --А 5908 Ms. Ganapathy. Dr. Collins, I am going to step in and just 5909 say to the extent that this would require you to disclose 5910 any deliberative communications, I would instruct you not 5911 to answer.

5912 The <u>Witness.</u> I think I can stay out of that zone.

5913 Basically, that Dr. Atlas played a role in having those

5914 experts appear in Massachusetts and resulting in this

5915 one-page declaration.

5916 BY MR. BENZINE.

5917 Q And those three individuals,

5918 Dr. Bhattacharya, Gupta, and Kulldorff met with the

5919 Secretary on this, correct?

5920 A I don't know if all three of them did. At 5921 least some of them did.

5922 Q Do you know who? 5923 I don't. А 5924 And do you believe that meeting to be set up 0 5925 by Dr. Atlas as well? 5926 А That's my understanding. 5927 Mr. Benzine. I want to introduce this as Majority Exhibit 5928 15. 5929 (Majority Exhibit No. 15 was 5930 identified for the record.) 5931 BY MR. BENZINE. 5932 So this is an email production from FOIA and 0 5933 Bates marked 1028 through 1031. I will give you a second 5934 to skim. You don't need to read the whole article, but the 5935 email I want to focus on is on the last page. 5936 Yeah, I'm not familiar with the Wired А 5937 article. 5938 The last page is an email from you to Q 5939 Dr. Fauci, Dr. Lane, and Dr. Tabak. And it reads, "Hi Tony 5940 and Cliff, See GreatBarringtonDeclaration.org. This 5941 proposal from the three fringe epidemiologists who met with 5942 the Secretary seems to be getting a lot of attention and a 5943 even co-signature from Nobel Prize winner Mike Leavitt at 5944 Stanford. There needs to be a quick and devastating 5945 published takedown of its premises. I don't see anything 5946 like that online yet - is it underway?"

5947 First, what were your concerns with the Great Barrington 5948 Declaration?

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5949 A I was deeply alarmed that this proposal, 5950 which flew in the face of virtually every principle of how 5951 to handle a pandemic, had been put forward and within 24 5952 hours, without opportunity for any scientific debate, was 5953 presented to a cabinet member with the implication that 5954 this might rather quickly become the new policy for the 5955 United States.

5956 As a physician and somebody who hung around epidemiologists 5957 a lot, I was convinced this would result in the deaths of 5958 tens of thousands of people, and was looking for a quick 5959 response of some sort to sound the alarm.

5960 Q Was it your interpretation that the Great 5961 Barrington Declaration called for a kind of like, for lack 5962 of a better phrase, let it rip approach?

5963 That's been -- I think characterized is too А 5964 strong, but it was in that zone. Basically, the idea would 5965 be what they called focused protection of the vulnerable 5966 people, mostly elderly, and otherwise younger people would 5967 essentially go about normal activities with schools, 5968 businesses, et cetera. And with the expectation that the 5969 illness would certainly spread rapidly amongst that 5970 unprotected group and somehow the focused protection would 5971 work.

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5972 This troubled me greatly because of the absence of any 5973 proposal of how you could actually do this effectively. 5974 Are those old people supposed to hide in their houses for 5975 the next year with no interaction with anybody? And also, 5976 knowing at this point that something like 30 or 40 percent 5977 of the people who died from COVID-19 were under 65, this 5978 just seemed all wrong.

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5979 0 I appreciate that and the rationale, because 5980 I think it has been -- I'm not and never will advocate for 5981 a let it rip approach, but it doesn't seem like that's what 5982 they advocated for, but I understand, your perspective now 5983 hearing it makes a lot of sense and I appreciate it. 5984 I don't want to nitpick too much, it's late on a Friday 5985 before a holiday weekend, but what did you mean by fringe 5986 epidemiologists?

5987 A I meant their proposal was fringe.

5988 Q Not they themselves?

5989 A What they were putting forward was way 5990 outside the boundaries of what most experienced public 5991 health experts would have advocated for. And again, if it 5992 was put forward as a scientific presentation and let's 5993 discuss this, well, fine, let's do that. But they were 5994 short-circuiting that by a direct transmission to a cabinet 5995 member of the United States of America.

