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**From:** Brandy, Aesha (NIH/OD) [C] [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=52AA9651B97D41E58AFF688573E4752F-BRANDYA]  
**Sent:** 5/1/2020 1:03:17 AM  
**To:** Lauer, Michael (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=90fe9cae30c64cfbb67abd568e882796-lauerm]  
**CC:** Bundesen, Liza (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3cded900576a49aea461d26e93bddac3-lbundese]; Kosub, David (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3e3eccf57f4e4fcfaecaa7885f39bee5-kosubd]  
**Subject:** RE: NIH FOIA #54086 - SECOND Request from Meredith Wadman of Science Magazine - Due by COB Friday May 8th, if possible

Thanks.

Best,  
**Aesha**

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**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** Thursday, April 30, 2020 8:49 PM  
**To:** Brandy, Aesha (NIH/OD) [C] (b) (6)  
**Cc:** Bundesen, Liza (NIH/OD) [E] (b) (6); Kosub, David (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: NIH FOIA #54086 - SECOND Request from Meredith Wadman of Science Magazine - Due by COB Friday May 8th, if possible

Hi Aesha – I have nothing for that period.

Best, Mike

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**From:** "Brandy, Aesha (NIH/OD) [C]" (b) (6)  
**Date:** Thursday, April 30, 2020 at 8:47 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Cc:** "Bunden, Liza (NIH/OD) [E]" (b) (6), "Kosub, David (NIH/OD) [E]" (b) (6)  
**Subject:** NIH FOIA #54086 - SECOND Request from Meredith Wadman of Science Magazine - Due by COB Friday May 8th, if possible

Hi Dr. Lauer –

Meredith Wadman of Science Magazine submitted a second request, #54086, for the same records, but for a larger/different date range as well: **For the period October 1 2016- 9/30/2019**. This was done in the hope that they would receive records for the smaller date range faster.

Would you please search both date ranges for these 2 requests and forward me responsive documents by COB Friday, May 8<sup>th</sup>.

Let me know if you have any questions. Thanks Dr. Lauer.

Best,  
**Aesha**

Hi FOIA Team!

Request # 54085 was submitted through the NIH FOIA Public Portal and assigned to you for review and further processing.

Please review the request and if all required details have not been provided by the requester, be sure to use the "Stop Clock" option to ensure processing time for the request is accurately monitored while waiting for clarification/information from the requester.

**Request Description:**

Dear NIH FOIA staff:

I'm a reporter with Science. I'm requesting on an expedited basis a response to the following FOIA. The expedition is requested because of the urgent and pressing public health threat posed by the novel coronavirus -- and the possibility that political considerations caused NIH to cut off a grant that was probing the bat-to-human transmission that very possibly launched the current pandemic. See the April 27 Politico article under the headline: "Trump cuts U.S. research on bat-human virus transmission over China ties; The National Institutes of Health on Friday told EcoHealth Alliance, the study's sponsor for the past five years, that all future funding was cut."

The NIH's possible stifling of foundational research germane to both this epidemic and the prevention of future pandemics a time when Americans are dying in their thousands is clearly a matter of urgent and pressing concern for public safety, thus my request for expedition.

I'm requesting, for the period October 1 2019 to today, April 28, 2020:

1. All correspondence (including emails, written memos or letters, memos of phone conversations, and texts) between senior NIH officials Francis Collins, Michael Lauer, Lawrence Tabak, Tony Fauci and anyone else at NIH they copied on such correspondence, or who initiated such correspondence, concerning the grant to EcoHealth Alliance, R01 AI110964, "Understanding the Risk of Bat Coronavirus Emergence."
2. All correspondence between the senior NIH officials listed in (1.) above and any officials in the Department of Health and Human Services concerning the grant to EcoHealth Alliance, R01 AI110964, "Understanding the Risk of Bat Coronavirus Emergence."
3. All correspondence between the senior NIH officials listed in (1.) above and any officials in the Department of State concerning the grant to EcoHealth Alliance, R01 AI110964, "Understanding the Risk of Bat Coronavirus Emergence."



4. All correspondence between the senior NIH officials listed in (1.) above and any officials at EcoHealth Alliance concerning the grant to EcoHealth Alliance, R01 AI110964, "Understanding the Risk of Bat Coronavirus Emergence."

5. All correspondence between the senior NIH officials listed in (1.) above and any White House employees concerning the grant to EcoHealth Alliance, R01 AI110964, "Understanding the Risk of Bat Coronavirus Emergence."

Thanks for considering this request.

Sincerely,

Meredith Wadman, BM, BCh

Reporter

Science Magazine

1200 New York Avenue N.W., #1144

Washington, D.C. 20005

Email: [mwadman@aaaas.org](mailto:mwadman@aaaas.org)

Cell: (b) (6)

(Date Range for Record Search: From 10/01/2019 To 04/28/2020)

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**From:** Lauer, Michael (NIH/OD) [E] [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=90FE9CAE30C64CFBB67ABD568E882796-LAUERM]  
**Sent:** 5/1/2020 12:24:33 PM  
**To:** Brandy, Aesha (NIH/OD) [C] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=52aa9651b97d41e58aff688573e4752f-brandya]  
**CC:** Bundesen, Liza (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3cded900576a49aea461d26e93bddac3-lbundese]; Kosub, David (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3e3eccf57f4e4fcfaecaa7885f39bee5-kosubd]; Lauer, Michael (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=90fe9cae30c64cfbb67abd568e882796-lauerm]  
**Subject:** Re: NIH FOIA #54085 - Meredith Wadman of Science Magazine - Due by Friday May 8th  
**Attachments:** Wuhan FOIA.zip

Hi again Aesha – ODNI announced yesterday that there is an ongoing investigation into safety and security breaches at the Wuhan laboratory.

(b) (5)

Best, Mike

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**From:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Date:** Thursday, April 30, 2020 at 8:48 PM  
**To:** "Brandy, Aesha (NIH/OD) [C]" (b) (6)  
**Cc:** "Bundesen, Liza (NIH/OD) [E]" (b) (6), "Kosub, David (NIH/OD) [E]" (b) (6), "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** Re: NIH FOIA #54085 - Meredith Wadman of Science Magazine - Due by Friday May 8th

Hi Aesha – see attached.

Thanks, Mike

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**From:** "Brandy, Aesha (NIH/OD) [C]" (b) (6)  
**Date:** Thursday, April 30, 2020 at 8:27 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Cc:** "Bundesen, Liza (NIH/OD) [E]" (b) (6), "Kosub, David (NIH/OD) [E]" (b) (6)  
**Subject:** RE: NIH FOIA #54085 - Meredith Wadman of Science Magazine - Due by Friday May 8th

Apologies Mike – Can you send me documents by next Friday, **May 8<sup>th</sup>**.

Best,  
**Aesha**

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**From:** Brandy, Aesha (NIH/OD) [C]  
**Sent:** Thursday, April 30, 2020 8:26 PM  
**To:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Cc:** Bundesen, Liza (NIH/OD) [E] (b) (6); Kosub, David (NIH/OD) [E] (b) (6)  
**Subject:** NIH FOIA #54085 - Meredith Wadman of Science Magazine - Due by Friday April 8th

Hi Mike –

Please see the NIH FOIA request below from Science Magazine. Would you forward any responsive documents to me by COB Friday, May 8<sup>th</sup>, if possible. Let me know if you have any questions or feel this should be sent to another SME for input.

Thanks.

Best,  
**Aesha**

**From:** FOIA\_noreply@nih.gov <FOIA\_noreply@nih.gov>

**Sent:** Tuesday, April 28, 2020 10:47 AM

**To:** NIH FOIA <nihfoia@od.nih.gov>

**Subject:** NIH FOIA - Assignment Notification from NIH FOIA Public Portal-Tracking # 54085

*Hi FOIA Team!*

*Request # 54085 was submitted through the NIH FOIA Public Portal and assigned to you for review and further processing.*

*Please review the request and if all required details have not been provided by the requester, be sure to use the "Stop Clock" option to ensure processing time for the request is accurately monitored while waiting for clarification/information from the requester.*

**Request Description:**

*Dear NIH FOIA staff:*

*I'm a reporter with Science. I'm requesting on an expedited basis a response to the following FOIA. The expedition is requested because of the urgent and pressing public health threat posed by the novel coronavirus -- and the possibility that political considerations caused NIH to cut off a grant that was probing the bat-to-human transmission that very possibly launched the current pandemic. See the April 27 Politico article under the headline: "Trump cuts U.S. research on bat-human virus transmission over China ties; The National Institutes of Health on Friday told EcoHealth Alliance, the study's sponsor for the past five years, that all future funding was cut."*

*The NIH's possible stifling of foundational research germane to both this epidemic and the prevention of future pandemics a time when Americans are dying in their thousands is clearly a matter of urgent and pressing concern for public safety, thus my request for expedition.*



*I'm requesting, for the period October 1 2019 to today, April 28, 2020:*

- 1. All correspondence (including emails, written memos or letters, memos of phone conversations, and texts) between senior NIH officials Francis Collins, Michael Lauer, Lawrence Tabak, Tony Fauci and anyone else at NIH they copied on such correspondence, or who initiated such correspondence, concerning the grant to EcoHealth Alliance, R01 AI110964, "Understanding the Risk of Bat Coronavirus Emergence."*
- 2. All correspondence between the senior NIH officials listed in (1.) above and any officials in the Department of Health and Human Services concerning the grant to EcoHealth Alliance, R01 AI110964, "Understanding the Risk of Bat Coronavirus Emergence."*
- 3. All correspondence between the senior NIH officials listed in (1.) above and any officials in the Department of State concerning the grant to EcoHealth Alliance, R01 AI110964, "Understanding the Risk of Bat Coronavirus Emergence."*
- 4. All correspondence between the senior NIH officials listed in (1.) above and any officials at EcoHealth Alliance concerning the grant to EcoHealth Alliance, R01 AI110964, "Understanding the Risk of Bat Coronavirus Emergence."*
- 5. All correspondence between the senior NIH officials listed in (1.) above and any White House employees concerning the grant to EcoHealth Alliance, R01 AI110964, "Understanding the Risk of Bat Coronavirus Emergence."*

*Thanks for considering this request.*

*Sincerely,*

*Meredith Wadman, BM, BCh*

*Reporter*

*Science Magazine*

*1200 New York Avenue N.W., #1144*

*Washington, D.C. 20005*

*Email:* [mwadman@aaas.org](mailto:mwadman@aaas.org)

*Cell:* [REDACTED] (b) (6)

*(Date Range for Record Search: From 10/01/2019 To 04/28/2020)*

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**From:** Bulls, Michelle G. (NIH/OD) [E] (b) (6)  
**Sent:** 4/21/2020 12:17:39 PM  
**To:** Black, Jodi (NIH/OD) [E] (b) (6)  
**CC:** Tarwater, Robert (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6)  
Bulls, Michelle G. (NIH/OD) [E] (b) (6)  
**Subject:** RE: Subrecipients Under FAIN R01AI110964

Jodi,  
I will review— (b) (5) If Mike could loop me back into the discussion, I will respond to her and look into it. Thank you.

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**From:** Black, Jodi (NIH/OD) [E] (b) (6)  
**Sent:** Monday, April 20, 2020 10:28 PM  
**To:** Bulls, Michelle G. (NIH/OD) [E] (b) (6)  
**Cc:** Tarwater, Robert (NIH/OD) [E] (b) (6); Black, Jodi (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** FW: Subrecipients Under FAIN R01AI110964

Hi Michelle, how do you suggest we proceed? See below

Best,  
Jodi

Jodi B. Black, PhD, MMSc  
Deputy Director  
Office of Extramural Research, NIH

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**From:** Mike Lauer (b) (6)  
**Date:** Monday, April 20, 2020 at 6:55 PM  
**To:** "Bettencourt, Alice (HHS/ASFR)" (b) (6) Jodi OER (b) (6)  
**Cc:** Mike Lauer (b) (6)  
**Subject:** Re: Subrecipients Under FAIN R01AI110964

Thanks Alice – looping in Jodi – we'll look into it.

Best, Mike

---

**From:** "Bettencourt, Alice (HHS/ASFR)" (b) (6)  
**Date:** Monday, April 20, 2020 at 5:04 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** RE: Subrecipients Under FAIN R01AI110964

So the follow up question is likely to be: (b) (5)

(b) (5)

(b) (5)

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**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** Monday, April 20, 2020 4:57 PM  
**To:** Bettencourt, Alice (HHS/ASFR) (b) (6); Bulls, Michelle G. (NIH/OD) [E]



(b) (6); Black, Jodi (NIH/OD) [E] (b) (6)

Cc: Lauer, Michael (NIH/NHLBI) [E] (b) (6)

Subject: Re: Subrecipients Under FAIN R01AI110964

Hi Alice – here's the info I have – from NIAID. Thanks, Mike

R01-AI-110964, Peter Daszak, PI to ECOHEALTH ALLIANCE

(b) (5)

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From: "Bettencourt, Alice (HHS/ASFR)" (b) (6)

Date: Monday, April 20, 2020 at 4:49 PM

To: "Bulls, Michelle G. (NIH/OD) [E]" (b) (6), "Lauer, Michael (NIH/OD) [E]" (b) (6)

Subject: Subrecipients Under FAIN R01AI110964

Mike, Michelle,

OMB has requested via Jen M. to know if there are subrecipients to Ecohealth Alliance under the subject FAIN. (b) (5)

(b) (5) Could you please have the application checked and let me know. (b) (5)

Thank you,

Alice

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**From:** Arbes, Sarah (HHS/ASL) (b) (6)  
**Sent:** 4/15/2020 12:31:06 PM  
**To:** Tabak, Lawrence (NIH/OD) [E] (b) (6); Pence, Laura (HHS/ASL) (b) (6); Wolinetz, Carrie (NIH/OD) [E] (b) (6)  
**CC:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/NHLBI) [E] (b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6)  
**Subject:** RE: Wuhan lab research

Very helpful—and just in time! About to send this up to AMA and able to include this. Will let you know if there are followup questions.

---

**From:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Sent:** Wednesday, April 15, 2020 8:24 AM  
**To:** Pence, Laura (HHS/ASL) (b) (6); Wolinetz, Carrie (NIH/OD) [E] (b) (6)  
**Cc:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/NHLBI) [E] (b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6); Arbes, Sarah (HHS/ASL) (b) (6)  
**Subject:** Re: Wuhan lab research

Clarifying the resources to the Wuhan group:

Type 1 total is 749,976. The Type 2, is 76,301 (so far). Thus total for all years is:  $749,976 + 76,301 = 826,277$  (b) (5)

It's a subcontract going through New York.

Let us know if you need anything else.

Larry

---

**From:** "Pence, Laura (HHS/ASL)" (b) (6)  
**Date:** Wednesday, April 15, 2020 at 7:19 AM  
**To:** "Wolinetz, Carrie (NIH/OD) [E]" (b) (6)  
**Cc:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6), "Hallett, Adrienne (NIH/OD) [E]" (b) (6), "Lauer, Michael (NIH/OD) [E]" (b) (6), "Schwetz, Tara (NIH/OD) [E]" (b) (6), "Arbes, Sarah (HHS/ASL)" (b) (6)  
**Subject:** Re: Wuhan lab research

This is great, thanks!

On Apr 15, 2020, at 7:05 AM, Wolinetz, Carrie (NIH/OD) [E] (b) (6) wrote:

And this news release has a pretty good lay level summary of it, if it's useful :  
<https://www.sciencedaily.com/releases/2020/03/200317175442.htm> Cheers, Carrie

---

**From:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Sent:** Wednesday, April 15, 2020 6:56 AM  
**To:** Wolinetz, Carrie (NIH/OD) [E] (b) (6); Pence, Laura (HHS/ASL)

(b) (6)  
**Cc:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E]  
(b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6); Arbes, Sarah (HHS/ASL)  
(b) (6)  
**Subject:** Re: Wuhan lab research

Attached is the paper Carrie is referring to.  
Larry

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**From:** "Wolinetz, Carrie (NIH/OD) [E]" (b) (6)  
**Date:** Wednesday, April 15, 2020 at 6:50 AM  
**To:** "Pence, Laura (HHS/ASL)" (b) (6), "Tabak, Lawrence (NIH/OD) [E]"  
(b) (6)  
**Cc:** "Hallett, Adrienne (NIH/OD) [E]" (b) (6), "Lauer, Michael (NIH/OD) [E]"  
(b) (6) "Schwetz, Tara (NIH/OD) [E]" (b) (6) "Arbes, Sarah  
(HHS/ASL)" (b) (6)  
**Subject:** RE: Wuhan lab research

Laura,

(b) (5)

(b) (5) Cheers, Carrie

---

**From:** Pence, Laura (HHS/ASL) (b) (6)  
**Sent:** Tuesday, April 14, 2020 11:32 PM  
**To:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Cc:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E]  
(b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6); Wolinetz, Carrie  
(NIH/OD) [E] (b) (6); Arbes, Sarah (HHS/ASL) (b) (6)  
**Subject:** Re: Wuhan lab research

Gotcha, thanks! If you have that info tomorrow morning that would be great. (b) (5)

(b) (5)

Can't thank you enough for all the info you've already gotten to us on this. If will be very helpful.

On Apr 14, 2020, at 10:53 PM, Tabak, Lawrence (NIH/OD) [E] (b) (6)  
wrote:

Mike Lauer will need to answer this- it is a sub project to the NY grant but I don't know if  
funding is direct or via NY.  
Larry

Sent from my iPhone



On Apr 14, 2020, at 10:51 PM, Pence, Laura (HHS/ASL)

(b) (6) wrote:

Really helpful, thanks! So the PI in NY is the grantee and the institute in Wuhan is subgrantee? Or Wuhan receives funding directly from NIH?

On Apr 14, 2020, at 10:43 PM, Tabak, Lawrence  
(NIH/OD) [E] (b) (6) wrote:

Laura,  
Still working on some confirmation of details, but this work is part of a large multi- country study with Wuhan being one site. The principal investigator, Peter Daszak, is based in NY at Ecohealth Alliance, Inc

**Project Number:** 2R01AI110964-06  
**Title:** UNDERSTANDING THE RISK OF BAT CORONAVIRUS EMERGENCE

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=)

**Contact PI / Project Leader:**  
**Awardee Organization:**

DASZAK, P  
ECOHEALTH

How long have we been giving research dollars to this lab? (b) (5)

- How much have we given? (b) (5)

(b) (5)

- 
- For what purpose? (b) (5)

(b) (5)

- 
- 
- 

(b) (5)

Anything else we should know? (b) (5)

[Redacted]  
[Redacted]  
[Redacted]

Please let us know if you need anything else.  
Larry

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**From:** "Pence, Laura (HHS/ASL)"

[Redacted] (b) (6)

**Date:** Tuesday, April 14, 2020 at 9:47 PM

**To:** "Tabak, Lawrence (NIH/OD) [E]"

[Redacted] (b) (6), "Wolinetz, Carrie  
(NIH/OD) [E]" [Redacted] (b) (6),

"Schwetz, Tara (NIH/OD) [E]"

[Redacted] (b) (6)

**Subject:** Wuhan lab research

Hi! Can we get info on this ASAP? Need for the morning.  
Sorry for the fire drill.

Begin forwarded message:

**From:** "Arbes, Sarah (HHS/ASL)"

[Redacted] (b) (6)

**Date:** April 14, 2020 at 9:30:23 PM EDT

**To:** "Hallett, Adrienne (NIH/OD) [E]"

[Redacted] (b) (6), "Pence,  
Laura (HHS/ASL)"

[Redacted] (b) (6)

**Cc:** "Morse, Sara (HHS/ASL)"

[Redacted] (b) (6)

**Subject:** For AMA in the morning

Adrienne and Laura –

Can you please help me run ground  
truth to this article?:

<https://protect2.fireeye.com/url?k=f08a61fa-acdf682a-f08a50c5-0cc47a6a52de-b99d5f233732d661&u=https://protect2.fireeye.com/url?k=79bfb5e8-25eb9cc3-79bf84d7-0cc47a6d17cc-7fe08f9f909251fb&u=https://protect2.fireeye.com/url?k=40f43e35-1ca13726->

40f40f0a-0cc47adb5650-c048b52a2b043577&u=https://protect2.fireeye.com/url?k=d8055c7b-84514507-d8056d44-0cc47adc5fa2-762234a678e2d50f&u=https://www.soundhealthandlastingwealth.com/health-news/u-s-government-gave-3-7million-grant-to-wuhan-lab-that-experimented-on-coronavirus-source-bats/

Congressman Gaetz is publicly criticizing HHS/NIH for funding the Wuhan laboratory's bat research. Here's this quote from another article: "I'm disgusted to learn that for years the US government has been funding dangerous and cruel animal experiments at the Wuhan Institute, which may have contributed to the global spread of coronavirus, and research at other labs in China that have virtually no oversight from US authorities."

- How long have we been giving research dollars to this lab?
- How much have we given?
- For what purpose?

(b) (5)





- If asked to defend our research dollars going to this lab for this purpose, what do you recommend we say?

(b) (5)



- Anything else we should know?

(b) (5)



Thanks much!  
Sarah

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**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** 4/15/2020 11:23:08 AM  
**To:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**CC:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology  
**Attachments:** NoA R01AI110964-06.pdf; NoA R01AI110964-01.pdf; FACTS Snapshot for 2-R01-AI110964-06 DASZAK, PETER QVR.pdf

Hi Larry – on the Type 1 total is 749,976. On the Type 2, looks like the total is 76,301 (so far). Thus total is 749,976+76,301=826,277.

It's a subcontract going through New York.

Mike

---

**From:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Date:** Wednesday, April 15, 2020 at 7:12 AM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Mike – sorry – what is the total amount Wuhan has received since 2014?

Does the money go to NY and they send to Wuhan or do we send to Wuhan directly.

Thanks  
Larry

---

**From:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Date:** Wednesday, April 15, 2020 at 7:11 AM  
**To:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6), "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Cc:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6), "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Thanks – just sent you budget details.

Mike

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**From:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Date:** Tuesday, April 14, 2020 at 10:12 PM  
**To:** "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Cc:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6), "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Thanks Emily.

Looping in Mike Lauer,  
Larry

---

**From:** "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Date:** Tuesday, April 14, 2020 at 10:11 PM  
**To:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Cc:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6)  
**Subject:** Fwd: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

I am forwarding draft response below to inquiry from Rubio et al earlier.

PI is Peter Dazsak, Eco Health alliance in NYC. Wuhan subcontract is approximately 74k per year. I will try to find more accurate subcontract numbers.

Sent from my iPad

Begin forwarded message:

**From:** "Abbey, Lillian (NIH/NIAID) [E]" (b) (6)  
**Date:** April 14, 2020 at 4:24:34 PM EDT  
**To:** "Cassetti, Cristina (NIH/NIAID) [E]" (b) (6), "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Cc:** "Ford, Andrew (NIH/NIAID) [E]" (b) (6), "Bateman, Karen (NIH/NIAID) [E]" (b) (6), "Werner, Alyssa (NIH/NIAID) [E]" (b) (6), "Mulach, Barbara (NIH/NIAID) [E]" (b) (6)  
**Subject:** Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Dear Cristina and Emily,  
Incorporated below in red font is a draft response Andrew developed based on his discussion with Erik.  
(b) (5)  
. Also, Andrew provided the attached publication from mid-March, noting that we may want to share it with the OD.

**DRAFT RESPONSE:**

<b>Project Number:</b>	2R01AI110964-06	<b>Contact PI / Project Leader:</b>	DASZAK, PETER
<b>Title:</b>	UNDERSTANDING THE RISK OF BAT CORONAVIRUS EMERGENCE	<b>Awardee Organization:</b>	ECOHEALTH ALLIANCE, INC.

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=)

- 1) What are the goals of the main grant:

(b) (5)

(b) (5)

- 2) What are the specific activities supported by the sub to the Wuhan lab and the total costs associated with these activities. Please verify if the creation of recombinant bat in Wuhan is included in their research activities.

(b) (5)

Total award information is available in Reporter at link above but budget information about subcontracts is not publicly available as these awards are administered by the grantee institution.

---

**From:** Crawford, Chase (NIH/NIAID) [E] (b) (6)  
**Sent:** Monday, April 13, 2020 5:41 PM  
**To:** NIAID BUGS (b) (6)  
**Cc:** Auchincloss, Hugh (NIH/NIAID) [E] (b) (6); Harper, Jill (NIH/NIAID) [E] (b) (6); NIAID OCGR Leg (b) (6)  
**Subject:** Request for information: Senate Qs - Wuhan Institute of Virology

Hi BUGS,

Staff to Senator Marco Rubio (R-FL) has forwarded an email to Building 1 from the White Coat Waste Project (see bottom of email chain). The forwarded message links to recent articles in The Daily Mail and the Washington Examiner on NIH support for previous coronavirus studies involving the Wuhan Institute of Virology. Building 1 has asked if NIAID has any information related to this research that we can share with staff to Senators Rubio and Mike Braun (R-IN).

**To help us better understand this congressional request, is there any background information that you can provide on the activities discussed in the articles referenced below?**

Thanks,  
Chase

(b) (6)

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**From:** LaMontagne, Karen (NIH/OD) [E] (b) (6)  
**Sent:** Monday, April 13, 2020 4:23 PM  
**To:** NIAID OCGR Leg (b) (6)  
**Subject:** Senate Qs - Wuhan Institute of Virology

Hi, NIAID,

Separately, we have heard from the offices of Senators Rubio and Braun about these linked articles:

[White Coat Waste](#)  
[Daily Mail](#)  
[Washington Examiner](#)



Both offices have asked if there's any information we can share with them related to this matter. Thanks in advance for anything you can provide.

Karen

---

**From:** Michelle Mitchell (b) (6)  
**Date:** Monday, April 13, 2020 at 3:42 PM  
**To:** Karen LaMontagne (b) (6)  
**Subject:** Sen. Rubio question - NIH funding Wuhan virus lab

Hey Karen,

Sen. Rubio's staff, Ansley Rhyne, forwarded the email below that she received regarding NIH funding for the Wuhan Institute of Virology. Her boss, along with Rep. Gaetz are working on a letter to ensure no taxpayer dollars are sent to that Institute.

Ansley requested our input. Would you ask NIAID for any information on this issue that we could be shared with Ansley?

Thank you.

MM

-----

**From:** Justin Goodman <[justin@whitecoatwaste.org](mailto:justin@whitecoatwaste.org)>  
**Sent:** Monday, April 13, 2020 2:36 PM  
**To:**  
**Subject:** Laura- NIH funding Wuhan virus lab

I hope you had a nice weekend and are staying safe and healthy. I wanted to make sure you saw that our taxpayer watchdog group just exposed that **the National Institutes of Health (NIH) has been sending tax dollars to the controversial Wuhan Institute of Virology for years, including for dangerous lab experiments on coronavirus-infected bats captured from caves.** The Daily Mail, Washington Examiner, Drudge and others ran stories about the troubling find over the weekend.

We're working with Rep. Matt Gaetz (R-FL) and others on a sign-on letter about this and would love to work with you and Senator Rubio as well to ensure no more tax dollars are shipped to the Wuhan Institute of Virology.

I'd be happy to send over more info if you're interested and answer any questions you may have.

Thanks for looking,

Justin

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**Justin Goodman, M.A.**  
Vice President, Advocacy and Public Policy

White Coat Waste Project

*Taxpayers shouldn't be forced to pay \$20 billion+  
for **wasteful** government animal experiments.*

PO Box 26029

Washington, DC 20001

Phone: 860.882.2492

**[Donate](#) | [Blog](#) | [Web](#) | [Twitter](#) | [Facebook](#)**

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**From:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Sent:** 4/15/2020 2:58:57 PM  
**To:** Collins, Francis (NIH/OD) [E] (b) (6); Fauci, Anthony (NIH/NIAID) [E] (b) (6)  
**CC:** Erbelding, Emily (NIH/NIAID) [E] (b) (6); Fenton, Matthew (NIH/NIAID) [E] (b) (6); Marston, Hilary (NIH/NIAID) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6); Wolinetz, Carrie (NIH/OD) [E] (b) (6)  
**Subject:** HEADS UP: Wuhan lab research

**Importance:** High

Francis, Tony -

The **WH has strongly embraced concerns** raised by Congressman Gaetz who is publicly criticizing HHS/NIH for funding the Wuhan laboratory's bat research. Here's this quote from another article: "I'm disgusted to learn that for years the US government has been funding dangerous and cruel animal experiments at the Wuhan Institute, which may have contributed to the global spread of coronavirus, and research at other labs in China that have virtually no oversight from US authorities."

This is a large multi- country study with Wuhan being one site. The principal investigator, Peter Daszak, is based in NY at Ecohealth Alliance, Inc

**Project Number:** 2R01AI110964-06

**Contact PI / Project Leader:** DASZAK, PETER

**Title:** UNDERSTANDING THE RISK OF BAT CORONAVIRUS EMERGENCE

**Awardee Organization:** ECOHEALTH ALLIANCE, INC.

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&dds=ub=&cr=1&csb=default&cs=ASC&pball=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&dds=ub=&cr=1&csb=default&cs=ASC&pball=)

The 3.7M dollar figure is the total over 6 years to all sites which include (several in) China, Thailand, Cambodia, Laos, Vietnam, Malaysia, Indonesia, and Myanmar. (b) (5)

It is in year 6 of a total of 10 year.

More by phone.  
Larry

---

**From:** Pence, Laura (HHS/ASL) (b) (6)  
**Sent:** 4/15/2020 12:32:16 PM  
**To:** Tabak, Lawrence (NIH/OD) [E] (b) (6); Wolinetz, Carrie (NIH/OD) [E] (b) (6)  
**CC:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/NHLBI) [E] (b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6); Arbes, Sarah (HHS/ASL) (b) (6)  
**Subject:** RE: Wuhan lab research

Got it, thanks!

---

**From:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Sent:** Wednesday, April 15, 2020 8:24 AM  
**To:** Pence, Laura (HHS/ASL) (b) (6); Wolinetz, Carrie (NIH/OD) [E] (b) (6)  
**Cc:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/NHLBI) [E] (b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6); Arbes, Sarah (HHS/ASL) (b) (6)  
**Subject:** Re: Wuhan lab research

Clarifying the resources to the Wuhan group:

Type 1 total is 749,976. The Type 2, is 76,301 (so far). Thus total for all years is:  $749,976 + 76,301 = 826,277$ . (b) (5)

It's a subcontract going through New York.

Let us know if you need anything else.  
Larry

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**From:** "Pence, Laura (HHS/ASL)" (b) (6)  
**Date:** Wednesday, April 15, 2020 at 7:19 AM  
**To:** "Wolinetz, Carrie (NIH/OD) [E]" (b) (6)  
**Cc:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6), "Hallett, Adrienne (NIH/OD) [E]" (b) (6), "Lauer, Michael (NIH/OD) [E]" (b) (6), "Schwetz, Tara (NIH/OD) [E]" (b) (6), "Arbes, Sarah (HHS/ASL)" (b) (6)  
**Subject:** Re: Wuhan lab research

This is great, thanks!

On Apr 15, 2020, at 7:05 AM, Wolinetz, Carrie (NIH/OD) [E] (b) (6) wrote:

And this news release has a pretty good lay level summary of it, if it's useful :  
<https://www.sciencedaily.com/releases/2020/03/200317175442.htm> Cheers, Carrie

---

**From:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Sent:** Wednesday, April 15, 2020 6:56 AM  
**To:** Wolinetz, Carrie (NIH/OD) [E] (b) (6); Pence, Laura (HHS/ASL) (b) (6)  
**Cc:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6)

(b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6); Arbes, Sarah (HHS/ASL)

(b) (6)

**Subject:** Re: Wuhan lab research

Attached is the paper Carrie is referring to.  
Larry

---

**From:** "Wolinetz, Carrie (NIH/OD) [E]" (b) (6)

**Date:** Wednesday, April 15, 2020 at 6:50 AM

**To:** "Pence, Laura (HHS/ASL)" (b) (6), "Tabak, Lawrence (NIH/OD) [E]"

(b) (6)

**Cc:** "Hallett, Adrienne (NIH/OD) [E]" (b) (6), "Lauer, Michael (NIH/OD) [E]"

(b) (6), "Schwetz, Tara (NIH/OD) [E]" (b) (6) "Arbes, Sarah (HHS/ASL)" (b) (6)

**Subject:** RE: Wuhan lab research

Laura,

(b) (5)

(b) (5) Cheers, Carrie

---

**From:** Pence, Laura (HHS/ASL) (b) (6)

**Sent:** Tuesday, April 14, 2020 11:32 PM

**To:** Tabak, Lawrence (NIH/OD) [E] (b) (6)

**Cc:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E]

(b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6); Wolinetz, Carrie (NIH/OD) [E] (b) (6); Arbes, Sarah (HHS/ASL) (b) (6)

**Subject:** Re: Wuhan lab research

Gotcha, thanks! If you have that info tomorrow morning that would be great. (b) (5)

Can't thank you enough for all the info you've already gotten to us on this. If will be very helpful.

On Apr 14, 2020, at 10:53 PM, Tabak, Lawrence (NIH/OD) [E] (b) (6)  
wrote:

Mike Lauer will need to answer this- it is a sub project to the NY grant but I don't know if funding is direct or via NY.

Larry

Sent from my iPhone



On Apr 14, 2020, at 10:51 PM, Pence, Laura (HHS/ASL)

(b) (6) wrote:

Really helpful, thanks! So the PI in NY is the grantee and the institute in Wuhan is subgrantee? Or Wuhan receives funding directly from NIH?

On Apr 14, 2020, at 10:43 PM, Tabak, Lawrence  
(NIH/OD) [E] (b) (6) wrote:

Laura,

Still working on some confirmation of details, but this work is part of a large multi- country study with Wuhan being one site. The principal investigator, Peter Daszak, is based in NY at Ecohealth Alliance, Inc

**Project Number:** 2R01AI110964-06

**Title:** UNDERSTANDING THE RISK OF BAT CORONAVIRUS EMERGENCE

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=)

**Contact PI / Project Leader:**

DASZAK, P

**Awardee Organization:**

ECOHEALT

How long have we been giving research dollars to this lab? (b) (5)

- How much have we given? (b) (5)

(b) (5)

- 
- For what purpose? (b) (5)

(b) (5)

- 
- If asked to defend our research dollars going to this lab for this purpose, what do you recommend we say

- (b) (5)

(b) (5)

(b) (5)

Anything else we should know? (b) (5)

Please let us know if you need anything else.  
Larry

---

**From:** "Pence, Laura (HHS/ASL)"

(b) (6)

**Date:** Tuesday, April 14, 2020 at 9:47 PM

**To:** "Tabak, Lawrence (NIH/OD) [E]"

(b) (6), "Wolinetz, Carrie

(NIH/OD) [E]" (b) (6),

"Schwetz, Tara (NIH/OD) [E]"

(b) (6)

**Subject:** Wuhan lab research

Hi! Can we get info on this ASAP? Need for the morning.  
Sorry for the fire drill.

Begin forwarded message:

**From:** "Arbes, Sarah (HHS/ASL)"

(b) (6)

**Date:** April 14, 2020 at 9:30:23 PM EDT

**To:** "Hallett, Adrienne (NIH/OD) [E]"

(b) (6), "Pence,

Laura (HHS/ASL)"

(b) (6)

**Cc:** "Morse, Sara (HHS/ASL)"

(b) (6)

**Subject:** For AMA in the morning

Adrienne and Laura –

Can you please help me run ground  
truth to this article?:

<https://protect2.fireeye.com/url?k=f08a61fa-acdf682a-f08a50c5-0cc47a6a52de-b99d5f233732d661&u=https://protect2.fireeye.com/url?k=79bfb5e8-25eb9cc3-79bf84d7-0cc47a6d17cc-7fe08f9f909251fb&u=https://protect2.fireeye.com/url?k=40f43e35-1ca13726->

[40f40f0a-0cc47adb5650-c048b52a2b043577&u=https://protect2.fireeye.com/url?k=d8055c7b-84514507-d8056d44-0cc47adc5fa2-762234a678e2d50f&u=https://www.soundhealthandlastingwealth.com/health-news/u-s-government-gave-3-7million-grant-to-wuhan-lab-that-experimented-on-coronavirus-source-bats/](https://protect2.fireeye.com/url?k=d8055c7b-84514507-d8056d44-0cc47adc5fa2-762234a678e2d50f&u=https://www.soundhealthandlastingwealth.com/health-news/u-s-government-gave-3-7million-grant-to-wuhan-lab-that-experimented-on-coronavirus-source-bats/)

Congressman Gaetz is publicly criticizing HHS/NIH for funding the Wuhan laboratory's bat research. Here's this quote from another article: "I'm disgusted to learn that for years the US government has been funding dangerous and cruel animal experiments at the Wuhan Institute, which may have contributed to the global spread of coronavirus, and research at other labs in China that have virtually no oversight from US authorities."

- How long have we been giving research dollars to this lab?
- How much have we given?
- For what purpose?

(b) (5)



- If asked to defend our research dollars going to this lab for this purpose, what do you recommend we say?

(b) (5)



- Anything else we should know?

(b) (5)



Thanks much!  
Sarah

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** 4/20/2020 10:55:51 PM  
**To:** Bettencourt, Alice (HHS/ASFR) (b) (6); Black, Jodi (NIH/OD) [E] (b) (6)  
**CC:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: Subrecipients Under FAIN R01AI110964

Thanks Alice – looping in Jodi – we'll look into it.

Best, Mike

---

**From:** "Bettencourt, Alice (HHS/ASFR)" (b) (6)  
**Date:** Monday, April 20, 2020 at 5:04 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** RE: Subrecipients Under FAIN R01AI110964

So the follow up question is likely to be: (b) (5)

(b) (5)

(b) (5)

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**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** Monday, April 20, 2020 4:57 PM  
**To:** Bettencourt, Alice (HHS/ASFR) (b) (6); Bulls, Michelle G. (NIH/OD) [E] (b) (6); Black, Jodi (NIH/OD) [E] (b) (6)  
**Cc:** Lauer, Michael (NIH/NHLBI) [E] (b) (6)  
**Subject:** Re: Subrecipients Under FAIN R01AI110964

Hi Alice – here's the info I have – from NIAID. Thanks, Mike

R01-AI-110964, Peter Daszak, PI to ECOHEALTH ALLIANCE

(b) (5)

(b) (5)



---

**From:** "Bettencourt, Alice (HHS/ASFR)" [REDACTED] (b) (6)

**Date:** Monday, April 20, 2020 at 4:49 PM

**To:** "Bulls, Michelle G. (NIH/OD) [E]" [REDACTED] (b) (6), "Lauer, Michael (NIH/OD) [E]" [REDACTED] (b) (6)

**Subject:** Subrecipients Under FAIN R01AI110964

Mike, Michelle,

OMB has requested via Jen M. to know if there are subrecipients to Ecohealth Alliance under the subject FAIN. [REDACTED] (b) (5)  
[REDACTED] Could you please have the application checked and let me know. [REDACTED] (b) (5)  
[REDACTED]

Thank you,

Alice

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** 4/20/2020 8:56:45 PM  
**To:** Bettencourt, Alice (HHS/ASFR) (b) (6); Bulls, Michelle G. (NIH/OD) [E]  
(b) (6); Black, Jodi (NIH/OD) [E] (b) (6)  
**CC:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: Subrecipients Under FAIN R01AI110964

Hi Alice – here's the info I have – from NIAID. Thanks, Mike

R01-AI-110964, Peter Daszak, PI to ECOHEALTH ALLIANCE

(b) (5)

---

**From:** "Bettencourt, Alice (HHS/ASFR)" (b) (6)  
**Date:** Monday, April 20, 2020 at 4:49 PM  
**To:** "Bulls, Michelle G. (NIH/OD) [E]" (b) (6), "Lauer, Michael (NIH/OD) [E]"  
(b) (6)  
**Subject:** Subrecipients Under FAIN R01AI110964

Mike, Michelle,

OMB has requested via Jen M. to know if there are subrecipients to Ecohealth Alliance under the subject FAIN (b) (6). Could you please have the application checked and let me know. (b) (5)

Thank you,

Alice

---

**From:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Sent:** 4/15/2020 2:12:14 AM  
**To:** Erbeling, Emily (NIH/NIAID) [E] (b) (6)  
**CC:** Marston, Hilary (NIH/NIAID) [E] (b) (6) Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Thanks Emily.  
Looping in Mike Lauer,  
Larry

---

**From:** "Erbeling, Emily (NIH/NIAID) [E]" (b) (6)  
**Date:** Tuesday, April 14, 2020 at 10:11 PM  
**To:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Cc:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6)  
**Subject:** Fwd: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

I am forwarding draft response below to inquiry from Rubio et al earlier.

PI is Peter Dazsak, Eco Health alliance in NYC. Wuhan subcontract is approximately 74k per year. I will try to find more accurate subcontract numbers.

Sent from my iPad

Begin forwarded message:

**From:** "Abbey, Lillian (NIH/NIAID) [E]" (b) (6)  
**Date:** April 14, 2020 at 4:24:34 PM EDT  
**To:** "Cassetti, Cristina (NIH/NIAID) [E]" (b) (6), "Erbeling, Emily (NIH/NIAID) [E]" (b) (6)  
**Cc:** "Ford, Andrew (NIH/NIAID) [E]" (b) (6), "Bateman, Karen (NIH/NIAID) [E]" (b) (6), "Werner, Alyssa (NIH/NIAID) [E]" (b) (6), "Mulach, Barbara (NIH/NIAID) [E]" (b) (6)  
**Subject:** Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Dear Cristina and Emily,  
Incorporated below in red font is a draft response Andrew developed based on his discussion with Erik.

(b) (5)

Also, Andrew provided the attached publication from mid-March, noting that we may want to share it with the OD.

**DRAFT RESPONSE:**

**Project** 2R01AI110964-06

**Number:**

**Title:** UNDERSTANDING THE RISK OF BAT CORONAVIRUS EMERGENCE

**Contact PI / Project** DASZAK, PETER

**Leader:**

**Awardee** ECOHEALTH ALLIANCE, INC.  
**Organization:**

1) What are the goals of the main grant:

(b) (5)

2) What are the specific activities supported by the sub to the Wuhan lab and the total costs associated with these activities. Please verify if the creation of recombinant bat in Wuhan is included in their research activities.

(b) (5)

Total award information is available in Reporter at link above but budget information about subcontracts is not publicly available as these awards are administered by the grantee institution.

---

**From:** Crawford, Chase (NIH/NIAID) [E] (b) (6)  
**Sent:** Monday, April 13, 2020 5:41 PM  
**To:** NIAID BUGS (b) (6)  
**Cc:** Auchincloss, Hugh (NIH/NIAID) [E] (b) (6); Harper, Jill (NIH/NIAID) [E] (b) (6); NIAID OCGR Leg (b) (6)  
**Subject:** Request for information: Senate Qs - Wuhan Institute of Virology

Hi BUGS,

Staff to Senator Marco Rubio (R-FL) has forwarded an email to Building 1 from the White Coat Waste Project (see bottom of email chain). The forwarded message links to recent articles in The Daily Mail and the Washington Examiner on NIH support for previous coronavirus studies involving the Wuhan Institute of Virology. Building 1 has asked if NIAID has any information related to this research that we can share with staff to Senators Rubio and Mike Braun (R-IN).

To help us better understand this congressional request, is there any background information that you can provide on the activities discussed in the articles referenced below?

Thanks,  
 Chase

(b) (6)

---

**From:** LaMontagne, Karen (NIH/OD) [E] (b) (6)  
**Sent:** Monday, April 13, 2020 4:23 PM  
**To:** NIAID OCGR Leg (b) (6)  
**Subject:** Senate Qs - Wuhan Institute of Virology

Hi, NIAID,

Separately, we have heard from the offices of Senators Rubio and Braun about these linked articles:

[White Coat Waste](#)

[Daily Mail](#)

[Washington Examiner](#)

Both offices have asked if there's any information we can share with them related to this matter. Thanks in advance for anything you can provide.

Karen

---

**From:** Michelle Mitchell (b) (6)  
**Date:** Monday, April 13, 2020 at 3:42 PM  
**To:** Karen LaMontagne (b) (6)  
**Subject:** Sen. Rubio question - NIH funding Wuhan virus lab

Hey Karen,

Sen. Rubio's staff, Ansley Rhyne, forwarded the email below that she received regarding NIH funding for the Wuhan Institute of Virology. Her boss, along with Rep. Gaetz are working on a letter to ensure no taxpayer dollars are sent to that Institute.

Ansley requested our input. Would you ask NIAID for any information on this issue that we could be shared with Ansley?

Thank you.

MM

-----

**From:** Justin Goodman <[justin@whitecoatwaste.org](mailto:justin@whitecoatwaste.org)>  
**Sent:** Monday, April 13, 2020 2:36 PM  
**To:**  
**Subject:** Laura- NIH funding Wuhan virus lab

I hope you had a nice weekend and are staying safe and healthy. I wanted to make sure you saw that our taxpayer watchdog group just exposed that **the National Institutes of Health (NIH) has been sending tax dollars to the controversial Wuhan Institute of Virology for years, including for dangerous lab experiments on coronavirus-infected bats captured from caves.** The [Daily Mail](#), [Washington Examiner](#), Drudge and others ran stories about the troubling find over the weekend.

We're working with Rep. Matt Gaetz (R-FL) and others on a sign-on letter about this and would love to work with you and Senator Rubio as well to ensure no more tax dollars are shipped to the Wuhan Institute of Virology.

I'd be happy to send over more info if you're interested and answer any questions you may have.



Thanks for looking,

Justin

---

**Justin Goodman, M.A.**

Vice President, Advocacy and Public Policy  
White Coat Waste Project

*Taxpayers shouldn't be forced to pay \$20 billion+  
for **wasteful** government animal experiments.*

PO Box 26029  
Washington, DC 20001  
Phone: 860.882.2492

**[Donate](#) | [Blog](#) | [Web](#) | [Twitter](#) | [Facebook](#)**

---

**From:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Sent:** 4/15/2020 10:56:24 AM  
**To:** Wolinetz, Carrie (NIH/OD) [E] (b) (6); Pence, Laura (HHS/ASL) (b) (6)  
**CC:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6)  
Schwetz, Tara (NIH/OD) [E] (b) (6); Arbes, Sarah (HHS/ASL) (b) (6)  
**Subject:** Re: Wuhan lab research  
**Attachments:** Proximal origin of SARS-CoV-2.pdf

Attached is the paper Carrie is referring to.  
Larry

---

**From:** "Wolinetz, Carrie (NIH/OD) [E]" (b) (6)  
**Date:** Wednesday, April 15, 2020 at 6:50 AM  
**To:** "Pence, Laura (HHS/ASL)" (b) (6), "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Cc:** "Hallett, Adrienne (NIH/OD) [E]" (b) (6), "Lauer, Michael (NIH/OD) [E]" (b) (6), "Schwetz, Tara (NIH/OD) [E]" (b) (6), "Arbes, Sarah (HHS/ASL)" (b) (6)  
**Subject:** RE: Wuhan lab research

Laura,

(b) (5)

(b) (5) Cheers, Carrie

---

**From:** Pence, Laura (HHS/ASL) (b) (6)  
**Sent:** Tuesday, April 14, 2020 11:32 PM  
**To:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Cc:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6); Wolinetz, Carrie (NIH/OD) [E] (b) (6); Arbes, Sarah (HHS/ASL) (b) (6)  
**Subject:** Re: Wuhan lab research

Gotcha, thanks! If you have that info tomorrow morning that would be great. (b) (5)

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Mike Lauer will need to answer this- it is a sub project to the NY grant but I don't know if funding is direct or via NY.

Larry

Sent from my iPhone

On Apr 14, 2020, at 10:51 PM, Pence, Laura (HHS/ASL) [REDACTED] (b) (6) wrote:

Really helpful, thanks! So the PI in NY is the grantee and the institute in Wuhan is subgrantee? Or Wuhan receives funding directly from NIH?

On Apr 14, 2020, at 10:43 PM, Tabak, Lawrence (NIH/OD) [E]

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Laura,

Still working on some confirmation of details, but this work is part of a large multi- country study with Wuhan being one site. The principal investigator, Peter Daszak, is based in NY at Ecohealth Alliance, Inc

**Project** 2R01AI110964-06

**Number:**

**Title:** UNDERSTANDING THE RISK OF BAT CORONAVIRUS  
EMERGENCE

**Contact PI / Project** DASZAK, PETER

**Leader:**

**Awardee**

ECOHEALTH ALLIA

**Organization:**

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=)

How long have we been giving research dollars to this lab? [REDACTED] (b) (5)

- How much have we given? [REDACTED] (b) (5)

- 
- For what purpose? [REDACTED] (b) (5)

- 
- If asked to defend our research dollars going to this lab for this purpose, what do you recommend we say

- [REDACTED] (b) (5)

Anything else we should know? (b) (5)

Please let us know if you need anything else.  
Larry

---

**From:** "Pence, Laura (HHS/ASL)" (b) (6)  
**Date:** Tuesday, April 14, 2020 at 9:47 PM  
**To:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6),  
"Wolinetz, Carrie (NIH/OD) [E]" (b) (6),  
"Schwetz, Tara (NIH/OD) [E]" (b) (6)  
**Subject:** Wuhan lab research

Hi! Can we get info on this ASAP? Need for the morning. Sorry for the fire drill.

Begin forwarded message:

**From:** "Arbes, Sarah (HHS/ASL)" (b) (6)  
**Date:** April 14, 2020 at 9:30:23 PM EDT  
**To:** "Hallett, Adrienne (NIH/OD) [E]" (b) (6) "Pence, Laura (HHS/ASL)" (b) (6)  
**Cc:** "Morse, Sara (HHS/ASL)" (b) (6)  
**Subject:** For AMA in the morning

Adrienne and Laura –

Can you please help me run ground truth to this article?: <https://protect2.fireeye.com/url?k=40f43e35-1ca13726-40f40f0a-0cc47adb5650-c048b52a2b043577&u=https://protect2.fireeye.com/url?k=d8055c7b-84514507-d8056d44-0cc47adc5fa2-762234a678e2d50f&u=https://www.soundhealthandlastingwealth.com/health-news/u-s-government-gave-3-7million-grant-to-wuhan-lab-that-experimented-on-coronavirus-source-bats/>

Congressman Gaetz is publicly criticizing HHS/NIH for funding the Wuhan laboratory's bat research. Here's this quote from another article: "I'm disgusted to learn that for years the US government has been funding dangerous and cruel animal experiments at the Wuhan Institute, which may have contributed to the global spread of coronavirus, and research at other labs in

China that have virtually no oversight from US authorities."

- How long have we been giving research dollars to this lab?
- How much have we given?
- For what purpose?



- If asked to defend our research dollars going to this lab for this purpose, what do you recommend we say?



- Anything else we should know?



Thanks much!  
Sarah



---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** 4/20/2020 10:55:51 PM  
**To:** Bettencourt, Alice (HHS/ASFR) (b) (6); Black, Jodi (NIH/OD) [E] (b) (6)  
**CC:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: Subrecipients Under FAIN R01AI110964

Thanks Alice – looping in Jodi – we'll look into it.

Best, Mike

---

**From:** "Bettencourt, Alice (HHS/ASFR)" (b) (6)  
**Date:** Monday, April 20, 2020 at 5:04 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** RE: Subrecipients Under FAIN R01AI110964

So the follow up question is likely to be: (b) (5)

(b) (5)

(b) (5)

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** Monday, April 20, 2020 4:57 PM  
**To:** Bettencourt, Alice (HHS/ASFR) (b) (6); Bulls, Michelle G. (NIH/OD) [E] (b) (6); Black, Jodi (NIH/OD) [E] (b) (6)  
**Cc:** Lauer, Michael (NIH/NHLBI) [E] (b) (6)  
**Subject:** Re: Subrecipients Under FAIN R01AI110964

Hi Alice – here's the info I have – from NIAID. Thanks, Mike

R01-AI-110964, Peter Daszak, PI to ECOHEALTH ALLIANCE

(b) (5)

(b) (5)

---

**From:** "Bettencourt, Alice (HHS/ASFR)" [REDACTED] (b) (6)

**Date:** Monday, April 20, 2020 at 4:49 PM

**To:** "Bulls, Michelle G. (NIH/OD) [E]" [REDACTED] (b) (6), "Lauer, Michael (NIH/OD) [E]" [REDACTED] (b) (6)

**Subject:** Subrecipients Under FAIN R01AI110964

Mike, Michelle,

OMB has requested via Jen M. to know if there are subrecipients to Ecohealth Alliance under the subject FAIN [REDACTED] (b) (6). Could you please have the application checked and let me know. [REDACTED] (b) (6) [REDACTED] (b) (6)

Thank you,

Alice

---

**From:** Pence, Laura (HHS/ASL) (b) (6)  
**Sent:** 4/15/2020 1:19:02 PM  
**To:** Arbes, Sarah (HHS/ASL) (b) (6); Wolinetz, Carrie (NIH/OD) [E] (b) (6)  
**CC:** Tabak, Lawrence (NIH/OD) [E] (b) (6); Hallett, Adrienne (NIH/OD) [E] (b) (6)  
Lauer, Michael (NIH/NHLBI) [E] (b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6)  
**Subject:** RE: Wuhan lab research

Yes, thank you!!!

