

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 16 Mar 2020 13:50:31 +0000  
**To:** COSTA, Alejandro Javier  
**Subject:** Accepted: WEBEX call - update on COVID vaccines research activities

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 19 Mar 2020 16:02:40 +0000  
**To:** Casimiro, Danilo /US  
**Subject:** RE: (b) (4)

Everyone is [REDACTED] (b) (4) |  
think people are also just scared and reluctant to volunteer for things.

Cristina is now Deputy Director of DMID and could be a good starting point.

BG

---

**From:** Casimiro, Danilo /US [REDACTED] (b) (6)  
**Sent:** Thursday, March 19, 2020 11:59 AM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Subject:** RE: (b) (4)

Would you recommend anyone at DMID I should contact? Is Christina (Cassetti) a/the program officer for COVID?

What are the challenges with [REDACTED] (b) (4)  
Danny

---

**From:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Sent:** Thursday, March 19, 2020 11:52 AM  
**To:** Casimiro, Danilo /US [REDACTED] (b) (6)  
**Subject:** [EXTERNAL] Re: (b) (4)

**EXTERNAL :** Real sender is [REDACTED] (b) (6)

It may be good to check with DMID. Also DARPA's P3 consortium are the groups who are the fastest. These are publicly identified as Abcellera, AztraZeneca, James Crowe, and Bart Haynes.

We are still [REDACTED] (b) (4)

Barney

Sent from my iPhone

On Mar 19, 2020, at 11:47 AM, Casimiro, Danilo /US [REDACTED] (b) (6) wrote:

Thank you for your quick reply. This is a fast evolving field. Who in the field should we also reach out to who might have them available at the moment? All the best,  
Danny

---

**From:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Sent:** Thursday, March 19, 2020 11:38 AM  
**To:** Casimiro, Danilo /US [REDACTED] (b) (6)  
**Subject:** [EXTERNAL] Re: [REDACTED] (b) (4)

**EXTERNAL :** Real sender is [REDACTED] (b) (6)

We have a few [REDACTED] (b) (4), but we are close to having a [REDACTED] (b) (4)  
[REDACTED] (b) (4) These initial [REDACTED] (b) (4) at the moment. We are also trying to  
[REDACTED] (b) (4).

Barney

Sent from my iPhone

On Mar 19, 2020, at 11:12 AM, Casimiro, Danilo /US [REDACTED] (b) (6) wrote:

Barney, do you have [REDACTED] (b) (4)? Are these available to access? These would be for [REDACTED] (b) (4).  
Danny

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 22 Apr 2020 15:35:23 +0000  
**To:** Margaret E. Ackerman  
**Cc:** (b)(6)  
**Subject:** RE: \*\*EXTERNAL\*\*

I'm on (b)(4), so I will have a voice.

BG

---

**From:** Margaret E. Ackerman (b)(6)  
**Sent:** Wednesday, April 22, 2020 11:24 AM  
**To:** Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Cc:** (b)(6)  
**Subject:** Re: \*\*EXTERNAL\*\*

Barney,

If we draft it, would you be open to signing a letter that indicates you think (b)(4) would be (b)(4) (b)(4) that you are involved in?

I think that is the best we can do on our timeline. It isn't a firm commitment of (b)(4), but I think it would really add value nonetheless.

Best,  
Margie

On Apr 22, 2020, at 11:09 AM, Graham, Barney (NIH/VRC) [E] <(b)(6)> wrote:

Hi Peter,

There is a lot of interest in this. Since (b)(4) (b)(4) (b)(4) (b)(4) You might specific those people when making your request.

These are the questions she will ask:

1. (b)(4)

- 2. [redacted] (b) (4)
- 3. [redacted]
- 4. [redacted]
- 5. [redacted]
- 6. [redacted]

[redacted] (b) (4)

Barney

---

**From:** Peter F. Wright <[redacted] (b)(6)>  
**Sent:** Wednesday, April 22, 2020 11:02 AM  
**To:** Graham, Barney (NIH/VRC) [E] <[redacted] (b) (6)>  
**Cc:** Margaret E. Ackerman ([redacted] (b)(6))  
[redacted] (b)(6)  
**Subject:** RE: \*\*EXTERNAL\*\*

**Totally different request.** I am working with Margie Ackerman and Laura Walker on developing a [redacted] (b) (4)  
[redacted] (b) (4) And wonder if you in principle would agree to that. Spoiler alert in a very [redacted] (b) (4)  
[redacted] (b) (4). Very exciting! Let us know ASAP, thanks

---

**From:** Graham, Barney (NIH/VRC) [E] <[redacted] (b) (6)>  
**Sent:** Tuesday, April 21, 2020 3:32 PM  
**To:** Crowe, James [redacted] (b)(6) Peter F. Wright [redacted] (b)(6)  
Denison, Mark (NIH)  
[redacted] (b)(6)  
**Subject:** RE: \*\*EXTERNAL\*\*

Must have been 1996. I can't remember the event, but looks like we should have a reunion.

Thanks for sharing Peter.

Barney

---

**From:** Crowe, James E (University) (b)(6)  
**Sent:** Tuesday, April 21, 2020 3:28 PM  
**To:** Peter F. Wright (b)(6) Denison, Mark (NIH)  
(b)(6) Graham, Barney (NIH/VRC) [E]  
<(b)(6) (b)(6)>  
**Subject:** Re:

Mark looked 12 then. Now he looks 20.

---

**From:** Peter Wright (b)(6)  
**Date:** Tuesday, April 21, 2020 at 10:32 AM  
**To:** Mark Denison (b)(6) "James Crowe, Jr."  
(b)(6) "Barney S. Graham " <(b)(6) Terry  
Dermody (b)(6)  
(b)(6)  
**Subject:** <no subject>

Remarkable assemblage dress for the beach and corona time

IMPORTANT NOTICE REGARDING THIS ELECTRONIC MESSAGE:

This message is intended for the use of the person to whom it is addressed and may contain information that is privileged, confidential, and protected from disclosure under applicable law. If you are not the intended recipient, your use of this message for any purpose is strictly prohibited. If you have received this communication in error, please delete the message and notify the sender so that we may correct our records.

IMPORTANT NOTICE REGARDING THIS ELECTRONIC MESSAGE:

This message is intended for the use of the person to whom it is addressed and may contain information that is privileged, confidential, and protected from disclosure under applicable law. If you are not the intended recipient, your use of this message for any purpose is strictly prohibited. If you have received this communication in error, please delete the message and notify the sender so that we may correct our records.

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sun, 15 Mar 2020 12:24:37 +0000  
**To:** (b)(6)  
**Subject:** FW: Message from the NIH Director: CORONAVIRUS UPDATE: Approved Telework for Eligible Staff

Here is our instruction.

(b)(6)

---

**From:** Austin, Sarah (NIH/NIAID) [E] <(b)(6)> **On Behalf Of** Mascola, John (NIH/VRC) [E]  
**Sent:** Friday, March 13, 2020 7:11 PM  
**To:** VRC Bldg 40 VRC Users <(b)(6)> VRC-VPPL WWatkins Users <(b)(6)> NIAID VRC Users Dynamic <(b)(6)> NIAID VRC VIP Team <(b)(6)>  
**Cc:** VRC Bldg 40 AO <(b)(6)>  
**Subject:** Re: Message from the NIH Director: CORONAVIRUS UPDATE: Approved Telework for Eligible Staff

Dear VRC colleagues,

I am forwarding this important email from our NIH Director, Dr. Collins, and have highlighted one aspect of his guidance in yellow.

VRC leadership and your direct supervisors will provide more specific guidance early next week. In the interim, feel free to contact your supervisor for guidance on your work status.

I am deeply grateful for your commitment to our VRC work during the uncertainty created by this COVID-19 outbreak.

Sincerely,

John R. Mascola, M.D.  
Director, Vaccine Research Center  
National Institute of Allergy and Infectious Diseases  
National Institutes of Health

---

**From:** NIH Executive Secretariat <[NIHExecSec@nih.gov](mailto:NIHExecSec@nih.gov)>  
**Date:** Friday, March 13, 2020 at 5:19 PM  
**To:** List NIH-ALL-STAFF <[NIH-ALL-STAFF@LIST.NIH.GOV](mailto:NIH-ALL-STAFF@LIST.NIH.GOV)>  
**Subject:** Message from the NIH Director: CORONAVIRUS UPDATE: Approved Telework for Eligible Staff  
**Resent-From:** <[NIHStaff-NIAID@mail.nih.gov](mailto:NIHStaff-NIAID@mail.nih.gov)>

Dear NIH Family:

We recognize that there is a high level of concern among NIH staff about the coronavirus outbreak. I'm incredibly proud of your efforts to continue the important and critical work of NIH to prevent and fight all disease, while we work through our response to this rapidly evolving situation. As you know, our local area now has confirmed cases of community spread of COVID-19. In addition, Maryland, the District of Columbia, and many Virginia schools are now closed for several weeks to promote social distancing and help "flatten the curve" of COVID-19 spread across our area. I want to assure you that our #1 priority during this outbreak is to protect our staff and patients.



### **Telework**

Toward this effort and consistent with [new guidance](#) from the Office of Management and Budget (OMB), I have made the decision that effective Monday, March 16, all telework-eligible employees across the NIH should begin teleworking to the extent possible, at least through Friday, April 3. This timing will be assessed continually, and we will inform the community of any changes. Please coordinate with your supervisor if you are telework-eligible. Employees who are telework eligible, but not telework ready, should come in on Monday to gather necessary equipment and materials. Supervisors should identify opportunities to shift staff who are not currently telework-eligible over to telework-eligible status. By taking these social distancing measures, we reduce risk for everyone and ensure NIH operations can continue.

Due to the diversity of our work here at the NIH, many of you will need to remain on site to continue to support our hospital and facilities, conduct bench research, care for animals, and other critical functions that cannot be handled remotely. And some of you may be able to work from home several days a week, but not every day, due to responsibilities in the lab or office. Supervisors and employees should work together to maximize telework to the extent possible.

We are making every effort to ensure our IT infrastructure is ready to support a large volume of telework employees. I encourage you to visit the intranet site on [NIH Guidance for Staff and Coronavirus](#) that provides resources on remote work. This will be taxing for our system, so I ask that you please be patient as we work through IT issues. If you are experiencing issues, work with your local IT Support or the [NIH IT Service Desk](#).

### **Trainees**

We have a particular responsibility to support our trainees who are in need of special consideration. Supervisors should identify opportunities for trainees to telework. If telework is not an appropriate option, trainees will continue to be paid through their stipend if they are unable to report to work, though other offsite activities such as literature reviews can be encouraged. Visiting Fellows should



contact the [Division of International Services](#) if they choose to telework or plan to be absent from work for a prolonged period of time.

### **Additional Flexibilities**

The closing of local schools will present particular challenges for those of you with children at home. Many of you will not be able to work your normal schedule. HHS has granted a temporary exception to the Agency Telework policy. This exception allows telework eligible employees to telework with children and/or elders at their approved alternate work location. However, employees who are teleworking with dependents at home must account for work and non-work hours and take appropriate leave to account for time spent away from normal work-related duties due to dependent care. Employees should work with their supervisors about their specific circumstances. More information on these flexibilities are available on the [intranet page](#).

Supervisors may also allow staff to temporarily use different work schedules that allow for greater flexibility about their work hours. Additional information about these options can be found on the [Office of Human Resources website](#).

### **High-Risk Staff**

We run a small city here at the NIH, and I know that not everyone is eligible to take advantage of the telework options. We recognize that there may be staff who are not telework eligible but are at [higher risk for serious complications from COVID-19](#). Vulnerable populations include older adults and individuals who have chronic health conditions, such as high blood pressure, heart disease, diabetes, lung disease, or compromised immune systems. At this time, individuals who are at high risk need to take additional measures to protect themselves. [Weather and safety leave](#) may be granted for a “condition that prevents the employee or group of employees from safely traveling to or performing work at an approved location.” Because COVID-19 prevents employees who are at higher risk from safely traveling to or performing work at an approved location, supervisors are encouraged to grant weather and safety leave for these employees who are not telework eligible. Please work with your supervisor if you fall in this category.

### **Health and Safety**

Please continue to follow the CDC guidance about COVID-19 to [prevent illness](#) and recognize [symptoms](#). If you are sick, stay home, or go home immediately if you are at work, and call your healthcare provider for medical advice. As soon as you’re able, contact your supervisor and NIH Occupation Medical Services, as noted in the [NIH guidance](#).

### **Dealing with Stress**

We know that this outbreak may be stressful to you. It may be difficult to cope with the fear and anxiety about a disease, particularly when there is uncertainty. We hope that the decision to move to telework where possible will ease some of the stress. I encourage you to visit the [CDC Coronavirus webpage](#), which includes [information and resources to cope with this stress and ensure your mental health](#). In addition, the NIH [Employee Assistance Program \(EAP\)](#) is available to help you cope with any stress or anxiety you may have concerning the COVID-19 pandemic. To schedule an appointment to address your concerns, please contact the EAP at 301-496-3164.

I want you to know that we will be frequently communicating and adding new information/resources to the intranet site. We ask for your patience as we work through these very complicated issues that affect many different aspects of the agency. Please continue to stay up to date via the [intranet page](#).

Keep safe and continue the good work of NIH.

With deep appreciation and admiration,

Francis S. Collins, M.D., Ph.D.  
NIH Director

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 27 Apr 2020 17:33:36 +0000  
**To:** Helen Y Chu  
**Subject:** RE: Slides for coronavirus vaccine development  
**Attachments:** COVID-19 for Helen.pptx

With attachment.

BG

---

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Monday, April 27, 2020 1:28 PM  
**To:** Helen Y Chu <[REDACTED] (b)(6)>  
**Subject:** RE: Slides for coronavirus vaccine development

Hi Helen,

These are some slides I showed for an NIH webinar last week: [REDACTED] (b) (4)

I deleted a couple that had unpublished data.

Best wishes,

Barney

---

**From:** Helen Y Chu <[REDACTED] (b)(6)>  
**Sent:** Sunday, April 26, 2020 12:47 AM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Subject:** Slides for coronavirus vaccine development

Dear Barney,

I hope you are doing well. I have to give a talk on Tuesday about vaccine and monoclonal development for COVID to the faculty at the medical center. Do you have any slides from the work that has been done to date that you wouldn't mind sharing?

Thanks for considering.

Helen

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 27 Feb 2020 22:39:02 +0000  
**To:** Mascola, John (NIH/VRC) [E]  
**Subject:** RE: slides for IABS meeting  
**Attachments:** Precision Vaccinology IADBS 65th Lyon 27Feb2020.pptx

Trying again.

BG

---

**From:** Mascola, John (NIH/VRC) [E] <[REDACTED]> (b) (6)  
**Sent:** Thursday, February 27, 2020 4:34 PM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED]> (b) (6)  
**Subject:** RE: slides for IABS meeting

Hi Barney,

Some of the slides don't come through – can you resend. PP says slides can't be “repaired”

Thanks,  
John

---

**From:** Graham, Barney (NIH/VRC) [E] <[REDACTED]> (b) (6)  
**Sent:** Thursday, February 27, 2020 3:49 PM  
**To:** Mascola, John (NIH/VRC) [E] <[REDACTED]> (b) (6)  
**Subject:** slides for IABS meeting

Here are the slides I showed this morning. You might like the new VRC intro slide I made (or it might be too much). Also, the last slide is a timeline for the nCoV project that I like. Still has a few more steps before the trial starts.

Barney

\*\*\*\*\*

Barney S. Graham, MD, PhD  
Senior Investigator  
Deputy Director, Vaccine Research Center  
Chief, Viral Pathogenesis Laboratory  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive, MSC 3017  
Bldg 40, Room 2502  
Bethesda, MD 20892-3017

Phone: (b)(6)

URL: <https://www.niaid.nih.gov/research/> (b)(6)

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. 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.

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 31 Mar 2020 00:54:05 +0000  
**To:** Stemmy, Erik (NIH/NIAID) [E]; Embry, Alan (NIH/NIAID) [E]  
**Subject:** FW: Conversations with (b) (4) might you provide your thoughts please?  
**Attachments:** (b) (4).pdf

More ideas.

BG

---

**From:** Eric Sievers <(b) (6)>  
**Sent:** Sunday, March 22, 2020 9:19 AM  
**To:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Subject:** Conversations with (b) (4); might you provide your thoughts please?  
**Importance:** High

Dear Dr. Graham,

We are developing a technology that delivers (b) (4) plasmid (b) (4) (b) (4)

We believe our (b) (4)  
(b) (4) We pivoted to the global pandemic and found that (b) (4)  
(b) (4) It launched our vision for both a vaccine (b) (4)

(b) (4)  
(b) (4)

(b) (4)

Might you and I share a call to discuss further? I'm working every day on this effort, so no worries regarding

weekends or hour of the day. I live in (b) (6).

Grateful during these extraordinary times,  
Eric

Eric Sievers, MD  
Consulting Medical Officer  
Symvivo

(b)(6)

(b) (4)



Anti-Luciferase immunohistochemistry

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 28 Apr 2020 03:29:46 +0000  
**To:** Kolberg, Rebecca (NIH/OD) [E]  
**Cc:** George, Jill (NIH/OD) [E]; Pelis, Kim (NIH/OD) [E]  
**Subject:** RE: Slides Request-NIH Director  
**Attachments:** COVID-19 IG for NIH OD.pptx

The slides are attached.

Take care,

Barney

---

**From:** Kolberg, Rebecca (NIH/OD) [E] <[REDACTED] (b) (6)>  
**Sent:** Monday, April 27, 2020 9:15 PM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Cc:** George, Jill (NIH/OD) [E] <[REDACTED] (b)(6)>; Pelis, Kim (NIH/OD) [E] <[REDACTED] (b)(6)>  
**Subject:** Slides Request-NIH Director

Dr. Graham,

When you have time, we'd greatly appreciate it if you could send us your slide set from your COVID-19 SIG lecture. It was a great talk that we'd like to have on hand for our future reference in Dr Collins' presentations files.

Thanks!

Rebecca

Rebecca Kolberg  
Chief, NIH Director's Presentations Branch  
Office of Communications & Public Liaison  
Office of the Director, NIH  
Bethesda, MD 20892  
[REDACTED] (b)(6)(mobile)



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 26 Feb 2020 20:30:32 +0000  
**To:** Corbett, Kizzmekia (NIH/VRC) [E]  
**Cc:** Morabito, Kaitlyn (NIH/VRC) [E]; Bok, Karin (NIH/VRC) [E]  
**Subject:** FW: 2019-nCoV [REDACTED] (b) (4)  
**Attachments:** 2019nCoV\_flyer\_FINAL\_lettercompressed.pdf

This might be interesting.

BG

---

**From:** PEPperprint - Carsten Haber <[REDACTED]> (b)(6)  
**Sent:** Wednesday, February 26, 2020 3:21 PM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED]> (b) (6)  
**Subject:** 2019-nCoV [REDACTED] (b) (4)

Dear Dr. Graham,

We have proteome microarrays for the coronavirus (2019-nCoV, COVID-19 – see flyer) available. It can be used to detect IgG and IgM antibody responses on the epitope level in patient sera for in-vitro diagnostic test, diagnostics & vaccine development.

### PEPperCHIP<sup>®</sup> Coronavirus 2019-nCoV Proteome Microarray

**Organism:** Coronavirus 2019-nCoV (Acute Respiratory Distress Syndrome)  
**Content:** Whole proteome of Wuhan seafood market pneumonia virus isolate Wuhan-Hu-1 (GenBank ID: MN908947.3) translated into overlapping peptides  
**Tests per Microarray:** One array with 4,883 peptides in duplicate  
**Download:** [Material Data Sheet](#) / [Microarray Layout](#)

If there is interest or questions, you may contact me for further details or [request a quote](#) directly through our website.

Best wishes,  
Carsten Haber



---

**Carsten Haber, PhD**

PEPPERPRINT

One Broadway, 14<sup>th</sup> floor  
Cambridge, MA 02142

Phone (b)(6)

Mobile (b)(6)

E-mail (b)(6)

Web <http://www.pepperprint.com>

---



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 13 Mar 2020 12:24:03 +0000  
**To:** Oplinger, Anne (NIH/NIAID) [E];Routh, Jennifer (NIH/NIAID) [E];Hiatt, Nissa (NIH/VRC) [C]  
**Subject:** Fwd: Interview with PRI's 'The World' today -- Moderna's work on Covid-19 vaccine

FYI. This would probably be a good one to do.

Barney

Sent from my iPhone

Begin forwarded message:

**From:** Rebecca Rosman <[REDACTED] (b)(6)>  
**Date:** March 13, 2020 at 6:28:22 AM EDT  
**To:** "Graham, Barney (NIH/VRC) [E]" <[REDACTED] (b)(6)>  
**Subject:** Interview with PRI's 'The World' today -- Moderna's work on Covid-19 vaccine

Hi Dr. Graham,

I hope you are well. My name is Rebecca Rosman, I'm a journalist working with PRI's 'The World,' a daily radio program broadcast by local NPR stations around the US.

I'm currently working on a report about the different kinds of vaccine research taking place for Covid-19. Since I'm Paris-based, I spoke with the head of vaccine research at the Pasteur Institute, where they are working on a measles-vector vaccine.

This report will also touch on Moderna's promising mRNA vaccine. I understand your office has been working with Moderna on trials for this vaccine.

I was wondering if you would have any **availability today for a short phone interview to discuss this work? It wouldn't take more than ten minutes.**

To give you more information about the show, it's an hour long daily international news program that reaches around 7 million weekly listeners. Here is a link to the site:

<https://www.pri.org/programs/the-world>

In the meantime, feel free to let me know if there's any other questions I can answer for you about the piece.

Many thanks in advance and I look forward to hearing from you.

Best,  
Rebecca

--

**Rebecca Rosman | Journalist**

**France:** (b)(6)

**USA:** + (b)(6)

[www.rebeccalynnrosman.com](http://www.rebeccalynnrosman.com)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 30 Apr 2020 16:18:58 +0000  
**To:** Reilly, Deborah (NIH/VRC) [E]  
**Subject:** Accepted: COVID-19 Daily Check-in

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 25 Mar 2020 17:37:07 +0000  
**To:** Seder, Robert (NIH/VRC) [E]  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** Re: Potential Mechanistic Studies

Hi Bob,

Thanks for your input here. [REDACTED] (b) (5)  
think it will be helpful to hear your ideas as we flesh out the plan

Barney

Sent from my iPhone

On Mar 23, 2020, at 6:44 PM, Seder, Robert (NIH/VRC) [E] <[REDACTED] (b)(6)> wrote:

Hi Barney and Kizzie,

[REDACTED] (b) (5)

I look forward to hearing your feedback. I can then discuss this later this week at PI meeting. Mario and Rick have reviewed it.

Best,

Bob

Robert A. Seder, M.D.  
Chief, Cellular Immunology Section  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive  
Bethesda, Maryland 20892  
Office phone: (b)(6)  
(b)(5)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 9 Mar 2020 20:49:50 +0000  
**To:** Marston, Hilary (NIH/NIAID) [E]; Stemmy, Erik (NIH/NIAID) [E]; Munster, Vincent (NIH/NIAID) [E]; Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** RE: URGENT: Save The Date: CEPI-BC meeting on preventing disease enhancement with COVID-19 vaccines

I'll be one of the speakers. Thanks for the reminder.

BG

---

**From:** Marston, Hilary (NIH/NIAID) [E] <(b)(6)>  
**Sent:** Monday, March 9, 2020 4:45 PM  
**To:** Stemmy, Erik (NIH/NIAID) [E] <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)> Munster, Vincent (NIH/NIAID) [E] <(b)(6)> Corbett, Kizzmekia (NIH/VRC) [E] <(b)(6)>  
**Subject:** FW: URGENT: Save The Date: CEPI-BC meeting on preventing disease enhancement with COVID-19 vaccines

Forwarding to a small group here – have you received this invite already?

**From:** Robert Chen <(b)(6)>  
**Sent:** Monday, March 9, 2020 4:33 PM  
**To:** Marston, Hilary (NIH/NIAID) [E] <(b)(6)>  
**Subject:** Re: URGENT: Save The Date: CEPI-BC meeting on preventing disease enhancement with COVID-19 vaccines

Hi Hilary,

We plan to post both the recording and the revised guidance docs online right after this scientific consensus meeting. We anticipate a 2nd round of meetings with policymakers (regulators, WHO, etc.) to brief them & refine the guidelines

To make moderating the remote discussion manageable, we'd like to limit the actual invitees to folks knowledgeable re: animal models or immunological assays of enhanced diseases if possible. So yes but only if they are in this group as we have limited number of slots.

Robert (Bob) Chen MD MA  
Scientific Director, Brighton Collaboration  
Land: (b)(6) Cell: (b)(6)  
email: (b)(6)



On Mon, Mar 9, 2020 at 9:56 AM Marston, Hilary (NIH/NIAID) [E] <(b)(6)> wrote:  
The agenda looks great. May we forward the link to select others?

**From:** Robert Chen <(b)(6)>  
**Sent:** Monday, March 9, 2020 9:34 AM  
**To:** Melanie Saville <(b)(6)> Debra Yeskey <(b)(6)> Gould, Sarah <(b)(6)> Lidia Oostvogels <(b)(6)> Kate Broderick <(b)(6)> Marston, Hilary (NIH/NIAID) [E] <(b)(6)> Rhonda <(b)(6)> Francesco Berlanda Scorza <(b)(6)> <(b)(6)>  
**Cc:** Imanol Urcola Lecuona <(b)(6)> Ángel Honrado <(b)(6)>  
**Subject:** Fwd: URGENT: Save The Date: CEPI-BC meeting on preventing disease enhancement with COVID-19 vaccines

Dear Colleague,

The Coalition for Epidemic Preparedness and Innovation (CEPI) has funded several programs to develop a vaccine against COVID-19 ([https://cepi.net/news\\_cepi/cepi-to-fund-three-programmes-to-develop-vaccines-against-the-novel-coronavirus-ncov-2019/](https://cepi.net/news_cepi/cepi-to-fund-three-programmes-to-develop-vaccines-against-the-novel-coronavirus-ncov-2019/)). CEPI has partnered with the Brighton Collaboration (BC) to support the safety assessment of its vaccine candidates ([https://cepi.net/news\\_cepi/cepi-partners-with-brighton-collaboration-to-support-safety-assessment-of-vaccine-candidates-against-emerging-infectious-diseases/](https://cepi.net/news_cepi/cepi-partners-with-brighton-collaboration-to-support-safety-assessment-of-vaccine-candidates-against-emerging-infectious-diseases/))

Some prior coronavirus vaccine candidates vs. SARS and MERS have shown enhanced disease (ED) can occur in immunized animals upon subsequent exposure to live virus. To better understand and hopefully prevent this phenomenon with COVID-19 vaccine candidates, CEPI and BC are organizing an urgent internal scientific consensus meeting (Draft Agenda attached; your suggestions welcome).

To cut the challenges, cost, and risk associated with traveling, we plan to hold this meeting on March 12-13, 2020 using an internet conference platform for 5 hours duration on two successive days at the following times on both days:

23:00-04:00+1 (Melbourne)  
20:00-01:00+1 (Beijing)  
12:00-17:00 GMT (London)  
08:00-13:00 EDT (New York)  
05:00-10:00 PDT (San Francisco)

You will receive a calendar invite shortly from Imanol Lecuola of WEDO, the meeting logistician shortly. Please accept if you are interested and available to attend as a speaker, moderator, peer reviewer, or observer (you're in last two category unless listed in draft agenda as a speaker or moderator).

We anticipate the meeting outcomes to be presented and published in multiple scientific and policy forums subsequently. We look forward to your reply on your availability and your contribution towards a fruitful meeting. We'll follow up with more details as soon as we can. Please let me know if you have any questions.

Best regards,

Robert (Bob) Chen MD MA  
Scientific Director, Brighton Collaboration  
Land: (b)(6) Cell: (b)(6)  
email: (b)(6)

JAKOB CRAMER  
Head of Clinical Development  
CEPI

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 3 Feb 2020 22:01:48 +0000  
**To:** Zhang, Yi (NIH/NIAID) [C]  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E];Kong, Wing-Pui (NIH/VRC) [E];Shi, Wei (NIH/VRC) [E]  
**Subject:** Re: Lingshu on the way back!

That's wonderful news. Will be good to have Lingshu back with us.

Barney

Sent from my iPhone

On Feb 3, 2020, at 4:56 PM, Zhang, Yi (NIH/NIAID) [C] <[REDACTED] (b)(6)> wrote:

Hi,

Great news, I just got Lingshu's message that she already on the flight back to DCA, and she will contact us tomorrow when she get home.

Best,  
Yi

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Sent:** Monday, February 3, 2020 1:01 PM  
**To:** Daniel P. Wrapp <[REDACTED] (b)(6)> Zhang, Yi (NIH/NIAID) [C] <[REDACTED] (b)(6)>  
**Cc:** Jason McLellan <[REDACTED] (b)(6)>  
**Subject:** FW: SARS [REDACTED] (b)(5) Data is Beautiful!!!

Good morning Daniel,  
Lingshu is still [REDACTED] (b)(6) so Yi, cc'ed here, will [REDACTED] (b)(4) Please let her know the quantity that you need.

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**  
Viral Pathogenesis Laboratory | Vaccine Research Center  
National Institutes of Allergy and Infectious Diseases  
National Institutes of Health

Building 40 Room 2608  
40 Convent Drive

Bethesda MD 20892

Laboratory: (b)(6)

Personal: (b)(6)

Fax: (301) 480-2771

---

**From:** "Zhang, Yi (NIH/NIAID) [C]" <(b)(6)>

**Date:** Monday, February 3, 2020 at 9:38 AM

**To:** Kizzmekia Corbett <(b)(6)> "Wang, Lingshu (NIH/VRC) [E]"

<(b)(6)>

**Cc:** "Kong, Wing-Pui (NIH/VRC) [E]" <(b)(6)> Barney Graham

<(b)(6)>

**Subject:** RE: SARS (b)(5) Data is Beautiful!!!

Good morning,

Thanks for sharing information

(b)(4)

Thanks,

Yi

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] <(b)(6)>

**Sent:** Monday, February 3, 2020 6:21 AM

**To:** Wang, Lingshu (NIH/VRC) [E] <(b)(6)> Zhang, Yi (NIH/NIAID) [C]

<(b)(6)>

**Cc:** Kong, Wing-Pui (NIH/VRC) [E] <(b)(6)> Graham, Barney (NIH/VRC) [E]

<(b)(6)>

**Subject:** FW: SARS (b)(5) Data is Beautiful!!!

HAPPY MONDAY!!!

See attached. Yi, I will be sending the McLellan lab your way so they can receive (b)(4)

(b)(4). Olu is shipping them a box today, if you want to throw them in there.

(b)(4), (b)(5)

Yi, could you tell Lingshu to email me from her personal email. We want to know if you has anything already written up for a couple of manuscripts:

(b)(4), (b)(5)

(b) (5), (b) (4)

**Kizzmekia S. Corbett, PhD**

**Senior Research Fellow | Scientific Lead**

**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**

Viral Pathogenesis Laboratory | Vaccine Research Center

National Institutes of Allergy and Infectious Diseases

National Institutes of Health

Building 40 Room 2608

40 Convent Drive

Bethesda MD 20892

Laboratory: (b)(6)

Personal: (b)(6)

Fax: (301) 480-2771

---

**From:** Kizzmekia Corbett <(b)(6)>

**Date:** Monday, February 3, 2020 at 4:14 AM

**To:** Barney Graham <(b)(6)> "Mascola, John (NIH/VRC) [E]"

<(b)(6)>

**Cc:** Jason McLellan <(b)(6)> "Daniel P. Wrapp"

<(b)(6)>

**Subject:** SARS (b)(5) Data is Beautiful!!!

(b) (4)

(b) (4) ...

(b) (4)

*Jason and Daniel, Take your pick and we will send them immediately!*

(b) (4)

Jason, (b) (4)

--

**Kizzmekia S. Corbett, PhD**

**Senior Research Fellow | Scientific Lead**

**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**

Viral Pathogenesis Laboratory | Vaccine Research Center  
National Institutes of Allergy and Infectious Diseases  
National Institutes of Health

Building 40 Room 2608

40 Convent Drive

Bethesda MD 20892

Laboratory: (b)(6)

Personal: (b)(6)

Fax: (301) 480-2771

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 27 Feb 2020 16:39:08 +0000  
**To:** Stein, Judy (NIH/VRC) [C]  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E]; Young, Monique (NIH/VRC) [E]; Petrik, Amy (NIH/NIAID) [E]; Morabito, Kaitlyn (NIH/VRC) [E]  
**Subject:** Re: Introduction- BioNTech COVID-19

Ok. Got it.

BG

Sent from my iPhone

On Feb 27, 2020, at 9:13 AM, Stein, Judy (NIH/VRC) [C] <(b)(6)> wrote:

Hi Barney,  
Holger is removed from this email.

(b) (5), (b) (4)

(b) (5), (b) (4)

Thanks,  
Judy

---

**From:** Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Sent:** Thursday, February 27, 2020 9:10 AM  
**To:** Holger Kissel <(b)(6)>  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E] <(b)(6)> Young, Monique (NIH/VRC) [E] <(b)(6)> Petrik, Amy (NIH/NIAID) [E] <(b)(6)> Stein, Judy (NIH/VRC) [C] <(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)>  
**Subject:** Re: Introduction- BioNTech COVID-19

Ok. I'll call then. (b) (4)

Barney

Sent from my iPhone

On Feb 27, 2020, at 8:28 AM, Holger Kissel <[REDACTED] (b)(6)> wrote:

Dear Barney,

(

Thank you for your response. Just for clarity, as my initial mail could be misleading, I was referring to the [REDACTED] (b)(4) I'd be happy giving you a call tomorrow/Friday at 9:30 am EST at [REDACTED] (b)(6).