5996 Q At this point in time, did you have access

5997 to Secretary Azar?

5998 I did, but not on an easy, everyday basis. А 5999 Did you ever try to set up a meeting with 0 6000 the Secretary regarding the Great Barrington Declaration? 6001 А I don't recall so. 6002 0 Do you know if anyone within, outside of 6003 these folks and whoever from the government attended with 6004 them, do you know if anyone attempted to set up a meeting 6005 to kind of counter the Great Barrington Declaration? 6006 А I don't know. 6007 The second to last line is my next question, 0 6008 "There needs to be a quick and devastating published 6009 takedown of its premises." What did you mean by that? 6010 А I meant that this is a dangerous approach 6011 that could do great harm. I am looking for a response from 6012 credible experts to get that response out there quickly 6013 before this becomes somehow a U.S. policy, which seemed 6014 like a potential serious risk. 6015 And then, "I don't see anything like that 0 6016 online yet - is it underway?" What did you mean by that? 6017 А That this is now October 8th. This 6018 statement has been out now for two or three days. I was 6019 interested to see whether there was going to be such a 6020 response from the experts. And as, in fact, there was 6021 about a week later, with 14 public health organizations

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6022 putting forward a very strong disagreement with the Great 6023 Barrington Declaration, and then a whole other effort 6024 called the John Snow Memorandum capturing additional 6025 experts who pointed out the potential dangerous flaws. 6026 Q Did you ever instruct anyone at NIH or NIAID 6027 to draft a counter to the Great Barrington Declaration? 6028 А I did not. 6029 My last kind of question, we talked about 0 6030 therapeutics and treatments a lot and the active program, 6031 and I jotted down some notes, attempt to repurpose already 6032 FDA approved drugs. I think a valiant attempt. 800 went 6033 in, tested 29, and even fewer than 29 came out. Is that 6034 fair? 6035 А They were all tested. The vast majority 6036 showed no benefit. I think the total that did was six. 6037 Q Okay. 6038 That's in that science summary that I А 6039 mentioned earlier. 6040 Thank you. Do you recall -- I think there Q 6041 was some testimony before about -- and I might be flipping 6042 my million and billion, but 7 million or 7 billion spent on 6043 this. Do you recall if it's an M or a B? 6044 Spent on which exactly? А 6045 On ACTIV. Q 6046 It would certainly be more than 7 million. А

6047	And a lot of these expenditures were being done by the		
6048	private sector. Remember, this was a public/private		
6049	partnership, where a lot of the work had to be done by the		
6050	companies. I don't know the number. 7 billion sounds		
6051	awfully large.		
6052	Q Seven is stuck in my head and I don't		
6053	remember quite where it came from, but I really appreciate		
6054	that.		
6055	Mr. <u>Benzine.</u> I think we can go off the record then.		
6056	(Pause.)		
6057	We can go back on the record.		
6058	BY BY		
6059	Q Dr. Collins, thank you for being here. My		
6060	names is I am the Democratic staff		
6061	director for the Select Subcommittee. I just wanted to ask		
6062	a few questions following on to a few topics my Majority		
6063	colleagues raised in the last round.		
6064	Just initially, Dr. Collins, I want to get your perspective		
6065	here. Is it true that in March of 2020, officials at every		
6066	level of government were operating off of extremely limited		
6067	information regarding the coronavirus and the ways in which		
6068	it spread?		
6069	A Absolutely true.		
6070	Q If you could briefly elaborate for us on		
6071	what we knew and what we didn't know about the virus and		

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6072 its spread at that time in March 2020, I would appreciate 6073 it.

6074 A I'm trying to figure out exactly what the 6075 timing was relative to the realization that this virus was 6076 readily spread by asymptomatic people. And that was a big 6077 discovery that really led to, of course, a much more 6078 serious outcome. With SARS and MERS, the people who were 6079 infected were sick.