---

**From:** Arbes, Sarah (HHS/ASL) (b) (6)  
**Sent:** Wednesday, April 15, 2020 9:03 AM  
**To:** Pence, Laura (HHS/ASL) (b) (6); Wolinetz, Carrie (NIH/OD) [E] (b) (6)  
**Cc:** Tabak, Lawrence (NIH/OD) [E] (b) (6); Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/NHLBI) [E] (b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6)  
**Subject:** RE: Wuhan lab research

Thank you all, so very much!!

---

**From:** Pence, Laura (HHS/ASL) (b) (6)  
**Sent:** Wednesday, April 15, 2020 7:18 AM  
**To:** Wolinetz, Carrie (NIH/OD) [E] (b) (6)  
**Cc:** Tabak, Lawrence (NIH/OD) [E] (b) (6); Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/NHLBI) [E] (b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6); Arbes, Sarah (HHS/ASL) (b) (6)  
**Subject:** Re: Wuhan lab research

This is great, thanks!

On Apr 15, 2020, at 7:05 AM, Wolinetz, Carrie (NIH/OD) [E] (b) (6) wrote:

And this news release has a pretty good lay level summary of it, if it's useful: :  
<https://www.sciencedaily.com/releases/2020/03/200317175442.htm> Cheers, Carrie

---

**From:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Sent:** Wednesday, April 15, 2020 6:56 AM  
**To:** Wolinetz, Carrie (NIH/OD) [E] (b) (6); Pence, Laura (HHS/ASL) (b) (6)  
**Cc:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6); Arbes, Sarah (HHS/ASL) (b) (6)  
**Subject:** Re: Wuhan lab research

Attached is the paper Carrie is referring to.  
Larry

---

**From:** "Wolinetz, Carrie (NIH/OD) [E]" (b) (6)  
**Date:** Wednesday, April 15, 2020 at 6:50 AM  
**To:** "Pence, Laura (HHS/ASL)" (b) (6) "Tabak, Lawrence (NIH/OD) [E]"  
(b) (6)  
**Cc:** "Hallett, Adrienne (NIH/OD) [E]" (b) (6) "Lauer, Michael (NIH/OD) [E]"  
(b) (6), "Schwetz, Tara (NIH/OD) [E]" (b) (6) "Arbes, Sarah  
(HHS/ASL)" (b) (6)  
**Subject:** RE: Wuhan lab research

Laura,

(b) (5)

(b) (5) Cheers, Carrie

---

**From:** Pence, Laura (HHS/ASL) (b) (6)  
**Sent:** Tuesday, April 14, 2020 11:32 PM  
**To:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Cc:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E]  
(b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6); Wolinetz, Carrie  
(NIH/OD) [E] (b) (6); Arbes, Sarah (HHS/ASL) (b) (6)  
**Subject:** Re: Wuhan lab research

Gotcha, thanks! If you have that info tomorrow morning that would be great. (b) (5)

Can't thank you enough for all the info you've already gotten to us on this. It will be very helpful.

On Apr 14, 2020, at 10:53 PM, Tabak, Lawrence (NIH/OD) [E] (b) (6)  
wrote:

Mike Lauer will need to answer this- it is a sub project to the NY grant but I don't know if  
funding is direct or via NY.

Larry

Sent from my iPhone

On Apr 14, 2020, at 10:51 PM, Pence, Laura (HHS/ASL)  
(b) (6) wrote:

Really helpful, thanks! So the PI in NY is the grantee and the institute in  
Wuhan is subgrantee? Or Wuhan receives funding directly from NIH?

On Apr 14, 2020, at 10:43 PM, Tabak, Lawrence  
(NIH/OD) [E] (b) (6) wrote:

Laura,

Still working on some confirmation of details, but this work is part of a large multi- country study with Wuhan being one site. The principal investigator, Peter Daszak, is based in NY at Ecohealth Alliance, Inc

**Project Number:** 2R01AI110964-06

**Title:**

UNDERSTANDING THE RISK OF BAT CORONAVIRUS EMERGENCE

**Contact PI / Project Leader:** DASZAK,

**Awardee**

ECOHEAL

**Organization:**

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=)

How long have we been giving research dollars to this lab? (b) (5)

- How much have we given? (b) (5)

(b) (5)

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- For what purpose? (b) (5)

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- If asked to defend our research dollars going to this lab for this purpose, what do you recommend we say

- (b) (5)

Anything else we should know? (b) (5)

(b) (5)

Please let us know if you need anything else.



Larry

---

**From:** "Pence, Laura (HHS/ASL)"

(b) (6)

**Date:** Tuesday, April 14, 2020 at 9:47 PM

**To:** "Tabak, Lawrence (NIH/OD) [E]"

(b) (6),

"Wolinetz, Carrie (NIH/OD) [E]" (b) (6),

"Schwetz, Tara (NIH/OD) [E]"

(b) (6)

**Subject:** Wuhan lab research

Hi! Can we get info on this ASAP? Need for the morning.  
Sorry for the fire drill.

Begin forwarded message:

**From:** "Arbes, Sarah (HHS/ASL)"

(b) (6)

**Date:** April 14, 2020 at 9:30:23 PM EDT

**To:** "Hallett, Adrienne (NIH/OD) [E]"

(b) (6)

"Pence, Laura (HHS/ASL)"

(b) (6)

**Cc:** "Morse, Sara (HHS/ASL)"

(b) (6)

**Subject:** For AMA in the morning

Adrienne and Laura –

Can you please help me run ground truth to this article?:

<https://protect2.fireeye.com/url?k=79bfb5e8-25eb9cc3-79bf84d7-0cc47a6d17cc-7fe08f9f909251fb&u=https://protect2.fireeye.com/url?k=40f43e35-1ca13726-40f40f0a-0cc47adb5650-c048b52a2b043577&u=https://protect2.fireeye.com/url?k=d8055c7b-84514507-d8056d44-0cc47adc5fa2-762234a678e2d50f&u=https://www.soundhealthandlastingwealth.com/health-news/u-s-government-gave-3-7million-grant-to-wuhan-lab-that-experimented-on-coronavirus-source-bats/>

Congressman Gaetz is publicly criticizing HHS/NIH for funding the Wuhan laboratory's bat research. Here's this

quote from another article: "I'm disgusted to learn that for years the US government has been funding dangerous and cruel animal experiments at the Wuhan Institute, which may have contributed to the global spread of coronavirus, and research at other labs in China that have virtually no oversight from US authorities."

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(b) (5)



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(b) (5)



- Anything else we should know?

(b) (5)



Thanks much!  
Sarah

---

**From:** Wolinetz, Carrie (NIH/OD) [E] (b) (6)  
**Sent:** 4/15/2020 10:59:56 AM  
**To:** Tabak, Lawrence (NIH/OD) [E] (b) (6); Pence, Laura (HHS/ASL) (b) (6)  
**CC:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6)  
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Attached is the paper Carrie is referring to.  
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**Contact PI / Project Leader:** DASZAK, PETER

**Awardee Organization:** ECOHEALTH ALLIANCE

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=)

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- If asked to defend our research dollars going to this lab for this purpose, what do you recommend we say



(b) (5)

Anything else we should know? (b) (5)

Please let us know if you need anything else.  
Larry

---

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**Cc:** "Morse, Sara (HHS/ASL)" (b) (6)  
**Subject:** For AMA in the morning

Adrienne and Laura –

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- If asked to defend our research dollars going to this lab for this purpose, what do you recommend we say?



- Anything else we should know?



Thanks much!  
Sarah

---

**From:** Bettencourt, Alice (HHS/ASFR) [REDACTED] (b) (6)  
**Sent:** 4/20/2020 9:04:28 PM  
**To:** Lauer, Michael (NIH/NHLBI) [E] [REDACTED] (b) (6)  
**Subject:** RE: Subrecipients Under FAIN R01AI110964

So the follow up question is likely to be: [REDACTED] (b) (5)

---

**From:** Lauer, Michael (NIH/OD) [E] [REDACTED] (b) (6)  
**Sent:** Monday, April 20, 2020 4:57 PM  
**To:** Bettencourt, Alice (HHS/ASFR) [REDACTED] (b) (6); Bulls, Michelle G. (NIH/OD) [E] [REDACTED] (b) (6); Black, Jodi (NIH/OD) [E] [REDACTED] (b) (6)  
**Cc:** Lauer, Michael (NIH/NHLBI) [E] [REDACTED] (b) (6)  
**Subject:** Re: Subrecipients Under FAIN R01AI110964

Hi Alice – here's the info I have – from NIAID. Thanks, Mike

R01-AI-110964, Peter Daszak, PI to ECOHEALTH ALLIANCE

[REDACTED] (b) (5)

---

**From:** "Bettencourt, Alice (HHS/ASFR)" [REDACTED] (b) (6)  
**Date:** Monday, April 20, 2020 at 4:49 PM  
**To:** "Bulls, Michelle G. (NIH/OD) [E]" [REDACTED] (b) (6); "Lauer, Michael (NIH/OD) [E]" [REDACTED] (b) (6)  
**Subject:** Subrecipients Under FAIN R01AI110964

Mike, Michelle,

OMB has requested via Jen M. to know if there are subrecipients to Ecohealth Alliance under the subject FAIN. (b)

(S)  
[REDACTED] Could you please have the application checked and let me know. (b)

(S)

Thank you,

Alice



**From:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Sent:** 4/15/2020 2:43:09 AM  
**To:** Pence, Laura (HHS/ASL) (b) (6)  
**CC:** Hallett, Adrienne (NIH/OD) [E] (b) (6) Lauer, Michael (NIH/OD) [E] (b) (6)  
Schwetz, Tara (NIH/OD) [E] (b) (6) Wolinetz, Carrie (NIH/OD) [E] (b) (6)  
**Subject:** Re: Wuhan lab research

Laura,

Still working on some confirmation of details, but this work is part of a large multi- country study with Wuhan being one site. The principal investigator, Peter Daszak, is based in NY at Ecohealth Alliance, Inc

<b>Project Number:</b>	2R01AI110964-06	<b>Contact PI / Project Leader:</b>	DASZAK, PETER
<b>Title:</b>	UNDERSTANDING THE RISK OF BAT CORONAVIRUS EMERGENCE	<b>Awardee Organization:</b>	ECOHEALTH ALLIANCE, INC.

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&dds=ub=&cr=1&csb=default&cs=ASC&pball=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&dds=ub=&cr=1&csb=default&cs=ASC&pball=)

How long have we been giving research dollars to this lab? (b) (5)

- How much have we given? (b) (5)

- For what purpose? (b) (5)

- If asked to defend our research dollars going to this lab for this purpose, what do you recommend we say (b) (5)

Anything else we should know? (b) (5)

Please let us know if you need anything else.  
Larry

---

**From:** "Pence, Laura (HHS/ASL)" (b) (6)  
**Date:** Tuesday, April 14, 2020 at 9:47 PM  
**To:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6) "Wolinetz, Carrie (NIH/OD) [E]" (b) (6)  
"Schwetz, Tara (NIH/OD) [E]" (b) (6)  
**Subject:** Wuhan lab research

Hi! Can we get info on this ASAP? Need for the morning. Sorry for the fire drill.

Begin forwarded message:

**From:** "Arbes, Sarah (HHS/ASL)" (b) (6)  
**Date:** April 14, 2020 at 9:30:23 PM EDT  
**To:** "Hallett, Adrienne (NIH/OD) [E]" (b) (6) "Pence, Laura (HHS/ASL)" (b) (6)  
**Cc:** "Morse, Sara (HHS/ASL)" <Sara.Morse@hhs.gov>  
**Subject:** For AMA in the morning

Adrienne and Laura –

Can you please help me run ground truth to this article?:

<https://www.soundhealthandlastingwealth.com/health-news/u-s-government-gave-3-7million-grant-to-wuhan-lab-that-experimented-on-coronavirus-source-bats/>

Congressman Gaetz is publicly criticizing HHS/NIH for funding the Wuhan laboratory's bat research. Here's this quote from another article: "I'm disgusted to learn that for years the US government has been funding dangerous and cruel animal experiments at the Wuhan Institute, which may have contributed to the global spread of coronavirus, and research at other labs in China that have virtually no oversight from US authorities."

- How long have we been giving research dollars to this lab?
- How much have we given?
- For what purpose?

(b) (5)

- If asked to defend our research dollars going to this lab for this purpose, what do you recommend we say?

(b) (5)

- Anything else we should know?

(b) (5)

Thanks much!  
Sarah

---

**From:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Sent:** 4/15/2020 12:24:27 PM  
**To:** Pence, Laura (HHS/ASL) (b) (6); Wolinetz, Carrie (NIH/OD) [E] (b) (6)  
**CC:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6)  
Schwetz, Tara (NIH/OD) [E] (b) (6); Arbes, Sarah (HHS/ASL) (b) (6)  
**Subject:** Re: Wuhan lab research

Clarifying the resources to the Wuhan group:

Type 1 total is 749,976. The Type 2, is 76,301 (so far). Thus total for all years is:  $749,976 + 76,301 = 826,277$ . (b) (5)

It's a subcontract going through New York.

Let us know if you need anything else.

Larry

---

**From:** "Pence, Laura (HHS/ASL)" (b) (6)  
**Date:** Wednesday, April 15, 2020 at 7:19 AM  
**To:** "Wolinetz, Carrie (NIH/OD) [E]" (b) (6)  
**Cc:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6), "Hallett, Adrienne (NIH/OD) [E]" (b) (6), "Lauer, Michael (NIH/OD) [E]" (b) (6), "Schwetz, Tara (NIH/OD) [E]" (b) (6), "Arbes, Sarah (HHS/ASL)" (b) (6)  
**Subject:** Re: Wuhan lab research

This is great, thanks!

On Apr 15, 2020, at 7:05 AM, Wolinetz, Carrie (NIH/OD) [E] (b) (6) wrote:

And this news release has a pretty good lay level summary of it, if it's useful: :  
<https://www.sciencedaily.com/releases/2020/03/200317175442.htm> Cheers, Carrie

---

**From:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Sent:** Wednesday, April 15, 2020 6:56 AM  
**To:** Wolinetz, Carrie (NIH/OD) [E] (b) (6); Pence, Laura (HHS/ASL) (b) (6)  
**Cc:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6); Arbes, Sarah (HHS/ASL) (b) (6)  
**Subject:** Re: Wuhan lab research

Attached is the paper Carrie is referring to.  
Larry

---

**From:** "Wolinetz, Carrie (NIH/OD) [E]" (b) (6)  
**Date:** Wednesday, April 15, 2020 at 6:50 AM  
**To:** "Pence, Laura (HHS/ASL)" (b) (6) "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Cc:** "Hallett, Adrienne (NIH/OD) [E]" (b) (6) "Lauer, Michael (NIH/OD) [E]" (b) (6) "Schwetz, Tara (NIH/OD) [E]" (b) (6) "Arbes, Sarah (HHS/ASL)" (b) (6)  
**Subject:** RE: Wuhan lab research

Laura,

(b) (5)

(b) (5) Cheers, Carrie

---

**From:** Pence, Laura (HHS/ASL) (b) (6)  
**Sent:** Tuesday, April 14, 2020 11:32 PM  
**To:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Cc:** Hallett, Adrienne (NIH/OD) [E] (b) (6) Lauer, Michael (NIH/OD) [E] (b) (6) Schwetz, Tara (NIH/OD) [E] (b) (6) Wolinetz, Carrie (NIH/OD) [E] (b) (6) Arbes, Sarah (HHS/ASL) (b) (6)  
**Subject:** Re: Wuhan lab research

Gotcha, thanks! If you have that info tomorrow morning that would be great. (b) (5)

(b) (5)

Can't thank you enough for all the info you've already gotten to us on this. It will be very helpful.

On Apr 14, 2020, at 10:53 PM, Tabak, Lawrence (NIH/OD) [E] (b) (6) wrote:

Mike Lauer will need to answer this- it is a sub project to the NY grant but I don't know if funding is direct or via NY.

Larry

Sent from my iPhone

On Apr 14, 2020, at 10:51 PM, Pence, Laura (HHS/ASL) (b) (6) wrote:

Really helpful, thanks! So the PI in NY is the grantee and the institute in Wuhan is subgrantee? Or Wuhan receives funding directly from NIH?



On Apr 14, 2020, at 10:43 PM, Tabak, Lawrence (NIH/OD) [E] (b) (6) wrote:

Laura,  
Still working on some confirmation of details, but this work is part of a large multi- country study with Wuhan being one site. The principal investigator, Peter Daszak, is based in NY at Ecohealth Alliance, Inc

**Project Number:** 2R01AI110964-06

**Title:** UNDERSTANDING THE RISK OF BAT CORONAVIRUS EMERGENCE

**Contact PI / Project Leader:** DASZAK,  
**Awardee Organization:** ECOHEAL

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&ddparam=&ddval=&ddsub=&cr=1&csb=default&cs=ASC&pball=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&ddparam=&ddval=&ddsub=&cr=1&csb=default&cs=ASC&pball=)

How long have we been giving research dollars to this lab? (b) (5)

- How much have we given? (b) (5)  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]
- For what purpose? (b) (5)  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]
- If asked to defend our research dollars going to this lab for this purpose, what do you recommend we say  
[REDACTED] (b) (5)

Anything else we should know? (b)  
(5)

(b) (5)

Please let us know if you need anything else.  
Larry

---

**From:** "Pence, Laura (HHS/ASL)"

(b) (6)

**Date:** Tuesday, April 14, 2020 at 9:47 PM

**To:** "Tabak, Lawrence (NIH/OD) [E]"

(b) (6),

"Wolinetz, Carrie (NIH/OD) [E]"

(b) (6)

"Schwetz, Tara (NIH/OD) [E]"

(b) (6)

**Subject:** Wuhan lab research

Hi! Can we get info on this ASAP? Need for the morning.  
Sorry for the fire drill.

Begin forwarded message:

**From:** "Arbes, Sarah (HHS/ASL)"

(b) (6)

**Date:** April 14, 2020 at 9:30:23 PM EDT

**To:** "Hallett, Adrienne (NIH/OD) [E]"

(b) (6),

"Pence, Laura (HHS/ASL)"

(b) (6)

**Cc:** "Morse, Sara (HHS/ASL)"

(b) (6)

**Subject:** For AMA in the morning

Adrienne and Laura –

Can you please help me run ground truth to this article?:

<https://protect2.fireeye.com/url?k=79bfb5e8-25eb9cc3-79bf84d7-0cc47a6d17cc-7fe08f9f909251fb&u=https://protect2.fireeye.com/url?k=40f43e35-1ca13726-40f40f0a-0cc47adb5650-c048b52a2b043577&u=https://protect2.fireeye.com/url?k=d8055c7b-84514507-d8056d44-0cc47adc5fa2-762234a678e2d50f&u=https://www.soundhealthandlastingwealth.com/health-news/u-s-government-gave-3-7million-grant-to-wuhan-lab-that-experimented-on-coronavirus-source-bats/>

Congressman Gaetz is publicly criticizing HHS/NIH for funding the Wuhan laboratory's bat research. Here's this quote from another article: "I'm disgusted to learn that for years the US government has been funding dangerous and cruel animal experiments at the Wuhan Institute, which may have contributed to the global spread of coronavirus, and research at other labs in China that have virtually no oversight from US authorities."

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- For what purpose?

(b) (5)



- If asked to defend our research dollars going to this lab for this purpose, what do you recommend we say?

(b) (5)



(b) (5)

A large rectangular area of the document is redacted with a solid gray fill.

- Anything else we should know?

(b) (5)

A large rectangular area of the document is redacted with a solid gray fill.

Thanks much!  
Sarah

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** 4/15/2020 11:08:42 AM  
**To:** Tabak, Lawrence (NIH/OD) [E] (b) (6) Erbelding, Emily (NIH/NIAID) [E] (b) (6)  
**CC:** Marston, Hilary (NIH/NIAID) [E] (b) (6) Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology  
**Attachments:** Re: Wuhan lab research

Thanks – just sent you budget details.

Mike

---

**From:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Date:** Tuesday, April 14, 2020 at 10:12 PM  
**To:** "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Cc:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6), "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Thanks Emily.  
Looping in Mike Lauer,  
Larry

---

**From:** "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Date:** Tuesday, April 14, 2020 at 10:11 PM  
**To:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Cc:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6)  
**Subject:** Fwd: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

I am forwarding draft response below to inquiry from Rubio et al earlier.

PI is Peter Dazsak, Eco Health alliance in NYC. Wuhan subcontract is approximately 74k per year. I will try to find more accurate subcontract numbers.

Sent from my iPad

Begin forwarded message:

**From:** "Abbey, Lillian (NIH/NIAID) [E]" (b) (6)  
**Date:** April 14, 2020 at 4:24:34 PM EDT  
**To:** "Cassetti, Cristina (NIH/NIAID) [E]" (b) (6) "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Cc:** "Ford, Andrew (NIH/NIAID) [E]" (b) (6) "Bateman, Karen (NIH/NIAID) [E]" (b) (6) "Werner, Alyssa (NIH/NIAID) [E]" (b) (6) "Mulach, Barbara (NIH/NIAID) [E]" (b) (6)  
**Subject:** Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Dear Cristina and Emily,

Incorporated below in red font is a draft response Andrew developed based on his discussion with Erik.

(b) (5)

Also, Andrew provided the attached publication from mid-March, noting that we may want to share it with the OD.

**DRAFT RESPONSE:**

**Project Number:** 2R01AI110964-06

**Contact PI / Project Leader:** DASZAK, PETER

**Title:** UNDERSTANDING THE RISK OF BAT CORONAVIRUS EMERGENCE

**Awardee Organization:** ECOHEALTH ALLIANCE, INC.

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=)

- 1) What are the goals of the main grant:

(b) (5)

- 2) What are the specific activities supported by the sub to the Wuhan lab and the total costs associated with these activities. Please verify if the creation of recombinant bat in Wuhan is included in their research activities.

(b) (5)

Total award information is available in Reporter at link above but budget information about subcontracts is not publicly available as these awards are administered by the grantee institution.

---

**From:** Crawford, Chase (NIH/NIAID) [E] (b) (6)

**Sent:** Monday, April 13, 2020 5:41 PM

**To:** NIAID BUGS (b) (6)

**Cc:** Auchincloss, Hugh (NIH/NIAID) [E] (b) (6); Harper, Jill (NIH/NIAID) [E]

(b) (6); NIAID OCGR Leg (b) (6)

**Subject:** Request for information: Senate Qs - Wuhan Institute of Virology

Hi BUGS,

Staff to Senator Marco Rubio (R-FL) has forwarded an email to Building 1 from the White Coat Waste Project (see bottom of email chain). The forwarded message links to recent articles in The Daily Mail and the Washington Examiner on NIH support for previous coronavirus studies involving the Wuhan



Institute of Virology. Building 1 has asked if NIAID has any information related to this research that we can share with staff to Senators Rubio and Mike Braun (R-IN).

**To help us better understand this congressional request, is there any background information that you can provide on the activities discussed in the articles referenced below?**

Thanks,  
Chase

(b) (6)

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**From:** LaMontagne, Karen (NIH/OD) [E] (b) (6)  
**Sent:** Monday, April 13, 2020 4:23 PM  
**To:** NIAID OCGR Leg (b) (6)  
**Subject:** Senate Qs - Wuhan Institute of Virology

Hi, NIAID,

Separately, we have heard from the offices of Senators Rubio and Braun about these linked articles:

[White Coat Waste](#)  
[Daily Mail](#)  
[Washington Examiner](#)

Both offices have asked if there's any information we can share with them related to this matter. Thanks in advance for anything you can provide.

Karen

---

**From:** Michelle Mitchell (b) (6)  
**Date:** Monday, April 13, 2020 at 3:42 PM  
**To:** Karen LaMontagne (b) (6)  
**Subject:** Sen. Rubio question - NIH funding Wuhan virus lab

Hey Karen,

Sen. Rubio's staff, Ansley Rhyne, forwarded the email below that she received regarding NIH funding for the Wuhan Institute of Virology. Her boss, along with Rep. Gaetz are working on a letter to ensure no taxpayer dollars are sent to that Institute.

Ansley requested our input. Would you ask NIAID for any information on this issue that we could be shared with Ansley?

Thank you.

MM

-----

**From:** Justin Goodman <[justin@whitecoatwaste.org](mailto:justin@whitecoatwaste.org)>  
**Sent:** Monday, April 13, 2020 2:36 PM

**To:**

**Subject:** Laura- NIH funding Wuhan virus lab

I hope you had a nice weekend and are staying safe and healthy. I wanted to make sure you saw that our taxpayer watchdog group just exposed that **the National Institutes of Health (NIH) has been sending tax dollars to the controversial Wuhan Institute of Virology for years, including for dangerous lab experiments on coronavirus-infected bats captured from caves.** The Daily Mail, Washington Examiner, Drudge and others ran stories about the troubling find over the weekend.

We're working with Rep. Matt Gaetz (R-FL) and others on a sign-on letter about this and would love to work with you and Senator Rubio as well to ensure no more tax dollars are shipped to the Wuhan Institute of Virology.

I'd be happy to send over more info if you're interested and answer any questions you may have.

Thanks for looking,

Justin

---

**Justin Goodman, M.A.**

Vice President, Advocacy and Public Policy  
White Coat Waste Project

*Taxpayers shouldn't be forced to pay \$20 billion+  
for **wasteful** government animal experiments.*

PO Box 26029  
Washington, DC 20001  
Phone: 860.882.2492

**[Donate](#) | [Blog](#) | [Web](#) | [Twitter](#) | [Facebook](#)**

---

**From:** Bettencourt, Alice (HHS/ASFR) [REDACTED] (b) (6)  
**Sent:** 4/20/2020 9:00:39 PM  
**To:** Lauer, Michael (NIH/NHLBI) [E] [REDACTED] (b) (6) Bulls, MichelleG. (NIH/OD) [E] [REDACTED] (b) (6)  
Black, Jodi (NIH/OD) [E] [REDACTED] (b) (6)  
**CC:** Lauer, Michael (NIH/NHLBI) [E] [REDACTED] (b) (6)  
**Subject:** RE: Subrecipients Under FAIN R01AI110964

Thanks Mike!

---

**From:** Lauer, Michael (NIH/OD) [E] [REDACTED] (b) (6)  
**Sent:** Monday, April 20, 2020 4:57 PM  
**To:** Bettencourt, Alice (HHS/ASFR) [REDACTED] (b) (6) Bulls, Michelle G. (NIH/OD) [E]  
[REDACTED] (b) (6); Black, Jodi (NIH/OD) [E] [REDACTED] (b) (6)  
**Cc:** Lauer, Michael (NIH/NHLBI) [E] [REDACTED] (b) (6)  
**Subject:** Re: Subrecipients Under FAIN R01AI110964

Hi Alice – here's the info I have – from NIAID. Thanks, Mike

R01-AI-110964, Peter Daszak, PI to ECOHEALTH ALLIANCE

(b) (5)

---

**From:** "Bettencourt, Alice (HHS/ASFR)" [REDACTED] (b) (6)  
**Date:** Monday, April 20, 2020 at 4:49 PM  
**To:** "Bulls, Michelle G. (NIH/OD) [E]" [REDACTED] (b) (6) "Lauer, Michael (NIH/OD) [E]"  
[REDACTED] (b) (6)  
**Subject:** Subrecipients Under FAIN R01AI110964

Mike, Michelle,

OMB has requested via Jen M. to know if there are subrecipients to Ecohealth Alliance under the subject FAIN. (b)

(S)  
[REDACTED] Could you please have the application checked and let me know. (b)

(S)

Thank you,

Alice

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** 4/20/2020 8:56:46 PM  
**To:** Bettencourt, Alice (HHS/ASFR) (b) (6) Bulls,Michelle G. (NIH/OD) [E] (b) (6)  
Black, Jodi (NIH/OD) [E] (b) (6)  
**CC:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: Subrecipients Under FAIN R01AI110964

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(b) (5)

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Thank you,

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**Sent:** 4/15/2020 11:08:41 AM  
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**CC:** Marston, Hilary (NIH/NIAID) [E] (b) (6) Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology  
**Attachments:** Re: Wuhan lab research

Thanks – just sent you budget details.

Mike

---

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**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Thanks Emily.  
Looping in Mike Lauer,  
Larry

---

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**Date:** Tuesday, April 14, 2020 at 10:11 PM  
**To:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Cc:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6)  
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PI is Peter Dazsak, Eco Health alliance in NYC. Wuhan subcontract is approximately 74k per year. I will try to find more accurate subcontract numbers.

Sent from my iPad

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**Date:** April 14, 2020 at 4:24:34 PM EDT  
**To:** "Cassetti, Cristina (NIH/NIAID) [E]" (b) (6) "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Cc:** "Ford, Andrew (NIH/NIAID) [E]" (b) (6) "Bateman, Karen (NIH/NIAID) [E]" (b) (6) "Werner, Alyssa (NIH/NIAID) [E]" (b) (6) "Mulach, Barbara (NIH/NIAID) [E]" (b) (6)  
**Subject:** Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology



Dear Cristina and Emily,

Incorporated below in red font is a draft response Andrew developed based on his discussion with Erik.

(b) (5)

Also, Andrew provided the attached publication from mid-March, noting that we may want to share it with the OD.

**DRAFT RESPONSE:**

**Project Number:** 2R01AI110964-06

**Contact PI / Project Leader:** DASZAK, PETER

**Title:** UNDERSTANDING THE RISK OF BAT CORONAVIRUS EMERGENCE

**Awardee Organization:** ECOHEALTH ALLIANCE, INC.

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=)

- 1) What are the goals of the main grant:

(b) (5)

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**Sent:** Monday, April 13, 2020 5:41 PM

**To:** NIAID BUGS (b) (6)

**Cc:** Auchincloss, Hugh (NIH/NIAID) [E] (b) (6) Harper, Jill (NIH/NIAID) [E]

(b) (6) NIAID OCGR Leg (b) (6)

**Subject:** Request for information: Senate Qs - Wuhan Institute of Virology

Hi BUGS,

Staff to Senator Marco Rubio (R-FL) has forwarded an email to Building 1 from the White Coat Waste Project (see bottom of email chain). The forwarded message links to recent articles in The Daily Mail and the Washington Examiner on NIH support for previous coronavirus studies involving the Wuhan

Institute of Virology. Building 1 has asked if NIAID has any information related to this research that we can share with staff to Senators Rubio and Mike Braun (R-IN).

**To help us better understand this congressional request, is there any background information that you can provide on the activities discussed in the articles referenced below?**

Thanks,  
Chase

(b) (6)

---

**From:** LaMontagne, Karen (NIH/OD) [E] (b) (6)  
**Sent:** Monday, April 13, 2020 4:23 PM  
**To:** NIAID OCGR Leg (b) (6)  
**Subject:** Senate Qs - Wuhan Institute of Virology

Hi, NIAID,

Separately, we have heard from the offices of Senators Rubio and Braun about these linked articles:

[White Coat Waste](#)  
[Daily Mail](#)  
[Washington Examiner](#)

Both offices have asked if there's any information we can share with them related to this matter. Thanks in advance for anything you can provide.

Karen

---

**From:** Michelle Mitchell (b) (6)  
**Date:** Monday, April 13, 2020 at 3:42 PM  
**To:** Karen LaMontagne (b) (6)  
**Subject:** Sen. Rubio question - NIH funding Wuhan virus lab

Hey Karen,

Sen. Rubio's staff, Ansley Rhyne, forwarded the email below that she received regarding NIH funding for the Wuhan Institute of Virology. Her boss, along with Rep. Gaetz are working on a letter to ensure no taxpayer dollars are sent to that Institute.

Ansley requested our input. Would you ask NIAID for any information on this issue that we could be shared with Ansley?

Thank you.

MM

-----

**From:** Justin Goodman <[justin@whitecoatwaste.org](mailto:justin@whitecoatwaste.org)>  
**Sent:** Monday, April 13, 2020 2:36 PM

**To:**

**Subject:** Laura- NIH funding Wuhan virus lab

I hope you had a nice weekend and are staying safe and healthy. I wanted to make sure you saw that our taxpayer watchdog group just exposed that **the National Institutes of Health (NIH) has been sending tax dollars to the controversial Wuhan Institute of Virology for years, including for dangerous lab experiments on coronavirus-infected bats captured from caves.** The Daily Mail, Washington Examiner, Drudge and others ran stories about the troubling find over the weekend.

We're working with Rep. Matt Gaetz (R-FL) and others on a sign-on letter about this and would love to work with you and Senator Rubio as well to ensure no more tax dollars are shipped to the Wuhan Institute of Virology.

I'd be happy to send over more info if you're interested and answer any questions you may have.

Thanks for looking,

Justin

---

**Justin Goodman, M.A.**

Vice President, Advocacy and Public Policy  
White Coat Waste Project

*Taxpayers shouldn't be forced to pay \$20 billion+  
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PO Box 26029  
Washington, DC 20001  
Phone: 860.882.2492

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---

**From:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Sent:** 4/15/2020 11:24:34 AM  
**To:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

So we don't technically fund them directly, the grantee in NY does?

---

**From:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Date:** Wednesday, April 15, 2020 at 7:23 AM  
**To:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Cc:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Hi Larry – on the Type 1 total is 749,976. On the Type 2, looks like the total is 76,301 (so far). Thus total is 749,976+76,301=826,277.

It's a subcontract going through New York.

Mike

---

**From:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Date:** Wednesday, April 15, 2020 at 7:12 AM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Mike – sorry – what is the total amount Wuhan has received since 2014?

Does the money go to NY and they send to Wuhan or do we send to Wuhan directly.

Thanks  
Larry

---

**From:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Date:** Wednesday, April 15, 2020 at 7:11 AM  
**To:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6) "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Cc:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6) "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Thanks – just sent you budget details.

Mike



---

**From:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Date:** Tuesday, April 14, 2020 at 10:12 PM  
**To:** "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Cc:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6) "Lauer, Michael (NIH/OD) [E]" (b) (6)

**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Thanks Emily.  
Looping in Mike Lauer,  
Larry

---

**From:** "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Date:** Tuesday, April 14, 2020 at 10:11 PM  
**To:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Cc:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6)  
**Subject:** Fwd: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

I am forwarding draft response below to inquiry from Rubio et al earlier.

PI is Peter Dazsak, Eco Health alliance in NYC. Wuhan subcontract is approximately 74k per year. I will try to find more accurate subcontract numbers.

Sent from my iPad

Begin forwarded message:

**From:** "Abbey, Lillian (NIH/NIAID) [E]" (b) (6)  
**Date:** April 14, 2020 at 4:24:34 PM EDT  
**To:** "Cassetti, Cristina (NIH/NIAID) [E]" (b) (6) "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Cc:** "Ford, Andrew (NIH/NIAID) [E]" (b) (6) "Bateman, Karen (NIH/NIAID) [E]" (b) (6) "Werner, Alyssa (NIH/NIAID) [E]" (b) (6), "Mulach, Barbara (NIH/NIAID) [E]" (b) (6)  
**Subject:** Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Dear Cristina and Emily,  
Incorporated below in red font is a draft response Andrew developed based on his discussion with Erik.

(b) (5)

Also, Andrew provided the attached publication from mid-March, noting that we may want to share it with the OD.

DRAFT RESPONSE:

**Project Number:** 2R01AI110964-06

**Contact PI / Project Leader:** DASZAK, PETER

**Title:** UNDERSTANDING THE RISK OF BAT CORONAVIRUS EMERGENCE **Awardee** ECOHEALTH ALLIANCE, INC.  
**Organization:**

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=)

1) What are the goals of the main grant:

(b) (5)

2) What are the specific activities supported by the sub to the Wuhan lab and the total costs associated with these activities. Please verify if the creation of recombinant bat in Wuhan is included in their research activities.

(b) (5)

Total award information is available in Reporter at link above but budget information about subcontracts is not publicly available as these awards are administered by the grantee institution.

---

**From:** Crawford, Chase (NIH/NIAID) [E] (b) (6)  
**Sent:** Monday, April 13, 2020 5:41 PM  
**To:** NIAID BUGS (b) (6)  
**Cc:** Auchincloss, Hugh (NIH/NIAID) [E] (b) (6) Harper, Jill (NIH/NIAID) [E]  
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**Subject:** Request for information: Senate Qs - Wuhan Institute of Virology

Hi BUGS,

Staff to Senator Marco Rubio (R-FL) has forwarded an email to Building 1 from the White Coat Waste Project (see bottom of email chain). The forwarded message links to recent articles in The Daily Mail and the Washington Examiner on NIH support for previous coronavirus studies involving the Wuhan Institute of Virology. Building 1 has asked if NIAID has any information related to this research that we can share with staff to Senators Rubio and Mike Braun (R-IN).

To help us better understand this congressional request, is there any background information that you can provide on the activities discussed in the articles referenced below?

Thanks,  
Chase

(b) (6)

---

**From:** LaMontagne, Karen (NIH/OD) [E] (b) (6)  
**Sent:** Monday, April 13, 2020 4:23 PM



To: NIAID OCGR Leg [REDACTED] (b) (6)

Subject: Senate Qs - Wuhan Institute of Virology

Hi, NIAID,

Separately, we have heard from the offices of Senators Rubio and Braun about these linked articles:

White Coat Waste

Daily Mail

Washington Examiner

Both offices have asked if there's any information we can share with them related to this matter. Thanks in advance for anything you can provide.

Karen

---

**From:** Michelle Mitchell [REDACTED] (b) (6)

**Date:** Monday, April 13, 2020 at 3:42 PM

**To:** Karen LaMontagne [REDACTED] (b) (6)

**Subject:** Sen. Rubio question - NIH funding Wuhan virus lab

Hey Karen,

Sen. Rubio's staff, Ansley Rhyne, forwarded the email below that she received regarding NIH funding for the Wuhan Institute of Virology. Her boss, along with Rep. Gaetz are working on a letter to ensure no taxpayer dollars are sent to that Institute.

Ansley requested our input. Would you ask NIAID for any information on this issue that we could be shared with Ansley?

Thank you.

MM

-----

**From:** Justin Goodman <[justin@whitecoatwaste.org](mailto:justin@whitecoatwaste.org)>

**Sent:** Monday, April 13, 2020 2:36 PM

**To:**

**Subject:** Laura- NIH funding Wuhan virus lab

I hope you had a nice weekend and are staying safe and healthy. I wanted to make sure you saw that our taxpayer watchdog group just exposed that **the National Institutes of Health (NIH) has been sending tax dollars to the controversial Wuhan Institute of Virology for years, including for dangerous lab experiments on coronavirus-infected bats captured from caves.** The Daily Mail, Washington Examiner, Drudge and others ran stories about the troubling find over the weekend.

We're working with Rep. Matt Gaetz (R-FL) and others on a sign-on letter about this and would love to work with you and Senator Rubio as well to ensure no more tax dollars are shipped to the Wuhan Institute of Virology.

I'd be happy to send over more info if you're interested and answer any questions you may have.

Thanks for looking,

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Washington, DC 20001  
Phone: 860.882.2492

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---

**From:** Black, Jodi (NIH/OD) [E] (b) (6)  
**Sent:** 4/21/2020 2:28:22 AM  
**To:** Bulls, Michelle G. (NIH/OD) [E] (b) (6)  
**CC:** Tarwater, Robert (NIH/OD) [E] (b) (6); Black, Jodi (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** FW: Subrecipients Under FAIN R01AI110964

Hi Michelle, how do you suggest we proceed? See below

Best,  
Jodi

Jodi B. Black, PhD, MMSc  
Deputy Director  
Office of Extramural Research, NIH

---

**From:** Mike Lauer (b) (6)  
**Date:** Monday, April 20, 2020 at 6:55 PM  
**To:** "Bettencourt, Alice (HHS/ASFR)" (b) (6); Jodi OER (b) (6)  
**Cc:** Mike Lauer (b) (6)  
**Subject:** Re: Subrecipients Under FAIN R01AI110964

Thanks Alice – looping in Jodi – we'll look into it.

Best, Mike

---

**From:** "Bettencourt, Alice (HHS/ASFR)" (b) (6)  
**Date:** Monday, April 20, 2020 at 5:04 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** RE: Subrecipients Under FAIN R01AI110964

So the follow up question is likely to be: (b) (5)

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** Monday, April 20, 2020 4:57 PM  
**To:** Bettencourt, Alice (HHS/ASFR) (b) (6); Bulls, Michelle G. (NIH/OD) [E] (b) (6); Black, Jodi (NIH/OD) [E] (b) (6)  
**Cc:** Lauer, Michael (NIH/NHLBI) [E] (b) (6)  
**Subject:** Re: Subrecipients Under FAIN R01AI110964

Hi Alice – here's the info I have – from NIAID. Thanks, Mike

R01-AI-110964, Peter Daszak, PI to ECOHEALTH ALLIANCE

(b) (5)

(b) (5)

---

**From:** "Bettencourt, Alice (HHS/ASFR)" (b) (6)

**Date:** Monday, April 20, 2020 at 4:49 PM

**To:** "Bulls, Michelle G. (NIH/OD) [E]" (b) (6) "Lauer, Michael (NIH/OD) [E]"  
(b) (6)

**Subject:** Subrecipients Under FAIN R01AI110964

Mike, Michelle,

OMB has requested via Jen M. to know if there are subrecipients to Ecohealth Alliance under the subject FAIN. (b) (6)  
(b) (6) Could you please have the application checked and let me know. (b) (6)  
(b) (6)

Thank you,

Alice

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** 4/15/2020 11:23:07 AM  
**To:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**CC:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology  
**Attachments:** NoA R01AI110964-06.pdf; NoA R01AI110964-01.pdf; FACTS Snapshot for 2-R01-AI110964-06 DASZAK, PETER QVR.pdf

Hi Larry – on the Type 1 total is 749,976. On the Type 2, looks like the total is 76,301 (so far). Thus total is 749,976+76,301=826,277.

It's a subcontract going through New York.

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**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Thanks – just sent you budget details.

Mike

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**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Thanks Emily.



Looping in Mike Lauer,  
Larry

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Dear Cristina and Emily,  
Incorporated below in red font is a draft response Andrew developed based on his discussion with Erik.

(b) (5)  
Also, Andrew provided the attached publication from mid-March, noting that we may want to share it with the OD.

**DRAFT RESPONSE:**

<b>Project Number:</b>	2R01AI110964-06	<b>Contact PI / Project Leader:</b>	DASZAK, PETER
<b>Title:</b>	UNDERSTANDING THE RISK OF BAT CORONAVIRUS EMERGENCE	<b>Awardee Organization:</b>	ECOHEALTH ALLIANCE, INC.

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=)

- 1) What are the goals of the main grant:

(b) (5)



(b) (5)

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(b) (6) NIAID OCGR Leg (b) (6)  
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**Subject:** Sen. Rubio question - NIH funding Wuhan virus lab

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**To:**  
**Subject:** Laura- NIH funding Wuhan virus lab

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I'd be happy to send over more info if you're interested and answer any questions you may have.

Thanks for looking,

Justin

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**Justin Goodman, M.A.**  
Vice President, Advocacy and Public Policy

White Coat Waste Project

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Washington, DC 20001

Phone: 860.882.2492

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---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** 4/24/2020 8:26:17 PM  
**To:** Kosub, David (NIH/OD) [E] (b) (6); Black, Jodi (NIH/OD)[E] (b) (6); Bulls, Michelle G. (NIH/OD) [E] (b) (6); Ta, Kristin (NIH/OD) [E] (b) (6)  
**CC:** Columbus, Megan (NIH/OD) [E] (b) (6); Rabin, Elise (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: Hill Qs on WIV  
**Attachments:** FACTS Snapshot for 2-R01-AI110964-06 DASZAK, PETER QVR.pdf; Daszak Foreign Year 6.pdf; Daszak Foreign Year 5.pdf; Daszak Foreign Year 4.pdf; Daszak Foreign Year 3.pdf; Daszak Foreign Year 2.pdf; Daszak Foreign Year 1.pdf

Thanks David – here are thoughts:

**Do we know why the amount went down in 2019? Just random fluctuation?**

The first 5-year “Type 1” grant ended and the competing renewal, a “Type 2” started. The renewal proposal was not the same as the de novo one. It’s not unusual for budget allocations to change (up or down) when a renewal grant is proposed and funded.

**Who were the other subawardees? (i.e. the specific institutes in countries listed in the statement -- China, Thailand, Cambodia, Laos, Vietnam, Malaysia, Indonesia, and Myanmar). Joel later specified that he wants info for all subawards for all locations for all of those six years.**

See attached State Department clearance documents. There may be more info through NIAID.

---

**From:** "Kosub, David (NIH/OD) [E]" (b) (6)  
**Date:** Friday, April 24, 2020 at 2:22 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6); "Black, Jodi (NIH/OD) [E]" (b) (6); "Bulls, Michelle G. (NIH/OD) [E]" (b) (6); "Ta, Kristin (NIH/OD) [E]" (b) (6)  
**Cc:** "Columbus, Megan (NIH/OD) [E]" (b) (6); "Rabin, Elise (NIH/OD) [E]" (b) (6)  
**Subject:** FW: Hill Qs on WIV

Mike, Jodi, Michelle, and Kristin,

Please see the forwarded message below from OLPA. Greatly appreciate your advice on how to proceed.

Thank you  
David

---

**From:** LaMontagne, Karen (NIH/OD) [E] (b) (6)  
**Sent:** Friday, April 24, 2020 1:46 PM  
**To:** Kosub, David (NIH/OD) [E] (b) (6)



Subject: Hill Qs on WIV

Hi, David and Elise,

Thank you for chatting earlier today. As discussed, OLPA received a number of Congressional inquiries inspired by media reports on the Wuhan Institute of Virology (WIV). We have satisfied most of the info requests but are seeking your help with a few outstanding questions from staff from the House LHHS Appropriations Subcommittee and Senator Cruz's office. NIAID now indicates that OER would be best positioned given that it is leading other efforts to request information from the PI, and that NIAID wouldn't have more information than OER would be providing.

We appreciate your sharing with Mike, Jodi, and Michelle to get answers to outstanding questions from the Hill. Unfortunately, these requests are already a bit stale since they were put into a holding pattern while information gathering efforts shifted over the last two weeks. If we can get a response by Tuesday 4/28, that would be extremely helpful.

For reference, here is a brief summary of what each staffer asked, what OLPA shared with them so far, and the **outstanding questions for which we are still seeking information (bolded below)**.

#### HOUSE LHHS

- In response to her request for the funding history for the Wuhan Institute of Virology, we shared with Kathryn Salmon from House LHHS Appropriations a FY14-19 subaward funding chart that NIAID provided (pasted below my signature for reference).
- In follow-up, referencing that chart, Kathryn asks:  
**Do we know why the amount went down in 2019? Just random fluctuation?** She added that some reports have said that this facility was cited for poor management and wants to know if that's why the amount went down.

#### SENATOR TED CRUZ

- In response to initial questions from Joel Heimbach from Sen. Cruz's staff, we shared an OD-cleared statement and the FY19 funding line only from the chart produced by NIAID (pasted below my signature for reference).
- In response to a follow-up asking for a detailed rundown of exactly how the \$76,301 (FY19) was spent by WIV, we shared the following program info from NIAID:

*Additional detail about activities supported through the subaward to the Wuhan Institute of Virology is below.*

*Through project subawards, NIAID has supported the following activities at the Wuhan Institute of Virology: coronavirus screening and serology of non-human samples, viral pathogenesis, serological testing, host receptor binding, spike (S) protein sequencing, and in vitro and in vivo virus characterization. NIAID has not supported the creation of recombinant viruses at the Wuhan Institute of Virology.*

- Joel again followed-up with these additional questions - we were able to answer Qs #1 and #2, but we **still need the information for #3:**

- (1) who was the original/main project awardee;
- (2) what entity made the subaward to the WIV; and,
- (3) who were the other subawardees? (i.e. the specific institutes in countries listed in the statement -- China, Thailand, Cambodia, Laos, Vietnam, Malaysia, Indonesia, and Myanmar). Joel later specified that he wants info for all subawards for all locations for all of those six years.**

Again, thank you very much for your assistance with these outstanding Hill requests for information. Please let me know if you have any questions.

Karen

Karen LaMontagne  
Office of Legislative Policy & Analysis  
National Institutes of Health  
P: (b) (6)

### **NIAID Response**

Below is NIAID's response to recent congressional inquiries on this topic. Please note that NIAID would defer any questions about the care of laboratory animals to the National Institutes of Health Office of Laboratory Animal Welfare.

The National Institute of Allergy and Infectious Diseases (NIAID) continues to support research to understand the risk of bat coronavirus emergence in China and Southeast Asia. NIAID-supported scientists at EcoHealth Alliance and their collaborators at Wuhan Institute of Virology, Duke-National University of Singapore Medical School, and other organizations are working to better understand what factors allow coronaviruses to evolve and jump from animals into humans. Through project subawards, NIAID has supported the following activities at the Wuhan Institute of Virology: coronavirus screening and serology of non-human samples, viral pathogenesis, serological testing, host receptor binding, spike (S) protein sequencing, and *in vitro* and *in vivo* virus characterization. NIAID has not supported the creation of recombinant viruses at the Wuhan Institute of Virology. NIAID funding for these activities through project subawards to the Wuhan Institute of Virology is outlined in the table below.

### **NIAID Subawards to Wuhan Institute of Virology**

<b>Fiscal Year</b>	<b>Project Number/ Title</b>	<b>Organization</b>	<b>Subaward Recipient</b>	<b>Subaward Amount</b>
2019	R01AI110964: Understanding the Risk of Bat Coronavirus Emergence	EcoHealth Alliance	Wuhan Institute of Virology	\$76,301
2018	R01AI110964: Understanding the Risk of Bat Coronavirus Emergence	EcoHealth Alliance	Wuhan Institute of Virology	\$159,122
2017	R01AI110964: Understanding the Risk of Bat Coronavirus Emergence	EcoHealth Alliance	Wuhan Institute of Virology	\$159,122
2016	R01AI110964: Understanding the	EcoHealth Alliance	Wuhan Institute of Virology	\$159,122



	Risk of Bat Coronavirus Emergence			
2015	R01AI110964: Understanding the Risk of Bat Coronavirus Emergence	EcoHealth Alliance	Wuhan Institute of Virology	\$139,015
2014	R01AI110964: Understanding the Risk of Bat Coronavirus Emergence	EcoHealth Alliance	Wuhan Institute of Virology	\$133,595
<b>Total FY 14-19</b>				<b>\$826,277</b>

**OD-cleared statement shared with Hill offices**

Most emerging human viruses come from wildlife, and these represent a significant threat to public health and biosecurity in the US and globally, as demonstrated by the SARS epidemic of 2002-03, and the current COVID-19 pandemic. The grant you are referencing is a multi-site, multi-country project supporting research that aims to understand what factors allow coronaviruses, including close relatives to SARS, to evolve and jump into the human population and cause disease (called a spillover event). Specifically, the project includes studying viral diversity in animal (bats) reservoirs, surveying people that live in high-risk communities for evidence of bat-coronavirus infection, and conducting laboratory experiments to analyze and predict which newly-discovered viruses pose the greatest threat to human health. The \$3.7M dollar figure is the total funding over 6 years to all sites which include China, Thailand, Cambodia, Laos, Vietnam, Malaysia, Indonesia, and Myanmar. Additional details are available on the NIH RePORTER tool:

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=) .

Also, please note, scientific research indicates that there is no evidence that suggests the virus was created in a laboratory: <https://www.sciencedaily.com/releases/2020/03/200317175442.htm>

---

**From:** Arbes, Sarah (HHS/ASL) (b) (6)  
**Sent:** 4/15/2020 1:03:25 PM  
**To:** Pence, Laura (HHS/ASL) (b) (6); Wolinetz, Carrie (NIH/OD) [E] (b) (6)  
**CC:** Tabak, Lawrence (NIH/OD) [E] (b) (6); Hallett, Adrienne (NIH/OD) [E] (b) (6)  
Lauer, Michael (NIH/NHLBI) [E] (b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6)  
**Subject:** RE: Wuhan lab research

Thank you all, so very much!!

---

**From:** Pence, Laura (HHS/ASL) (b) (6)  
**Sent:** Wednesday, April 15, 2020 7:18 AM  
**To:** Wolinetz, Carrie (NIH/OD) [E] (b) (6)  
**Cc:** Tabak, Lawrence (NIH/OD) [E] (b) (6); Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/NHLBI) [E] (b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6); Arbes, Sarah (HHS/ASL) (b) (6)  
**Subject:** Re: Wuhan lab research

This is great, thanks!

On Apr 15, 2020, at 7:05 AM, Wolinetz, Carrie (NIH/OD) [E] (b) (6) wrote:

And this news release has a pretty good lay level summary of it, if it's useful: :  
<https://www.sciencedaily.com/releases/2020/03/200317175442.htm> Cheers, Carrie

---

**From:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Sent:** Wednesday, April 15, 2020 6:56 AM  
**To:** Wolinetz, Carrie (NIH/OD) [E] (b) (6); Pence, Laura (HHS/ASL) (b) (6)  
**Cc:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6); Arbes, Sarah (HHS/ASL) (b) (6)  
**Subject:** Re: Wuhan lab research

Attached is the paper Carrie is referring to.  
Larry

---

**From:** "Wolinetz, Carrie (NIH/OD) [E]" (b) (6)  
**Date:** Wednesday, April 15, 2020 at 6:50 AM  
**To:** "Pence, Laura (HHS/ASL)" (b) (6); "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Cc:** "Hallett, Adrienne (NIH/OD) [E]" (b) (6); "Lauer, Michael (NIH/OD) [E]" (b) (6); "Schwetz, Tara (NIH/OD) [E]" (b) (6); "Arbes, Sarah (HHS/ASL)" (b) (6)  
**Subject:** RE: Wuhan lab research

Laura,

(b) (5)

(b) (5) Cheers, Carrie

---

**From:** Pence, Laura (HHS/ASL) (b) (6)  
**Sent:** Tuesday, April 14, 2020 11:32 PM  
**To:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Cc:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E]  
(b) (6) Schwetz, Tara (NIH/OD) [E] (b) (6) Wolinetz, Carrie  
(NIH/OD) [E] (b) (6) Arbes, Sarah (HHS/ASL) (b) (6)  
**Subject:** Re: Wuhan lab research

Gotcha, thanks! If you have that info tomorrow morning that would be great. (b) (5)

Can't thank you enough for all the info you've already gotten to us on this. It will be very helpful.