Kind regards,

Holger

**Dr. Holger Kissel**

Vice President Business Alliances | BioNTech SE | An der Goldgrube 12 | 55131 Mainz | Germany

Tel.: + [REDACTED] (b)(6) | Fax: +49 6131 – 9084 – 390 | E-Mail: [REDACTED] (b)(6)

---

**Von:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>

**Gesendet:** Donnerstag, 27. Februar 2020 01:59

**An:** Holger Kissel <[REDACTED] (b)(6)>

**Cc:** Corbett, Kizzmekia (NIH/VRC) [E] <[REDACTED] (b)(6)> Young, Monique (NIH/VRC) [E] <[REDACTED] (b)(6)> Petrik, Amy (NIH/NIAID) [E] <[REDACTED] (b)(6)> Stein, Judy (NIH/VRC) [C] <[REDACTED] (b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <[REDACTED] (b)(6)>

**Betreff:** RE: Introduction- BioNTech COVID-19

**Attention: This is an external email. Please verify sender before replying, clicking links or opening any attachments.**

Sorry, but I have been in meetings and calls all day and did not have time for a call. [REDACTED] (b)(4)

[REDACTED] (b)(4) I would have some time to talk on Friday morning before 11 am EST if that works for you.

Barney

---

**From:** Holger Kissel <[REDACTED] (b)(6)>

**Sent:** Wednesday, February 26, 2020 10:11 AM

**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>

**Subject:** AW: Introduction- BioNTech COVID-19

Dear Dr. Graham,



We recently met during a TC to discuss (b) (4)

(b) (4)

(b) (4) In parallel I am in contact with (b) (4)

(b) (4)

We were wondering if it were possible to (b) (4)

(b) (4) from your lab?

It may be best if we could have a short call today. Would that be possible?

Kind regards,

Holger

**Dr. Holger Kissel**

Vice President Business Alliances | BioNTech SE | An der Goldgrube 12 | 55131 Mainz | Germany

Tel.: (b) (6) | Fax: +49 6131 – 9084 – 390 | E-Mail: (b) (6)

---

**Von:** Graham, Barney (NIH/VRC) [E] <(b) (6)>

**Gesendet:** Montag, 3. Februar 2020 13:37

**An:** Ugur.Sahin.Uni <(b) (6)>

**Cc:** Holger Kanzler <(b) (6)> Ugur Sahin <(b) (6)>

Lynda, Stuart <(b) (6)> Holger Kissel <(b) (6)>

Mascola, John (NIH/VRC) [E] <(b) (6)> Gall, Jason (NIH/VRC) [C] <(b) (6)>

Morabito, Kaitlyn (NIH/VRC) [E] <(b) (6)> Stein, Judy (NIH/VRC) [C]

<(b) (6)>

**Betreff:** Re: Introduction

**Attention: This is an external email. Please verify sender before replying, clicking links or opening any attachments.**

Dear Prof. Ugur,

Thank you for your interest in (b) (4) If we can help by providing advice and information on (b) (4)

(b) (4) we are glad to do so. Fortunately, (b) (4)

(b) (4)

(b) (4) Therefore, we believe (b) (4)

Let us know if you would like to arrange a call to discuss for which we would probably want to (b) (4)

(b) (4)

Best wishes,

Barney

Sent from my iPhone

On Feb 2, 2020, at 12:22 PM, Sahin, Prof. Dr. Ugur <[redacted] (b)(6)> wrote:

Dear Holger,

many thanks for connecting.

Dear Barney,

I have read your [redacted] (b)(4) and would greatly appreciate to learn more and get your advice for [redacted] (b)(4) [redacted] (b)(4)

Best regards,

Ugur

---

**Von:** Holger Kanzler [mailto:[redacted] (b)(6)]  
**Gesendet:** Sonntag, 2. Februar 2020 17:53  
**An:** Graham, Barney (NIH/VRC) [E]; Ugur Sahin; Sahin, Prof. Dr. Ugur  
**Cc:** Lynda Stuart; Holger Kissel  
**Betreff:** Introduction

Dear Barney, Ugur,

I wanted to take a moment to introduce you to each other regarding 2019-nCoV.

Ugur, Barney is Deputy Director, Vaccine Research Center, Chief, Viral Pathogenesis Laboratory and Translational Science Core, and there is nobody who knows more about structural basis of antibody-based virus neutralization than him.

<https://www.niaid.nih.gov/research> [redacted] B (6)

Barney, Ugur is CEO of BioNTech, a cutting edge mRNA company with a tremendous technology pipeline and partner of the foundation in TB and HIV.

<https://biontech.de/our-dna/leadership>

I was hoping you could have a conversation on [redacted] (b)(4) [redacted] (b)(5)

Best,  
Holger

**Holger Kanzler PhD**

Senior Program Officer, Vaccines & Human Immunobiology  
Global Health – Discovery Cross Cutting

V + (b)(6)

E (b)(6)

**Bill & Melinda Gates Foundation**

[www.gatesfoundation.org](http://www.gatesfoundation.org)

[<image001.png>](#)

[Facebook](#)

[<image002.png>](#)

[Twitter](#)

[<image003.png>](#)

[Impatient Optimists](#)

**Note:** For a text version of these three links, use this format:

Join the conversation on [Facebook](#), [Twitter](#),  
and our blog: [www.impatientoptimists.org](http://www.impatientoptimists.org)

--

---This email was Virus checked by UTM 9. <http://www.sophos.com>---

---This Email was scanned by Sophos UTM system---

--

---This email was Virus checked by UTM 9. <http://www.sophos.com>---

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 8 Apr 2020 16:51:30 +0000  
**To:** Jon Smith  
**Cc:** Wataru Akahata  
**Subject:** Re: Looking for people

Thanks Jon. We will let people know. Would be nice to think about something by CoV for a while even though it is my favorite topic second to RSV.

Barney

Sent from my iPhone

> On Apr 8, 2020, at 12:24 PM, Jon Smith <[REDACTED] (b)(6)> wrote:

>

> Hi Barney,

>

> I hope you have been well - and safe.

>

> Wataru and I would like to [REDACTED]

(b) (4)

(b) (4)

>

> Best regards,

>

> Jon

>

> Jonathan Smith, Ph.D.

> CSO, VLP Therapeutics

> [REDACTED] (b)(6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sun, 1 Mar 2020 02:26:03 +0000  
**To:** Hiatt, Nissa (NIH/VRC) [C];Mascola, John (NIH/VRC) [E];Marston, Hilary (NIH/NIAID) [E];Daucher, Marybeth (NIH/NIAID) [E];Morabito, Kaitlyn (NIH/VRC) [E];Marston, Hilary (NIH/NIAID) [E];Corbett, Kizzmekia (NIH/VRC) [E];Harris, Christina (NIH/NIAID) [E]  
**Cc:** Ledgerwood, Julie (NIH/NIAID) [E];Bok, Karin (NIH/VRC) [E];Koup, Richard (NIH/VRC) [E]  
**Subject:** RE: NIHVisit03-03-20 PLEASE READ  
**Attachments:** Talking Points CoVid VRC visit 03March2019;jrm\_BG.docx

With attachment.

---

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Saturday, February 29, 2020 9:19 PM  
**To:** Hiatt, Nissa (NIH/VRC) [C] <(b)(6)> Mascola, John (NIH/VRC) [E] <(b)(6)> Marston, Hilary (NIH/NIAID) [E] <(b)(6)> Daucher, Marybeth (NIH/NIAID) [E] <(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)> Marston, Hilary (NIH/NIAID) [E] <(b)(6)> Corbett, Kizzmekia (NIH/VRC) [E] <(b)(6)> Harris, Christina (NIH/NIAID) [E] <(b)(6)>  
**Cc:** Ledgerwood, Julie (NIH/NIAID) [E] <(b)(6)> Bok, Karin (NIH/VRC) [E] <(b)(6)> Koup, Richard (NIH/VRC) [E] <(b)(6)>  
**Subject:** RE: NIHVisit03-03-20 PLEASE READ

I've added my edits on top of John's.

Barney

---

**From:** Hiatt, Nissa (NIH/VRC) [C] <(b)(6)>  
**Sent:** Saturday, February 29, 2020 8:58 PM  
**To:** Mascola, John (NIH/VRC) [E] <(b)(6)> Marston, Hilary (NIH/NIAID) [E] <(b)(6)> Daucher, Marybeth (NIH/NIAID) [E] <(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)> Marston, Hilary (NIH/NIAID) [E] <(b)(6)> Corbett, Kizzmekia (NIH/VRC) [E] <(b)(6)> Harris, Christina (NIH/NIAID) [E] <(b)(6)>  
**Cc:** Ledgerwood, Julie (NIH/NIAID) [E] <jumart> Bok, Karin (NIH/VRC) [E] <(b)(6)> Koup, Richard (NIH/VRC) [E] <(b)(6)>  
**Subject:** RE: NIHVisit03-03-20 PLEASE READ

I know y'all are still reviewing talking points edited by John but I'm adding bios for the 3 VRC roundtable participants (John, Barney, Kizzy) to the review list. It sounds like bios could be helpful for the WH briefing materials as well.

Bios are attached here and use language from the website.

Hilary, we are also preparing slides for your team's consideration in case you would like to use some of them in the lab on a monitor.

Best,  
Nissa

**Nissa Hiatt**

Communications

Vaccine Research Center, NIAID, NIH

40 Convent Drive, Bldg 40, Room 1100

Bethesda, MD 20892

(b)(6)

(b)(6)



---

**From:** Mascola, John (NIH/VRC) [E] <(b)(6)>  
**Sent:** Saturday, February 29, 2020 8:32 PM  
**To:** Hiatt, Nissa (NIH/VRC) [C] <(b)(6)> Marston, Hilary (NIH/NIAID) [E]  
<(b)(6)> Daucher, Marybeth (NIH/NIAID) [E] <(b)(6)> Morabito,  
Kaitlyn (NIH/VRC) [E] <(b)(6)> Graham, Barney (NIH/VRC) [E]  
<(b)(6)> Marston, Hilary (NIH/NIAID) [E] <(b)(6)>  
**Cc:** Ledgerwood, Julie (NIH/NIAID) [E] <(b)(6)> Bok, Karin (NIH/VRC) [E]  
<(b)(6)> Koup, Richard (NIH/VRC) [E] <(b)(6)>  
**Subject:** RE: NIHVisit03-03-20 PLEASE READ

Thanks Nissa,

These are good, and (b)(5) I've made some edits to shorten in some cases, and to polish text.

Barney and others here should review and suggest. We need to get to Hilary ASAP, so I've copied her here.

Thanks,  
John

---

**From:** Hiatt, Nissa (NIH/VRC) [C] <(b)(6)>  
**Sent:** Saturday, February 29, 2020 7:53 PM  
**To:** Mascola, John (NIH/VRC) [E] <(b)(6)> Marston, Hilary (NIH/NIAID) [E]  
<(b)(6)> Daucher, Marybeth (NIH/NIAID) [E] <(b)(6)> Morabito,  
Kaitlyn (NIH/VRC) [E] <(b)(6)> Graham, Barney (NIH/VRC) [E]  
<(b)(6)>

**Cc:** Ledgerwood, Julie (NIH/NIAID) [E] <(b)(6)> Bok, Karin (NIH/VRC) [E]  
<(b)(6)> Koup, Richard (NIH/VRC) [E] <(b)(6)>

**Subject:** RE: NIHVisit03-03-20 PLEASE READ

Hi John,

Here is a draft version of talking points for consideration. Please let us know if we can provide additional information or alter the approach.

Best,  
Nissa

**Nissa Hiatt**

Communications

Vaccine Research Center, NIAID, NIH  
40 Convent Drive, Bldg 40, Room 1100  
Bethesda, MD 20892

<(b)(6)>

<(b)(6)>



---

**From:** Mascola, John (NIH/VRC) [E] <(b)(6)>

**Sent:** Saturday, February 29, 2020 5:28 PM

**To:** Marston, Hilary (NIH/NIAID) [E] <(b)(6)> Daucher, Marybeth (NIH/NIAID) [E]  
<(b)(6)> Hiatt, Nissa (NIH/VRC) [C] <(b)(6)> Morabito, Kaitlyn  
(NIH/VRC) [E] <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)>

**Cc:** Ledgerwood, Julie (NIH/NIAID) [E] <(b)(6)> Bok, Karin (NIH/VRC) [E]  
<(b)(6)> Koup, Richard (NIH/VRC) [E] <(b)(6)>

**Subject:** RE: NIHVisit03-03-20 PLEASE READ

Yes, we can assist with what Tony asks for. Barney's group – those copied here (Karin, Kaitlyn, Nissa) and I've added Kizzmekia – have bullet points.

All – please read the email chain carefully – to understand what Tony is asking – and who he will provide it to. Then send materials to Hilary.

Hilary – thanks for offering to help.

Barney and I will edit.

Thanks all – I know this is imposition on weekend – but this doesn't happen often.

Best,

John

---

**From:** Marston, Hilary (NIH/NIAID) [E] <(b)(6)>  
**Sent:** Saturday, February 29, 2020 5:25 PM  
**To:** Daucher, Marybeth (NIH/NIAID) [E] <(b)(6)> Hiatt, Nissa (NIH/VRC) [C]  
<(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)> Graham, Barney  
(NIH/VRC) [E] <(b)(6)>  
**Cc:** Mascola, John (NIH/VRC) [E] <(b)(6)> Ledgerwood, Julie (NIH/NIAID) [E]  
<(b)(6)> Bok, Karin (NIH/VRC) [E] <(b)(6)>  
**Subject:** Re: NIHVisit03-03-20 PLEASE READ

(b)(5)

---

**From:** "Daucher, Marybeth (NIH/NIAID) [E]" <(b)(6)>  
**Date:** Saturday, February 29, 2020 at 5:19 PM  
**To:** Hilary Marston <(b)(6)> "Hiatt, Nissa (NIH/VRC) [C]"  
<(b)(6)> "Morabito, Kaitlyn (NIH/VRC) [E]" <(b)(6)> >,  
"Graham, Barney (NIH/VRC) [E]" <(b)(6)>  
**Cc:** "Mascola, John (NIH/VRC) [E]" <(b)(6)> Julie Ledgerwood  
<(b)(6)> Karin Bok <(b)(6)>  
**Subject:** Re: NIHVisit03-03-20 PLEASE READ

Hi Hilary

At this time no formal presentation is required for the briefing in 1201. It will be a round table type discussion. Your office can suggest if Tony wants to put a slide up to explain background.

MB

---

**From:** "Marston, Hilary (NIH/NIAID) [E]" <(b)(6)>  
**Date:** Saturday, February 29, 2020 at 4:56:36 PM  
**To:** "Daucher, Marybeth (NIH/NIAID) [E]" <(b)(6)> "Hiatt, Nissa (NIH/VRC) [C]"  
<(b)(6)> "Morabito, Kaitlyn (NIH/VRC) [E]" <(b)(6)> "Graham, Barney  
(NIH/VRC) [E]" <(b)(6)>  
**Cc:** "Mascola, John (NIH/VRC) [E]" <(b)(6)> "Ledgerwood, Julie (NIH/NIAID) [E]"  
<(b)(6)> "Bok, Karin (NIH/VRC) [E]" <(b)(6)>  
**Subject:** FW: NIHVisit03-03-20 PLEASE READ

Please see below and close hold. I can work on a 1-pager on the vaccine candidate for your review, but they need briefing content on what will be seen on the tour. Is that something that you guys can provide. Tight timeline.



---

**From:** Patricia Conrad <(b)(6)>  
**Date:** Saturday, February 29, 2020 at 4:16 PM  
**To:** Hilary Marston <(b)(6)>  
**Cc:** "Daucher, Marybeth (NIH/NIAID) [E]" <(b)(6)> Gregory Folkers  
<(b)(6)>  
**Subject:** FW: NIHVisit03-03-20 PLEASE READ

Hi and sorry for the weekend email

ASF would like you to work with MaryBeth and VRC staff to draft a memo/briefer as per below. WH needs by noonish tomorrow (or sooner)

MB – can you send what will actually be part of the tour and seen.

ASF will want to approve final draft before sending

Again, sorry for the quick turnaround. thx

Patricia L. Conrad  
Public Health Analyst and  
Special Assistant to the Director  
National Institute of Allergy and Infectious Diseases  
The National Institutes of Health  
31 Center Drive, MSC 2520 - Room 7A03  
Bethesda, Maryland 20892  
(b)(6)  
301-496-4409 fax

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. National Institute of Allergy and Infectious Diseases (NIAID) shall not accept liability for any statement made that are sender's own and not expressly made on behalf of the NIAID by one of its representatives.

---

**From:** Burklow, John (NIH/OD) [E] <(b)(6)>  
**Sent:** Saturday, February 29, 2020 2:44 PM  
**To:** Conrad, Patricia (NIH/NIAID) [E] <(b)(6)>  
**Subject:** Fwd: NIHVisit03-03-20

Sent from my iPhone

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 4 Apr 2020 19:57:47 +0000  
**To:** (b)(6)  
**Subject:** RE: Tonight's (b)(6) - do you need a break from coronavirus

Thanks Maureen. I think it is hard to avoid coronavirus talk. I'm willing to discuss with friends. Even Cynthia and I find ourselves talking about CoV almost every day.

See you later.

Barney

---

**From:** (b)(6) <(b)(6)>  
**Sent:** Saturday, April 4, 2020 2:16 PM  
**To:** Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Subject:** Tonight's (b)(6) - do you need a break from coronavirus

Barney, I think everyone is looking forward to (b)(6) tonight as a source of socialization, distraction and fun. Given your closeness to important aspects of the pandemic, and your 80(plus)-hour work week, **do you need a break from talking coronavirus?** (b)(6)

(b)(6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 23 Mar 2020 02:51:59 +0000  
**To:** Mascola, John (NIH/VRC) [E]  
**Cc:** Ledgerwood, Julie (NIH/NIAID) [E]; Bok, Karin (NIH/VRC) [E]; Austin, Sarah (NIH/NIAID) [E]  
**Subject:** Re: [-EXTERNAL-] RE: BIO Coronavirus Collaboration Initiative Summit - Panelist Information

(b) (5), (b) (4)

BG

Sent from my iPhone

> On Mar 22, 2020, at 10:35 PM, Mascola, John (NIH/VRC) [E] <(b) (6)> wrote:  
>  
> Thanks. And (b) (5), (b) (4) correct/  
>  
> -----Original Message-----  
> From: Graham, Barney (NIH/VRC) [E] <(b) (6)>  
> Sent: Sunday, March 22, 2020 10:05 PM  
> To: Mascola, John (NIH/VRC) [E] <(b) (6)>  
> Cc: Ledgerwood, Julie (NIH/NIAID) [E] <(b) (6)> Bok, Karin (NIH/VRC) [E]  
<(b) (6)> Austin, Sarah (NIH/NIAID) [E] <(b) (6)>  
> Subject: Re: [-EXTERNAL-] RE: BIO Coronavirus Collaboration Initiative Summit - Panelist Information  
>  
> Hi John. Slides look good. I have a couple of comments.  
>

(b) (5), (b) (4)

> BG

> Sent from my iPhone

>> On Mar 22, 2020, at 8:59 PM, Mascola, John (NIH/VRC) [E] <(b) (6)> wrote:  
>>  
>> Barney, Julie, Karin,  
>>  
>> Would you look at these slides. I have to give 7 min presentation – agenda attached, for this virtual conference on Tuesday.  
>> I want to relay VRC work on CoV-2 vaccine and mAbs – big picture, and emphasizing role of USG and our

private sector partnerships.

>>

>> Any major omissions? Suggestions?

>>

>> Thanks,

>>

>> John

>>

>>

>> From: Amy Walker <(b)(6)>

>> Sent: Saturday, March 21, 2020 3:51 PM

>> To: Mascola, John (NIH/VRC) [E] <(b)(6)>

>> Cc: Austin, Sarah (NIH/NIAID) [E] <(b)(6)> Suhana,

>> Tina (NIH/VRC) [E] <(b)(6)> Graham, Barney (NIH/VRC)

>> [E] <(b)(6)> Ledgerwood, Julie (NIH/NIAID) [E]

>> <(b)(6)>

>> Subject: RE: [-EXTERNAL-] RE: BIO Coronavirus Collaboration Initiative

>> Summit - Panelist Information

>>

>> Hi John,

>>

>> Yes, we were planning on each speaker providing a short (about 5-7 minutes each) presentation focused on their partnerships, ongoing work, and gaps, so what you outlined sounds perfect. We are hoping to have some time within the 40 minutes for audience Q&A as well. Apologies that this information was omitted from the logistics email!

>>

>> Thank you again for your participation in the Summit – we are looking forward to a productive conversation on Tuesday!

>>

>> Please let us know if you have any other questions.

>>

>> Best,

>> Amy

>>

>> From: Mascola, John (NIH/VRC) [E]

>> <(b)(6)mailto:(b)(6)>

>> Sent: Saturday, March 21, 2020 10:11 AM

>> To: Amy Walker <(b)(6)mailto:(b)(6)>

>> Cc: Austin, Sarah (NIH/NIAID) [E]

>> <(b)(6)mailto:(b)(6) Suhana, Tina

>> (NIH/VRC) [E] <(b)(6)mailto:(b)(6)>

>> Graham, Barney (NIH/VRC) [E]

>> <(b)(6)mailto:(b)(6) Ledgerwood, Julie

>> (NIH/NIAID) [E]

>> <(b)(6)mailto:(b)(6)>

>> Subject: [-EXTERNAL-] RE: BIO Coronavirus Collaboration Initiative

>> Summit - Panelist Information

>>

>> Amy,

>>

>> I see from agenda a 40 min time slot for Current USG and NGO R&D partnerships. If 4-5 talks, this would seem to be < 10 min each.

>> If so, I can show few slides on our Vaccine Research Center at NIH, and how we were prepared to respond to CoV-2, including vaccines and antibodies, and partnerships with private sector.

>>

>> Best,

>> John

>>  
>> John R. Mascola, M.D.  
>> Director, Vaccine Research Center  
>> National Institute of Allergy and Infectious Diseases National  
>> Institutes of Health  
>> email: (b)(6) mailto: (b)(6)  
>> office tel: (b)(6)  
>>  
>>  
>>  
>> From: Amy Walker <(b)(6)mailto:(b)(6)>  
>> Sent: Friday, March 20, 2020 9:09 PM  
>> To: Mascola, John (NIH/VRC) [E]  
>> <(b)(6)mailto:(b)(6)>  
>> Cc: Phyllis Arthur <(b)(6)mailto:(b)(6)> Gregory  
>> Frank <(b)(6)mailto:(b)(6)> Hannah Dorsey  
>> <(b)(6)mailto:(b)(6)> Ellen Carlin  
>> <(b)(6)mailto:(b)(6)>  
>> Ellen Carlin <(b)(6)mailto:(b)(6)>  
>> Jennifer Alton  
>> <(b)(6)mailto:(b)(6)>  
>> Austin, Sarah (NIH/NIAID) [E]  
>> <(b)(6)mailto:(b)(6)> Suhana, Tina  
>> (NIH/VRC) [E] <(b)(6)mailto:(b)(6)>  
>> Graham, Barney (NIH/VRC) [E]  
>> <(b)(6)mailto:(b)(6)> Ledgerwood, Julie  
>> (NIH/NIAID) [E]  
>> <(b)(6)mailto:(b)(6)>  
>> Subject: BIO Coronavirus Collaboration Initiative Summit - Panelist  
>> Information  
>> Importance: High  
>>  
>>  
>> Dr. Mascola,  
>>  
>> Thank you for participating in the BIO Coronavirus Collaboration Initiative Virtual Summit next Tuesday.  
Additional details regarding the event, webcast instructions, and requested actions before Tuesday.  
>>  
>> Please do not hesitate to reach out to the BIO team if you have any questions or need any additional information.  
>>  
>> Plenary Session Agenda  
>>  
>> The plenary session is scheduled for 10:00 a.m. – 11:45 a.m. on Tuesday, March 24th. This session will include  
opening remarks, a panel on the latest data on COVID-19, and a panel on public-private partnerships for COVID-19  
product R&D. A full agenda is attached to this email for your reference.  
>> Webcast Logistics & Instructions  
>>  
>>  
>> \* Requested information & action items:  
>> \* Please provide to Hannah Dorsey (<(b)(6)mailto:(b)(6)>) by 2:00 p.m. EDT on  
Monday, 3/23 any necessary edits to the name and affiliation text provided here: John Mascola, MD, Director, Dale  
& Betty Bumpers Vaccine Research Center, National Institute of Allergy & Infectious Diseases (NIAID), National  
Institutes of Health (NIH)  
>> \* Please provide a recent head shot for graphic use by 2:00 pm EDT on Monday, 3/23 to THIS  
LINK<[https://www.dropbox.com:\(b\)\(6\),\(b\)\(4\)](https://www.dropbox.com:(b)(6),(b)(4)); Please include your name in the file name.  
>> \* Please provide your presentation slides (\*in 16:9 format) by 2:00 pm EDT on Monday, 3/23 to THIS

LINK<<https://www.dropbox.com/> (b) (6), (b) (4)>; Please include your name in the file name.

>> \* Please confirm your, or your staff's, availability for a tech run-through on Monday, 3/23. Please use THIS LINK<<https://doodle.com/> (b) (4)> to reserve a 15 minute slot to ensure your equipment works properly. It will be best if you are in the same location as, and using the same equipment for, the live plenary webcast.

>> \* Please provide a day-of telephone number that can be used to call you during the presentation, should your internet connection drop, to establish an audio-only connection for the event.

>> \* Please review the following technical recommendation to provide the best webcast results:

>> \* Computer/Laptop Camera is working, at the desired angle, and with necessary lighting in the room

>> \* When possible, a headset with microphone is preferable

>> \* Computer/Laptop Audio is working

>> \* Day-of phone number provided to BIO (should audio back-up connection be needed) is charged, and easily accessible for when the webcast begins

>> \* Close Outlook, Gmail, and any applications that include sound notifications

>> \* Choose an environment away from windows and/or street noise if possible

>> \* Day-of logistics:

>> \* You will receive a separate, speaker-specific link to use for access to the event as a presenter. Do not utilize the attendee-specific link.

>> \* Speakers are asked to call in to a ready-room prior to their presentation. From here you will have the opportunity to speak with a specialist about your equipment and the webcast system. Then you will receive a second link with password via email to join the live webcast, to be queued in by the technician.

>> \* Panelists, please join the virtual greenroom 30 minutes prior to the start of your presentation time, but no later than 15 before the start.

>> \* Slides will be advanced by our webcast producer. Please use a verbal cue to request to advance you slides.

>>

>> A few additional logistical items and reminders:

>>

>> \* Q&A: Following presentations from each of the panelists there will be a moderated Q&A. Using the webinar technology, people will be able to "raise their hand" to ask questions, and BIO staff will "call on" attendees. Attendees will not be submitting questions in advance and BIO staff will not be able to review questions as attendees queue to ask questions.

>> \* Recording: The webcast will be recorded and posted to BIO's website following the event.

>> \* Media: Media have been invited to participate as observers in the plenary session. Q&A and discussion is intended to be between industry, government and NGO partners, and there will not be an opportunity for media questions. BIO will provide a list of registered media to panelists prior to Tuesday's plenary session.

>> Amy Walker

>> Senior Manager, Infectious Diseases Policy Biotechnology Innovation

>> Organization (BIO)

>> 1201 Maryland Ave. SW, Ste. 900

>> Washington, DC 20024

>> direct: (b)(6)

>> mobile: (b)(6)

>> (b)(6)mailto:(b)(6)

>> [www.bio.org](http://www.bio.org)<<http://www.bio.org/>>

>>

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 18 Mar 2020 14:34:35 +0000  
**To:** Corbett, Kizzmekia (NIH/VRC) [E];Routh, Jennifer (NIH/NIAID) [E];Hiatt, Nissa (NIH/VRC) [C]  
**Cc:** Oplinger, Anne (NIH/NIAID) [E];Deatrck, Elizabeth (NIH/NIAID) [C];Pekoc, Ken (NIH/NIAID) [E];Lavelle, Judith (NIH/NIAID) [E];Stover, Kathy (NIH/NIAID) [E]  
**Subject:** RE: Request for help - Forbes article correction. mRNA-1273 vaccine - animal work already done?

Agree. Looks good. This is what Jen developed for Seattle talking points over the weekend.

BG

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] <(b)(6)>  
**Sent:** Wednesday, March 18, 2020 10:22 AM  
**To:** Routh, Jennifer (NIH/NIAID) [E] <(b)(6)> Hiatt, Nissa (NIH/VRC) [C] <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Cc:** Oplinger, Anne (NIH/NIAID) [E] <(b)(6)> Deatrck, Elizabeth (NIH/NIAID) [C] <(b)(6)> Pekoc, Ken (NIH/NIAID) [E] <(b)(6)> Lavelle, Judith (NIH/NIAID) [E] <(b)(6)> Stover, Kathy (NIH/NIAID) [E] <(b)(6)>  
**Subject:** Re: Request for help - Forbes article correction. mRNA-1273 vaccine - animal work already done?

I love this statement and AMEN to setting the record straight.

--

**Kizzmekia S. Corbett, PhD**

**Senior Research Fellow | Scientific Lead**

**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**

Viral Pathogenesis Laboratory | Vaccine Research Center

National Institutes of Allergy and Infectious Diseases

National Institutes of Health

Building 40 Room 2608

40 Convent Drive

Bethesda MD 20892

Laboratory: (b)(6)

Personal: (b)(6)

Fax: (301) 480-2771

---

**From:** "Routh, Jennifer (NIH/NIAID) [E]" <(b)(6)>  
**Date:** Wednesday, March 18, 2020 at 10:12 AM  
**To:** "Hiatt, Nissa (NIH/VRC) [C]" <(b)(6)> Barney Graham

< (b)(6) Kizzmekia Corbett < (b)(6)  
**Cc:** "Oplinger, Anne (NIH/NIAID) [E]" < (b)(6) "Deatrick, Elizabeth  
(NIH/NIAID) [C]" < (b)(6) "Pekoc, Ken (NIH/NIAID) [E]"  
< (b)(6) "Lavelle, Judith (NIH/NIAID) [E]" < (b)(6) "Stover,  
Kathy (NIH/NIAID) [E]" < (b)(6)  
**Subject:** FW: Request for help - Forbes article correction. mRNA-1273 vaccine - animal work  
already done?

Hello – please see the request below from Forbes. I would propose that we respond with a statement that can be attributed to NIAID, using some of the language we developed over the weekend. If this looks OK to VRC, I will send to the reporter:

**NIAID investigators have conducted preclinical immunogenicity testing of mRNA-1273 in mouse models. These studies show that the vaccine produces a potent antibody response against the COVID-19 virus. This data is not yet published. However, while these studies are supportive of the Phase 1 trial, they are not the basis for starting the clinical trial. The safety assessment is based on prior human studies of other vaccines developed using the mRNA platform technology. NIAID is following FDA guidance in performing the Phase 1 clinical trial. The studies in mice and future studies in nonhuman primates, in addition to the information from the Phase 1 clinical trial, will establish the rationale for testing the vaccine in larger trials if warranted.**

Thanks,  
Jen

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.

**From:** Victoria Forster < (b)(6) >  
**Sent:** Wednesday, March 18, 2020 9:19 AM  
**To:** Billet, Courtney (NIH/NIAID) [E] < (b)(6) > Stover, Kathy (NIH/NIAID) [E]  
< (b)(6) >  
**Subject:** Request for help - Forbes article correction. mRNA-1273 vaccine - animal work already done?

Dear Ms Billet and Ms Stover,

My name is Vicky and I'm a contributing writer for Forbes Health. I wrote an article about the first patient to be injected with the NIH/Moderna developed vaccine in Seattle. In [the article](#) I mention that



the approval of the vaccine for the phase I trial did not involve mouse work as is standard due to the urgency of the situation. However, after following one of your scientists (Dr Corbett) on Twitter, this appears not to be the case, but I am struggling from her tweets to find out exactly what mouse work has been done on the vaccine and I can't find any published data involving this work (understandable considering the short timescale of the vaccine development).

I understand that this is an unprecedented situation, but I am keen to make sure my article is not misleading and would like to correct it to make sure it is accurate about the mouse work that has been done (even if perhaps this has not been done in quite the way it normally would). I messaged Dr Corbett over twitter late last night, but haven;t heard back from her (I'm sure she and all of the other researchers on the project are very busy indeed!).

Is this something you can help me with? I don't need to interview the researchers necessarily, but I would very much appreciate clarification on what mouse work has been done or is in progress so that I can correct my article.

Thank you for your help and very best wishes at what is undoubtedly a busy and trying time for you,

Vicky Forster

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 7 Mar 2020 16:57:32 +0000  
**To:** Jon Cohen  
**Subject:** RE: Coronavirus vaccine literature  
**Attachments:** FIPV ADE on reinfection Virology 2008.pdf, FIPV ADE epitopes JVI 1995.pdf, FIPV ADE 1981.pdf, Animal CoV Vet Micro Saif 1993.pdf, FIPV live attenuated vaccine JVI 2004.pdf, FIPV natural history JVI 2005.pdf, FIPV ADE-C' Vir Res 2009.pdf, FIPV ferret model Vet Path 2016.pdf, FIPV ADE AJVS 2019.pdf

FIPV ADE. This is a macrophage tropic virus that causes a vasculitis-like systemic disease. It does not have tropism for lung.

ADE has not been demonstrated to be caused of ERD.

Barney

-----Original Message-----

From: Jon Cohen <(b)(6)>  
Sent: Friday, March 6, 2020 5:37 PM  
To: Graham, Barney (NIH/VRC) [E] <(b)(6)>  
Subject: Coronavirus vaccine literature

Hi Barney,

I want to do a story about human coronavirus vaccines studied in the past. I want to read everything.

Is there a review article with references with SARS, MERS and 4 common cold ones?

If not, can you give me a reading list?

Then once I'm done, I want to interview you, the guru.