6080 Q Of course. But at a high level, when we 6081 were looking at those very first weeks and months of the 6082 COVID-19 pandemic, we were operating off of very limited 6083 information about the way the virus spread and that body of 6084 work was the one that was actively in development in those 6085 very first initial stages of the pandemic; is that correct? 6086 That is correct. Again, I don't recall А 6087 precisely if you're asking about March, what was the body 6088 of knowledge we had, but it was very incomplete. 6089 And would you agree, or is it true that as a 0 6090 nation, we were experiencing significant challenges, again,

6091 in that very early period of COVID-19, with supplies of 6092 tests and PPE?

6093 A Absolutely. Very serious.

6094 Q And just for the record, with respect to 6095 tests, we were seeing a delayed deployment of effective 6096 COVID-19 tests due to a number of issues including

6097 contamination of those tests and fundamental design flaws. 6098 Does that sound correct? 6099 Yes, that's correct. А 6100 0 And with respect to PPE, we did observe 6101 missteps by the federal government both in obtaining and 6102 effectively distributing PPE to states; is that correct? 6103 А I was not involved in the PPE part. 6104 0 Does it sound familiar that that was an 6105 issue we were experiencing as a nation, though? 6106 А It sounds familiar, correct. 6107 Now, taking a step back, is it true that 0 6108 when we are faced with a rapidly spreading respiratory 6109 virus, when we have little understanding of the ways in 6110 which it spreads, as you just said, and when we have 6111 limited supplies of testing and mitigation measures, one of 6112 the few tools that we have at our disposal to reduce spread 6113 is to create physical separation between people in order to 6114 reduce the risk of person-to-person transmission? 6115 А That is a reasonable approach that might be 6116 taken. 6117 0 And was it reasonable in March 2020 for 6118 public health officials, again working with extremely 6119 limited information about the virus and its spread, to 6120 believe that physical separation between people had the

6121 potential to reduce person-to-person transmission?

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6122 I think it was a reasonable assumption. А 6123 And just to be clear, do you agree, 0 6124 Dr. Collins, that public health guidance suggesting six 6125 feet of social distancing between individuals to reduce the 6126 spread of COVID-19 was not an attempt to deceive the 6127 American public or to mislead the American public, rather, 6128 it was an effort to reduce the spread of COVID-19 and to 6129 save lives, again when public health officials had 6130 extremely limited information about the spread of the 6131 virus? 6132 А I would agree. 6133 I also wanted to briefly just revisit the Q 6134 topic of herd immunity, the different kinds of immunity, 6135 and the way in which that sort of set of issues was 6136 approached in the pandemic response. 6137 I would like to just quickly get your view on herd 6138 immunity. As I understand it, sort of a marquee or 6139 noteworthy aspect of the novel coronavirus and COVID-19 is 6140 the ability to get reinfected; is that correct? 6141 А Yes. 6142 0 So can you just briefly explain for us how 6143 the ability to get reinfected with the novel coronavirus, 6144 with COVID-19 undermines the feasibility of herd immunity 6145 as an approach for addressing COVID-19 specifically?

6146 A Again, I'm not an immunologist, but the idea

6147 of herd immunity is that you have a significant fraction of 6148 the population that is essentially immune from being 6149 infected with COVID-19. That turned out to be a very 6150 difficult goal to achieve because of waning of the immune 6151 response and changing of the virus. 6152 0 You mentioned for us in the last round asked 6153 by my Majority colleague that there are different types of 6154 immunity. There is infection acquired immunity, there is 6155 vaccine conferred immunity, and there is hybrid immunity. 6156 As you just explained for us, immunity wanes. And the idea 6157 that infection acquired immunity is something that is a 6158 permanent fix or a permanent form of protection against 6159 COVID-19 is rendered moot as a result of that, correct? 6160 А That's correct. 6161 And just to be clear for the record, hybrid Q 6162 immunity, which is immunity conferred both through 6163 vaccination and immunity conferred from infection, affords 6164 stronger and more durable protection than infection 6165 acquired immunity alone? 6166 That was the result of a Kentucky study. Α 6167 0 Okay. 6168 I think with that, we can go off the record. 6169 [Whereupon, at 5:22 p.m., the taking of the instant 6170 interview ceased.]