On Apr 14, 2020, at 10:53 PM, Tabak, Lawrence (NIH/OD) [E] (b) (6) wrote:

Mike Lauer will need to answer this- it is a sub project to the NY grant but I don't know if funding is direct or via NY.

Larry

Sent from my iPhone

On Apr 14, 2020, at 10:51 PM, Pence, Laura (HHS/ASL) (b) (6) wrote:

Really helpful, thanks! So the PI in NY is the grantee and the institute in Wuhan is subgrantee? Or Wuhan receives funding directly from NIH?

On Apr 14, 2020, at 10:43 PM, Tabak, Lawrence (NIH/OD) [E] (b) (6) wrote:

Laura,

Still working on some confirmation of details, but this work is part of a large multi-country study with Wuhan being one site. The principal investigator, Peter Daszak, is based in NY at Ecohealth Alliance, Inc

**Project Number:** 2R01AI110964-06  
**Title:** UNDERSTANDING THE RISK OF BAT CORONAVIRUS EMERGENCE

**Contact PI / Project Leader:** DASZAK, P  
**Awardee Organization:** ECOHEALTH

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=)

How long have we been giving research dollars to this lab? (b) (5)

- How much have we given? (b) (5)

(b) (5)

- 
- For what purpose? (b) (5)

(b) (5)

- 
- If asked to defend our research dollars going to this lab for this purpose, what do you recommend we say

- (b) (5)

(b) (5)

Anything else we should know? (b) (5)

(b) (5)

Please let us know if you need anything else.  
Larry

---

**From:** "Pence, Laura (HHS/ASL)"

(b) (6)

**Date:** Tuesday, April 14, 2020 at 9:47 PM  
**To:** "Tabak, Lawrence (NIH/OD) [E]"  
(b) (6) "Wolinetz, Carrie  
(NIH/OD) [E]" (b) (6)  
"Schwetz, Tara (NIH/OD) [E]"  
(b) (6)  
**Subject:** Wuhan lab research

Hi! Can we get info on this ASAP? Need for the morning.  
Sorry for the fire drill.

Begin forwarded message:

**From:** "Arbes, Sarah (HHS/ASL)"  
(b) (6)  
**Date:** April 14, 2020 at 9:30:23 PM EDT  
**To:** "Hallett, Adrienne (NIH/OD) [E]"  
(b) (6) "Pence,  
Laura (HHS/ASL)"  
(b) (6)  
**Cc:** "Morse, Sara (HHS/ASL)"  
(b) (6)  
**Subject:** For AMA in the morning

Adrienne and Laura –

Can you please help me run ground truth to this article?:  
<https://protect2.fireeye.com/url?k=79bfb5e8-25eb9cc3-79bf84d7-0cc47a6d17cc-7fe08f9f909251fb&u=https://protect2.fireeye.com/url?k=40f43e35-1ca13726-40f40f0a-0cc47adb5650-c048b52a2b043577&u=https://protect2.fireeye.com/url?k=d8055c7b-84514507-d8056d44-0cc47adc5fa2-762234a678e2d50f&u=https://www.soundhealthandlastingwealth.com/health-news/u-s-government-gave-3-7million-grant-to-wuhan-lab-that-experimented-on-coronavirus-source-bats/>

Congressman Gaetz is publicly criticizing HHS/NIH for funding the Wuhan laboratory's bat research. Here's this quote from another article: "I'm disgusted to learn that for years the US government has been funding dangerous and cruel animal experiments at the Wuhan Institute, which may have contributed to the

global spread of coronavirus, and research at other labs in China that have virtually no oversight from US authorities."

- How long have we been giving research dollars to this lab?
- How much have we given?
- For what purpose?

(b) (5)



- If asked to defend our research dollars going to this lab for this purpose, what do you recommend we say?

(b) (5)



- Anything else we should know?



(b) (5)

Thanks much!  
Sarah

---

**From:** Wolinetz, Carrie (NIH/OD) [E] (b) (6)  
**Sent:** 4/15/2020 10:50:40 AM  
**To:** Pence, Laura (HHS/ASL) (b) (6); Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**CC:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6); Arbes, Sarah (HHS/ASL) (b) (6)  
**Subject:** RE: Wuhan lab research

Laura,

(b) (5)

(b) (5) Cheers, Carrie

---

**From:** Pence, Laura (HHS/ASL) (b) (6)  
**Sent:** Tuesday, April 14, 2020 11:32 PM  
**To:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Cc:** Hallett, Adrienne (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6); Schwetz, Tara (NIH/OD) [E] (b) (6); Wolinetz, Carrie (NIH/OD) [E] (b) (6); Arbes, Sarah (HHS/ASL) (b) (6)  
**Subject:** Re: Wuhan lab research

Gotcha, thanks! If you have that info tomorrow morning that would be great. (b) (5)

Can't thank you enough for all the info you've already gotten to us on this. It will be very helpful.

On Apr 14, 2020, at 10:53 PM, Tabak, Lawrence (NIH/OD) [E] (b) (6) wrote:

Mike Lauer will need to answer this- it is a sub project to the NY grant but I don't know if funding is direct or via NY.

Larry

Sent from my iPhone

On Apr 14, 2020, at 10:51 PM, Pence, Laura (HHS/ASL) (b) (6) wrote:

Really helpful, thanks! So the PI in NY is the grantee and the institute in Wuhan is subgrantee? Or Wuhan receives funding directly from NIH?

On Apr 14, 2020, at 10:43 PM, Tabak, Lawrence (NIH/OD) [E] (b) (6) wrote:

Laura,

Still working on some confirmation of details, but this work is part of a large multi- country study with Wuhan being one site. The principal investigator, Peter Daszak, is based in NY at Ecohealth Alliance, Inc

**Project Number:** 2R01AI110964-06

**Contact PI / Project Leader:** DASZAK, PETER

**Title:** UNDERSTANDING THE RISK OF BAT CORONAVIRUS EMERGENCE

**Awardee Organization:** ECOHEALTH ALLIANCE

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=)

How long have we been giving research dollars to this lab? (b) (5)

- How much have we given? (b) (5)

- For what purpose? (b) (5)

- If asked to defend our research dollars going to this lab for this purpose, what do you recommend we say

- (b) (5)

Anything else we should know? (b) (5)

Please let us know if you need anything else.  
Larry

---

**From:** "Pence, Laura (HHS/ASL)" (b) (6)

**Date:** Tuesday, April 14, 2020 at 9:47 PM

**To:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6)

"Wolinetz, Carrie (NIH/OD) [E]" (b) (6)

"Schwetz, Tara (NIH/OD) [E]" (b) (6)

**Subject:** Wuhan lab research

Hi! Can we get info on this ASAP? Need for the morning. Sorry for the fire drill.

Begin forwarded message:

**From:** "Arbes, Sarah (HHS/ASL)"

(b) (6)

**Date:** April 14, 2020 at 9:30:23 PM EDT

**To:** "Hallett, Adrienne (NIH/OD) [E]"

(b) (6)

"Pence, Laura (HHS/ASL)"

(b) (6)

**Cc:** "Morse, Sara (HHS/ASL)" (b) (6)

**Subject:** For AMA in the morning

Adrienne and Laura –

Can you please help me run ground truth to this article?: <https://protect2.fireeye.com/url?k=40f43e35-1ca13726-40f40f0a-0cc47adb5650-c048b52a2b043577&u=https://protect2.fireeye.com/url?k=d8055c7b-84514507-d8056d44-0cc47adc5fa2-762234a678e2d50f&u=https://www.soundhealthandlastingwealth.com/health-news/u-s-government-gave-3-7million-grant-to-wuhan-lab-that-experimented-on-coronavirus-source-bats/>

Congressman Gaetz is publicly criticizing HHS/NIH for funding the Wuhan laboratory's bat research. Here's this quote from another article: "I'm disgusted to learn that for years the US government has been funding dangerous and cruel animal experiments at the Wuhan Institute, which may have contributed to the global spread of coronavirus, and research at other labs in China that have virtually no oversight from US authorities."

- How long have we been giving research dollars to this lab?
- How much have we given?
- For what purpose?

(b) (5)

(b) (5)



- If asked to defend our research dollars going to this lab for this purpose, what do you recommend we say?

(b) (5)



- Anything else we should know?

(b) (5)



Thanks much!  
Sarah

---

**From:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**Sent:** 4/15/2020 11:12:36 AM  
**To:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Mike – sorry – what is the total amount Wuhan has received since 2014?

Does the money go to NY and they send to Wuhan or do we send to Wuhan directly.

Thanks  
Larry

---

**From:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Date:** Wednesday, April 15, 2020 at 7:11 AM  
**To:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6) "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Cc:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6) "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Thanks – just sent you budget details.

Mike

---

**From:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Date:** Tuesday, April 14, 2020 at 10:12 PM  
**To:** "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Cc:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6) "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Thanks Emily.  
Looping in Mike Lauer,  
Larry

---

**From:** "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Date:** Tuesday, April 14, 2020 at 10:11 PM  
**To:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Cc:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6)  
**Subject:** Fwd: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

I am forwarding draft response below to inquiry from Rubio et al earlier.

PI is Peter Dazsak, Eco Health alliance in NYC. Wuhan subcontract is approximately 74k per year. I will try to find more accurate subcontract numbers.



Sent from my iPad

Begin forwarded message:

**From:** "Abbey, Lillian (NIH/NIAID) [E]" (b) (6)  
**Date:** April 14, 2020 at 4:24:34 PM EDT  
**To:** "Cassetti, Cristina (NIH/NIAID) [E]" (b) (6) "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Cc:** "Ford, Andrew (NIH/NIAID) [E]" (b) (6) "Bateman, Karen (NIH/NIAID) [E]" (b) (6) "Werner, Alyssa (NIH/NIAID) [E]" (b) (6) "Mulach, Barbara (NIH/NIAID) [E]" (b) (6)  
**Subject:** Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Dear Cristina and Emily,

Incorporated below in red font is a draft response Andrew developed based on his discussion with Erik.

(b) (5)

Also, Andrew provided the attached publication from mid-March, noting that we may want to share it with the OD.

**DRAFT RESPONSE:**

**Project Number:** 2R01AI110964-06

**Contact PI / Project Leader:** DASZAK, PETER

**Title:** UNDERSTANDING THE RISK OF BAT CORONAVIRUS EMERGENCE

**Awardee Organization:** ECOHEALTH ALLIANCE, INC.

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=)

- 1) What are the goals of the main grant:

(b) (5)

- 2) What are the specific activities supported by the sub to the Wuhan lab and the total costs associated with these activities. Please verify if the creation of recombinant bat in Wuhan is included in their research activities.

(b) (5)

Total award information is available in Reporter at link above but budget information about subcontracts is not publicly available as these awards are administered by the grantee institution.

---

**From:** Crawford, Chase (NIH/NIAID) [E] (b) (6)  
**Sent:** Monday, April 13, 2020 5:41 PM  
**To:** NIAID BUGS (b) (6)  
**Cc:** Auchincloss, Hugh (NIH/NIAID) [E] (b) (6) Harper, Jill (NIH/NIAID) [E]  
(b) (6) NIAID OCGR Leg (b) (6)  
**Subject:** Request for information: Senate Qs - Wuhan Institute of Virology

Hi BUGS,

Staff to Senator Marco Rubio (R-FL) has forwarded an email to Building 1 from the White Coat Waste Project (see bottom of email chain). The forwarded message links to recent articles in The Daily Mail and the Washington Examiner on NIH support for previous coronavirus studies involving the Wuhan Institute of Virology. Building 1 has asked if NIAID has any information related to this research that we can share with staff to Senators Rubio and Mike Braun (R-IN).

**To help us better understand this congressional request, is there any background information that you can provide on the activities discussed in the articles referenced below?**

Thanks,  
Chase

(b) (6)

---

**From:** LaMontagne, Karen (NIH/OD) [E] (b) (6)  
**Sent:** Monday, April 13, 2020 4:23 PM  
**To:** NIAID OCGR Leg (b) (6)  
**Subject:** Senate Qs - Wuhan Institute of Virology

Hi, NIAID,

Separately, we have heard from the offices of Senators Rubio and Braun about these linked articles:

[White Coat Waste](#)  
[Daily Mail](#)  
[Washington Examiner](#)

Both offices have asked if there's any information we can share with them related to this matter. Thanks in advance for anything you can provide.

Karen

---

**From:** Michelle Mitchell (b) (6)  
**Date:** Monday, April 13, 2020 at 3:42 PM  
**To:** Karen LaMontagne (b) (6)  
**Subject:** Sen. Rubio question - NIH funding Wuhan virus lab

Hey Karen,

Sen. Rubio's staff, Ansley Rhyne, forwarded the email below that she received regarding NIH funding for the Wuhan Institute of Virology. Her boss, along with Rep. Gaetz are working on a letter to ensure no taxpayer dollars are sent to that Institute.

Ansley requested our input. Would you ask NIAID for any information on this issue that we could be shared with Ansley?

Thank you.

MM

-----

**From:** Justin Goodman <[justin@whitecoatwaste.org](mailto:justin@whitecoatwaste.org)>

**Sent:** Monday, April 13, 2020 2:36 PM

**To:**

**Subject:** Laura- NIH funding Wuhan virus lab

I hope you had a nice weekend and are staying safe and healthy. I wanted to make sure you saw that our taxpayer watchdog group just exposed that **the National Institutes of Health (NIH) has been sending tax dollars to the controversial Wuhan Institute of Virology for years, including for dangerous lab experiments on coronavirus-infected bats captured from caves.** The Daily Mail, Washington Examiner, Drudge and others ran stories about the troubling find over the weekend.

We're working with Rep. Matt Gaetz (R-FL) and others on a sign-on letter about this and would love to work with you and Senator Rubio as well to ensure no more tax dollars are shipped to the Wuhan Institute of Virology.

I'd be happy to send over more info if you're interested and answer any questions you may have.

Thanks for looking,

Justin

---

**Justin Goodman, M.A.**

Vice President, Advocacy and Public Policy  
White Coat Waste Project

*Taxpayers shouldn't be forced to pay \$20 billion+  
for **wasteful** government animal experiments.*

PO Box 26029  
Washington, DC 20001  
Phone: 860.882.2492

**[Donate](#) | [Blog](#) | [Web](#) | [Twitter](#) | [Facebook](#)**

---

**From:** Bulls, Michelle G. (NIH/OD) [E] [REDACTED] (b) (6)  
**Sent:** 4/21/2020 12:43:49 PM  
**To:** Black, Jodi (NIH/OD) [REDACTED] (b) (6)  
**CC:** Tarwater, Robert (NIH/OD) [E] [REDACTED] (b) (6) Lauer, Michael (NIH/OD) [E] [REDACTED] (b) (6)  
Bettencourt, Alice (HHS/ASFR) [REDACTED] (b) (6) Bulls, Michelle G. (NIH/OD) [E] [REDACTED] (b) (6)  
**Subject:** RE: Subrecipients Under FAIN R01AI110964

Hi Alice,

Jodi and Mike have forwarded your question to me. I have my team researching this answer—I will get back to you before the end of the day.

Michelle

---

**From:** Black, Jodi (NIH/OD) [E] [REDACTED] (b) (6)  
**Sent:** Monday, April 20, 2020 10:28 PM  
**To:** Bulls, Michelle G. (NIH/OD) [E] [REDACTED] (b) (6)  
**Cc:** Tarwater, Robert (NIH/OD) [E] [REDACTED] (b) (6) Black, Jodi (NIH/OD) [E] [REDACTED] (b) (6) Lauer, Michael (NIH/OD) [E] [REDACTED] (b) (6)  
**Subject:** FW: Subrecipients Under FAIN R01AI110964

Hi Michelle, how do you suggest we proceed? See below

Best,  
Jodi

Jodi B. Black, PhD, MMSc  
Deputy Director  
Office of Extramural Research, NIH

---

**From:** Mike Lauer [REDACTED] (b) (6)  
**Date:** Monday, April 20, 2020 at 6:55 PM  
**To:** "Bettencourt, Alice (HHS/ASFR)" [REDACTED] (b) (6) Jodi OER [REDACTED] (b) (6)  
**Cc:** Mike Lauer [REDACTED] (b) (6)  
**Subject:** Re: Subrecipients Under FAIN R01AI110964

Thanks Alice – looping in Jodi – we'll look into it.

Best, Mike

---

**From:** "Bettencourt, Alice (HHS/ASFR)" [REDACTED] (b) (6)  
**Date:** Monday, April 20, 2020 at 5:04 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" [REDACTED] (b) (6)  
**Subject:** RE: Subrecipients Under FAIN R01AI110964

So the follow up question is likely to be: [REDACTED] (b) (5)

[REDACTED]

[REDACTED]



---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** Monday, April 20, 2020 4:57 PM  
**To:** Bettencourt, Alice (HHS/ASFR) (b) (6) Bulls, Michelle G. (NIH/OD) [E]  
(b) (6) Black, Jodi (NIH/OD) [E] (b) (6)  
**Cc:** Lauer, Michael (NIH/NHLBI) [E] (b) (6)  
**Subject:** Re: Subrecipients Under FAIN R01AI110964

Hi Alice – here's the info I have – from NIAID. Thanks, Mike

R01-AI-110964, Peter Daszak, PI to ECOHEALTH ALLIANCE

(b) (5)

---

**From:** "Bettencourt, Alice (HHS/ASFR)" (b) (6)  
**Date:** Monday, April 20, 2020 at 4:49 PM  
**To:** "Bulls, Michelle G. (NIH/OD) [E]" (b) (6) "Lauer, Michael (NIH/OD) [E]"  
(b) (6)  
**Subject:** Subrecipients Under FAIN R01AI110964

Mike, Michelle,

OMB has requested via Jen M. to know if there are subrecipients to Ecohealth Alliance under the subject FAIN. (b) (5)  
(b) (5) Could you please have the application checked and let me know. (b) (5)  
(b) (5)

Thank you,

Alice

---

**From:** Bettencourt, Alice (HHS/ASFR) [REDACTED] (b) (6)  
**Sent:** 4/21/2020 7:22:47 PM  
**To:** Bulls, Michelle G. (NIH/OD) [REDACTED] (b) (6); Black, Jodi (NIH/OD) [REDACTED] (b) (6)  
**CC:** Tarwater, Robert (NIH/OD) [REDACTED] (b) (6); Lauer, Michael (NIH/NHLBI) [REDACTED] (b) (6)  
Bulls, Michelle G. (NIH/OD) [REDACTED] (b) (6)  
**Subject:** RE: Subrecipients Under FAIN R01AI110964

Hi Michelle,

No worries. This was more of a heads up in case we get asked since nothing was listed in the reporting system. Thanks for following up!

Alice

---

**From:** Bulls, Michelle G. (NIH/OD) [REDACTED] (b) (6)  
**Sent:** Tuesday, April 21, 2020 8:44 AM  
**To:** Black, Jodi (NIH/OD) [REDACTED] (b) (6)  
**Cc:** Tarwater, Robert (NIH/OD) [REDACTED] (b) (6); Lauer, Michael (NIH/NHLBI) [REDACTED] (b) (6)  
Bettencourt, Alice (HHS/ASFR) [REDACTED] (b) (6); Bulls, Michelle G. (NIH/OD) [REDACTED] (b) (6)  
**Subject:** RE: Subrecipients Under FAIN R01AI110964

Hi Alice,

Jodi and Mike have forwarded your question to me. I have my team researching this answer—I will get back to you before the end of the day.

Michelle

---

**From:** Black, Jodi (NIH/OD) [REDACTED] (b) (6)  
**Sent:** Monday, April 20, 2020 10:28 PM  
**To:** Bulls, Michelle G. (NIH/OD) [REDACTED] (b) (6)  
**Cc:** Tarwater, Robert (NIH/OD) [REDACTED] (b) (6); Black, Jodi (NIH/OD) [REDACTED] (b) (6); Lauer, Michael (NIH/OD) [REDACTED] (b) (6)  
**Subject:** FW: Subrecipients Under FAIN R01AI110964

Hi Michelle, how do you suggest we proceed? See below

Best,  
Jodi

Jodi B. Black, PhD, MMSc  
Deputy Director  
Office of Extramural Research, NIH

---

**From:** Mike Lauer [REDACTED] (b) (6)  
**Date:** Monday, April 20, 2020 at 6:55 PM  
**To:** "Bettencourt, Alice (HHS/ASFR)" [REDACTED] (b) (6); Jodi OER [REDACTED] (b) (6)  
**Cc:** Mike Lauer [REDACTED] (b) (6)  
**Subject:** Re: Subrecipients Under FAIN R01AI110964

Thanks Alice – looping in Jodi – we'll look into it.



Best, Mike

---

**From:** "Bettencourt, Alice (HHS/ASFR)" [REDACTED] (b) (6)  
**Date:** Monday, April 20, 2020 at 5:04 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" [REDACTED] (b) (6)  
**Subject:** RE: Subrecipients Under FAIN R01AI110964

So the follow up question is likely to be: [REDACTED] (b) (5)

---

**From:** Lauer, Michael (NIH/OD) [E] [REDACTED] (b) (6)  
**Sent:** Monday, April 20, 2020 4:57 PM  
**To:** Bettencourt, Alice (HHS/ASFR) [REDACTED] (b) (6); Bulls, Michelle G. (NIH/OD) [E]  
[REDACTED] (b) (6); Black, Jodi (NIH/OD) [E] [REDACTED] (b) (6)  
**Cc:** Lauer, Michael (NIH/NHLBI) [E] [REDACTED] (b) (6)  
**Subject:** Re: Subrecipients Under FAIN R01AI110964

Hi Alice – here's the info I have – from NIAID. Thanks, Mike

R01-AI-110964, Peter Daszak, PI to ECOHEALTH ALLIANCE

[REDACTED] (b) (5)

---

**From:** "Bettencourt, Alice (HHS/ASFR)" [REDACTED] (b) (6)  
**Date:** Monday, April 20, 2020 at 4:49 PM  
**To:** "Bulls, Michelle G. (NIH/OD) [E]" [REDACTED] (b) (6); "Lauer, Michael (NIH/OD) [E]"  
[REDACTED] (b) (6)  
**Subject:** Subrecipients Under FAIN R01AI110964

Mike, Michelle,

OMB has requested via Jen M. to know if there are subrecipients to Ecohealth Alliance under the subject FAIN. (b)  
[REDACTED] Could you please have the application checked and let me know. (b)  
[REDACTED] (5)

Thank you,

Alice

---

**From:** Lauer, Michael (NIH/OD) [E] [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=90FE9CAE30C64CFBB67ABD568E882796-LAUERM]  
**Sent:** 5/1/2020 12:39:08 AM  
**To:** Brandy, Aesha (NIH/OD) [C] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=52aa9651b97d41e58aff688573e4752f-brandya]  
**CC:** Bundesen, Liza (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3cded900576a49aea461d26e93bddac3-lbundese]; Kosub, David (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3e3eccf57f4e4fcfaecaa7885f39bee5-kosubd]; Lauer, Michael (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=90fe9cae30c64cfbb67abd568e882796-lauerm]  
**Subject:** Re: NIH FOIA #54085 - Meredith Wadman of Science Magazine - Due by Friday May 8th  
**Attachments:** Wuhan FOIA.zip

Hi Aesha – see attached.

Thanks, Mike

---

**From:** "Brandy, Aesha (NIH/OD) [C]" (b) (6)  
**Date:** Thursday, April 30, 2020 at 8:27 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Cc:** "Bunden, Liza (NIH/OD) [E]" (b) (6) "Kosub, David (NIH/OD) [E]" (b) (6)  
**Subject:** RE: NIH FOIA #54085 - Meredith Wadman of Science Magazine - Due by Friday May 8th

Apologies Mike – Can you send me documents by next Friday, **May 8<sup>th</sup>**.

Best,  
**Aesha**

---

**From:** Brandy, Aesha (NIH/OD) [C]  
**Sent:** Thursday, April 30, 2020 8:26 PM  
**To:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Cc:** Bundesen, Liza (NIH/OD) [E] (b) (6) Kosub, David (NIH/OD) [E] (b) (6)  
**Subject:** NIH FOIA #54085 - Meredith Wadman of Science Magazine - Due by Friday April 8th

Hi Mike –

Please see the NIH FOIA request below from Science Magazine. Would you forward any responsive documents to me by COB Friday, May 8<sup>th</sup>, if possible. Let me know if you have any questions or feel this should be sent to another SME for input.

Thanks.

Best,  
**Aesha**

---

**From:** FOIA\_noreply@nih.gov <FOIA\_noreply@nih.gov>  
**Sent:** Tuesday, April 28, 2020 10:47 AM  
**To:** NIH FOIA <nihfoia@od.nih.gov>  
**Subject:** NIH FOIA - Assignment Notification from NIH FOIA Public Portal-Tracking # 54085

Hi FOIA Team!

Request # 54085 was submitted through the NIH FOIA Public Portal and assigned to you for review and further processing.

Please review the request and if all required details have not been provided by the requester, be sure to use the "Stop Clock" option to ensure processing time for the request is accurately monitored while waiting for clarification/information from the requester.

**Request Description:**

Dear NIH FOIA staff:

I'm a reporter with Science. I'm requesting on an expedited basis a response to the following FOIA. The expedition is requested because of the urgent and pressing public health threat posed by the novel coronavirus -- and the possibility that political considerations caused NIH to cut off a grant that was probing the bat-to-human transmission that very possibly launched the current pandemic. See the April 27 Politico article under the headline: "Trump cuts U.S. research on bat-human virus transmission over China ties; The National Institutes of Health on Friday told EcoHealth Alliance, the study's sponsor for the past five years, that all future funding was cut."

The NIH's possible stifling of foundational research germane to both this epidemic and the prevention of future pandemics a time when Americans are dying in their thousands is clearly a matter of urgent and pressing concern for public safety, thus my request for expedition.

I'm requesting, for the period October 1 2019 to today, April 28, 2020:

1. All correspondence (including emails, written memos or letters, memos of phone conversations, and texts) between senior NIH officials Francis Collins, Michael Lauer, Lawrence Tabak, Tony Fauci and anyone else at NIH they copied on such correspondence, or who initiated such correspondence, concerning the grant to EcoHealth Alliance, R01 AI110964, "Understanding the Risk of Bat Coronavirus Emergence."

2. All correspondence between the senior NIH officials listed in (1.) above and any officials in the Department of Health and Human Services concerning the grant to EcoHealth Alliance, R01 AI110964, "Understanding the Risk of Bat Coronavirus Emergence."

3. All correspondence between the senior NIH officials listed in (1.) above and any officials in the Department of State concerning the grant to EcoHealth Alliance, R01 AI110964, "Understanding the Risk of Bat Coronavirus Emergence."

4. All correspondence between the senior NIH officials listed in (1.) above and any officials at EcoHealth Alliance concerning the grant to EcoHealth Alliance, R01 AI110964, "Understanding the Risk of Bat Coronavirus Emergence."

5. All correspondence between the senior NIH officials listed in (1.) above and any White House employees concerning the grant to EcoHealth Alliance, R01 AI110964, "Understanding the Risk of Bat Coronavirus Emergence."

Thanks for considering this request.

Sincerely,

Meredith Wadman, BM, BCh

Reporter

Science Magazine

1200 New York Avenue N.W., #1144

Washington, D.C. 20005

Email: [mwadman@aaaas.org](mailto:mwadman@aaaas.org)

Cell: (b) (6)

(Date Range for Record Search: From 10/01/2019 To 04/28/2020)



---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** 4/15/2020 11:23:07 AM  
**To:** Tabak, Lawrence (NIH/OD) [E] (b) (6)  
**CC:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology  
**Attachments:** NoA R01AI110964-06.pdf; NoA R01AI110964-01.pdf; FACTS Snapshot for 2-R01-AI110964-06 DASZAK, PETER QVR.pdf

Hi Larry – on the Type 1 total is 749,976. On the Type 2, looks like the total is 76,301 (so far). Thus total is 749,976+76,301=826,277.

It's a subcontract going through New York.

Mike

---

**From:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Date:** Wednesday, April 15, 2020 at 7:12 AM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Mike – sorry – what is the total amount Wuhan has received since 2014?

Does the money go to NY and they send to Wuhan or do we send to Wuhan directly.

Thanks  
Larry

---

**From:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Date:** Wednesday, April 15, 2020 at 7:11 AM  
**To:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6) "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Cc:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6) "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Thanks – just sent you budget details.

Mike

---

**From:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Date:** Tuesday, April 14, 2020 at 10:12 PM  
**To:** "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Cc:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6) "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** Re: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Thanks Emily.

Looping in Mike Lauer,  
Larry

---

**From:** "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Date:** Tuesday, April 14, 2020 at 10:11 PM  
**To:** "Tabak, Lawrence (NIH/OD) [E]" (b) (6)  
**Cc:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6)  
**Subject:** Fwd: Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

I am forwarding draft response below to inquiry from Rubio et al earlier.

PI is Peter Dazsak, Eco Health alliance in NYC. Wuhan subcontract is approximately 74k per year. I will try to find more accurate subcontract numbers.

Sent from my iPad

Begin forwarded message:

**From:** "Abbey, Lillian (NIH/NIAID) [E]" (b) (6)  
**Date:** April 14, 2020 at 4:24:34 PM EDT  
**To:** "Cassetti, Cristina (NIH/NIAID) [E]" (b) (6) "Erbelding, Emily (NIH/NIAID) [E]" (b) (6)  
**Cc:** "Ford, Andrew (NIH/NIAID) [E]" (b) (6) "Bateman, Karen (NIH/NIAID) [E]" (b) (6) "Werner, Alyssa (NIH/NIAID) [E]" (b) (6) "Mulach, Barbara (NIH/NIAID) [E]" (b) (6)  
**Subject:** Draft response for review -- FW: Request for information: Senate Qs - Wuhan Institute of Virology

Dear Cristina and Emily,  
Incorporated below in red font is a draft response Andrew developed based on his discussion with Erik.

(b) (5)  
Also, Andrew provided the attached publication from mid-March, noting that we may want to share it with the OD.

**DRAFT RESPONSE:**

<b>Project Number:</b>	2R01AI110964-06	<b>Contact PI / Project Leader:</b>	DASZAK, PETER
<b>Title:</b>	UNDERSTANDING THE RISK OF BAT CORONAVIRUS EMERGENCE	<b>Awardee Organization:</b>	ECOHEALTH ALLIANCE, INC.

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=)

- 1) What are the goals of the main grant:

(b) (5)

(b) (5)

- 2) What are the specific activities supported by the sub to the Wuhan lab and the total costs associated with these activities. Please verify if the creation of recombinant bat in Wuhan is included in their research activities.

(b) (5)

Total award information is available in Reporter at link above but budget information about subcontracts is not publicly available as these awards are administered by the grantee institution.

---

**From:** Crawford, Chase (NIH/NIAID) [E] (b) (6)  
**Sent:** Monday, April 13, 2020 5:41 PM  
**To:** NIAID BUGS (b) (6)  
**Cc:** Auchincloss, Hugh (NIH/NIAID) [E] (b) (6) Harper, Jill (NIH/NIAID) [E]  
(b) (6) NIAID OCGR Leg (b) (6)  
**Subject:** Request for information: Senate Qs - Wuhan Institute of Virology

Hi BUGS,

Staff to Senator Marco Rubio (R-FL) has forwarded an email to Building 1 from the White Coat Waste Project (see bottom of email chain). The forwarded message links to recent articles in The Daily Mail and the Washington Examiner on NIH support for previous coronavirus studies involving the Wuhan Institute of Virology. Building 1 has asked if NIAID has any information related to this research that we can share with staff to Senators Rubio and Mike Braun (R-IN).

**To help us better understand this congressional request, is there any background information that you can provide on the activities discussed in the articles referenced below?**

Thanks,  
Chase

(b) (6)

---

**From:** LaMontagne, Karen (NIH/OD) [E] (b) (6)  
**Sent:** Monday, April 13, 2020 4:23 PM  
**To:** NIAID OCGR Leg (b) (6)  
**Subject:** Senate Qs - Wuhan Institute of Virology

Hi, NIAID,

Separately, we have heard from the offices of Senators Rubio and Braun about these linked articles:

[White Coat Waste](#)  
[Daily Mail](#)  
[Washington Examiner](#)

Both offices have asked if there's any information we can share with them related to this matter. Thanks in advance for anything you can provide.

Karen

---

**From:** Michelle Mitchell (b) (6)  
**Date:** Monday, April 13, 2020 at 3:42 PM  
**To:** Karen LaMontagne (b) (6)  
**Subject:** Sen. Rubio question - NIH funding Wuhan virus lab

Hey Karen,

Sen. Rubio's staff, Ansley Rhyne, forwarded the email below that she received regarding NIH funding for the Wuhan Institute of Virology. Her boss, along with Rep. Gaetz are working on a letter to ensure no taxpayer dollars are sent to that Institute.

Ansley requested our input. Would you ask NIAID for any information on this issue that we could be shared with Ansley?

Thank you.

MM

-----

**From:** Justin Goodman <[justin@whitecoatwaste.org](mailto:justin@whitecoatwaste.org)>  
**Sent:** Monday, April 13, 2020 2:36 PM  
**To:**  
**Subject:** Laura- NIH funding Wuhan virus lab

I hope you had a nice weekend and are staying safe and healthy. I wanted to make sure you saw that our taxpayer watchdog group just exposed that **the National Institutes of Health (NIH) has been sending tax dollars to the controversial Wuhan Institute of Virology for years, including for dangerous lab experiments on coronavirus-infected bats captured from caves.** The Daily Mail, Washington Examiner, Drudge and others ran stories about the troubling find over the weekend.

We're working with Rep. Matt Gaetz (R-FL) and others on a sign-on letter about this and would love to work with you and Senator Rubio as well to ensure no more tax dollars are shipped to the Wuhan Institute of Virology.

I'd be happy to send over more info if you're interested and answer any questions you may have.

Thanks for looking,

Justin

---

**Justin Goodman, M.A.**  
Vice President, Advocacy and Public Policy



White Coat Waste Project

*Taxpayers shouldn't be forced to pay \$20 billion+  
for **wasteful** government animal experiments.*

PO Box 26029

Washington, DC 20001

Phone: 860.882.2492

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---

**From:** Lauer, Michael (NIH/OD) [E] [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=90FE9CAE30C64CFBB67ABD568E882796-LAUERM]  
**Sent:** 3/9/2021 10:51:32 AM  
**To:** Redding, Tiffani C (HHS/ASFR) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b8b2eb2c740c4b49a38fe1b54918863e-TiffaniC.Re]; Bettencourt, Alice (HHS/ASFR) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a6333b72bfc04cd28b844e966e37f17b-alice.bette]  
**CC:** Lauer, Michael (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=90fe9cae30c64cfbb67abd568e882796-lauerml]  
**Subject:** Re: Wuhan Institute of Virology  
**Attachments:** Draft DHHS WIV response\_OGC GLD Rev msl OG and OA[2].docx; NIH Response to EcoHealth Response to Suspension\_10\_23\_20.pdf; Daszak 7 8 20.pdf

Hi Tiffani – I'm attaching the relevant correspondence. Bob Charrow / OGC had approved both of these before they went out.

Thanks, Mike

---

**From:** "Redding, Tiffani C (HHS/ASFR)" (b) (6)  
**Date:** Monday, March 8, 2021 at 9:03 PM  
**To:** "Bettencourt, Alice (HHS/ASFR)" (b) (6) "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** FW: Wuhan Institute of Virology

Hello,  
Passing along the recommendation from OGC.  
Tiffani

---

**From:** Santiago, Linda (HHS/OGC) (b) (6)  
**Sent:** Monday, March 8, 2021 9:31 AM  
**To:** Redding, Tiffani C (HHS/ASFR) (b) (6)  
**Subject:** RE: Wuhan Institute of Virology

Hi Tiffani: (b) (5) One suggestion might be as follows, if accurate:

(b) (5)

Thanks,

Linda Santiago  
Attorney-Advisor  
Procurement, Fiscal and Information Law Branch  
General Law Division | Office of the General Counsel  
U.S. Department of Health and Human Services  
Office: (b) (6) | Fax: (202) 205-3560  
E-mail: (b) (6)

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---

**From:** Redding, Tiffani C (HHS/ASFR) (b) (6)  
**Sent:** Friday, March 5, 2021 6:07 PM  
**To:** Santiago, Linda (HHS/OGC) (b) (6)  
**Subject:** RE: Wuhan Institute of Virology

Hello Linda,

I am following up with the attached track change response from the drafting team. Based on that comment I believe we are ready to move forward with the response as is but wanted to provide GLD with an opportunity to review the response from the drafting team before that statement is sent to ASPA for release.

Tiffani

---

**From:** Goulding, Michael (HHS/OGC) (b) (6)  
**Sent:** Friday, March 5, 2021 10:25 AM  
**To:** Redding, Tiffani C (HHS/ASFR) (b) (6)  
**Cc:** Dasher, David (HHS/ASFR) (b) (6); Barry, Daniel J (HHS/OGC) (b) (6); Omatete, Mogbeyi E. (HHS/OGC) (b) (6); Pierre, Jeffri (HHS/OGC) (b) (6); Jordan, Krystal (HHS/OGC) (b) (6); Santiago, Linda (HHS/OGC) (b) (6)  
**Subject:** RE: Wuhan Institute of Virology  
**Importance:** High

Hello Tiffany,

We have reviewed the attached and have included recommended edits, with explanatory comments for your consideration. Should you have any follow-up questions, please let us know and please feel free to contact Linda Santiago of my staff directly.

We hope this is helpful to you.

**Michael I. Goulding**

*Associate General Counsel*

General Law Division

Office of the General Counsel

U.S. Department of Health and Human Services

330 Independence Ave., S.W., Room 4760 - Cohen Bldg.

Washington, DC 20201

(b) (6) dd (202) 205-3560 fax

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---

**From:** Redding, Tiffani C (HHS/ASFR) (b) (6)  
**Sent:** Thursday, March 4, 2021 9:51 PM  
**To:** Barry, Daniel J (HHS/OGC) (b) (6)  
**Cc:** Dasher, David (HHS/ASFR) (b) (6); Goulding, Michael (HHS/OGC) (b) (6)  
**Subject:** RE: Wuhan Institute of Virology

Hi Dan,

Yes. We have worked directly with Mark Weber in ASPA to provide an initial response to the incoming message from the reporter.

Tiffani

---

**From:** Barry, Daniel J (HHS/OGC) (b) (6)

**Sent:** Thursday, March 4, 2021 9:48 PM

**To:** Redding, Tiffani C (HHS/ASFR) (b) (6)

**Cc:** Dasher, David (HHS/ASFR) (b) (6) Goulding, Michael (HHS/OGC) (b) (6)

**Subject:** Re: Wuhan Institute of Virology

Thanks, Tiffani - if you could work with Michael Goulding in GLD about this, I would appreciate it. Has ASPA already been looped in about this inquiry?

Thanks

Dan

Sent from my iPhone

On Mar 4, 2021, at 9:41 PM, Redding, Tiffani C (HHS/ASFR) (b) (6) wrote:

Hello Dan,

Attached to the message is the draft response developed by OA, OG, and NIH. Please let me know if you have another attorney you would like to have us vet this through.

Thank you,

Tiffani Redding

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**From:** Jerry Dunleavy <[jdunleavy@washingtonexaminer.com](mailto:jdunleavy@washingtonexaminer.com)>

**Sent:** Thursday, February 25, 2021 9:15 AM

**To:** Redding, Tiffani C (HHS/ASFR) (b) (6) Dasher, David (HHS/ASFR)

(b) (6)

**Subject:** Wuhan Institute of Virology

Dear Tiffani and David,

My name is Jerry Dunleavy, and I am a reporter with the Washington Examiner.

NIH tells me that it does not have the authority to debar institutions from receiving federal funds, and that it is HHS's Suspension and Debarment Official who can impose debarment and suspension on institutions and individual scientists. I have a number of questions and would greatly appreciate your assistance.

It is my understanding that to date the Wuhan Institute of Virology has not been debarred from



receiving federal funds (which I am aware can be distributed either directly through NIH grants or through subawards from an NIH grantee to another institution - like with EcoHealth Alliance receiving an NIH grant then giving a subaward to the Wuhan lab).

Why has HHS not banned the Wuhan lab from receiving any U.S. funds (whether direct funds or indirect funds)?

NIH blocked EcoHealth Alliance from sharing subawards with the Wuhan lab until a number of requirements are met - can HHS say why it has not simply banned the Wuhan lab entirely?

State Department cables from 2018 raised concerns about biosecurity at the Wuhan lab - can HHS say if it reviewed those cables and say why those worries did not result in the Wuhan lab being banned?

Has HHS seen the declassified State Department fact sheet on the Wuhan lab?

The State Department intelligence alleges that the Wuhan lab has worked with the Chinese military for years - does HHS have thoughts on that and can HHS say why that would not result in the Wuhan lab being banned (even indirect U.S. funds)?

The State Department intelligence also alleges that the Wuhan lab has conducted gain of function viral research - does HHS have thoughts on that and can HHS say why that would not result in the Wuhan lab being banned (even indirect U.S. funds)?

The Wuhan Institute of Virology has also been named by the WHO and by numerous U.S. officials - including former Secretary of State Mike Pompeo and former DNI John Ratcliffe - as a possible (and by some a likely) origin of the COVID-19 pandemic - did HHS take that into account and can HHS say why that would not result in the Wuhan lab being banned from receiving U.S. funds (even indirect U.S. funds)?

Many thanks!

JD

--

**Jerry Dunleavy**

**Washington Examiner**

[JDunleavy@WashingtonExaminer.com](mailto:JDunleavy@WashingtonExaminer.com)

**216-375-7101**

<Draft DHHS WIV response 3 3 21 (003).docx>







National Institutes of Health  
National Institute of Allergy  
and Infectious Diseases  
Bethesda, Maryland 20892

23 October 2020

Drs. Aleksei Chmura and Peter Daszak  
EcoHealth Alliance, Inc.  
460 W 34<sup>th</sup> St  
Suite 1701  
New York, NY 10001

Re: NIH Grant R01AI110964

Dear Drs. Chmura and Daszak:

I am following up on Mr. Krinsky's August 13, 2020, letter on behalf of EcoHealth Alliance, Inc. ("EcoHealth") responding to NIH's suspension of grant R01AI110964, which funds the project *Understanding the Risk of Bat Coronavirus Emergence* (the "Project"). Per my letter of July 8, 2020, NIH reinstated the grant but suspended all award activities because we have concerns that the Wuhan Institute of Virology (WIV), which previously served as a subrecipient of the Project, had not satisfied safety requirements that applied to its subawards with EcoHealth, and that EcoHealth had not satisfied its obligations to monitor the activities of its subrecipient to ensure compliance. EcoHealth objected to the suspension on the grounds that WIV has no *current* connection to the Project or EcoHealth's research, and EcoHealth had not issued any subawards in connection with the Grant *at the time of the suspension*.

The fact that EcoHealth does not currently have a subrecipient relationship with WIV and had not issued subawards to WIV at the time of suspension does not absolve EcoHealth of any past non-compliance with the terms and conditions of award for grant R01AI110964. While EcoHealth did not issue a subaward to WIV for year 6 of the grant, WIV served as a subrecipient for years 1 through 5. NIH awarded EcoHealth grant R01AI110964 in 2014, with a project period of June 1, 2014, through June 30, 2024, as renewed. In EcoHealth's grant application, EcoHealth listed Drs. Zheng Li Shi and Xing Yi Ge of WIV as co-investigators and senior/key personnel. It stated that "Drs. Shi, Zhang, and Daszak have collaborated together since 2002 and have been involved in running joint conferences, and shipping samples into and out of China." EcoHealth listed WIV as a Project/Performance Site Location. In describing WIV's facilities, EcoHealth described WIV as China's premier institute for virological research" and touted WIV's "fully equipped biosafety level 3 laboratory" and "a newly opened BLS-4 laboratory." In support of the application, Dr. Zheng Li Shi's personal statement indicated that "My lab will be responsible for diagnosis, genomics and isolation of coronavirus from wild and domestic animals in Southern China and for analyzing their receptor binding domains." The application stated that "Wuhan Institute of Virology and the Wuhan University Center for Animal Experiment BSL-3

lab have an Internal Biosafety Committee and are accredited BSL-2 and BSL 3 laboratories. All experimental work using infectious material will be conducted under appropriate biosafety standards. Disposal of hazardous materials will be conducted according to the institutional biosafety regulations.”

EcoHealth requested funding specifically for activities to be carried out by WIV. NIH awarded EcoHealth a total of \$749,976 for WIV’s work in the following annual amounts for years 1 through 5:

	-Yr 1	-Yr 2	-Yr 3	-Yr 4	-Yr 5
Total Direct Costs	\$123,699	\$128,718	\$147,335	\$147,335	\$147,335
F&A Costs @ 8%	\$9,896	\$10,297	\$11,787	\$11,787	\$11,787
TOTAL COSTS	\$133,595	\$139,015	\$159,122	\$159,122	\$159,122

As stated in the Notices of Award for each budget period of the grant, the awards were subject to terms and conditions, which include the NIH Grants Policy Statement (GPS) and applicable HHS grant regulations. As I indicated in my letter of July 8, 2020, as a term and condition of award EcoHealth was required to “monitor the activities of the subrecipient as necessary to ensure that the subaward is used for authorized purposes, in compliance with Federal statutes, regulations, and the terms and conditions of the subaward . . .” 45 C.F.R. § 75.352(d). See also, 45 C.F.R. § 75.342(a) (“The non-Federal entity is responsible for oversight of the operations of the Federal award supported activities.”). Moreover, EcoHealth was required to “Establish and maintain effective internal control over the Federal award that provides reasonable assurance that the non-Federal entity is managing the Federal award in compliance with Federal statutes, regulations, and the terms and conditions of the Federal award[.]” 45 C.F.R. § 75.303(a). The Notice of Award stated that as a term and condition of award, “Research funded under this grant must adhere to the [CDC/NIH Biosafety in Microbiological and Biomedical Laboratories (BMBL)].” Moreover, the NIH GPS provides that NIH grant recipients are expected to provide safe working conditions for their employees and foster work environments conducive to high-quality research. NIH GPS, Section 4. The terms and conditions of the grant award flow down to subawards to subrecipients, so these terms applied to WIV. 45 C.F.R. § 75.101.

As I stated, NIH has concerns of non-compliance with terms and conditions of award—namely, that WIV had not satisfied safety requirements under the award and that EcoHealth Alliance had not satisfied its obligations to monitor the activities of its subrecipient to ensure compliance. Accordingly, NIH suspended all activities related to R01AI110964, pursuant to 45 C.F.R. § 75.371, Remedies for Noncompliance, which permits suspension of award activities in cases of non-compliance, and the NIH GPS, Section 8.5.2, which permits NIH to take immediate action to suspend a grant when necessary to protect the public health and welfare.

In my letter of July 8, 2020, I provided EcoHealth with the opportunity to object and to provide information and documentation challenging the suspension. Specifically, I sought information and materials that speak to WIV’s lab safety and EcoHealth’s oversight of its subrecipient, and an inspection of WIV’s laboratory records and facilities. I indicated that as a specific condition of award, during the period of suspension, EcoHealth Alliance may not allow research under this

project to be conducted and that no funds from grant R01AI110964 may be provided to or expended by EcoHealth Alliance or any subrecipients.

EcoHealth objected to the requests on the grounds that “NIAID is not authorized under 45 CFR §§ 75.371, 75.205, and 75.207, entitled *Specific Award Conditions*, to impose, *inter alia*, conditions that consist of demands for information regarding entities that are neither subrecipients of grant funds nor project affiliates.”

These provisions are irrelevant to NIH’s requests. NIH is required to permit the opportunity for recipients to object and provide information and documentation challenging a suspension, 45 C.F.R. § 75.374, so we specifically gave EcoHealth the opportunity to provide information that speaks to NIH’s concerns. Moreover, as a granting agency, NIH is required to “manage and administer the Federal award in a manner so as to ensure that Federal funding is expended and associated programs are implemented in full accordance with U.S. statutory and public policy requirements: Including, but not limited to, those protecting public welfare [and] the environment[.]” 45 C.F.R. § 75.300(a). In addition to seeking information that speaks to compliance with terms and conditions of award, NIH is entitled to “make site visits as warranted by program needs.” 45 C.F.R. § 75.342. As a term and condition of award, NIH “must have the right of access to any documents, papers, or other records of the non-Federal entity which are pertinent to the Federal award, in order to make audits, examinations, excerpts, and transcripts” (45 C.F.R. § 75.364); and must have “timely and reasonable access to the non-Federal entity’s personnel for the purpose of interview and discussion related to such documents” (*id.*). These requirements flow down to subawards to subrecipients. 45 C.F.R. § 75.101. “Non-Federal entities must comply with requirements in [45 C.F.R. Part 75] regardless of whether the non-Federal entity is a recipient or subrecipient of a Federal award.” 45 C.F.R. 75.101. As the grantee, EcoHealth was required to have in place, “A requirement that the subrecipient permit the pass-through entity and auditors to have access to the subrecipient’s records and financial statements as necessary for the pass-through entity to meet the requirements of this part.” 45 C.F.R. § 75.352(a)(5). For each of these reasons, NIH is justified in seeking the materials, information, and a site visit specified in my letter of July 8, 2020.

In addition to objecting to NIH’s authority to seek the materials, information, and a site visit, EcoHealth has responded that it lacks knowledge or information regarding the requests; that it is not in possession, custody, or control of the specified items; and that it has no authority to grant NIAID and the U.S. National Academy of Sciences access to WIV’s facility to conduct an inspection. EcoHealth’s responses have not satisfied NIH’s concerns that EcoHealth had failed to adequately monitor the compliance of its subrecipient, and that the subrecipient, WIV, had failed to comply with safety requirements.

Notwithstanding this, NIH is providing an additional opportunity for EcoHealth to provide information and documentation challenging these concerns of non-compliance. Accordingly, in addition to reiterating our prior requests (1) through (6) per our letter of July 8, 2020, NIH requests the following information and materials, which must be complete and accurate:



1. Provide copies of all EcoHealth Alliance – WIV subrecipient agreements as well as any other documents and information describing how EcoHealth Alliance monitored WIV's compliance with the terms and conditions of award, including with respect to biosafety.
2. Describe EcoHealth's efforts to evaluate WIV's risk of noncompliance with Federal statutes, regulations, and the terms and conditions of the subaward.
3. Provide copies of all WIV biosafety reports from June 1, 2014 through May 31, 2019.

During the ongoing period of suspension, NIH will continue to review the activities under this award, taking into consideration information provided by EcoHealth Alliance, to further assess whether EcoHealth Alliance and WIV complied with the terms and conditions of award, including compliance with other terms and conditions of award that may be implicated. We remind you that during the period of suspension, EcoHealth Alliance may not allow research under this project to be conducted. Further, no funds from grant R01AI110964 may be provided to or expended by EcoHealth Alliance or any subrecipients; all such charges are unallowable. It is EcoHealth Alliance's responsibility as the recipient of this grant award to ensure that the terms of this suspension are communicated to and understood by all subrecipients. EcoHealth Alliance must provide adequate oversight to ensure compliance with the terms of the suspension. Any noncompliance of the terms of this suspension must be immediately reported to NIH. EcoHealth Alliance will receive a revised Notice of Award from NIAID indicating the continued suspension of these research activities and funding restrictions as a specific condition of award.

Please note that this action does not preclude NIH from taking additional corrective or enforcement actions pursuant to 45 C.F.R. Part 75, including, but not limited to, terminating the grant award or disallowing costs. NIH may also take other remedies that may be legally available if NIH discovers other violations of terms and conditions of award on the part of EcoHealth Alliance or WIV.

Sincerely,

Michael S. Lauer -S Digitally signed by Michael S. Lauer-S  
Date: 2020.10.23 13:34:25 -04'00'

Michael S Lauer, MD  
NIH Deputy Director for Extramural Research  
Email: (b) (6)

cc: Dr. Erik Stemmy (NIAID)  
Ms. Emily Linde (NIAID)



National Institutes of Health  
National Institute of Allergy  
and Infectious Diseases  
Bethesda, Maryland 20892

8 July 2020

Drs. Aleksei Chmura and Peter Daszak  
EcoHealth Alliance, Inc.  
460 W 34<sup>th</sup> St  
Suite 1701  
New York, NY 10001

Re: NIH Grant R01AI110964

Dear Drs. Chmura and Daszak:

In follow-up to my previous letter of April 24, 2020, I am writing to notify you that the National Institute of Allergy and Infectious Diseases (NIAID), an Institute within the National Institutes of Health (NIH), under the Department of Health and Human Services (HHS), has withdrawn its termination of grant R01AI110964, which supports the project *Understanding the Risk of Bat Coronavirus Emergence*. Accordingly, the grant is reinstated.