Thanks Professor,

Jon

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 17 Mar 2020 18:03:02 +0000  
**To:** Lederhofer, Julia (NIH/VRC) [F]  
**Subject:** RE: Lab attendance and duties

Thanks Julia,

Take care. Please don't hesitate to call if you have questions or [REDACTED] B (6)

Barney

---

**From:** Lederhofer, Julia (NIH/VRC) [F] <[REDACTED] (b)(6)>  
**Sent:** Tuesday, March 17, 2020 9:05 AM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Subject:** Re: Lab attendance and duties

Hi Barney,

[REDACTED] (b)(6)

Best,  
Julia

---

**From:** "Graham, Barney (NIH/VRC) [E]" <[REDACTED] (b)(6)>  
**Date:** Sunday, March 15, 2020 at 10:48 PM  
**To:** "Ruckwardt, Tracy (NIH/VRC) [E]" <[REDACTED] (b)(6)> "Kanekiyo, Masaru (NIH/VRC) [E]" <[REDACTED] (b)(6)> "Corbett, Kizzmekia (NIH/VRC) [E]" <[REDACTED] (b)(6)>  
**Cc:** "Morabito, Kaitlyn (NIH/VRC) [E]" <[REDACTED] (b)(6)> "Bok, Karin (NIH/VRC) [E]" <[REDACTED] (b)(6)> "Alvarado, Gabriela (NIH/VRC) [C]" <[REDACTED] (b)(6)> "Young, Monique (NIH/VRC) [E]" <[REDACTED] (b)(6)> "Boyoglu-Barnum, Seyhan (NIH/VRC) [E]" <[REDACTED] (b)(6)> "Creanga, Adrian (NIH/VRC) [E]" <[REDACTED] (b)(6)> "Gillespie, Rebecca (NIH/VRC) [E]" <[REDACTED] (b)(6)> "Lederhofer, Julia (NIH/VRC) [F]" <[REDACTED] (b)(6)> "Dipiazza, Anthony (NIH/VRC) [F]" <[REDACTED] (b)(6)> "Nair, Deepika (NIH/VRC) [E]" <[REDACTED] (b)(6)> "Chang, Lauren (NIH/VRC) [F]" <[REDACTED] (b)(6)> "Phung, Emily (NIH/VRC) [F]" <[REDACTED] (b)(6)> "Fisher, Brian (NIH/VRC) [E]" <[REDACTED] (b)(6)> "Moin, Syed (NIH/VRC) [E]" <[REDACTED] (b)(6)> "Kumar, Azad (NIH/VRC) [E]" <[REDACTED] (b)(6)>

"Chintalacheruvu, Saavan (NIH/VRC) [F]" < (b)(6) "Hutchinson, Geoffrey (NIH/VRC) [F]" < (b)(6) "Ziwawo, Cynthia (NIH/VRC) [F]" < (b)(6) "Abiona, Olubukola (NIH/VRC) [F]" < (b)(6) "Corbett, Kizzmekia (NIH/VRC) [E]" < (b)(6) "Derrien-Colemy, Alexandrine (NIH/VRC) [C]" < (b)(6) "Loomis, Rebecca (NIH/VRC) [E]" < (b)(6) "Yap, Christina (NIH/VRC) [F]" < (b)(6) "Chen, Man (NIH/VRC) [E]" < (b)(6) "Krug, Peter (NIH/VRC) [C]" < (b)(6) "Chapman, Latanya (NIH/VRC) [C]" < (b)(6)

**Subject:** Lab attendance and duties

Dear Lab,

You recently received emails from Dr. Collins and the VRC leadership about what to do during the looming coronavirus pandemic. Let me say a little more about what I expect from you. These are interesting and unprecedented times at least within my lifetime. We have to balance our own personal health against the public health and the functioning of the lab against the functioning of our families. I want this to work out well for everyone and for everyone to stay well. However, it is likely that some of us will eventually encounter the new coronavirus and if that happens we need to be mindful of our own health and the health of others around us. If you think you have been exposed or are developing symptoms, please stay home and contact me and seek medical help if needed.

Although we have been granted liberal telework options, it is important that we find a way to continue the coronavirus work. There are 4 major efforts that need to continue. 1) continue the preclinical work in (b)(4) prepare for the clinical trial assays that will be coming soon, (b)(4) that we will be receiving on Tuesday, and 4) continue to supply the reagents for internal experiments and to external collaborators. People involved in those activities should try to be in the lab and outside of the lab please take care and avoid any exposures. We do not have a very solid plan for what happens if a member of our coronavirus team has to be quarantined. This is going to be discussed and determined with more clarity during the next few days. In the meantime, please be careful.

We obviously have other important work going on in (b)(5) (b)(5)

(b)(5) This could be a good time to catch up on your writing and finish those manuscripts that have been waiting. Alternatively, you can catch up on your lab notebooks, required NIH training modules, animal protocols, file organization, future talks, reading, etc. If you have any questions about what to do, please talk to the head of your group, either Tracy, Masaru, or Kizzy. You are also welcome to talk with me if needed.

I will be working off site for the next few days, and will be back in the office on Thursday. I am available by email and phone if needed.

Best wishes,

Barney

\*\*\*\*\*

Barney S. Graham, MD, PhD  
Senior Investigator  
Deputy Director, Vaccine Research Center  
Chief, Viral Pathogenesis Laboratory  
National Institute of Allergy and Infectious Diseases, NIH  
40 Convent Drive, MSC 3017  
Bldg 40, Room 2502  
Bethesda, MD 20892-3017  
Phone: (b)(6)

URL: <https://www.niaid.nih.gov/research> (b)(6)

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. 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.

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 4 Feb 2020 15:21:57 +0000  
**To:** Mascola, John (NIH/VRC) [E]  
**Subject:** Fwd: [REDACTED] (b) (4)

[REDACTED] (b) (5)

BG

Sent from my iPhone

Begin forwarded message:

**From:** "Fauci, Anthony (NIH/NIAID) [E]" <[REDACTED] (b)(6)>  
**Date:** February 4, 2020 at 10:03:34 AM EST  
**To:** "Mascola, John (NIH/VRC) [E]" <[REDACTED] (b) (6)> "Graham, Barney (NIH/VRC) [E]" <[REDACTED] (b) (6)> "Erbelding, Emily (NIH/NIAID) [E]" <[REDACTED] (b)(6)>  
**Cc:** "Conrad, Patricia (NIH/NIAID) [E]" <[REDACTED] (b)(6)> "Marston, Hilary (NIH/NIAID) [E]" <[REDACTED] (b)(6)> "Eisinger, Robert (NIH/NIAID) [E]" <[REDACTED] (b)(6)> "Lerner, Andrea (NIH/NIAID) [E]" <[REDACTED] (b)(6)>  
**Subject:** [REDACTED] (b) (4)

[REDACTED] (b) (5)

**Anthony S. Fauci, MD**  
Director  
National Institute of Allergy and Infectious Diseases  
Building 31, Room 7A-03  
31 Center Drive, MSC 2520  
National Institutes of Health  
Bethesda, MD 20892-2520  
Phone: [REDACTED] (b)(6)  
FAX: (301) 496-4409  
E-mail: [REDACTED] (b)(6)

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 (NIAID) shall not accept liability for any statements made that are the sender's own and not expressly made on behalf of the NIAID by one of its representatives.

Page appears blank in original

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 16 Mar 2020 13:55:03 +0000  
**To:** Mascola, John (NIH/VRC) [E]  
**Cc:** Ledgerwood, Julie (NIH/NIAID) [E]  
**Subject:** Re: Updates from the CC CEO - (b) (4)

(b) (4)

(b) (4).

Barney

Sent from my iPhone

On Mar 16, 2020, at 9:51 AM, Mascola, John (NIH/VRC) [E] <(b) (6)> wrote:

Do you think we will want to (b) (5)

(b) (5)

---

**From:** Ledgerwood, Julie (NIH/NIAID) [E] <(b) (6)>  
**Sent:** Monday, March 16, 2020 9:49 AM  
**To:** Mascola, John (NIH/VRC) [E] <(b) (6)> Gilman, James (NIH/CC/OD) [E]  
<(b) (6)> Lane, Cliff (NIH/NIAID) [E] <(b) (6)>  
**Cc:** Frank, Karen (NIH/CC/DLM) [E] <(b) (6)> Wallen, Gwenyth (NIH/CC/NURS) [E]  
<(b) (6)> Chen, Grace (NIH/NIAID) [E] <(b) (6)>  
**Subject:** RE: Updates from the CC CEO - (b) (4)

Yes John. That is correct. Based on the current evolving situation in the community and the fact that many of our volunteers take metro and live in Va and DC –we decided that the potential risk had become too high.

As this group knows—we appreciate the CC support we have been receiving and we had hoped to proceed. (b) (5)

(b) (5)

- (b) (5)
- (b) (5)
- (b) (5)



[Redacted] (b) (5)

[Redacted] (b) (5)

Best,  
Julie

Julie E. Ledgerwood, D.O.  
Deputy Director,  
Chief Medical Officer,  
Vaccine Research Center, NIAID, NIH

[Redacted] (b)(6)  
[Redacted] (b)(6) (office)  
[Redacted] (b)(6) (mobile)

---

**From:** Mascola, John (NIH/VRC) [E] <[Redacted] (b) (6)>  
**Sent:** Monday, March 16, 2020 9:18 AM  
**To:** Gilman, James (NIH/CC/OD) [E] <[Redacted] (b)(6)> Lane, Cliff (NIH/NIAID) [E]  
<[Redacted] (b)(6)> Ledgerwood, Julie (NIH/NIAID) [E] <[Redacted] (b) (6)>  
**Cc:** Frank, Karen (NIH/CC/DLM) [E] [Redacted] (b)(6) Wallen, Gwenyth (NIH/CC/NURS) [E]  
<[Redacted] (b)(6)> Chen, Grace (NIH/NIAID) [E] <[Redacted] (b)(6)>  
**Subject:** RE: Updates from the CC CEO - [Redacted] (b) (4)

Jim,  
Copying Julie, or CMO. Our clinical team has had detailed discussions over weekend. One major concern is [Redacted] (b) (5)  
[Redacted] (b) (5)

That said – we do not want to relay that [Redacted] (b) (5)  
[Redacted]

Julie – please comment here.

Thanks,  
John

---

**From:** Gilman, James (NIH/CC/OD) [E] <[Redacted] (b)(6)>  
**Sent:** Monday, March 16, 2020 9:14 AM  
**To:** Lane, Cliff (NIH/NIAID) [E] <[Redacted] (b)(6)> Mascola, John (NIH/VRC) [E]  
<[Redacted] (b) (6)>  
**Cc:** Frank, Karen (NIH/CC/DLM) [E] <[Redacted] (b)(6)> Wallen, Gwenyth (NIH/CC/NURS) [E]

< (b)(6)

**Subject:** FW: Updates from the CC CEO - (b)(4)

Cliff:

Lots of email flying around about this study. The email string that involves me is below. I had agreed to

(b)(5)

(b)(5) I am not questioning, Just asking.

Jim

---

**From:** Gilman, James (NIH/CC/OD) [E]

**Sent:** Friday, March 13, 2020 4:58 PM

**To:** Frank, Karen (NIH/CC/DLM) [E] < (b)(6)

**Subject:** Fwd: Updates from the CC CEO - (b)(4)

(b)(5)

Jim

---

**From:** "Gilman, James (NIH/CC/OD) [E]" < (b)(6)

**Date:** Wednesday, March 11, 2020 at 7:52:10 PM

**To:** "Mascola, John (NIH/VRC) [E]" < (b)(6) "CEO, NIH Clinical Center"  
(b)(6)

**Cc:** "Ledgerwood, Julie (NIH/NIAID) [E]" < (b)(6) "Lane, Cliff  
(NIH/NIAID) [E]" < (b)(6) "Wallen, Gwenyth (NIH/CC/NURS) [E]"

< (b)(6).

**Subject:** RE: Updates from the CC CEO - (b)(4)

John:

(b)(5)

Jim

---

**From:** Mascola, John (NIH/VRC) [E] < (b)(6)

**Sent:** Wednesday, March 11, 2020 5:28 PM

**To:** CEO, NIH Clinical Center < (b)(6) Gilman, James (NIH/CC/OD) [E]

< (b)(6)

**Cc:** Ledgerwood, Julie (NIH/NIAID) [E] < (b)(6)

**Subject:** Updates from the CC CEO - (b)(4)

Dear Jim,

Appreciate your email and the gravity of the COVID-19 outbreak. Our team at the VRC is working diligently on both vaccines and antibody therapeutics.

I am writing to make you aware, and to get you're teams input, on an ongoing (b) (5) study conducted by the NIAID Vaccine Research Center – at the Vaccine Evaluation Clinic of the CC.

(b) (5)

Subsequently, subjects are scheduled to be seen at the Vaccine Evaluation Clinic by our VRC clinical team in the CC for frequent (b) (5) (b) (5) (b) (5)

We would like to continue the study – (b) (5) (b) (5)

If we did have to abort the study – we would have to start again (b) (5) (b) (5)

(b) (5)

I appreciate you may want to know more. I am available, along with our Chief Medical officer, Julie Ledgerwood, to talk to you and your staff.

Thank you,  
John

-----  
John R. Mascola, M.D.  
Director, Vaccine Research Center  
National Institute of Allergy and Infectious Diseases  
National Institutes of Health

---

**From:** "CEO, NIH Clinical Center" (b)(6)

**Date:** Tuesday, March 10, 2020 at 2:28 PM

**To:** "(b)(6) <(b)(6)> CC-OD Medical Exec Committee  
<cc:(b)(6)>

**Cc:** CC-OD CC Department Heads (b)(6)>, "Aiyelawo, Pius (NIH/CC/OD) [E]" <(b)(6)> "Lonnerdal, Daniel (NIH/CC/OD) [E]" <(b)(6)> "Wallen, Gwenyth (NIH/CC/NURS) [E]" <(b)(6)> "Joyce, Maria (NIH/CC/OD) [E]" <(b)(6)> "Cohen, Justin (NIH/CC/OD) [E]" <(b)(6)> "Lee, Laura (NIH/CC/OD) [E]" <(b)(6)> "Henderson, David (NIH/CC/OD) [C]" <(b)(6)> "Green, Jonathan (NIH/OD) [E]" <(b)(6)> Patricia Piringer <(b)(6)> "Stakem, Maggi (NIH/CC/OD) [E]" <(b)(6)>

**Subject:** Today's 1 Huge Thing - High Priority Message

**To:** All Clinical Directors, CC Department Heads,

Effective Wednesday, March 11<sup>th</sup> all elective admissions and elective out-patient visits to the Clinical Center should be deferred for 30 days. At a minimum those deferred should include patients scheduled for elective operative procedures, all patients in natural history studies admitted to the hospital for deep phenotyping, healthy volunteers, and all elective metabolic studies.

All IC ward teams should also critically evaluate the need for continued in-patient stay for current in-patients. A spectacular surgical outcome becomes all for naught if the patient acquires a nosocomially transmitted serious infection from coronavirus. The same can be said for a patient who responds dramatically to a new therapeutic agent or cellular product.

The purpose of these aggressive measures is to free manpower so that we can provide active screening on entry for all patients and family members accessing the CC on a 7 x 24 hour basis.

Exceptions for patients who have traveled to the National Capitol Region already will be made. However, these patients and their family members still must be actively screened on arrival / entry to the CC. All other exceptions require approval of the CEO or COO.

While we have been able to maintain our usual clinical research activities as we prepared for coronavirus in the National Capitol Region and in many areas of the country, coronavirus activity in our area has ramped up in the last few days and the sooner we implement aggressive measures the better our chances of control.

I appreciate that these measures will impact ICs in different ways and render my apology now - ahead of time. I understand that a number of areas in the CC will have much less to do as we work our way through this and again I apologize. However, the ability to care for the very ill, compromised patients here as well as CC and IC staff involved in patient care make these steps necessary.

Dr. Green has published separate guidance related to protocol deviations due to COVID-19. Please refer to guidance published by OHSRP.

We will not wait 30 days to re-evaluate whether we can return to business as usual. Expect an update at the 15 day mark.

Comments / criticism should be directed to me.

Dr. Gilman

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 27 Mar 2020 14:26:02 +0000  
**To:** Holbrook, Michael (NIH/NIAID) [C]  
**Subject:** Re: SARS-CoV-2 [REDACTED] (b) (4)

Unfortunately we are still very limited on this as well. [REDACTED] (b) (5)

[REDACTED] (b)(6)

Barney

Sent from my iPhone

> On Mar 27, 2020, at 10:20 AM, Holbrook, Michael (NIH/NIAID) [C] <[REDACTED] (b)(6)> wrote:

>

>

> Dr. Graham,

>

> We are in need of [REDACTED] (b) (5)

[REDACTED] (b) (5) Would you happen to have some that you can spare? We are hoping that the [REDACTED] (b) (5) that we can use in the long-term, but are a little stuck now. Currently we use [REDACTED] (b) (5) as our positive control which isn't ideal.

>

> Many thanks for any assistance you can provide.

>

> Mike

>

> Mike Holbrook, PhD

> High Containment Supervisor, Contractor

> NIAID Integrated Research Facility

> Ft. Detrick

> Frederick, MD 21702

**From:** [REDACTED] (b) (6)  
**Sent:** Thu, 19 Mar 2020 12:10:08 -0400  
**To:** Koup, Richard (NIH/VRC) [E]; Ledgerwood, Julie (NIH/NIAID) [E]; McDermott, Adrian (NIH/VRC) [E]  
**Cc:** Mascola, John (NIH/VRC) [E]  
**Subject:** RE: NEW! SARS-CoV-2 [REDACTED] (b) (4)

Tracy has ordered the [REDACTED] (b) (5), (b) (4)

BG

---

**From:** Koup, Richard (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Sent:** Thursday, March 19, 2020 11:22 AM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)> Ledgerwood, Julie (NIH/NIAID) [E] <[REDACTED] (b) (6)> McDermott, Adrian (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Cc:** Mascola, John (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Subject:** FW: NEW! SARS-CoV-2 [REDACTED] (b) (4)

FYI. I don't know what [REDACTED] (b) (5), (b) (4)]. Do we want to get [REDACTED] (b) (5), (b) (4) It would seem to make sense.

Rick

Richard A. Koup, MD  
Chief, Immunology Laboratory  
Deputy Director  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive, MSC 3022  
Building 40, Room 3502  
Bethesda, MD 20892  
Tel: [REDACTED] (b) (6)  
Fax: [REDACTED] (b) (6)  
[REDACTED] (b) (6)

*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.*

---

**From:** Foulds, Kathryn (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Sent:** Thursday, March 19, 2020 11:06 AM

**To:** Koup, Richard (NIH/VRC) [E] < (b)(6) >  
**Subject:** FW: NEW! SARS-CoV-2 (b)(4)

In case you haven't already seen this...

---

**From:** JPT Peptide Technologies < (b)(6) >  
**Date:** Wednesday, March 18, 2020 at 2:48 PM  
**To:** Kathryn Foulds (b)(6)  
**Subject:** NEW! SARS-CoV-2 (b)(4) & (b)(4)

▪

Dear Dr. Foulds,

(b)(4)

(b)(4)

(b)(4)

(b)(4)

In an effort to manage capacities, we highly appreciate your feedback on your anticipated needs (b)(4)

As always, we encourage your feedback and questions!

Best regards,

Holger Wenschuh

*\*Please note: As time is critical we want to provide these tools to researchers as fast as possible. Hence, we will initially (b)(4)*

(b)(4)

(b)(4) <sup>TM</sup> and will inform you as soon as they are available.



Dr. Holger Wenschuh  
Managing Director

T (b)(6)  
F (b)(6)  
(b)(6)

JPT Peptide Technologies GmbH - Volmerstrasse 5 - 12489 Berlin, Germany  
**Please visit us at [www.jpt.com](http://www.jpt.com)**



- DIN EN ISO 9001:2015 Certified -

Geschäftsführer / Managing Directors: Dr. Holger Wenschuh, Sean Marett, Dr. Sierk Pötting  
Gerichtsstand / Jurisdiction: Berlin HRB 92692  
Ust.-IdNr. / V.A.T.: DE 814044483

This document and any attachment is for authorized use by the intended recipient(s) only. It may contain proprietary material, confidential information and/or be subject to legal privilege. It should not be copied, disclosed to, retained or used by any other party. If you are not an intended recipient then you are hereby notified that any disclosure or use of the contents or attachment to this e-mail is strictly prohibited. In such case, please promptly delete this e-mail, any attachment and all copies and inform the sender. It is the responsibility of the recipient to virus scan this e-mail.

If you do not wish to receive more newsletters from JPT, just respond to this email, with in subject "UNSUBSCRIBE"

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 2 Mar 2020 20:58:50 +0000  
**To:** Morabito, Kaitlyn (NIH/VRC) [E]  
**Cc:** Hiatt, Nissa (NIH/VRC) [C]; Corbett, Kizzmekia (NIH/VRC) [E]; VRC\_CoV; Prince, Tasheema (NIH/VRC) [C]; Harris, Christina (NIH/NIAID) [E]  
**Subject:** Re: Kizzmekia's Edit Re: Review Today: NIH Research Matters Blog  
**Attachments:** image001.png, image002.png, image003.png

This is fine with me.

BG

Sent from my iPhone

On Mar 2, 2020, at 12:39 PM, Morabito, Kaitlyn (NIH/VRC) [E] <[REDACTED]> (b)(6) wrote:

Hi all,

I edited the sentence slightly, [REDACTED] (b)(5)

Kaitlyn

---

**From:** "Hiatt, Nissa (NIH/VRC) [C]" <[REDACTED]> (b)(6)  
**Date:** Monday, March 2, 2020 at 12:21 PM  
**To:** Kizzmekia Corbett <[REDACTED]> (b)(6) Barney Graham <[REDACTED]> (b)(6)  
VRC\_CoV <[REDACTED]> (b)(6)  
**Cc:** "Prince, Tasheema (NIH/VRC) [C]" <[REDACTED]> (b)(6) "Harris, Christina (NIH/NIAID) [E]" <[REDACTED]> (b)(6)  
**Subject:** RE: Kizzmekia's Edit Re: Review Today: NIH Research Matters Blog

Hi Barney,

Here is the NIH blog post that I mentioned. I know you are busy today -just bringing this further up in your inbox if you can sign off today. The blog editors reached out again. Kizzmekia edited the content. We'd like to have you review the placeholder quote that NIH drafted on your behalf as well as any content edits.

Best,  
Nissa

**Nissa Hiatt**  
Communications  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive, Bldg. 40, Room 1107  
Bethesda, MD 20892  
office: (b)(6)  
mobile: (b)(6)  
(b)(6)

<image001.png>

Disclaimer: The information in this email and any of its attachments is confidential and may contain sensitive information. It should not be used by anyone who is not the originally intended recipient. If you have received this email 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 the sender's own and not expressly made on behalf of NIAID by one of its representatives.

---

**From:** Hiatt, Nissa (NIH/VRC) [C]  
**Sent:** Friday, February 28, 2020 10:16 AM  
**To:** Corbett, Kizzmekia (NIH/VRC) [E] <(b)(6)> Graham, Barney (NIH/VRC) [E]  
<(b)(6)> VRC\_CoV <(b)(6)>  
**Cc:** Prince, Tasheema (NIH/VRC) [C] <(b)(6)> Harris, Christina (NIH/NIAID) [E]  
<(b)(6)>  
**Subject:** RE: Kizzmekia's Edit Re: Review Today: NIH Research Matters Blog

Thank you, Kizzy. Your revisions are included in the attached version for additional updates to Barney's quote, edits, and comments.

Best,  
Nissa

**Nissa Hiatt**  
Communications  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive, Bldg 40, Room 1100  
Bethesda, MD 20892  
(b)(6)  
(b)(6)

<image002.png>

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] <(b)(6)>  
**Sent:** Friday, February 28, 2020 8:34 AM  
**To:** Hiatt, Nissa (NIH/VRC) [C] <(b)(6)> Graham, Barney (NIH/VRC) [E]  
<(b)(6)> VRC\_CoV <(b)(6)>

**Cc:** Prince, Tasheema (NIH/VRC) [C] <[REDACTED] (b)(6)> Harris, Christina (NIH/NIAID) [E] <[REDACTED] (b)(6)>

**Subject:** Kizzmekia's Edit Re: Review Today: NIH Research Matters Blog

Old sentence:

[REDACTED] (b) (5)

New Sentence:

[REDACTED] (b) (5)

**Kizzmekia S. Corbett, PhD**

**Senior Research Fellow | Scientific Lead**

**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**

Viral Pathogenesis Laboratory | Vaccine Research Center

National Institutes of Allergy and Infectious Diseases

National Institutes of Health

Building 40 Room 2608

40 Convent Drive

Bethesda MD 20892

Laboratory: [REDACTED] (b)(6)

Personal: [REDACTED] (b)(6)

Fax: (301) 480-2771

---

**From:** "Hiatt, Nissa (NIH/VRC) [C]" <[REDACTED] (b)(6)>

**Date:** Friday, February 28, 2020 at 8:01 AM

**To:** Barney Graham <[REDACTED] (b)(6)> VRC\_CoV <[REDACTED] (b)(6)>

**Cc:** "Prince, Tasheema (NIH/VRC) [C]" <[REDACTED] (b)(6)> "Harris, Christina (NIH/NIAID) [E]" <[REDACTED] (b)(6)>

**Subject:** Review Today: NIH Research Matters Blog

Hi Barney and VRC CoV team,

The NIH Research Matters team (<https://www.nih.gov/news-events/nih-research-matters>) would also like to post about the protein structure Science paper. They drafted a post based on the NIAID blog post -a draft is attached for your review.

Notes:

-The quote is just a placeholder. Please edit and feel free to expand to 2 sentences.

(b) (5)

Please share any edits or comments by Monday at 930 AM.

Best,  
Nissa

**Nissa Hiatt**

Communications

Vaccine Research Center, NIAID, NIH

40 Convent Drive, Bldg 40, Room 1100

Bethesda, MD 20892

(b)(6)

(b)(6)

<image003.png>

<NIH Research Matters SARS CoV 2 Protein Structure Blog Post 2.28.2020 KC\_KMM.docx>



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 22 Apr 2020 18:11:29 +0000  
**To:** Robert Coffman  
**Cc:** Gall, Jason (NIH/VRC) [C]; Mascola, John (NIH/VRC) [E]; Seder, Robert (NIH/VRC) [E]; Bok, Karin (NIH/VRC) [E]  
**Subject:** RE [REDACTED] (b) (4)

Hi Bob,

[REDACTED] (b) (4)

We will stay in touch.

Barney

---

**From:** Robert Coffman <[REDACTED] (b)(6)>  
**Sent:** Wednesday, April 22, 2020 1:10 PM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Subject:** RE: [REDACTED] (b) (4)

Barney,

[REDACTED] (b) (4)

Best regards,

Bob Coffman

*Robert L. Coffman, Ph.D.*

*Scientific Advisor to Dynavax Technologies*

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

Email: [redacted] (b)(6)

---

**From:** Graham, Barney (NIH/VRC) [E] <[redacted] (b)(6)>  
**Sent:** Sunday, March 15, 2020 8:49 AM  
**To:** Robert Coffman <[redacted] (b)(6)>  
**Cc:** Mascola, John (NIH/VRC) [E] <[redacted] (b)(6)> Gall, Jason (NIH/VRC) [C] <[redacted] (b)(6)>  
**Subject:** RE: [redacted] (b)(4)

Hi Bob,

Sorry for this delayed response. I agree that [redacted] (b)(4)

[redacted] (b)(4)

Let us know if you would like to discuss in more detail. I've copied John Mascola our director and Jason Gall head of strategic planning and process development.

Best wishes,

Barney

---

**From:** Robert Coffman <[redacted] (b)(6)>  
**Sent:** Saturday, March 7, 2020 7:59 PM  
**To:** Graham, Barney (NIH/VRC) [E] <[redacted] (b)(6)>  
**Subject:** [redacted] (b)(4)

Dear Barney,

[redacted] (b)(4)

(b) (4)

Best regards,

Bob Coffman

Robert L. Coffman

Consultant to Dynavax Technologies

Phone: (b)(6)

Email: (b)(6)



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sun, 15 Mar 2020 12:29:28 +0000  
**To:** Petrik, Amy (NIH/NIAID) [E]; Morabito, Kaitlyn (NIH/VRC) [E]  
**Cc:** Stein, Judy (NIH/VRC) [C]; Gall, Jason (NIH/VRC) [C]; Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** RE: BlueWillow Biologics - (b) (4) of SARS-CoV-2 S-2P antigen

(b) (5).

BG

---

**From:** Petrik, Amy (NIH/NIAID) [E] <(b) (6)>  
**Sent:** Sunday, March 15, 2020 8:02 AM  
**To:** Graham, Barney (NIH/VRC) [E] <(b) (6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b) (6)>  
**Cc:** Stein, Judy (NIH/VRC) [C] <(b) (6)> Gall, Jason (NIH/VRC) [C] <(b) (6)> Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)>  
**Subject:** Re: BlueWillow Biologics - (b) (4) of SARS-CoV-2 S-2P antigen

Thanks, Barney, Jason, and Kaitlyn.

I'll let them know that (b) (5)

Amy

---

**From:** "Graham, Barney (NIH/VRC) [E]" <(b) (6)>  
**Date:** Saturday, March 14, 2020 at 4:51:32 PM  
**To:** "Morabito, Kaitlyn (NIH/VRC) [E]" <(b) (6)> "Petrik, Amy (NIH/NIAID) [E]" <(b) (6)>  
**Cc:** "Stein, Judy (NIH/VRC) [C]" <(b) (6)> "Gall, Jason (NIH/VRC) [C]" <(b) (6)> "Corbett, Kizzmekia (NIH/VRC) [E]" <(b) (6)>  
**Subject:** RE: BlueWillow Biologics - (b) (4) of SARS-CoV-2 S-2P antigen

(b) (5)

Barney

---

**From:** Morabito, Kaitlyn (NIH/VRC) [E] <(b) (6)>  
**Sent:** Thursday, March 12, 2020 1:41 PM  
**To:** Petrik, Amy (NIH/NIAID) [E] <(b) (6)>

**Cc:** Stein, Judy (NIH/VRC) [C] < (b)(6) > Graham, Barney (NIH/VRC) [E]  
< (b)(6) > Gall, Jason (NIH/VRC) [C] < (b)(6) > Corbett, Kizzmekia (NIH/VRC)  
[E] < (b)(6) >  
**Subject:** Re: BlueWillow Biologics - (b)(4) of SARS-CoV-2 S-2P antigen

Hi Amy,

Thank you. (b)(4) but I'm including Barney and Jason here in (b)(4)  
(b)(4)

Thanks,  
Kaitlyn

---

**From:** "Petrik, Amy (NIH/NIAID) [E]" < (b)(6) >  
**Date:** Thursday, March 12, 2020 at 1:30 PM  
**To:** "Morabito, Kaitlyn (NIH/VRC) [E]" < (b)(6) >  
**Cc:** Judy Stein < (b)(6) >  
**Subject:** BlueWillow Biologics - (b)(4) of SARS-CoV-2 S-2P antigen

Hi Kaitlyn,

(b)(5)



Thanks,  
Amy

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 10 Feb 2020 01:47:42 +0000  
**To:** Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** Fwd: BioRxiv  
**Attachments:** WuCoV main\_text\_v4\_clean-JSM\_BG.docx, ATT00001.htm

Looks like you were not on there.

BG

Sent from my iPhone

Begin forwarded message:

**From:** "Graham, Barney (NIH/VRC) [E]" <(b)(6)>  
**Date:** February 9, 2020 at 7:42:00 PM EST  
**To:** "Daniel P. Wrapp" <(b)(6)> (b)(6) Jason McLellan  
<(b)(6)>  
**Subject:** RE: BioRxiv

Here is the last paragraph as intended. Fortunately, it was still there on my version. Makes me wonder if I sent the right version last time, so I'm reattaching.

BG

(b)(4)

---

**From:** Daniel P. Wrapp <(b)(6)>  
**Sent:** Sunday, February 9, 2020 5:53 PM  
**To:** Jason McLellan <(b)(6)> Graham, Barney (NIH/VRC) [E]  
<(b)(6)>  
**Subject:** Re: BioRxiv

It looks like it was cut off in the version that you sent to us last night Barney. If you send it in full tonight, I'll be sure to update the text as soon as I get word from you.

Daniel

---

**From:** Jason McLellan <[REDACTED] (b)(6)>  
**Sent:** Sunday, February 9, 2020 3:47 PM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Cc:** Daniel P. Wrapp <[REDACTED] (b)(6)>  
**Subject:** RE: BioRxiv

Hi Barney,

Attached is our current draft of the manuscript. Please edit as you like. I'll put it on my department letterhead before submission.

Best regards,  
Jason

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 3 Mar 2020 18:47:05 +0000  
**To:** Cynthia Turner-Graham  
**Cc:** Isis Nelson-Graham; Daniel Jr. Graham; Daniel Graham (CCI-Atlanta); Anne Margaret Graham; Ebone Graham  
**Subject:** Fwd: FYI: Watch Live -- Today's Roundtable Briefing on Coronavirus

FYI. This would be the way to watch.

Love,

Bebop

Sent from my iPhone

Begin forwarded message:

**From:** "Prince, Tasheema (NIH/VRC) [C]" <[REDACTED] (b)(6)>  
**Date:** March 3, 2020 at 1:44:00 PM EST  
**To:** VRC Communications <[REDACTED] (b)(6)>  
**Subject:** FYI: Watch Live -- Today's Roundtable Briefing on Coronavirus

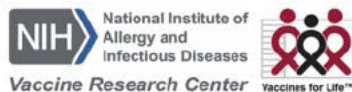
Dear VRC Colleagues,

Today's White House VIP roundtable briefing on Coronavirus will be broadcast live at 2:30 pm via [www.whitehouse.gov/live/](http://www.whitehouse.gov/live/) or [www.youtube.com/watch?v=KieldB\\_R2pg](http://www.youtube.com/watch?v=KieldB_R2pg).

Best,  
Tasheema Prince

**Tasheema Prince**  
Communications Team  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive, Bldg. 40/110  
Bethesda, MD 20892

office: [REDACTED] (b)(6)  
mobile: [REDACTED] (b)(6)  
[REDACTED] (b)(6)



Disclaimer: The information in this email and any of its attachments is confidential and may contain sensitive information. It should not be used by anyone who is not the originally intended recipient. If you have received this email 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 the sender's own and not expressly made on behalf of NIAID by one of its representatives.

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 26 Feb 2020 20:48:13 +0000  
**To:** Donabedian, Armen (OS/ASPR/BARDA);Bright, Rick (OS/ASPR/BARDA)  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E];Bok, Karin (NIH/VRC) [E];Morabito, Kaitlyn (NIH/VRC) [E];Mascola, John (NIH/VRC) [E];Marston, Hilary (NIH/NIAID) [E]  
**Subject:** nCoV vaccine immunogenicity data  
**Attachments:** 02.26.20\_BARDA\_Confidential mRNA-1273 W2 Responses.pdf

Hi Rick/Armen,

[Redacted] (b) (5), (b) (4)

This is part of [Redacted] (b) (5), (b) (4)  
[Redacted] (b) (5), (b) (4) will try to have these data assembled by mid-March to share, and could share [Redacted] (b) (5), (b) (4) if interested.