However, as you are aware, the NIH has received reports that the Wuhan Institute of Virology (WIV), a subrecipient of EcoHealth Alliance under R01AI110964, has been conducting research at its facilities in China that pose serious bio-safety concerns and, as a result, create health and welfare threats to the public in China and other countries, including the United States. Grant award R01AI110964 is subject to biosafety requirements set forth in the NIH Grants Policy Statement (e.g., NIH GPS, Section 4.1.24 "Public Health Security") and the Notice of Award (e.g., requiring that "Research funded under this grant must adhere to the [CDC/NIH Biosafety in Microbiological and Biomedical Laboratories (BMBL)]."). Moreover, NIH grant recipients are expected to provide safe working conditions for their employees and foster work environments conducive to high-quality research. NIH GPS, Section 4. The terms and conditions of the grant award flow down to subawards to subrecipients. 45 C.F.R. § 75.101.

As the grantee, EcoHealth Alliance was required to "monitor the activities of the subrecipient as necessary to ensure that the subaward is used for authorized purposes, in compliance with Federal statutes, regulations, and the terms and conditions of the subaward . . ." 45 C.F.R. § 75.352(d). We have concerns that WIV has not satisfied safety requirements under the award, and that EcoHealth Alliance has not satisfied its obligations to monitor the activities of its subrecipient to ensure compliance.

Moreover, as we have informed you through prior Notices of Award, this award is subject to the Transparency Act subaward and executive compensation reporting requirement of 2 C.F.R. Part



170. To date you have not reported any subawards in the Federal Subaward Reporting System.

Therefore, effective the date of this letter, July 8, 2020, NIH is suspending all activities related to R01AI110964, until such time as these concerns have been addressed to NIH's satisfaction. This suspension is taken in accordance with 45 C.F.R. § 75.371, Remedies for Noncompliance, which permits suspension of award activities in cases of non-compliance, and the NIH GPS, Section 8.5.2, which permits NIH to take immediate action to suspend a grant when necessary to protect the public health and welfare. This action is not appealable in accordance with 42 C.F.R. § 50.404 and the NIH GPS Section 8.7, Grant Appeals Procedures. However, EcoHealth Alliance has the opportunity to provide information and documentation demonstrating that WIV and EcoHealth Alliance have satisfied the above-mentioned requirements.

Specifically, to address the NIH's concerns, EcoHealth must provide the NIH with the following information and materials, which must be complete and accurate:

1. Provide an aliquot of the actual SARS-CoV-2 virus that WIV used to determine the viral sequence.
2. Explain the apparent disappearance of Huang Yanling, a scientist / technician who worked in the WIV lab but whose lab web presence has been deleted.
3. Provide the NIH with WIV's responses to the 2018 U.S. Department of State cables regarding safety concerns.
4. Disclose and explain out-of-ordinary restrictions on laboratory facilities, as suggested, for example, by diminished cell-phone traffic in October 2019, and the evidence that there may have been roadblocks surrounding the facility from October 14-19, 2019.
5. Explain why WIV failed to note that the RaTG13 virus, the bat-derived coronavirus in its collection with the greatest similarity to SARS-CoV-2, was actually isolated from an abandoned mine where three men died in 2012 with an illness remarkably similar to COVID-19, and explain why this was not followed up.
6. Additionally, EcoHealth Alliance must arrange for WIV to submit to an outside inspection team charged to review the lab facilities and lab records, with specific attention to addressing the question of whether WIV staff had SARS-CoV-2 in their possession prior to December 2019. The inspection team should be granted full access to review the processes and safety of procedures of all of the WIV field work (including but not limited to collection of animals and biospecimens in caves, abandoned man-made underground cavities, or outdoor sites). The inspection team could be organized by NIAID, or, if preferred, by the U.S. National Academy of Sciences.
7. Lastly, EcoHealth Alliance must ensure that all of its subawards are fully reported in the Federal Subaward Reporting System

During this period of suspension, NIH will continue to review the activities under this award, taking into consideration information provided by EcoHealth Alliance, to further assess compliance by EcoHealth Alliance and WIV, including compliance with other terms and conditions of award that may be implicated. Additionally, during the period of suspension, EcoHealth Alliance may not allow research under this project to be conducted. Further, no funds from grant R01AI110964 may be provided to or expended by EcoHealth Alliance or any subrecipients; all such charges are unallowable. It is EcoHealth Alliance's responsibility as the

recipient of this grant award to ensure that the terms of this suspension are communicated to and understood by all subrecipients. EcoHealth Alliance must provide adequate oversight to ensure compliance with the terms of the suspension. Any noncompliance of the terms of this suspension must be immediately reported to NIH. Once the original award is reinstated, NIH will take additional steps to restrict all funding in the HHS Payment Management System in the amount of \$369,819. EcoHealth Alliance will receive a revised Notice of Award from NIAID indicating the suspension of these research activities and funding restrictions as a specific condition of award.

Please note that this action does not preclude NIH from taking additional corrective or enforcement actions pursuant to 45 CFR Part 75, including, but not limited to, terminating the grant award. NIH may also take other remedies that may be legally available if NIH discovers other violations of terms and conditions of award on the part of EcoHealth Alliance or WIV.

Sincerely,

Michael S. Lauer -S

Digitally signed by Michael S.  
Lauer -S  
Date: 2020.07.08 21:43:41 -04'00'

Michael S Lauer, MD  
NIH Deputy Director for Extramural Research  
Email: (b) (6)

cc: Dr. Erik Stemmy  
Ms. Emily Linde

**From:** McManus, Ayanna (NIH/OD) [E] [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=BCF06DE08BA845249B9B36AD216E237E-AMCMANUS]  
**Sent:** 2/1/2021 3:15:55 PM  
**To:** Collins, Francis (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=410e1ca313f44ced9938e50d2ff0b6c2-collinsf]; Tabak, Lawrence (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=02e22836b5ff4e9988e3770cfc7ee770-tabakl]; Wolinetz, Carrie (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1c655040d47346c7b04d7bc11a403ecb-wolinetzcd]; Lauer, Michael (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=90fe9cae30c64cfbb67abd568e882796-lauer] ]

**Subject:** ECCO Health Discussion

**Attachments:** NIH Response to EcoHealth Response to Suspension\_10\_23\_20.pdf; Daszak 7 8 20.pdf; Did the Coronavirus Escape From a Lab.pdf; The World Needs a Real Investigation Into the Origins of Covid-19 - WSJ.pdf; 29246.full-2.pdf

**Location:** Zoom

The first two attachments are the same as pages 122 and 126

**Start:** 2/5/2021 6:15:00 PM

**End:** 2/5/2021 6:45:00 PM

**Show Time As:** Tentative

**Required Attendees:** Collins, Francis (NIH/OD) [E]; Tabak, Lawrence (NIH/OD) [E]; Wolinetz, Carrie (NIH/OD) [E]; Lauer, Michael (NIH/OD) [E]

Francis Collins is inviting you to a scheduled ZoomGov meeting.

Join ZoomGov Meeting  
[https://nih.zoomgov.com/j/\(\(b\) \(6\)\)](https://nih.zoomgov.com/j/((b) (6)))pwd=T2EWSTnpQmXTWENGY1FRVG5YT2o3dz09

Meeting ID: ((b) (6))  
Passcode: ((b) (6))  
One tap mobile  
+16692545252, ((b) (6)) US (San Jose)  
+16468287666, ((b) (6)) US (New York)

Dial by your location  
+1 669 254 5252 US (San Jose)  
+1 646 828 7666 US (New York)  
+1 551 285 1373 US  
+1 669 216 1590 US (San Jose)

Meeting ID: 160 371 9784

Passcode: 435146

Find your local number: <https://nih.zoomgov.com/u/adrutQHjXA>

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((b) (6))

Join by H.323  
161.199.138.10 (US West)  
161.199.136.10 (US East)  
Meeting ID: ((b) (6))  
Passcode: ((b) (6))

# The Lab-Leak Hypothesis

Nicholson Baker Jan. 4, 2021

**For decades, scientists have been hot-wiring viruses in hopes of preventing a pandemic, not causing one. But what if ...?**

*By*



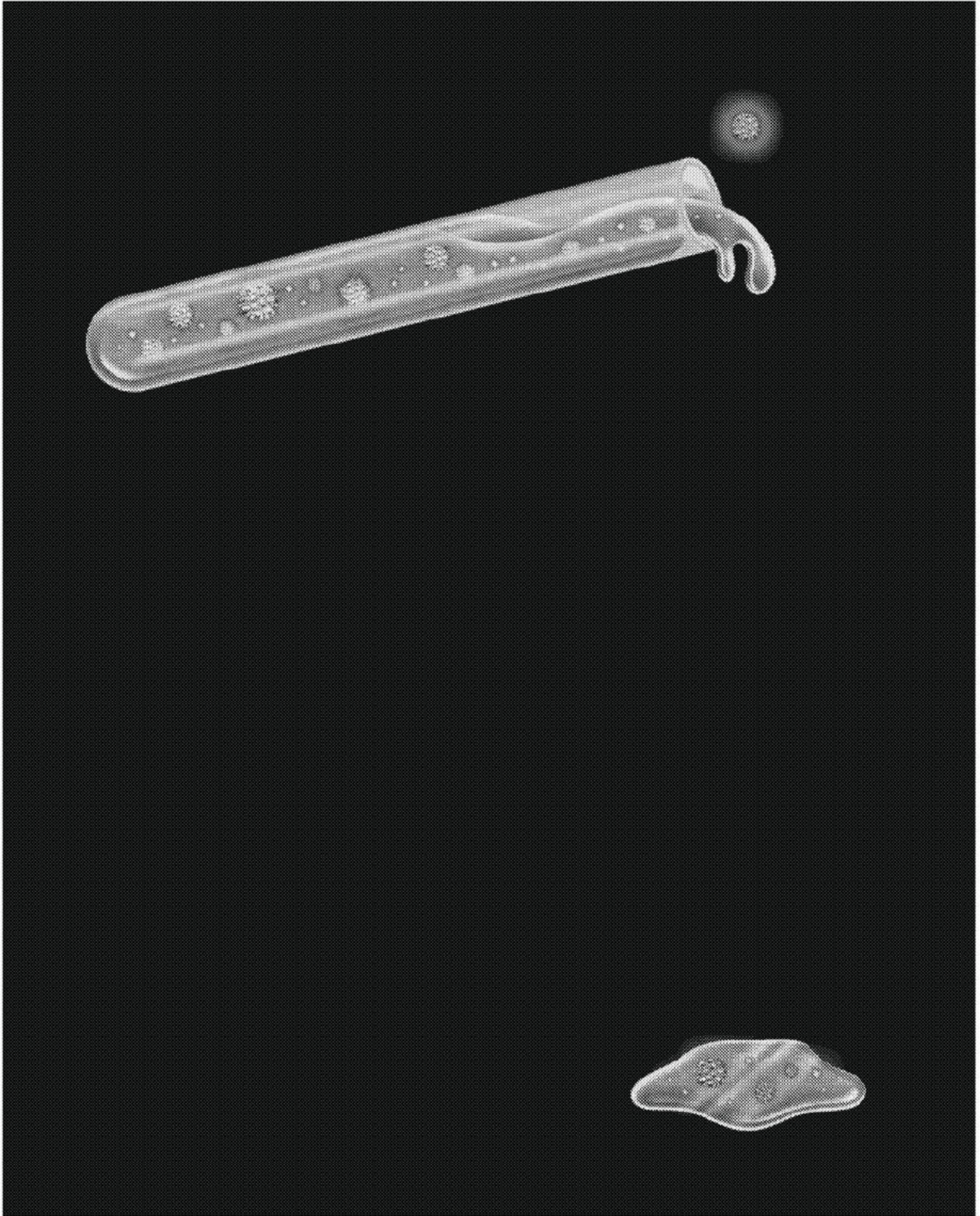


Illustration: Illustration by Robert Beatty for New York Magazine

*This article was featured in One Great Story, New York's reading recommendation newsletter. Sign up here to get it nightly.*



I.

## Flask Monsters

**What happened was** fairly simple, I've come to believe. It was an accident. A virus spent some time in a laboratory, and eventually it got out. SARS-CoV-2, the virus that causes COVID-19, began its existence inside a bat, then it learned how to infect people in a claustrophobic mine shaft, and then it was made more infectious in one or more laboratories, perhaps as part of a scientist's well-intentioned but risky effort to create a broad-spectrum vaccine. SARS-2 was not designed as a biological weapon. But it was, I think, designed. Many thoughtful people dismiss this notion, and they may be right. They sincerely believe that the coronavirus arose naturally, "zoonotically," from animals, without having been previously studied, or hybridized, or sluiced through cell cultures, or otherwise worked on by trained professionals. They hold that a bat, carrying a coronavirus, infected some other creature, perhaps a pangolin, and that the pangolin may have already been sick with a different coronavirus disease, and out of the conjunction and commingling of those two diseases within the pangolin, a new disease, highly infectious to humans, evolved. Or they hypothesize that two coronaviruses recombined in a bat, and this new virus spread to other bats, and then the bats infected a person directly — in a rural setting, perhaps — and that this person caused a simmering undetected outbreak of respiratory disease, which over a period of months or years evolved to become virulent and highly transmissible but was not noticed until it appeared in Wuhan.

There is no direct evidence for these zoonotic possibilities, just as there is no direct evidence for an experimental mishap — no written confession, no incriminating notebook, no official accident report. Certainty craves detail, and detail requires an investigation. It has been a full year, 80 million people

have been infected, and, surprisingly, no public investigation has taken place. We still know very little about the origins of this disease.

Nevertheless, I think it's worth offering some historical context for our yearlong medical nightmare. We need to hear from the people who for years have contended that certain types of virus experimentation might lead to a disastrous pandemic like this one. And we need to stop hunting for new exotic diseases in the wild, shipping them back to laboratories, and hot-wiring their genomes to prove how dangerous to human life they might become.

Over the past few decades, scientists have developed ingenious methods of evolutionary acceleration and recombination, and they've learned how to trick viruses, coronaviruses in particular, those spiky hairballs of protein we now know so well, into moving quickly from one species of animal to another or from one type of cell culture to another. They've made machines that mix and mingle the viral code for bat diseases with the code for human diseases — diseases like SARS, severe acute respiratory syndrome, for example, which arose in China in 2003, and MERS, Middle East respiratory syndrome, which broke out a decade later and has to do with bats and camels. Some of the experiments — “gain of function” experiments — aimed to create new, more virulent, or more infectious strains of diseases in an effort to predict and therefore defend against threats that might conceivably arise in nature. The term *gain of function* is itself a euphemism; the Obama White House more accurately described this work as “experiments that may be reasonably anticipated to confer attributes to influenza, MERS, or SARS viruses such that the virus would have enhanced pathogenicity and/or transmissibility in mammals via the respiratory route.” The virologists who carried out these experiments have accomplished amazing feats of genetic transmutation, no question, and there have been very few publicized accidents over the years. But there have been some.



And we were warned, repeatedly. The intentional creation of new microbes that combine virulence with heightened transmissibility “poses extraordinary risks to the public,” wrote infectious-disease experts Marc Lipsitch and Thomas Inglesby in 2014. “A rigorous and transparent risk-assessment process for this work has not yet been established.” That’s still true today. In 2012, in *Bulletin of the Atomic Scientists*, Lynn Klotz warned that there was an 80 percent chance, given how many laboratories were then handling virulent viro-varietals, that a leak of a potential pandemic pathogen would occur sometime in the next 12 years.

A lab accident — a dropped flask, a needle prick, a mouse bite, an illegibly labeled bottle — is apolitical. Proposing that something unfortunate happened during a scientific experiment in Wuhan — where COVID-19 was first diagnosed and where there are three high-security virology labs, one of which held in its freezers the most comprehensive inventory of sampled bat viruses in the world — isn’t a conspiracy theory. It’s just a theory. It merits attention, I believe, alongside other reasoned attempts to explain the source of our current catastrophe.

II.

## **“A Reasonable Chance”**





Seeking Ebola strains in Sierra Leone's wild-animal population for USAID's Predict project in 2018.  
Photo: Simon Townsley

From early 2020, the world was brooding over the origins of COVID-19. People were reading research papers, talking about what kinds of live animals were or were not sold at the Wuhan seafood market — wondering where the new virus had come from.

Meanwhile, things got strange all over the world. The Chinese government shut down transportation and built hospitals at high speed. There were video clips of people who'd suddenly dropped unconscious in the street. A doctor on YouTube told us how we were supposed to scrub down our produce when we got back from the supermarket. A scientist named Shi Zhengli of the Wuhan Institute of Virology published [a paper](#) saying that the novel coronavirus was 96 percent identical to a bat virus, RaTG13, found in



Yunnan province in southern China. On March 13, I wrote in my journal that there seemed to be something oddly artificial about the disease: "It's too airborne — too catching — it's something that has been selected for infectivity. That's what I suspect. No way to know so no reason to waste time thinking about it."

This was just a note to self — at the time, I hadn't interviewed scientists about SARS-2 or read their research papers. But I did know something about pathogens and laboratory accidents; I published a book last year, *Baseless*, that talks about some of them. The book is named after a Pentagon program, Project Baseless, whose goal, as of 1951, was to achieve "an Air Force-wide combat capability in biological and chemical warfare at the earliest possible date."

A vast treasure was spent by the U.S. on the amplification and aerial delivery of diseases — some well known, others obscure and stealthy. America's biological-weapons program in the '50s had A1-priority status, as high as nuclear weapons. In preparation for a total war with a numerically superior communist foe, scientists bred germs to be resistant to antibiotics and other drug therapies, and they infected lab animals with them, using a technique called "serial passaging," in order to make the germs more virulent and more catching.

And along the way, there were laboratory accidents. By 1960, hundreds of American scientists and technicians had been hospitalized, victims of the diseases they were trying to weaponize. Charles Armstrong, of the National Institutes of Health, one of the consulting founders of the American germ-warfare program, investigated Q fever three times, and all three times, scientists and staffers got sick. In the anthrax pilot plant at Camp Detrick, Maryland, in 1951, a microbiologist, attempting to perfect the "foaming process" of high-volume production, developed a fever and died. In 1964,



veterinary worker Albert Nickel fell ill after being bitten by a lab animal. His wife wasn't told that he had Machupo virus, or Bolivian hemorrhagic fever. "I watched him die through a little window to his quarantine room at the Detrick infirmary," she said.

In 1977, a worldwide epidemic of influenza A began in Russia and China; it was eventually traced to a sample of an American strain of flu preserved in a laboratory freezer since 1950. In 1978, a hybrid strain of smallpox killed a medical photographer at a lab in Birmingham, England; in 2007, live foot-and-mouth disease leaked from a faulty drainpipe at the Institute for Animal Health in Surrey. In the U.S., "more than 1,100 laboratory incidents involving bacteria, viruses and toxins that pose significant or bioterror risks to people and agriculture were reported to federal regulators during 2008 through 2012," reported *USA Today* in an exposé published in 2014.

In 2015, the Department of Defense discovered that workers at a germ-warfare testing center in Utah had mistakenly sent close to 200 shipments of live anthrax to laboratories throughout the United States and also to Australia, Germany, Japan, South Korea, and several other countries over the past 12 years. In 2019, laboratories at Fort Detrick — where "defensive" research involves the creation of potential pathogens to defend against — were shut down for several months by the Centers for Disease Control and Prevention for "breaches of containment." They reopened in December 2019.

High-containment laboratories have a whispered history of near misses. Scientists are people, and people have clumsy moments and poke themselves and get bitten by the enraged animals they are trying to nasally inoculate. Machines can create invisible aerosols, and cell solutions can become contaminated. Waste systems don't always work properly. Things can go wrong in a hundred different ways.



Hold that human fallibility in your mind. And then consider the cautious words of Alina Chan, a scientist who works at the Broad Institute of MIT and Harvard. "There is a reasonable chance that what we are dealing with is the result of a lab accident," Chan told me in July of last year. There was also, she added, a reasonable chance that the disease had evolved naturally — both were scientific possibilities. "I don't know if we will ever find a smoking gun, especially if it was a lab accident. The stakes are so high now. It would be terrifying to be blamed for millions of cases of COVID-19 and possibly up to a million deaths by year end, if the pandemic continues to grow out of control. The Chinese government has also restricted their own scholars and scientists from looking into the origins of SARS-CoV-2. At this rate, the origin of SARS-CoV-2 may just be buried by the passage of time."

I asked Jonathan A. King, a molecular biologist and biosafety advocate from MIT, whether he'd thought *lab accident* when he first heard about the epidemic. "Absolutely, absolutely," King answered. Other scientists he knew were concerned as well. But scientists, he said, in general were cautious about speaking out. There were "very intense, very subtle pressures" on them not to push on issues of laboratory biohazards. Collecting lots of bat viruses, and passaging those viruses repeatedly through cell cultures, and making bat-human viral hybrids, King believes, "generates new threats and desperately needs to be reined in."

"All possibilities should be on the table, including a lab leak," a scientist from the NIH, Philip Murphy — chief of the Laboratory of Molecular Immunology — wrote me recently. Nikolai Petrovsky, a professor of endocrinology at Flinders University College of Medicine in Adelaide, Australia, said in an email, "There are indeed many unexplained features of this virus that are hard if not impossible to explain based on a completely natural origin." Richard Ebright, a molecular biologist at Rutgers University, wrote that he'd been concerned for some years about the Wuhan laboratory and about the

work being done there to create “chimeric” (i.e., hybrid) SARS-related bat coronaviruses “with enhanced human infectivity.” Ebright said, “In this context, the news of a novel coronavirus in Wuhan \*\*\*screamed\*\*\* lab release.”

III.

## “No Credible Evidence”

**The new disease**, as soon as it appeared, was intercepted — stolen and politicized by people with ulterior motives. The basic and extremely interesting scientific question of what happened was sucked up into an ideological sharknado.

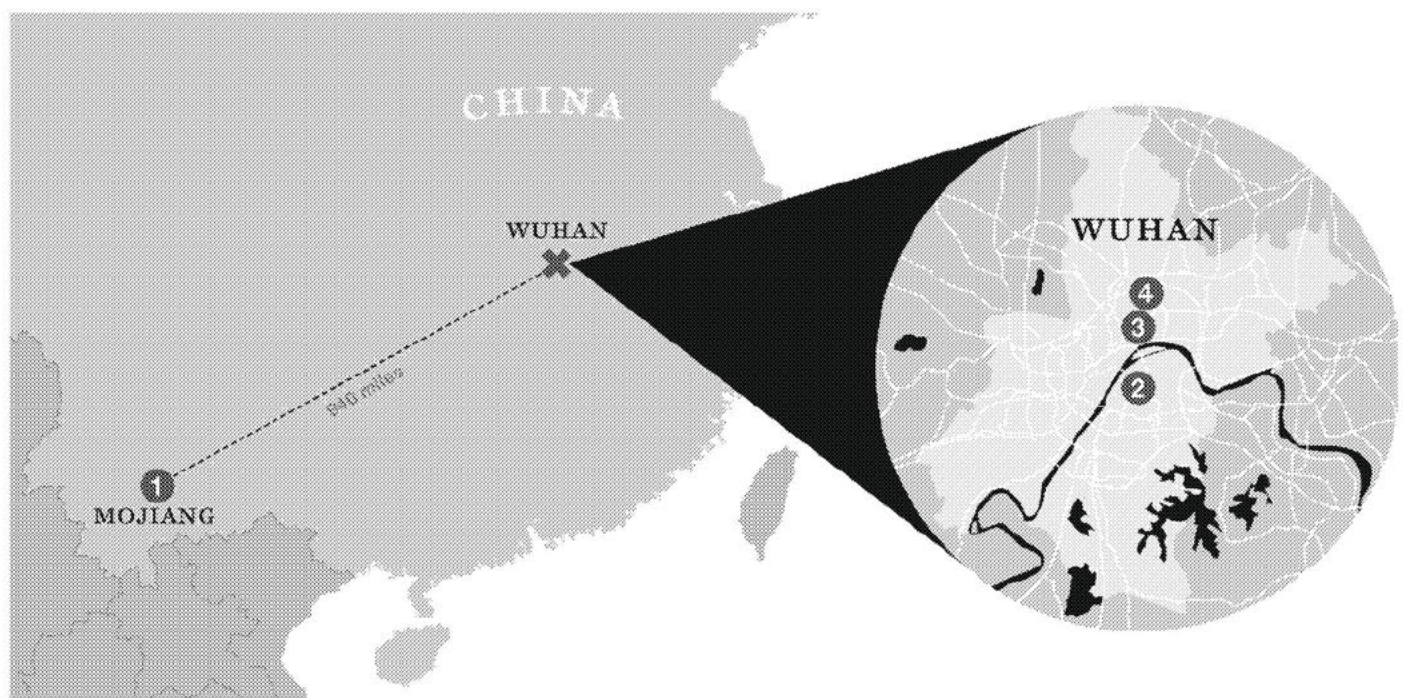
Some Americans boycotted Chinese restaurants; others bullied and harassed Asian Americans. Steve Bannon, broadcasting from his living room, in a YouTube series called *War Room*, said that the Chinese Communist Party had made a biological weapon and intentionally released it. He called it the “CCP virus.” And his billionaire friend and backer, Miles Guo, a devoted Trump supporter, told a right-wing website that the communists’ goal was to “use the virus to infect selective people in Hong Kong, so that the Chinese Communist Party could use it as an excuse to impose martial law there and ultimately crush the Hong Kong pro-democracy movement. But it backfired terribly.”

In *The Lancet*, in February, a powerful counterstatement appeared, signed by 27 scientists. “We stand together to strongly condemn conspiracy theories suggesting that COVID-19 does not have a natural origin,” the statement said. “Scientists from multiple countries have published and analyzed genomes of the causative agent, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), and they overwhelmingly conclude



that this coronavirus originated in wildlife, as have so many other emerging pathogens."

The behind-the-scenes organizer of this *Lancet* statement, Peter Daszak, is a zoologist and bat-virus sample collector and the head of a New York nonprofit called [EcoHealth Alliance](#) — a group that (as veteran science journalist Fred Guterl explained later in *Newsweek*) has channeled money from the National Institutes of Health to Shi Zhengli's laboratory in Wuhan, allowing the lab to carry on recombinant research into diseases of bats and humans. "We have a choice whether to stand up and support colleagues who are being attacked and threatened daily by conspiracy theorists or to just turn a blind eye," Daszak said in February in *Science* magazine.



**How Did It Get Out?** 1. **The Tongguan Mine Shaft** in Mojiang, Yunnan, where, in 2013, fragments of RaTG13, the closest known relative of SARS-CoV-2, were recovered and transported to the Wuhan Institute of Virology; 2. **The Wuhan Institute of Virology**, where Shi Zhengli's team brought the RaTG13 sample, sequenced its genome, then took it out of the freezer several times in recent years; 3. **The Wuhan Center for Disease Control and Prevention**, which first reported signs of the novel coronavirus in hospital patients; 4. **The Huanan Seafood Wholesale Market**, an early suspected origin of the pandemic, where the first major outbreak occurred. Illustration: Map by Jason Lee



Vincent Racaniello, a professor at Columbia and a co-host of a podcast called *This Week in Virology*, said on February 9 that the idea of an accident in Wuhan was “complete bunk.” The coronavirus was 96 percent similar to a bat virus found in 2013, Racaniello said. “It’s not a man-made virus. It wasn’t released from a lab.”

Racaniello’s dismissal was seconded by a group of scientists from Ohio State, the University of Pennsylvania, and the University of North Carolina, who put out a paper in *Emerging Microbes and Infections* to quiet the “speculations, rumors, and conspiracy theories that SARS-CoV-2 is of laboratory origin.” There was “currently no credible evidence” that SARS-2 leaked from a lab, these scientists said, using a somewhat different argument from Racaniello’s. “Some people have alleged that the human SARS-CoV-2 was leaked directly from a laboratory in Wuhan where a bat CoV (RaTG13) was recently reported,” they said. But RaTG13 could not be the source because it differed from the human SARS-2 virus by more than a thousand nucleotides. One of the paper’s authors, Susan Weiss, told the Raleigh *News & Observer*, “The conspiracy theory is ridiculous.”

The most influential natural-origin paper, “The Proximal Origin of SARS-CoV-2,” by a group of biologists that included Kristian Andersen of Scripps Research, appeared online in a preliminary version in mid-February. “We do not believe any type of laboratory-based scenario is plausible,” the scientists said. Why? Because molecular-modeling software predicted that if you wanted to optimize an existing bat virus so that it would replicate well in human cells, you would arrange things a different way than how the SARS-2 virus actually does it — even though the SARS-2 virus does an extraordinarily good job of replicating in human cells. The laboratory-based scenario was implausible, the paper said, because, although it was true that the virus could conceivably have developed its unusual genetic features in a laboratory, a stronger and “more parsimonious” explanation was that the



features came about through some kind of natural mutation or recombination. "What we think," explained one of the authors, Robert F. Garry of Tulane University, [on YouTube](#), "is that this virus is a recombinant. It probably came from a bat virus, plus perhaps one of these viruses from the pangolin." Journalists, for the most part, echoed the authoritative pronouncements of Daszak, Racaniello, Weiss, Andersen, and other prominent natural-originists. "The balance of the scientific evidence strongly supports the conclusion that the new coronavirus emerged from nature — be it the Wuhan market or somewhere else," said the *Washington Post's* "Fact Checker" column. "Dr. Fauci Again Dismisses Wuhan Lab As Source of Coronavirus," said [CBS News](#), posting a video interview of Anthony Fauci by *National Geographic*. "If you look at the evolution of the virus in bats, and what's out there now," Fauci said, "it's very, very strongly leaning toward 'This could not have been artificially or deliberately manipulated' — the way the mutations have naturally evolved."

Everyone took sides; everyone thought of the new disease as one more episode in an ongoing partisan struggle. Think of Mike Pompeo, that landmass of Cold War truculence; think of Donald Trump himself. They stood at their microphones saying, in a winking, I-know-something-you-don't-know sort of way, that this disease escaped from a Chinese laboratory. Whatever they were saying must be wrong. It became impermissible, almost taboo, to admit that, of course, SARS-2 could have come from a lab accident. "The administration's claim that the virus spread from a Wuhan lab has made the notion politically toxic, even among scientists who say it could have happened," wrote science journalist Mara Hvistendahl in [the Intercept](#).

IV.

## "Is It a Complete Coincidence?"

**Even so, in** January and February of 2020, there were thoughtful people who were speaking up, formulating their perplexities.

One person was Sam Hussein, an independent journalist. He went to a CDC press conference at the National Press Club on February 11, 2020. By then, 42,000 people had gotten sick in China and more than a thousand had died. But there were only 13 confirmed cases in the U.S. Halfway through the Q&A period, Hussein went to the microphone and asked the CDC's representative, Anne Schuchat, where the virus had come from. His head was spinning, he told me later.

"Obviously the main concern is how to stop the virus," Hussein said; nonetheless, he wanted to know more about its source. "Is it the CDC's contention," he asked, "that there's absolutely no relation to the BSL-4 lab in Wuhan? It's my understanding that this is the only place in China with a BSL-4 lab. We in the United States have, I think, two dozen or so, and there have been problems and incidents." (A BSL-4 laboratory is a maximum-security biosafety-level-four facility, used to house research on the most dangerous known pathogens. *New York* has confirmed there are at least 11 BSL-4 facilities currently operating in the U.S.) Hussein hastened to say that he wasn't implying that what happened in Wuhan was in any way intentional. "I'm just asking, Is it a complete coincidence that this outbreak happened in the one city in China with a BSL-4 lab?"

Schuchat thanked Hussein for his questions and comments. Everything she'd seen was quite consistent with a natural, zoonotic origin for the disease, she said.

That same month, a group of French scientists from Aix-Marseille University posted a paper describing their investigation of a small insertion in the genome of the new SARS-2 virus. The virus's spike protein contained a



sequence of amino acids that formed what Etienne Decroly and colleagues called a “peculiar furin-like cleavage site” — a chemically sensitive region on the lobster claw of the spike protein that would react in the presence of an enzyme called furin, which is a type of protein found everywhere within the human body, but especially in the lungs. When the spike senses human furin, it shudders, chemically speaking, and the enzyme opens the protein, commencing the tiny morbid ballet whereby the virus burns a hole in a host cell’s outer membrane and finds its way inside.

The code for this particular molecular feature — not found in SARS or any SARS-like bat viruses, but present in a slightly different form in the more lethal MERS virus — is easy to remember because it’s a roar: “R-R-A-R.” The letter code stands for amino acids: arginine, arginine, alanine, and arginine. Its presence, so Decroly and his colleagues observed, may heighten the “pathogenicity” — that is, the god-awfulness — of a disease.

Botao Xiao, a professor at the South China University of Technology, posted [a short paper](#) on a preprint server titled “The Possible Origins of 2019-nCoV Coronavirus.” Two laboratories, the Wuhan Center for Disease Control and Prevention (WHCDC) and the Wuhan Institute of Virology, were not far from the seafood market, which was where the disease was said to have originated, Xiao wrote — in fact, the WHCDC was only a few hundred yards away from the market — whereas the horseshoe bats that hosted the disease were hundreds of miles to the south. (No bats were sold in the market, he pointed out.) It was unlikely, he wrote, that a bat would have flown to a densely populated metropolitan area of 15 million people. “The killer coronavirus probably originated from a laboratory in Wuhan,” Xiao believed. He urged the relocation of “biohazardous laboratories” away from densely populated places. His article disappeared from the server.

And late in the month, a professor at National Taiwan University, Fang Chi-

tai, gave a lecture on the coronavirus in which he described the anomalous R-R-A-R furin cleavage site. The virus was “unlikely to have four amino acids added all at once,” Fang said — natural mutations were smaller and more haphazard, he argued. “From an academic point of view, it is indeed possible that the amino acids were added to COVID-19 in the lab by humans.” When the *Taiwan News* published an article about Fang’s talk, Fang disavowed his own comments, and the video copy of the talk disappeared from the website of the Taiwan Public Health Association. “It has been taken down for a certain reason,” the association explained. “Thank you for your understanding.”

V.

## **“A Serious Shortage of Appropriately Trained Technicians”**

**In the spring**, I did some reading on coronavirus history. Beginning in the 1970s, dogs, cows, and pigs were diagnosed with coronavirus infections; dog shows were canceled in 1978 after 25 collies died in Louisville, Kentucky. New varieties of coronaviruses didn’t start killing humans, though, until 2003 — that’s when restaurant chefs, food handlers, and people who lived near a live-animal market got sick in Guangzhou, in southern China, where the shredded meat of a short-legged raccoonlike creature, the palm civet, was served in a regional dish called “dragon-tiger-phoenix soup.” The new disease, SARS, spread alarmingly in hospitals, and it reached 30 countries and territories. More than 800 people died; the civet-borne virus was eventually [traced to horseshoe bats](#).

Later, smaller outbreaks of SARS in Taiwan, Singapore, and China’s National Institute of Virology in Beijing were all caused by laboratory accidents. Of the Beijing Virology Institute, the World Health Organization’s safety



investigators wrote, in May 2004, that they had “serious concerns about biosafety procedures.” By one account, a SARS storage room in the Beijing lab was so crowded that the refrigerator holding live virus was moved out to the hallway. “Scientists still do not fully understand exactly where or how SARS emerged 18 months ago,” wrote Washington *Post* reporter David Brown in June 2004. “But it is clear now that the most threatening source of the deadly virus today may be places they know intimately — their own laboratories.”

***I’m just asking, Is it a complete coincidence that this outbreak happened in the one city in China with a BSL-4 lab?***

MERS arose in 2012, possibly spread by camels that had contracted the disease from bats or bat guano, then passed it to human drinkers of raw camel milk and butchers of camel meat. It was an acute sickness, with a high fatality rate, mostly confined to Saudi Arabia. Like SARS, MERS ebbed quickly — it all but disappeared outside the Middle East, except for an outbreak in 2015 at the Samsung Medical Center in South Korea, where a single case of MERS led to more than 180 infections, many involving hospital workers.

In January 2015, the brand-new BSL-4 lab in Wuhan, built by a French contractor, celebrated its opening, but full safety certification came slowly. According to State Department cables from 2018 leaked to the Washington *Post*, the new BSL-4 lab had some start-up problems, including “a serious shortage of appropriately trained technicians and investigators needed to safely operate this high-containment laboratory.” The staff had gotten some training at a BSL-4 lab in Galveston, Texas, but they were doing potentially dangerous work with SARS-like viruses, the memo said, and they needed more help from the U.S.

In November or December of 2019, the novel coronavirus began to spread. Chinese scientists initially named it “Wuhan seafood market pneumonia virus,” but soon that idea went away. The market, closed and decontaminated by Chinese officials on January 1, 2020, was an amplifying hub, not the source of the outbreak, according to several studies by Chinese scientists. Forty-five percent of the earliest SARS-2 patients had no link with the market.

VI.

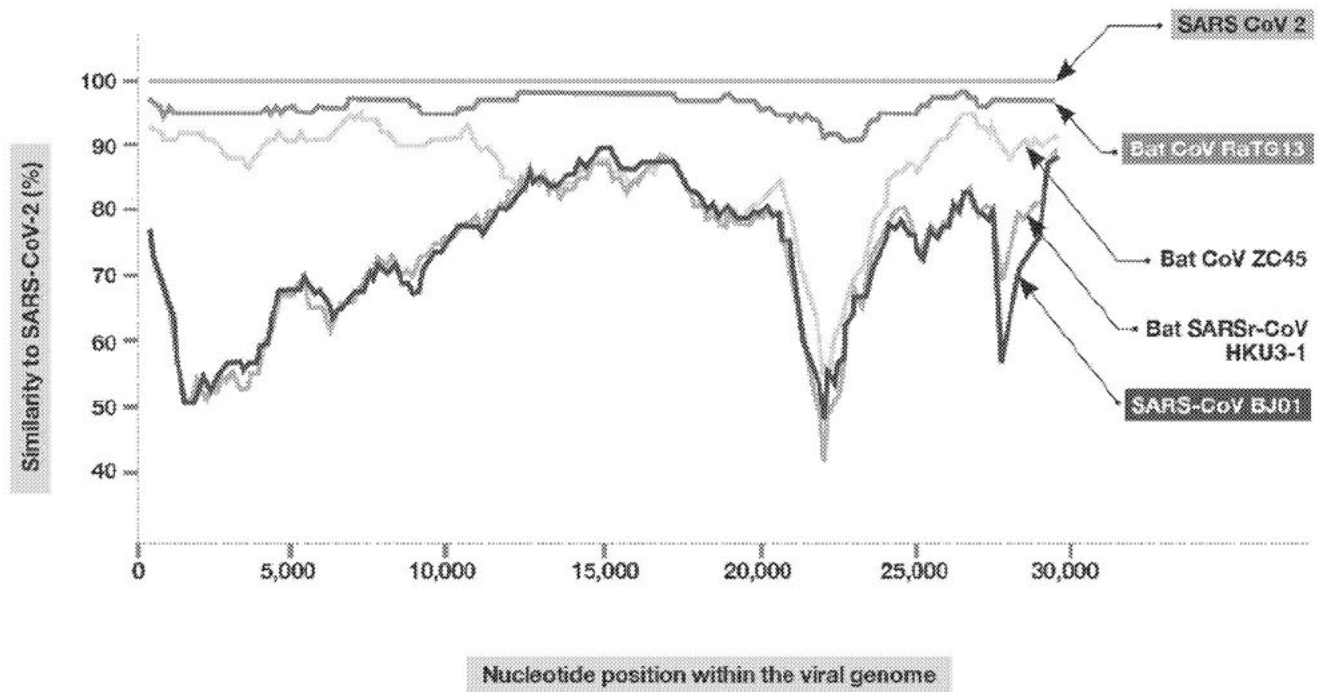
## Emergence

**Now let’s take a step back.** AIDS, fatal and terrifying and politically charged, brought on a new era in government-guided vaccine research, under the guidance of Anthony Fauci. A virologist at Rockefeller University, Stephen S. Morse, began giving talks on “emerging viruses” — other plagues that might be in the process of coming out of nature’s woodwork. In 1992, Richard Preston wrote a horrific account of one emergent virus, Ebola, in *The New Yorker*, which became a best-selling book in 1994; Laurie Garrett’s *The Coming Plague: Newly Emerging Diseases in a World Out of Balance* appeared that same year and was also a best seller. The idea seemed to be everywhere: We were on the verge of a wave of zoonotic, emergent plagues.

This new, useful term, *emerging*, began to glow in the research papers of some coronavirologists, who were out of the spotlight, working on common colds and livestock diseases. The term was useful because it was fluid. An emerging disease could be real and terrifying, as AIDS was — something that had just arrived on the medical scene and was confounding our efforts to combat it — or it could be a disease that hadn’t arrived, and might never arrive, but could be shown in a laboratory to be waiting in the wings, just a



few mutations away from a human epidemic. It was real and unreal at the same time — a quality that was helpful when applying for research grants.



**Where Did It Come From?** This chart measures the genetic similarity of known viruses to the novel coronavirus (which appears in yellow). By far the closest is the bat virus RaTG13, which appears in blue, and which was recovered in 2013 and brought to the Wuhan Institute of Virology. The first SARS, marked in red, is a much more distant relative. Graphic: Zhou, P., Yang, XL., Wang, XG. et al. A pneumonia outbreak associated with a new coronavirus of probable bat origin. *Nature* 579, 270–273 (2020)

Take, for instance, [this paper](#) from 1995: “High Recombination and Mutation Rates in Mouse Hepatitis Viruses Suggest That Coronaviruses May Be Potentially Important Emerging Viruses.” It was written by Dr. Ralph Baric and his bench scientist, Boyd Yount, at the University of North Carolina. Baric, a gravelly voiced former swim champion, described in this early paper how his lab was able to train a coronavirus, MHV, which causes hepatitis in mice, to jump species, so that it could reliably infect BHK (baby-hamster kidney) cell cultures. They did it using serial passaging: repeatedly dosing a mixed solution of mouse cells and hamster cells with mouse-hepatitis virus,

while each time decreasing the number of mouse cells and upping the concentration of hamster cells. At first, predictably, the mouse-hepatitis virus couldn't do much with the hamster cells, which were left almost free of infection, floating in their world of fetal-calf serum. But by the end of the experiment, after dozens of passages through cell cultures, the virus had mutated: It had mastered the trick of parasitizing an unfamiliar rodent. A scourge of mice was transformed into a scourge of hamsters. And there was more: "It is clear that MHV can rapidly alter its species specificity and infect rats and primates," Baric said. "The resulting virus variants are associated with demyelinating diseases in these alternative species." (A demyelinating disease is a disease that damages nerve sheaths.) With steady prodding from laboratory science, along with some rhetorical exaggeration, a lowly mouse ailment was morphed into an emergent threat that might potentially cause nerve damage in primates. That is, nerve damage in us.

A few years later, in a further round of "interspecies transfer" experimentation, Baric's scientists introduced their mouse coronavirus into flasks that held a suspension of African-green-monkey cells, human cells, and pig-testicle cells. Then, in 2002, they announced something even more impressive: They'd found a way to create a full-length infectious clone of the entire mouse-hepatitis genome. Their "infectious construct" replicated itself just like the real thing, they wrote.

Not only that, but they'd figured out how to perform their assembly seamlessly, without any signs of human handiwork. Nobody would know if the virus had been fabricated in a laboratory or grown in nature. Baric called this the "no-see'm method," and he asserted that it had "broad and largely unappreciated molecular biology applications." The method was named, he wrote, after a "very small biting insect that is occasionally found on North Carolina beaches."



In 2006, Baric, Yount, and two other scientists were granted a patent for their invisible method of fabricating a full-length infectious clone using the seamless, no-see'm method. But this time, it wasn't a clone of the mouse-hepatitis virus — it was a clone of the entire deadly human SARS virus, the one that had emerged from Chinese bats, via civets, in 2002. The Baric Lab came to be known by some scientists as "the Wild Wild West." In 2007, Baric said that we had entered "the golden age of coronavirus genetics."

"I would be afraid to look in their freezers," one virologist told me.

Baric and Shi Zhengli of the Wuhan Institute of Virology, the two top experts on the genetic interplay between bat and human coronaviruses, began collaborating in 2015.

VII.

## **"I Had Not Slept a Wink"**





Virologist Shi Zhengli at the Wuhan Institute of Virology in 2017. Photo: Feature China / Barcroft Studios / Future Publishing / Getty Images

**Early in the** pandemic, *Scientific American* profiled Shi Zhengli, known in China as the “bat woman.” Shi trapped hundreds of bats in nets at the mouths of caves in southern China, sampled their saliva and their blood, swabbed their anuses, and gathered up their fecal pellets. Several times, she visited and sampled bats in a mine in Mojiang, in southern China, where, in 2012, six men set to work shoveling bat guano were sickened by a severe lung disease, three of them fatally. Shi’s team took the samples back to Wuhan and analyzed whatever fragments of bat virus she could find. In some cases, when she found a sequence that seemed particularly significant, she experimented with it in order to understand how it might potentially infect humans. Some of her work was funded by the National Institutes of Health and some of it by the U.S. Defense Threat Reduction



Agency of the Department of Defense via Peter Daszak's EcoHealth Alliance.

As Shi explained to *Scientific American*, late in December 2019, she heard from the director of the Wuhan Institute that there was an outbreak of a new disease in the city. Medical samples taken from hospital patients arrived at her lab for analysis. Shi determined that the new virus was related to SARS but even more closely related to a bat disease that her own team had found on a virus-hunting trip: the now-famous RaTG13. Shi was surprised that the outbreak was local, she said: "I had never expected this kind of thing to happen in Wuhan, in central China." The bat hiding places that she'd been visiting were, after all, as far away as Orlando, Florida, is from New York City. Could this new virus, she wondered, have come from her own laboratory? She checked her records and found no exact matches. "That really took a load off my mind," she said. "I had not slept a wink for days."

If one of the first thoughts that goes through the head of a lab director at the Wuhan Institute of Virology is that the new coronavirus could have come from her lab, then we are obliged to entertain the scientific possibility that it could indeed have come from her lab. Right then, there should have been a comprehensive, pockets-inside-out, fully public investigation of the Virology Institute, along with the other important virus labs in Wuhan, including the one close by the seafood market, headquarters of the Wuhan CDC. There should have been interviews with scientists, interviews with biosafety teams, close parsings of laboratory notebooks, freezer and plumbing and decontamination systems checks — everything. It didn't happen. The Wuhan Institute of Virology closed down its databases of viral genomes, and the Chinese Ministry of Education sent out a directive: "Any paper that traces the origin of the virus must be strictly and tightly managed."

Shi made some WeChat posts early in 2020. "The novel 2019 coronavirus is nature punishing the human race for keeping uncivilized living habits," she wrote. "I, Shi Zhengli, swear on my life that it has nothing to do with our laboratory." She advised those who believed rumors, and gave credence to unreliable scientific papers, to "shut their stinking mouths."

VIII.

## " 'Bug to Drug' in 24 Hours"

**It wasn't only AIDS** that changed the way the NIH funded research. The War on Terror also influenced which diseases got the most attention. In the late '90s, under Bill Clinton and then George W. Bush, biodefense specialists became interested — again — in anthrax. The Defense Threat Reduction Agency built a small anthrax factory in Nevada, using simulants, to demonstrate how easy it would be for a terrorist to build a small anthrax factory. And in the first year of the Bush presidency, the Defense Intelligence Agency wrote up plans to create a vaccine-resistant form of anthrax using state-of-the-art gene-splicery. A front-page article describing these initiatives, "U.S. Germ Warfare Research Pushes Treaty Limits," appeared in the New York *Times* on September 4, 2001, one week before 9/11. "Pentagon Says Projects Are Defense, Is Pressing Ahead," was the subtitle.

After the 9/11 attacks, and the mysterious anthrax mailings that began a week later (which said, "TAKE PENACILIN [sic] NOW / DEATH TO AMERICA / DEATH TO ISRAEL / ALLAH IS GREAT"), the desire for biopreparedness became all consuming. Now there were emerging biothreats from humans as well as from the evolving natural world. Fauci's anti-terror budget went from \$53 million in 2001 to \$1.7 billion in 2003. Setting aside his work toward an AIDS vaccine, which was taking longer than he'd foreseen, Fauci



said he would be going all out to defend against a suite of known Cold War agents, all of which had been bred and perfected in American weapons programs many years before — brucellosis, anthrax, tularemia, and plague, for instance. “We are making this the highest priority,” Fauci said. “We are really marshaling all available resources.”

### *I would be afraid to look in their freezers.*

Vaccine development had to progress much faster, Fauci believed; he wanted to set up “vaccine systems” and “vaccine platforms,” which could be quickly tailored to defend against a particular emergent strain some terrorist with an advanced biochemistry degree might have thrown together in a laboratory. “Our goal within the next 20 years is ‘bug to drug’ in 24 hours,” Fauci said. “This would specifically meet the challenge of genetically engineered bioagents.” The first Project BioShield contract Fauci awarded was to VaxGen, a California pharmaceutical company, for \$878 million worth of shots of anthrax vaccine.

By 2005, so much money was going toward biothreat reduction and preparedness that more than 750 scientists sent a protest letter to the NIH. Their claim was that grants to study canonical biowar diseases — anthrax, plague, brucellosis, and tularemia, all exceptionally rare in the U.S. — had increased by a factor of 15 since 2001, whereas funds for the study of widespread “normal” diseases, of high public-health importance, had decreased.

Fauci was firm in his reply: “The United States through its leaders made the decision that this money was going to be spent on biodefense,” he said. “We disagree with the notion that biodefense concerns are of ‘low public-health significance.’ ”

In 2010, by one count, there were 249 BSL-3 laboratories and seven BSL-4 laboratories in the U.S., and more than 11,000 scientists and staffers were authorized to handle the ultralethal germs on the government's select pathogen list. And yet the sole bioterrorist in living memory who actually killed American citizens, according to the FBI — the man who sent the anthrax letters — turned out to be one of the government's own researchers. Bruce Ivins, an eccentric, suicidal laboratory scientist from Ohio who worked in vaccine development at Fort Detrick, allegedly wanted to boost the fear level so as to persuade the government to buy more of the patented, genetically engineered anthrax VaxGen vaccine, of which he was a co-inventor. (See David Willman's fascinating biography of Ivins, *Mirage Man*.) Fauci's staff at NIH funded Ivins's vaccine laboratory and gave \$100 million to VaxGen to accelerate vaccine production. (The NIH's \$878 million contract with VaxGen, however, was quietly canceled in 2006; Ivins, who was never charged, killed himself in 2008.)

"The whole incident amounted to a snake eating its own tail," wrote Wendy Orent in an August 2008 piece titled "Our Own Worst Bioenemy" in the Los Angeles *Times*. "No ingenious biowarrior from Al Qaeda sent the lethal envelopes through the U.S. postal system. An American scientist did." What confirmed Ivins's guilt, according to the FBI, was that there was a genetic match between the anthrax used in the killings and the strain held at Fort Detrick.

IX.

## "Weapons of Mass Disruption"

**After SARS appeared** in 2003, Ralph Baric's laboratory moved up the NIH funding ladder. SARS was a "dual use" organism — a security threat and a zoonotic threat at the same time. In 2006, Baric wrote a long, fairly creepy



paper on the threat of “weaponizable” viruses. Synthetic biology had made possible new kinds of viral “weapons of mass disruption,” he wrote, involving, for example, “rapid production of numerous candidate bioweapons that can be simultaneously released,” a scattershot terror tactic Baric called the “ ‘survival of the fittest’ approach.”

Baric hoped to find a SARS vaccine, but he couldn’t; he kept looking for it, year after year, supported by the NIH, long after the disease itself had been contained. It wasn’t really gone, Baric believed. Like other epidemics that pop up and then disappear, as he told a university audience some years later, “they don’t go extinct. They are waiting to return.” What do you do if you run a well-funded laboratory, an NIH “center of excellence,” and your emergent virus is no longer actually making people sick? You start squeezing it and twisting it into different shapes. Making it stand on its hind legs and quack like a duck, or a bat. Or breathe like a person.

Baric’s safety record is good — although there was a minor mouse-bite incident in 2016, uncovered by ProPublica — and his motives are beyond reproach: “Safe, universal, vaccine platforms are needed that can be tailored to new pathogens as they emerge, quickly tested for safety, and then strategically used to control new disease outbreaks in human populations,” he wrote in a paper on public health. But the pioneering work he did over the past 15 years — generating tiny eager single-stranded flask monsters and pitting them against human cells, or bat cells, or gene-spliced somewhat-human cells, or monkey cells, or humanized mice — was not without risk, and it may have led others astray.

In 2006, for instance, Baric and his colleagues, hoping to come up with a “vaccine strategy” for SARS, produced noninfectious virus replicon particles (or VRPs) using the Venezuelan-equine-encephalitis virus (another American germ-warfare agent), which they fitted with various SARS spike

proteins. Then, wearing Tyvek suits and two pairs of gloves each, and working in a biological safety cabinet in a BSL-3-certified laboratory, they cloned and grew recombinant versions of the original SARS virus in an incubator in a medium that held African-green-monkey cells. When they had grown enough virus, the scientists swapped out one kind of spike protein for a carefully chosen mutant, and they challenged their prototype vaccine with it in mice.

The scientists also tried their infectious SARS clones in something called an air-liquid interface, using a relatively new type of cell culture developed by Raymond Pickles of the University of North Carolina's Cystic Fibrosis Center. Pickles had perfected a method of emulating the traits of human airway tissue by cultivating cells taken from lung-disease patients — nurturing the culture over four to six weeks in such a way that the cells differentiated and developed a crop of tiny moving hairs, or cilia, on top and goblet cells within that produced real human mucus. In fact, before infecting these HAE (human airway epithelial) cells with a virus, the lab worker must sometimes rinse off some of the accumulated mucus, as if helping the lab-grown tissue to clear its throat. So Baric was exposing and adapting his engineered viruses to an extraordinarily true-to-life environment — the juicy, sticky, hairy inner surface of our breathing apparatus.

SARS-2 seems almost perfectly calibrated to grab and ransack our breathing cells and choke the life out of them. "By the time SARS-CoV-2 was first detected in late 2019, it was already pre-adapted to human transmission," Alina Chan and her co-authors have written, whereas SARS, when it first appeared in 2003, underwent "numerous adaptive mutations" before settling down. Perhaps viral nature hit a bull's-eye of airborne infectivity, with almost no mutational drift, no period of accommodation and adjustment, or perhaps some lab worker somewhere, inspired by Baric's



work with human airway tissue, took a spike protein that was specially groomed to colonize and thrive deep in the ciliated, mucosal tunnels of our inner core and cloned it onto some existing viral bat backbone. It could have happened in Wuhan, but — because anyone can now “print out” a fully infectious clone of any sequenced disease — it could also have happened at Fort Detrick, or in Texas, or in Italy, or in Rotterdam, or in Wisconsin, or in some other citadel of coronaviral inquiry. No conspiracy — just scientific ambition, and the urge to take exciting risks and make new things, and the fear of terrorism, and the fear of getting sick. Plus a whole lot of government money.

X.

## “Risky Areas for Spillover”

**Project Bioshield began** to fade by the end of the Bush administration, although the expensive high-containment laboratories, controversial preservers and incubators of past and future epidemics, remain. By 2010, some BioShield projects had dissolved into Obama’s Predict program, which paid for laboratories and staff in 60 “risky areas for spillover” around the world. Jonna Mazet, a veterinary scientist from the University of California, Davis, was in charge of Predict, which was a component of USAID’s “Emerging Pandemic Threats” program. Her far-flung teams collected samples from 164,000 animals and humans and claimed to have found “almost 1,200 potentially zoonotic viruses, among them 160 novel coronaviruses, including multiple SARS- and MERS-like coronaviruses.” The fruits of Predict’s exotic harvest were studied and circulated in laboratories worldwide, and their genetic sequences became part of [GenBank](#), the NIH’s genome database, where any curious RNA wrangler anywhere could quickly synthesize snippets of code and test out a new disease on human cells.

Baric, Jonna Mazet, and Peter Daszak of EcoHealth worked together for years — and Daszak also routed Predict money to Shi Zhengli's bat-surveillance team in Wuhan through his nonprofit, mingling it with NIH money and money from the U.S. Defense Threat Reduction Agency. In 2013, Mazet announced that Shi Zhengli's virus hunters, with Predict's support, had, for the first time, isolated and cultured a live SARS-like virus from bats and demonstrated that this virus could bind to the human ACE2, or "angiotensin-converting enzyme 2," receptor, which Baric's laboratory had determined to be the sine qua non of human infectivity. "This work shows that these viruses can directly infect humans and validates our assumption that we should be searching for viruses of pandemic potential before they spill over to people," Mazet said.

Daszak, for his part, seems to have viewed his bat quests as part of an epic, quasi-religious death match. In a paper from 2008, Daszak and a co-author described Bruegel's painting *The Fall of the Rebel Angels* and compared it to the contemporary human biological condition. The fallen angels could be seen as pathogenic organisms that had descended "through an evolutionary (not spiritual) pathway that takes them to a netherworld where they can feed only on our genes, our cells, our flesh," Daszak wrote. "Will we succumb to the multitudinous horde? Are we to be cast downward into chthonic chaos represented here by the heaped up gibbering phantasmagory against which we rail and struggle?"

XI.

## "Lab-Made?"

**There are, in fact,** some helpful points of agreement between zoonoticists — those who believe in a natural origin of the SARS-2 virus — and those who believe that it probably came from a laboratory. Both sides agree, when



pressed, that a lab origin can't be conclusively ruled out and a natural origin can't be ruled out either — because nature, after all, is capable of improbable, teleological-seeming achievements. Both sides also agree, for the most part, that the spillover event that began the human outbreak probably happened only once, or a few times, quite recently, and not many times over a longer period. They agree that bat virus RaTG13 (named for the *Rinolophus affinis* bat, from Tongguan, in 2013) is the closest match to the human virus that has yet been found, and that although the two viruses are very similar, the spike protein of the bat virus lacks the features the human spike protein possesses that enable it to work efficiently with human tissue.

Zoonoticists hold that SARS-2's crucial features — the furin cleavage site and the ACE2 receptor — are the result of a recombinant event involving a bat coronavirus (perhaps RaTG13 or a virus closely related to it) and another, unknown virus. Early on, researchers proposed that it could be a snake sold at the seafood market — a Chinese cobra or a banded krait — but no: Snakes don't typically carry coronaviruses. Then there was a thought that the disease came from sick smuggled pangolins, because there existed a certain pangolin coronavirus that was, inexplicably, almost identical in its spike protein to the human coronavirus — but then, no: There turned out to be questions about the reliability of the genetic information in that diseased-pangolin data set, on top of which there were no pangolins for sale at the Wuhan market. Then a group from China's government veterinary laboratory at Harbin tried infecting beagles, pigs, chickens, ducks, ferrets, and cats with SARS-2 to see if they could be carriers. (Cats and ferrets got sick; pigs, ducks, and most dogs did not.)

In September, some scientists at the University of Michigan, led by Yang Zhang, reported that they had created a "computational pipeline" to screen nearly a hundred possible intermediate hosts, including the Sumatran orangutan, the Western gorilla, the Olive baboon, the crab-eating macaque,



and the bonobo. All these primates were “permissive” to the SARS-2 coronavirus and should undergo “further experimental investigation,” the scientists proposed.

Despite this wide-ranging effort, there is at the moment no animal host that zoonoticists can point to as the missing link. There’s also no single, agreed-upon hypothesis to explain how the disease may have traveled from the bat reservoirs of Yunnan all the way to Wuhan, seven hours by train, without leaving any sick people behind and without infecting anyone along the way.

The zoonoticists say that we shouldn’t find it troubling that virologists have been inserting and deleting furin cleavage sites and ACE2-receptor-binding domains in experimental viral spike proteins for years: The fact that virologists have been doing these things in laboratories, in advance of the pandemic, is to be taken as a sign of their prescience, not of their folly. But I keep returning to the basic, puzzling fact: This patchwork pathogen, which allegedly has evolved without human meddling, first came to notice in the only city in the world with a laboratory that was paid for years by the U.S. government to perform experiments on certain obscure and heretofore unpublicized strains of bat viruses — which bat viruses then turned out to be, out of all the organisms on the planet, the ones that are most closely related to the disease. What are the odds?

In July, I discovered a number of volunteer analysts who were doing a new kind of forensic, samizdat science, hunched over the letter code of the SARS-2 genome like scholars deciphering the cuneiform impressions in Linear B tablets. There were the anonymous authors of Project Evidence, on GitHub, who “disavow all racism and violent attacks, including those which are aimed at Asian or Chinese people,” and there was Yuri Deigin, a biotech entrepreneur from Canada, who wrote [a massive, lucid paper](#) on Medium, “Lab-Made?,” which illuminated the mysteries of the spike protein. Jonathan



Latham of the Bioscience Resource Project, with his co-author Allison Wilson, wrote two important papers: one a calm, unsparing overview of laboratory accidents and rash research and the other a [close look at the small outbreak](#) of an unexplained viral pneumonia in a bat-infested copper mine in 2012. I corresponded with Alina Chan (now the subject of a nicely turned piece in [Boston](#) magazine by Rowan Jacobsen) and with the pseudonymous Billy Bostickson, a tireless researcher whose Twitter photo is a cartoon of an injured experimental monkey, and Monali Rahalkar, of the Agharkar Research Institute in Pune, India, who wrote a [paper](#) with her husband, Rahul Bahulikar, that also sheds light on the story of the bat-guano-shoveling men whose virus was remarkably like SARS-2, except that it was not nearly as catching. I talked to Rossana Segreto, a molecular biologist at the University of Innsbruck, whose [paper](#), "Is Considering a Genetic-Manipulation Origin for SARS-CoV-2 a Conspiracy Theory That Must Be Censored?" co-authored with Yuri Deigin, was finally published in November under a milder title; it argued that SARS-2's most notable features, the furin site and the human ACE2-binding domain, were unlikely to have arisen simultaneously and "might be the result of lab manipulation techniques such as site directed mutagenesis." Segreto is also the person who first established that a bat-virus fragment named BtCoV/4991, identified in 2013, was 100 percent identical to the closest known cousin to SARS-CoV-2, the bat virus RaTG13, thereby proving that the virus closest to the SARS-2-pandemic virus was linked back not to a bat cave but to a mine shaft, and that this same virus had been stored and worked on in the Wuhan Institute for years. This made possible the first big investigative piece on SARS-2's origins, in the [Times](#) of London, in July: "Nobody can deny the bravery of scientists who risked their lives harvesting the highly infectious virus," the *Times* authors write. "But did their courageous detective work lead inadvertently to a global disaster?"

XII.

## "A New, Non-Natural Risk"

**In 2011, a tall**, confident Dutch scientist, Ron Fouchier, using grant money from Fauci's group at NIH, created a mutant form of highly pathogenic avian influenza, H5N1, and passaged it ten times through ferrets in order to prove that he could "force" (his word) this potentially fatal disease to infect mammals, including humans, "via aerosols or respiratory droplets." Fouchier said his findings indicated that these avian influenza viruses, thus forced, "pose a risk of becoming pandemic in humans."

This experiment was too much for some scientists: Why, out of a desire to prove that something extremely infectious could happen, would you make it happen? And why would the U.S. government feel compelled to pay for it to happen? Late in 2011, Marc Lipsitch of the Harvard School of Public Health got together with several other dismayed onlookers to ring the gong for caution. On January 8, 2012, the *New York Times* published a scorching [editorial](#), "An Engineered Doomsday." "We cannot say there would be no benefits at all from studying the virus," the *Times* said. "But the consequences, should the virus escape, are too devastating to risk."

These gain-of-function experiments were an important part of the NIH's approach to vaccine development, and Anthony Fauci was reluctant to stop funding them. He and Francis Collins, director of the National Institutes of Health, along with Gary Nabel, NIAID director of vaccine research, published an opinion piece in the *Washington Post* in which they contended that the ferret flu experiments, and others like them, were "a risk worth taking." "Important information and insights can come from generating a potentially dangerous virus in the laboratory," they wrote; the work can "help delineate the principles of virus transmission between species." The



work was safe because the viruses were stored in a high-security lab, they believed, and the work was necessary because nature was always coming up with new threats. "Nature is the worst bioterrorist," Fauci told a reporter. "We know that through history."

Soon afterward, there followed some distressing screwups in secure federal laboratories involving live anthrax, live smallpox, and live avian influenza. These got attention in the science press. Then Lipsitch's activists (calling themselves the Cambridge Working Group) sent around a strong statement on the perils of research with "Potential Pandemic Pathogens," signed by more than a hundred scientists. The work might "trigger outbreaks that would be difficult or impossible to control," the signers said. Fauci reconsidered, and the White House in 2014 announced that there would be a "pause" in the funding of new influenza, SARS, and MERS gain-of-function research.

Baric, in North Carolina, was not happy. He had a number of gain-of-function experiments with pathogenic viruses in progress. "It took me ten seconds to realize that most of them were going to be affected," he told [NPR](#). Baric and a former colleague from Vanderbilt University wrote a [long letter](#) to an NIH review board expressing their "profound concerns." "This decision will significantly inhibit our capacity to respond quickly and effectively to future outbreaks of SARS-like or MERS-like coronaviruses, which continue to circulate in bat populations and camels," they wrote. The funding ban was itself dangerous, they argued. "Emerging coronaviruses in nature do not observe a mandated pause."

Hoping to smooth over controversy by showing due diligence, the National Science Advisory Board for Biosecurity, founded in the BioShield era under President Bush, paid a consulting firm, Gryphon Scientific, to write a report on gain-of-function research, which by now was simply referred to as GoF.



In chapter six of this thousand-page dissertation, published in April 2016, the consultants take up the question of coronaviruses. "Increasing the transmissibility of the coronaviruses could significantly increase the chance of a global pandemic due to a laboratory accident," they wrote.

The Cambridge Working Group continued to write letters of protest and plead for restraint and sanity. Steven Salzberg, a professor of biomedical engineering at Johns Hopkins, said, "We have enough problems simply keeping up with the current flu outbreaks — and now with Ebola — without scientists creating incredibly deadly new viruses that might accidentally escape their labs." David Relman of Stanford Medical School said, "It is unethical to place so many members of the public at risk and then consult only scientists — or, even worse, just a small subset of scientists — and exclude others from the decision-making and oversight process." Richard Ebright wrote that creating and evaluating new threats very seldom increases security: "Doing so in biology — where the number of potential threats is nearly infinite, and where the asymmetry between the ease of creating threats and the difficulty of addressing threats is nearly absolute — is especially counterproductive." Lynn Klotz wrote, "Awful as a pandemic brought on by the escape of a variant H5N1 virus might be, it is SARS that now presents the greatest risk. The worry is less about recurrence of a natural SARS outbreak than of yet another escape from a laboratory researching it to help protect against a natural outbreak." Marc Lipsitch argued that gain-of-function experiments can mislead, "resulting in worse not better decisions," and that the entire gain-of-function debate as overseen by the NIH was heavily weighted in favor of scientific insiders and "distinctly unwelcoming of public participation."

Nariyoshi Shinomiya, a professor of physiology and nano-medicine at the National Defense Medical College in Japan, offered this warning: "Similar to nuclear or chemical weapons there is no going back once we get a thing in



our hands."

But in the end, Baric was allowed to proceed with his experiments, and the research papers that resulted, showered with money, became a sort of *Anarchist's Cookbook* for the rest of the scientific world. In November 2015, Baric and colleagues published [a collaboration paper](#) with Shi Zhengli titled "A SARS-like Cluster of Circulating Bat Coronaviruses Shows Potential for Human Emergence." Into a human SARS virus that they had adapted so that it would work in mice, Baric and Shi et al. inserted the spike protein of a bat virus, SHC014, discovered by Shi in southern China. They dabbed the mice nasally with virus and waited, looking for signs of sickness: "hunching, ruffled fur." They also infected human airway cells with the mouse-adapted bat-spike-in-a-human-virus backbone. In both mice and human airway cells, the chimeric virus caused a "robust infection."

This proved, Baric and Shi believed, that you did not need civets or other intermediate hosts in order for bats to cause an epidemic in humans and that therefore all the SARS-like viruses circulating in bat populations "may pose a future threat." Peter Daszak, who had used Predict funds to pay Shi for her work on the paper, was impressed by this conclusion; the findings, he said, "move this virus from a candidate emerging pathogen to a clear and present danger."

Richard Ebright was trenchantly unenthusiastic. "The only impact of this work," [he said](#), "is the creation, in a lab, of a new, non-natural risk."

Early in 2016, Baric and Shi again collaborated. Shi sent Baric a fresh bat virus spike protein, and Baric inserted it into the backbone of a human SARS virus and then used that infectious clone to attack human airway cells. "The virus readily and efficiently replicated in cultured human airway tissues, suggesting an ability to potentially jump directly to humans,"

reported the UNC's website. This time, they also used the bat-human hybrid virus to infect transgenic humanized mice that grew human ACE2 protein. The mice, young and old, lost weight and died, proving, again, that this particular bat virus was potentially "poised to emerge in human populations." It was "an ongoing threat," Baric wrote. But was it? Civets and camels that are exposed to a lot of bat-guano dust may be an ongoing threat and a manageable one. But the bats themselves just want to hang in their caves and not be bothered by frowning sightseers in spacesuits who want to poke Q-tips in their bottoms. This 2016 "poised for human emergence" paper was supported by eight different NIH grants. In 2015, Baric's lab received \$8.3 million from the NIH; in 2016, it received \$10.5 million.

Gain-of-function research came roaring back under Trump and Fauci. "The National Institutes of Health will again fund research that makes viruses more dangerous," said an article in *Nature* in December 2017. Carrie Wolinetz of the NIH's office of science policy defended the decision. "These experiments will help us get ahead of viruses that are already out there and pose a real and present danger to human health," she told *The Lancet*. The NIH, Wolinetz said, was committed to a leadership role with gain-of-function research internationally. "If we are pursuing this research in an active way, we will be much better positioned to develop protection and countermeasures should something bad happen in another country."

A reporter asked Marc Lipsitch what he thought of the resumption of NIH funding. Gain-of-function experiments "have done almost nothing to improve our preparedness for pandemics," he said, "yet they risked creating an accidental pandemic."

XIII.



## "Proximity Is a Problem"

**In April**, four months into the coronavirus emergency, a deputy director at the NIH wrote an email to EcoHealth Alliance. "You are instructed to cease providing any funds to Wuhan Institute of Virology," it said. In response, Daszak and the chief scientific officer of New England Biolabs (a company that sells seamless gene-splicing products to laboratories, among other things) got 77 Nobel Prize winners to sign a statement saying that the cancellation deprived the "nation and the world of highly regarded science that could help control one of the greatest health crises in modern history and those that may arise in the future." Later, as a condition of further funding, the NIH wrote to say it wanted Daszak to arrange an outside inspection of the Wuhan lab and to procure from Wuhan's scientists a sample of whatever they'd used to sequence the SARS-2 virus. Daszak was outraged ("I am not trained as a private detective"), and again he fought back. He was reluctant to give up his own secrets, too. "Conspiracy-theory outlets and politically motivated organizations have made Freedom of Information Act requests on our grants and all of our letters and emails to the NIH," he told *Nature*. "We don't think it's fair that we should have to reveal everything we do."

But Daszak has survived — even prospered. Recently, *The Lancet* made him the lead investigator in its inquiry into the origins of the pandemic, and the World Health Organization named him to its ten-person origins investigation. ("We're still close enough to the origin to really find out more details about where it has come from," Daszak told *Nature*.)

The NIH has also set up an ambitious new international program, called CREID, which stands for Centers for Research in Emerging Infectious Diseases, and it has put Daszak's EcoHealth in charge of trapping animals and looking for obscure bat viruses in Singapore, Malaysia, and Thailand.

Baric is one of Daszak's partners in CREID. The virus hunting and collecting, which Richard Ebright likens to "looking for a gas leak with a lighted match," will continue and widen with U.S. funding. "We're going to work in remote parts of Malaysia and Thailand to get to the front line of where the next pandemic is going to start," Daszak told NPR.

In May, an interviewer from the People's Pharmacy website asked Baric if he had any thoughts on whether the coronavirus began with a natural bat-to-human transfer. "Or was there something a little bit more, perhaps, insidious involved?"

"Well, of course the answers to those questions are in China," Baric replied. "Exactly how they work in that facility is something that would be very difficult for a Westerner to know," he said. "The main problems that the Institute of Virology has is that the outbreak occurred in close proximity to that Institute. That Institute has in essence the best collection of virologists in the world that have gone out and sought out, and isolated, and sampled bat species throughout Southeast Asia. So they have a very large collection of viruses in their laboratory. And so it's — you know — proximity is a problem. It's a problem."

Over the course of the fall, and especially after the election muffled Donald Trump's influence over the country's public-health apparatus, that proximity problem — and the uncomfortable questions of origins it raised — began to grow somewhat more discussable. The BBC, *Le Monde*, and Italy's RAI have all recently taken seriously the scientific possibility of a lab leak. In late October, the World Health Organization convened the first meeting of its second inquiry into the origins of the disease. The WHO's effort is perhaps the world's best chance to satisfy its curiosity about goings-on at the Wuhan Institute of Virology and at the Wuhan CDC's virus lab near the Wuhan seafood market. But, as the *New York Times* has reported, the



WHO's information gathering has been hindered by Chinese secretiveness since February, when an initial investigative team sent to Beijing was told its members' access to scientists would be restricted and that it couldn't visit the seafood market, then considered a hub of the pandemic.

When a BBC video team tried to inspect the Yunnan mine shaft, they found the road to the mine blocked by a strategically parked truck that had "broken down" shortly before they arrived. Reporter John Sudworth asked Daszak, one of the ten members of the second WHO investigative team, whether he would push for access to the Wuhan Institute of Virology. "That's not my job to do that," Daszak replied.

In November, David Relman, the Stanford microbiologist, one of the most thoughtful of the voices warning against gain-of-function research, published [a paper](#) in *Proceedings of the National Academy of Sciences* on the urgent need to unravel the origins of COVID-19. "If SARS-CoV-2 escaped from a lab to cause the pandemic," he wrote, "it will become critical to understand the chain of events and prevent this from happening again." Conflicts of interest by researchers and administrators will need to be addressed, Relman wrote; to reach the truth, the investigation must be transparent, international, and, as much as possible, unpolitical. "A more complete understanding of the origins of COVID-19 clearly serves the interests of every person in every country on this planet."

"The world is sitting on a precedent-setting decision right now," wrote Alina Chan on December 8. "It is unclear if SARS2 is 100 percent natural or emerged due to lab/research activities. If we walk away from this, demonstrating that we cannot effectively investigate its origins, it will pave the way for future COVIDS."

Just before this issue of *New York* went to press, I reached Ralph Baric by

phone and asked him where he now believed SARS-2 came from. (Anthony Fauci, Shi Zhengli, and Peter Daszak didn't respond to emails, and Kristian Andersen said he was busy with other things.) Baric said he still thought the virus came from bats in southern China, perhaps directly, or possibly via an intermediate host, although the smuggled pangolins, in his view, were a red herring. The disease evolved in humans over time without being noticed, he suspected, becoming gradually more infectious, and eventually a person carried it to Wuhan "and the pandemic took off." Then he said, "Can you rule out a laboratory escape? The answer in this case is probably not."

XIV.

## Transmission

**So how did** we actually get this disease?

Here's what I think happened. In April 2012, in a copper mine in Mojiang, China, three men were given an awful job — they were told to shovel bat guano out of a mine shaft. They went to work and shoveled guano for seven hours a day in the confined, insufficiently ventilated space of the mine shaft, and by the end of the week, they were sick with a viral pneumonia of unknown etiology. Three more, younger shovelers were hired to replace the ones who were out sick.

The viral load in their lungs was so huge, because of all the guano dust, that their lungs became a kind of accelerated laboratory passaging experiment, as Jonathan Latham and Allison Wilson have written, forcing the virus to switch its allegiance from bats to humans. SARS experts were consulted, and the disease was judged to be SARS-like but not SARS. It was something new. (Shi Zhengli told *Scientific American* that the guano shovelers had died of a fungal disease, but, as Monali Rahalkar pointed out,



they were treated with antivirals, and their symptoms were consistent with viral pneumonia with attendant secondary fungal infections.)

Although it was a severe disease, and in the end three of the shovelers died, there was no resultant epidemic. It was actually a case of industrial overexposure to an infectious substance — what we might call a massive OSHA violation. The bat disease that the men encountered wasn't necessarily all that dangerous except in an environment of immunosuppressive overload.

Peter Daszak and Shi Zhengli were interested, of course, because this unidentified coronavirus disease involved bats and people. Of the fragmentary bits of virus Shi retrieved from the mine shaft, one was SARS-like, and Shi sequenced it and called it BtCoV/4991 and published a paper about it. Several times — in 2016 and 2018 and 2019 — this most interesting sample, a portion of what we now know as RaTG13, was taken out of the freezers in Shi's lab and worked on in undisclosed ways. (Peter Daszak claims that these samples have disintegrated and can't be validated or studied.) Samples of the nameless human disease also traveled back to the Wuhan Institute of Virology — few specifics about these valuable specimens have been released by Chinese sources, however.

This is the period in the story that demands a very close investigation, when chimeric assemblages may have been created and serially passaged, using BtCoV/4991, a.k.a. RaTG13, and other bat viruses, perhaps along with forms of the human virus. It's when Shi and Baric both published papers that were about what happened when you hot-swapped mutant spike proteins between bat viruses and human viruses.

The link, via the renamed sample BtCoV/4991, to the copper mine is of exceptional importance because of the one huge difference between the

unnamed guano shovelers' virus and the SARS-2 virus that is now ravaging, for example, California: transmissibility. Airborne human-to-human transmissibility — the kind of thing that gain-of-functioneers like Ron Fouchier and Ralph Baric were aiming at, in order to demonstrate what Baric called "lurking threats" — is COVID-19's crucial distinguishing feature. If six men had gotten extremely sick with COVID-19 back in 2012 in southern China, doctors and nurses in the hospital where they lay dying would likely have gotten sick as well. There might have been hundreds or thousands of cases. Instead, only the shovelers themselves, who had breathed a heavy concentration of guano dust for days, got it.

The existence of bat virus RaTG13 is therefore not necessarily evidence of a natural bat origin. In fact, it seems to me to imply the opposite: New functional components may have been overlaid onto or inserted into the RaTG13 genome, new Tinkertoy intermolecular manipulations, especially to its spike protein, which have the effect of making it unprecedentedly infectious in human airways.

This is where the uniquely peculiar furin insert and/or the human-tuned ACE2-receptor-binding domain may come in — although it's also possible that either of these elements could have evolved as part of some multistep zoonotic process. But in the climate of gonzo laboratory experimentation, at a time when all sorts of tweaked variants and amped-up substitutions were being tested on cell cultures and in the lungs of humanized mice and other experimental animals, isn't it possible that somebody in Wuhan took the virus that had been isolated from human samples, or the RaTG13 bat virus sequence, or both (or other viruses from that same mine shaft that Shi Zhengli has recently mentioned in passing), and used them to create a challenge disease for vaccine research — a chopped-and-channeled version of RaTG13 or the miners' virus that included elements that would make it thrive and even rampage in people? And then what if, during an



experiment one afternoon, this new, virulent, human-infecting, furin-ready virus got out?

For more than 15 years, coronavirologists strove to prove that the threat of SARS was ever present and must be defended against, and they proved it by showing how they could doctor the viruses they stored in order to force them to jump species and go directly from bats to humans. More and more bat viruses came in from the field teams, and they were sequenced and synthesized and "rewired," to use a term that Baric likes. In this international potluck supper of genetic cookery, hundreds of new variant diseases were invented and stored. And then one day, perhaps, somebody messed up. It's at least a reasonable, "parsimonious" explanation of what might have happened.

This may be the great scientific meta-experiment of the 21st century. Could a world full of scientists do all kinds of reckless recombinant things with viral diseases for many years and successfully avoid a serious outbreak? The hypothesis was that, yes, it was doable. The risk was worth taking. There would be no pandemic.

I hope the vaccine works.

*\*This article appears in the January 4, 2021, issue of New York Magazine.*

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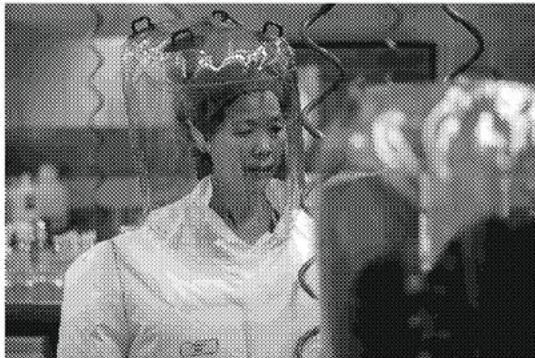
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# The World Needs a Real Investigation Into the Origins of Covid-19

A team of WHO researchers has arrived in China but won't investigate the possibility that the coronavirus originated in a lab.



Dr. Shi Zhengli, whose lab at the Wuhan Institute of Virology has been a suspected source of the coronavirus, in 2017.

PHOTO: JOHANNES EISELE/AFP/GETTY IMAGES

By Alina Chan and Matt Ridley

Jan. 15, 2021 11:31 am ET



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9 minutes

In the first week of January, scientists representing the World Health Organization (WHO) were due to arrive in China to trace the origins of Covid-19. The team membership and terms of reference were preapproved by the Chinese government, yet at the last minute Beijing denied entry to the investigators. This prompted WHO to take the rare step of criticizing China, which relented and allowed the group to enter the country this week.

The brief standoff highlights a more serious problem: the inadequacy of WHO's current investigative framework for exploring all plausible origins of Covid-19. The world needs an inquiry that considers not just natural origins but the possibility that SARS-CoV-2, the virus that causes Covid-19, escaped from a laboratory. The WHO team, however, plans to build on reports by Chinese scientists rather than mount an independent investigation. Given that Chinese authorities have been slow to release information, penalized scientists and doctors who shared clinical and genomic details of the novel coronavirus, and have since demonstrated a keen interest in controlling the narrative of how the virus emerged, this is not a promising foundation for WHO's investigation.

The WHO team includes experts who traced the origins of Ebola and MERS outbreaks, but critics are concerned that it doesn't have the expertise for an investigation that would examine possible lab origins. Dr. David Relman of Stanford University, who raised the possibility early on that the virus might have leaked from a lab, told us: "Based on the scant information that has been shared publicly about the WHO investigation, it doesn't appear that WHO has adequately represented the range of views and perspectives of key stakeholders or incorporated all needed forms of expertise." Responding to whether the



**Critics are concerned that the WHO team doesn't have the expertise for an investigation that would examine possible lab origins of the coronavirus.**

WHO team will investigate lab origins, Dr. Peter Ben Embarek, the leader of the team, told us, "If our studies point to a possible lab accident, then other international mechanisms would be involved to document such an event. It would take time and additional types of expertise."



Tedros Adhanom Ghebreyesus, director-general of the World Health Organization, at a press conference in March 2020.

PHOTO: SALVATORE DI NOLFI/ASSOCIATED PRESS

Could the virus have escaped from a laboratory? Then-deputy U.S. national security adviser Matthew Pottinger told international leaders late last year that the latest intelligence points to SARS-CoV-2 having originated from the Wuhan Institute of Virology (WIV). This intelligence has not been made public, and China has denied that the virus came from a lab. Dr. Shi Zhengli, whose lab at WIV has been a suspected source of the virus, told Scientific American last March that "none of the [early SARS-CoV-2] sequences matched those of the viruses her team had sampled from bat caves."

The hypothesis that SARS-CoV-2 originated in a lab remains controversial. Last March, in the journal *Nature Medicine*, Dr. Kristian Andersen of the Scripps Research Institute and colleagues asserted that "SARS-CoV-2 is not a laboratory construct or a purposefully manipulated virus." They said there was no evidence to support lab-based origins and that the available data was consistent with natural evolution. Dr. David Robertson of the University of Glasgow told us that "SARS-CoV-2 is just too different to the [viruses] we were aware of prior to its emergence."

**The ability to build coronavirus genomes without leaving traces of manipulation has existed for years.**

In November, however, in the journal *PNAS*, Dr. Relman wrote that Dr. Andersen's argument didn't acknowledge that unpublished viruses closely related to SARS-CoV-2 could have been studied in a laboratory. For more than a decade, Dr. Shi has been publishing experiments on "chimera" coronaviruses, built by inserting parts of newly found viruses into better known viruses to understand how novel viruses could

infect human cells. These were used to assess the risk that such viruses could spill over



into humans.

The ability to build coronavirus genomes without leaving traces of manipulation has existed for years. Dr. Ralph Baric of the University of North Carolina at Chapel Hill, a world-leading coronavirus expert and collaborator of Dr. Shi, told an Italian television documentary last June, “In sequence databases there were sequences for a large number of bat coronaviruses that were SARS-like, reported out of China.” He added that “whether the virus existed beforehand, it would only be within the records of the Institute of Virology in Wuhan.”

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For some scientists, the location of the first detected outbreak is enough to raise suspicions.

In the words of Dr. Richard Ebright of Rutgers University, “the outbreak occurred on the doorstep of laboratories that conduct the world’s largest research project on horseshoe-bat viruses, that have the world’s largest collection of horseshoe-bat viruses, and that possessed and worked with the world’s closest sequenced relative of the outbreak virus. The laboratories actively searched for new horseshoe-bat viruses in horseshoe-bat colonies

in caves in remote rural areas in Yunnan province, brought those new horseshoe-bat viruses to Wuhan, and then mass-produced and studied those new horseshoe-bat viruses, year-round, inside Wuhan.”

Such concerns have gained prominence over the past year and were recently explored in a [much-discussed article](#) in New York magazine, “The Lab-Leak Hypothesis” by Nicholson Baker.



In January 2020, a police officer stands guard outside the seafood market in Wuhan, China, where the coronavirus was first detected.

PHOTO: HECTOR RETAMAL/AFP/GETTY IMAGES

SARS viruses are known to have escaped previously from laboratories in Singapore, Taiwan and twice in Beijing. Dr. Maciej Boni of Pennsylvania State University told us that if the virus escaped from the Wuhan lab (though he thinks this is unlikely), he would expect that “some of the early December cases should be traceable to WIV employees, family members of WIV employees or frequent social contacts of WIV employees. If this evidence is presented, it will be the first ‘positive evidence’ that SARS-CoV-2 may have a lab origin.”

What would it take to properly investigate possible lab origins? Dr. Relman said that “it will be critical to obtain independently verified, time-stamped records of sample

inventories, data, lab notebooks and records, internal and external communications, personnel health records and serum samples, and access to personnel so that they can be interviewed in private without fear of repercussions.” Yet the path to such a credible investigation seems nearly impossible in the current geopolitical climate.

Several scientists also told us they were troubled by the presence on the WHO team of Dr. Peter Daszak of the New York-based EcoHealth Alliance. Dr. Daszak has been a longtime collaborator of Dr. Shi since they worked together to trace SARS viruses to bats after the 2003 epidemic. His organization has administered more than \$100 million in U.S. federal grants to fund overseas fieldwork and laboratory experiments, including those performed by WIV, to find and characterize new viruses in order to predict the next pandemic, according to the EcoHealth Alliance.

**Last February, Dr. Peter Daszak organized a statement in The Lancet, a prominent medical journal, to ‘condemn conspiracy theories suggesting that Covid-19 doesn’t have a natural origin.’**

Last February, Dr. Daszak organized [a statement](#) in The Lancet, a prominent medical journal, to “condemn conspiracy theories suggesting that Covid-19 doesn’t have a natural origin.” The statement was drafted when little was yet known about the virus. Dr. Daszak declined to comment for this piece, but a spokesman for Dr. Daszak told us: “The Lancet letter was written during a time in which Chinese scientists were receiving death threats and the letter was intended as a showing of support for them as they were caught between important work trying to stop an outbreak and the crush of online harassment.” Yet, in June, Dr. Daszak

wrote an opinion piece for the Guardian headlined, “Ignore the conspiracy theories: scientists know Covid-19 wasn’t created in a lab.”

The spokesman for Dr. Daszak told us that any questions about his potential conflict of interest should be referred to WHO. Dr. Ben Embarek said that he sees no problem in having Dr. Daszak on his investigative team: “Of course the WHO team will have discussion with the scientists and researchers in Wuhan. And therefore it is good to have on the team someone who knows the area well.”

Miles Pomper, a co-author of [an expert guide](#) to investigating outbreak origins published in October by the Middlebury Institute of International Studies at Monterey, said that “The independence of the WHO investigation may be seriously compromised by the process used to choose investigators.... In particular, the choice of Dr. Daszak, who has a personal stake in ensuring current Chinese practices continue and who is a longtime collaborator of a scientist at the center of the investigation, is likely to taint its results.”

Another co-author of the guide, Dr. Filippa Lentzos, said, “We also need to take a hard look in the mirror. It is our own virologists, funders and publishers who are driving and endorsing the practice of actively hunting for viruses and the high-risk research of deliberately making viruses more dangerous to humans. We need to be more open about the heavily vested interests of some of the scientists given prominent platforms to make claims about the pandemic’s origins.”

As a scientist and a science writer, we believe that both natural and lab-based scenarios of Covid-19’s origins must be rigorously investigated, not only to avert future pandemics but for the sake of science’s reputation. The formal investigation launched by WHO is only

taking steps to look into natural origins. That needs to change.

*—Dr. Chan is a researcher at the Broad Institute of MIT and Harvard. Mr. Ridley is a member of the House of Lords and the author, most recently, of “How Innovation Works: And Why It Flourishes in Freedom.”*

*Appeared in the January 16, 2021, print edition.*

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# To stop the next pandemic, we need to unravel the origins of COVID-19

David A. Relman<sup>a,b,c,d,1</sup> 

We find ourselves ten months into one of the most catastrophic global health events of our lifetime and, disturbingly, we still do not know how it began. What's even more troubling is that despite the critical importance of this question, efforts to investigate the origins of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) virus and of the associated disease, coronavirus disease 2019 (COVID-19), have become mired in politics, poorly supported assumptions and assertions, and incomplete information.

SARS-CoV-2 is a betacoronavirus whose apparent closest relatives, RaTG13 and RmYN02, are reported

to have been collected from bats in 2013 and 2019, respectively, in Yunnan Province, China (1). COVID-19 was first reported in December 2019 more than 1,000 miles away in Wuhan City, Hubei Province, China. Beyond these facts, the "origin story" is missing many key details, including a plausible and suitably detailed recent evolutionary history of the virus, the identity and provenance of its most recent ancestors, and surprisingly, the place, time, and mechanism of transmission of the first human infection. Even though a definitive answer may not be forthcoming, and even though an objective analysis requires addressing



To avoid or mitigate the dire consequences of this and future pandemics (here, people in PPE bury a victim in Delhi, India in June), unraveling the origins of SARS-CoV-2 and COVID-19 will be essential—even though a definitive answer may be elusive, and an objective analysis means broaching some uncomfortable possibilities. Image credit: Shutterstock/PradeepGaur.

<sup>a</sup>Department of Medicine, Stanford University School of Medicine, Stanford, CA 94305; <sup>b</sup>Department of Microbiology & Immunology, Stanford University School of Medicine, Stanford, CA 94305; <sup>c</sup>Center for International Security and Cooperation, Stanford University, Stanford, CA 94305; and <sup>d</sup>Infectious Diseases Section, Veterans Affairs Palo Alto Health Care System, Palo Alto, CA 94304

The author declares no competing interest.

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<sup>1</sup>Email: relman@stanford.edu.

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some uncomfortable possibilities, it is crucial that we pursue this question. Preventing the next pandemic depends on understanding the origins of this one.

There are several potential origin scenarios. First, SARS-CoV-2 may have evolved in bats, which are known reservoirs of immense coronavirus diversity (2), and then spread directly, or indirectly via an intermediate host, to humans through natural mechanisms. The degree of anticipated but undiscovered natural diversity clearly lends support to this scenario, as well as support to other scenarios. Second, SARS-CoV-2 or a recent ancestor virus may have been collected by humans from a bat or other animal and then brought to a laboratory where it was stored knowingly or unknowingly, propagated and perhaps manipulated genetically to understand its biological properties, and then released accidentally.

Some have argued that a deliberate engineering scenario is unlikely because one would not have had the insight *a priori* to design the current pandemic virus (3). This argument fails to acknowledge the possibility that two or more as yet undisclosed ancestors (i.e., more proximal ancestors than RaTG13 and RmYN02) had already been discovered and were being studied in a laboratory—for example, one with the SARS-CoV-2 backbone and spike protein receptor-binding domain, and the other with the SARS-CoV-2 polybasic furin cleavage site. It would have been a logical next step to wonder about the properties of a recombinant virus and then create it in the laboratory. Alternatively, the complete SARS-CoV-2 sequence could have been recovered from a bat sample and viable virus resurrected from a synthetic genome to study it, before that virus accidentally escaped from the laboratory. The third scenario, seemingly much less likely, involves laboratory manipulation or release, with the clear intention of causing harm.

Even though strong opinions abound, none of these scenarios can be confidently ruled in or ruled out with currently available facts. Just because there are no public reports of more immediate, proximal ancestors in natural hosts, doesn't mean that these ancestors don't exist in natural hosts or that COVID-19 didn't begin as a spillover event. Nor does it mean that they have not been recovered and studied, or deliberately recombined in a laboratory.

Why do these distinctions matter? If we find more concrete evidence of a "spill-over" event with SARS-CoV-2 passing directly from bat to human, then efforts to understand and manage the bat-human interface need to be significantly strengthened. But if SARS-CoV-2 escaped from a lab to cause the pandemic, it will become critical to understand the chain of events and prevent this from happening again. Rather than resorting to hunches or finger-pointing, each scenario must be systematically and objectively analyzed using the best available science-based approaches. There is a path to greater clarity. It requires scientific rigor, forensic approaches, deliberate methods, transparency, and cooperation.

In an effort to reveal the origins of the pandemic, researchers so far have focused on the SARS-CoV-2

genome sequence. However, the sequence of the pandemic virus tells us only so much. First, the closest known relatives, RaTG13 and RmYN02, are not that close (4). Second, there is probably more than one recent ancestral lineage that contributes to SARS-CoV-2 because its genome shows evidence of recombination between different parental viruses. In nature, recombination is common among coronaviruses. But it's also common in some research laboratories where recombinant engineering is used to study those viruses. The bottom line is simple: We need to identify the immediate parent(s) of SARS-CoV-2, and they're missing.

To find its parents and understand its recent history, we need 1) additional genome sequences of coronaviruses from relevant bats and other suspect

**A deliberative process for investigating the origins of this pandemic must be representative of all relevant disciplines, expertise, and stakeholders; must achieve political neutrality, scientific balance, and access to all relevant information and samples; and must operate with transparency and independent oversight. Without these features, it will not be credible, trustworthy, or effective.**

hosts—some of these likely exist already in laboratories, given the efforts so far undertaken to survey bats in particular (2, 5); 2) measurements of SARS-CoV-2 evolution under a variety of defined conditions so that differences between viral genomes can be understood better as differences in time on an evolutionary clock; and 3) data from antibody surveys of humans at high risk of coronavirus exposure and from past cases of similar disease, so that previously unrecognized encounters can be revealed. In addition, we need to address whether there is information about host or environmental samples that contain recent ancestors of SARS-CoV-2, data perhaps not yet publicly available. More generally, are there relevant scientific data, including from coronavirus engineering work in laboratories, that have not been shared widely? Who knew what about relevant viruses and cases of disease before December 2019, and when? This information will go a long way toward clarifying the origins of this pandemic, even if certainty continues to elude us.

The means are just as important as the goals. An investigative process should be transparent, collaborative, international, and, to the extent possible, devoid of political interest. Recent, productive scientific collaborations between the United States and China, for example, provide hope that such a process can be achieved. But the kind of effort required will need to expand far beyond what's taken place so far, and nations other than the United States and China will need to be involved. Conflicts of interest by researchers, administrators, and policymakers on all sides must be revealed and addressed, and all relevant global



constituencies must be included. Both the World Health Organization and *The Lancet* COVID-19 Commission (6) have hinted that they have taken some first steps, but their efforts so far have been cloaked in secrecy (7, 8). A deliberative process for investigating the origins of this pandemic must be representative of all relevant disciplines, expertise, and stakeholders; must achieve political neutrality, scientific balance, and access to all relevant information and samples; and must operate with transparency and independent oversight. Without these features, it will not be credible, trustworthy, or effective.

A more complete understanding of the origins of COVID-19 clearly serves the interests of every person in every country on this planet. It will limit further re-criminations and diminish the likelihood of conflict; it will lead to more effective responses to this pandemic, as well as efforts to anticipate and prevent the next one. It will also advance our discussions about risky science. And it will do something else: Delineating COVID-19's origin story will help elucidate the nature of our very precarious coexistence within the biosphere.

- 
- 1 Y.-Z. Zhang, E. C. Holmes, A genomic perspective on the origin and emergence of SARS-CoV-2. *Cell* **181**, 223–227 (2020).
  - 2 A. Latané et al., Origin and cross-species transmission of bat coronaviruses in China. *Nat. Commun.* **11**, 4235 (2020).
  - 3 K. G. Andersen, A. Rambaut, W. I. Lipkin, E. C. Holmes, R. F. Garry, The proximal origin of SARS-CoV-2. *Nat. Med.* **26**, 450–452 (2020).
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  - 5 Z. Wu et al., Deciphering the bat virome catalog to better understand the ecological diversity of bat viruses and the bat origin of emerging infectious diseases. *ISME J.* **10**, 609–620 (2016).
  - 6 J. D. Sachs et al.; The Lancet COVID-19 Commission. *Lancet* **396**, 454–455 (2020).
  - 7 World Health Organization, WHO experts to travel to China. <https://www.who.int/news-room/detail/07-07-2020-who-experts-to-travel-to-china/>. Accessed 20 September 2020.
  - 8 P. Nuki, S. Newey, Scientists to examine possibility Covid leaked from lab as part of investigation into virus origins. *The Telegraph*, 15 September 2020. <https://www.telegraph.co.uk/global-health/science-and-disease/scientists-examine-possibility-covid-leaked-lab-part-investigation/>. Accessed 27 September 2020.



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**From:** Kosub, David (NIH/OD) [E] [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=3E3 ECCF57F4E4FCFAECA7885F39BEE5-KOSUBD]  
**Sent:** 4/29/2020 7:01:32 PM  
**To:** Black, Jodi (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=782921b9f08249b59a582e93f6963f5f-blackj]; Lauer, Michael (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=90fe9cae30c64cfbb67abd568e882796-lauerm]  
**CC:** OER Press Group [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0373283dff404a969ea109f86919dc9b-OER Press G]  
**Subject:** RE: OER PRESS/NEED YOUR HELP: Media inquiries on EcoHealth Alliance

Thank you both. I'll relay to OCPL. (b) (5)  
David

---

**From:** Black, Jodi (NIH/OD) [E] (b) (6)  
**Sent:** Wednesday, April 29, 2020 2:59 PM  
**To:** Lauer, Michael (NIH/OD) [E] (b) (6); Kosub, David (NIH/OD) [E] (b) (6)  
**Cc:** OER Press Group <OERPressGroup@mail.nih.gov>  
**Subject:** Re: OER PRESS/NEED YOUR HELP: Media inquiries on EcoHealth Alliance

Hi David, (b) (5)  
(b) (5)  
(b) (5)  
(b) (5)

Hope that helps

Best,  
Jodi

Jodi B. Black, PhD, MMSc  
Deputy Director  
Office of Extramural Research, NIH

---

**From:** Mike Lauer (b) (6)  
**Date:** Wednesday, April 29, 2020 at 2:43 PM  
**To:** David Kosub (b) (6), Jodi OER (b) (6)  
**Cc:** OER Press Group <OERPressGroup@mail.nih.gov>, Mike Lauer (b) (6)  
**Subject:** Re: OER PRESS/NEED YOUR HELP: Media inquiries on EcoHealth Alliance

Hi David – our WG meeting is on break. (b) (5)  
(b) (5)  
(b) (5)

Many thanks, Mike

---

**From:** "Kosub, David (NIH/OD) [E]" (b) (6)  
**Date:** Wednesday, April 29, 2020 at 2:31 PM  
**To:** "Black, Jodi (NIH/OD) [E]" (b) (6) "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Cc:** OER Press Group <OERPressGroup@mail.nih.gov>  
**Subject:** FW: OER PRESS/NEED YOUR HELP: Media inquiries on EcoHealth Alliance

Hi Jodi,  
Would you be able to clear the revised statement from OCPL below in Mike's absence? They requested a response and are getting inundated with requests on this  
Thanks  
David

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** Wednesday, April 29, 2020 2:04 PM  
**To:** Fine, Amanda (NIH/OD) [E] (b) (6)  
**Cc:** Myles, Renate (NIH/OD) [E] (b) (6) Wojtowicz, Emma (NIH/OD) [E] (b) (6)  
Black, Jodi (NIH/OD) [E] (b) (6); OER Press Group <OERPressGroup@mail.nih.gov>; Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Hi Amanda – Sorry, I'm tied up this afternoon – here's the table of the history of the grant.

Thanks, Mike

---

**From:** "Fine, Amanda (NIH/OD) [E]" (b) (6)  
**Date:** Wednesday, April 29, 2020 at 1:48 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Cc:** "Myles, Renate (NIH/OD) [E]" (b) (6) "Wojtowicz, Emma (NIH/OD) [E]" (b) (6)  
(b) (6) "Black, Jodi (NIH/OD) [E]" (b) (6) OER Press Group  
<OERPressGroup@mail.nih.gov>  
**Subject:** RE: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Just to update you we've received a few more inquiries on this. Hoping to get back to them as soon as possible. We know you're swamped but when you have a moment let us know if we are able to share the below response.

Thanks!  
Amanda

---

**From:** Fine, Amanda (NIH/OD) [E]  
**Sent:** Wednesday, April 29, 2020 12:38 PM  
**To:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Cc:** Myles, Renate (NIH/OD) [E] (b) (6) Wojtowicz, Emma (NIH/OD) [E] (b) (6)  
(b) (6) Black, Jodi (NIH/OD) [E] (b) (6) OER  
Press Group <OERPressGroup@mail.nih.gov>  
**Subject:** FW: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Hi Mike-

Sorry for the delay,

(b) (5)

(b) (5)

Thanks,  
Amanda

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)

**Sent:** Tuesday, April 28, 2020 7:09 PM

**To:** Fine, Amanda (NIH/OD) [E] (b) (6)

**Cc:** Myles, Renate (NIH/OD) [E] (b) (6); Wojtowicz, Emma (NIH/OD) [E]

(b) (6) Black, Jodi (NIH/OD) [E] (b) (6); OER Press Group

<OERPressGroup@mail.nih.gov>; Lauer, Michael (NIH/OD) [E] (b) (6)

**Subject:** Re: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Hi Amanda

(b) (5)

Many thanks, Mike

---

**From:** "Fine, Amanda (NIH/OD) [E]" (b) (6)

**Date:** Tuesday, April 28, 2020 at 5:54 PM

**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6)

**Cc:** "Myles, Renate (NIH/OD) [E]" (b) (6); "Wojtowicz, Emma (NIH/OD) [E]"



(b) (6) "Black, Jodi (NIH/OD) [E]" (b) (6) OER Press Group  
<OERPressGroup@mail.nih.gov>

**Subject:** RE: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Hi Mike-

As you are probably can guess we're getting a lot of media inquiries on this topic. There have been several articles that cite the April 19 letter from you to EcoHealth Alliance. Since this letter is now somewhat public, the first paragraph has definitely been quoted in several places, (b) (5)

(b) (5)

(b) (5)

Thanks for your guidance,  
Amanda

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** Tuesday, April 28, 2020 1:39 PM  
**To:** Fine, Amanda (NIH/OD) [E] (b) (6) Myles, Renate (NIH/OD) [E] (b) (6)  
Black, Jodi (NIH/OD) [E] (b) (6) Showe, Melanie (NIH/OD) [E] (b) (6)  
**Cc:** Wojtowicz, Emma (NIH/OD) [E] (b) (6) OER Press Group  
<OERPressGroup@mail.nih.gov>; Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Hi Amanda - (b) (5)

(b) (5)

(b) (5)

Many thanks, Mike

---

**From:** "Fine, Amanda (NIH/OD) [E]" (b) (6)  
**Date:** Tuesday, April 28, 2020 at 12:40 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6) "Myles, Renate (NIH/OD) [E]"  
(b) (6) "Black, Jodi (NIH/OD) [E]" (b) (6) "Showe, Melanie (NIH/OD)  
[E]" (b) (6)  
**Cc:** "Wojtowicz, Emma (NIH/OD) [E]" (b) (6) OER Press Group  
<OERPressGroup@mail.nih.gov>  
**Subject:** RE: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Hi Mike-

Thanks, regarding the highlighted below, (b) (5)

Amanda

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** Tuesday, April 28, 2020 12:12 PM  
**To:** Fine, Amanda (NIH/OD) [E] (b) (6) Myles, Renate (NIH/OD) [E] (b) (6)  
Black, Jodi (NIH/OD) [E] (b) (6) Showe, Melanie (NIH/OD) [E] (b) (6)  
**Cc:** Wojtowicz, Emma (NIH/OD) [E] (b) (6) OER Press Group  
<OERPressGroup@mail.nih.gov>; Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Hi Amanda – (b) (5)

(b) (5)

Thanks, Mike

---

**From:** "Fine, Amanda (NIH/OD) [E]" (b) (6)  
**Date:** Tuesday, April 28, 2020 at 12:05 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6) "Myles, Renate (NIH/OD) [E]"  
(b) (6) "Black, Jodi (NIH/OD) [E]" (b) (6) "Showe, Melanie (NIH/OD)  
[E]" (b) (6)  
**Cc:** "Wojtowicz, Emma (NIH/OD) [E]" (b) (6) OER Press Group  
<OERPressGroup@mail.nih.gov>  
**Subject:** RE: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Hi Mike-

Science magazine asked for the "law or regulation" that gives NIH authority to stop funding a grant midstream in the absence of fraud or other findings of misconduct?