It would be good to have a conversation about [Redacted] (b) (5)  
[Redacted] (b) (5)  
[Redacted] (b) (5)

My cell number is [Redacted] (b)(6) so let me know if you want to discuss.

Best wishes,

Barney

\*\*\*\*\*  
Barney S. Graham, MD, PhD  
Senior Investigator  
Deputy Director, Vaccine Research Center  
Chief, Viral Pathogenesis Laboratory  
National Institute of Allergy and Infectious Diseases, NIH  
40 Convent Drive, MSC 3017  
Bldg 40, Room 2502  
Bethesda, MD 20892-3017  
Phone: [Redacted] (b)(6)

URL: <https://www.niaid.nih.gov/research> (b)(6)

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. 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.



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 9 Apr 2020 21:57:23 +0000  
**To:** Calder, Thomas (NIH/NIAID) [E]  
**Cc:** Bushar, Nicholas (NIH/NIAID) [E];Schneider, Johanna (NIH/NIAID) [E]  
**Subject:** Re: NIAID COVID-19 Division Director Sync meeting

I will be working on the slides in the morning. Would it be possible for me to share the slides from my computer? These data are sensitive because they are proprietary to Moderna and it's a [REDACTED] (b) (4).

Barney

Sent from my iPhone

On Apr 9, 2020, at 5:42 PM, Calder, Thomas (NIH/NIAID) [E] <[REDACTED] (b)(6)> wrote:

Hi Barney,

Hilary is requesting that you provide an update on [REDACTED] (b) (4)" at tomorrow's COVID-19 Division Director Sync meeting.

If you will have slides, could you please send those to me prior to the meeting. I will share the slides on my screen during the meeting.

Thanks,  
Thomas

**Thomas Calder, PhD**

Health Science Policy Analyst  
Policy, Planning, and Evaluation (PP&E) Branch  
National Institute of Allergy and Infectious Diseases

**P:** [REDACTED] (b)(6) | **A:** Building 31, Room 7A46G

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 6 Feb 2020 16:38:24 +0000  
**To:** Young, Monique (NIH/VRC) [E]  
**Subject:** FW: VERY URGENT: Invitation to Register - Global Research and Innovation Forum: Towards a Roadmap for the 2019 Novel Coronavirus"

I think I saw that I was registered, but can you confirm?

Barney

---

**From:** MAFUNGA, Neddy <[REDACTED]> (b)(6)  
**Sent:** Thursday, February 6, 2020 10:19 AM  
**Subject:** VERY URGENT: Invitation to Register - Global Research and Innovation Forum: Towards a Roadmap for the 2019 Novel Coronavirus"  
**Importance:** High

**IMPORTANT TO NOTE IF YOU ARE ATTENDING IN PERSON AT WHO HQ**

**(apologies if you are already registered on WHO site)**

Good afternoon all,

Please refer to my earlier email.

The above mentioned meeting will be held from 11 to 12 February 2020 in the EB room at WHO HQ in Geneva, Switzerland.

To access the WHO buildings the security at the reception will process your badge using the INDICO platform highlighted below. Please note that you have to register twice, most of you have already completed registration via the BMGF site but not at the WHO site.

[http://indico.un.org/e/nCoV\\_feb19](http://indico.un.org/e/nCoV_feb19) (please make sure that you are using **Google Chrome**, otherwise you will not be able to register).

Please note that we may close registration due to high demand from those not originally invited and you may otherwise be locked out.

You may access the agenda through the BMGF registration site linked below:

<http://events.gatesfoundation.org/events/global-research-and-innovation-forum-towards-a-roadmap-for-the-2019-novel-coronavirus/custom-19-06e0cfda93ad424b912c17b4c361cf79.aspx?ct=02e16fec-1865-4de4-9366-1f929dd23304>

*Kind regards*

*Neddy MAFUNGA*

---

**From:** MAFUNGA, Neddy

**Sent:** Wednesday, February 5, 2020 12:09 AM

**Subject:** URGENT“Invitation to Register - Global Research and Innovation Forum: Towards a Roadmap for the 2019 Novel Coronavirus”

**Importance:** High

Dear all,

Please search your emails for an email from BMGF with the above title for an invitation to a meeting next week at WHO headquarters in the Executive Boardroom, in Geneva, Switzerland from 11 to 12 February 2020.

If you will be attending in person, urgently register on the link below, the security at the reception will use the information therein to provide you with a badge. Also if you require a visa support letter, it will be generated from this link.

[http://indico.un.org/e/nCoV\\_feb19](http://indico.un.org/e/nCoV_feb19) (please make sure that you are using **Google Chrome, Firefox or Microsoft Edge**, otherwise you will not be able to register).

*My apologies to those who have already responded, please ignore this email.*

Kind regards,

**Ms Neddy MAFUNGA**

Assistant (R&D Blueprint)

Office of the Executive Director  
WHO Health Emergencies Preparedness & Response  
World Health Organization  
20 Avenue Appia  
1211 Geneva 27  
Tel direct: + (b)(6)  
Fax direct: + (b)(6)  
E-mail: (b)(6)

*Website* <https://www.who.int/blueprint/en/>

*This e-mail, together with any attachments, is intended for the named recipients only and is confidential. It may also be privileged or otherwise protected by legal rules. If you have received it in error, please notify the sender immediately by return and delete it and any attachments from your system. You must not copy or disclose its contents to anyone.*

*The World Health Organization has taken every effort to ensure that outgoing messages are free of computer viruses. However, given the nature of the threat posed by computer viruses and the Internet, the recipient is advised to scan this e-mail and any attached files for viruses upon receipt*

Page appears blank in  
original

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 27 Apr 2020 17:46:52 +0000  
**To:** Hiatt, Nissa (NIH/VRC) [C]  
**Cc:** Carlton, Kevin (NIH/VRC) [E]; Bok, Karin (NIH/VRC) [E]; Mascola, John (NIH/VRC) [E]; Koup, Richard (NIH/VRC) [E]; Ledgerwood, Julie (NIH/NIAID) [E]; Prince, Tasheema (NIH/VRC) [C]; Abe, Ken (NIH/VRC) [C]  
**Subject:** Re: Action by COB Today (4/27): NIAID-Supported vaccine candidates  
**Attachments:** image001.png

(b) (5),

Barney

Sent from my iPhone

On Apr 27, 2020, at 1:43 PM, Hiatt, Nissa (NIH/VRC) [C] <(b)(6)> wrote:

Hi VRC leadership, Karin, and Kevin,

The NIAID Legislative team created a list (below) of COVID-19 vaccine candidates other than mRNA-1273 in response to Representative Frank Pallone (D-NJ), Chairman of the House Energy & Commerce committee.

**Ask:**

Could you confirm that VRC has no other vaccine candidates that might be far enough along to mention to the Congressman?

**Deadline:**

COB, Today, April 27

Thank you in advance for your help with the urgent request.

Best,  
Nissa

**Nissa Hiatt**

Communications  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive, Bldg 40, Room 1100  
Bethesda, MD 20892  
Cell: (b)(6)

Office: (b)(6)  
(b)(6)

<image001.png>

---

**From:** Hastings, Andrew (NIH/OD) [E] <(b)(6)>  
**Sent:** Monday, April 27, 2020 1:37 PM  
**To:** NIAID BUGS <(b)(6)> NIAID DIR-OCGR <(b)(6)> NIAID VRC-OPA <(b)(6)> NIAID DAIT-OPA <(b)(6)> NIAID DCR-OCGR <(b)(6)> Follmann, Dean (NIH/NIAID) [E] <(b)(6)>  
**Cc:** NIAID OCGR Leg <(b)(6)> Marston, Hilary (NIH/NIAID) [E] <(b)(6)> Harper, Jill (NIH/NIAID) [E] <(b)(6)> Billet, Courtney (NIH/NIAID) [E] <(b)(6)> Lane, Cliff (NIH/NIAID) [E] <(b)(6)>  
**Subject:** Action by COB Today (4/27): NIAID-Supported vaccine candidates

Good afternoon,

**Background:**

We received an inquiry from Representative Frank Pallone (D-NJ), Chairman of the House Energy & Commerce committee, about the vaccine candidates, other than the Moderna mRNA vaccine, that NIAID is currently supporting. OCGR-Leg used existing documents to put together the following list of candidates that might be far enough along to mention to the Congressman:

- - 
  - 
  - 
  - 
  - 
  -
- (b) (5), (b) (4)

**Action:**

**By COB Today, Monday, April 27<sup>th</sup>:** please review the list above and let us know if we are missing any candidates or if you have any other comments.

Let me know if you have any questions.

Thanks,  
Drew

Cell #: (b)(6)

**Andrew K. Hastings, Ph.D.**  
*Health Scientist – AAAS S&T Policy Fellow*  
Legislative Affairs and Correspondence Management Branch

Office of Communications and Government Relations  
NIAID/NIH/DHHS  
Bldg. 31, Room 7A17, MSC 2520  
Bethesda, MD 20892-2520

(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. 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.*



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 30 Apr 2020 16:19:52 +0000  
**To:** Andrea Carfi  
**Subject:** RE: In vivo studies and clinical studies

(b) (4). Only time.

BG

-----Original Message-----

From: Andrea Carfi <(b) (6)>  
Sent: Thursday, April 30, 2020 10:31 AM  
To: Graham, Barney (NIH/VRC) [E] <(b) (6)>  
Subject: Re: In vivo studies and clinical studies

Yes, thank you. (b) (4)

(b) (4)

Let's see where today's discussion (b) (4).

Best,  
Andrea

> On Apr 30, 2020, at 9:49 AM, Graham, Barney (NIH/VRC) [E] <(b) (6)> wrote:  
>  
> Hi Andrea.  
>  
> Did the email last night (b) (4) Overall I think we need to (b) (4)  
(b) (4)  
>  
> This will not (b) (4)  
>  
> (b) (4).  
>  
> Barney  
>  
>  
>  
> Sent from my iPhone  
>  
>> On Apr 29, 2020, at 9:06 PM, Andrea Carfi <(b) (6)> wrote:  
>>  
>> Hi Barney,  
>>  
>> Do you think it would help to have a small meeting/call (b) (4)

(b) (4)  
>> I propose you, Kizzy, myself, Darin and Hamilton but it can be expanded to anyone else you think maybe needed.



>>

(b) (4)

>>

>> Best,

>> Andrea

>>

>>

>>

>> P Please consider the environment before printing this email

>>

>>

>> Confidentiality notice and disclaimer: The information in this message and any attachments is intended for the exclusive use of the addressee(s), is confidential and may be privileged or otherwise protected from disclosure. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon, of any such information by persons or entities other than the intended addressee(s) is prohibited. If you have received this message in error and are not the intended addressee, please notify the sender immediately and delete this message and any attachments from your system without reading or disclosing them. If you are not the intended addressee, be advised that any use of the information in this message and any attachment is prohibited and may be unlawful, and you must not copy this message or attachment or disclose the contents to any other person.

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 5 Mar 2020 17:12:35 +0000  
**To:** Handley, Gray (NIH/NIAID) [E]  
**Subject:** Fwd: Vaccine—confidential PPT

FYI (b)(5)

BG

Sent from my iPhone

Begin forwarded message:

**From:** George GAO <(b)(6)>  
**Date:** March 5, 2020 at 12:07:00 PM EST  
**To:** "Graham, Barney (NIH/VRC) [E]" <(b)(6)>  
**Cc:** 王奇慧 <(b)(6)> "Sahin, Prof. Dr. Ugur" <(b)(6)> Holger Kissel <(b)(6)> 戴连攀 <(b)(6)> "Fauci, Anthony (NIH/NIAID) [E]" <(b)(6)> "Mascola, John (NIH/VRC) [E]" <(b)(6)> "Conrad, Patricia (NIH/NIAID) [E]" <(b)(6)>  
**Subject: Re: Vaccine—confidential PPT**

Dear Barney

Many thanks for your introduction ! I always think we are friends though we have overlapping interests which sometimes show competition. Competition and collaborations are twin brothers ! Lets work together !

Friends in need are friends indeed !

Lets work together to get COVID-19 down !

All the best

George

(b)(6) iPhone

在 2020年3月5日, 22:13, Graham, Barney (NIH/VRC) [E] <(b)(6)> 写道 :

Dear Professor Sahin,

I am introducing you to Dr. George Gao who is head of China CDC and his colleague Dr. Wang. They are outstanding investigators and often our competitors who have published important papers on MERS and SARS coronaviruses including the structure of MERS CoV spike and the dynamic nature of the RBD.

[Redacted] (b) (4)

As we have both discussed, [Redacted] (b) (4)  
[Redacted] (b) (4)  
[Redacted] (b) (4) I am only providing an introduction.

Best wishes,

Barney

\*\*\*\*\*

Barney S. Graham, MD, PhD  
Senior Investigator  
Deputy Director, Vaccine Research Center  
Chief, Viral Pathogenesis Laboratory  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive, MSC 3017  
Bldg 40, Room 2502  
Bethesda, MD 20892-3017  
Phone: [Redacted] (b)(6)  
URL: <https://www.niaid.nih.gov/research/> [Redacted] (b)(6)

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. 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.

**From:** 王奇慧 <[Redacted] (b)(6)>  
**Sent:** Thursday, March 5, 2020 7:59 AM

**To:** George GAO <(b)(6)>

**Cc:** Graham, Barney (NIH/VRC) [E] <(b)(6) 戴连攀 <(b)(6) Fauci,  
Anthony (NIH/NIAID) [E] <(b)(6) Mascola, John (NIH/VRC) [E] <(b)(6)  
Conrad, Patricia (NIH/NIAID) [E] <(b)(6)>

**Subject:** Re: Re: Vaccine—confidential PPT

Dear Barney,

(b) (4)

Looking forward to your reply.

Best regards,  
Qihui

Qihui Wang

Associate Professor

CAS Key Laboratory of Microbial and Metabolic engineering

Institute of Microbiology, CAS

Tel: (b)(6)

<20200303 For Gao laoshi.pptx>

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 25 Mar 2020 17:48:34 +0000  
**To:** Kanekiyo, Masaru (NIH/VRC) [E]  
**Cc:** Ruckwardt, Tracy (NIH/VRC) [E]; Corbett, Kizzmekia (NIH/VRC) [E]; Bok, Karin (NIH/VRC) [E]  
**Subject:** Re: VRC Staff Plan for COVID-19 and Missions Critical Work (Graham)

(b) (5)

Barney

Sent from my iPhone

On Mar 25, 2020, at 1:44 PM, Kanekiyo, Masaru (NIH/VRC) [E] <(b)(6)> wrote:

Does anyone start working on the excel sheet yet? Thomas asked to return to him by 2 (15 min from now).

Masaru

---

**From:** Tracy Ruckwardt <(b)(6)>  
**Date:** Wednesday, March 25, 2020 at 1:42 PM  
**To:** Kizzmekia Corbett <(b)(6)> "Kanekiyo, Masaru (NIH/VRC) [E]" <(b)(6)> Barney Graham <(b)(6)> "Bok, Karin (NIH/VRC) [E]" <(b)(6)>  
**Subject:** Re: VRC Staff Plan for COVID-19 and Missions Critical Work (Graham)

(b) (5)

---

**From:** "Corbett, Kizzmekia (NIH/VRC) [E]" <(b)(6)>  
**Date:** Wednesday, March 25, 2020 at 12:43 PM  
**To:** "Ruckwardt, Tracy (NIH/VRC) [E]" <(b)(6)> "Kanekiyo, Masaru (NIH/VRC) [E]" <(b)(6)> "Graham, Barney (NIH/VRC) [E]" <(b)(6)> "Bok, Karin (NIH/VRC) [E]" <(b)(6)>  
**Subject:** Re: VRC Staff Plan for COVID-19 and Missions Critical Work (Graham)

It's a hot mess. Honestly. Haha.

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**  
Viral Pathogenesis Laboratory | Vaccine Research Center  
National Institutes of Allergy and Infectious Diseases  
National Institutes of Health

Building 40 Room 2608  
40 Convent Drive  
Bethesda MD 20892  
Laboratory: (b)(6)  
Personal: (b)(6)  
Fax: (301) 480-2771

---

**From:** "Ruckwardt, Tracy (NIH/VRC) [E]" <(b)(6)>  
**Date:** Wednesday, March 25, 2020 at 10:58 AM  
**To:** "Kanekiyo, Masaru (NIH/VRC) [E]" <(b)(6)> Barney Graham  
<(b)(6)> "Bok, Karin (NIH/VRC) [E]" <(b)(6)> Kizzmekia Corbett  
<(b)(6)>  
**Subject:** Re: VRC Staff Plan for COVID-19 and Missions Critical Work (Graham)

Sorry, guys, but I'm kind of annoyed (b)(5)  
(b)(5) I guess I figured (b)(5)  
(b)(5)

(b)(6) ....  
(b)(5) ...

---

**From:** "Kanekiyo, Masaru (NIH/VRC) [E]" <(b)(6)>  
**Date:** Wednesday, March 25, 2020 at 10:46 AM  
**To:** "Graham, Barney (NIH/VRC) [E]" <(b)(6)> "Bok, Karin (NIH/VRC) [E]"  
<(b)(6)> "Ruckwardt, Tracy (NIH/VRC) [E]" <(b)(6)> "Corbett,  
Kizzmekia (NIH/VRC) [E]" <(b)(6)>  
**Subject:** FW: VRC Staff Plan for COVID-19 and Missions Critical Work (Graham)

Looping Kizzy in.

---

**From:** "Royal, Thomas (NIH/NIAID) [E]" <(b)(6)>  
**Date:** Wednesday, March 25, 2020 at 10:41 AM

**To:** Barney Graham <[REDACTED] (b) (6)>  
**Cc:** "Bok, Karin (NIH/VRC) [E]" <[REDACTED] (b) (6)> "Kanekiyo, Masaru (NIH/VRC) [E]" <[REDACTED] (b) (6)> Tracy Ruckwardt <[REDACTED] (b) (6)>  
**Subject:** VRC Staff Plan for COVID-19 and Missions Critical Work (Graham)

Good morning,

I have attached the staff list for those under your area. Can you fill it out and return it to me no later than 2pm? Thanks

Thomas E. Royal Jr.  
Deputy Chief, VAMB, VRC, NIAID  
40 Convent Drive, Bethesda, MD 20892  
Phone: [REDACTED] (b) (6)

**From:** (b) (6)  
**Sent:** Tue, 10 Mar 2020 22:28:01 -0400  
**To:** Boritz, Eli (NIH/NIAID) [E]  
**Cc:** Ledgerwood, Julie (NIH/NIAID) [E]  
**Subject:** Re: coV sequencing

Hi Eli,

I thought Mark would be the best contact. It's possible that Natalie Thornburg in the diagnostics lab at CDC would be interested but everyone is so busy at the moment that they may not have time to process a research question.

Barney

Sent from my iPhone

On Mar 10, 2020, at 3:27 PM, Boritz, Eli (NIH/NIAID) [E] <(b) (6)> wrote:

Dear Barney and Julie,

I wanted to check back in with you about SARS-CoV-2 S protein gene sequencing, and see if you're

(b) (5)

Does either of you know of anyone other than Mark Denison who might be interested in collaborating? I feel like it (b) (5) but I've also reached out to John Beigel and several of the NIH ICU docs in case they have plans in this area.

Thanks very much,  
Eli

---

**From:** "Graham, Barney (NIH/VRC) [E]" <(b) (6)>  
**Date:** Monday, February 24, 2020 at 10:50 AM  
**To:** "Boritz, Eli (NIH/NIAID) [E]" <(b) (6)> "Ledgerwood, Julie (NIH/NIAID) [E]" <(b) (6)>  
**Cc:** "Denison, Mark" <(b) (6)>  
**Subject:** RE: coV sequencing

The CDC virus isolate from the Seattle patient has been deposited at BEI. Other isolate are in process. It is a BL3 agent and I assumed we would not have a way of working on it at the VRC. Would probably



(b) (5)

We've worked primarily with Mark Denison on BL3 CoV and he may be able to provide guidance on how this could be done.

Barney

---

**From:** Boritz, Eli (NIH/NIAID) [E] <[REDACTED] (b)(6)>

**Sent:** Monday, February 24, 2020 10:44 AM

**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)> Ledgerwood, Julie (NIH/NIAID) [E] <[REDACTED] (b) (6)>

**Subject:** coV sequencing

Hi Barney and Julie,

(b) (4), (b) (5)

Thanks

Eli

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 9 Mar 2020 20:51:45 +0000  
**To:** Mora, Anita (NIH/NIAID) [E]  
**Subject:** RE: 2020 spring RML public lecture

Yes, I'm glad we got to meet in Bethesda and will need to Skype.

BG

---

**From:** Mora, Anita (NIH/NIAID) [E] <(b)(6)>  
**Sent:** Monday, March 9, 2020 4:03 PM  
**To:** Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Subject:** RE: 2020 spring RML public lecture

Austin, Ryan and I are disappointed but we will catch up via Skype as we move forward on your (b)(4), (b)(5) project. Anita

---

**From:** Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Sent:** Monday, March 9, 2020 1:21 PM  
**To:** Bloom, Marshall (NIH/NIAID) [E] <(b)(6)> Young, Monique (NIH/VRC) [E] <(b)(6)>  
**Cc:** Pekoc, Ken (NIH/NIAID) [E] <(b)(6)> Miller, Susie (NIH/NIAID) [E] <(b)(6)> Bowland, Toby (NIH/NIAID) [E] <(b)(6)> Mora, Anita (NIH/NIAID) [E] <(b)(6)>  
**Subject:** RE: 2020 spring RML public lecture

Indeed. Sorry to miss another springtime visit to RML.

Barney

---

**From:** Bloom, Marshall (NIH/NIAID) [E] <(b)(6)>  
**Sent:** Monday, March 9, 2020 3:03 PM  
**To:** Young, Monique (NIH/VRC) [E] <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Cc:** Pekoc, Ken (NIH/NIAID) [E] <(b)(6)> Miller, Susie (NIH/NIAID) [E] <(b)(6)> Bowland, Toby (NIH/NIAID) [E] <(b)(6)> Bloom, Marshall (NIH/NIAID) [E] <(b)(6)> Mora, Anita (NIH/NIAID) [E] <(b)(6)>  
**Subject:** RE: 2020 spring RML public lecture

Barney and Monique.

Based on the long-awaited COVID-19 guidance released by NIH this morning, it seems prudent to cancel the visit to RML next month. This is really too bad, but seems proper in the face of the outbreak. Let's touch base in early summer and try to arrange something for next fall or spring. Interesting times. Thanks for your patience. Marshall

Marshall E. Bloom, M.D.  
Associate Director for Scientific Management  
Division of Intramural Research  
Chief, Biology of Vector-borne Viruses Section  
Laboratory of Virology  
Rocky Mountain Laboratories  
National Institute of Allergy and Infectious Diseases  
National Institutes of Health  
903 South 4th Street  
Hamilton, MT 59840  
PHO: (b)(6)  
Cell: (b)(6)  
email: (b)(6)

\*\*\*\*\*  
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. 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.  
\*\*\*\*\*

---

**From:** Bloom, Marshall (NIH/NIAID) [E] <(b)(6)>  
**Sent:** Tuesday, March 3, 2020 9:44 AM  
**To:** Young, Monique (NIH/VRC) [E] <(b)(6)>  
**Cc:** Bloom, Marshall (NIH/NIAID) [E] <(b)(6)> Pekoc, Ken (NIH/NIAID) [E] <(b)(6)> Mora, Anita (NIH/NIAID) [E] <(b)(6)> Miller, Susie (NIH/NIAID) [E] <(b)(6)> Bowland, Toby (NIH/NIAID) [E] <(b)(6)>  
**Subject:** FW: 2020 spring RML public lecture

Monique,

I want to follow up with you all about Barney's visit next month. It is clear to me how busy he is with the nCoV projects and everything else so we truly appreciate his taking the time to come out. Here are the salient points at this time:

- We have the auditorium reserved for the evening of Thursday, April 23.
- We need to have a presentation title, a photo and a CV or brief bio. If he wants to throw in a little nCoV vaccine fodder, that would be fine.
- We need to firm up his travel plans.
  - The initial concept was for him to fly out Weds, give a scientific talk (need a title for that too) and meet with RML staff on Thursday, public lecture on Thursday evening, more meetings with RML staff on Friday (including with Anita Mora about your video), spend Friday night in Missoula and then fly back early Saturday.

- You can book the flights, accommodations at the Bitterroot River Inn in Missoula, and the Wingate in Missoula.
- I will get a CAN from Joe Blaney in DIR to charge against.

Please let me know if you have any questions or need clarification.

Thanks very much!

Marshall

Marshall E. Bloom, M.D.  
 Associate Director for Scientific Management  
 Division of Intramural Research  
 Chief, Biology of Vector-borne Viruses Section  
 Laboratory of Virology  
 Rocky Mountain Laboratories  
 National Institute of Allergy and Infectious Diseases  
 National Institutes of Health  
 903 South 4th Street  
 Hamilton, MT 59840  
 PHO: (b)(6)  
 Cell: (b)(6)  
 email: (b)(6)

\*\*\*\*\*  
 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. 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.  
 \*\*\*\*\*

---

**From:** Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Sent:** Wednesday, November 27, 2019 10:28 AM  
**To:** Pekoc, Ken (NIH/NIAID) [E] <(b)(6)> Bloom, Marshall (NIH/NIAID) [E] <(b)(6)>  
**Cc:** Young, Monique (NIH/VRC) [E] <(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)> Bowland, Toby (NIH/NIAID) [E] <(b)(6)>  
**Subject:** RE: 2020 spring RML public lecture

OK, sounds good. I will plan on April 23<sup>rd</sup>.

BG

---

**From:** Pekoc, Ken (NIH/NIAID) [E] <(b)(6)>  
**Sent:** Wednesday, November 27, 2019 12:20 PM  
**To:** Bloom, Marshall (NIH/NIAID) [E] <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Cc:** Young, Monique (NIH/VRC) [E] <(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E]

< (b)(6) Bowland, Toby (NIH/NIAID) [E] < (b)(6)

**Subject:** RE: 2020 spring RML public lecture

The school has approved our Performing Arts Center rental for Thursday, April 23, with a presentation from 7-8 p.m.

Dr. Graham, when we get about a month from the event I'll need to get a presentation title, photo, and Cv / background about you to develop a press release and promo poster (you'll be able to review both in advance).

Thanks

---

**From:** Bloom, Marshall (NIH/NIAID) [E] < (b)(6) >  
**Sent:** Wednesday, November 20, 2019 2:10 PM  
**To:** Graham, Barney (NIH/VRC) [E] < (b)(6) >  
**Cc:** Young, Monique (NIH/VRC) [E] < (b)(6) > Morabito, Kaitlyn (NIH/VRC) [E] < (b)(6) > Pekoc, Ken (NIH/NIAID) [E] < (b)(6) > Bowland, Toby (NIH/NIAID) [E] < (b)(6) > Bloom, Marshall (NIH/NIAID) [E] < (b)(6) >  
**Subject:** RE: 2020 spring RML public lecture

Barney,  
We have reserved the high school auditorium for the evening of Thursday, April 23, but Ken Pekoc says that it seems to be open on Friday, April 24, too.  
If you could please send my Program Specialist Toby a tentative title for you talk, she can initiate the approval to book the hall.  
There are several strategies for your trip depending on how much time you can take. In essence, they revolve around whether you prefer to do the public lecture on Thursday or Friday, and if you want to stay and visit the area on Saturday. Let me know your preference a  
Thanks very much!  
Marshall

Marshall E. Bloom, M.D.  
Associate Director for Scientific Management  
Division of Intramural Research  
Chief, Biology of Vector-borne Viruses Section  
Laboratory of Virology  
Rocky Mountain Laboratories  
National Institute of Allergy and Infectious Diseases  
National Institutes of Health  
903 South 4th Street  
Hamilton, MT 59840  
PHO: (b)(6)  
Cell: (b)(6)  
email: (b)(6)

\*\*\*\*\*  
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. 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.  
\*\*\*\*\*

nd we can sketch out some ideas with your staff.  
It will be terrific having you visit.

---

**From:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Sent:** Saturday, November 16, 2019 8:45 AM  
**To:** Bloom, Marshall (NIH/NIAID) [E] <[REDACTED] (b)(6)>  
**Cc:** Young, Monique (NIH/VRC) [E] <[REDACTED] (b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <[REDACTED] (b)(6)> Pekoc, Ken (NIH/NIAID) [E] <[REDACTED] (b)(6)> Bowland, Toby (NIH/NIAID) [E] <[REDACTED] (b)(6)>  
**Subject:** RE: 2020 spring RML public lecture

Hi Marshall,

I think we've identified dates that could work. Would either April 23 or 24 work for you?

Thanks,

Barney

---

**From:** Bloom, Marshall (NIH/NIAID) [E] <[REDACTED] (b)(6)>  
**Sent:** Tuesday, October 1, 2019 2:18 PM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Cc:** Young, Monique (NIH/VRC) [E] <[REDACTED] (b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <[REDACTED] (b)(6)> Pekoc, Ken (NIH/NIAID) [E] <[REDACTED] (b)(6)> Bowland, Toby (NIH/NIAID) [E] <[REDACTED] (b)(6)>  
**Subject:** 2020 spring RML public lecture

Barney,

This is great and it will be terrific to have you give our spring 2020 public lecture about vaccines and related topics. I am confident that Steve Holland will be particularly pleased that you are coming.

We try to do the public lectures either on a Thursday or Friday evening at 7:00 PM. The local high school has an amazing performing arts auditorium that seats about 700. Precise scheduling is dependent on the school's schedule for concerts, etc, but it is rare that they have something on both Thursday and Friday evening.

Speakers like you, with a lot of friends and interest in RML programs, typically come in on a Wednesday afternoon, give a seminar and meet with the staff on Thursday and Friday, and then head out on Saturday morning. Some stay Saturday for extracurricular activities, like skiing or fishing, and leave on Sunday. The costs are borne by my office.

Monique, if you want to check Barney's calendar and come up with some possible dates in March, April and May, Ken and I will check with the school.

Thanks very much!  
Marshall

Marshall E. Bloom, M.D.  
Associate Director for Scientific Management  
Division of Intramural Research  
Chief, Biology of Vector-borne Viruses Section  
Laboratory of Virology  
Rocky Mountain Laboratories  
National Institute of Allergy and Infectious Diseases  
National Institutes of Health  
903 South 4th Street  
Hamilton, MT 59840  
PHO: (b)(6)  
Cell: (b)(6)  
email: (b)(6)

\*\*\*\*\*  
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. 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.  
\*\*\*\*\*

---

**From:** Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Sent:** Tuesday, October 1, 2019 11:23 AM  
**To:** Bloom, Marshall (NIH/NIAID) [E] <(b)(6)>  
**Cc:** Young, Monique (NIH/VRC) [E] <(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)>  
**Subject:** RE: RML visit?

Hi Marshall,

Thank you for thinking of me. I was just speaking to someone a few days ago about needing to visit RML, so this is timely. I tried with Kim Hasenkrug a few times and various other obligations interfered. I would very much like to schedule this in advance and visit the RML faculty. There is a lot to discuss, especially in the area of pandemic preparedness.

I've copied Monique Young here who can help identify dates. I've also copied Kaitlyn Morabito who manages our EID projects. Are the community lectures on a particular day of the week?

Best wishes,

Barney

---

**From:** Bloom, Marshall (NIH/NIAID) [E] <[REDACTED] (b)(6)>  
**Sent:** Tuesday, October 1, 2019 10:51 AM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Cc:** Bloom, Marshall (NIH/NIAID) [E] <[REDACTED] (b)(6)>  
**Subject:** RML visit?

Dear Barney,

Every year for the past 15 years, I have sponsored public lectures for our community here in Montana. Past speakers have included Tony Fauci, Dick Krause, Dave Baltimore, Stan Falkow, Irv Weissman, Ian Lipkin, Karl Johnson, Jeff Taubenberger, Kanta Subbarao, and many others.

I would like to invite you to come to RML and present the spring 2020 public lecture on vaccines and vaccinations. Vaccines and vaccination are of huge interest now, so this would be very timely topic and I think that you are the best person at NIAID to talk about it.

Of course, we would couple this with a seminar at RML and visits with our scientific staff.

Please let me know if you are interested, and we can ruminate on dates and specific topics.

Thanks very much for your kind consideration!  
Marshall

Marshall E. Bloom, M.D.  
Associate Director for Scientific Management  
Division of Intramural Research  
Chief, Biology of Vector-borne Viruses Section  
Laboratory of Virology  
Rocky Mountain Laboratories  
National Institute of Allergy and Infectious Diseases  
National Institutes of Health  
903 South 4th Street  
Hamilton, MT 59840  
PHO: [REDACTED] (b)(6)  
Cell: [REDACTED] (b)(6)  
email: [REDACTED] (b)(6)

\*\*\*\*\*

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. 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.

\*\*\*\*\*



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 4 Feb 2020 01:22:29 +0000  
**To:** Sahin, Prof. Dr. Ugur  
**Cc:** Stefan Pöhlmann  
**Subject:** Re: Introduction

Dear Dr. Sahin,

I am connecting you to Professor Stefan Pöhlmann. He is an expert on (b) (4). Stefan, I don't know if you have time, but Dr. Sahin is CEO of BioNTech and is looking for help with (b) (4) a CoV vaccine program.

Barney

Sent from my iPhone

On Feb 3, 2020, at 3:05 PM, Sahin, Prof. Dr. Ugur <(b) (6)> wrote:

Thanks, Barney. 3:45pm i.e. in 40min is fine for me. Holger Kissel will set-up a TC. Best regards, Ugur

---

**Von:** Graham, Barney (NIH/VRC) [E] [mailto:(b) (6)]  
**Gesendet:** Montag, 3. Februar 2020 20:58  
**An:** Sahin, Prof. Dr. Ugur  
**Cc:** Holger Kanzler; Ugur Sahin; Lynda, Stuart; Holger Kissel; Mascola, John (NIH/VRC) [E]; Gall, Jason (NIH/VRC) [C]; Morabito, Kaitlyn (NIH/VRC) [E]; Stein, Judy (NIH/VRC) [C]; Young, Monique (NIH/VRC) [E]  
**Betreff:** Re: Introduction

I could speak briefly at 3:45 pm EST today. That is about 45 minutes from now. If that does not work we can look for a time tomorrow. I've copied Monique Young who can help with scheduling if we can't talk today.