Based on what we discussed yesterday, how do you recommend we respond? (b) (5)

Thanks!  
Amanda

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** Monday, April 27, 2020 7:21 PM  
**To:** Myles, Renate (NIH/OD) [E] (b) (6) Fine, Amanda (NIH/OD) [E] (b) (6)  
Black, Jodi (NIH/OD) [E] (b) (6) Showe, Melanie (NIH/OD) [E] (b) (6)  
**Cc:** Wojtowicz, Emma (NIH/OD) [E] (b) (6) OER Press Group

<OERPressGroup@mail.nih.gov>; Lauer, Michael (NIH/OD) [E] (b) (6)

**Subject:** Re: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Hi Renate - (b) (5)

Best, Mike

---

**From:** "Myles, Renate (NIH/OD) [E]" (b) (6)

**Date:** Monday, April 27, 2020 at 7:20 PM

**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6) "Fine, Amanda (NIH/OD) [E]"

(b) (6) "Black, Jodi (NIH/OD) [E]" (b) (6) "Showe, Melanie (NIH/OD) [E]" (b) (6)

**Cc:** "Wojtowicz, Emma (NIH/OD) [E]" (b) (6) OER Press Group  
<OERPressGroup@mail.nih.gov>

**Subject:** RE: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Hi Mike:

(b) (5)

Thanks,  
Renate

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)

**Sent:** Monday, April 27, 2020 7:14 PM

**To:** Fine, Amanda (NIH/OD) [E] (b) (6) Black, Jodi (NIH/OD) [E] (b) (6) Showe, Melanie (NIH/OD) [E] (b) (6)

**Cc:** Myles, Renate (NIH/OD) [E] (b) (6) Wojtowicz, Emma (NIH/OD) [E] (b) (6) OER Press Group <OERPressGroup@mail.nih.gov>; Lauer, Michael (NIH/OD) [E] (b) (6)

**Subject:** Re: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Hi Amanda

Here's a revised paragraph. (b) (5)

(b) (5)

Thanks, Mike

(b) (5)



---

**From:** "Fine, Amanda (NIH/OD) [E]" (b) (6)  
**Date:** Monday, April 27, 2020 at 6:22 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6) "Black, Jodi (NIH/OD) [E]"  
(b) (6) "Showe, Melanie (NIH/OD) [E]" (b) (6)  
**Cc:** "Myles, Renate (NIH/OD) [E]" (b) (6) "Wojtowicz, Emma (NIH/OD) [E]"  
(b) (6), OER Press Group <OERPressGroup@mail.nih.gov>  
**Subject:** RE: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Hi Mike-

Thanks for sharing the report. Based on what you've shared, (b) (5)

(b) (5)

(b) (5)

Thanks in advance for your guidance,  
Amanda

Standard language:

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** Monday, April 27, 2020 5:45 PM  
**To:** Fine, Amanda (NIH/OD) [E] (b) (6) Black, Jodi (NIH/OD) [E] (b) (6) Showe,  
Melanie (NIH/OD) [E] (b) (6)  
**Cc:** Myles, Renate (NIH/OD) [E] (b) (6) Wojtowicz, Emma (NIH/OD) [E]  
(b) (6) OER Press Group <OERPressGroup@mail.nih.gov>; Lauer, Michael (NIH/OD) [E]  
(b) (6)  
**Subject:** Re: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Hi Amanda – (b) (5)

But I'm not seeing this in any public venue.

Best, Mike

---

**From:** "Fine, Amanda (NIH/OD) [E]" (b) (6)  
**Date:** Monday, April 27, 2020 at 4:27 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6) "Black, Jodi (NIH/OD) [E]" (b) (6) "Showe, Melanie (NIH/OD) [E]" (b) (6)  
**Cc:** "Myles, Renate (NIH/OD) [E]" (b) (6) "Wojtowicz, Emma (NIH/OD) [E]" (b) (6) OER Press Group <OERPressGroup@mail.nih.gov>  
**Subject:** RE: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Thanks Mike-and is that response public?

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** Monday, April 27, 2020 4:17 PM  
**To:** Fine, Amanda (NIH/OD) [E] (b) (6) Black, Jodi (NIH/OD) [E] (b) (6) Showe, Melanie (NIH/OD) [E] (b) (6)  
**Cc:** Myles, Renate (NIH/OD) [E] (b) (6) Wojtowicz, Emma (NIH/OD) [E] (b) (6) OER Press Group <OERPressGroup@mail.nih.gov>; Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Hi Amanda – (b) (5)

Best, Mike

---

**From:** "Fine, Amanda (NIH/OD) [E]" (b) (6)  
**Date:** Monday, April 27, 2020 at 3:40 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6) "Black, Jodi (NIH/OD) [E]" (b) (6) "Showe, Melanie (NIH/OD) [E]" (b) (6)  
**Cc:** "Myles, Renate (NIH/OD) [E]" (b) (6) "Wojtowicz, Emma (NIH/OD) [E]" (b) (6) OER Press Group <OERPressGroup@mail.nih.gov>  
**Subject:** RE: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Hi Mike-

Thanks so much again for your input. One question we're not sure how to answer, (b) (5)  
Do you have guidance on how to respond to that question?

Thanks!  
Amanda

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** Monday, April 27, 2020 2:39 PM  
**To:** Fine, Amanda (NIH/OD) [E] (b) (6) Black, Jodi (NIH/OD) [E] (b) (6) Showe, Melanie (NIH/OD) [E] (b) (6) Lauer, Michael (NIH/OD) [E] (b) (6)  
**Cc:** Myles, Renate (NIH/OD) [E] (b) (6) Wojtowicz, Emma (NIH/OD) [E] (b) (6)

(b) (6); OER Press Group <OERPressGroup@mail.nih.gov>  
**Subject:** Re: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Please send me an invite with your conference line, thanks

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**From:** "Fine, Amanda (NIH/OD) [E]" (b) (6)  
**Date:** Monday, April 27, 2020 at 2:32 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6) "Black, Jodi (NIH/OD) [E]" (b) (6) "Showe, Melanie (NIH/OD) [E]" (b) (6)  
**Cc:** "Myles, Renate (NIH/OD) [E]" (b) (6) "Wojtowicz, Emma (NIH/OD) [E]" (b) (6) OER Press Group <OERPressGroup@mail.nih.gov>  
**Subject:** RE: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Either work. What number should we call or do you want to use the OCPL conference line?

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** Monday, April 27, 2020 2:29 PM  
**To:** Fine, Amanda (NIH/OD) [E] (b) (6) Black, Jodi (NIH/OD) [E] (b) (6) Showe, Melanie (NIH/OD) [E] (b) (6)  
**Cc:** Myles, Renate (NIH/OD) [E] (b) (6) Wojtowicz, Emma (NIH/OD) [E] (b) (6) OER Press Group <OERPressGroup@mail.nih.gov>; Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Probably best for us to talk – I'm "free" from 3:05 to 3:25 if that works.

Thanks, Mike

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**From:** "Fine, Amanda (NIH/OD) [E]" (b) (6)  
**Date:** Monday, April 27, 2020 at 2:21 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6) "Black, Jodi (NIH/OD) [E]" (b) (6)  
**Cc:** "Myles, Renate (NIH/OD) [E]" (b) (6) "Wojtowicz, Emma (NIH/OD) [E]" (b) (6) OER Press Group <OERPressGroup@mail.nih.gov>  
**Subject:** FOR INPUT AND GUIDANCE: Media inquiries on EcoHealth Alliance

Hi Mike and Jodi -

NIAID has been receiving inquiries about the EcoHealth Alliance grant. In addition to the 2 listed below in Jen's email they received a similar one from Newsweek. We want to answer these questions. Would you provide guidance on how best to answer them? Thanks and hope you're both staying well.

Newsweek:

**From:** Fred Guterl <f.guterl@newsweek.com>

Hi, we're running a story tomorrow morning at 10 am that mentions Dr. Fauci and we'd like to ask for a comment.



The story is about the possibility that SARS-Cov-2 is a product of gain of function research at the Wuhan Institute of Virology. The story mentions Dr. Fauci as an early proponent of the work of Ron Fouchier et al. ten years ago, quotes from his Washington Post article of 2011 on the importance of the research as a way of preparing for a pandemic. We trace the lifting of the moratorium and subsequent accusations that the NIH was acting with too little transparency in approving projects.

Sorry to spring this on you on Sunday night. Many thanks in advance.

Best,  
Fred

---

**From:** Routh, Jennifer (NIH/NIAID) [E] (b) (6)  
**Sent:** Monday, April 27, 2020 1:38 PM  
**To:** Myles, Renate (NIH/OD) [E] (b) (6) Fine, Amanda (NIH/OD) [E]  
(b) (6)  
**Cc:** Billet, Courtney (NIH/NIAID) [E] (b) (6) Stover, Kathy (NIH/NIAID) [E]  
(b) (6) Haskins, Melinda (NIH/NIAID) [E] (b) (6)  
**Subject:** EcoHealth Alliance grant / Wuhan lab  
**Importance:** High

Hi Renate –

NIAID received media inquiries last week from Snopes and Politifact related to the NIAID grant to EcoHealth Alliance (see below). Kathy and I just had a conversation with NIAID grants management and learned that OER communicated with this grantee on Friday and we believe media inquiries on this topic would be best handled by OER now. Happy to discuss more via phone. We are holding on any responses to media on this topic right now.

## INQUIRY FROM SNOPE

### QUESTION:

This is Dan Evon from the fact-checking website Snopes. We've been receiving questions about a recent article published in the [Daily Mail](#) that claims the Obama administration provided a \$3.7 million grant to the Wuhan Institute of Virology, and I was hoping to get some more information from you.

The Daily Mail appears to be referring to NIAID award [R01AI110964](#). That award went to the EcoHealth Alliance in New York and subsequently funded a [research paper](#) from the Wuhan Institute.

Has NIH issued any direct grants to the Wuhan Institute of Virology? The NIH [RePORT](#) tool shows funding to Wuhan University in 2019 and 2018, but not (unless I missed something) from previous years.

Did NIH provide a \$3.7 million grant to the Wuhan Institute of Virology between 2008 and 2016? Can you tell me more about the grants awarded to Wuhan University in 2018 and 2019?

Any information you can provide would be greatly appreciated.

## INQUIRY FROM POLITIFACT

**QUESTION:**

We're fielding a claim that NIH gave a \$3.7 million grant to a virology lab in Wuhan in 2015. Can you share any relevant grant or contract activity around that time and place?

**NIAID PROVIDED THIS RESPONSE (general cleared language):**

First, to be clear, scientific research indicates there is no evidence that SARS-CoV-2 was created in a laboratory: <https://www.sciencedaily.com/releases/2020/03/200317175442.htm>

Most emerging human viruses come from wildlife, and these represent a significant threat to public health and biosecurity in the US and globally, as demonstrated by the SARS epidemic of 2002-03, and the current COVID-19 pandemic. The grant you are referencing is a multi-site, multi-country project supporting research that aims to understand what factors allow coronaviruses, including close relatives to SARS, to evolve and jump into the human population and cause disease (called a spillover event). Specifically, the project includes studying viral diversity in animal (bats) reservoirs, surveying people that live in high-risk communities for evidence of bat-coronavirus infection, and conducting laboratory experiments to analyze and predict which newly discovered viruses pose the greatest threat to human health. The \$3.7M dollar figure is the total funding over 6 years to all sites which include China, Thailand, Cambodia, Laos, Vietnam, Malaysia, Indonesia, and Myanmar. Additional details are available on the NIH RePORTER tool:

[https://projectreporter.nih.gov/project\\_info\\_description.cfm?aid=9819304&icde=49588715&dparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pbll=](https://projectreporter.nih.gov/project_info_description.cfm?aid=9819304&icde=49588715&dparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pbll=)

**REPORTER FOLLOWED UP WITH THESE QUESTIONS:**

Focusing on the money, [does this Spending.gov summary](#) (Grant tab; see Wuhan University) tell me how much the Wuhan lab in question got from the overall \$3.7 million? (b) (5)

Also, is the project done, and has any money due to Wuhan been withdrawn/put on hold, etc? Lastly, if you want to make sure I see the scientific articles specific to the Wuhan research, please feel free to highlight them. I will go through the results list, but it's always better if you make sure I don't miss one.

(b) (5)

Jennifer Routh [E]  
News and Science Writing Branch  
Office of Communications and Government Relations  
National Institute of Allergy and Infectious Diseases (NIAID)  
NIH/HHS  
31 Center Drive Room 7A17C  
Bethesda, MD 20892  
Direct: (b) (6)  
(b) (6)

**Disclaimer:** The information in this e-mail and any of its attachments is confidential and may contain sensitive information. It should not be used by anyone who is not the original intended recipient. If you have received this e-mail in error please inform the sender and delete it from your mailbox or any other storage devices. The National Institute of Allergy and Infectious Diseases shall not accept liability for any statements made that are sender's own and not expressly made on behalf of the NIAID by one of its representatives.

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**From:** Kosub, David (NIH/OD) [E] [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=3E3 ECCF57F4E4FCFAECA7885F39BEE5-KOSUBD]  
**Sent:** 2/23/2021 6:05:32 PM  
**To:** Lauer, Michael (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=90fe9cae30c64cfbb67abd568e882796-lauerm]  
**CC:** Columbus, Megan (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=e8878f99917841749c5ae3fad8d90c73-columbum]; Rabin, Elise (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a3426cfac5b54e8dae0d1aca72262bf3-rabine]  
**Subject:** FW: House Appropriations staff inquiry - WIV grant

Good day Mike,  
OLPA shared a few questions from Rep. Cole's office related to the EcoHealth Alliance grant and WIV sub-award (in the forwarded email below). Below are some proposed answers using the latest versions of vetted language that OCPL has for this issue. Note, the funding table was pulled from the response provided to Sen. McSally last summer. Greatly appreciate your review and feedback.

(b) (5)



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From: LaMontagne, Karen (NIH/OD) [E] [REDACTED] (b) (6)  
Sent: Monday, February 22, 2021 5:32 PM  
To: Kosub, David (NIH/OD) [E] [REDACTED] (b) (6)  
Cc: Rabin, Elise (NIH/OD) [E] [REDACTED] (b) (6)  
Subject: House Appropriations staff inquiry - WIV grant

Hi, David,

Kathryn Salmon from Congressman Tom Cole's appropriations staff reached out with questions related to the Wuhan Institute of Virology grant. I shared the general status of the grant (that it has been reinstated with funds suspended until EcoHealth responds to our requests for information), but Kathryn asked several specific questions that we need help answering. I've listed them below with some of my own comments – many apologies for any duplication, as I feel that we've answered some of these before and I just can't find the information:

- What was the amount of this grant (both amount that has been obligated and amount that has been spent)?
- What was the duration of this grant?
- Why type of monitoring occurred in response to this grant ?
- Does NIH have any ongoing investigations in response to the award of this grant?

Additionally, do we know the status of the lawsuit that was filed by EcoHealth?

OLPA would like to have a response to send to Kathryn by Thursday COB if possible. Let me know if that timeline can't be met.

Thanks, and let me know if you have any questions.

Karen

Karen LaMontagne  
Office of Legislative Policy & Analysis  
National Institutes of Health

(b) (6)



**From:** Lauer, Michael (NIH/OD) [E] [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=90FE9CAE30C64CFBB67ABD568E882796-LAUERM]  
**Sent:** 3/4/2021 12:45:50 AM  
**To:** Bettencourt, Alice (HHS/ASFR) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a6333b72bfc04cd28b844e966e37f17b-alice.bette]; Redding, Tiffani C (HHS/ASFR) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b8b2eb2c740c4b49a38fe1b54918863e-TiffaniC.Re]  
**CC:** Lauer, Michael (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=90fe9cae30c64cfbb67abd568e882796-lauer] Attached letter is the same as page 122  
**Subject:** Re: Wuhan Institute of Virology  
**Attachments:** Draft DHHS WIV response 3 3 21.docx; NIH Response to EcoHealth Response to Suspension\_10\_23\_20.pdf

Hi Alice – see attached for the next iteration. Right now the relevant EcoHealth grant is under full suspension pending the resolution of noncompliance concerns. I'm attaching our October 23<sup>rd</sup> letter; to date, we have not received a response.

See what you think.

Many thanks!

Mike

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**From:** "Bettencourt, Alice (HHS/ASFR)" (b) (6)  
**Date:** Wednesday, March 3, 2021 at 1:09 PM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6), "Redding, Tiffani C (HHS/ASFR)" (b) (6)  
**Cc:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Subject:** RE: Wuhan Institute of Virology

Oops, I hit send too quickly. Mike, could you review how I phrased the partial suspension. That may need some wordsmithing.

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**From:** Bettencourt, Alice (HHS/ASFR)  
**Sent:** Wednesday, March 3, 2021 1:04 PM  
**To:** Lauer, Michael (NIH/OD) [E] (b) (6); Redding, Tiffani C (HHS/ASFR) (b) (6)  
**Cc:** Lauer, Michael (NIH/NHLBI) [E] (b) (6)  
**Subject:** RE: Wuhan Institute of Virology

Hi Tiffani and Mike,

(b) (5)  
I've copied the regulatory provision below and made suggested edits within Mike's email.

Alice

#### §75.371 Remedies for noncompliance.

If a non-Federal entity fails to comply with Federal statutes, regulations, or the terms and conditions of a Federal award, the HHS awarding agency or pass-through entity may impose additional conditions, as described in §75.207. If the HHS awarding agency or pass-through entity determines that noncompliance cannot be remedied by



imposing additional conditions, the HHS awarding agency or pass-through entity may take one or more of the following actions, as appropriate in the circumstances:

(b) (5)

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**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** Wednesday, March 3, 2021 12:52 PM  
**To:** Redding, Tiffani C (HHS/ASFR) (b) (6) Bettencourt, Alice (HHS/ASFR)  
(b) (6)  
**Cc:** Lauer, Michael (NIH/NHLBI) [E] (b) (6)  
**Subject:** Re: Wuhan Institute of Virology

Hi Tiffani – looks good with one change (in red). Thanks so much and happy to discuss, Mike

(b) (5)

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**From:** "Redding, Tiffani C (HHS/ASFR)" (b) (6)  
**Date:** Wednesday, March 3, 2021 at 9:41 AM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6) "Bettencourt, Alice (HHS/ASFR)"

(b) (6)

**Subject:** RE: Wuhan Institute of Virology

Good morning,

Below is the proposed response for the Washington Examiner. We are working with HHS-ASPA on this. Please send me your feedback on this response.

Thank you,

Tiffani

(b) (5)

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**From:** Lauer, Michael (NIH/OD) [E] (b) (6)

**Sent:** Thursday, February 25, 2021 11:43 AM

**To:** Redding, Tiffani C (HHS/ASFR) (b) (6); Bettencourt, Alice (HHS/ASFR)

(b) (6)

**Cc:** Lauer, Michael (NIH/NHLBI) [E] (b) (6)

**Subject:** Re: Wuhan Institute of Virology

Hi Tiffani and Alice – would be happy to discuss with the two of you, if that's OK.

In the meantime, I'm attaching some interesting reading.

Many thanks, Mike

---

**From:** "Redding, Tiffani C (HHS/ASFR)" (b) (6)

**Date:** Thursday, February 25, 2021 at 10:44 AM

**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6), "Bettencourt, Alice (HHS/ASFR)"

(b) (6)

**Subject:** FW: Wuhan Institute of Virology

Good morning,

I received the media inquiry below and am wondering about the status of any upcoming awards to the Wuhan Institute of Virology. Also, are there any fact-based debarment referrals under development for this matter?

Thank you,

Tiffani

**From:** Jerry Dunleavy <jdunleavy@washingtonexaminer.com>

**Sent:** Thursday, February 25, 2021 9:15 AM

**To:** Redding, Tiffani C (HHS/ASFR) (b) (6); Dasher, David (HHS/ASFR) (b) (6)

**Subject:** Wuhan Institute of Virology

Dear Tiffani and David,

My name is Jerry Dunleavy, and I am a reporter with the Washington Examiner.

NIH tells me that it does not have the authority to debar institutions from receiving federal funds, and that it is HHS's Suspension and Debarment Official who can impose debarment and suspension on institutions and individual scientists. I have a number of questions and would greatly appreciate your assistance.

It is my understanding that to date the Wuhan Institute of Virology has not been debarred from receiving federal funds (which I am aware can be distributed either directly through NIH grants or through subawards from an NIH grantee to another institution - like with EcoHealth Alliance receiving an NIH grant then giving a subaward to the Wuhan lab).

Why has HHS not banned the Wuhan lab from receiving any U.S. funds (whether direct funds or indirect funds)?

NIH blocked EcoHealth Alliance from sharing subawards with the Wuhan lab until a number of requirements are met - can HHS say why it has not simply banned the Wuhan lab entirely?

State Department cables from 2018 raised concerns about biosecurity at the Wuhan lab - can HHS say if it reviewed those cables and say why those worries did not result in the Wuhan lab being banned?

Has HHS seen the declassified State Department fact sheet on the Wuhan lab?

The State Department intelligence alleges that the Wuhan lab has worked with the Chinese military for years - does HHS have thoughts on that and can HHS say why that would not result in the Wuhan lab being banned (even indirect U.S. funds)?

The State Department intelligence also alleges that the Wuhan lab has conducted gain of function viral research - does HHS have thoughts on that and can HHS say why that would not result in the Wuhan lab being banned (even indirect U.S. funds)?

The Wuhan Institute of Virology has also been named by the WHO and by numerous U.S. officials - including former Secretary of State Mike Pompeo and former DNI John Ratcliffe - as a possible (and by some a likely) origin of the COVID-19 pandemic - did HHS take that into account and can HHS say why that would not result in the Wuhan lab being banned from receiving U.S. funds (even indirect U.S. funds)?

Many thanks!

JD

--



**Jerry Dunleavy**  
**Washington Examiner**  
[JDunleavy@WashingtonExaminer.com](mailto:JDunleavy@WashingtonExaminer.com)  
**216-375-7101**



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**From:** Lauer, Michael (NIH/OD) [E] [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=90FE9CAE30C64CFBB67ABD568E882796-LAUERM]  
**Sent:** 5/28/2020 4:43:18 PM  
**To:** OER Executive Secretariat [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=de64692fb5a049adabeed7a64fb2c9de-OERExecutiv]; Black, Jodi (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=782921b9f08249b59a582e93f6963f5f-blackj]  
**CC:** Bundesen, Liza (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3cded900576a49aea461d26e93bddac3-lbundese]; Kosub, David (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3e3eccf57f4e4cfcaecaa7885f39bee5-kosubd]; Joshi, Pritty (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3c86da34052e41ccab1b25f9e344ec7d-joship]; Showe, Melanie (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=fbbbc74184e64f7e8a12d9faf8deb58f-showem]; Lauer, Michael (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=90fe9cae30c64cfbb67abd568e882796-lauerm]  
**Subject:** Re: Direct Reply w/ OD Clearance - Wuhan Institute of Virology- Due by COB today, if possible (WF390335)  
**Attachments:** RE: Direct Reply w/ OD Clearance - Wuhan Institute of Virology- Due by COB today, if possible (WF390335); With Rnd2 clearance comments edits Draft wRnd2 Edits Senator McSally - Wuhan lab response msl msl.doc

Thanks Aesha – next version attached.

Best, Mike

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**From:** OER Executive Secretariat (b) (6)  
**Date:** Thursday, May 28, 2020 at 10:52 AM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6), "Black, Jodi (NIH/OD) [E]" (b) (6)  
**Cc:** "Bunden, Liza (NIH/OD) [E]" (b) (6), "Kosub, David (NIH/OD) [E]" (b) (6), "Joshi, Pritty (NIH/OD) [E]" (b) (6), "Showe, Melanie (NIH/OD) [E]" (b) (6)  
**Subject:** RE: Direct Reply w/ OD Clearance - Wuhan Institute of Virology- Due by COB today, if possible (WF390335)

Hi Dr. Lauer -

Please find your attached draft response with Round 2 comments/edits from OGC and NIAID. Would you address the comments and return back to me by COB today, if possible. ES will then forward to HHS for review and clearance. Please let me know if you have any questions or concerns.

Best,  
**Aesha**

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** Monday, May 11, 2020 10:11 PM  
**To:** OER Executive (b) (6); Black, Jodi (NIH/OD) [E] (b) (6)  
**Cc:** Bundesen, Liza (NIH/OD) [E] (b) (6); Kosub, David (NIH/OD) [E] (b) (6); Joshi, Pritty (NIH/OD) [E] (b) (6); Showe, Melanie (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: Direct Reply w/ OD Clearance - Wuhan Institute of Virology- Due by COB today, if possible (WF390335)

Many thanks Aesha – I agree with all the edits and accepted them. Next version attached.



Best, Mike

---

**From:** OER Executive Secretariat (b) (6)  
**Date:** Monday, May 11, 2020 at 10:14 AM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6), "Black, Jodi (NIH/OD) [E]" (b) (6)  
**Cc:** "Bundesen, Liza (NIH/OD) [E]" (b) (6), "Kosub, David (NIH/OD) [E]" (b) (6), "Joshi, Pritty (NIH/OD) [E]" (b) (6), "Showe, Melanie (NIH/OD) [E]" (b) (6)  
**Subject:** RE: Direct Reply w/ OD Clearance - Wuhan Institute of Virology- Due by COB today, if possible (WF390335)

Hi Dr. Lauer –

Please find attached your draft response containing comments from OSP and NIAID. Would you mind editing as necessary and forwarding back to me for ROUND 2 clearance. Please let me know if you have any questions or if you would like to discuss.

Best,  
**Aesha**

---

**From:** Lauer, Michael (NIH/OD) [E] (b) (6)  
**Sent:** Sunday, May 03, 2020 2:16 PM  
**To:** OER Executive Secretariat (b) (6); Black, Jodi (NIH/OD) [E] (b) (6)  
**Cc:** Bundesen, Liza (NIH/OD) [E] (b) (6); Kosub, David (NIH/OD) [E] (b) (6); Joshi, Pritty (NIH/OD) [E] (b) (6); Showe, Melanie (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: Direct Reply w/ OD Clearance - Wuhan Institute of Virology (WF390335)

Hi Aesha – here's my draft.

Many thanks, Mike

---

**From:** OER Executive Secretariat (b) (6)  
**Date:** Wednesday, April 29, 2020 at 10:21 AM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6), "Black, Jodi (NIH/OD) [E]" (b) (6)  
**Cc:** "Bundesen, Liza (NIH/OD) [E]" (b) (6), "Kosub, David (NIH/OD) [E]" (b) (6), "Joshi, Pritty (NIH/OD) [E]" (b) (6), "Showe, Melanie (NIH/OD) [E]" (b) (6)  
**Subject:** Direct Reply w/ OD Clearance - Wuhan Institute of Virology (WF390335)

Hi Mike and Jodi –

Please see the attached letter from Members of Congress who write with concerns about NIH's past and current relationship with China's bio-agent laboratory Wuhan Institute of Virology (WIV) and to ensure no additional tax dollars are directed to this institution. OER has been asked to draft a direct reply for OD Clearance. Would you mind forwarding me a draft response for OD clearance. Please let me know if you have any questions or if you feel this should be assigned to another SME for drafting.

Thanks,

---

Best Regards,  
**Aesha Brandy, MBA\***  
Program Analyst

NIH Office of Extramural Research  
Immediate Office of the Director

---

Building 1, Room 150  
Bethesda, MD 20814

(b) (6)

(b) (6)

*\*Contractor*

---

**From:** OER Executive Secretariat [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D64692FB5A049ADABEED7A64FB2C9DE-OEREXECUTIV]  
**Sent:** 5/28/2020 2:49:59 PM  
**To:** Lauer, Michael (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=90fe9cae30c64cfbb67abd568e882796-lauerm]; Black, Jodi (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=782921b9f08249b59a582e93f6963f5f-blackj]  
**CC:** Bundesen, Liza (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3cded900576a49aea461d26e93bddac3-lbundese]; Kosub, David (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3e3eccf57f4e4fcfaecaa7885f39bee5-kosubd]; Joshi, Pritty (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3c86da34052e41ccab1b25f9e344ec7d-joship]; Showe, Melanie (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=fbbbc74184e64f7e8a12d9faf8deb58f-showem]  
**Subject:** RE: Direct Reply w/ OD Clearance - Wuhan Institute of Virology- Due by COB today, if possible (WF390335)  
**Attachments:** With Rnd2 clearance comments edits Draft wRnd2 Edits Senator McSally - Wuhan lab response msl.doc; McSally-Gaetz Letter to NIH-Wuhan Institute funding - FINAL[4].pdf

Hi Dr. Lauer -

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**Sent:** Monday, May 11, 2020 10:11 PM  
**To:** OER Executive Secretariat (b) (6); Black, Jodi (NIH/OD) [E] (b) (6)  
**Cc:** Bundesen, Liza (NIH/OD) [E] (b) (6); Kosub, David (NIH/OD) [E] (b) (6); Joshi, Pritty (NIH/OD) [E] (b) (6); Showe, Melanie (NIH/OD) [E] (b) (6) Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: Direct Reply w/ OD Clearance - Wuhan Institute of Virology- Due by COB today, if possible (WF390335)

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**Cc:** "Bunden, Liza (NIH/OD) [E]" (b) (6), "Kosub, David (NIH/OD) [E]" (b) (6), "Joshi, Pritty (NIH/OD) [E]" (b) (6), "Showe, Melanie (NIH/OD) [E]" (b) (6)  
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**Aesha**

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**Sent:** Sunday, May 03, 2020 2:16 PM  
**To:** OER Executive Secretariat (b) (6); Black, Jodi (NIH/OD) [E] (b) (6)  
**Cc:** Bundesen, Liza (NIH/OD) [E] (b) (6); Kosub, David (NIH/OD) [E] (b) (6); Joshi, Pritty (NIH/OD) [E] (b) (6); Showe, Melanie (NIH/OD) [E] (b) (6); Lauer, Michael (NIH/OD) [E] (b) (6)  
**Subject:** Re: Direct Reply w/ OD Clearance - Wuhan Institute of Virology (WF390335)

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**From:** OER Executive Secretariat (b) (6)  
**Date:** Wednesday, April 29, 2020 at 10:21 AM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6); "Black, Jodi (NIH/OD) [E]" (b) (6)  
**Cc:** "Bunden, Liza (NIH/OD) [E]" (b) (6); "Kosub, David (NIH/OD) [E]" (b) (6); "Joshi, Pritty (NIH/OD) [E]" (b) (6); "Showe, Melanie (NIH/OD) [E]" (b) (6)  
**Subject:** Direct Reply w/ OD Clearance - Wuhan Institute of Virology (WF390335)

Hi Mike and Jodi –

Please see the attached letter from Members of Congress who write with concerns about NIH's past and current relationship with China's bio-agent laboratory Wuhan Institute of Virology (WIV) and to ensure no additional tax dollars are directed to this institution. OER has been asked to draft a direct reply for OD Clearance. Would you mind forwarding me a draft response for OD clearance. Please let me know if you have any questions or if you feel this should be assigned to another SME for drafting.

Thanks,

---

Best Regards,  
**Aesha Brandy, MBA\***  
Program Analyst  
NIH Office of Extramural Research  
Immediate Office of the Director

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Building 1, Room 150  
Bethesda, MD 20814

(b) (6)

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\*Contractor



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

National Institutes of Health  
Bethesda, Maryland 20892

(b) (5)

(b) (5)

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**Congress of the United States**  
**Washington, DC 20515**

April 21, 2020

The Honorable Francis Collins, M.D.  
Director, U.S. National Institutes of Health  
600 Rockville Pike  
Bethesda, MD 20892

Dear Dr. Collins,

Thank you for your leadership in confronting the coronavirus pandemic. We are writing to express our deep concerns regarding the National Institutes of Health's (NIH) past and current relationship with China's controversial bio-agent laboratory the Wuhan Institute of Virology (WIV) and to ensure no additional U.S. tax dollars are directed to this notorious institution.

On Friday evening, President Donald Trump announced his intention to cut NIH funding for WIV following reports that the agency has been supporting secretive and treacherous laboratory research at the WIV for many years.<sup>1,2</sup> According to the NIH's website, the WIV is currently authorized to receive taxpayer funding for animal research (Assurance ID# F16-00279).<sup>3</sup>

Taxpayers' money should not be sent to a dangerous Chinese state-run bio-agent laboratory that lacks any meaningful oversight from U.S. authorities and is run by adversaries with a history of lab leaks, including SARS, and deception about the causes and extent of deadly disease outbreaks, including COVID-19.

**We respectfully request that all active grants, sub-grants and contracts awarded to WIV be canceled immediately and that WIV be stripped of its eligibility to receive taxpayer funds from the NIH in the future.**

Additionally, please provide the following details about the NIH's relationship with the WIV:

- When did WIV first start receiving funding from the NIH?
- How much total taxpayer funding, by year, has WIV received from the NIH?
- List all active *and* inactive NIH grants, sub-grants or contracts that have in any way supported research at WIV. For each grant, please include:
  - Project title
  - Project number
  - Grantee institution

---

<sup>1</sup> Taxpayer-funded Animal Experiments Tied To Chinese 'Wet Markets' and Wuhan Laboratory, Carlin Becker - <https://www.washingtonexaminer.com/news/taxpayer-funded-animal-experiments-tied-to-chinese-wet-markets-and-wuhan-laboratory>

<sup>2</sup> Trump Says He'll End Obama-Era Funding To Chinese Lab That May Have Spawned The Coronavirus. David Krayden - <https://dailycaller.com/2020/04/18/donald-trump-end-funding-china-lab-coronavrus-covid-19/>

<sup>3</sup> NIH website, Institutions with a PHS Approved Animal Welfare Assurance - <https://olaw.nih.gov/assured/app/index.html#FOREIGN>

- Start and end dates
- Fiscal Year 2019 funding
- Total funding since grant's inception
- Details about WIV's involvement in the project

Thank you for your efforts and assistance in this matter. We look forward to working with you to ensure no future NIH funds are directed to the WIV. If you have any questions regarding this letter, please contact Ed Kim with Sen. Martha McSally ([edward\\_kim@mcsally.senate.gov](mailto:edward_kim@mcsally.senate.gov)) or Devin Murphy with Rep. Matt Gaetz ([devin.murphy@mail.house.gov](mailto:devin.murphy@mail.house.gov)).

Sincerely,



Martha McSally  
U.S. Senator



Matt Gaetz  
Member of Congress

Cc: The Honorable Alex Azar  
Secretary  
U.S. Department of Health & Human Services  
200 Independence Avenue, SW  
Washington, DC 20201



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

National Institutes of Health

(b) (5)

(b) (5)

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**From:** Lauer, Michael (NIH/OD) [E] [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=90FE9CAE30C64CFBB67ABD568E882796-LAUERM]  
**Sent:** 4/19/2020 3:00:34 PM  
**To:** Tabak, Lawrence (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=02e22836b5ff4e9988e3770cfc7ee770-tabakl]  
**CC:** Lauer, Michael (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=90fe9cae30c64cfbb67abd568e882796-lauerm]; Black, Jodi (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=782921b9f08249b59a582e93f6963f5f-blackj]  
**Subject:** FW: Please read and acknowledge receipt -- Actions needed regarding 2R01AI110964-06  
**Attachments:** EcoHealth Alliance re AI grant 4 19 20.pdf

Labeled "High Priority"

---

**From:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Date:** Sunday, April 19, 2020 at 10:59 AM  
**To:** (b) (6) (b) (6), Naomi Schrag (b) (6)  
**Cc:** "Black, Jodi (NIH/OD) [E]" (b) (6)  
**Subject:** Please read and acknowledge receipt -- Actions needed regarding 2R01AI110964-06

Dear Dr. Olival and Ms. Schrag

Please see attached.

Many thanks, Mike

Michael S Lauer, MD  
NIH Deputy Director for Extramural Research  
1 Center Drive, Building 1, Room 144  
Bethesda, MD 20892  
Phone: (b) (6)  
Email: (b) (6)

Date: April 19, 2020

From: Michael S Lauer, MD  
NIH Deputy Director for Extramural Research

Lauer, Michael  
(NIH/OD) [E]  
Digitally signed by Lauer,  
Michael (NIH/OD) [E]  
Date: 2020.04.19 10:47:40  
-04'00'

To: Kevin Olival, PhD  
Vice-President for Research  
EcoHealth Alliance

(b) (6)

Naomi Schrag, JD  
Vice-President for Research Compliance, Training, and Policy  
Columbia University

(b) (6)

Subject: Project Number 2R01AI110964-06

Dear Dr. Olival and Ms. Schrag:

EcoHealth Alliance, Inc. is the recipient, as grantee, of an NIH grant entitled "Understanding the Risk of Bat Coronavirus Emergence." It is our understanding that one of the sub-recipients of the grant funds is the Wuhan Institute of Virology ("WIV"). It is our understanding that WIV studies the interaction between corona viruses and bats. The scientific community believes that the coronavirus causing COVID-19 jumped from bats to humans likely in Wuhan where the COVID-19 pandemic began. There are now allegations that the current crisis was precipitated by the release from WIV of the coronavirus responsible for COVID-19. Given these concerns, we are pursuing suspension of WIV from participation in Federal programs.

While we review these allegations during the period of suspension, you are instructed to cease providing any funds from the above noted grant to the WIV. This temporary action is authorized by 45 C.F.R. § 75.371(d) ("Initiate suspension or debarment proceedings as authorized under 2 C.F.R. part 180"). The incorporated OMB provision provides that the funding agency may, through suspension, immediately and temporarily exclude from Federal programs persons who are not presently responsible where "immediate action is necessary to protect the public interest." 2 C.F.R. § 180.700(c). It is in the public interest that NIH ensure that a sub-recipient has taken all appropriate precautions to prevent the release of pathogens that it is studying. This suspension of the sub-recipient does not affect the remainder of your grant assuming that no grant funds are provided to WIV following receipt of this email during the period of suspension.

---

**From:** Lauer, Michael (NIH/OD) [E] [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=90FE9CAE30C64CFBB67ABD568E882796-LAUERM]  
**Sent:** 4/19/2020 3:02:43 PM  
**To:** Redding, Tiffani C (HHS/ASFR) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b8b2eb2c740c4b49a38fe1b54918863e-TiffaniC.Re]  
**CC:** Lauer, Michael (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=90fe9cae30c64cfbb67abd568e882796-lauerm]; Black, Jodi (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=782921b9f08249b59a582e93f6963f5f-blackj]  
**Subject:** FW: Please read and acknowledge receipt -- Actions needed regarding 2R01AI110964-06  
**Attachments:** EcoHealth Alliance re AI grant 4 19 20.pdf Same Attachment as page 215

Good morning Tiffani – you may already know about this through OGC DHHS (or other DHHS pathways). I'm happy to follow-up with you.

Many thanks and hope you're doing OK.

Best, Mike

Michael S Lauer, MD  
NIH Deputy Director for Extramural Research  
1 Center Drive, Building 1, Room 144  
Bethesda, MD 20892  
Phone: (b) (6)  
Email: (b) (6)

---

**From:** "Lauer, Michael (NIH/OD) [E]" (b) (6)  
**Date:** Sunday, April 19, 2020 at 10:59 AM  
**To:** "olival@ecohealthalliance.org" (b) (6), Naomi Schrag (b) (6)  
**Cc:** "Black, Jodi (NIH/OD) [E]" (b) (6)  
**Subject:** Please read and acknowledge receipt -- Actions needed regarding 2R01AI110964-06

Dear Dr. Olival and Ms. Schrag

Please see attached.

Many thanks, Mike

Michael S Lauer, MD  
NIH Deputy Director for Extramural Research  
1 Center Drive, Building 1, Room 144  
Bethesda, MD 20892  
Phone: (b) (6)  
Email: (b) (6)

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**From:** Bulls, Michelle G. (NIH/OD) [E] [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=B366F1A4382D44C1BDE626E7730C3DD4-BULLSMG]  
**Sent:** 4/24/2020 8:27:23 PM  
**To:** Lauer, Michael (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=90fe9cae30c64cfbb67abd568e882796-lauerm]; Black, Jodi (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=782921b9f08249b59a582e93f6963f5f-blackj]  
**CC:** Bulls, Michelle G. (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b366f1a4382d44c1bde626e7730c3dd4-bullsmg]; Ta, Kristin (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=72dc8e6c4cae4efcaa9e72eabbff2ee3-takr]  
**Subject:** Draft - AI110964 (rev)  
**Attachments:** Draft - AI110964 (rev).docx

(b) (5)





DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

National Institutes of Health  
National Institute of Allergy  
and Infectious Diseases  
Bethesda, Maryland 20892

24 April 2020

(b) (5)





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**From:** Lauer, Michael (NIH/OD) [E] [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=90FE9CAE30C64CFBB67ABD568E882796-LAUERM]  
**Sent:** 4/22/2020 2:00:13 PM  
**To:** Schwetz, Tara (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange AdministrativeGroup (FYDIBOHF23SPDLT)/cn=Recipients/cn=0b1da1e9650d44fa9a9e2d94f24b5035-schwetzta]; Myles, Renate (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=7d317f5626934585b3692a1823c1b522-mylesr]  
**CC:** Lauer, Michael (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=90fe9cae30c64cfbb67abd568e882796-lauer]; Black, Jodi (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=782921b9f08249b59a582e93f6963f5f-blackj]; Hallett, Adrienne (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f1705e2e7c254b84a77f058dbf75b31b-halletta]  
**Subject:** FW: Rep. Gaetz request: NIH letter on subgrant for Wuhan Bat Lab  
**Attachments:** EcoHealth Alliance re AI grant 4 19 20.pdf; Wuhan Lab First Attachment is the same as page 215

Hi Tara and Renate – advice on how to handle this? (b) (5)

Also FYI – an email with some additional background material I scrounged up.

Happy to talk

Thanks, Mike

---

**From:** "Kosub, David (NIH/OD) [E]" (b) (6)  
**Date:** Wednesday, April 22, 2020 at 9:40 AM  
**To:** "Lauer, Michael (NIH/OD) [E]" (b) (6), "Black, Jodi (NIH/OD) [E]" (b) (6), "Bulls, Michelle G. (NIH/OD) [E]" (b) (6), "Ta, Kristin (NIH/OD) [E]" (b) (6)  
**Cc:** "Columbus, Megan (NIH/OD) [E]" (b) (6), "Rabin, Elise (NIH/OD) [E]" (b) (6)  
<rabine@od.nih.gov>  
**Subject:** FW: Rep. Gaetz request: NIH letter on subgrant for Wuhan Bat Lab

Hello Mike , Jodi, Michelle and Kristin,

Please see email string below regarding a request from Rep Gates for a letter NIH sent on Sunday to EcoHealth Alliance asking it to stop funding to its subgrantee, Wuhan Institute of Virology. Please advise on how to handle.

Thank you  
David

---

**From:** LaMontagne, Karen (NIH/OD) [E] (b) (6)  
**Sent:** Wednesday, April 22, 2020 9:32 AM  
**To:** Kosub, David (NIH/OD) [E] (b) (6)  
**Cc:** Rabin, Elise (NIH/OD) [E] (b) (6)  
**Subject:** Rep. Gaetz request: NIH letter on subgrant for Wuhan Bat Lab

Good Morning, David,

Rep. Matt Gaetz's office is asking for a copy of the letter that we sent on Sunday to EcoHealth Alliance asking it to stop funding to its subgrantee, Wuhan Institute of Virology. Adrienne indicated that this is an OER letter. Let me know if you have any questions.

Thanks!  
Karen

---

**From:** Adrienne Hallett (b) (6)  
**Date:** Tuesday, April 21, 2020 at 6:49 PM  
**To:** Karen LaMontagne (b) (6), Chris Everett (b) (6)  
**Subject:** Fwd: NIH subgrant for Wuhan Bat Lab

This is an OER letter.

Begin forwarded message:

**From:** "Hallett, Adrienne (NIH/OD) [E]" (b) (6)  
**Date:** April 21, 2020 at 5:57:08 PM EDT  
**To:** "LaMontagne, Karen (NIH/OD) [E]" (b) (6), "Bradway, Courtney (HHS/ASL)" (b) (6)  
**Cc:** "Everett, Chris (NIH/OD) [E]" (b) (6)  
**Subject:** FW: NIH subgrant for Wuhan Bat Lab

We'll check.

---

**From:** "Bradway, Courtney (HHS/ASL)" (b) (6)  
**Date:** Tuesday, April 21, 2020 at 4:41 PM  
**To:** Adrienne Hallett (b) (6)  
**Subject:** FW: NIH subgrant for Wuhan Bat Lab

Adrienne-

Are you able to share a copy of the letter NIH sent to a NY subgrantee of the Wuhan Institute of Virology re: the email traffic below?

Courtney Bradway  
(b) (6)

---

**From:** Belchior, Isabela (b) (6)  
**Sent:** Tuesday, April 21, 2020 4:38 PM  
**To:** Bradway, Courtney (HHS/ASL) (b) (6)  
**Cc:** Murphy, Devin (b) (6)  
**Subject:** Re: NIH subgrant for Wuhan Bat Lab

Thanks, may I get a copy of the letter you sent?

---  
Isabela Belchior  
Legislative Counsel



Congressman Matt Gaetz (FL-01)

---

**From:** "Bradway, Courtney (HHS/ASL)" (b) (6)  
**Date:** Tuesday, April 21, 2020 at 3:36 PM  
**To:** "Belchior, Isabela" (b) (6)  
**Cc:** "Murphy, Devin" (b) (6)  
**Subject:** RE: NIH subgrant for Wuhan Bat Lab

Circling back- On Sunday, the NIH sent a letter to the grantee in NY to stop funding from going to the Wuhan Institute is Virology, which had been a subgrantee.

Courtney Bradway  
(b) (6)

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**From:** Belchior, Isabela (b) (6)  
**Sent:** Tuesday, April 21, 2020 2:33 PM  
**To:** Bradway, Courtney (HHS/ASL) (b) (6)  
**Cc:** Murphy, Devin (b) (6)  
**Subject:** Re: NIH subgrant for Wuhan Bat Lab

Hi Courtney,

Hope you week has gone well. Do you have an update on this matter?

Thank you

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Isabela Belchior  
Legislative Counsel  
Congressman Matt Gaetz (FL-01)

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**From:** "Bradway, Courtney (HHS/ASL)" (b) (6)  
**Date:** Sunday, April 19, 2020 at 12:15 PM  
**To:** "Belchior, Isabela" (b) (6)  
**Cc:** "Murphy, Devin" (b) (6)  
**Subject:** RE: NIH subgrant for Wuhan Bat Lab

Hi Isabela,

Apologies for the delay. Circling back with our folks to see if we have an update- I know we've been waiting for a few things to land. I'll be in touch soon.

Thanks!

Courtney Bradway  
(b) (6)

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**From:** Belchior, Isabela (b) (6)  
**Sent:** Friday, April 17, 2020 3:18 PM  
**To:** Bradway, Courtney (HHS/ASL) (b) (6)  
**Cc:** Murphy, Devin (b) (6)  
**Subject:** NIH subgrant for Wuhan Bat Lab

Hi Courtney,

Hope you're well. I just tried giving you a call to check in about the congressman's request from Wednesday's phone call. Please let me know if your team has any questions or needs anything from us. When should we expect to get an update?

Thanks so much and happy Friday

Isabela Belchior  
Legislative Counsel  
Congressman Matt Gaetz (FL-01)

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**From:** Lauer, Michael (NIH/OD) [E] [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=90FE9CAE30C64CFBB67ABD568E882796-LAUERM]  
**Sent:** 4/22/2020 12:15:13 AM  
**To:** Tabak, Lawrence (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=02e22836b5ff4e9988e3770cfc7ee770-tabakl]  
**CC:** Lauer, Michael (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=90fe9cae30c64cfbb67abd568e882796-lauerm]; Black, Jodi (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=782921b9f08249b59a582e93f6963f5f-blackj]; Schwetz, Tara (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0b1da1e9650d44fa9a9e2d94f24b5035-schwetzta]  
**Subject:** Wuhan Lab  
**Attachments:** State Department cables warned of safety issues at Wuhan lab studying bat coronaviruses - The Washington Post.pdf; China Lab In Focus Of Coronavirus Outbreak.pdf; Coronavirus China Origin in Wuhan Lab Unproven, But Denials Unconvincing National Review.pdf; Hong Kong Wuhan disease control researcher was once attacked by bats attacking mainland scholars questioned virus leakage Hong Kong 01 Social News.pdf; Botao Xiao origins of COVID 19 virus.pdf; PIIS0140673620301835.pdf

Hi Larry – in follow-up to our 1:1 earlier today, (b) (5)

(b) (5)

Many thanks,

Mike



# State Department cables warned of safety issues at Wuhan lab studying bat coronaviruses

Josh Rogin



A woman wearing a protective suit at a hospital in Wuhan, China. (Aly Song/Reuters)

Two years before the novel coronavirus pandemic upended the world, U.S. Embassy officials visited a Chinese research facility in the city of Wuhan several times and sent two official warnings back to Washington about inadequate safety at the lab, which was conducting risky studies on coronaviruses from bats. The cables have fueled discussions inside the U.S. government about whether this or another Wuhan lab was the source of the virus — even though conclusive proof has yet to emerge.



In January 2018, the U.S. Embassy in Beijing took the unusual step of repeatedly sending U.S. science diplomats to the Wuhan Institute of Virology (WIV), which had in 2015 become China's first laboratory to achieve the highest level of international bioresearch safety (known as BSL-4). WIV issued a news release in English about the last of these visits, which occurred on March 27, 2018. The U.S. delegation was led by Jamison Fouss, the consul general in Wuhan, and Rick Switzer, the embassy's counselor of environment, science, technology and health. Last week, WIV erased that statement from its website, though it remains archived on the Internet.

### Full coverage of the coronavirus pandemic

What the U.S. officials learned during their visits concerned them so much that they dispatched two diplomatic cables categorized as Sensitive But Unclassified back to Washington. The cables warned about safety and management weaknesses at the WIV lab and proposed more attention and help. The first cable, which I obtained, also warns that the lab's work on bat coronaviruses and their potential human transmission represented a risk of a new SARS-like pandemic.

"During interactions with scientists at the WIV laboratory, they noted the new lab has a serious shortage of appropriately trained technicians and investigators needed to safely operate this high-containment laboratory," states the Jan. 19, 2018, cable, which was drafted by two officials from the embassy's environment, science and health sections who met with the WIV scientists. (The State Department declined to comment on this and other details of the story.)

Global Opinions writer Josh Rogin has obtained a 2018 U.S. diplomatic cable urging Washington to better support a Chinese lab researching bat coronaviruses. (Joshua Carroll, Kate Woodsome, Josh Rogin/The Washington Post)

The Chinese researchers at WIV were receiving assistance from the Galveston National Laboratory at the University of Texas Medical Branch and other U.S. organizations, but the Chinese requested additional help. The cables argued that the United States should give the Wuhan lab further support, mainly because its research on bat coronaviruses was important but also dangerous.

As the cable noted, the U.S. visitors met with Shi Zhengli, the head of the research project, who had been publishing studies related to bat coronaviruses for many years. In November 2017, just before the U.S. officials' visit, Shi's team had published research showing that horseshoe bats they had collected from a cave in Yunnan province were very likely from the same bat population that spawned the SARS coronavirus in 2003.

*Sign up for our Coronavirus Updates newsletter to track the outbreak. All stories linked in the newsletter are free to access.*

"Most importantly," the cable states, "the researchers also showed that various SARS-like coronaviruses can interact with ACE2, the human receptor identified for SARS-coronavirus. This finding strongly suggests that SARS-like coronaviruses from bats can be transmitted to humans to cause SARS-like diseases. From a public health perspective, this makes the continued surveillance of SARS-like coronaviruses in bats and study of the animal-human interface critical to future emerging coronavirus outbreak prediction and prevention."

The research was designed to prevent the next SARS-like pandemic by anticipating how it might emerge. But even in 2015, other scientists questioned whether Shi's team was taking unnecessary risks. In October 2014, the U.S. government had imposed a moratorium on funding of any research that makes a virus more deadly or contagious, known as "gain-of-function" experiments.



As many have pointed out, there is no evidence that the virus now plaguing the world was engineered; scientists largely agree it came from animals. But that is not the same as saying it didn't come from the lab, which spent years testing bat coronaviruses in animals, said Xiao Qiang, a research scientist at the School of Information at the University of California at Berkeley.

"The cable tells us that there have long been concerns about the possibility of the threat to public health that came from this lab's research, if it was not being adequately conducted and protected," he said.

There are similar concerns about the nearby Wuhan Center for Disease Control and Prevention lab, which operates at biosecurity level 2, a level significantly less secure than the level-4 standard claimed by the Wuhan Institute of Virology lab, Xiao said. That's important because the Chinese government still refuses to answer basic questions about the origin of the novel coronavirus while suppressing any attempts to examine whether either lab was involved.

Sources familiar with the cables said they were meant to sound an alarm about the grave safety concerns at the WIV lab, especially regarding its work with bat coronaviruses. The embassy officials were calling for more U.S. attention to this lab and more support for it, to help it fix its problems.

"The cable was a warning shot," one U.S. official said. "They were begging people to pay attention to what was going on."

No extra assistance to the labs was provided by the U.S. government in response to these cables. The cables began to circulate again inside the administration over the past two months as officials debated whether the lab could be the origin of the pandemic and what the implications would be for the U.S. pandemic response and relations with China.

Inside the Trump administration, many national security officials have long suspected either the WIV or the Wuhan Center for Disease Control and Prevention lab was the source of the novel coronavirus outbreak. According to the New York Times, the intelligence community has provided no evidence to confirm this. But one senior administration official told me that the cables provide one more piece of evidence to support the possibility that the pandemic is the result of a lab accident in Wuhan.

"The idea that it was just a totally natural occurrence is circumstantial. The evidence it leaked from the lab is circumstantial. Right now, the ledger on the side of it leaking from the lab is packed with bullet points and there's almost nothing on the other side," the official said.

As my colleague David Ignatius noted, the Chinese government's original story — that the virus emerged from a seafood market in Wuhan — is shaky. Research by Chinese experts published in the Lancet in January showed the first known patient, identified on Dec. 1, had no connection to the market, nor did more than one-third of the cases in the first large cluster. Also, the market didn't sell bats.

*The Opinions section is looking for stories of how the coronavirus has affected people of all walks of life. Write to us.*

Shi and other WIV researchers have categorically denied this lab was the origin for the novel coronavirus. On Feb. 3, her team was the first to publicly report the virus known as 2019-nCoV was a bat-derived coronavirus.

The Chinese government, meanwhile, has put a total lockdown on information related to the virus origins. Beijing has yet to provide U.S. experts with samples of the novel coronavirus collected from the earliest cases. The Shanghai lab that published the novel coronavirus genome on Jan. 11 was quickly shut down by authorities for "rectification." Several of the doctors and journalists



who reported on the spread early on have disappeared.

On Feb. 14, Chinese President Xi Jinping called for a new biosecurity law to be accelerated. On Wednesday, CNN reported the Chinese government has placed severe restrictions requiring approval before any research institution publishes anything on the origin of the novel coronavirus.

The origin story is not just about blame. It's crucial to understanding how the novel coronavirus pandemic started because that informs how to prevent the next one. The Chinese government must be transparent and answer the questions about the Wuhan labs because they are vital to our scientific understanding of the virus, said Xiao.

We don't know whether the novel coronavirus originated in the Wuhan lab, but the cable pointed to the danger there and increases the impetus to find out, he said.

"I don't think it's a conspiracy theory. I think it's a legitimate question that needs to be investigated and answered," he said. "To understand exactly how this originated is critical knowledge for preventing this from happening in the future."

[Read this piece in Chinese](#)

[Read this piece in Spanish](#)

[David Ignatius: How did covid-19 begin? Its initial origin story is shaky.](#)

[Marc A. Thiessen: China should be legally liable for the pandemic damage it has done](#)

[We need smart solutions to mitigate the coronavirus's impact. Here are 23.](#)

Michael L. Barnett and David C. Grabowski: Covid-19 is ravaging nursing homes. We're getting what we paid for.

Megan McArdle: Why the lockdown skeptics are wrong

Xinyan Yu: My hometown showed us how a pandemic begins. Could it also show us how one ends?



# China Lab In Focus Of Coronavirus Outbreak

Don Reisinger 05:35pm EDT



People wearing face masks wait to buy roasted duck at a restaurant in Wuhan, China's central Hubei ... [+]

AFP via Getty Images

For months, anyone who said the new SARS coronavirus might have come out of a virology research lab in Wuhan, China was dismissed as a right wing xenophobe.

When Zero Hedge — a financial news website whose comment section certainly fits the right wing stereotype — first put out its own bombastic version of the bat-borne virus escaping a research lab, they were banned from



Twitter.

FOX host Tucker Carlson starting banging this drum last week.

But on Tuesday, the narrative flipped. It's no longer a story shared by China bears and President Trump fans. Today, Josh Rogin, who is said to be as plugged into the State Department as any *Washington Post* columnist, was shown documents dating back to 2015 revealing how the U.S. government was worried about safety standards at that Wuhan lab. In fact, they were worried that one day, one of these experiments — including the one on bat coronaviruses — could escape and become a global nightmare.

In a best case scenario, Rogin's reveal may ultimately get China to cooperate more in regards to the origins of the virus, setting the table for better drugs to mitigate or even cure the deadly COVID-19. At the very least, for a government that likes to save face, the fact that the U.S. government helped build and fund the Wuhan virology lab in question should be enough for China to open that info vault to scientists at the World Health Organization.

[Washington Post Opinion | State Department cables warned of safety issues at Wuhan lab studying bat coronaviruses](#)

"I don't think it's a conspiracy theory. I think it's a legitimate question that needs to be investigated and answered," Xiao Qiang, a research scientist at the School of Information at the University of California at Berkeley told Rogin. "To understand exactly how this originated is critical knowledge for preventing this from happening in the future."

China has not been forthcoming about the new SARS coronavirus origins. They're not being entirely transparent, despite being heralded as such by some leaders.

An example of that secrecy from Rogin:

"In January 2018, the U.S. Embassy in Beijing took the unusual step of repeatedly sending U.S. science diplomats to the Wuhan Institute of Virology (WIV), which had in 2015 become China's first laboratory to achieve the highest level of international bio research safety (known as BSL-4). WIV issued a news release in English about the last of these visits, which occurred on March 27, 2018. The U.S. delegation was led by Jamison Fouss, the consul general in Wuhan, and Rick Switzer, the embassy's counselor of environment, science, technology and health. Last week, WIV erased that statement from its website, though it remains archived on the Internet."



A medical worker cleans up, Wuhan, Hubei Province, China, April 14, 2020. Tomorrow, leishenshan ... [+]

Barcroft Media via Getty Images

Worth noting, at least one young researcher from the lab —Huang Yanling — a graduate student rumored to be patient zero — was scrubbed from the lab's website.

The first, mysterious samples from infected individuals arrived at Wuhan Institute of Virology on December 30, 2019.

According to the Scientific American magazine, Shi Zhengli, a renown bat scientist in China, was told by the Institute's director that the Wuhan Center for Disease Control and Prevention — modeled after our own CDC — had detected a novel coronavirus in two hospital patients. They were suffering from an odd pneumonia. They wanted her laboratory to investigate because the virus belonged to the same family of bat-borne viruses that caused SARS, a disease that — by comparison — only infected 8,100 people and killed just



under 800 in an 8 month period in 2002-03.

"I had never expected this kind of thing to happen in Wuhan, in central China," she was quoted as saying by [Scientific American on March 11](#). Her studies had shown that the southern, subtropical areas of Guangdong, Guangxi and Yunnan had the greatest risk of coronaviruses jumping to humans from animals—particularly bats, a known reservoir for many viruses. If bat coronaviruses were the culprit, she recalled to Scientific American, "could they have come from our lab?"

She has since promised the world that it did not come from her lab, though how she would know that for sure is unknown. We don't know where she is. If she is making the media rounds on Chinese television, few in the U.S. would believe her at this point.

Her research on bat coronaviruses goes back to 2015. Here is [one published in 2015](#) in Nature magazine. There is a lot of information about this new SARS, yet the world still seems stuck in the unknowns.

The U.S. government helped build and fund Wuhan virology labs. The thinking was that it was important for China to get up to par in the global life sciences. It was already a known center of previous outbreaks. Investing there and educating them on international safety standards was just preventative medicine.

Rogin's reporting suggests that government officials were well aware of the research being conducted in the lab on bat coronaviruses and were worried that the lab still had sub-par safety standards.

Rogin writes that, "What the U.S. officials learned during their visits concerned them so much that they dispatched two diplomatic cables categorized as Sensitive But Unclassified back to Washington. The cables warned about



safety and management weaknesses at the WIV lab and proposed more attention and help. The first cable, which I obtained, also warns that the lab's work on bat coronaviruses and their potential human transmission represented a risk of a new SARS-like pandemic."



Chinese President Xi Jinping hears about the progress on a vaccine at the Academy of Military ... [+]

Xinhua News Agency/Getty Images

Rogin's article probably stemmed from conversations with someone inside the State Department boiling at the rim over many weeks as the U.S. faces a "stop the world" moment because of this pandemic.

Over the weekend, the Chinese government banned academic and other research institutions from publishing its research on coronaviruses on their websites.

The thinking there is, perhaps, that people in the U.S. and Europe are using those studies to place blame on the Chinese government. China has been working overtime to convince people that questioning the origin of the disease is racist.

*The Washington Post* story today brings the possibility of a lab leak into the mainstream. It moves the needle on getting a clearer handle on the origin of the virus, and that could eventually lead to more cooperation between the U.S. and China in making sure this does not happen again.

## 7 Of The Best Gaming Chairs For The Serious Gamer

# F

## Shopping

*I write about technology and video games for Forbes Finds.*

Forbes and/or the author may earn a commission on sales made from links on this page.

If you've been playing video games all this time without cushioning yourself within the comforting confines of a bespoke gaming chair, you're missing out. Gaming chairs are designed to offer a supportive and cozy experience while looking right at home alongside your gaming PC or console.

With gaming chairs, you'll find seats that are typically comfortable, look good and offer a variety of color and material options. Maintaining a good posture while sitting for long periods is of paramount importance, and these chairs will help you do just that.



The following were selected as some of the best gaming chairs due to their build quality, support and comfort, as well as style, looks and any additional features. They are also all reasonably priced for what they offer.

## **Vertagear Racing Series S-Line SL4000 Gaming Chair Black/Blue Edition**







Walmart

## **Vertagear Racing Series S-Line SL4000 Gaming Chair Black/Blue Edition**

**450**

The Vertagear S-Line SL4000 is built for comfort. The chair has supportive padding, which is perfect for gamers who want to game for multiple hours in a single session. The chair is easy to assemble too — one person can put it together within 30 minutes or so.

On the bottom of the chair, there are custom Penta RS1 casters, which are coated with PU for a soft and smooth gliding experience on the chair, so moving around shouldn't feel bumpy.

The chair is a little expensive depending on the color you get, but it's still a great choice and should create an awesome gaming experience.

## **Noblechairs Epic Gaming Chair**



Amazon

## **Noblechairs Epic Gaming Chair**

**419**

The Noblechairs Epic is an excellent gaming chair that comes in your choice of

PU leather, NAPPA leather or real leather. It has air gaps at the top to improve airflow to help keep you cool and is built with ergonomics in mind, so you can sit more comfortably. In fact, Noblechairs said that the chairs will conform to the shape of your back and has obtained international certifications for the design.

Like the Secret Lab Omega, the Noblechairs Epic has a tilting mechanism that will allow you to lock it into place wherever you see fit. That allows you to obtain the perfect recline while you're playing games and dramatically enhances the broader experience. It even comes with what Noblechairs calls 4D armrests that let you adjust their height, depth, width and angle to maximize comfort.

## **Secretlab Omega 2020 Prime 2.0 PU Leather LCS Gaming Chair**





Amazon

# Secretlab Omega 2020 Prime 2.0 PU Leather LCS Gaming Chair

350

If you like your gaming chair to look a little more refined, a little less colorful and more demure, then the SecretLab Omega is a great choice. Not only is it competitively priced, but it offers heavy discounts if you shop directly, whether you opt for the more affordable PU leather, fabric covering or even its more premium leather option, though that does come at an added cost.

Updated in 2020, the Omega is the mid-size option that SecretLab offers, fitting everyone up to and below 5'11. There are larger and smaller offerings for those who fall outside the standard height and weight range though, with all shapes and sizes catered to.

Whichever size you opt for, you'll be able to enjoy the Omega's built-in lumbar support (no pillow required), durable armrests and even a gel-lined neck pillow to help keep you cool during the most intense of gaming sessions.

## GTRACING Gaming Chair Racing Chair







Amazon

## GTRACING Gaming Chair Racing Chair



## 156

It might not have the catchiest of names, but the GTRacing Pro GTF88 is an excellent gaming chair at an even more excellent price. Reduced to under \$150 at the time of writing, it's supremely affordable when compared with some of its contemporaries, and though it doesn't have the most high-end of feature sets, it's still a great gaming chair that will both support and comfort you no matter what game you're playing and for how long.

With a sturdy metal frame and ergonomic design, your back, shoulders and arms are all well supported, making sure that you don't develop poor posture habits, the bane of any gamer. That includes pillows for lumbar support and headrest, each of which — and the chair itself — are packed with high-density foam for a superior seating experience.

You can also customize the chair to your heart's desire, with options for swivel, reclining, rocking and height adjustment. Even the armrests can be rotated and height adjusted.

Available in a variety of colors and coated in 100 percent Grade A PU leather, this racing-inspired seat will be a great addition to your gaming arsenal at an affordable price.

## **Corsair CF-9010029-WW T3 RUSH Gaming Chair**



Newegg

## **Corsair CF-9010029-WW T3 RUSH Gaming Chair**

**424**

Corsair might be most well known for starting the RGB revolution on PC components, but it also makes fantastic gaming chairs; particularly of the mesh fabric kind. Its T3 Rush is the latest generation of gaming chair from the component company and it's only improved on what came before.

Designed to help alleviate heat buildup that is all too commonplace on some gaming chairs (particularly with PU leather) the T3 Rush is covered entirely in a soft fabric that makes it breathable, comfortable and soft to the touch.

With included neck cushion and memory foam lumbar support, the T3 Rush sacrifices nothing in its goal to improve comfort and support. Supremely adjustable, you can change the angle of the seat until it's practically a bed, sit straight up, tweak the height and even adjust the orientation of the armrests through four dimensions to make your T3 look and feel exactly how you like it.

## **Arozzi Verona Junior Gaming Chair for Kids**





Amazon

## Arozzi Verona Junior Gaming Chair for Kids

249

Not everyone is as hulking as their gaming avatars, and not everyone who needs a gaming chair is an adult. The Arozzi Verona Junior gaming chair is designed for growing gamers and those with a smaller than average physical footprint, with a maximum weight of just 130lbs. But by catering to such a niche, it offers a fantastic experience specifically tailored to that body type.

Ergonomically designed for a healthy posture, the Verona Junior enjoys both lumbar and headrest pillows, as well as armrests that can be tweaked to the exact position you need them to be in. You can rotate them, or adjust them up and down, though there are no lateral movement options.

Available in a variety of color options and with a comfortable, easy-to-clean pleather exterior, the Verona Junior is a fantastic gaming chair for a growing gamer or someone with a slighter build.

## Nitro Concepts S300 EX Gaming Chair





Amazon

## NITRO CONCEPTS S300 EX Gaming Chair

300

Designed to be its most comfortable gaming chair yet, Nitro Concepts' S300



EX builds on its already sterling pedigree for gaming chair production, with a few new additions. Integrating its new Health Enhancing Adjustment Technology, or H.E.A.T., it leverages lumbar and head support pillows for individual adjustment to the unique contours of your body. They're backed up by cooling holes in the neck-rest, making sure that even with the nylon seat-coating, you'll never get too hot during intense play.

They're built atop a steel frame for additional support, which can be leaned back, rocked, height adjusted and rotated, while the armrests can move up, down, forward and backwards, letting you make this gaming chair just right for your particular seating habits. It's also available in four stylish color options, each with color matching stitching and attractive accents.

Don't want something gaudy? Nitro Concepts has you covered too. The Stealth color option makes everything black, letting your gaming chair blend into the background so you can focus on your game and not look like a stereotypical "gamer" while doing it. You might even be able to swing it as an office chair upgrade.



I'm a freelance technology, video game, and entertainment journalist. I've been writing about the world of technology, video games, and entertainment for the last decade.

...



# The Trail Leading Back to the Wuhan Labs

Jim Geraghty April 3, 2020 1:20 PM



Medical workers in protective suits attend to a patient inside an isolated ward of the Wuhan Red Cross Hospital in Wuhan, the epicenter of the novel coronavirus outbreak, in Hubei Province, China, February 16, 2020. (*China Daily via Reuters*)

**There's no proof the coronavirus accidentally escaped from a laboratory, but we can't take the Chinese government's denials at face value.**

NRPLUS MEMBER  
ARTICLE

/ t is understandable that many would be wary of the notion that the origin of the coronavirus could be discovered by some documentary filmmaker who used to live in China. Matthew Tye, who creates YouTube videos, contends he has identified the source of the coronavirus — and a great deal of the information that he presents, obtained from public records posted on the



Internet, checks out.

The Wuhan Institute of Virology in China indeed posted a job opening on November 18, 2019, "asking for scientists to come research the relationship between the coronavirus and bats."



The Google translation of the job posting is: "Taking bats as the research object, I will answer the molecular mechanism that can coexist with Ebola and SARS- associated coronavirus for a long time without disease, and its relationship with flight and longevity. Virology, immunology, cell biology, and multiple omics are used to compare the differences between humans and other mammals." ("Omics" is a term for a subfield within biology, such as genomics or glycomics.)

**PI Introduction:**

Peng Zhou, Ph.D., Researcher, Wuhan Institute of Virology, Chinese Academy of Sciences, and Leader of Bat Virus Infection and Immunization. He received his PhD in Wuhan Virus Research Institute in 2010 and has worked on bat virus and immunology in Australia and Singapore. In 2009, he took the lead in starting the research on the immune mechanism of bat long-term carrying and transmitting virus in the world. So far, he has published more than 30 SCI articles, including the first and corresponding author's *Nature*, *Cell Host Microbe* and *PNAS*. At present, research on bat virus and immunology is continuing, and it has received support from the National Excellent Youth Fund, the Pilot Project of the Chinese Academy of Sciences, and the Major Project of the Ministry of Science and Technology.

**The main research directions of the research group:**

Taking bats as the research object, I will answer the molecular mechanism that can coexist with Ebola and SARS-associated corona virus for a long time without disease, and its relationship with flight and longevity. Virology, immunology, cell biology, and multiple omics are used to compare the differences between humans and other mammals.

On December 24, 2019, the Wuhan Institute of Virology posted a second job posting. The translation of that posting includes the declaration, "long-term research on the pathogenic biology of bats carrying important viruses has confirmed the origin of bats of major new human and livestock infectious diseases such as SARS and SADS, and a large number of new bat and rodent new viruses have been discovered and identified."

**PI Introduction**

Zhengli Shi, Ph.D., Researcher, Leader of Emerging Virus Group, Wuhan Institute of Virology, Chinese Academy of Sciences, Director of Emerging Infectious Disease Research Center of Wuhan Institute of Virology, Chinese Academy of Sciences, Editor-in-Chief, *Virologica Sinica*. Long-term research on the pathogenic biology of bats carrying important viruses has confirmed the origin of bats of major new human and livestock infectious diseases such as SARS and SADS, and a large number of new bat and rodent new viruses have been discovered and identified. So far in *Nature*, *Science*, *Nat Rev Microbiol*, the *Cell Host Microbe*, *Nat Microbiol*, *PLoS Pathog* and other SCI papers published journals 110 over papers, 2014 onwards for five consecutive years was selected Elsevier "China highly cited scholars' list (Immunology and Microbiology)". Has won the "advanced worker" of the Chinese Academy of Sciences, the "May 1 Labor Medal", Hubei Province has outstanding contributions to young and middle-aged experts, Chinese Academy of Sciences "Excellent Graduate Instructor", French Palm Education Knight Medal and other honors. As the first person to complete the research on "Chinese bat carrying important viruses", he won the first prize of the 2017 Hubei Natural Science Award and the second prize of the 2018 National Natural Science Award. Elected to the American Academy of Microbiology in 2019.

Tye contends that that posting meant, "we've discovered a new and terrible virus, and would like to recruit people to come deal with it." He also contends that "news didn't come out about coronavirus until ages after that." Doctors in



Wuhan knew that they were dealing with a cluster of pneumonia cases as December progressed, but it is accurate to say that a very limited number of people knew about this particular strain of coronavirus and its severity at the time of that job posting. By December 31, about three weeks after doctors first noticed the cases, the Chinese government notified the World Health Organization and the first media reports about a “mystery pneumonia” appeared outside China.

*Scientific American* verifies much of the information Tye mentions about Shi Zhengli, the Chinese virologist nicknamed “Bat Woman” for her work with that species.

Shi — a virologist who is often called China’s “bat woman” by her colleagues because of her virus-hunting expeditions in bat caves over the past 16 years — walked out of the conference she was attending in Shanghai and hopped on the next train back to Wuhan. “I wondered if [the municipal health authority] got it wrong,” she says. “I had never expected this kind of thing to happen in Wuhan, in central China.” Her studies had shown that the southern, subtropical areas of Guangdong, Guangxi and Yunnan have the greatest risk of coronaviruses jumping to humans from animals — *particularly bats, a known reservoir for many viruses. If coronaviruses were the culprit, she remembers thinking, “could they have come from our lab?”*

... By January 7 the Wuhan team determined that the new virus had indeed caused the disease those patients suffered — a conclusion based on results from polymerase chain reaction analysis, full genome sequencing, antibody tests of blood samples and the virus’s ability to infect human lung cells in a petri dish. The genomic sequence of the virus — now officially called SARS-CoV-2 because it is related to the SARS pathogen — was 96 percent identical to that of a coronavirus the researchers had identified in



horseshoe bats in Yunnan, they reported in a paper published last month in *Nature*. "It's crystal clear that bats, once again, are the natural reservoir," says Daszak, who was not involved in the study.

Some scientists aren't convinced that the virus jumped straight from bats to human beings, but there are a few problems with the theory that some other animal was an intermediate transmitter of COVID-19 from bats to humans:

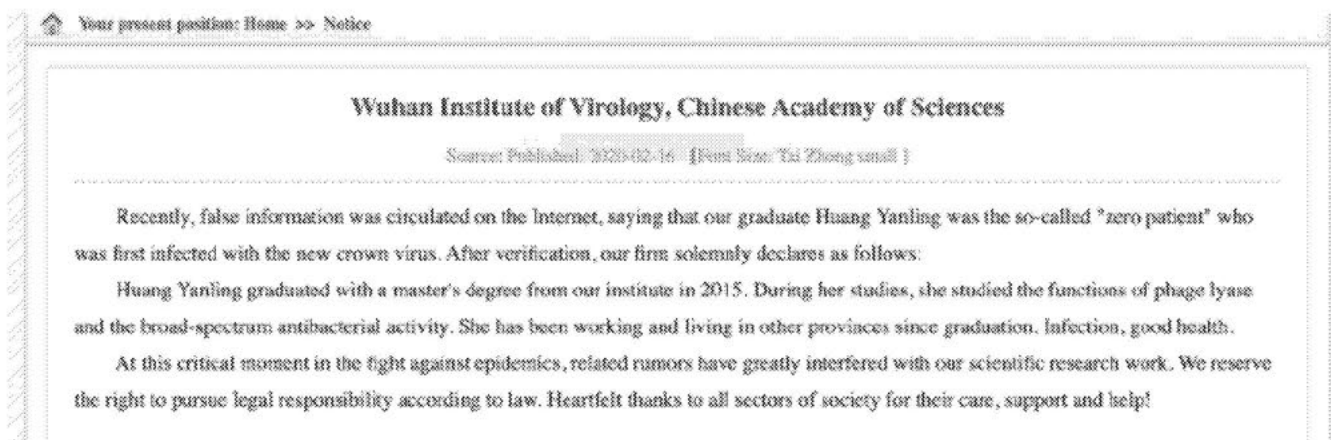
Analyses of the SARS-CoV-2 genome indicate a single spillover event, meaning the virus jumped only once from an animal to a person, which makes it likely that the virus was circulating among people before December. Unless more information about the animals at the Wuhan market is released, the transmission chain may never be clear. There are, however, numerous possibilities. A bat hunter or a wildlife trafficker might have brought the virus to the market. Pangolins happen to carry a coronavirus, which they might have picked up from bats years ago, and which is, in one crucial part of its genome, virtually identical to SARS-CoV-2. But no one has yet found evidence that pangolins were at the Wuhan market, or even that vendors there trafficked pangolins.

On February 4 — one week before the World Health Organization decided to officially name this virus "COVID-19" — the journal *Cell Research* posted a notice written by scientists at the Wuhan Institute of Virology about the virus, concluding, "our findings reveal that remdesivir and chloroquine are highly effective in the control of 2019-nCoV infection in vitro. Since these compounds have been used in human patients with a safety track record and shown to be effective against various ailments, we suggest that they should be assessed in human patients suffering from the novel coronavirus disease." One of the authors of that notice was the "bat woman," Shi Zhengli.

In his YouTube video, Tye focuses his attention on a researcher at the Wuhan






Institute of Virology named Huang Yanling: "Most people believe her to be patient zero, and most people believe she is dead."

There was enough discussion of rumors about Huang Yanling online in China to spur an official denial. On February 16, the Wuhan Institute of Virology denied that patient zero was one of their employees, and interestingly named her specifically: "Recently there has been fake information about Huang Yanling, a graduate from our institute, claiming that she was patient zero in the novel coronavirus." Press accounts quote the institute as saying, "Huang was a graduate student at the institute until 2015, when she left the province and had not returned since. Huang was in good health and had not been diagnosed with disease, it added." None of her publicly available research papers are dated after 2015.



The web page for the Wuhan Institute of Virology's Lab of Diagnostic Microbiology does indeed still have "Huang Yanling" listed as a 2012 graduate student, and her picture and biography appear to have been recently removed — as have those of two other graduate students from 2013, Wang Mengyue and Wei Cuihua.



		
<a href="#">Hu Yuanxuan, 2011 PhD student</a>	<a href="#">Li Heng, 2011 PhD student</a>	<a href="#">Qiao Jinxuan, 2012 PhD student</a>
		
<a href="#">Zhang Yun, 2011 Graduate Student</a>	<a href="#">Wang Ming, 2012 Graduate Student</a>	<a href="#">Huang Yanling, 2012 graduate student</a>

Her name still has a hyperlink, but the linked page is blank. The pages for Wang Mengyue and Wei Cuihua are blank as well.



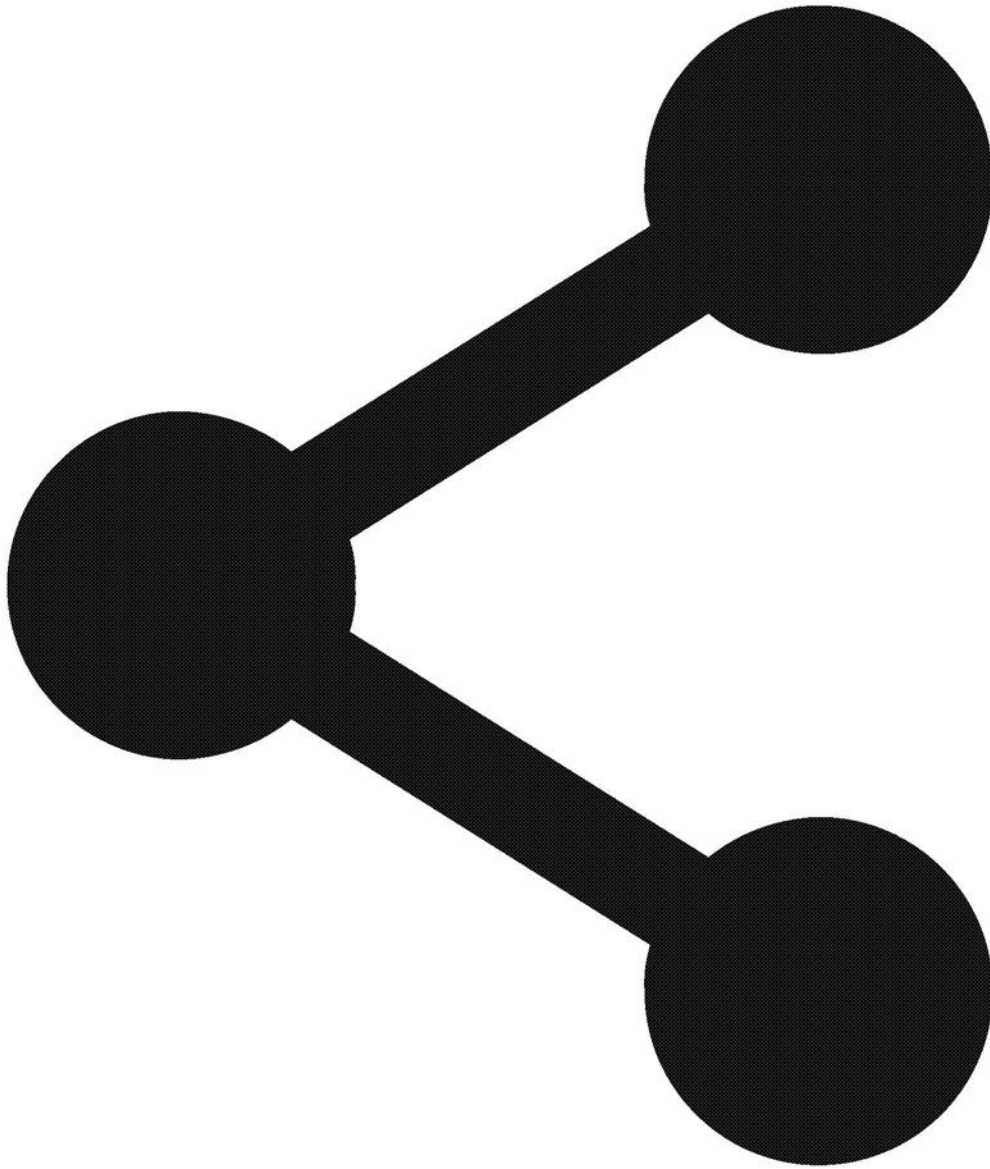
(For what it is worth, the *South China Morning Post* — a newspaper seen as being generally pro-Beijing — reported on March 13 that "according to the



government data seen by the Post, a 55 year-old from Hubei province could have been the first person to have contracted Covid-19 on November 17.")

On February 17, Zhen Shuji, a Hong Kong correspondent from the French public-radio service Radio France Internationale, reported: "when a reporter from the Beijing News of the Mainland asked the institute for rumors about patient zero, the institute first denied that there was a researcher Huang Yanling, but after learning that the name of the person on the Internet did exist, acknowledged that the person had worked at the firm but has now left the office and is unaccounted for."

**NOW WATCH:** 'Health Officials Warn There Is No Proof Coronavirus Is Impacted By Spring And Summer Weather'





<https://www.nationalreview.com/2020/04/coronavirus->

Tye says, "everyone on the Chinese internet is searching for [Huang Yanling] but most believe that her body was quickly cremated and the people working at the crematorium were perhaps infected as they were not given any information about the virus." (The U.S. Centers for Disease Control and



Prevention says that handling the body of someone who has died of coronavirus is safe — including embalming and cremation — as long as the standard safety protocols for handing a decedent are used. It's anyone's guess as to whether those safety protocols were sufficiently used in China before the outbreak's scope was known.)

As Tye observes, a public appearance by Huang Yanling would dispel a lot of the public rumors, and is the sort of thing the Chinese government would quickly arrange in normal circumstances — presuming that Huang Yanling was still alive. Several officials at the Wuhan Institute of Virology issued public statements that Huang was in good health and that no one at the institute has been infected with COVID-19. In any case, the mystery around Huang Yanling may be moot, but it does point to the lab covering up something about her.

China Global Television Network, a state-owned television broadcaster, illuminated another rumor while attempting to dispel it in a February 23 report entitled "Rumors Stop With the Wise":

On February 17, a Weibo user who claimed herself to be Chen Quanjiao, a researcher at the Wuhan Institute of Virology, reported to the public that the Director of the Institute was responsible for leaking the novel coronavirus. The Weibo post threw a bomb in the cyberspace and the public was shocked. Soon Chen herself stepped out and declared that she had never released any report information and expressed great indignation at such identity fraud on Weibo. It has been confirmed that that particular Weibo account had been shut down several times due to the spread of misinformation about COVID-19.

That Radio France Internationale report on February 17 also mentioned the next key part of the Tye's YouTube video. "Xiaobo Tao, a scholar from South China University of Technology, recently published a report that researchers at

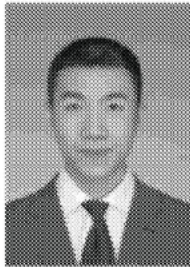
Wuhan Virus Laboratory were splashed with bat blood and urine, and then quarantined for 14 days." HK01, another Hong Kong-based news site, [reported the same claim](#).

This doctor's name is spelled in English as both "Xiaobo Tao" and "Botao Xiao." From 2011 to 2013, Botao Xiao was a [postdoctoral research fellow at Harvard Medical School and Boston Children's Hospital](#), and his [biography is still on the web site of the South China University of Technology](#).

www2.scut.edu.cn/biology\_en/2017/0814/c5951a169022/page.htm

Botao Xiao

time: 2017-08-14



Botao Xiao

Email: [botaoxiao@126.com](mailto:botaoxiao@126.com) or [botaoxiao2013@scu.scut.edu.cn](mailto:botaoxiao2013@scu.scut.edu.cn)

Office: B6-485

Single Molecule Lab: B6-138

#### Education

Ph.D., Northwestern University, Evanston, IL, U.S.A, 2011

M.S., Chongqing University, Institute of Mechanics, Chinese Academy of Sciences, 2004

B.S., Chongqing University, 2000

#### Professional Experience

2017-Present, Professor, South China University of Technology

2013-2017, Professor, Huazhong University of Science and Technology

2011-2013, Postdoctoral Research Fellow, Harvard Medical School, Boston Children's Hospital

#### Research Description

The Xiao group study mainly in the fields of cellular and molecular biomechanics, single molecule biophysics and engineering. Current research areas are: protein-ligand interactions, DNA and RNA assembly, high throughput nanoscale measurements and manipulation, mathematical modeling and quantitative analysis. The experimental techniques include: magnetic tweezers, optical tweezers, biosensors, force probes, fluorescent microscopy, atomic force microscopy, and chromatin dynamics. An online resume is online <http://personal.scnu.edu.cn/botaoxiao/>

At some point in February, Botao Xiao posted a research paper onto ResearchGate.net, "[The Possible Origins of 2019-nCoV coronavirus](#)." He is listed as one author, along with Lei Xiao from Tian You Hospital, which is [affiliated with the Wuhan University of Science and Technology](#). The paper was removed a short time after it was posted, but archived images of its pages can be found [here](#) and [here](#).



The first conclusion of Botao Xiao's paper is that the bats suspected of carrying the virus are extremely unlikely to be found naturally in the city, and despite the stories of "bat soup," they conclude that bats were not sold at the market and were unlikely to be deliberately ingested.

The bats carrying CoV ZC45 were originally found in Yunnan or Zhejiang province, both of which were more than 900 kilometers away from the seafood market. Bats were normally found to live in caves and trees. But the seafood market is in a densely-populated district of Wuhan, a metropolitan [area] of ~15 million people. The probability was very low for the bats to fly to the market. According to municipal reports and the testimonies of 31 residents and 28 visitors, the bat was never a food source in the city, and no bat was traded in the market.

The U.S. Centers for Disease Control and Prevention and the World Health Organization could not confirm if bats were present at the market. Botao Xiao's paper theorizes that the coronavirus originated from bats being used for research at either one of two research laboratories in Wuhan.

We screened the area around the seafood market and identified two laboratories conducting research on bat coronavirus. Within ~ 280 meters from the market, there was the Wuhan Center for Disease Control & Prevention. WHCDC hosted animals in laboratories for research purpose, one of which was specialized in pathogens collection and identification. In one of their studies, 155 bats including *Rhinolophus affinis* were captured in Hubei province, and other 450 bats were captured in Zhejiang province. The expert in Collection was noted in the Author Contributions (JHT). Moreover, he was broadcasted for collecting viruses on nation-wide newspapers and websites in 2017 and 2019. He described that he was once by attacked by bats and the blood of a bat shot on his skin. He knew the extreme danger of the infection so he quarantined himself for 14 days.



In another accident, he quarantined himself again because bats peed on him.

Surgery was performed on the caged animals and the tissue samples were collected for DNA and RNA extraction and sequencing. The tissue samples and contaminated trashes were source of pathogens. They were only ~280 meters from the seafood market. The WHCDC was also adjacent to the Union Hospital (Figure 1, bottom) where the first group of doctors were infected during this epidemic. It is plausible that the virus leaked around and some of them contaminated the initial patients in this epidemic, though solid proofs are needed in future study.

The second laboratory was ~12 kilometers from the seafood market and belonged to Wuhan Institute of Virology, Chinese Academy of Sciences . . .

In summary, somebody was entangled with the evolution of 2019-nCoV coronavirus. In addition to origins of natural recombination and intermediate host, the killer coronavirus probably originated from a laboratory in Wuhan. Safety level may need to be reinforced in high risk biohazardous laboratories. Regulations may be taken to relocate these laboratories far away from city center and other densely populated places.

However, Xiao has told the *Wall Street Journal* that he has withdrawn his paper. "The speculation about the possible origins in the post was based on published papers and media, and was not supported by direct proofs," he said in a brief email on February 26.

The bat researcher that Xiao's report refers to is virologist Tian Junhua, who works at the Wuhan Centre for Disease Control. In 2004, the World Health Organization determined that an outbreak of the SARS virus had been caused by two separate leaks at the Chinese Institute of Virology in Beijing. The Chinese government said that the leaks were a result of "negligence" and the

responsible officials had been punished.

In 2017, the Chinese state-owned Shanghai Media Group made a seven-minute documentary about Tian Junhua, entitled "Youth in the Wild: Invisible Defender." Videographers followed Tian Junhua as he traveled deep into caves to collect bats. "Among all known creatures, the bats are rich with various viruses inside," he says in Chinese. "You can find most viruses responsible for human diseases, like rabies virus, SARS, and Ebola. Accordingly, the caves frequented by bats became our main battlefields." He emphasizes, "bats usually live in caves humans can hardly reach. Only in these places can we find the most ideal virus vector samples."

One of his last statements on the video is: "In the past ten-plus years, we have visited every corner of Hubei Province. We explored dozens of undeveloped caves and studied more than 300 types of virus vectors. But I do hope these virus samples will only be preserved for scientific research and will never be used in real life. Because humans need not only the vaccines, but also the protection from the nature."

The description of Tian Junhua's self-isolation came from a May 2017 report by Xinhua News Agency, repeated by the Chinese news site JQKNews.com:

The environment for collecting bat samples is extremely bad. There is a stench in the bat cave. Bats carry a large number of viruses in their bodies. If they are not careful, they are at risk of infection. But Tian Junhua is not afraid to go to the mountain with his wife to catch Batman.

Tian Junhua summed up the experience that the most bats can be caught by using the sky cannon and pulling the net. But in the process of operation, Tian Junhua forgot to take protective measures. Bat urine dripped on him like raindrops from the top. If he was infected, he could not find any medicine. It was written in the report.



The wings of bats carry sharp claws. When the big bats are caught by bat tools, they can easily spray blood. Several times bat blood was sprayed directly on Tians skin, but he didn't flinch at all. After returning home, Tian Junhua took the initiative to isolate for half a month. As long as the incubation period of 14 days does not occur, he will be lucky to escape, the report said.

Bat urine and blood can carry viruses. How likely is it that bat urine or blood got onto a researcher at either Wuhan Center for Disease Control & Prevention or the Wuhan Institute of Virology? Alternatively, what are the odds that some sort of medical waste or other material from the bats was not properly disposed of, and that was the initial transmission vector to a human being?

Virologists have been vehemently skeptical of the theory that COVID-19 was engineered or deliberately constructed in a laboratory; the director of the National Institutes of Health has written that recent genomic research "debunks such claims by providing scientific evidence that this novel coronavirus arose naturally." And none of the above is definitive proof that COVID-19 originated from a bat at either the Wuhan Center for Disease Control & Prevention or the Wuhan Institute of Virology. Definitive proof would require much broader access to information about what happened in those facilities in the time period before the epidemic in the city.

But it is a remarkable coincidence that the Wuhan Institute of Virology was researching Ebola and SARS-associated coronaviruses in bats before the pandemic outbreak, and that in the month when Wuhan doctors were treating the first patients of COVID-19, the institute announced in a hiring notice that "a large number of new bat and rodent new viruses have been discovered and identified." And the fact that the Chinese government spent six weeks insisting that COVID-19 could not be spread from person to person means that its denials about Wuhan laboratories cannot be accepted without



independent verification.



Jim Geraghty is the senior political correspondent of *National Review*. @jingeraghty



[Wuhan Pneumonia] Wuhan disease control researcher was once attacked by bat attacked mainland scholars questioning virus leak



Social News

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Written by: Wei Jingquan

🕒 2020-02-15 17:44

Last update date:2020-02-15 19:26

The new coronavirus (2019-nCoV) pneumonia epidemic continues, and WHO experts point out that the virus may originate from bats, especially Rhinolophus Bat. Xiaobo Tao, a professor at South China University of Technology, published a report entitled "Possibility of New Coronavirus (2019-nCoV) Source", pointing out that the Wuhan Disease Control Center was less than 300 meters away from the South China Seafood Market, which was allegedly the source of the outbreak, had captured bat To study coronavirus, more researchers were splashed by the blood and urine of bats. The researchers had to isolate themselves for 14 days.





academic journal, but only on the scientific paper sharing website. The paper has not been found. "Hong Kong 01" reporter wanted to call Xiao Botao for verification, but the other party did not listen to the call. Earlier it was suspected that the epidemic was related to another laboratory in Wuhan and the Wuhan Institute of Virology, Chinese Academy of Sciences, but officials denied it many times.

### ▼ The process of capturing bats in Wuhan CDC ▼



+ 4





The scholar who wrote this report is Professor Xiao Botao of the School of Biological Science and Engineering of South China University of Technology. He used to work at Harvard Medical School and has collaborated with Northwestern University in the United States. He has been awarded the National Natural Science Foundation many times. Fund support. As of February 6, the report refers to the new coronavirus gene sequencing found that 96% and 89% are similar to the coronavirus (CoV ZC45) found in the head bat (CoV ZC45), but it is necessary to study the pathogen and how to pass it to humans. The report cited medical journal research, stating that 27 of the 41 people infected in Wuhan were linked to South China Seafood City, and 33 of the 585 samples collected in South China Seafood City had detected new coronaviruses.

However, the bat carrying CoV ZC45 was first discovered in Yunnan and Zhejiang provinces, more than 900 kilometers away from South China Seafood City. In addition, bats usually live in the wild, and the population is dense. The possibility of bats flying to the place is "very low." Although the South China Seafood Market sells game meat, it does not sell bats.

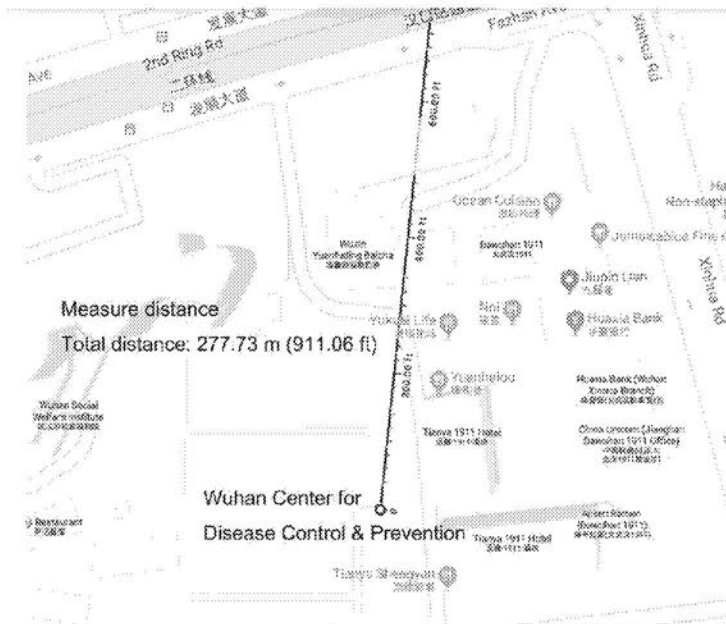
market and identified two laboratories conducting research on bat coronavirus. Within ~280 meters from the market, there was the Wuhan Center for Disease Control & Prevention (WHCDC) (Figure 1, from Baidu and Google maps). WHCDC hosted animals in laboratories for research purpose, one of which was specialized in pathogens collection and identification <sup>4</sup>.

<sup>8</sup>. In one of their studies, 155 bats including *Rhinolophus affinis* were captured in Hubei province, and other 450 bats were captured in Zhejiang province <sup>4</sup>. The expert in collection was noted in the Author Contributions (JHT). Moreover, he was broadcasted for collecting viruses on nation-wide newspapers and websites in 2017 and 2019 <sup>7,8</sup>. He described that he was once by attacked by bats and the blood of a bat shot on his skin. He knew the extreme danger of the infection so he quarantined himself for 14 days <sup>7</sup>. In another accident, he quarantined himself again because bats peed on him. He was once thrilled for capturing a bat carrying a live tick <sup>8</sup>.

Surgery was performed on the caged animals and the tissue samples were collected for DNA and RNA extraction and sequencing <sup>4,5</sup>. The tissue samples and contaminated trashes were source of pathogens. They were only ~280 meters from the seafood market. The WHCDC was also adjacent to the Union Hospital (Figure 1, bottom) where the first group of doctors were infected during this epidemic. It is plausible that the virus leaked around and some of them contaminated the initial patients in this epidemic, though solid proofs







The report mentions the possibility of other ways, noting that there are two laboratories in Wuhan, in addition to the Wuhan Institute of Virology of the Chinese Academy of Sciences, which is 30 kilometers away from the South China Seafood Market and at the P4 level. WHCDC), the center possesses animals for research purposes including collecting and distinguishing pathogens.

The report quotes past official information that the Wuhan CDC once captured 155 bats from Hubei Province, including the chrysanthemum bat, and another 450 bats from Zhejiang Province. However, the researcher in charge of the research had been interviewed by the media in 2017 and 2019 to mention two accidents, including that he had been attacked by a bat, and the blood of the bat splashed on his skin, so he was isolated for 14 days; The bat urinates and must be isolated; he has found a live tick on the bat.







As for the Wuhan Institute of Virology, Chinese Academy of Sciences, 30 kilometers away from South China Seafood City, it has been tracking SARS-CoV virus research in 2003, such as using reverse genetics methods. Therefore, "direct speculation" refers to the possibility that the laboratory has leaked SARS-CoV or its derivatives.

▼ Professor Xiao Botao of South China University of Technology Full Paper



[Origins of 2019-NCoV XiaoB Res by Zerohedge](#) on Scribd



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## The possible origins of 2019-nCoV coronavirus

Preprint · February 2020

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### Summary quoted opinion that high-risk laboratories should stay away from people

The report concluded that some people are concerned about the evolution of the 2019-nCoV coronavirus. In addition to the natural reorganization and the origin of the intermediate host, the lethal coronavirus may also come from the Wuhan laboratory. The safety level of the high-risk biological laboratory may need to be strengthened. Regulations should be taken to keep the laboratory location away from the city center and other densely populated places.



This report was published on the research sharing website Research Gate on February 6, and was not published in an authoritative academic journal, but Research Gate has not found the article. "Hong Kong 01" reporter called Xiao Botao for enquiries, but the other party did not answer the call.







The city of Wuhan was closed, public transportation stopped, tens of thousands of people were infected, people in the city were panicked, residents wore masks when they went out, and even more people went to the supermarket to protect themselves with plastic bags. (Chinatopix / Associated Press)

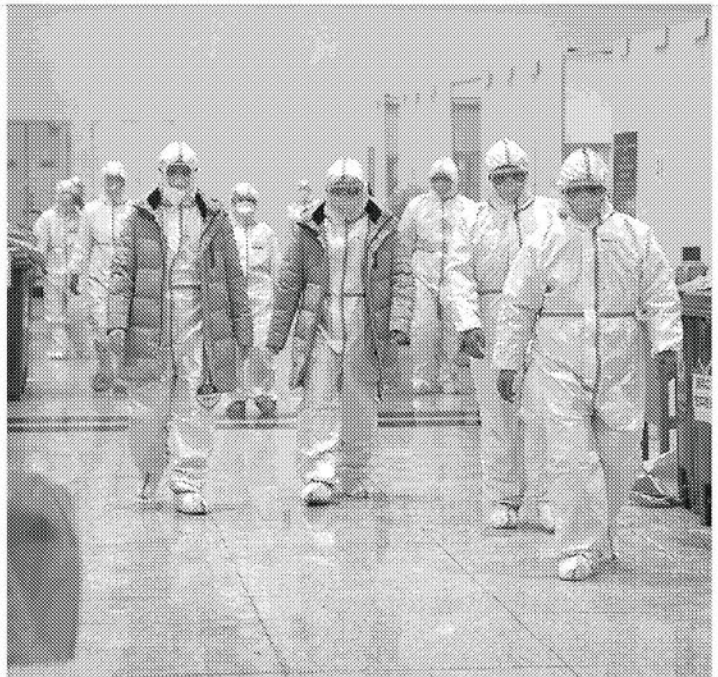
## WHO: No intermediate host found

A World Health Organization official said on February 11th that after the Chinese health department disclosed the viral gene sequencing, scientists found that the new coronavirus may have come from bats, and then transferred to an intermediate host, and then infected humans. However, it is temporarily unknown which animal the intermediate host is. Sylvie Briand, director of the Infectious Diseases Hazard Management Department, attended a press conference at the Geneva headquarters and said that after the scientists arrived at the South China Seafood Market in Wuhan, the epidemic-stricken area, a large number of bats were not found, and further research needed.



▼ Wuhan pneumonia epidemic spread more than 60,000 people diagnosed





+ 5

## Virus researcher "guaranteed by life" denied laboratory leak

There have been doubts about the epidemic related to the laboratories in the Mainland, including the laboratory of the Wuhan Institute of Virology, the Chinese Academy of Sciences, which is 30 kilometers away from the South China Seafood Market and the highest level 4 (P4).

Shi Zhengli, a researcher at the Wuhan Institute of Virology, Chinese Academy of Sciences, said on February 2 that the "guarantee of life" was not leak the laboratory, referring to "the new coronavirus is nature's punishment to humans' uncivilized living habits," meaning it is related to wild game. Peter Daszak, a long-time partner of Shi Zhengli and a disease ecologist of the American non-profit organization Environmental Ecology and Health Alliance,



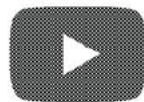




At the press conference of the State Council's Joint Defense and Joint Control Mechanism today (15th), Wu Yuanbin, director of the Department of Social Development and Technology of the Ministry of Science and Technology, said, "Guiding Opinions on Strengthening the Biosafety Management of the New Coronavirus High-grade Viral Microbiology Laboratory" is issued, requiring all competent departments to strengthen the management of laboratories, especially viruses, to ensure biosecurity.

▼ Wuhan CDC captures and studies bat documentary ▼

旷野青春 | 隐形防线 (英文字幕版)



[Wuhan Pneumonia] WHO: Viruses or bats infect humans through intermediate hosts

China releases new coronavirus resource library 80% similar to SARS

[Wuhan Pneumonia · Multiple Images] The latest virus exposure looks SARS and MERS

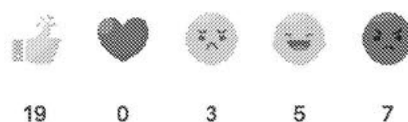


【Wuhan Pneumonia】 Researcher of the Institute of Virology: Using life to





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用戶\_6454556

吹吹風，試試反應。

2020年2月16日 07:23. 回應, 讚好



用戶\_9894522

有証据嗎，冇，不要乱作。

2020年2月16日 04:48. 回應, 讚好

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## 【Wuhan Pneumonia】 New coronavirus material and two





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# The possible origins of 2019-nCoV coronavirus

Preprint · February 2020

DOI: 10.13140/RG.2.2.21789.23901

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# **The possible origins of 2019-nCoV coronavirus**

Botao Xiao<sup>1,2\*</sup> and Lei Xiao<sup>3</sup>

<sup>1</sup> Joint International Research Laboratory of Synthetic Biology and Medicine, School of Biology and Biological Engineering, South China University of Technology, Guangzhou 510006, China

<sup>2</sup> School of Physics, Huazhong University of Science and Technology, Wuhan 430074, China

<sup>3</sup> Tian You Hospital, Wuhan University of Science and Technology, Wuhan 430064, China

\* Corresponding author: [xiaob@scut.edu.cn](mailto:xiaob@scut.edu.cn)

Tel / Fax: 86-20-3938-0631

The 2019-nCoV coronavirus has caused an epidemic of 28,060 laboratory-confirmed infections in human including 564 deaths in China by February 6, 2020. Two descriptions of the virus published on Nature this week indicated that the genome sequences from patients were 96% or 89% identical to the Bat CoV ZC45 coronavirus originally found in *Rhinolophus affinis*<sup>1,2</sup>. It was critical to study where the pathogen came from and how it passed onto human.

An article published on The Lancet reported that 41 people in Wuhan were found to have the acute respiratory syndrome and 27 of them had contact with Huanan Seafood Market<sup>3</sup>. The 2019-nCoV was found in 33 out of 585 samples collected in the market after the outbreak. The market was suspicious to be the origin of the epidemic, and was shut down according to the rule of quarantine the source during an epidemic.

The bats carrying CoV ZC45 were originally found in Yunnan or Zhejiang province, both of which were more than 900 kilometers away from the seafood market. Bats were normally found to live in caves and trees. But the seafood market is in a densely-populated district of Wuhan, a metropolitan of ~15 million people. The probability was very low for the bats to fly to the market. According to municipal reports and the testimonies of 31 residents and 28 visitors, the bat was never a food source in the city, and no bat was traded in the market. There was possible natural recombination or intermediate host of the coronavirus, yet little proof has been reported.

Was there any other possible pathway? We screened the area around the seafood market and identified two laboratories conducting research on bat coronavirus. Within ~280 meters from the market, there was the Wuhan Center for Disease Control & Prevention (WHCDC) (Figure 1, from Baidu and Google maps). WHCDC hosted animals in laboratories for research purpose, one of which was specialized in pathogens collection and identification<sup>4-6</sup>. In one of their studies, 155 bats including *Rhinolophus affinis* were captured in Hubei province, and other 450 bats were captured in Zhejiang province<sup>4</sup>. The expert in collection was noted in the Author Contributions (JHT). Moreover, he was broadcasted for collecting viruses on nation-wide newspapers and websites in 2017 and 2019<sup>7,8</sup>. He described that he was once by attacked by bats and the blood of a bat shot on his skin. He knew the extreme danger of the infection so he quarantined himself for 14 days<sup>7</sup>. In another accident, he quarantined himself again because bats peed on him. He was once thrilled for capturing a bat carrying a live tick<sup>8</sup>.