Barney

Sent from my iPhone

On Feb 3, 2020, at 10:30 AM, Sahin, Prof. Dr. Ugur <[redacted] (b)(6)> wrote:

Dear Graham,

Many thanks for your willingness to support. We have [redacted] (b)(4) [redacted] (b)(4) I would like to get further advice about [redacted] (b)(4) Moreover, I would like to understand [redacted] (b)(4) [redacted] (b)(4) Given the urgency, it would be great if we could have a 15min phone call today, ideally after 8:30pm German time (i.e. 2:30 or later Bethesda time). Please, let me know if this work for you. We would be happy to set up a TC.

Best regards,

Ugur

---

**Von:** Graham, Barney (NIH/VRC) [E] [mailto:[redacted] (b)(6)]

**Gesendet:** Montag, 3. Februar 2020 13:37

**An:** Sahin, Prof. Dr. Ugur

**Cc:** Holger Kanzler; Ugur Sahin; Lynda, Stuart; Holger Kissel; Mascola, John (NIH/VRC) [E]; Gall, Jason (NIH/VRC) [C]; Morabito, Kaitlyn (NIH/VRC) [E]; Stein, Judy (NIH/VRC) [C]

**Betreff:** Re: Introduction

Dear Prof. Ugur,

Thank you for your interest [redacted] (b)(4) If we can help by providing advice and information on [redacted] (b)(4) [redacted] (b)(4) we are glad to do so. Fortunately, [redacted] (b)(4) [redacted] (b)(4) [redacted] (b)(4). Therefore, we believe [redacted] (b)(4)

Let us know if you would like to arrange a call to discuss for which we would probably want to complete a CDA.

Best wishes,

Barney

Sent from my iPhone

On Feb 2, 2020, at 12:22 PM, Sahin, Prof. Dr. Ugur <[REDACTED] (b)(6)> wrote:

Dear Holger,

many thanks for connecting.

Dear Barney,

I have read your [REDACTED] (b)(4) and would greatly appreciate to learn more and get your advice for [REDACTED] (b)(4) [REDACTED] (b)(4).

Best regards,

Ugur

---

**Von:** Holger Kanzler [mailto:[REDACTED] (b)(6)]  
**Gesendet:** Sonntag, 2. Februar 2020 17:53  
**An:** Graham, Barney (NIH/VRC) [E]; Ugur Sahin; Sahin, Prof. Dr. Ugur  
**Cc:** Lynda Stuart; Holger Kissel  
**Betreff:** Introduction

Dear Barney, Ugur,

I wanted to take a moment to introduce you to each other regarding 2019-nCoV.

Ugur, Barney is Deputy Director, Vaccine Research Center, Chief, Viral Pathogenesis Laboratory and Translational Science Core, and there is nobody who knows more about structural basis of antibody-based virus neutralization than him.

<https://www.niaid.nih.gov/research> [REDACTED] B (6)

Barney, Ugur is CEO of BioNTech, a cutting edge mRNA company with a tremendous technology pipeline and partner of the foundation in TB and HIV.

<https://biontech.de/our-dna/leadership>

I was hoping you could have a conversation on [REDACTED] (b)(4) [REDACTED] (b)(4)

Best,  
Holger

**Holger Kanzler PhD**  
Senior Program Officer, Vaccines & Human Immunobiology

Global Health – Discovery Cross Cutting

V + (b)(6)

E (b)(6)

Bill & Melinda Gates Foundation

[www.gatesfoundation.org](http://www.gatesfoundation.org)

[<image001.png>](#)

[Facebook](#)

[<image002.png>](#)

[Twitter](#)

[<image003.png>](#)

[Impatient Optimists](#)

**Note:** For a text version of these three links, use this format:

Join the conversation on [Facebook](#), [Twitter](#),

and our blog: [www.impatientoptimists.org](http://www.impatientoptimists.org)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sun, 16 Feb 2020 19:28:47 +0000  
**To:** Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** FW: [Non-DoD Source] (b) (4)  
**Attachments:** Research plan template 15FEB18\_KM.doc

FYI.

BG

---

**From:** Kayvon Modjarrad <(b)(6)>  
**Sent:** Sunday, February 16, 2020 1:49 PM  
**To:** Stein, Judy (NIH/VRC) [C] <(b)(6)> Gordon Joyce <(b)(6)> Mihret Amare <(b)(6)>  
**Cc:** Jayda Jones <(b)(6)> (b)(6) Graham, Barney (NIH/VRC) [E] <(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)> Corbett, Kizzmekia (NIH/VRC) [E] <(b)(6)> Bok, Karin (NIH/VRC) [E] <(b)(6)>  
**Subject:** Re: [Non-DoD Source] (b) (4)

Thank you Judy.

I took a first pass at it. Attached. VRC can add in their portion.

What do you need (b) (4) so that Gordon and I can tailor it accordingly?

Kayvon

---

**From:** Stein, Judy (NIH/VRC) [C] <(b)(6)>  
**Sent:** Friday, February 14, 2020 3:39 PM  
**To:** Kayvon Modjarrad; Gordon Joyce; Mihret Amare  
**Cc:** Jayda Jones; (b)(6) Graham, Barney (NIH/VRC) [E]; Morabito, Kaitlyn (NIH/VRC) [E]; Corbett, Kizzmekia (NIH/VRC) [E]; Bok, Karin (NIH/VRC) [E]  
**Subject:** FW: [Non-DoD Source] (b)(6)

Hi everyone,

We are putting together [REDACTED] (b) (4)

[REDACTED] Jasleen, I should have a draft to send to you on Tuesday.

Kayvon and Gordon,

[REDACTED] (b) (4)

Thanks very much.

Judy

[REDACTED] (b)(6)

---

This message contains information that may be confidential, privileged, proprietary, or otherwise protected. If you are not the intended recipient, notify the sender immediately and delete/destroy all copies of this message and any attachments. This message is not intended to constitute or include either an electronic record or an electronic signature unless otherwise specifically indicated.

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 8 Apr 2020 16:55:48 +0000  
**To:** Crystal Ocampo  
**Cc:** Young, Monique (NIH/VRC) [E]  
**Subject:** Re: Important, please read: Changes to your upcoming NYAS Event on Maternal Vaccines

I should be able to participate by video.

Barney

Sent from my iPhone

On Apr 8, 2020, at 12:47 PM, Crystal Ocampo <[REDACTED]> (b)(6) wrote:

### **Change to Your Upcoming Speaking Appearance**

Dear Dr. Graham,

I am writing with an important update regarding your scheduled appearance to speak at the upcoming in-person New York Academy of Sciences event, **Innovations in Maternal, Neonatal, and Early Infancy Vaccines** to be held on **Tuesday, June 23, 2020**. I would like to thank you for generously agreeing to participate as a speaker at this event.

News of the growing coronavirus (COVID-19) outbreak is changing quickly in the US and globally each day. Many countries, agencies, and institutions have now banned travel and participation in large group gatherings, and many healthcare providers are urgently needed to care for patients with COVID-19 in their own institutions.

The health and safety of our community is of utmost importance to us. In an effort to support global initiatives to contain virus spread, and out of an abundance of caution, **the Academy is moving to an online platform, or postponing, all large (100+ persons) meetings and events intended to be held in person between now and June 30, 2020.**

### **YOUR UPCOMING SPEAKING APPEARANCE AT THIS EVENT IS AFFECTED.**

Here is what you need to know:

- **This event will now be presented only as a Webinar.** No portion of these programs will be presented in person at the New York Academy of Sciences. A proposed [modified schedule](#) is available on the event website.
- We respectfully request your continued participation as a speaker for this event, and are **pleased to offer you the capability of delivering your presentation from the convenience of your home or office via Webinar. Please confirm your availability by April 30<sup>th</sup>.**

- **Please find below** my signature instructions and technical requirements for preparing to participate via Webinar.
- **If the Academy has reserved hotel accommodation for you in New York City**, we shall manage cancellation of this reservation. No action on your part is required.
- **If you have reservations for travel to/from New York City for this event**, we kindly ask you to cancel these travel plans as soon as possible. If you incur any cancellation fees please contact me for further information.

Our team is monitoring the COVID-19 outbreak, and related issues, and will notify you as soon as possible of any further changes to our programming schedule or formats for events.

In the meantime, here are some helpful informational resources about the coronavirus:

### Public Health Information Resources on the COVID-19 Outbreak

Academy Webinar, April 22, 2020: [New Developments in the COVID-19 Outbreak](#)  
[The latest from the Centers for Disease Control and Prevention \(CDC\)](#)  
[The latest from the World Health Organization \(WHO\)](#)  
[The latest from the New York State Department of Health](#)  
[The latest from the New York City Department of Health and Mental Hygiene](#)

### Questions or Concerns?

The New York Academy of Sciences is currently open and our [Customer Service](#) team is available to answer questions and address concerns. We ask you for your patience and understanding as we facilitate creation of these virtual programs while doing our best to protect the health and integrity of the science and scientists that serve our community.

We recognize the importance and value of providing a platform for continued intellectual discourse among our community during this period. We thank you for your understanding and for helping us to achieve this mission.

Best regards,

Crystal Ocampo

**Associate Director, Meeting & Event Operations**

The New York Academy of Sciences  
7 World Trade Center  
250 Greenwich Street, 40th Floor  
New York, NY 10007

### **\*\*TECHNICAL REQUIREMENTS FOR WEBINAR PARTICIPATION\*\***

We ask that you be in the same location and use the same equipment in which you will be presenting on the actual date of the event. Using a headset during your presentation is preferred, but not required. A pre-test will be scheduled at least 2 weeks prior to the event date; a link will be circulated in which the test will be conducted with our audio-visual team.



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 4 Apr 2020 20:01:37 +0000  
**To:** Harris, Christina (NIH/NIAID) [E];Koup, Richard (NIH/VRC) [E];Ledgerwood, Julie (NIH/NIAID) [E];Mascola, John (NIH/VRC) [E]  
**Cc:** Daucher, Marybeth (NIH/NIAID) [E];Prince, Tasheema (NIH/VRC) [C]  
**Subject:** RE: Staff Safety Communication for Approval

When we send out another bulletin or email on this issue, can we provide a [REDACTED] (b) (5)  
[REDACTED] (b) (5)

Barney

---

**From:** Harris, Christina (NIH/NIAID) [E] <[REDACTED] (b)(6)>  
**Sent:** Saturday, April 4, 2020 2:53 PM  
**To:** Koup, Richard (NIH/VRC) [E] <[REDACTED] (b)(6)> Ledgerwood, Julie (NIH/NIAID) [E] <[REDACTED] (b)(6)> Mascola, John (NIH/VRC) [E] <[REDACTED] (b)(6)> Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Cc:** Daucher, Marybeth (NIH/NIAID) [E] <[REDACTED] (b)(6)> Prince, Tasheema (NIH/VRC) [C] <[REDACTED] (b)(6)>  
**Subject:** Re: Staff Safety Communication for Approval

Hi all,  
Revised language is attached [REDACTED] (b) (5)  
[REDACTED] (b) (5) No word from Bldg 1 yet on their guidance for face covering on campus.

Please let me know if have any further revisions.

Best,  
Christy

---

**From:** "Koup, Richard (NIH/VRC) [E]" <[REDACTED] (b)(6)>  
**Date:** Friday, April 3, 2020 at 3:59 PM  
**To:** "Harris, Christina (NIH/NIAID) [E]" <[REDACTED] (b)(6)> "Ledgerwood, Julie (NIH/NIAID) [E]" <[REDACTED] (b)(6)> "Mascola, John (NIH/VRC) [E]" <[REDACTED] (b)(6)> "Graham, Barney (NIH/VRC) [E]" <[REDACTED] (b)(6)>  
**Cc:** Marybeth Daucher <[REDACTED] (b)(6)> Tasheema Prince <[REDACTED] (b)(6)>  
**Subject:** RE: Staff Safety Communication for Approval

[REDACTED] (b) (5)

---

**From:** Harris, Christina (NIH/NIAID) [E] <[REDACTED] (b)(6)>  
**Sent:** Friday, April 3, 2020 2:40 PM  
**To:** Ledgerwood, Julie (NIH/NIAID) [E] <[REDACTED] (b)(6)> Mascola, John (NIH/VRC) [E] <[REDACTED] (b)(6)> Koup, Richard (NIH/VRC) [E] <[REDACTED] (b)(6)> Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Cc:** Daucher, Marybeth (NIH/NIAID) [E] <[REDACTED] (b)(6)> Prince, Tasheema (NIH/VRC) [C] <[REDACTED] (b)(6)>  
**Subject:** Re: Staff Safety Communication for Approval

Thanks, Julie. I like the document you sent, especially the [REDACTED] (b)(5)

Attached is the revised guidance with more specifics about [REDACTED] (b)(5) We could include [REDACTED] (b)(5)  
[REDACTED] (b)(5) However, [REDACTED] (b)(5)  
[REDACTED] (b)(5)

The question re: [REDACTED] (b)(5)  
[REDACTED] (b)(5) Any guidance you all can provide on specific [REDACTED] (b)(5)

Please advise,  
Christy

---

**From:** "Ledgerwood, Julie (NIH/NIAID) [E]" <[REDACTED] (b)(6)>  
**Date:** Friday, April 3, 2020 at 1:49 PM  
**To:** "Harris, Christina (NIH/NIAID) [E]" <[REDACTED] (b)(6)> "Mascola, John (NIH/VRC) [E]" <[REDACTED] (b)(6)> "Koup, Richard (NIH/VRC) [E]" <[REDACTED] (b)(6)> "Graham, Barney (NIH/VRC) [E]" <[REDACTED] (b)(6)>  
**Cc:** Marybeth Daucher <[REDACTED] (b)(6)> Tasheema Prince <[REDACTED] (b)(6)>  
**Subject:** RE: Staff Safety Communication for Approval

This maybe helpful for our committee—I have attached the draft guidance on this subject developed this week at the VA. We are in close contact with their group [REDACTED] (b)(5) and they shared this with us today—actually asking if we had advice for them---but theirs already seems more detailed than ours so it maybe more useful to us.  
Julie

---

**From:** Ledgerwood, Julie (NIH/NIAID) [E]  
**Sent:** Friday, April 3, 2020 10:39 AM  
**To:** Harris, Christina (NIH/NIAID) [E] <[REDACTED] (b)(6)> Mascola, John (NIH/VRC) [E] <[REDACTED] (b)(6)> Koup, Richard (NIH/VRC) [E] <[REDACTED] (b)(6)> Graham, Barney

(NIH/VRC) [E] < [REDACTED] (b) (6)

**Cc:** Daucher, Marybeth (NIH/NIAID) [E] < [REDACTED] (b)(6) Prince, Tasheema (NIH/VRC) [C]  
< [REDACTED] (b)(6)

**Subject:** RE: Staff Safety Communication for Approval

Thank you Christy

This is a nice start and seems broad. We had hoped for the committee to provide specific guidance for [REDACTED] (b) (5)

In this document the majority of text seems to be [REDACTED] (b) (5)  
the portion about our specific question (inserted below) is quite limited and I suspect our staff would like a bit more direction. Meaning, [REDACTED] (b) (5)  
[REDACTED] (b) (5)

Current specific wording excerpt is below---and I recommend [REDACTED] (b) (5)  
[REDACTED] (b) (5)

Tracked comments also attached.

[REDACTED] (b) (5)

[REDACTED] (b) (5)

Happy to work with the committee as well.

Julie

---

**From:** Harris, Christina (NIH/NIAID) [E] < [REDACTED] (b)(6)

**Sent:** Friday, April 3, 2020 10:25 AM

**To:** Mascola, John (NIH/VRC) [E] < [REDACTED] (b) (6) Koup, Richard (NIH/VRC) [E]  
< [REDACTED] (b)(6) Graham, Barney (NIH/VRC) [E] < [REDACTED] (b) (6) Ledgerwood, Julie  
(NIH/NIAID) [E] < [REDACTED] (b) (6)

**Cc:** Daucher, Marybeth (NIH/NIAID) [E] < [REDACTED] (b)(6) Prince, Tasheema (NIH/VRC) [C]  
< [REDACTED] (b)(6)

**Subject:** Staff Safety Communication for Approval

Dear John, Rick, Barney, Julie,

Attached for your review is the [REDACTED] (b) (5)  
[REDACTED] (b) (5), but I think Steve and Alida did a nice job in compiling a succinct,  
comprehensive list that people can keep as a reference.

Please let us know your thoughts. Once finalized, Tasheema can send as a bulletin.

Thanks,  
Christy

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sun, 1 Mar 2020 03:03:50 +0000  
**To:** Hiatt, Nissa (NIH/VRC) [C];Marston, Hilary (NIH/NIAID) [E];Mascola, John (NIH/VRC) [E];Daucher, Marybeth (NIH/NIAID) [E];Morabito, Kaitlyn (NIH/VRC) [E];Corbett, Kizzmekia (NIH/VRC) [E];Harris, Christina (NIH/NIAID) [E]  
**Cc:** Ledgerwood, Julie (NIH/NIAID) [E];Bok, Karin (NIH/VRC) [E];Koup, Richard (NIH/VRC) [E]  
**Subject:** RE: NIHVisit03-03-20 PLEASE READ  
**Attachments:** WH visit VRC 3March2020.pptx

These are some slightly updated slides we plan to use.

Barney

---

**From:** Hiatt, Nissa (NIH/VRC) [C] <(b)(6)>  
**Sent:** Saturday, February 29, 2020 9:44 PM  
**To:** Marston, Hilary (NIH/NIAID) [E] <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)> Mascola, John (NIH/VRC) [E] <(b)(6)> Daucher, Marybeth (NIH/NIAID) [E] <(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)> Corbett, Kizzmekia (NIH/VRC) [E] <(b)(6)> Harris, Christina (NIH/NIAID) [E] <(b)(6)>  
**Cc:** Ledgerwood, Julie (NIH/NIAID) [E] <(b)(6)> Bok, Karin (NIH/VRC) [E] <(b)(6)> Koup, Richard (NIH/VRC) [E] <(b)(6)>  
**Subject:** RE: NIHVisit03-03-20 PLEASE READ

Thought that I caught that. This version is consistent on the salutations including Dr. Corbett.

**Nissa Hiatt**

Communications

Vaccine Research Center, NIAID, NIH  
40 Convent Drive, Bldg 40, Room 1100  
Bethesda, MD 20892

(b)(6)

(b)(6)



---

**From:** Marston, Hilary (NIH/NIAID) [E] <(b)(6)>  
**Sent:** Saturday, February 29, 2020 9:38 PM  
**To:** Hiatt, Nissa (NIH/VRC) [C] <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)> Mascola, John (NIH/VRC) [E] <(b)(6)> Daucher, Marybeth (NIH/NIAID) [E] <(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E]

< (b)(6) Corbett, Kizzmekia (NIH/VRC) [E] < (b)(6) Harris, Christina (NIH/NIAID) [E] < (b)(6)  
**Cc:** Ledgerwood, Julie (NIH/NIAID) [E] (b)(6) Bok, Karin (NIH/VRC) [E]  
< (b)(6) Koup, Richard (NIH/VRC) [E] < (b)(6)  
**Subject:** Re: NIHVisit03-03-20 PLEASE READ

Yes of course! As long as they call Kizzmekia Dr. Corbett. :)

---

**From:** "Hiatt, Nissa (NIH/VRC) [C]" < (b)(6) >  
**Date:** Saturday, February 29, 2020 at 9:35 PM  
**To:** Hilary Marston < (b)(6) "Graham, Barney (NIH/VRC) [E]" < (b)(6) "Mascola, John (NIH/VRC) [E]" < (b)(6) "Daucher, Marybeth (NIH/NIAID) [E]" < (b)(6) "Morabito, Kaitlyn (NIH/VRC) [E]" < (b)(6) "Corbett, Kizzmekia (NIH/VRC) [E]" < (b)(6) "Harris, Christina (NIH/NIAID) [E]" < (b)(6) >  
**Cc:** Julie Ledgerwood < (b)(6) Karin Bok < (b)(6) "Koup, Richard (NIH/VRC) [E]" < (b)(6) >  
**Subject:** RE: NIHVisit03-03-20 PLEASE READ

Hi Hilary,

Would you use the updated bios for John and Kizzy included in the attachment?

Best,  
Nissa

**Nissa Hiatt**  
Communications  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive, Bldg 40, Room 1100  
Bethesda, MD 20892

(b)(6)  
(b)(6)



---

**From:** Marston, Hilary (NIH/NIAID) [E] < (b)(6) >  
**Sent:** Saturday, February 29, 2020 9:28 PM  
**To:** Graham, Barney (NIH/VRC) [E] < (b)(6) Hiatt, Nissa (NIH/VRC) [C] < (b)(6) Mascola, John (NIH/VRC) [E] < (b)(6)>; Daucher, Marybeth (NIH/NIAID) [E] < (b)(6) Morabito, Kaitlyn (NIH/VRC) [E] < (b)(6)>; Corbett, Kizzmekia (NIH/VRC) [E] < (b)(6) Harris, Christina (NIH/NIAID) [E] < (b)(6) >  
**Cc:** Ledgerwood, Julie (NIH/NIAID) [E] (b)(6)>; Bok, Karin (NIH/VRC) [E]

< (b) (6) Koup, Richard (NIH/VRC) [E] < (b) (6)

**Subject:** Re: NIHVisit03-03-20 PLEASE READ

(Barney – attachment?)

While we are finalizing the talking points, I put the shortened bios and VRC/lab background blurbs into a document with a one pager on the candidate (which Kaitlyn, Karin and Julie kindly took a look at).

I would plan on including this with the talking points – very hard to know what format our audience will actually want.

Please let me know if you have edits and I'll send to Tony with the final tps once those are incorporated.

---

**From:** "Graham, Barney (NIH/VRC) [E]" < (b) (6)

**Date:** Saturday, February 29, 2020 at 9:19 PM

**To:** "Hiatt, Nissa (NIH/VRC) [C]" < (b) (6) "Mascola, John (NIH/VRC) [E]"

< (b) (6) Hilary Marston < (b) (6) "Daucher, Marybeth (NIH/NIAID) [E]" < (b) (6) "Morabito, Kaitlyn (NIH/VRC) [E]"

< (b) (6) Hilary Marston < (b) (6) "Corbett, Kizzmekia (NIH/VRC) [E]" < (b) (6) "Harris, Christina (NIH/NIAID) [E]"

< (b) (6)

**Cc:** Julie Ledgerwood < (b) (6) Karin Bok < (b) (6) "Koup, Richard (NIH/VRC) [E]" < (b) (6)

**Subject:** RE: NIHVisit03-03-20 PLEASE READ

I've added my edits on top of John's.

Barney

---

**From:** Hiatt, Nissa (NIH/VRC) [C] < (b) (6)

**Sent:** Saturday, February 29, 2020 8:58 PM

**To:** Mascola, John (NIH/VRC) [E] < (b) (6) Marston, Hilary (NIH/NIAID) [E]

< (b) (6) Daucher, Marybeth (NIH/NIAID) [E] < (b) (6) Morabito, Kaitlyn (NIH/VRC) [E] < (b) (6) Graham, Barney (NIH/VRC) [E]

< (b) (6) Marston, Hilary (NIH/NIAID) [E] < (b) (6) Corbett, Kizzmekia (NIH/VRC) [E] < (b) (6) Harris, Christina (NIH/NIAID) [E]

< (b) (6)

**Cc:** Ledgerwood, Julie (NIH/NIAID) [E] < (b) (6) Bok, Karin (NIH/VRC) [E]

< (b) (6) Koup, Richard (NIH/VRC) [E] < (b) (6)

**Subject:** RE: NIHVisit03-03-20 PLEASE READ

I know y'all are still reviewing talking points edited by John but I'm adding bios for the 3 VRC roundtable participants (John, Barney, Kizzy) to the review list. It sounds like bios could be helpful for the WH briefing materials as well.

Bios are attached here and use language from the website.

Hilary, we are also preparing slides for your team's consideration in case you would like to use some of them in the lab on a monitor.

Best,  
Nissa

**Nissa Hiatt**  
Communications  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive, Bldg 40, Room 1100  
Bethesda, MD 20892

(b)(6)

(b)(6)



---

**From:** Mascola, John (NIH/VRC) [E] <(b)(6)>  
**Sent:** Saturday, February 29, 2020 8:32 PM  
**To:** Hiatt, Nissa (NIH/VRC) [C] <(b)(6)> Marston, Hilary (NIH/NIAID) [E] <(b)(6)> Daucher, Marybeth (NIH/NIAID) [E] <(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)> Marston, Hilary (NIH/NIAID) [E] <(b)(6)>  
**Cc:** Ledgerwood, Julie (NIH/NIAID) [E] <(b)(6)>; Bok, Karin (NIH/VRC) [E] <(b)(6)> Koup, Richard (NIH/VRC) [E] <(b)(6)>  
**Subject:** RE: NIHVisit03-03-20 PLEASE READ

Thanks Nissa,

These are good, and (b)(5) I've made some edits to shorten in some cases, and to polish text.

Barney and others here should review and suggest. We need to get to Hilary ASAP, so I've copied her here.

Thanks,  
John

---

**From:** Hiatt, Nissa (NIH/VRC) [C] <(b)(6)>  
**Sent:** Saturday, February 29, 2020 7:53 PM



**To:** Mascola, John (NIH/VRC) [E] <(b)(6)> Marston, Hilary (NIH/NIAID) [E]  
<(b)(6)> Daucher, Marybeth (NIH/NIAID) [E] <(b)(6)> Morabito,  
Kaitlyn (NIH/VRC) [E] <(b)(6)> Graham, Barney (NIH/VRC) [E]  
<(b)(6)>  
**Cc:** Ledgerwood, Julie (NIH/NIAID) [E] <(b)(6)> Bok, Karin (NIH/VRC) [E]  
<(b)(6)> Koup, Richard (NIH/VRC) [E] <(b)(6)>  
**Subject:** RE: NIHVisit03-03-20 PLEASE READ

Hi John,

Here is a draft version of talking points for consideration. Please let us know if we can provide additional information or alter the approach.

Best,  
Nissa

**Nissa Hiatt**

Communications

Vaccine Research Center, NIAID, NIH

40 Convent Drive, Bldg 40, Room 1100

Bethesda, MD 20892

(b)(6)

(b)(6)



---

**From:** Mascola, John (NIH/VRC) [E] <(b)(6)>  
**Sent:** Saturday, February 29, 2020 5:28 PM  
**To:** Marston, Hilary (NIH/NIAID) [E] <(b)(6)> Daucher, Marybeth (NIH/NIAID) [E]  
<(b)(6)> Hiatt, Nissa (NIH/VRC) [C] <(b)(6)>; Morabito, Kaitlyn  
(NIH/VRC) [E] <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Cc:** Ledgerwood, Julie (NIH/NIAID) [E] <(b)(6)> Bok, Karin (NIH/VRC) [E]  
<(b)(6)> Koup, Richard (NIH/VRC) [E] <(b)(6)>  
**Subject:** RE: NIHVisit03-03-20 PLEASE READ

Yes, we can assist with what Tony asks for. Barney's group – those copied here (Karin, Kaitlyn, Nissa) and I've added Kizzmekia – have bullet points.

All – please read the email chain carefully – to understand what Tony is asking – and who he will provide it to. Then send materials to Hilary.

Hilary – thanks for offering to help.

Barney and I will edit.

Thanks all – I know this is imposition on weekend – but this doesn't happen often.

Best,

John

---

**From:** Marston, Hilary (NIH/NIAID) [E] <(b)(6)>  
**Sent:** Saturday, February 29, 2020 5:25 PM  
**To:** Daucher, Marybeth (NIH/NIAID) [E] <(b)(6)> Hiatt, Nissa (NIH/VRC) [C]  
<(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)> Graham, Barney  
(NIH/VRC) [E] <(b)(6)>  
**Cc:** Mascola, John (NIH/VRC) [E] <(b)(6)> Ledgerwood, Julie (NIH/NIAID) [E]  
<(b)(6)> Bok, Karin (NIH/VRC) [E] <(b)(6)>  
**Subject:** Re: NIHVisit03-03-20 PLEASE READ

(b)(5)

---

**From:** "Daucher, Marybeth (NIH/NIAID) [E]" <(b)(6)>  
**Date:** Saturday, February 29, 2020 at 5:19 PM  
**To:** Hilary Marston <(b)(6)> "Hiatt, Nissa (NIH/VRC) [C]"  
<(b)(6)> "Morabito, Kaitlyn (NIH/VRC) [E]" <(b)(6)>  
"Graham, Barney (NIH/VRC) [E]" <(b)(6)>  
**Cc:** "Mascola, John (NIH/VRC) [E]" <(b)(6)> Julie Ledgerwood  
<(b)(6)> Karin Bok <(b)(6)>  
**Subject:** Re: NIHVisit03-03-20 PLEASE READ

Hi Hilary

At this time no formal presentation is required for the briefing in 1201. It will be a round table type discussion. Your office can suggest if Tony wants to put a slide up to explain background.

MB

---

**From:** "Marston, Hilary (NIH/NIAID) [E]" <(b)(6)>  
**Date:** Saturday, February 29, 2020 at 4:56:36 PM  
**To:** "Daucher, Marybeth (NIH/NIAID) [E]" <(b)(6)> "Hiatt, Nissa (NIH/VRC) [C]"  
<(b)(6)> "Morabito, Kaitlyn (NIH/VRC) [E]" <(b)(6)> "Graham, Barney  
(NIH/VRC) [E]" <(b)(6)>  
**Cc:** "Mascola, John (NIH/VRC) [E]" <(b)(6)> "Ledgerwood, Julie (NIH/NIAID) [E]"  
<(b)(6)> "Bok, Karin (NIH/VRC) [E]" <(b)(6)>  
**Subject:** FW: NIHVisit03-03-20 PLEASE READ

Please see below and close hold. I can work on a 1-pager on the vaccine candidate for your review, but they need briefing content on what will be seen on the tour. Is that something that you guys can provide. Tight timeline.

---

**From:** Patricia Conrad <[REDACTED] (b)(6)>  
**Date:** Saturday, February 29, 2020 at 4:16 PM  
**To:** Hilary Marston <[REDACTED] (b)(6)>  
**Cc:** "Daucher, Marybeth (NIH/NIAID) [E]" <[REDACTED] (b)(6)> Gregory Folkers  
<[REDACTED] (b)(6)>  
**Subject:** FW: NIHVisit03-03-20 PLEASE READ

Hi and sorry for the weekend email

ASF would like you to work with MaryBeth and VRC staff to draft a memo/briefer as per below. WH needs by noonish tomorrow (or sooner)

MB – can you send what will actually be part of the tour and seen.

ASF will want to approve final draft before sending

Again, sorry for the quick turnaround. thx

Patricia L. Conrad  
Public Health Analyst and  
Special Assistant to the Director  
National Institute of Allergy and Infectious Diseases  
The National Institutes of Health  
31 Center Drive, MSC 2520 - Room 7A03  
Bethesda, Maryland 20892  
[REDACTED] (b)(6)  
301-496-4409 fax

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. National Institute of Allergy and Infectious Diseases (NIAID) shall not accept liability for any statement made that are sender's own and not expressly made on behalf of the NIAID by one of its representatives.

---

**From:** Burklow, John (NIH/OD) [E] <[REDACTED] (b)(6)>  
**Sent:** Saturday, February 29, 2020 2:44 PM  
**To:** Conrad, Patricia (NIH/NIAID) [E] <[REDACTED] (b)(6)>  
**Subject:** Fwd: NIHVisit03-03-20

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 23 Mar 2020 03:05:57 +0000  
**To:** Breyer, Rich  
**Subject:** Re: COVID-19

Hi Rich.

Definitely crazy times. [REDACTED] (b) (4)  
[REDACTED] (b) (4)

Take care,

Barney

Sent from my iPhone

On Mar 21, 2020, at 1:31 PM, Breyer, Rich <[REDACTED] (b)(6)> wrote:

Hi Barney,  
It has been a long time. Very cool you had the COVID -19 spike structure so fast. I'm sorry to bother you as I know that you must be overwhelmed. I am sitting at home, working remotely and thinking about what I might be able to contribute. I was involved with [REDACTED] (b) (6)  
[REDACTED] (b) (6) That being said I am wonder if there might use  
for a [REDACTED] (b) (4)  
[REDACTED] (b) (4)

Any thoughts? Maybe that ship has sailed.  
If we can be of any help in any way please let me know.  
Best regards,  
Rich

---  
Richard M. Breyer, PhD.  
Ruth Scoville Professor of Medicine  
Vanderbilt University &  
VA Tennessee Valley Healthcare System  
Research and Development 151  
ACRE Building F-427

1310 24th Ave South  
Nashville, TN 37212

[email:](#) [REDACTED] (b)(6)  
Tel: [REDACTED] (b)(6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 13 Apr 2020 13:46:59 +0000  
**To:** Case, Chris (NIH/NCI) [C]  
**Cc:** Gupta, Shanker (NIH/VRC) [E];Bahorich, Jessica (NIH/VRC) [C]  
**Subject:** Re: mRNA synthesis (b) (4)

We may need this in the future, (b) (5)  
(b) (5) We are now working with (b) (5)  
(b) (5)

Barney

Sent from my iPhone

On Apr 13, 2020, at 7:14 AM, Case, Chris (NIH/NCI) [C] <(b) (6)> wrote:

Hi Barney, Shanker,

Regarding Karin's note below, is the VRC (b) (5)  
(b) (5)

We are also in the process of (b) (5)  
(b) (5)

Please let me know how we should proceed.

Thanks  
Chris

**Chris Case, Ph.D.** (Contractor)  
Manager, Scientific Programs  
Frederick National Laboratory for Cancer Research  
Leidos Biomedical Research, Inc.  
Phone: (b) (6)

---

**From:** Case, Chris (NIH/NCI) [C]  
**Sent:** Monday, April 13, 2020 7:07 AM  
**To:** Bok, Karin (NIH/VRC) [E] <(b) (6)>  
**Cc:** Bahorich, Jessica (NIH/VRC) [C] <(b) (6)> Gupta, Shanker (NIH/VRC) [E]

< (b)(6) Graham, Barney (NIH/VRC) [E] < (b)(6) Morabito, Kaitlyn (NIH/VRC) [E] < (b)(6) Moin, Syed (NIH/VRC) [E] < (b)(6) Kanekiyo, Masaru (NIH/VRC) [E] < (b)(6)  
**Subject:** RE: mRNA synthesis (b)(4)

Hi Karin,

Thanks for letting me know.

Best,  
Chris

**Chris Case, Ph.D.** (Contractor)  
Manager, Scientific Programs  
Frederick National Laboratory for Cancer Research  
Leidos Biomedical Research, Inc.  
Phone: (b)(6)

---

**From:** Bok, Karin (NIH/VRC) [E] < (b)(6) >  
**Sent:** Friday, April 10, 2020 1:30 PM  
**To:** Case, Chris (NIH/NCI) [C] < (b)(6) >  
**Cc:** Bahorich, Jessica (NIH/VRC) [C] < (b)(6) > Gupta, Shanker (NIH/VRC) [E] < (b)(6) > Graham, Barney (NIH/VRC) [E] < (b)(6) > Morabito, Kaitlyn (NIH/VRC) [E] < (b)(6) > Moin, Syed (NIH/VRC) [E] < (b)(6) > Kanekiyo, Masaru (NIH/VRC) [E] < (b)(6) >  
**Subject:** Re: mRNA synthesis (b)(4)

Chris,

Thank you for following up on this.

(b)(5)

Thank you,

Karin.

Karin Bok, MS, PhD  
Senior Advisor, Vaccine Development  
Office of the Director, Vaccine Research Center  
National Institute of Allergy and Infectious Diseases  
National Institutes of Health  
phone: (b)(6) | mobile: (b)(6) | email: (b)(6)  
<https://www.niaid.nih.gov/about/vrc>

---

**From:** "Case, Chris (NIH/NCI) [C]" <[REDACTED] (b)(6)>  
**Date:** Thursday, April 9, 2020 at 10:24 AM  
**To:** Karin Bok <[REDACTED] (b)(6)> "Morabito, Kaitlyn (NIH/VRC) [E]"  
<[REDACTED] (b)(6)> "Kanekiyo, Masaru (NIH/VRC) [E]" <[REDACTED] (b)(6)>  
"Moin, Syed (NIH/VRC) [E]" <[REDACTED] (b)(6)>  
**Cc:** "Bahorich, Jessica (NIH/VRC) [C]" <[REDACTED] (b)(6)> "Gupta, Shanker (NIH/VRC) [E]" <[REDACTED] (b)(6)>  
**Subject:** RE: mRNA synthesis [REDACTED] (b)(4)

Hi Karin,

[REDACTED] (b)(5)

Thanks  
Chris

**Chris Case, Ph.D.** (Contractor)  
Manager, Scientific Programs  
Frederick National Laboratory for Cancer Research  
Leidos Biomedical Research, Inc.  
Phone: [REDACTED] (b)(6)

---

**From:** Bok, Karin (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Sent:** Thursday, April 9, 2020 10:19 AM  
**To:** Morabito, Kaitlyn (NIH/VRC) [E] <[REDACTED] (b)(6)> Case, Chris (NIH/NCI) [C]  
<[REDACTED] (b)(6)> Kanekiyo, Masaru (NIH/VRC) [E] <[REDACTED] (b)(6)> Moin, Syed  
(NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Cc:** Bahorich, Jessica (NIH/VRC) [C] <[REDACTED] (b)(6)> Gupta, Shanker (NIH/VRC) [E]  
<[REDACTED] (b)(6)>  
**Subject:** Re: mRNA synthesis [REDACTED] (b)(4)

Thank you Kaitlyn for sharing.

[REDACTED] (b)(5)

Karin.

Karin Bok, MS, PhD  
Senior Advisor, Vaccine Development



Office of the Director, Vaccine Research Center  
National Institute of Allergy and Infectious Diseases  
National Institutes of Health

phone: (b) (6) mobile: (b) (6) email: (b) (6)

<https://www.niaid.nih.gov/about/vrc>

---

**From:** "Morabito, Kaitlyn (NIH/VRC) [E]" <(b) (6)>  
**Date:** Wednesday, April 8, 2020 at 8:57 AM  
**To:** "Case, Chris (NIH/NCI) [C]" <(b) (6)> "Kanekiyo, Masaru (NIH/VRC) [E]" <(b) (6)> "Moin, Syed (NIH/VRC) [E]" <(b) (6)> Karin Bok <(b) (6)>  
**Cc:** "Bahorich, Jessica (NIH/VRC) [C]" <(b) (6)> "Gupta, Shanker (NIH/VRC) [E]" <(b) (6)>  
**Subject:** Re: mRNA synthesis (b) (4)

Hi Chris,

I'm ccing some additional people from (b) (5).

---

**From:** "Case, Chris (NIH/NCI) [C]" <(b) (6)>  
**Date:** Wednesday, April 8, 2020 at 8:44 AM  
**To:** "Morabito, Kaitlyn (NIH/VRC) [E]" <[kait](#)> (b) (6) "Kanekiyo, Masaru (NIH/VRC) [E]" <(b) (6)>  
**Cc:** "Bahorich, Jessica (NIH/VRC) [C]" <(b) (6)> "Gupta, Shanker (NIH/VRC) [E]" <(b) (6)>  
**Subject:** RE: mRNA synthesis project at UPENN

Hi Kaitlyn, Masaru,

Checking in on below. Please let me know if (b) (5)

Best,  
Chris

**Chris Case, Ph.D.** (Contractor)  
Manager, Scientific Programs  
Frederick National Laboratory for Cancer Research  
Leidos Biomedical Research, Inc.  
Phone: (b) (6)

---

**From:** Case, Chris (NIH/NCI) [C]  
**Sent:** Thursday, March 26, 2020 8:43 AM  
**To:** Morabito, Kaitlyn (NIH/VRC) [E] <(b) (6)> Kanekiyo, Masaru (NIH/VRC) [E]

< [REDACTED] (b)(6) >

**Cc:** Bahorich, Jessica (NIH/VRC) [C] < [REDACTED] (b)(6) > Gupta, Shanker (NIH/VRC) [E]

< [REDACTED] (b)(6) >

**Subject:** mRNA synthesis [REDACTED] (b) (4)

Hi Kaitlyn, Masaru,

[REDACTED] (b) (4), (b) (5)

[REDACTED] (b) (5)

Thanks

Chris

**Chris Case, Ph.D.** (Contractor)  
Manager, Scientific Programs  
Vaccine Clinical Materials Program  
Frederick National Laboratory for Cancer Research  
Leidos Biomedical Research, Inc.  
7114 Geoffrey Way  
Frederick, MD 21704  
Phone: [REDACTED] (b)(6)  
Fax: 301-228-4039  
[REDACTED] (b)(6)

This email and any attachments to it are intended only for the identified recipients. It may contain proprietary or otherwise legally protected information for Leidos Biomed. Any unauthorized use or disclosure of this communication is strictly prohibited. If you have received this communication in error, please notify the sender and delete or otherwise destroy the e-mail and all attachments immediately.

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 25 Feb 2020 01:50:49 +0000  
**To:** (b)(6)  
**Cc:** Alice Barnett;Corbett, Kizzmekia (NIH/VRC) [E]; (b)(6)  
**Subject:** coronavirus handout  
**Attachments:** CoV for (b)(6) pdf

Hi India,

I've attached the Sunday handout about coronaviruses.

Let me know if there are any questions.

Barney

\*\*\*\*\*

Barney S. Graham, MD, PhD  
Senior Investigator  
Deputy Director, Vaccine Research Center  
Chief, Viral Pathogenesis Laboratory  
National Institute of Allergy and Infectious Diseases, NIH  
40 Convent Drive, MSC 3017  
Bldg 40, Room 2502  
Bethesda, MD 20892-3017  
Phone: (b)(6)  
URL: <https://www.niaid.nih.gov/research> (b)(6)

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. 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.

**From:** [REDACTED] (b) (6)  
**Sent:** Fri, 21 Feb 2020 17:47:36 -0500  
**To:** David O'Hagan  
**Cc:** Savita Nikam;Mascola, John (NIH/VRC) [E]  
**Subject:** RE: COVID-19 [REDACTED] (b) (4)

Thanks David, Good to know. We will review [REDACTED] (b) (4) and I will discuss with John. It's a little chaotic at the moment as we try to launch the clinical trials, but I agree with [REDACTED] (b) (4)  
[REDACTED] (b) (4)

Barney

---

**From:** David O'Hagan <[REDACTED] (b) (6)>  
**Sent:** Friday, February 21, 2020 10:47 AM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Cc:** Savita Nikam <[REDACTED] (b) (6)>  
**Subject:** COVID-19 Oral Vaccine

Dear Barney, I was listening to you on NPR this morning and it occurred to me that I should

[REDACTED] (b) (4)

[REDACTED] (b) (4) Anyway, have a great day! Dave

David O'Hagan PhD  
CEO, Esperovax INC.  
46701 Commerce Center Dr.  
Plymouth, Mi 48170, USA

[REDACTED] (b) (6)



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 1 Apr 2020 14:34:28 +0000  
**To:** Calder, Thomas (NIH/NIAID) [E]  
**Cc:** Munster, Vincent (NIH/NIAID) [E]  
**Subject:** Re: NIAID COVID-19 Division Directors Sync Meeting

I will try to have a boiled down version of plan, but have back-to-back meetings.

BG

Sent from my iPhone

On Apr 1, 2020, at 9:34 AM, Calder, Thomas (NIH/NIAID) [E] <[REDACTED]> (b)(6) wrote:

Barney and Vincent,

I am coordinating the agenda for the COVID-19 DivDir Sync Meetings. For today's meeting, Hilary is requesting that you provide an update on [REDACTED] (b)(4) (sorry for the last minute notice!). Due to a busy agenda, please keep your update to 20 minutes.

Hilary mentioned that you do not need to present slides. However, if you would like to present slides, please present them by sharing your screen.

Do let me know if you have any questions or concerns.

Best,  
Thomas

**Thomas Calder, PhD**

Health Science Policy Analyst  
Strategic Planning and Evaluation Branch  
National Institute of Allergy and Infectious Diseases  
**P:** [REDACTED] (b)(6) | **A:** Building 31, Room 7A46G

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 31 Jan 2020 12:49:34 +0000  
**To:** Bok, Karin (NIH/VRC) [E]  
**Cc:** Young, Monique (NIH/VRC) [E]  
**Subject:** Re: 2019 nCoV Global conference\_ (004).pptx

Ana-Marie from WHO asked me directly to please come. As long as I can get home for  
(b) (6)

BG

Sent from my iPhone

On Jan 30, 2020, at 10:50 PM, Bok, Karin (NIH/VRC) [E] <(b) (6)> wrote:

Barney,

Looking at your calendar I think you would be able to attend this (11-12 Feb), and I am sure this is high priority for you.

Also Hilary mentioned that it would be best to (b) (5)  
(b) (5).

(b) (5).

Karin.

Karin Bok, MS, PhD  
Senior Advisor, Vaccine Development  
Office of the Director, Vaccine Research Center  
National Institute of Allergy and Infectious Diseases  
National Institutes of Health  
phone: (b) (6) mobile: (b) (6) | email: (b) (6)  
<https://www.niaid.nih.gov/about/vrc>

---

**From:** "Marston, Hilary (NIH/NIAID) [E]" <(b) (6)>  
**Date:** Thursday, January 30, 2020 at 3:51 PM  
**To:** NIAID Coronavirus Response SWAT 2020  
<(b) (6)>  
**Subject:** Fwd: 2019 nCoV Global conference\_ (004).pptx

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 17 Mar 2020 18:15:54 +0000  
**To:** Villafana, Tonya  
**Subject:** RE: Hello

Hi Tonya,

When I've looked [REDACTED] (b) (4) I think I  
remember [REDACTED] (b) (4)  
[REDACTED] (b) (4) To me that means [REDACTED] (b) (4)  
I know there is [REDACTED] (b) (4) but I would [REDACTED] (b) (4)  
[REDACTED] (b) (4).

Barney

---

**From:** Villafana, Tonya <[REDACTED] (b) (6)>  
**Sent:** Tuesday, March 17, 2020 2:11 PM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Subject:** Hello

Hi Barney,  
Hope all is well and COVID-19 isn't driving you completely nuts! Good to hear you on the call today. Can  
you remind me of [REDACTED] (b) (4)  
Am I getting in right?  
Tonya

**Tonya L Villafana PhD, MPH**  
**GLOBAL MEDICINES LEAD, INFECTIOUS DISEASES**

---

**AstraZeneca**  
**R&D BioPharmaceuticals | Late RIA**  
One MedImmune Way, Gaithersburg, MD, 20878  
M: [REDACTED] (b) (6)  
L: [REDACTED] (b) (6)  
[REDACTED] (b) (6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 24 Apr 2020 19:43:27 +0000  
**To:** Ruckwardt, Tracy (NIH/VRC) [E]; Kanekiyo, Masaru (NIH/VRC) [E]  
**Subject:** FW: Call for Equipment Requests - Directors Reserve  
**Attachments:** VRC Funding Proposal Form template.pdf, VRC 2020 Procurement Deadlines (004).docx

[Redacted] (b) (5)

Barney

---

**From:** Daucher, Marybeth (NIH/NIAID) [E] <[Redacted] (b)(6)>  
**Sent:** Friday, April 24, 2020 1:48 PM  
**To:** Boritz, Eli (NIH/NIAID) [E] <[Redacted] (b)(6)> Daucher, Marybeth (NIH/NIAID) [E]  
<[Redacted] (b)(6)> Douek, Daniel (NIH/VRC) [E] <[Redacted] (b)(6)> Gall, Jason (NIH/VRC) [C] <[Redacted] (b)(6)> Graham, Barney (NIH/VRC) [E] <[Redacted] (b)(6)> Harris, Christina (NIH/NIAID) [E] <[Redacted] (b)(6)> Hirsch, Marie (NIH/VRC) [E] <[Redacted] (b)(6)> Koup, Richard (NIH/VRC) [E] <[Redacted] (b)(6)> Kwong, Peter (NIH/VRC) [E] <[Redacted] (b)(6)> Ledgerwood, Julie (NIH/NIAID) [E] <[Redacted] (b)(6)> Mascola, John (NIH/VRC) [E] <[Redacted] (b)(6)> McDermott, Adrian (NIH/VRC) [E] <[Redacted] (b)(6)> Roederer, Mario (NIH/VRC) [E] <[Redacted] (b)(6)> Scorpio, Diana (NIH/VRC) [E] <[Redacted] (b)(6)> Seder, Robert (NIH/VRC) [E] <[Redacted] (b)(6)> Sullivan, Nancy (NIH/VRC) [E] <[Redacted] (b)(6)>  
**Cc:** Wilson, Hope (NIH/VRC) [E] <[Redacted] (b)(6)> Dahmani, Nassera (NIH/VRC) [E] <[Redacted] (b)(6)>  
**Subject:** Call for Equipment Requests - Directors Reserve

Dear PIs,  
FY20 funding is currently available through the VRC Directors Reserve for equipment (non-COVID) requests. Please use the attached template to submit your request to Hope Wilson. Note the procurement deadlines (attached). [Redacted] (b) (5)

[Redacted] (b) (5)

Thanks  
Marybeth

**Marybeth Daucher, Ph.D.**  
Associate Director of Management and Operations  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive, Bldg 40, Room 1120  
Bethesda, MD 20892  
O: [Redacted] (b)(6) C: [Redacted] (b)(6)  
[Redacted] (b)(6)



Assistant: Debbie Reilly

(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. 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.*

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 16 Mar 2020 13:56:28 +0000  
**To:** COSTA, Alejandro Javier  
**Subject:** Accepted: WEBEX call - update on COVID vaccines research activities

**From:** [REDACTED] (b) (6)  
**Sent:** Thu, 19 Mar 2020 12:10:22 -0400  
**To:** Leda Castilho  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E]; Stein, Judy (NIH/VRC) [C]; Morabito, Kaitlyn (NIH/VRC) [E]  
**Subject:** RE: any [REDACTED] (b) (4)

[REDACTED] (b) (4)

Barney

**From:** Leda Castilho <[REDACTED] (b) (6)>  
**Sent:** Wednesday, March 18, 2020 3:09 PM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E] <[REDACTED] (b) (6)> Stein, Judy (NIH/VRC) [C] <[REDACTED] (b) (6)> Morabito, Kaitlyn (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Subject:** any [REDACTED] (b) (4)

Hi Barney and Judy,

I have a few questions to Judy, but first of all: congrats to Kizzie, Barney, Kathlyn and all the response team for [REDACTED] (b) (4)

My questions are mainly regarding what we can and what we cannot do [REDACTED] (b) (4)  
[REDACTED] (b) (4)

[REDACTED] (b) (4)

Thanks a lot for these answers and for having given us the [REDACTED] (b) (4)  
[REDACTED] And very good luck to you with the vaccine clinical trials!

Here in Rio people are all told to stay at home and even the Sugar Loaf and the Christ statue are closed - [REDACTED] (b) (6) and can imagine what this represents.

Kind regards,  
Leda

Em seg., 9 de mar. de 2020 às 16:05, Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)> escreveu:  
Hi Leda,

[REDACTED] (b) (4)

Glad the [REDACTED] (b) (4) is working.

BG

**From:** Leda Castilho <[REDACTED] (b) (6)>  
**Sent:** Friday, March 6, 2020 1:59 PM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E] <[REDACTED] (b) (6)> Stein, Judy (NIH/VRC) [C] <[REDACTED] (b) (6)> Morabito, Kaitlyn (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Subject:** [REDACTED] (b) (4) SARS-nCoV-2

Dear Barney,

I hope you're doing well and not too busy due to nCoV....

[REDACTED] (b) (4)

[REDACTED] (b) (4)

Now I have 2 questions where maybe Judy (cced) can help:

[REDACTED] (b) (4)

(b) (4)

Kind regards  
Leda

Em sex, 7 de fev de 2020 23:09, Leda Castilho <[REDACTED]> escreveu:  
Hi Barney,

Thanks a lot for the quick and positive response. [REDACTED] (b) (4)

(b) (6)

Hope all is well with the lab and with your family.

Best regards,  
Leda

Em sex, 7 de fev de 2020 18:05, Graham, Barney (NIH/VRC) [E] <[REDACTED]> escreveu:  
Hi Leda,

Yes, very busy.

[REDACTED] (b)(6).

[REDACTED] (b) (4)

We can arrange to send you [REDACTED] (b) (4)

Best wishes,

Barney

**From:** Leda Castilho <[REDACTED]> (b)(6)  
**Sent:** Thursday, February 6, 2020 10:26 AM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED]> (b) (6) Corbett, Kizzmekia (NIH/VRC) [E]  
<[REDACTED]> (b)(6)  
**Subject:** news from [REDACTED] (b) (4) 2019-nCoV

Dear Barney,

I hope you are doing well, and I can imagine how busy you are these days with the coronavirus outbreak. Here in Brazil things are somewhat complicated in many regards, but in my case I have my

(b) (6)

(b) (4)

(b) (4)

I am copying Kizzie, who is probably involved in 2019-nCoV work.

Thanks a lot indeed in advance!

Best regards,  
Leda

--

\*\*\*\*\*

Professora Titular / Full Professor  
COPPE - Universidade Federal do Rio de Janeiro  
Programa de Engenharia Química  
Laboratório de Engenharia de Cultivos Celulares  
Cx. Postal 68502 - Ilha do Fundão  
21941-972 - Rio de Janeiro/RJ - Brasil  
e-mail: (b)(6)

--

\*\*\*\*\*

Professora Titular / Full Professor  
COPPE - Universidade Federal do Rio de Janeiro  
Programa de Engenharia Química  
Laboratório de Engenharia de Cultivos Celulares  
Cx. Postal 68502 - Ilha do Fundão  
21941-972 - Rio de Janeiro/RJ - Brasil  
e-mail: (b)(6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 22 Apr 2020 21:29:30 +0000  
**To:** Eisinger, Robert (NIH/NIAID) [E]; Lieberman, Jenna (NIH/NIAMS) [F]  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** RE: NIAMS SARS-CoV-2 work

Dr. Lieberman,

(b) (5), (b) (6)

Dr. Corbett is the scientific point of contact at the VRC for this type of project. We have successfully  
(b) (4), (b) (5).

Best wishes,

Barney

---

**From:** Eisinger, Robert (NIH/NIAID) [E] <(b)(6)>  
**Sent:** Wednesday, April 22, 2020 3:55 PM  
**To:** Lieberman, Jenna (NIH/NIAMS) [F] <(b)(6)> Graham, Barney (NIH/VRC) [E]  
<(b)(6)>  
**Subject:** RE: NIAMS SARS-CoV-2 work

Jenna

Thank you for your email. I am adding Dr. Barney Graham at the NIAID Vaccine Research Center to this email trail. He is directly involved in the development of the mRNA-1273 vaccine.

If I can provide any additional assistance or information, please let me know.

Best wishes for continued success in your research activities.

Thanks  
Bob

Robert W. Eisinger, Ph.D.  
Special Assistant for Scientific Projects  
Immediate Office of the Director  
National Institute of Allergy and Infectious Diseases  
National Institutes of Health  
31 Center Drive, Room 7A-03  
Bethesda MD 20892

Telephone: (b)(6)

Email: (b)(6)

---

**From:** Lieberman, Jenna (NIH/NIAMS) [F] <(b)(6)>

**Sent:** Wednesday, April 22, 2020 3:36 PM

**To:** Eisinger, Robert (NIH/NIAID) [E] (b)(6)

**Subject:** NIAMS SARS-CoV-2 work

Robert,

Good afternoon. I am a postdoc in the Rafael Casellas laboratory in NIAMS. We are currently working

(b)(5)

(b)(5) I was wondering if you could help me. If not, could you lead me to whom to contact?

I look forward to hearing from you,

Jenna



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 27 Mar 2020 15:08:09 +0000  
**To:** Susan Alpert Siegel, Ph.D.  
**Subject:** Accepted: [REDACTED] (b) (4), (b) (5)  
[REDACTED] (b) (4), (b) (5)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 10 Feb 2020 03:22:57 +0000  
**To:** Jason McLellan  
**Cc:** Daniel P. Wrapp; Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** Re: BioRxiv

Ok. Thanks. Send the right images to Kizzy and she will make the slide and share you back a copy.

BG

Sent from my iPhone

On Feb 9, 2020, at 10:11 PM, Jason McLellan <[REDACTED] (b)(6)> wrote:

Sure Barney, happy to send you a combined PDF. That may be something we need to prepare for the BioRxiv anyway.

It would be great if Alan presented the structure. Let us know if you need a high-res version.

Best regards,  
Jason

---

**From:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Sent:** Sunday, February 9, 2020 7:19 PM  
**To:** Jason McLellan <[REDACTED] (b)(6)>  
**Cc:** Daniel P. Wrapp <[REDACTED] (b)(6)>  
**Subject:** Re: BioRxiv

I'll be at the WHO meeting Tues/Wed this week. I suggested that I would provide WHO a copy of the paper submitted tomorrow. Could you combine everything in one pdf and give me a copy to share with Ana Marie Hestrepo who is leading the WHO team?

Alan Embry who heads the respiratory group in DMID (likely who gives you grants) wants to show the National Vaccine Advisory Counsel on Thursday. Are you OK with him showing the [REDACTED] (b)(4) [REDACTED] (b)(4) I think overall it helps us for people to know the progress and the rational. Also, BioRxiv should be out by then.

BG

Sent from my iPhone

On Feb 9, 2020, at 7:56 PM, Jason McLellan <[REDACTED]> (b)(6) wrote:

That's perfect, thanks Barney!  
Jason

---

**From:** Graham, Barney (NIH/VRC) [E] <[REDACTED]> (b)(6)  
**Sent:** Monday, February 10, 2020 2:42 AM  
**To:** Daniel P. Wrapp <[REDACTED]> (b)(6) Jason McLellan <[REDACTED]> (b)(6)  
**Subject:** RE: [REDACTED] (b)(4)

Here is the last paragraph as intended. Fortunately, it was still there on my version. Makes me wonder if I sent the right version last time, so I'm reattaching.

BG

[REDACTED] (b)(4)

---

**From:** Daniel P. Wrapp <[REDACTED]> (b)(6)  
**Sent:** Sunday, February 9, 2020 5:53 PM  
**To:** Jason McLellan <[REDACTED]> (b)(6) Graham, Barney (NIH/VRC) [E] <[REDACTED]> (b)(6)  
**Subject:** Re: [REDACTED] (b)(4)

It looks like it was cut off in the version that you sent to us last night Barney. If you send it in full tonight, I'll be sure to update the text as soon as I get word from you.

Daniel

---

**From:** Jason McLellan <[REDACTED]> (b)(6)  
**Sent:** Sunday, February 9, 2020 3:47 PM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED]> (b)(6)  
**Cc:** Daniel P. Wrapp <[REDACTED]> (b)(6)  
**Subject:** RE: [REDACTED] (b)(4)

Hi Barney,

Attached is our current draft of the manuscript. Please edit as you like. I'll put it on my department letterhead before submission.

Best regards,  
Jason

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 24 Mar 2020 13:20:05 +0000  
**To:** Morabito, Kaitlyn (NIH/VRC) [E]; Stein, Judy (NIH/VRC) [C]  
**Cc:** Bok, Karin (NIH/VRC) [E]; Alvarado, Gabriela (NIH/VRC) [C]; Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** RE: VRC/ (b) (4) Coronavirus Discussion

Sounds good.

BG

---

**From:** Morabito, Kaitlyn (NIH/VRC) [E] <(b) (6)>  
**Sent:** Tuesday, March 24, 2020 8:12 AM  
**To:** Graham, Barney (NIH/VRC) [E] <(b) (6)> Stein, Judy (NIH/VRC) [C] <(b) (6)>  
**Cc:** Bok, Karin (NIH/VRC) [E] <(b) (6)> Alvarado, Gabriela (NIH/VRC) [C] <(b) (6)> Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)>  
**Subject:** Re: VRC, (b) (4) Coronavirus Discussion

Hi Judy,

(b) (5)

Thanks,  
Kaitlyn

---

**From:** Barney Graham <(b) (6)>  
**Date:** Tuesday, March 24, 2020 at 7:47 AM  
**To:** Judy Stein <(b) (6)>  
**Cc:** Karin Bok <(b) (6)> "Alvarado, Gabriela (NIH/VRC) [C]" <(b) (6)> "Morabito, Kaitlyn (NIH/VRC) [E]" <(b) (6)> Kizzmekia Corbett <(b) (6)>  
**Subject:** Re: VRC (b) (4) Coronavirus Discussion

Yes. Thanks. Karin and Gabriela will help fill in

Barney

Sent from my iPhone

On Mar 24, 2020, at 7:32 AM, Stein, Judy (NIH/VRC) [C] <(b)(6)> wrote:

Hi Barney,  
Would you like me to put together a RCA.  
I can draft a research plan for everybody to review.  
Thanks,  
Judy

---

**From:** Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Sent:** Monday, March 23, 2020 8:32 PM  
**To:** (b)(4) <(b)(4)>  
**Cc:** Bok, Karin (NIH/VRC) [E] <(b)(6)> Gall, Jason (NIH/VRC) [C] <(b)(6)>  
Corbett, Kizzmekia (NIH/VRC) [E] <(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E]  
(b)(6) Alvarado, Gabriela (NIH/VRC) [C] <(b)(6)> Carlton,  
Kevin (NIH/VRC) [E] <(b)(6)> Ledgerwood, Julie (NIH/NIAID) [E]  
<(b)(6)> Sullivan, Nancy (NIH/VRC) [E] <(b)(6)>  
(b)(6) Antonella Folgori <(b)(6)> Stein, Judy (NIH/VRC)  
[C] <(b)(6)> Petrik, Amy (NIH/NIAID) [E] <(b)(6)> Young, Monique  
(NIH/VRC) [E] <(b)(6)> Suhana, Tina (NIH/VRC) [E] <(b)(6)> Austin,  
Sarah (NIH/NIAID) [E] <(b)(6)> Grier, Shardae (NIH/VRC) [E] <(b)(6)>  
Taylor, Stephanie (NIH/NIAID) [E] <(b)(6)> Chapman, Latanya (NIH/VRC) [C]  
<(b)(6)> (b)(4) <(b)(4)> (b)(4)  
<(b)(4)>  
**Subject:** Re: VRC, (b)(4) Coronavirus Discussion

(b)(4)

(b)(4)

There is a lot going on and we have a reduced work force.

Putting the agreements in place would be a good place to start.

Take care,

Barney

Sent from my iPhone

On Mar 23, 2020, at 7:13 PM, (b) (4) < (b) (4) > wrote:

Dear Barney,

I (b) (4)

If I may try to summarize our conversation, here are some notes and questions:

(b) (4)

Please, let me know if I missed some points

Hoping to hear from you soon

Best wishes

(b) (4), (b) (6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 3 Mar 2020 18:54:37 +0000  
**To:** Jason McLellan  
**Cc:** Mascola, John (NIH/VRC) [E];Mukhamedova, Maryam (NIH/NIAID) [F];Daniel P. Wrapp;Gilman, Morgan Sarah Ashley;Ruckwardt, Tracy (NIH/VRC) [E];Morabito, Kaitlyn (NIH/VRC) [E]  
**Subject:** Re: (b) (4) Request of antibody from (b) (4)

(b) (4).

BG

Sent from my iPhone

On Mar 3, 2020, at 12:56 PM, Jason McLellan <(b) (6)> wrote:

(b) (4)

-Jason

---

**From:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Sent:** Tuesday, March 3, 2020 11:41 AM  
**To:** Jason McLellan <(b) (6)> Mascola, John (NIH/VRC) [E]  
<(b) (6)> Mukhamedova, Maryam (NIH/NIAID) [F] <(b) (6)>  
Daniel P. Wrapp <(b) (6)> Gilman, Morgan Sarah Ashley  
<(b) (6)>  
**Cc:** Ruckwardt, Tracy (NIH/VRC) [E] <(b) (6)> Morabito, Kaitlyn (NIH/VRC) [E]  
<(b) (6)>  
**Subject:** RE: (b) (4) Request of antibody from (b) (4)

So it looks like (b) (4)

(b) (4).

Very cool.

BG



---

**From:** Jason McLellan <[REDACTED] (b)(6)>  
**Sent:** Monday, March 2, 2020 5:52 PM  
**To:** Mascola, John (NIH/VRC) [E] <[REDACTED] (b)(6)> Mukhamedova, Maryam (NIH/NIAID) [F]  
<[REDACTED] (b)(6)> Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)> Daniel P.  
Wrapp <[REDACTED] (b)(6)> Gilman, Morgan Sarah Ashley  
[REDACTED] B (6) >  
**Cc:** Ruckwardt, Tracy (NIH/VRC) [E] <[REDACTED] (b)(6)> Morabito, Kaitlyn (NIH/VRC) [E]  
<[REDACTED] (b)(6)>  
**Subject:** RE: [REDACTED] (b)(4) Request of antibody from [REDACTED] (b)(4)

Sounds good, John.

[REDACTED] (b)(4)

[REDACTED] (b)(4)

Best regards,  
Jason

---

**From:** Mascola, John (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Sent:** Monday, March 2, 2020 4:44 PM  
**To:** Jason McLellan <[REDACTED] (b)(6)> Mukhamedova, Maryam (NIH/NIAID) [F]  
<[REDACTED] (b)(6)> Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)> Daniel P.  
Wrapp <[REDACTED] (b)(6)>  
**Cc:** Ruckwardt, Tracy (NIH/VRC) [E] <[REDACTED] (b)(6)> Morabito, Kaitlyn (NIH/VRC) [E]  
<[REDACTED] (b)(6)>  
**Subject:** RE: [REDACTED] (b)(4) Request of antibody from [REDACTED] (b)(4)

Fantastic Daniel,

[REDACTED] (b)(4)

Maryam, can you provide best estimates for when you'll [REDACTED] (b)(4)

Thanks,  
John

---

**From:** Jason McLellan <[REDACTED] (b)(6)>  
**Sent:** Monday, March 2, 2020 3:45 PM  
**To:** Mascola, John (NIH/VRC) [E] <[REDACTED] (b)(6)> Mukhamedova, Maryam (NIH/NIAID) [F]  
<[REDACTED] (b)(6)> Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)> Daniel P.  
Wrapp <[REDACTED] (b)(6)>

**Cc:** Ruckwardt, Tracy (NIH/VRC) [E] <[REDACTED] (b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Subject:** RE: [REDACTED] (b)(4) Request of antibody from [REDACTED] (b)(4)

Hi Everyone,

[REDACTED] (b)(4)

[REDACTED] (b)(4)

Please let us know if you have any questions. In the meantime, [REDACTED] (b)(4)  
[REDACTED] (b)(4).

Best regards,  
Jason and Daniel

---

**From:** Jason McLellan  
**Sent:** Friday, February 21, 2020 2:49 PM  
**To:** Mascola, John (NIH/VRC) [E] <[REDACTED] (b)(6)> Mukhamedova, Maryam (NIH/NIAID) [F] <[REDACTED] (b)(6)> Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Cc:** Ruckwardt, Tracy (NIH/VRC) [E] <[REDACTED] (b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Subject:** RE: [REDACTED] (b)(4) Request of antibody from [REDACTED] (b)(4)

Oh, it was busy! But the interview requests are beginning to subside, and now it's Barney and Kizzie's turn to take the baton and lead the vaccine development efforts.

[REDACTED] (b)(4).