Surgery was performed on the caged animals and the tissue samples were collected for DNA and RNA extraction and sequencing<sup>4,5</sup>. The tissue samples and contaminated trashes were source of pathogens. They were only ~280 meters from the seafood market. The WHCDC was also adjacent to the Union Hospital (Figure 1, bottom) where the first group of doctors were infected during this epidemic. It is plausible that the virus leaked around and some of them contaminated the initial patients in this epidemic, though solid proofs are needed in future study.

The second laboratory was ~12 kilometers from the seafood market and belonged to Wuhan Institute of Virology, Chinese Academy of Sciences<sup>1,9,10</sup>. This laboratory reported that the Chinese horseshoe bats were natural reservoirs for the severe acute respiratory syndrome coronavirus (SARS-CoV) which caused the 2002-3 pandemic<sup>9</sup>. The principle investigator participated in a project which generated a chimeric virus using



the SARS-CoV reverse genetics system, and reported the potential for human emergence<sup>10</sup>. A direct speculation was that SARS-CoV or its derivative might leak from the laboratory.

In summary, somebody was entangled with the evolution of 2019-nCoV coronavirus. In addition to origins of natural recombination and intermediate host, the killer coronavirus probably originated from a laboratory in Wuhan. Safety level may need to be reinforced in high risk biohazardous laboratories. Regulations may be taken to relocate these laboratories far away from city center and other densely populated places.

### Contributors

BX designed the comment and performed literature search. All authors performed data acquisition and analysis, collected documents, draw the figure, and wrote the papers.

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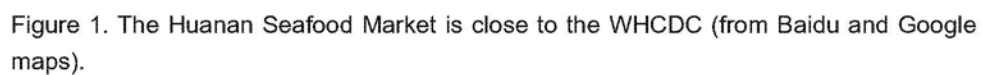
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### Declaration of interests

All authors declare no competing interests.

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# Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China

Chaolin Huang\*, Yeming Wang\*, Xingwang Li\*, Lili Ren\*, Jianping Zhao\*, Yi Hu\*, Li Zhang, Guohui Fan, Jiuyang Xu, Xiaoying Gu, Zhenshun Cheng, Ting Yu, Jiaao Xia, Yuan Wei, Wenjuan Wu, Xuelei Xie, Wen Yin, Hui Li, Min Liu, Yan Xiao, Hong Gao, Li Guo, Jungang Xie, Guangfa Wang, Rongmeng Jiang, Zhancheng Gao, Qi Jin, Jianwei Wang†, Bin Cao†

## Summary

**Background** A recent cluster of pneumonia cases in Wuhan, China, was caused by a novel betacoronavirus, the 2019 novel coronavirus (2019-nCoV). We report the epidemiological, clinical, laboratory, and radiological characteristics and treatment and clinical outcomes of these patients.

**Methods** All patients with suspected 2019-nCoV were admitted to a designated hospital in Wuhan. We prospectively collected and analysed data on patients with laboratory-confirmed 2019-nCoV infection by real-time RT-PCR and next-generation sequencing. Data were obtained with standardised data collection forms shared by WHO and the International Severe Acute Respiratory and Emerging Infection Consortium from electronic medical records. Researchers also directly communicated with patients or their families to ascertain epidemiological and symptom data. Outcomes were also compared between patients who had been admitted to the intensive care unit (ICU) and those who had not.

**Findings** By Jan 2, 2020, 41 admitted hospital patients had been identified as having laboratory-confirmed 2019-nCoV infection. Most of the infected patients were men (30 [73%] of 41); less than half had underlying diseases (13 [32%]), including diabetes (eight [20%]), hypertension (six [15%]), and cardiovascular disease (six [15%]). Median age was 49·0 years (IQR 41·0–58·0). 27 (66%) of 41 patients had been exposed to Huanan seafood market. One family cluster was found. Common symptoms at onset of illness were fever (40 [98%] of 41 patients), cough (31 [76%]), and myalgia or fatigue (18 [44%]); less common symptoms were sputum production (11 [28%] of 39), headache (three [8%] of 38), haemoptysis (two [5%] of 39), and diarrhoea (one [3%] of 38). Dyspnoea developed in 22 (55%) of 40 patients (median time from illness onset to dyspnoea 8·0 days [IQR 5·0–13·0]). 26 (63%) of 41 patients had lymphopenia. All 41 patients had pneumonia with abnormal findings on chest CT. Complications included acute respiratory distress syndrome (12 [29%]), RNAemia (six [15%]), acute cardiac injury (five [12%]) and secondary infection (four [10%]). 13 (32%) patients were admitted to an ICU and six (15%) died. Compared with non-ICU patients, ICU patients had higher plasma levels of IL2, IL7, IL10, GSCF, IP10, MCP1, MIP1A, and TNFα.

**Interpretation** The 2019-nCoV infection caused clusters of severe respiratory illness similar to severe acute respiratory syndrome coronavirus and was associated with ICU admission and high mortality. Major gaps in our knowledge of the origin, epidemiology, duration of human transmission, and clinical spectrum of disease need fulfilment by future studies.

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## Introduction

Coronaviruses are enveloped non-segmented positive-sense RNA viruses belonging to the family Coronaviridae and the order Nidovirales and broadly distributed in humans and other mammals.<sup>1</sup> Although most human coronavirus infections are mild, the epidemics of the two betacoronaviruses, severe acute respiratory syndrome coronavirus (SARS-CoV)<sup>2–4</sup> and Middle East respiratory syndrome coronavirus (MERS-CoV),<sup>5,6</sup> have caused more than 10 000 cumulative cases in the past two decades, with mortality rates of 10% for SARS-CoV and 37% for MERS-CoV.<sup>7,8</sup> The coronaviruses already identified might only be the tip of the iceberg, with

potentially more novel and severe zoonotic events to be revealed.

In December, 2019, a series of pneumonia cases of unknown cause emerged in Wuhan, Hubei, China, with clinical presentations greatly resembling viral pneumonia.<sup>9</sup> Deep sequencing analysis from lower respiratory tract samples indicated a novel coronavirus, which was named 2019 novel coronavirus (2019-nCoV). Thus far, more than 800 confirmed cases, including in health-care workers, have been identified in Wuhan, and several exported cases have been confirmed in other provinces in China, and in Thailand, Japan, South Korea, and the USA.<sup>10–13</sup>



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\*Contributed equally

†Joint corresponding authors

Jin Yin-tan Hospital, Wuhan, China (Prof C Huang MD, Prof L Zhang MD, T Yu MD, J Xia MD, Y Wei MD, Prof W Wu MD, Prof X Xie MD); Department of Pulmonary and Critical Care Medicine, Center of Respiratory Medicine, National Clinical Research Center for Respiratory Diseases (Y Wang MD, G Fan MS, X Gu PhD, H Li MD, Prof B Cao MD); Institute of Clinical Medical Sciences (G Fan, X Gu), and Department of Radiology (M Liu MD), China-Japan Friendship Hospital, Beijing, China; Institute of Respiratory Medicine, Chinese Academy of Medical Sciences, Peking Union Medical College, Beijing, China (Y Wang, G Fan, X Gu, H Li, Prof B Cao); Department of Respiratory Medicine, Capital Medical University, Beijing, China (Y Wang, H Li, Prof B Cao); Clinical and Research Center of Infectious Diseases, Beijing Ditan Hospital, Capital Medical University, Beijing, China (Prof X Li MD, Prof R Jiang MD); NHC Key Laboratory of Systems Biology of Pathogens and Christophe Merieux Laboratory, Institute of Pathogen Biology (Prof L Ren PhD, Y Xiao MS, Prof L Guo PhD, Q Jin PhD, Prof J Wang PhD), and Institute of Laboratory Animal Science (Prof H Gao PhD), Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China; Tongji Hospital (Prof J Zhao MD, Prof J Xie MD), and Department



of Pulmonary and Critical Care Medicine, The Central Hospital of Wuhan (Y Hu MD, W Yin MD), Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China; Tsinghua University School of Medicine, Beijing, China (J Xu MD); Department of Respiratory medicine, Zhongnan Hospital of Wuhan University, Wuhan, China (Prof Z Cheng MD); Department of Pulmonary and Critical Care Medicine, Peking University First Hospital, Beijing, China (Prof G Wang MD); Department of Pulmonary and Critical Care Medicine, Peking University People's Hospital, Beijing, China (Prof Z Gao MD); and Tsinghua University-Peking University Joint Center for Life Sciences, Beijing, China (Prof B Cao)

Correspondence to: Prof Bin Cao, Department of Pulmonary and Critical Care Medicine, China-Japan Friendship Hospital, Beijing 100029, China (caobin\_ben@163.com) or Prof Jianwei Wang, NHC Key Laboratory of Systems Biology of Pathogens and Christophe Merieux Laboratory, Institute of Pathogen Biology, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing 100730, China (wangjiw28@163.com)

## Research in context

### Evidence before this study

Human coronaviruses, including hCoV-229E, OC43, NL63, and HKU1, cause mild respiratory diseases. Fatal coronavirus infections that have emerged in the past two decades are severe acute respiratory syndrome coronavirus (SARS-CoV) and the Middle East respiratory syndrome coronavirus. We searched PubMed and the China National Knowledge Infrastructure database for articles published up to Jan 11, 2020, using the keywords "novel coronavirus", "2019 novel coronavirus", or "2019-nCoV". No published work about the human infection caused by the 2019 novel coronavirus (2019-nCoV) could be identified.

### Added value of this study

We report the epidemiological, clinical, laboratory, and radiological characteristics, treatment, and clinical outcomes of 41 laboratory-confirmed cases infected with 2019-nCoV.

We aim to describe epidemiological, clinical, laboratory, and radiological characteristics, treatment, and outcomes of patients confirmed to have 2019-nCoV infection, and to compare the clinical features between intensive care unit (ICU) and non-ICU patients. We hope our study findings will inform the global community of the emergence of this novel coronavirus and its clinical features.

## Methods

### Patients

Following the pneumonia cases of unknown cause reported in Wuhan and considering the shared history of exposure to Huanan seafood market across the patients, an epidemiological alert was released by the local health authority on Dec 31, 2019, and the market was shut down on Jan 1, 2020. Meanwhile, 59 suspected cases with fever and dry cough were transferred to a designated hospital starting from Dec 31, 2019. An expert team of physicians, epidemiologists, virologists, and government officials was soon formed after the alert.

Since the cause was unknown at the onset of these emerging infections, the diagnosis of pneumonia of unknown cause in Wuhan was based on clinical characteristics, chest imaging, and the ruling out of common bacterial and viral pathogens that cause pneumonia. Suspected patients were isolated using airborne precautions in the designated hospital, Jin Yin-tan Hospital (Wuhan, China), and fit-tested N95 masks and airborne precautions for aerosol-generating procedures were taken. This study was approved by the National Health Commission of China and Ethics Commission of Jin Yin-tan Hospital (KY-2020-01.01). Written informed consent was waived by the Ethics Commission of the designated hospital for emerging infectious diseases.

27 (66%) of 41 patients had a history of direct exposure to the Huanan seafood market. The median age of patients was 49.0 years (IQR 41.0–58.0), and 13 (32%) patients had underlying disease. All patients had pneumonia. A third of patients were admitted to intensive care units, and six died. High concentrations of cytokines were recorded in plasma of critically ill patients infected with 2019-nCoV.

### Implications of all the available evidence

2019-nCoV caused clusters of fatal pneumonia with clinical presentation greatly resembling SARS-CoV. Patients infected with 2019-nCoV might develop acute respiratory distress syndrome, have a high likelihood of admission to intensive care, and might die. The cytokine storm could be associated with disease severity. More efforts should be made to know the whole spectrum and pathophysiology of the new disease.

## Procedures

Local centres for disease control and prevention collected respiratory, blood, and faeces specimens, then shipped them to designated authoritative laboratories to detect the pathogen (NHC Key Laboratory of Systems Biology of Pathogens and Christophe Merieux Laboratory, Beijing, China). A novel coronavirus, which was named 2019-nCoV, was isolated then from lower respiratory tract specimen and a diagnostic test for this virus was developed soon after that.<sup>14</sup> Of 59 suspected cases, 41 patients were confirmed to be infected with 2019-nCoV. The presence of 2019-nCoV in respiratory specimens was detected by next-generation sequencing or real-time RT-PCR methods. The primers and probe target to envelope gene of CoV were used and the sequences were as follows: forward primer 5'-ACTTCTTTTCTTCTTTCGTGGT-3'; reverse primer 5'-GCAGCAGTACGCACACAATC-3'; and the probe 5'-CY5-CTAGTTACTAGCCATCCTTACTGC-3'-BHQ1. Conditions for the amplifications were 50°C for 15 min, 95°C for 3 min, followed by 45 cycles of 95°C for 15 s and 60°C for 30 s.

Initial investigations included a complete blood count, coagulation profile, and serum biochemical test (including renal and liver function, creatine kinase, lactate dehydrogenase, and electrolytes). Respiratory specimens, including nasal and pharyngeal swabs, bronchoalveolar lavage fluid, sputum, or bronchial aspirates were tested for common viruses, including influenza, avian influenza, respiratory syncytial virus, adenovirus, parainfluenza virus, SARS-CoV and MERS-CoV using real-time RT-PCR assays approved by the China Food and Drug Administration. Routine bacterial and fungal examinations were also performed.

Given the emergence of the 2019-nCoV pneumonia cases during the influenza season, antibiotics (orally and intravenously) and oseltamivir (orally 75 mg twice daily) were empirically administered. Corticosteroid therapy



(methylprednisolone 40–120 mg per day) was given as a combined regimen if severe community-acquired pneumonia was diagnosed by physicians at the designated hospital. Oxygen support (eg, nasal cannula and invasive mechanical ventilation) was administered to patients according to the severity of hypoxaemia. Repeated tests for 2019-nCoV were done in patients confirmed to have 2019-nCoV infection to show viral clearance before hospital discharge or discontinuation of isolation.

### Data collection

We reviewed clinical charts, nursing records, laboratory findings, and chest x-rays for all patients with laboratory-confirmed 2019-nCoV infection who were reported by the local health authority. The admission data of these patients was from Dec 16, 2019, to Jan 2, 2020. Epidemiological, clinical, laboratory, and radiological characteristics and treatment and outcomes data were obtained with standardised data collection forms (modified case record form for severe acute respiratory infection clinical characterisation shared by WHO and the International Severe Acute Respiratory and Emerging Infection Consortium) from electronic medical records. Two researchers also independently reviewed the data collection forms to double check the data collected. To ascertain the epidemiological and symptom data, which were not available from electronic medical records, the researchers also directly communicated with patients or their families to ascertain epidemiological and symptom data.

### Cytokine and chemokine measurement

To characterise the effect of coronavirus on the production of cytokines or chemokines in the acute phase of the illness, plasma cytokines and chemokines (IL1B, IL1RA, IL2, IL4, IL5, IL6, IL7, IL8 (also known as CXCL8), IL9, IL10, IL12p70, IL13, IL15, IL17A, Eotaxin (also known as CCL11), basic FGF2, GCSF (CSF3), GM-CSF (CSF2), IFN $\gamma$ , IP10 (CXCL10), MCP1 (CCL2), MIP1A (CCL3), MIP1B (CCL4), PDGFB, RANTES (CCL5), TNF $\alpha$ , and VEGFA were measured using Human Cytokine Standard 27-Plex Assays panel and the Bio-Plex 200 system (Bio-Rad, Hercules, CA, USA) for all patients according to the manufacturer's instructions. The plasma samples from four healthy adults were used as controls for cross-comparison. The median time from being transferred to a designated hospital to the blood sample collection was 4 days (IQR 2–5).

### Detection of coronavirus in plasma

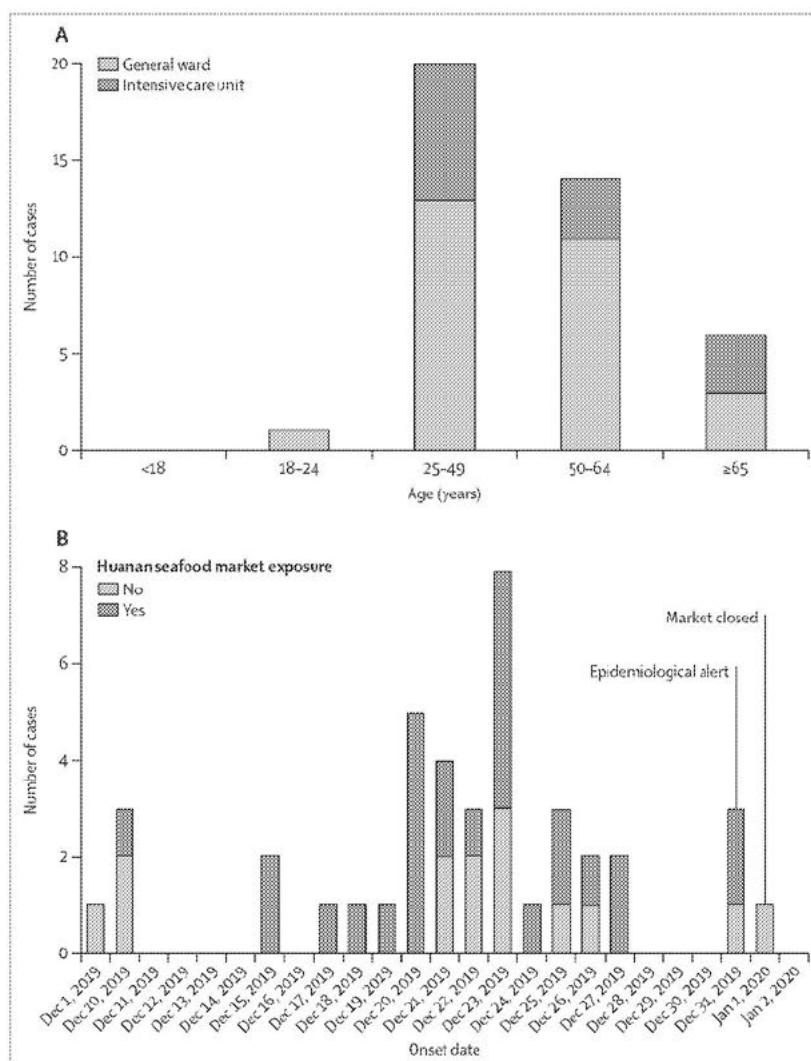
Each 80  $\mu$ L plasma sample from the patients and contacts was added into 240  $\mu$ L of Trizol LS (10296028; Thermo Fisher Scientific, Carlsbad, CA, USA) in the Biosafety Level 3 laboratory. Total RNA was extracted by Direct-zol RNA Miniprep kit (R2050; Zymo research, Irvine, CA, USA) according to the manufacturer's instructions and

50  $\mu$ L elution was obtained for each sample. 5  $\mu$ L RNA was used for real-time RT-PCR, which targeted the NP gene using AgPath-ID One-Step RT-PCR Reagent (AM1005; Thermo Fisher Scientific). The final reaction mix concentration of the primers was 500 nM and probe was 200 nM. Real-time RT-PCR was performed using the following conditions: 50°C for 15 min and 95°C for 3 min, 50 cycles of amplification at 95°C for 10 s and 60°C for 45 s. Since we did not perform tests for detecting infectious virus in blood, we avoided the term viraemia and used RNAemia instead. RNAemia was defined as a positive result for real-time RT-PCR in the plasma sample.

### Definitions

Acute respiratory distress syndrome (ARDS) and shock were defined according to the interim guidance of WHO

For the International Severe Acute Respiratory and Emerging Infection Consortium-*WHO* case record form for severe acute respiratory infections see <https://isaic.tghn.org/protocols/severe-acute-respiratory-infection-data-tools/>



**Figure 1:** Date of illness onset and age distribution of patients with laboratory-confirmed 2019-nCoV infection

(A) Number of hospital admissions by age group. (B) Distribution of symptom onset date for laboratory-confirmed cases. The Wuhan local health authority issued an epidemiological alert on Dec 30, 2019, and closed the Huanan seafood market 2 days later.



	All patients (n=41)	ICU care (n=13)	No ICU care (n=28)	p value
<b>Characteristics</b>				
Age, years	49.0 (41.0–58.0)	49.0 (41.0–61.0)	49.0 (41.0–57.5)	0.60
Sex	..	..	..	0.24
Men	30 (73%)	11 (85%)	19 (68%)	..
Women	11 (27%)	2 (15%)	9 (32%)	..
Huanan seafood market exposure	27 (66%)	9 (69%)	18 (64%)	0.75
Current smoking	3 (7%)	0	3 (11%)	0.31
Any comorbidity	13 (32%)	5 (38%)	8 (29%)	0.53
Diabetes	8 (20%)	1 (8%)	7 (25%)	0.16
Hypertension	6 (15%)	2 (15%)	4 (14%)	0.93
Cardiovascular disease	6 (15%)	3 (23%)	3 (11%)	0.32
Chronic obstructive pulmonary disease	1 (2%)	1 (8%)	0	0.14
Malignancy	1 (2%)	0	1 (4%)	0.49
Chronic liver disease	1 (2%)	0	1 (4%)	0.68
<b>Signs and symptoms</b>				
Fever	40 (98%)	13 (100%)	27 (96%)	0.68
Highest temperature, °C	..	..	..	0.037
<37.3	1 (2%)	0	1 (4%)	..
37.3–38.0	8 (20%)	3 (23%)	5 (18%)	..
38.1–39.0	18 (44%)	7 (54%)	11 (39%)	..
>39.0	14 (34%)	3 (23%)	11 (39%)	..
Cough	31 (76%)	11 (85%)	20 (71%)	0.35
Myalgia or fatigue	18 (44%)	7 (54%)	11 (39%)	0.38
Sputum production	11/39 (28%)	5 (38%)	6/26 (23%)	0.32
Headache	3/38 (8%)	0	3/25 (12%)	0.10
Haemoptysis	2/39 (5%)	1 (8%)	1/26 (4%)	0.46
Diarrhoea	1/38 (3%)	0	1/25 (4%)	0.66
Dyspnoea	22/40 (55%)	12 (92%)	10/27 (37%)	0.0010
Days from illness onset to dyspnoea	8.0 (5.0–13.0)	8.0 (6.0–17.0)	6.5 (2.0–10.0)	0.22
Days from first admission to transfer	5.0 (1.0–8.0)	8.0 (5.0–14.0)	1.0 (1.0–5.5)	0.0023
Systolic pressure, mm Hg	125.0 (119.0–135.0)	145.0 (123.0–167.0)	122.0 (118.5–129.5)	0.018
Respiratory rate >24 breaths per min	12 (29%)	8 (62%)	4 (14%)	0.0023

Data are median (IQR), n (%), or n/N (%), where N is the total number of patients with available data. p values comparing ICU care and no ICU care are from  $\chi^2$  test, Fisher's exact test, or Mann-Whitney U test. 2019-nCoV=2019 novel coronavirus. ICU=intensive care unit.

**Table 1: Demographics and baseline characteristics of patients infected with 2019-nCoV**

for novel coronavirus.<sup>9</sup> Hypoxaemia was defined as arterial oxygen tension (PaO<sub>2</sub>) over inspiratory oxygen fraction (FIO<sub>2</sub>) of less than 300 mm Hg.<sup>15</sup> Acute kidney injury was identified and classified on the basis of the highest serum creatinine level or urine output criteria according to the kidney disease improving global outcomes classification.<sup>16</sup> Secondary infection was diagnosed if the patients had clinical symptoms or signs of nosocomial pneumonia or bacteraemia, and was combined with a positive culture of a new pathogen from a lower respiratory tract specimen (including the sputum, transtracheal aspirates, or bronchoalveolar lavage fluid, or from blood samples taken  $\geq$ 48 h

after admission).<sup>17</sup> Cardiac injury followed the definition used in our previous study in H7N9 patients.<sup>18</sup> In brief, cardiac injury was diagnosed if serum levels of cardiac biomarkers (eg, troponin I) were above the 99th percentile upper reference limit, or new abnormalities were shown in electrocardiography and echocardiography.

### Statistical analysis

Continuous variables were expressed as median (IQR) and compared with the Mann-Whitney U test; categorical variables were expressed as number (%) and compared by  $\chi^2$  test or Fisher's exact test between ICU care and no ICU care groups. Boxplots were drawn to describe plasma cytokine and chemokine concentrations.

A two-sided  $\alpha$  of less than 0.05 was considered statistically significant. Statistical analyses were done using the SAS software, version 9.4, unless otherwise indicated.

### Role of the funding source

The funder of the study had no role in study design, data collection, data analysis, data interpretation, or writing of the report. The corresponding authors had full access to all the data in the study and had final responsibility for the decision to submit for publication.

### Results

By Jan 2, 2020, 41 admitted hospital patients were identified as laboratory-confirmed 2019-nCoV infection in Wuhan. 20 (49%) of the 2019-nCoV-infected patients were aged 25–49 years, and 14 (34%) were aged 50–64 years (figure 1A). The median age of the patients was 49.0 years (IQR 41.0–58.0; table 1). In our cohort of the first 41 patients as of Jan 2, no children or adolescents were infected. Of the 41 patients, 13 (32%) were admitted to the ICU because they required high-flow nasal cannula or higher-level oxygen support measures to correct hypoxaemia. Most of the infected patients were men (30 [73%]); less than half had underlying diseases (13 [32%]), including diabetes (eight [20%]), hypertension (six [15%]), and cardiovascular disease (six [15%]).

27 (66%) patients had direct exposure to Huanan seafood market (figure 1B). Market exposure was similar between the patients with ICU care (nine [69%]) and those with non-ICU care (18 [64%]). The symptom onset date of the first patient identified was Dec 1, 2019. None of his family members developed fever or any respiratory symptoms. No epidemiological link was found between the first patient and later cases. The first fatal case, who had continuous exposure to the market, was admitted to hospital because of a 7-day history of fever, cough, and dyspnoea. 5 days after illness onset, his wife, a 53-year-old woman who had no known history of exposure to the market, also presented with pneumonia and was hospitalised in the isolation ward.

The most common symptoms at onset of illness were fever (40 [98%] of 41 patients), cough (31 [76%]), and myalgia or fatigue (18 [44%]); less common symptoms



were sputum production (11 [28%] of 39), headache (three [8%] of 38), haemoptysis (two [5%] of 39), and diarrhoea (one [3%] of 38; table 1). More than half of patients (22 [55%] of 40) developed dyspnoea. The median duration from illness onset to dyspnoea was 8.0 days (IQR 5.0–13.0). The median time from onset of symptoms to first hospital admission was 7.0 days (4.0–8.0), to shortness of breath was 8.0 days (5.0–13.0), to ARDS was 9.0 days (8.0–14.0), to mechanical ventilation was 10.5 days (7.0–14.0), and to ICU admission was 10.5 days (8.0–17.0; figure 2).

The blood counts of patients on admission showed leucopenia (white blood cell count less than  $4 \times 10^9/L$ ; ten [25%] of 40 patients) and lymphopenia (lymphocyte count  $<1.0 \times 10^9/L$ ; 26 [63%] patients; table 2). Prothrombin time and D-dimer level on admission were higher in ICU patients (median prothrombin time 12.2 s [IQR 11.2–13.4]; median D-dimer level 2.4 mg/L [0.6–14.4]) than non-ICU patients (median prothrombin time 10.7 s [9.8–12.1],  $p=0.012$ ; median D-dimer level 0.5 mg/L [0.3–0.8],  $p=0.0042$ ). Levels of aspartate aminotransferase were increased in 15 (37%) of 41 patients, including eight (62%) of 13 ICU patients and seven (25%) of 28 non-ICU patients. Hypersensitive troponin I (hs-cTnI) was increased substantially in five patients, in whom the diagnosis of virus-related cardiac injury was made.

Most patients had normal serum levels of procalcitonin on admission (procalcitonin  $<0.1$  ng/mL; 27 [69%] patients; table 2). Four ICU patients developed secondary infections. Three of the four patients with secondary infection had procalcitonin greater than 0.5 ng/mL (0.69 ng/mL, 1.46 ng/mL, and 6.48 ng/mL).

On admission, abnormalities in chest CT images were detected among all patients. Of the 41 patients, 40 (98%) had bilateral involvement (table 2). The typical findings of chest CT images of ICU patients on admission were bilateral multiple lobular and subsegmental areas of consolidation (figure 3A). The representative chest CT findings of non-ICU patients showed bilateral ground-glass opacity and subsegmental areas of consolidation (figure 3B). Later chest CT images showed bilateral ground-glass opacity, whereas the consolidation had been resolved (figure 3C).

Initial plasma IL1B, IL1RA, IL7, IL8, IL9, IL10, basic FGF, GCSF, GM-CSF, IFN $\gamma$ , IP10, MCP1, MIP1A, MIP1B, PDGF, TNF $\alpha$ , and VEGF concentrations were higher in both ICU patients and non-ICU patients than in healthy adults (appendix pp 6–7). Plasma levels of IL5, IL12p70, IL15, Eotaxin, and RANTES were similar between healthy adults and patients infected with 2019-nCoV. Further comparison between ICU and non-ICU patients showed that plasma concentrations of IL2, IL7, IL10, GCSF, IP10, MCP1, MIP1A, and TNF $\alpha$  were higher in ICU patients than non-ICU patients.

All patients had pneumonia. Common complications included ARDS (12 [29%] of 41 patients), followed by

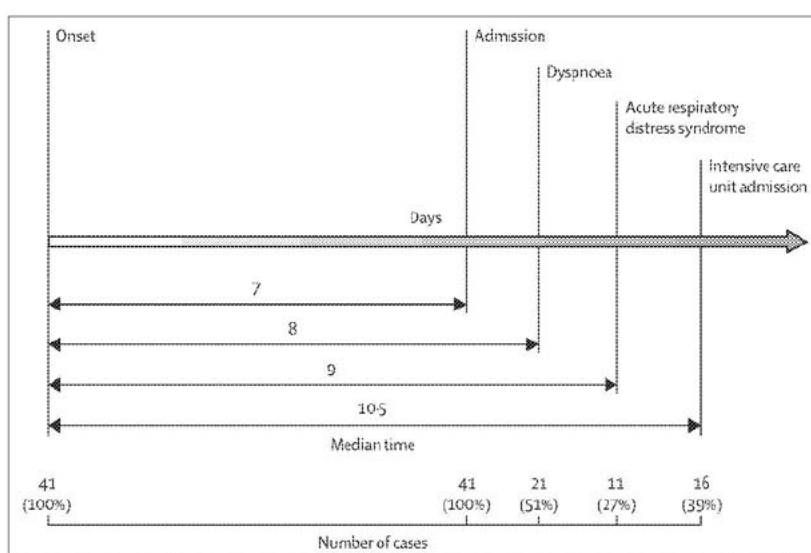


Figure 2: Timeline of 2019-nCoV cases after onset of illness

RNAemia (six [15%] patients), acute cardiac injury (five [12%] patients), and secondary infection (four [10%] patients; table 3). Invasive mechanical ventilation was required in four (10%) patients, with two of them (5%) had refractory hypoxaemia and received extracorporeal membrane oxygenation as salvage therapy. All patients were administered with empirical antibiotic treatment, and 38 (93%) patients received antiviral therapy (oseltamivir). Additionally, nine (22%) patients were given systematic corticosteroids. A comparison of clinical features between patients who received and did not receive systematic corticosteroids is in the appendix (pp 1–5).

As of Jan 22, 2020, 28 (68%) of 41 patients have been discharged and six (15%) patients have died. Fitness for discharge was based on abatement of fever for at least 10 days, with improvement of chest radiographic evidence and viral clearance in respiratory samples from upper respiratory tract.

## Discussion

We report here a cohort of 41 patients with laboratory-confirmed 2019-nCoV infection. Patients had serious, sometimes fatal, pneumonia and were admitted to the designated hospital in Wuhan, China, by Jan 2, 2020. Clinical presentations greatly resemble SARS-CoV. Patients with severe illness developed ARDS and required ICU admission and oxygen therapy. The time between hospital admission and ARDS was as short as 2 days. At this stage, the mortality rate is high for 2019-nCoV, because six (15%) of 41 patients in this cohort died.

The number of deaths is rising quickly. As of Jan 24, 2020, 835 laboratory-confirmed 2019-nCoV infections were reported in China, with 25 fatal cases. Reports have been released of exported cases in many provinces in China, and in other countries;

See Online for appendix



	All patients (n=41)	ICU care (n=13)	No ICU care (n=28)	p value
White blood cell count, $\times 10^9$ per L	6.2 (4.1–10.5)	11.3 (5.8–12.1)	5.7 (3.1–7.6)	0.011
<4	10/40 (25%)	1/13 (8%)	9/27 (33%)	0.041
4–10	18/40 (45%)	5/13 (38%)	13/27 (48%)	..
>10	12/40 (30%)	7/13 (54%)	5/27 (19%)	..
Neutrophil count, $\times 10^9$ per L	5.0 (3.3–8.9)	10.6 (5.0–11.8)	4.4 (2.0–6.1)	0.00069
Lymphocyte count, $\times 10^9$ per L	0.8 (0.6–1.1)	0.4 (0.2–0.8)	1.0 (0.7–1.1)	0.0041
<1.0	26/41 (63%)	11/13 (85%)	15/28 (54%)	0.045
$\geq 1.0$	15/41 (37%)	2/13 (15%)	13/28 (46%)	..
Haemoglobin, g/L	126.0 (118.0–140.0)	122.0 (111.0–128.0)	130.5 (120.0–140.0)	0.20
Platelet count, $\times 10^9$ per L	164.5 (131.5–263.0)	196.0 (165.0–263.0)	149.0 (131.0–263.0)	0.45
<100	2/40 (5%)	1/13 (8%)	1/27 (4%)	0.45
$\geq 100$	38/40 (95%)	12/13 (92%)	26/27 (96%)	..
Prothrombin time, s	11.1 (10.1–12.4)	12.2 (11.2–13.4)	10.7 (9.8–12.1)	0.012
Activated partial thromboplastin time, s	27.0 (24.2–34.1)	26.2 (22.5–33.9)	27.7 (24.8–34.1)	0.57
D-dimer, mg/L	0.5 (0.3–1.3)	2.4 (0.6–14.4)	0.5 (0.3–0.8)	0.0042
Albumin, g/L	31.4 (28.9–36.0)	27.9 (26.3–30.9)	34.7 (30.2–36.5)	0.00066
Alanine aminotransferase, U/L	32.0 (21.0–50.0)	49.0 (29.0–115.0)	27.0 (19.5–40.0)	0.038
Aspartate aminotransferase, U/L	34.0 (26.0–48.0)	44.0 (30.0–70.0)	34.0 (24.0–40.5)	0.10
$\leq 40$	26/41 (63%)	5/13 (38%)	21/28 (75%)	0.025
>40	15/41 (37%)	8/13 (62%)	7/28 (25%)	..
Total bilirubin, mmol/L	11.7 (9.5–13.9)	14.0 (11.9–32.9)	10.8 (9.4–12.3)	0.011
Potassium, mmol/L	4.2 (3.8–4.8)	4.6 (4.0–5.0)	4.1 (3.8–4.6)	0.27
Sodium, mmol/L	139.0 (137.0–140.0)	138.0 (137.0–139.0)	139.0 (137.5–140.5)	0.26
Creatinine, $\mu\text{mol/L}$	74.2 (57.5–85.7)	79.0 (53.1–92.7)	73.3 (57.5–84.7)	0.84
$\leq 133$	37/41 (90%)	11/13 (85%)	26/28 (93%)	0.42
>133	4/41 (10%)	2/13 (15%)	2/28 (7%)	..
Creatine kinase, U/L	132.5 (62.0–219.0)	132.0 (82.0–493.0)	133.0 (61.0–189.0)	0.31
$\leq 185$	27/40 (68%)	7/13 (54%)	20/27 (74%)	0.21
>185	13/40 (33%)	6/13 (46%)	7/27 (26%)	..
Lactate dehydrogenase, U/L	286.0 (242.0–408.0)	400.0 (323.0–578.0)	281.0 (233.0–357.0)	0.0044
$\leq 245$	11/40 (28%)	1/13 (8%)	10/27 (37%)	0.036
>245	29/40 (73%)	12/13 (92%)	17/27 (63%)	..
Hypersensitive troponin I, pg/mL	3.4 (1.1–9.1)	3.3 (3.0–163.0)	3.5 (0.7–5.4)	0.075
>28 (99th percentile)	5/41 (12%)	4/13 (31%)	1/28 (4%)	0.017
Procalcitonin, ng/mL	0.1 (0.1–0.1)	0.1 (0.1–0.4)	0.1 (0.1–0.1)	0.031
<0.1	27/39 (69%)	6/12 (50%)	21/27 (78%)	0.029
$\geq 0.1$ to <0.25	7/39 (18%)	3/12 (25%)	4/27 (15%)	..
$\geq 0.25$ to <0.5	2/39 (5%)	0/12	2/27 (7%)	..
$\geq 0.5$	3/39 (8%)	3/12 (25%)*	0/27	..
Bilateral involvement of chest radiographs	40/41 (98%)	13/13 (100%)	27/28 (96%)	0.68
Cycle threshold of respiratory tract	32.2 (31.0–34.5)	31.1 (30.0–33.5)	32.2 (31.1–34.7)	0.39

Data are median (IQR) or n/N (%), where N is the total number of patients with available data. p values comparing ICU care and no ICU care are from  $\chi^2$ , Fisher's exact test, or Mann-Whitney U test. 2019-nCoV=2019 novel coronavirus. ICU=intensive care unit. \*Complicated typical secondary infection during the first hospitalisation.

Table 2: Laboratory findings of patients infected with 2019-nCoV on admission to hospital

some health-care workers have also been infected in Wuhan. Taken together, evidence so far indicates human transmission for 2019-nCoV. We are concerned that 2019-nCoV could have acquired the ability for efficient human transmission.<sup>19</sup> Airborne precautions, such as a fit-tested N95 respirator, and other personal protective equipment are strongly recommended. To

prevent further spread of the disease in health-care settings that are caring for patients infected with 2019-nCoV, onset of fever and respiratory symptoms should be closely monitored among health-care workers. Testing of respiratory specimens should be done immediately once a diagnosis is suspected. Serum antibodies should be tested among health-care workers

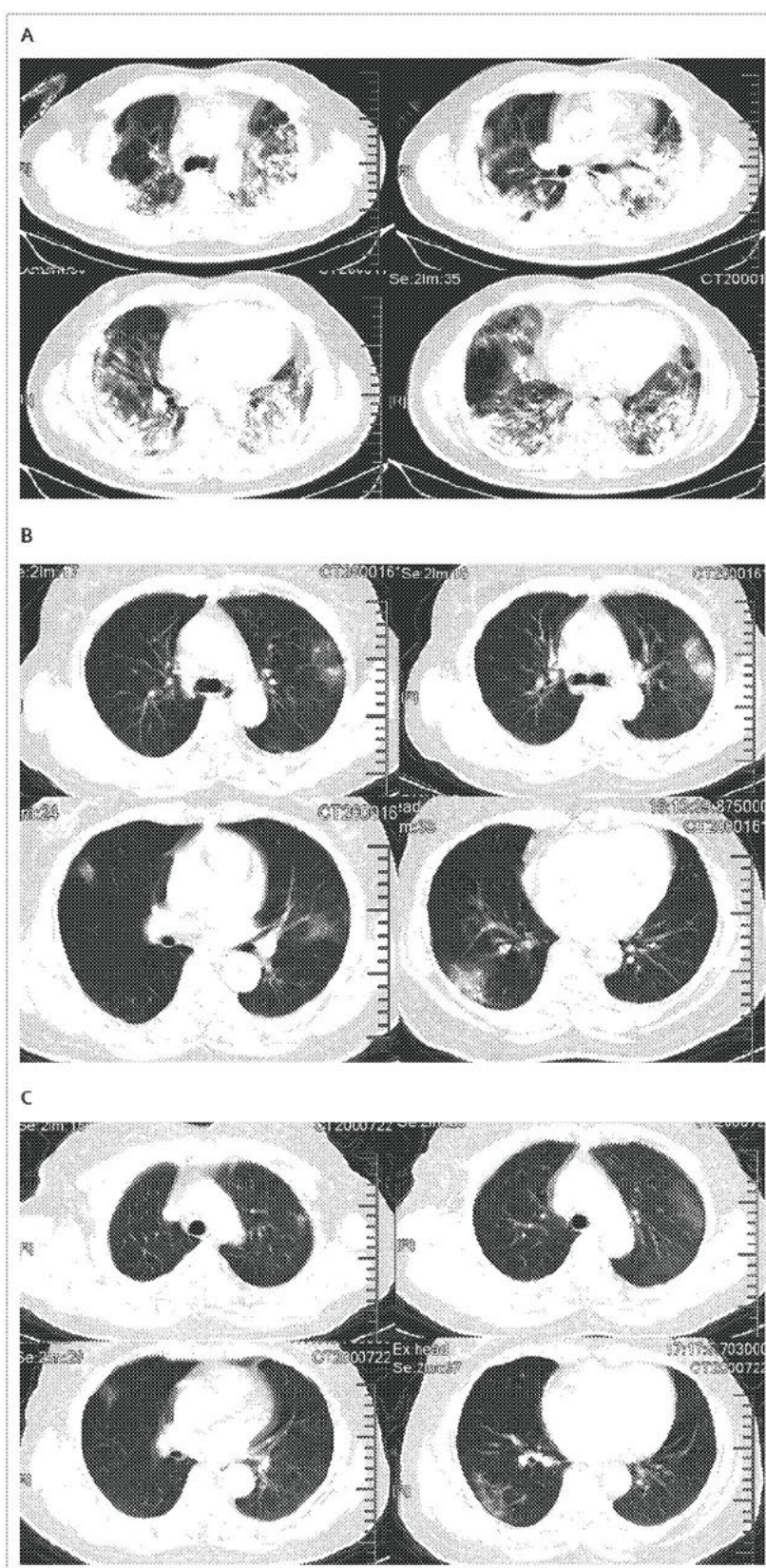


before and after their exposure to 2019-nCoV for identification of asymptomatic infections.

Similarities of clinical features between 2019-nCoV and previous betacoronavirus infections have been noted. In this cohort, most patients presented with fever, dry cough, dyspnoea, and bilateral ground-glass opacities on chest CT scans. These features of 2019-nCoV infection bear some resemblance to SARS-CoV and MERS-CoV infections.<sup>20,21</sup> However, few patients with 2019-nCoV infection had prominent upper respiratory tract signs and symptoms (eg, rhinorrhoea, sneezing, or sore throat), indicating that the target cells might be located in the lower airway. Furthermore, 2019-nCoV patients rarely developed intestinal signs and symptoms (eg, diarrhoea), whereas about 20–25% of patients with MERS-CoV or SARS-CoV infection had diarrhoea.<sup>21</sup> Faecal and urine samples should be tested to exclude a potential alternative route of transmission that is unknown at this stage.

The pathophysiology of unusually high pathogenicity for SARS-CoV or MERS-CoV has not been completely understood. Early studies have shown that increased amounts of proinflammatory cytokines in serum (eg, IL1B, IL6, IL12, IFN $\gamma$ , IP10, and MCP1) were associated with pulmonary inflammation and extensive lung damage in SARS patients.<sup>22</sup> MERS-CoV infection was also reported to induce increased concentrations of proinflammatory cytokines (IFN $\gamma$ , TNF $\alpha$ , IL15, and IL17).<sup>21</sup> We noted that patients infected with 2019-nCoV also had high amounts of IL1B, IFN $\gamma$ , IP10, and MCP1, probably leading to activated T-helper-1 (Th1) cell responses. Moreover, patients requiring ICU admission had higher concentrations of GCSF, IP10, MCP1, MIP1A, and TNF $\alpha$  than did those not requiring ICU admission, suggesting that the cytokine storm was associated with disease severity. However, 2019-nCoV infection also initiated increased secretion of T-helper-2 (Th2) cytokines (eg, IL4 and IL10) that suppress inflammation, which differs from SARS-CoV infection.<sup>22</sup> Further studies are necessary to characterise the Th1 and Th2 responses in 2019-nCoV infection and to elucidate the pathogenesis. Autopsy or biopsy studies would be the key to understand the disease.

In view of the high amount of cytokines induced by SARS-CoV,<sup>22,24</sup> MERS-CoV,<sup>25,26</sup> and 2019-nCoV infections, corticosteroids were used frequently for treatment of patients with severe illness, for possible benefit by reducing inflammatory-induced lung injury. However, current evidence in patients with SARS and MERS



**Figure 3: Chest CT images**

(A) Transverse chest CT images from a 40-year-old man showing bilateral multiple lobular and subsegmental areas of consolidation on day 15 after symptom onset. Transverse chest CT images from a 53-year-old woman showing bilateral ground-glass opacity and subsegmental areas of consolidation on day 8 after symptom onset (B), and bilateral ground-glass opacity on day 12 after symptom onset (C).



	All patients (n=41)	ICU care (n=13)	No ICU care (n=28)	p value
Duration from illness onset to first admission	7.0 (4.0–8.0)	7.0 (4.0–8.0)	7.0 (4.0–8.5)	0.87
<b>Complications</b>				
Acute respiratory distress syndrome	12 (29%)	11 (85%)	1 (4%)	<0.0001
RNAemia	6 (15%)	2 (15%)	4 (14%)	0.93
Cycle threshold of RNAemia	35.1 (34.7–35.1)	35.1 (35.1–35.1)	34.8 (34.1–35.4)	0.35
Acute cardiac injury*	5 (12%)	4 (31%)	1 (4%)	0.017
Acute kidney injury	3 (7%)	3 (23%)	0	0.027
Secondary infection	4 (10%)	4 (31%)	0	0.0014
Shock	3 (7%)	3 (23%)	0	0.027
<b>Treatment</b>				
Antiviral therapy	38 (93%)	12 (92%)	26 (93%)	0.46
Antibiotic therapy	41 (100%)	13 (100%)	28 (100%)	NA
Use of corticosteroid	9 (22%)	6 (46%)	3 (11%)	0.013
Continuous renal replacement therapy	3 (7%)	3 (23%)	0	0.027
Oxygen support	..	..	..	<0.0001
Nasal cannula	27 (66%)	1 (8%)	26 (93%)	..
Non-invasive ventilation or high-flow nasal cannula	10 (24%)	8 (62%)	2 (7%)	..
Invasive mechanical ventilation	2 (5%)	2 (15%)	0	..
Invasive mechanical ventilation and ECMO	2 (5%)	2 (15%)	0	..
<b>Prognosis</b>				
Hospitalisation	7 (17%)	1 (8%)	6 (21%)	0.014
Discharge	28 (68%)	7 (54%)	21 (75%)	..
Death	6 (15%)	5 (38%)	1 (4%)	..

Data are median (IQR) or n (%). p values are comparing ICU care and no ICU care. 2019-nCoV=2019 novel coronavirus. ICU=intensive care unit. NA=not applicable. ECMO=extracorporeal membrane oxygenation. \*Defined as blood levels of hypersensitive troponin I above the 99th percentile upper reference limit (>28 pg/mL) or new abnormalities shown on electrocardiography and echocardiography.

**Table 3: Treatments and outcomes of patients infected with 2019-nCoV**

suggests that receiving corticosteroids did not have an effect on mortality, but rather delayed viral clearance.<sup>27–29</sup> Therefore, corticosteroids should not be routinely given systemically, according to WHO interim guidance.<sup>30</sup> Among our cohort of 41 laboratory-confirmed patients with 2019-nCoV infection, corticosteroids were given to very few non-ICU cases, and low-to-moderate dose of corticosteroids were given to less than half of severely ill patients with ARDS. Further evidence is urgently needed to assess whether systematic corticosteroid treatment is beneficial or harmful for patients infected with 2019-nCoV.

No antiviral treatment for coronavirus infection has been proven to be effective. In a historical control study,<sup>31</sup> the combination of lopinavir and ritonavir among SARS-CoV patients was associated with substantial clinical benefit (fewer adverse clinical outcomes). Arabi and colleagues initiated a placebo-controlled trial of interferon beta-1b, lopinavir, and ritonavir among patients with MERS infection in Saudi Arabia.<sup>32</sup> Preclinical evidence showed

the potent efficacy of remdesivir (a broad-spectrum antiviral nucleotide prodrug) to treat MERS-CoV and SARS-CoV infections.<sup>33,34</sup> As 2019-nCoV is an emerging virus, an effective treatment has not been developed for disease resulting from this virus. Since the combination of lopinavir and ritonavir was already available in the designated hospital, a randomised controlled trial has been initiated quickly to assess the efficacy and safety of combined use of lopinavir and ritonavir in patients hospitalised with 2019-nCoV infection.

Our study has some limitations. First, for most of the 41 patients, the diagnosis was confirmed with lower respiratory tract specimens and no paired nasopharyngeal swabs were obtained to investigate the difference in the viral RNA detection rate between upper and lower respiratory tract specimens. Serological detection was not done to look for 2019-nCoV antibody rises in 18 patients with undetectable viral RNA. Second, with the limited number of cases, it is difficult to assess host risk factors for disease severity and mortality with multivariable-adjusted methods. This is a modest-sized case series of patients admitted to hospital; collection of standardised data for a larger cohort would help to further define the clinical presentation, natural history, and risk factors. Further studies in outpatient, primary care, or community settings are needed to get a full picture of the spectrum of clinical severity. At the same time, finding of statistical tests and p values should be interpreted with caution, and non-significant p values do not necessarily rule out difference between ICU and non-ICU patients. Third, since the causative pathogen has just been identified, kinetics of viral load and antibody titres were not available. Finally, the potential exposure bias in our study might account for why no paediatric or adolescent patients were reported in this cohort. More effort should be made to answer these questions in future studies.

Both SARS-CoV and MERS-CoV were believed to originate in bats, and these infections were transmitted directly to humans from market civets and dromedary camels, respectively.<sup>35</sup> Extensive research on SARS-CoV and MERS-CoV has driven the discovery of many SARS-like and MERS-like coronaviruses in bats. In 2013, Ge and colleagues<sup>36</sup> reported the whole genome sequence of a SARS-like coronavirus in bats with that ability to use human ACE2 as a receptor, thus having replication potentials in human cells.<sup>37</sup> 2019-nCoV still needs to be studied deeply in case it becomes a global health threat. Reliable quick pathogen tests and feasible differential diagnosis based on clinical description are crucial for clinicians in their first contact with suspected patients. Because of the pandemic potential of 2019-nCoV, careful surveillance is essential to monitor its future host adaption, viral evolution, infectivity, transmissibility, and pathogenicity.

#### Contributors

BC and JW had the idea for and designed the study and had full access to all data in the study and take responsibility for the integrity of the



data and the accuracy of the data analysis. YW, GF, XG, JX, HL, and BC contributed to writing of the report. BC contributed to critical revision of the report. YW, GF, XG, JX, and HL contributed to the statistical analysis. All authors contributed to data acquisition, data analysis, or data interpretation, and reviewed and approved the final version.

#### Declaration of interests

All authors declare no competing interests.

#### Data sharing

The data that support the findings of this study are available from the corresponding author on reasonable request. Participant data without names and identifiers will be made available after approval from the corresponding author and National Health Commission. After publication of study findings, the data will be available for others to request. The research team will provide an email address for communication once the data are approved to be shared with others. The proposal with detailed description of study objectives and statistical analysis plan will be needed for evaluation of the reasonability to request for our data. The corresponding author and National Health Commission will make a decision based on these materials. Additional materials may also be required during the process.

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**From:** Fine, Amanda (NIH/OD) [E] [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=61290B74AA9A44358954C45439FFDEB6-FINEAB]  
**Sent:** 4/27/2020 7:18:16 PM  
**To:** Lauer, Michael (NIH/OD) [E] [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=90fe9cae30c64cfbb67abd568e882796-lauerml]  
**Subject:** FW: wuhan lab q

**From:** O'Keefe, Kathryn <kathryn.okeefe@wsj.com>  
**Sent:** Monday, April 27, 2020 2:52 PM  
**To:** Myles, Renate (NIH/OD) [E] (b) (6) Fine, Amanda (NIH/OD) [E] (b) (6)  
Wojtowicz, Emma (NIH/OD) [E] (b) (6)  
**Subject:** wuhan lab q

hey,

hope all's well! it's been a while!

i'm writing an article about the wuhan institute of virology and am trying to clarify what U.S. funding it received and the backstory of all that. i saw this letter from members of congress claiming NIH had given the wuhan lab \$3.7M in funding:

<https://blog.whitecoatwaste.org/wp-content/uploads/2020/04/4-21-2020-Gaetz-McSally-letter-to-leadership-re-WIV-funding-FINAL1.pdf>

but then when i look at the grant they link to, it looks like it all went to a U.S.-based research group:

[https://taggs.hhs.gov/Detail/AwardDetail?arg\\_AwardNum=R01AI110964&arg\\_ProgOfficeCode=104](https://taggs.hhs.gov/Detail/AwardDetail?arg_AwardNum=R01AI110964&arg_ProgOfficeCode=104)

i know that some of the ppl in this U.S. group worked w ppl in wuhan, but could you please clarify if the NIH funded or indirectly funded the wuhan lab and, if so, how much money went to the wuhan lab and what the rationale was for the program? also please let me know if you have any other comment on any of this.

if you could let me know by **tomorrow am**, it would be really great.

thanks and best

Kate

Kate O'Keefe  
The Wall Street Journal

1025 Connecticut Ave NW, Suite 800

Washington, D.C. 20036

Email: [kathryn.okeeffe@wsj.com](mailto:kathryn.okeeffe@wsj.com)

Mobile: (b) (6)

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