Cheers,  
Jason

---

**From:** Mascola, John (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Sent:** Friday, February 21, 2020 2:44 PM  
**To:** Jason McLellan <[REDACTED] (b)(6)> Mukhamedova, Maryam (NIH/NIAID) [F] <[REDACTED] (b)(6)> Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Cc:** Ruckwardt, Tracy (NIH/VRC) [E] <[REDACTED] (b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Subject:** RE: [REDACTED] (b)(4) Request of antibody from [REDACTED] (b)(4)

Thanks Jason.  
Certainly must have been busy few weeks! We appreciate the collaboration. [REDACTED] (b)(4)  
[REDACTED] (b)(4)

Best,  
John

---

**From:** Jason McLellan <(b)(6)>  
**Sent:** Friday, February 21, 2020 12:41 PM  
**To:** Mukhamedova, Maryam (NIH/NIAID) [F] <(b)(6)> Mascola, John (NIH/VRC) [E] <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Cc:** Ruckwardt, Tracy (NIH/VRC) [E] <(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)>  
**Subject:** RE: (b)(4) Request of antibody from (b)(4)

Hi Maryam,

That sounds great. We can (b)(4) then we should be (b)(4).

Best regards,  
Jason

---

**From:** Mukhamedova, Maryam (NIH/NIAID) [F] <(b)(6)>  
**Sent:** Friday, February 21, 2020 2:34 PM  
**To:** Jason McLellan <(b)(6)> Mascola, John (NIH/VRC) [E] <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Cc:** Ruckwardt, Tracy (NIH/VRC) [E] <(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)>  
**Subject:** Re: (b)(4) Request of antibody from (b)(4)

Hi Jason,

Yes, of course. May I start with the (b)(4) (b)(4) I can send you (b)(4) next Tuesday (02/25).

I have (b)(4). In about three weeks, (b)(4). Is that fine?

Thanks!  
Maryam

---

**From:** Jason McLellan <(b)(6)>  
**Date:** Friday, February 21, 2020 at 2:25 PM  
**To:** "Mukhamedova, Maryam (NIH/NIAID) [F]" <(b)(6)> "Mascola, John (NIH/VRC) [E]" <(b)(6)> "Graham, Barney (NIH/VRC) [E]" <(b)(6)>  
**Cc:** "Ruckwardt, Tracy (NIH/VRC) [E]" <(b)(6)> "Morabito, Kaitlyn (NIH/VRC) [E]" <(b)(6)>  
**Subject:** RE: (b)(4) Request of antibody from (b)(4)

Hi Maryam,

Apologies for the delayed response, it's been quite a week and I'm only now getting caught up on things.

(b) (4) and I expect we will be able to (b) (4)  
(b) (4). Should time permit, we can then (b) (4).

Would you be able to (b) (4)

Best regards,  
Jason

---

**From:** Mukhamedova, Maryam (NIH/NIAID) [F] <(b) (6)>  
**Sent:** Monday, February 17, 2020 3:21 PM  
**To:** Jason McLellan <(b) (6)> Mascola, John (NIH/VRC) [E]  
<(b) (6)> Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Cc:** Ruckwardt, Tracy (NIH/VRC) [E] <(b) (6)> Morabito, Kaitlyn (NIH/VRC) [E]  
<(b) (6)>  
**Subject:** Re: (b) (4) Request of antibody from (b) (4)

Hi Jason,

(b) (4). The paper will (b) (4)  
(b) (4)

We would like (b) (4)  
(b) (4), as well as (b) (4).

I am attaching (b) (4) we would like (b) (4)  
(b) (4)

Would this be possible?

Thanks,  
Maryam

---

**From:** "Mascola, John (NIH/VRC) [E]" <[REDACTED] (b) (6)>  
**Date:** Friday, February 14, 2020 at 10:16 AM  
**To:** "Graham, Barney (NIH/VRC) [E]" <[REDACTED] (b) (6)>  
**Cc:** Jason McLellan <[REDACTED] (b) (6)> "Mukhamedova, Maryam (NIH/NIAID) [F]" <[REDACTED] (b) (6)> "Ruckwardt, Tracy (NIH/VRC) [E]" <[REDACTED] (b) (6)> "Morabito, Kaitlyn (NIH/VRC) [E]" <[REDACTED] (b) (6)>  
**Subject:** Re: [REDACTED] (b) (4)

Great. Perhaps Tracy and Maryam can make priority list with info on [REDACTED] (b) (4).  
[REDACTED] (b) (4).

Best  
John

Sent from my iPhone

On Feb 14, 2020, at 10:05, Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)> wrote:

... and the hope is to [REDACTED] (b) (4).  
[REDACTED]

Barney

Sent from my iPhone

On Feb 14, 2020, at 9:54 AM, Jason McLellan <[REDACTED] (b) (6)> wrote:

Thanks John and Maryam,

I agree that a [REDACTED] (b) (4). It would be helpful to know [REDACTED] (b) (4).  
[REDACTED] (b) (4). We can [REDACTED] (b) (4).  
[REDACTED] (b) (4), which can be [REDACTED] (b) (4).  
[REDACTED] (b) (4), but we can attempt [REDACTED] (b) (4).

Regardless, we are interested and are happy to contribute to this study (and Maryam's thesis).

Cheers,  
Jason

---

**From:** Mascola, John (NIH/VRC) [E] <(b)(6)>  
**Sent:** Friday, February 14, 2020 7:55 AM  
**To:** Mukhamedova, Maryam (NIH/NIAID) [F] <(b)(6)> Jason McLellan  
<(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)> Ruckwardt, Tracy (NIH/VRC) [E] <(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)>  
**Subject:** RE: (b)(4) Request of antibody from (b)(4)

Hi Maryam,

We want to take a systematic approach here.

Please make a short PP slide deck of your project and current data – borrowing from draft Figs.

Then, (b)(4). These could be (b)(4)  
(b)(4)

Also list the (b)(4). You'll want to  
(b)(4). The question becomes, (b)(4)  
(b)(4). Do we want to (b)(4)  
(b)(4).

We want to decide soon – so we can craft you thesis and paper.

Best,

John

---

**From:** Mukhamedova, Maryam (NIH/NIAID) [F] <(b)(6)>  
**Sent:** Thursday, February 13, 2020 4:41 PM  
**To:** (b)(6) Mascola, John (NIH/VRC) [E] <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)> Ruckwardt, Tracy (NIH/VRC) [E] <(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)>  
**Subject:** (b)(4) Request of antibody from (b)(4)

Hi Jason,

I hope you are well and understand you must be very busy with SARS-CoV-2 work.

We have (b)(4)  
(b)(4). We have (b)(4)  
(b)(4)

May I (b)(4) for my paper?

Thank you very much.

Sincerely,  
Maryam

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 26 Feb 2020 20:49:08 +0000  
**To:** Hiatt, Nissa (NIH/VRC) [C];Routh, Jennifer (NIH/NIAID) [E]  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** FW: Interview request -- Vox

FYI.

BG

**From:** Brian Resnick <[REDACTED] (b)(6)>  
**Sent:** Wednesday, February 26, 2020 3:46 PM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Subject:** Interview request -- Vox

Hi,

I'm a science reporter with Vox.com in Washington DC. I'm currently working on a story about the rush to develop vaccines for the new coronavirus. I was wondering if you're free to chat about this topic. I'd love to learn some more about how the process work, how it might fail, and how far along efforts currently are. If you're not free, could you suggest a knowledgeable colleague for me to reach out to? Any help will be greatly appreciated. Many thanks!

**Brian Resnick • Senior Reporter**



Follow Vox on [Twitter](#) • [Instagram](#) • [Facebook](#)



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 7 Mar 2020 20:16:10 +0000  
**To:** Kizzmekia Corbett  
**Subject:** Re: Our response to the coronavirus outbreak

Looks like you are on a first name basis with Oscar.

BG

Sent from my iPhone

On Mar 7, 2020, at 2:55 PM, Kizzmekia Corbett <[REDACTED] (b)(6)> wrote:

----- Forwarded message -----

**From:** United Airlines <[UnitedAirlines@news.united.com](mailto:UnitedAirlines@news.united.com)>

**Date:** Sat, Mar 7, 2020 at 12:31 PM

**Subject:** Our response to the coronavirus outbreak

**To:** <[REDACTED] (b)(6)>

We're taking action to keep you safe.

[View Online](#)

**UNITED**



MileagePlus #

[REDACTED] (b)(6)

**Dear Kizzmekia,**

I consider you part of our United family and your safety remains our highest priority.

We are in the business of serving people and in the midst of this coronavirus outbreak it's important that we give you as much flexibility as possible when planning your next trip. But it's also important that

we give you as much information as possible about the procedures we follow to clean our aircraft and maintain a sanitary environment once we're in the air.

Our teams are in daily contact with the Centers for Disease Control and Prevention (CDC), the World Health Organization (WHO), federal agencies and other global health organizations to share the most up-to-the-minute information to ensure the actions we're taking are comprehensive and appropriate.

So today, I wanted to personally reach out and share a few of the steps we are taking for you, our customer:

### ***Before you fly***

To give you the greatest flexibility, when you book any flight with us now through March 31, you can change it for free over the next 12 months – any ticket, any fare type, any destination.

### ***On the ground***

Our team of in-house medical experts and industrial hygienists oversee our aircraft cleaning procedures to ensure they meet or exceed all CDC guidelines. Hard surfaces such as lavatories, tray tables, window shades and armrests are thoroughly wiped down with a high-grade disinfectant and multi-purpose cleaner. And when we are advised by the CDC of a person who has traveled on board and is potentially exhibiting coronavirus symptoms, that aircraft is taken out of service and sent through a full decontamination process that includes our standard cleaning procedures plus washing ceilings and overhead bins and scrubbing the interior.

### ***In the air***

Our aircraft are equipped with state-of-the-art circulation systems, similar to those found in hospitals, which use a high-efficiency (HEPA) filter to circulate the air and remove more than 99% of airborne particles. We're also adjusting our inflight service to limit person-to-person contamination. This includes handing beverages directly to customers instead of allowing customers to touch a tray and ensuring all flight attendants wear gloves during service.

More information on each of these efforts can be found on the [United Hub](#).


I know I speak for every member of our United family when I say that we take the greatest pride in the role we play in the lives of our customers, personally and professionally.

I want you to know that you can continue to rely on us. So, the next time we have the privilege of welcoming you aboard our aircraft, you can know our commitment to you remains as steadfast as ever.

Kind regards,



**Oscar Munoz**  
CEO



fly the friendly skies<sup>®</sup>

<a href="#">Reservations</a>	<a href="#">Deals &amp; offers</a>	<a href="#">MileagePlus<sup>®</sup></a>	<a href="#">My account</a>
------------------------------	------------------------------------	---	----------------------------

[f](#) [Twitter](#) [YouTube](#) [Instagram](#)

**Terms and conditions:**

You have received this email because it includes important information about one or more of the following: United, the MileagePlus program, your MileagePlus account, your memberships or subscriptions, or a recent transaction or travel experience with United. Your privacy and communication preferences are very important to us. If you previously opted not to receive promotional emails, we will continue to respect that request. However, you will continue to receive non-promotional, service-related emails. If you would like to opt out of receiving promotional emails from United and MileagePlus in the future, you can update your [email subscription preferences](#).

C000020916 15454 ET01 20200307 6289f243ae8979aa85e9a8d1fc44a281

This email was sent to [\(b\)\(6\)](#) by United Airlines.

Please do not reply to this email. We cannot accept electronic replies to this email address.

© 2020 United Airlines. All rights reserved. United Airlines, Inc. [233 S. Wacker Drive Chicago, IL 60606](#)

[Contact us](#) | [Email preferences](#) | [Privacy policy](#)

A STAR ALLIANCE MEMBER 

--

Sent from the mobile device of:

Kizzmekia S. Corbett, PhD

(b)(6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 9 Apr 2020 21:58:41 +0000  
**To:** Hiatt, Nissa (NIH/VRC) [C]  
**Subject:** Re: questions for IRP blog post on IRP COVID-19 research  
**Attachments:** image001.png

Ok. Thanks

BG

Sent from my iPhone

On Apr 9, 2020, at 5:33 PM, Hiatt, Nissa (NIH/VRC) [C] <[REDACTED] (b)(6)> wrote:

Hi Barney,

All good to do the IRP blog -a few notes about the blog below. John and Bob/Mario did blog posts with Brandon's "I am Intramural" blog team recently and someone from their podcast contacted Kizzmekia about COVID-19. Thanks for letting me know about this so I can track it.

A little background if you have not worked with the IRP blog before:

-IRP focuses on individual scientists and rarely mentions their ICs. [REDACTED] (b) (5)

[REDACTED] (b) (5)

-They might ask you questions that can be answered by NIAID press materials to get a different quote or perspective from you -they seem to look for a unique angle

-They will let you review a draft of the blog post.

-They contract with Ogilvy Consulting for blog posts so someone with an Ogilvy email might contact you

Please let me know if you have any questions.

Best,  
Nissa

**Nissa Hiatt**

Communications

Vaccine Research Center, NIAID, NIH

40 Convent Drive, Bldg 40, Room 1100

Bethesda, MD 20892

Cell: [REDACTED] (b)(6)

Office: [REDACTED] (b)(6)

[REDACTED] (b)(6)

<image001.png>

---

**From:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Sent:** Thursday, April 9, 2020 5:01 PM  
**To:** Hiatt, Nissa (NIH/VRC) [C] <[REDACTED] (b)(6)>  
**Subject:** RE: questions for IRP blog post on IRP COVID-19 research

Do you see any problem with answering intramural questions?

BG

---

**From:** Levy, Brandon (NIH/OD) [C] <[REDACTED] (b)(6)>  
**Sent:** Thursday, April 9, 2020 4:34 PM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Subject:** questions for IRP blog post on IRP COVID-19 research

Hi Dr. Graham. I'm a science writer for the NIH Intramural Research Program. I'm working on a blog post for our ["I Am Intramural" blog](#) highlighting a few IRP studies that could help in the fight against COVID-19. I found your study published last month in *Science*, "Cryo-EM structure of the 2019-nCoV spike in the prefusion conformation" and was wondering if you could answer a few questions for me about it? If you're willing to help out with this, you could respond via email or we could schedule a time to talk briefly about the study, whichever you'd prefer. Here are my questions:

- Why is it important to know the physical structure of the virus's spike protein? How will this help efforts to develop therapies or vaccines against COVID-19?
- What is the significance of your finding that antibodies known to bind specifically to the SARS virus do not bind well to COVID-19? I take it this will make it more difficult to develop a treatment because we can't just use treatments or vaccines developed for SARS? And I guess it means that people who have had SARS aren't necessarily resistant or immune to COVID-19?
- Does your study tell us anything about the transmissibility of the virus, at least in comparison to other, similar viruses?
- Are you pursuing further research on COVID-19, or was this a one-off project?
- How long did it take your team to figure out this structure? When did you begin and end the project? Was this an unusually rapid timeline/turnaround? If so, what was it like to complete a project like this on such a rapid timeline?

Thanks,  
Brandon Levy [c]  
Science Communications Editor, NIH Intramural Research Program  
Columbus Technologies and Services, Inc.

(b)(6)

(b)(6)



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 13 Mar 2020 13:52:15 +0000  
**To:** Mascola, John (NIH/VRC) [E]  
**Subject:** FW: Seeking your thoughts on COVID-19 vaccines

FYI. I never answer inquiries like this, but do you think it might be appropriate for people like us to speak to the investor world and try to calm things down?

BG

---

**From:** Kashmiira Nayar <[REDACTED] (b)(6)>  
**Sent:** Friday, March 13, 2020 9:00 AM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Subject:** Seeking your thoughts on COVID-19 vaccines

Dear Barney S

As you know, COVID-19 has sent the world into a frenzy, with the stock markets plunging; the worst since Black Monday in 1987. It is pertinent that we mitigate the health, social and economic consequences immediately and the world has never been more driven to develop vaccines against emerging infectious diseases than it is today!

If you have been keeping up with the vaccine development efforts,

[Could we tap your knowledge?](#)

The purpose of this questionnaire is to understand the market sentiment of the vaccines industry towards COVID-19 vaccines. As a token of our gratitude, we will email you a complimentary copy of the survey results, which will compile insights from vaccine developers, government officials and other stakeholders.

All responses will be kept anonymous and the deadline to complete this survey is **17th March 2020**. Do share this with your colleagues as well. Click and forward this [link](#)!

I look forward to hearing [your views](#)!



Best Regards,

Kashmiira Nayar

Marketing Manager

IMAPAC Singapore

e: [kashmiira.nayar@imapac.com](mailto:kashmiira.nayar@imapac.com)

m: (b) (6) | p: +65 31090122

*Copyright © 2020 IMAPAC Pte Ltd, All rights reserved.*

You received this because you are either a treasured customer, partner or friend of IMAPAC or have signed up to receive emails about our upcoming events that we believe that may be of interest to you. If you receive this by mistake, please excuse us, mistakes do happen and kindly unsubscribe to the list.

**Our mailing address is:**

IMAPAC Pte Ltd  
133 Cecil Street  
#05-02A Keck Seng Tower  
Singapore 069535  
Singapore

[Add us to your address book](#)

Want to change how you receive these emails?

You can [update your preferences](#) or [unsubscribe from this list](#).



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 6 Feb 2020 16:54:19 +0000  
**To:** Stein, Judy (NIH/VRC) [C]  
**Cc:** Morabito, Kaitlyn (NIH/VRC) [E]; Bok, Karin (NIH/VRC) [E]  
**Subject:** Re: E-introduction to nCoV (b) (4)

(b) (4)

Thanks,

BG

Sent from my iPhone

On Feb 6, 2020, at 10:17 AM, Stein, Judy (NIH/VRC) [C] <(b) (6)> wrote:

Hi Barney,

(b) (4).

Thanks

Judy

---

**From:** J. Christopher Love <(b) (6)>  
**Sent:** Thursday, February 6, 2020 9:57 AM  
**To:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Cc:** Lynda, Stuart <(b) (6)> Harry Kleanthous <(b) (6)> David Vaughn <(b) (6)> Peter Dull <(b) (6)> Holger Kanzler <(b) (6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b) (6)> Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)> Bok, Karin (NIH/VRC) [E] <(b) (6)> Stein, Judy (NIH/VRC) [C] <(b) (6)> Gall, Jason (NIH/VRC) [C] <(b) (6)> Mascola, John (NIH/VRC) [E] <(b) (6)> Young, Monique (NIH/VRC) [E] <(b) (6)>  
**Subject:** RE: E-introduction to nCoV (b) (4)

Hi Barney,

I look forward to the conversation among everyone tomorrow. In the interim, might it be possible to get (b) (4)

(b) (4)

(b) (4)

(b) (4)

Best,  
Chris

---

**From:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Sent:** Tuesday, February 4, 2020 8:27 PM  
**To:** J. Christopher Love <(b) (6)>  
**Cc:** Lynda, Stuart <(b) (6)> Harry Kleanthous  
<(b) (6)> David Vaughn <(b) (6)> Peter  
Dull <(b) (6)> Holger Kanzler <(b) (6)>  
(b) (6) Morabito, Kaitlyn (NIH/VRC) [E] <(b) (6)> Corbett, Kizzmekia  
(NIH/VRC) [E] <(b) (6)> Bok, Karin (NIH/VRC) [E] <(b) (6)> Stein, Judy  
(NIH/VRC) [C] <(b) (6)> Gall, Jason (NIH/VRC) [C] <(b) (6)> Mascola, John  
(NIH/VRC) [E] <(b) (6)> Young, Monique (NIH/VRC) [E] <(b) (6)>  
**Subject:** Re: E-introduction to nCoV (b) (4)

I've copied Monique Young here and she can help find a time for a call.

Barney

Sent from my iPhone

On Feb 4, 2020, at 8:04 PM, J. Christopher Love <(b) (6)> wrote:

Hi Barney,

Thanks for your thoughtful response. And please do say hello to Mario—it has been a while since we have had a chance to cross paths. We are still doing work in the single-cell area with Alex Shalek, in addition to our recent work on (b) (4)

I read through the PNAS paper Lynda sent, and it is a fantastic study. Certainly these structures are complex as you point out. They will present interesting manufacturing challenge (b) (4),  
(b) (4)

(b) (4)

(b) (4)

A phone call as Lynda suggested sounds like a good next step.

Best,  
Chris

---

**From:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Sent:** Tuesday, February 4, 2020 5:48 PM  
**To:** J. Christopher Love <(b) (6)> Lynda, Stuart <(b) (6)>  
**Cc:** Harry Kleanthous <(b) (6)> David Vaughn  
<(b) (6)> Peter Dull <(b) (6)> Holger Kanzler  
<(b) (6)> Morabito, Kaitlyn (NIH/VRC) [E]  
<(b) (6)> Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)> Bok, Karin  
(NIH/VRC) [E] <(b) (6)> Stein, Judy (NIH/VRC) [C] <(b) (6)> Gall, Jason  
(NIH/VRC) [C] <(b) (6)> Mascola, John (NIH/VRC) [E] <(b) (6)>  
**Subject:** RE: E-introduction to nCoV (b) (4)

Hi Chris,

I've been following your work since I saw you present at a HIPC meeting several years ago. I'm the one who told Mario Roederer about your work.

(b) (4)

(b) (4)

(b) (4)

Glad to have further discussions if you are interested in pursuing this.

Best wishes,

Barney

---

**From:** J. Christopher Love <(b)(6)>

**Sent:** Tuesday, February 4, 2020 2:30 PM

**To:** Lynda, Stuart <(b)(6)> Graham, Barney (NIH/VRC) [E]

<(b)(6)>

**Cc:** Harry Kleanthous <(b)(6)> David Vaughn

<(b)(6)> Peter Dull <(b)(6)> Holger Kanzler

<(b)(6)> <(b)(6)>

**Subject:** RE: E-introduction to (b)(4)

Lynda, thanks for the introduction.

Barney, it is great to meet you. Our general interests seem to have been orbiting in similar spaces in the past couple of years so really great to connect.

As Lynda says, (b)(4)

(b)(4)

(b)(4)

(b)(4)

We have some ideas about where we could start pending a conversation.

Best,  
Chris

---

**From:** Lynda Stuart <[REDACTED] (b)(6)>  
**Sent:** Tuesday, February 4, 2020 12:43 PM  
**To:** J. Christopher Love <[REDACTED] (b)(6)> Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Cc:** Harry Kleanthous <[REDACTED] (b)(6)> David Vaughn  
<[REDACTED] (b)(6)> Peter Dull <[REDACTED] (b)(6)> Holger Kanzler  
<[REDACTED] (b)(6)>  
**Subject:** E-introduction to nCoV [REDACTED] (b)(4)

Dear Barney

I wanted to introduce you to Chris Love from MIT. Chris wears many hats including being the head of the AltHost Consortium – an academic private partnership on novel ways to make proteins faster and cheaper. He leads a group working on the [REDACTED] (b)(4)

[REDACTED] (b)(4)

[REDACTED] (b)(4) I have cleared much of my calendar for this week and will make myself available to join a call. I will ask [REDACTED] (b)(6), cc'ed here, to help with arranging a time for you to connect ASAP.

Lynda

Chris - I am attaching Barney [REDACTED] (b)(4)  
[REDACTED] (b)(4)

[REDACTED] (b)(6) - please can we try to get some time ASAP. Please include myself as required and those on the cc line if possible.

Lynda

**Lynda Stuart MD PhD**

Deputy Director, Vaccines & Human Immunobiology  
Global Health Discovery & Translational Sciences

**V** [REDACTED] (b)(6)  
**C +** [REDACTED] (b)(6)  
**E** [REDACTED] (b)(6)

**Bill & Melinda Gates Foundation**

[www.gatesfoundation.org](http://www.gatesfoundation.org)

[<image001.gif>](#)

[Facebook](#)

[<image002.gif>](#)

[Twitter](#)

[<image003.jpg>](#)

[Impatient Optimists](#)

(b) (6)  
Program Assistant  
Discovery & Translational Sciences  
Global Health  
**V** (b)(6)  
**E** (b)(6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 27 Apr 2020 18:02:53 +0000  
**To:** Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** RE: Cynthia's (b) (4)

(b) (5). We need to reach an agreement with Julie.

Barney

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)>  
**Sent:** Monday, April 27, 2020 1:54 PM  
**To:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Subject:** Cynthia's (b) (4)

Is there a way to make sure that (b) (5) before we know (b) (5)

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**  
Viral Pathogenesis Laboratory | Vaccine Research Center  
National Institutes of Allergy and Infectious Diseases  
National Institutes of Health

Building 40 Room 2608  
40 Convent Drive  
Bethesda MD 20892  
Laboratory: (b) (6)  
Personal: (b) (6)  
Fax: (301) 480-2771



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 30 Apr 2020 16:31:57 +0000  
**To:** Gemma Alderton  
**Subject:** RE: Perspective for Science abb8923  
**Attachments:** abb8923\_Graham\_v1a\_GA\_BG no comments.docx, Figure 1\_V4.pptx, Rebuttal V2.docx, abb8923\_Graham\_v1a\_GA\_BG v8\_clean\_kb\_BG\_v1.docx

Hi Gemma,

Interesting, I was just composing the email.

I attached two versions of the revised paper, one with your comments and one without. I had to enlarge the font on your original document, and eventually had to give up on the tracked document because it was too hard to read.

I've also included a figure with legend in a powerpoint format.

Please let me know what else is needed and whether I need to go into the web portal or if these attachments will work.

Thank you again for the opportunity to review these issues in a concise format.

Take care,

Barney

---

**From:** Gemma Alderton <[REDACTED]> (b)(6)  
**Sent:** Thursday, April 30, 2020 12:20 PM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED]> (b)(6)  
**Subject:** RE: Perspective for Science abb8923

Hi Barney,

How are you getting on with your revision – will you be able to submit today/tomorrow? Or do you need more time?

Best wishes,  
Gemma

Gemma K. Alderton, PhD  
Senior Editor, *Science*

AAAS Science International, Inc.

E: [REDACTED] B (6)

[www.sciencemag.org](http://www.sciencemag.org)

[cts.sciencemag.org](http://cts.sciencemag.org)

Follow me on Twitter: [@AldertonBiol](https://twitter.com/AldertonBiol)

---

**From:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)>

**Sent:** 27 April 2020 13:34

**To:** Gemma Alderton <[REDACTED] (b) (6)>

**Subject:** RE: Perspective for Science abb8923

Yes, I received and I'm working on it and created a figure. Should be possible to revise by Thursday.

Thanks,

Barney

---

**From:** Gemma Alderton <[REDACTED] (b) (6)>

**Sent:** Monday, April 27, 2020 8:06 AM

**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)>

**Subject:** RE: Perspective for Science abb8923

Hi Barney,

I just want to make sure that you received my email last week – could you confirm? And if resubmission on Thursday will be OK?

Thanks and best wishes,  
Gemma

Gemma K. Alderton, PhD  
Senior Editor, *Science*

AAAS Science International, Inc.

E: [REDACTED] B (6)

[www.sciencemag.org](http://www.sciencemag.org)

[cts.sciencemag.org](http://cts.sciencemag.org)

Follow me on Twitter: [@AldertonBiol](https://twitter.com/AldertonBiol)

---

**From:** Gemma Alderton

**Sent:** 23 April 2020 12:13

**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)>

**Subject:** Perspective for Science abb8923

Dear Barney,

Many thanks for your Perspective on “Benefits and Risks of Rapid COVID-19 Vaccine Development” for *Science*.

Your article has now been assessed by two reviewers who were largely positive about your piece and have some suggestions to improve the Perspective. I am therefore inviting you to revise your article according to the comments from the reviewers (below – my comments are in bold).

I have also edited your article using track-changes and comments. My edits are focused on ensuring the article is accessible to a general audience and to ensure the piece provides insight about current SARS-CoV-2 vaccine development approaches and offers a rounded discussion of ADE and VAERD (for example, ADE is not mentioned in the latter part of the discussion). My edits and comments are just suggestions aimed at ensuring your article is in the best possible shape for our audience. But, you should feel free to disagree with them or provide alternatives. I have asked for a lot of explanations, to ensure your piece is clear, but please note the article can be up to 1900 words, including references and acknowledgments.

The Perspective can have one figure – I wonder if something depicting the mechanisms of ADE and VAERD would be possible/helpful?

Would it be possible to return a revised Perspective to me by Thursday the 30<sup>th</sup> of April (or sooner)? Please submit a clean article, including a Word doc, in which you address the reviewers and my comments. Please also include a response to the reviewers explaining how you have addressed their comments. You do not need to respond to my comments. Please confirm that you have received this email and whether the deadline is feasible.

Thanks and best wishes,  
Gemma

## REVIEWS

### Reviewer 1

(b) (6), (b) (4)

(b) (6), (b) (4)

(b) (6), (b) (4)

**Reviewer 2**

(b) (6), (b) (4)

(b) (6), (b) (4)

Gemma K. Alderton, PhD  
Senior Editor, *Science*

AAAS Science International, Inc.

E: [REDACTED] B (6)

[www.sciencemag.org](http://www.sciencemag.org)

[cts.sciencemag.org](http://cts.sciencemag.org)

Follow me on Twitter: [@AldertonBio](https://twitter.com/AldertonBio)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 25 Mar 2020 17:51:01 +0000  
**To:** Corbett, Kizzmekia (NIH/VRC) [E]  
**Cc:** Ruckwardt, Tracy (NIH/VRC) [E]; Kanekiyo, Masaru (NIH/VRC) [E]; Bok, Karin (NIH/VRC) [E]  
**Subject:** Re: VRC Staff Plan for COVID-19 and Missions Critical Work (Graham)

Virtually all of these ideas will go through our group. It's good that they want to be involved. If we don't [REDACTED] (b) (5)

Barney

Sent from my iPhone

On Mar 25, 2020, at 12:43 PM, Corbett, Kizzmekia (NIH/VRC) [E] <[REDACTED] (b)(6)> wrote:

**It's a hot mess.** Honestly. Haha.

[REDACTED] (b) (5)

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**  
Viral Pathogenesis Laboratory | Vaccine Research Center  
National Institutes of Allergy and Infectious Diseases  
National Institutes of Health

Building 40 Room 2608  
40 Convent Drive  
Bethesda MD 20892  
Laboratory: [REDACTED] (b)(6)  
Personal: [REDACTED] (b)(6)  
Fax: (301) 480-2771

---

**From:** "Ruckwardt, Tracy (NIH/VRC) [E]" <[REDACTED] (b)(6)>  
**Date:** Wednesday, March 25, 2020 at 10:58 AM  
**To:** "Kanekiyo, Masaru (NIH/VRC) [E]" <[REDACTED] (b)(6)> Barney Graham

< (b) (6) "Bok, Karin (NIH/VRC) [E]" < (b) (6) Kizzmekia Corbett  
< (b) (6)

**Subject:** Re: VRC Staff Plan for COVID-19 and Missions Critical Work (Graham)

Sorry, guys, but I'm kind of annoyed (b) (5)  
(b) (5) I guess I figured (b) (5)  
(b) (5)

(b) (5)

(b) (5)....

---

**From:** "Kanekiyo, Masaru (NIH/VRC) [E]" < (b) (6) >  
**Date:** Wednesday, March 25, 2020 at 10:46 AM  
**To:** "Graham, Barney (NIH/VRC) [E]" < (b) (6) > "Bok, Karin (NIH/VRC) [E]" < (b) (6) > "Ruckwardt, Tracy (NIH/VRC) [E]" < (b) (6) > "Corbett, Kizzmekia (NIH/VRC) [E]" < (b) (6) >  
**Subject:** FW: VRC Staff Plan for COVID-19 and Missions Critical Work (Graham)

Looping Kizzy in.

---

**From:** "Royal, Thomas (NIH/NIAID) [E]" < (b) (6) >  
**Date:** Wednesday, March 25, 2020 at 10:41 AM  
**To:** Barney Graham < (b) (6) >  
**Cc:** "Bok, Karin (NIH/VRC) [E]" < (b) (6) > "Kanekiyo, Masaru (NIH/VRC) [E]" < (b) (6) > Tracy Ruckwardt < (b) (6) >  
**Subject:** VRC Staff Plan for COVID-19 and Missions Critical Work (Graham)

Good morning,

I have attached the staff list for those under your area. Can you fill it out and return it to me no later than 2pm? Thanks

Thomas E. Royal Jr.  
Deputy Chief, VAMB, VRC, NIAID  
40 Convent Drive, Bethesda, MD 20892  
Phone: (b) (6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 28 Apr 2020 12:04:54 +0000  
**To:** Rothenberg, Marc  
**Subject:** RE: article

Hi Marc,

Thanks for sharing. Well done. I've glanced over it and will read in more detail later. I will refer others to this.

BG

---

**From:** Rothenberg, Marc <[REDACTED] (b)(6)>  
**Sent:** Tuesday, April 28, 2020 1:31 AM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Subject:** article

Dear Barney,

In view of our prior discussion, please find the attached paper that we just published. I hope it will be helpful to you and your colleagues as you consider and develop vaccines.

Best wishes for peace, harmony, health and conquering COVID.

Sincerely,

Marc E. Rothenberg MD, PhD (Immediate cell phone access [REDACTED] (b)(6))  
Professor of Pediatrics  
Bunning Chair of Allergy and Immunology  
Director, Division of Allergy and Immunology  
Director, Cincinnati Center for Eosinophilic Disorders  
Cincinnati Children's Hospital Medical Center

[REDACTED] (b)(6) or [REDACTED] (b)(6) (office)  
[REDACTED] (b)(6) (Assistant)  
[REDACTED] (b)(6)

Featured Websites (Click each):

[Rothenberg CURED Laboratory](#)

[EGIDExpress \(access to Rothenberg Lab Data\)](#)

[Cincinnati Center for Eosinophilic Disorders](#)

[Rothenberg CURED Research Laboratory Facebook Site](#)

[Consortium of Gastrointestinal Disease Researchers](#)

[Eosinophilic Gastritis Benralizumab Study](#)

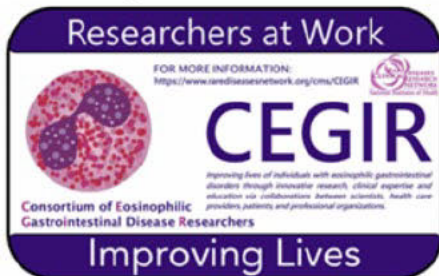
[What is EoE? \(click here for Spanish version\)](#)  
[2018 Allergy/Immunology Highlights](#)

See EoE research highlights by clicking on the photo below.



Divisional Mission-To improve the health and wellbeing of children with allergic and immune conditions through innovative research, outstanding clinical care, and education of the current and next generation of leaders in healthcare and research. [Divisional Video](#)

Click on image before for information about CEGIR



*The information contained in this message may be confidential, privileged and protected from disclosure. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by email or telephone and destroy all copies of the original message. Thank you.*

---

**From:** Marc Rothenberg <(b)(6)>  
**Date:** Monday, April 27, 2020 at 2:59 PM  
**To:** Ellen Jane Moss <(b)(6)> Ting Wen <(b)(6)>  
**Cc:** Elise Bates <(b)(6)>, Melissa Mingler <(b)(6)>  
**Subject:** Re: quick question

Hi Ellen-Jane.

Yes, we are very busy here with new considerations concerning COVID. In fact, I am attaching a paper that we just published yesterday about the eosinophils and COVID. Feel free to disseminate this paper. In terms of a lay summary, how is this?

Since our last update 1 year ago, we have analyzed 6 additional EoE buccal samples, along with 12 healthy control samples as the validation cohort. RNA sequencing was performed



following the same settings used previously and was compared to the discovery cohort. Importantly, when we overlapped the significant gene lists from the discovery and replication studies, we identified 26 genes (G26) overlapping between the two independent studies. The G26 test was able to achieve a sensitivity of 93% and a specificity of 90%, defining a satisfactory utility as a noninvasive EoE test. To our knowledge, there is no other non-invasive test that can reliably and repeatedly achieve a merit at this level. Research concerning these very promising findings is currently underway.

Ellen-Jane, we are very excited about these findings and thank you and your EAT supporters for supporting this study. We will soon send you a proposal about our plans to move forward.

Best wishes for peace, harmony, health and conquering COVID.

Sincerely,

Marc E. Rothenberg MD, PhD (Immediate cell phone access (b)(6)  
Professor of Pediatrics  
Bunning Chair of Allergy and Immunology  
Director, Division of Allergy and Immunology  
Director, Cincinnati Center for Eosinophilic Disorders  
Cincinnati Children's Hospital Medical Center

(b)(6) or (b)(6) office)  
(b)(6) (Assistant)  
(b)(6)

Featured Websites (Click each):

[Rothenberg CURED Laboratory](#)

[EGIDExpress \(access to Rothenberg Lab Data\)](#)

[Cincinnati Center for Eosinophilic Disorders](#)

[Rothenberg CURED Research Laboratory Facebook Site](#)

[Consortium of Gastrointestinal Disease Researchers](#)

[Eosinophilic Gastritis Benralizumab Study](#)

[What is EoE? \(click here for Spanish version\)](#)

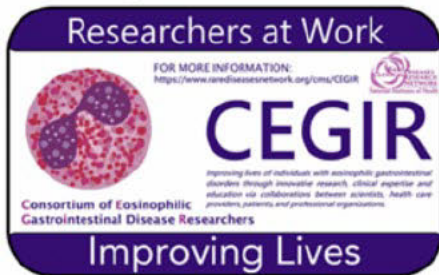
[2018 Allergy/Immunology Highlights](#)

See EoE research highlights by clicking on the photo below.



Divisional Mission-To improve the health and wellbeing of children with allergic and immune conditions through innovative research, outstanding clinical care, and education of the current and next generation of leaders in healthcare and research. [Divisional Video](#)

Click on image before for information about CEGIR



*The information contained in this message may be confidential, privileged and protected from disclosure. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by email or telephone and destroy all copies of the original message. Thank you.*

---

**From:** Ellen Jane Moss <[REDACTED] (b)(6)>  
**Date:** Monday, April 27, 2020 at 11:01 AM  
**To:** Marc Rothenberg <[REDACTED] (b)(6)> Ting Wen <[REDACTED] (b)(6)>  
**Cc:** Elise Bates <[REDACTED] (b)(6)>  
**Subject:** quick question

Hope this email finds you well! I imagine you may be both working on COVID related work so we don't want to take up too much of your time,

What can we share (publicly) with our donors about the outcome of the EAT grant

Many thanks!

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 9 Mar 2020 20:58:20 +0000  
**To:** Munster, Vincent (NIH/NIAID) [E]; Corbett, Kizzmekia (NIH/VRC) [E]; Marston, Hilary (NIH/NIAID) [E]; Stemmy, Erik (NIH/NIAID) [E]  
**Subject:** RE: URGENT: Save The Date: CEPI-BC meeting on preventing disease enhancement with COVID-19 vaccines

□ ... beam me up.

---

**From:** Munster, Vincent (NIH/NIAID) [E] <(b)(6)>  
**Sent:** Monday, March 9, 2020 4:55 PM  
**To:** Corbett, Kizzmekia (NIH/VRC) [E] <(b)(6)> Marston, Hilary (NIH/NIAID) [E] <(b)(6)> Stemmy, Erik (NIH/NIAID) [E] <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Subject:** Re: URGENT: Save The Date: CEPI-BC meeting on preventing disease enhancement with COVID-19 vaccines

I think I want a Barney hologram in my office

Vincent Munster, PhD  
Chief, Virus Ecology Section  
Laboratory of Virology  
Rocky Mountain Laboratories  
NIAID/NIH

---

**From:** "Corbett, Kizzmekia (NIH/VRC) [E]" <(b)(6)>  
**Date:** Monday, March 9, 2020 at 2:47 PM  
**To:** "Marston, Hilary (NIH/NIAID) [E]" <(b)(6)> "Stemmy, Erik (NIH/NIAID) [E]" <(b)(6)> Barney Graham <(b)(6)>  
" (b)(6) <(b)(6)>  
**Subject:** Re: URGENT: Save The Date: CEPI-BC meeting on preventing disease enhancement with COVID-19 vaccines

Dr. Graham will be attending virtually.

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**  
Viral Pathogenesis Laboratory | Vaccine Research Center  
National Institutes of Allergy and Infectious Diseases  
National Institutes of Health

Building 40 Room 2608

40 Convent Drive  
Bethesda MD 20892  
Laboratory: (b)(6)  
Personal: (b)(6)  
Fax: (301) 480-2771

---

**From:** "Marston, Hilary (NIH/NIAID) [E]" <(b)(6)>  
**Date:** Monday, March 9, 2020 at 4:45 PM  
**To:** "Stemmy, Erik (NIH/NIAID) [E]" <(b)(6)> Barney Graham  
<(b)(6)> "Munster, Vincent (NIH/NIAID) [E]" <(b)(6)>  
Kizzmekia Corbett <(b)(6)>  
**Subject:** FW: URGENT: Save The Date: CEPI-BC meeting on preventing disease enhancement with COVID-19 vaccines

Forwarding to a small group here – have you received this invite already?

**From:** Robert Chen <(b)(6)>  
**Sent:** Monday, March 9, 2020 4:33 PM  
**To:** Marston, Hilary (NIH/NIAID) [E] <(b)(6)>  
**Subject:** Re: URGENT: Save The Date: CEPI-BC meeting on preventing disease enhancement with COVID-19 vaccines

Hi Hilary,

We plan to post both the recording and the revised guidance docs online right after this scientific consensus meeting. We anticipate a 2nd round of meetings with policymakers (regulators, WHO, etc.) to brief them & refine the guidelines

To make moderating the remote discussion manageable, we'd like to limit the actual invitees to folks knowledgeable re: animal models or immunological assays of enhanced diseases if possible. So yes but only if they are in this group as we have limited number of slots.

Robert (Bob) Chen MD MA  
Scientific Director, Brighton Collaboration  
Land: (b)(6) Cell: (b)(6)  
email: (b)(6)

On Mon, Mar 9, 2020 at 9:56 AM Marston, Hilary (NIH/NIAID) [E] <(b)(6)> wrote:  
The agenda looks great. May we forward the link to select others?

**From:** Robert Chen <(b)(6)>  
**Sent:** Monday, March 9, 2020 9:34 AM  
**To:** Melanie Saville <(b)(6)> Debra Yeskey <(b)(6)> Gould, Sarah

< (b)(6) Lidia Oostvogels < (b)(6) Kate Broderick  
< (b)(6) Marston, Hilary (NIH/NIAID) [E] < (b)(6) Rhonda  
< (b)(6) (b)(6) Francesco Berlanda Scorza  
< (b)(6) (b)(6) (b)(6)  
**Cc:** Imanol Urcola Lecuona < (b)(6) Ángel Honrado < (b)(6)

**Subject:** Fwd: URGENT: Save The Date: CEPI-BC meeting on preventing disease enhancement with COVID-19 vaccines

Dear Colleague,

The Coalition for Epidemic Preparedness and Innovation (CEPI) has funded several programs to develop a vaccine against COVID-19 ([https://cepi.net/news\\_cepi/cepi-to-fund-three-programmes-to-develop-vaccines-against-the-novel-coronavirus-ncov-2019/](https://cepi.net/news_cepi/cepi-to-fund-three-programmes-to-develop-vaccines-against-the-novel-coronavirus-ncov-2019/)). CEPI has partnered with the Brighton Collaboration (BC) to support the safety assessment of its vaccine candidates ([https://cepi.net/news\\_cepi/cepi-partners-with-brighton-collaboration-to-support-safety-assessment-of-vaccine-candidates-against-emerging-infectious-diseases/](https://cepi.net/news_cepi/cepi-partners-with-brighton-collaboration-to-support-safety-assessment-of-vaccine-candidates-against-emerging-infectious-diseases/))

Some prior coronavirus vaccine candidates vs. SARS and MERS have shown enhanced disease (ED) can occur in immunized animals upon subsequent exposure to live virus. To better understand and hopefully prevent this phenomenon with COVID-19 vaccine candidates, CEPI and BC are organizing an urgent internal scientific consensus meeting (Draft Agenda attached; your suggestions welcome).

To cut the challenges, cost, and risk associated with traveling, we plan to hold this meeting on March 12-13, 2020 using an internet conference platform for 5 hours duration on two successive days at the following times on both days:

23:00-04:00+1 (Melbourne)  
20:00-01:00+1 (Beijing)  
12:00-17:00 GMT (London)  
08:00-13:00 EDT (New York)  
05:00-10:00 PDT (San Francisco)

You will receive a calendar invite shortly from Imanol Lecuola of WEDO, the meeting logistician shortly. Please accept if you are interested and available to attend as a speaker, moderator, peer reviewer, or observer (you're in last two category unless listed in draft agenda as a speaker or moderator).

We anticipate the meeting outcomes to be presented and published in multiple scientific and policy forums subsequently. We look forward to your reply on your availability and your contribution towards a fruitful meeting. We'll follow up with more details as soon as we can. Please let me know if you have any questions.

Best regards,

Robert (Bob) Chen MD MA  
Scientific Director, Brighton Collaboration  
Land: (b)(6) Cell: (b)(6)

email: [REDACTED] (b)(6)

JAKOB CRAMER  
Head of Clinical Development  
CEPI

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 4 Feb 2020 02:00:40 +0000  
**To:** Sahin, Prof. Dr. Ugur  
**Cc:** Stein, Judy (NIH/VRC) [C]  
**Subject:** RE: Introduction  
**Attachments:** [REDACTED] (b) (4).pdf

Dear Ugur,

Just to review the main points of our call today.

- 1.
- 2.
- 3.

[REDACTED] (b) (4)

I've attached a paper that begins describing the value of

[REDACTED] (b) (4)

[REDACTED] (b) (4)

Best wishes,

Barney

---

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Monday, February 3, 2020 8:22 PM  
**To:** Sahin, Prof. Dr. Ugur <[REDACTED] (b)(6)>  
**Cc:** Stefan Pöhlmann <[REDACTED] (b)(6)>  
**Subject:** Re: Introduction

Dear Dr. Sahin,

I am connecting you to Professor Stefan Pöhlmann. He is an expert on (b) (4) Stefan, I don't know if you have time, but Dr. Sahin is CEO of BioNTech and is looking for help (b) (4) (b) (4) a CoV vaccine program.

Barney

Sent from my iPhone

On Feb 3, 2020, at 3:05 PM, Sahin, Prof. Dr. Ugur <(b)(6)> wrote:

Thanks, Barney. 3:45pm i.e. in 40min is fine for me. Holger Kissel will set-up a TC. Best regards, Ugur

---

**Von:** Graham, Barney (NIH/VRC) [E] [mailto:(b)(6)]

**Gesendet:** Montag, 3. Februar 2020 20:58

**An:** Sahin, Prof. Dr. Ugur

**Cc:** Holger Kanzler; Ugur Sahin; Lynda, Stuart; Holger Kissel; Mascola, John (NIH/VRC) [E]; Gall, Jason (NIH/VRC) [C]; Morabito, Kaitlyn (NIH/VRC) [E]; Stein, Judy (NIH/VRC) [C]; Young, Monique (NIH/VRC) [E]

**Betreff:** Re: Introduction

I could speak briefly at 3:45 pm EST today. That is about 45 minutes from now. If that does not work we can look for a time tomorrow. I've copied Monique Young who can help with scheduling if we can't talk today.

Barney

Sent from my iPhone

On Feb 3, 2020, at 10:30 AM, Sahin, Prof. Dr. Ugur <(b)(6)> wrote:



Dear Graham,

Many thanks for your willingness to support. We have foreseen (b) (4) advice about (b) (4). I would like to get further (b) (4). Moreover, I would like to understand (b) (4) (b) (4). Given the urgency, it would be great if we could have a 15min phone call today, ideally after 8:30pm German time (i.e. 2:30 or later Bethesda time). Please, let me know if this work for you. We would be happy to set up a TC.

Best regards,

Ugur

---

**Von:** Graham, Barney (NIH/VRC) [E] [<mailto:> (b)(6)]  
**Gesendet:** Montag, 3. Februar 2020 13:37  
**An:** Sahin, Prof. Dr. Ugur  
**Cc:** Holger Kanzler; Ugur Sahin; Lynda, Stuart; Holger Kissel; Mascola, John (NIH/VRC) [E]; Gall, Jason (NIH/VRC) [C]; Morabito, Kaitlyn (NIH/VRC) [E]; Stein, Judy (NIH/VRC) [C]  
**Betreff:** Re: Introduction

Dear Prof. Ugur,

Thank you for your interest in (b) (4). If we can help by providing advice and information on (b) (4) (b) (4) (b) (4), we are glad to do so. Fortunately, (b) (4) (b) (4) (b) (4) (b) (4). Therefore, we believe (b) (4) (b) (4)

Let us know if you would like to arrange a call to discuss for which we would probably want to complete a CDA.

Best wishes,

Barney

Sent from my iPhone

On Feb 2, 2020, at 12:22 PM, Sahin, Prof. Dr. Ugur <(b)(6)> wrote:

Dear Holger,

many thanks for connecting.

Dear Barney,

I have read your excellent studies related (b) (4)  
(b) (4) and would greatly appreciate to learn more and get your advice for (b) (4).  
(b) (4)

Best regards,

Ugur

---

**Von:** Holger Kanzler [mailto:(b) (6)]

**Gesendet:** Sonntag, 2. Februar 2020 17:53

**An:** Graham, Barney (NIH/VRC) [E]; Ugur Sahin; Sahin, Prof. Dr. Ugur

**Cc:** Lynda Stuart; Holger Kissel

**Betreff:** Introduction

Dear Barney, Ugur,

I wanted to take a moment to introduce you to each other regarding 2019-nCoV.

Ugur, Barney is Deputy Director, Vaccine Research Center, Chief, Viral Pathogenesis Laboratory and Translational Science Core, and there is nobody who knows more about structural basis of antibody-based virus neutralization than him.

<https://www.niaid.nih.gov/research/> (b) (6)

Barney, Ugur is CEO of BioNTech, a cutting edge mRNA company with a tremendous technology pipeline and partner of the foundation in TB and HIV.

<https://biontech.de/our-dna/leadership>

I was hoping you could have a conversation on (b) (4)  
(b) (4)

Best,  
Holger

**Holger Kanzler PhD**

Senior Program Officer, Vaccines & Human Immunobiology  
Global Health - Discovery Cross Cutting

V + (b) (6)

E (b) (6)

**Bill & Melinda Gates Foundation**

[www.gatesfoundation.org](http://www.gatesfoundation.org)

[<image001.png>](#)

[Facebook](#)

[<image002.png>](#)

[Twitter](#)

[<image003.png>](#)

[Impatient Optimists](#)

**Note:** For a text version of these three links, use this format:

Join the conversation on [Facebook](#), [Twitter](#),

and our blog: [www.impatientoptimists.org](http://www.impatientoptimists.org)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 8 Apr 2020 17:08:35 +0000  
**To:** Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** Fwd: (b) (4)?

FYI. Just to make sure you saw this.

BG

Sent from my iPhone

Begin forwarded message:

**From:** Huihui Mu <(b)(6)>  
**Date:** April 8, 2020 at 11:33:29 AM EDT  
**To:** "Schmidt, Stephen (NIH/VRC) [C]" <(b)(6)>  
**Cc:** "Mascola, John (NIH/VRC) [E]" <(b)(6)> Michael Farzan  
<(b)(6)> "Graham, Barney (NIH/VRC) [E]" <(b)(6)>  
"Wang, Lingshu (NIH/VRC) [E]" <(b)(6)> "Corbett, Kizzmekia (NIH/VRC) [E]" <(b)(6)>  
<(b)(6)> "McDermott, Adrian (NIH/VRC) [E]"  
<(b)(6)> "Doria-Rose, Nicole (NIH/NIAID) [E]"  
<(b)(6)>  
**Subject: Re:** (b) (4)

Hi Steve,

(b) (4)

If you have any questions, please feel free to contact us.

Best  
Huihui

---

**From:** "Schmidt, Stephen (NIH/VRC) [C]" <(b)(6)>  
**Date:** Tuesday, April 7, 2020 at 10:07  
**To:** "Mascola, John (NIH/VRC) [E]" <(b)(6)> Michael Farzan  
<(b)(6)>  
**Cc:** "Graham, Barney (NIH/VRC) [E]" <(b)(6)> Huihui Mu  
<(b)(6)> "Wang, Lingshu (NIH/VRC) [E]" <(b)(6)> "Corbett, Kizzmekia (NIH/VRC) [E]" <(b)(6)> "McDermott, Adrian (NIH/VRC) [E]" <(b)(6)>  
<(b)(6)> "Doria-Rose, Nicole (NIH/NIAID) [E]"

< (b)(6)

**Subject:** RE: (b)(4)?

Hi Huihui,

Can you please send (b)(4) at the following address:

Stephen D. Schmidt  
Vaccine Research Center  
National Institutes of Health  
40 Convent Drive, Room 5612  
Bethesda, MD 20892

Phone: (b)(6)

Our FedEx account number is (b)(4), (b)(6)

Thanks very much,  
Steve

---

**From:** Mascola, John (NIH/VRC) [E] < (b)(6) >

**Sent:** Monday, April 6, 2020 8:10 PM

**To:** Michael Farzan < (b)(6) > Schmidt, Stephen (NIH/VRC) [C]

< (b)(6) >

**Cc:** Graham, Barney (NIH/VRC) [E] < (b)(6) > Huihui Mu < (b)(6) > Wang,  
Lingshu (NIH/VRC) [E] < (b)(6) > Corbett, Kizzmekia (NIH/VRC) [E]

< (b)(6) > McDermott, Adrian (NIH/VRC) [E] < (b)(6) > Doria-  
Rose, Nicole (NIH/NIAID) [E] < (b)(6) >

**Subject:** RE: (b)(4)?

Hi Mike and Huihui,

Much appreciated!. We would be willing to try both.

Steve Schmidt in the lab can provide a shipping address and a Fedex # also.

Will keep in touch  
Thank you

John

-----  
John R. Mascola, M.D.  
Director, Vaccine Research Center  
National Institute of Allergy and Infectious Diseases  
National Institutes of Health  
email: (b)(6)

office tel: (b)(6)

---

**From:** Michael Farzan <(b)(6)>  
**Sent:** Monday, April 6, 2020 7:33 PM  
**To:** Mascola, John (NIH/VRC) [E] <(b)(6)>  
**Cc:** Graham, Barney (NIH/VRC) [E] <(b)(6)> Huihui Mu <(b)(6)>  
**Subject:** RE: (b)(4)?

John, for sure.

I am cc'ing Huihui Mou in the lab (b)(4)

(b)(4)

We use the (b)(4)

Is there a good address and maybe a Fedex number?

Mike

---

**From:** Mascola, John (NIH/VRC) [E] [[mailto:\(b\)\(6\)](#)]  
**Sent:** Monday, April 06, 2020 3:25 PM  
**To:** Michael Farzan  
**Cc:** Graham, Barney (NIH/VRC) [E]  
**Subject:** (b)(4)?

Hi Mike,

Do you, or colleague have (b)(4)

Best,  
John

---

**From:** Michael Farzan <(b)(6)>  
**Sent:** Tuesday, March 10, 2020 2:27 AM  
**To:** Jason McLellan <(b)(6)> Graham, Barney (NIH/VRC) [E]  
<(b)(6)> Mascola, John (NIH/VRC) [E] <(b)(6)>  
**Cc:** (b)(6) Corbett, Kizzmekia (NIH/VRC) [E] <(b)(6)>  
**Subject:** Re: important (b)(4) (maybe)

Hi Jason,

The argument is that, (b) (4), you may have (b) (4)

This may be why (b) (4).

However, I'm not sure (b) (4)  
(b) (4).

100% speculative, (b) (4).

Mike

---

**From:** Jason McLellan <(b) (6)>  
**Sent:** Monday, March 9, 2020 11:47 PM  
**To:** Graham, Barney (NIH/VRC) [E] <(b) (6)> Mascola, John (NIH/VRC) [E]  
<(b) (6)>  
**Cc:** Michael Farzan <(b) (6)> (b) (6) <(b) (6)>  
Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)>  
**Subject:** RE: important (b) (4) (maybe)

(b) (4)....

(b) (4)

-Jason

---

**From:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Sent:** Monday, March 9, 2020 8:49 PM  
**To:** Mascola, John (NIH/VRC) [E] <(b) (6)>  
**Cc:** Michael Farzan <(b) (6)> (b) (6) Corbett, Kizzmekia (NIH/VRC) [E]  
<(b) (6)> Jason McLellan <(b) (6)>  
**Subject:** Re: important (b) (4)(maybe)

Thanks John and Mike. I did see Mike's earlier email (b) (4)  
(b) (4)

However, if something (b) (4) would be good to know.

Barney

Sent from my iPhone

On Mar 9, 2020, at 9:05 PM, Mascola, John (NIH/VRC) [E] <[REDACTED] (b) (6)> wrote:

Thanks for sending Mike – I've copied Barney Graham and his lab, and Jason McLellan – who are doing the CoV vaccine work. They can take a look.

So far we know [REDACTED] (b) (4)

Happy to keep in touch on this.

Best,  
John

---

**From:** Michael Farzan <[REDACTED] (b) (6)>  
**Sent:** Monday, March 9, 2020 8:55 PM  
**To:** [REDACTED] (b) (6) Mascola, John (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Subject:** important [REDACTED] (b) (4) (maybe)

Hi Gary, John,

[REDACTED] (b) (4)

If time is short, [REDACTED] (b) (4).

[REDACTED] (b) (4)

If you have time, let me know if we are wrong. Otherwise feel free to share.

Mike

[REDACTED] (b) (4)



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 4 Apr 2020 20:25:30 +0000  
**To:** Lewis, Leon (DCRA);Robert Louis Shepard;Charles Bailey;Nate;Erroll Boone;LeCount Davis;Dr. Hiawatha Fountain;Morton Grant;ALHSR;Kevin Hopson;Dr. Sterling/Dr. Rosalyn King;Leonard Miller;Tony Mumford;Russell Price;Andre Sergeon;Wilbert Williams;Billy arnwine;Amos Brown;Matt Bryant;Anthony Gary;Mitch Harris;Brian Jackson;MMW-Walter Jamison;Walter McCoy;Jay Johnson; (b)(6) Tolulope Odunlami;Elroy Sims;Eggerton Campbell  
**Subject:** RE: Men's Bible Study Meeting Tomorrow Morning: Apr. 4, 2020  
**Attachments:** (b)(6) Men CoV 4Apr2020 HO.pdf

Thanks Leon,

Here is a copy of the slides.

Take care,

Barney

---

**From:** Lewis, Leon (DCRA) <(b)(6)>  
**Sent:** Saturday, April 4, 2020 9:47 AM  
**To:** Robert Louis Shepard <(b)(6)> Charles Bailey <(b)(6)> Nate <(b)(6)> Erroll Boone <(b)(6)> LeCount Davis <(b)(6)> Dr. Hiawatha Fountain <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)> Morton Grant <(b)(6)> ALHSR <(b)(6)> Kevin Hopson <(b)(6)> Dr. Sterling/Dr. Rosalyn King <(b)(6)> Leonard Miller <(b)(6)> Tony Mumford <(b)(6)> Russell Price <(b)(6)> Andre Sergeon <(b)(6)> Wilbert Williams <(b)(6)> Billy arnwine <(b)(6)> Amos Brown <(b)(6)> Matt Bryant <(b)(6)> Anthony Gary <(b)(6)> Mitch Harris <(b)(6)> Brian Jackson <(b)(6)> MMW-Walter Jamison <(b)(6)> Walter McCoy <(b)(6)> Jay Johnson <(b)(6)> (b)(6) Tolulope Odunlami <(b)(6)> Elroy Sims <(b)(6)> Eggerton Campbell <(b)(6)>  
**Subject:** Re: Men's Bible Study Meeting Tomorrow Morning: Apr. 4, 2020

Excellent bible study and presentation from Dr. Graham this morning. I hope the entire congregation can receive Dr. Graham's presentation. Thanks to everyone.

Blessings  
Leon Lewis

**From:** Robert Louis Shepard <(b)(6)>  
**Sent:** Saturday, April 4, 2020 5:55 AM  
**To:** Charles Bailey <(b)(6)> Nate <(b)(6)> Erroll Boone <(b)(6)> LeCount Davis <(b)(6)> Dr. Hiawatha Fountain <(b)(6)> Barney Graham <(b)(6)> Morton Grant <(b)(6)> ALHSR <(b)(6)> Kevin Hopson <(b)(6)> Dr. Sterling/Dr. Rosalyn King <(b)(6)> Lewis, Leon (DCRA) <(b)(6)> Leonard Miller <(b)(6)> Tony Mumford <(b)(6)> Russell Price <(b)(6)> Andre Sergeon <(b)(6)> Robert Louis Shepard, PhD <(b)(6)> Wilbert Williams <(b)(6)> Billy arnwine <(b)(6)> Amos Brown <(b)(6)> Matt Bryant <(b)(6)> [will](#) <(b)(6)> Anthony Gary <(b)(6)> Mitch Harris <(b)(6)> Brian Jackson <(b)(6)> MMW-Walter Jamison <(b)(6)> [walter](#) <(b)(6)> Walter McCoy <(b)(6)> Jay Johnson <(b)(6)> <(b)(6)> <(b)(6)> Tolulope Odunlami <(b)(6)> Elroy Sims <(b)(6)> Eggerton Campbell <(b)(6)>

**Subject:** Re: Men's Bible Study Meeting Tomorrow Morning: Apr. 4, 2020

**CAUTION:** This email originated from outside of the DC Government. Do not click on links or open attachments unless you recognize the sender and know that the content is safe. If you believe that this email is suspicious, please forward to [phishing@dc.gov](mailto:phishing@dc.gov) for additional analysis by OCTO Security Operations Center (SOC).

On Fri, Apr 3, 2020 at 9:15 PM Robert Louis Shepard <(b)(6)> wrote:  
**Men, you are invited to a scheduled Zoom meeting.**

**Topic:** Men's Bible Study Meeting  
**Time:** Apr 4, 2020 07:00 AM Eastern Time (US and Canada)  
**End Time:** 9:20 AM Eastern Time (US and Canada)

**Join Zoom Meeting**



## One tap mobile

+ [REDACTED] (b)(6) US (New York)  
+ [REDACTED] US (Chicago)

## Dial by your location

[REDACTED] (b)(6) US (New York)  
+ [REDACTED] (b)(6) US (Chicago)  
+ [REDACTED] (b)(6) US  
+ [REDACTED] (b)(6) US (Houston)  
+ [REDACTED] (b)(6) US (San Jose)  
+ [REDACTED] (b)(6) US

Meeting ID: [REDACTED] (b)(6)

Find your local number: <https://zoom.us> [REDACTED] (b)(6)

## Thanks

/s/

*Robert Louis Shepard, PhD*

*Principal*

*The Shepard Institute (TSI), LLC*

*"It's more productive to focus on your capabilities than on your limitations."*

*----- Robert Louis Shepard, PhD*

Website: <http://www.robertlouisshepard.com>

[Follow Me on Facebook](#)

---

**CONFIDENTIALITY:** This email, and any attachments, is intended for the personal and authorized use of the recipient(s) named above. If you have received this communication in error, please notify the sender immediately by reply email

and delete the original message.

We've revamped our customer service model to ensure that when you contact DCRA, you get the help you need within 3 business days. To contact us, fill out our [on-demand customer intake form](#).

For the latest information on the District Government's response to COVID-19 (Coronavirus), please visit [coronavirus.dc.gov](https://coronavirus.dc.gov).

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 27 Feb 2020 20:38:20 +0000  
**To:** Jason McLellan  
**Subject:** RE: nCoV [REDACTED] (b) (4) opportunity

OK. Let me know when you are ready for a call. My last meeting ended early.

BG

---

**From:** Jason McLellan <[REDACTED] (b)(6)>  
**Sent:** Thursday, February 27, 2020 3:36 PM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Subject:** RE: nCoV licensing-partnership opportunity

Nope, no idea who they are  
Jason

---

**From:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Sent:** Thursday, February 27, 2020 1:51 PM  
**To:** Jason McLellan <[REDACTED] (b)(6)>  
**Subject:** FW: nCoV [REDACTED] (b) (4) opportunity  
**Importance:** High

FYI. Do you know this person? [REDACTED] (b) (4)

BG

---

**From:** Terrell, Jason <[REDACTED] (b)(6)>  
**Sent:** Thursday, February 27, 2020 2:37 PM  
**To:** Jason McLellan <[REDACTED] (b)(6)> [REDACTED] (b)(6)  
[REDACTED] (b)(6) <[REDACTED] (b)(6)> Graham, Barney (NIH/VRC) [E]  
<[REDACTED] (b) (6)>  
**Cc:** Leahy, Daniel J <[REDACTED] (b)(6)> Eckhardt, Gail <[REDACTED] (b)(6)>  
Jason Terrell <[REDACTED] (b)(6)>  
**Subject:** FW: nCoV [REDACTED] (b) (4) opportunity  
**Importance:** High

Following up on Tuesday's email...

I've copied CNS Chair, Dr. Dan Leahy, and my Oncology Chair, Dr. Gail Eckhardt, to help make contact as I'm sure you've been overwhelmed with inquiries.

(b) (4)

Jason

**JASON TERRELL, MD**

Affiliate Faculty, Department of Oncology

Dell Medical School | The University of Texas at Austin

c: (b)(6) | [dellmedschool.utexas.edu](http://dellmedschool.utexas.edu)



The University of Texas at Austin  
**Dell Medical School**

Health Discovery Building • 1701 Trinity St. • Austin, TX 78712 • T: 512-495-5400

---

**From:** "Terrell, Jason" <(b)(6)>

**Date:** Tuesday, February 25, 2020 at 1:07 PM

**To:** Jason McLellan <(b)(6)> "(b)(6)" <(b)(6)>  
<(b)(6)> "(b)(6)" <(b)(6)> <(b)(6)>  
"(b)(6)" <(b)(6)>

**Cc:** Jason Terrell <(b)(6)>

**Subject:** nCoV (b)(4) opportunity

Dr. McLellan, Dr. Graham, and team:

I'm an affiliate faculty member in Oncology at UT Dell Med and work full time as the (b)(4)

(b)(4)

(b)(4)

(b) (4)

If you're interested in learning more please complete the attached NDA allowing me to disclose details. Please don't hesitate to contact me directly by text or call on my personal cell at (b)(6) Thank you.

Jason

**JASON TERRELL, MD**

Affiliate Faculty, Department of Oncology

Dell Medical School | The University of Texas at Austin

c: (b)(6) | [dellmedschool.utexas.edu](http://dellmedschool.utexas.edu)



**The University of Texas at Austin**  
**Dell Medical School**

Health Discovery Building • 1701 Trinity St. • Austin, TX 78712 • T: 512-495-5400

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 27 Feb 2020 23:44:10 +0000  
**To:** Routh, Jennifer (NIH/NIAID) [E]; Beigel, John (NIH) [E]; Erbeling, Emily (NIH/NIAID) [E]; Casseti, Cristina (NIH/NIAID) [E]; NIAID BUGS; Corbett, Kizzmekia (NIH/VRC) [E]; Mascola, John (NIH/VRC) [E]; Hiatt, Nissa (NIH/VRC) [C]  
**Cc:** Stover, Kathy (NIH/NIAID) [E]; Marston, Hilary (NIH/NIAID) [E]  
**Subject:** RE: draft NIAID press release - Phase 1 mRNA  
**Attachments:** NIAID press release mRNA Phase 1\_BG.docx

I made one small edit.

BG

---

**From:** Routh, Jennifer (NIH/NIAID) [E] <(b)(6)>  
**Sent:** Thursday, February 27, 2020 6:17 PM  
**To:** Beigel, John (NIH) [E] <(b)(6)> Erbeling, Emily (NIH/NIAID) [E] <(b)(6)> Casseti, Cristina (NIH/NIAID) [E] <(b)(6).gov>; NIAID BUGS <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)> Corbett, Kizzmekia (NIH/VRC) [E] <(b)(6)> Mascola, John (NIH/VRC) [E] <(b)(6)> Hiatt, Nissa (NIH/VRC) [C] <(b)(6)>  
**Cc:** Stover, Kathy (NIH/NIAID) [E] <(b)(6)> Marston, Hilary (NIH/NIAID) [E] <(b)(6)>  
**Subject:** draft NIAID press release - Phase 1 mRNA

Hello,

Attached for DMID and VRC review is a press release announcing the start of the Phase 1 clinical trial of mRNA-1273. After I receive input from (b)(5)

(b)(5)

The trial is on [clinicaltrials.gov \(NCT04283461\)](https://clinicaltrials.gov/ct2/show/study/NCT04283461) so some reporters now know the basics of where it will be and how it is designed.

Thanks,  
Jen

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: [REDACTED] (b)(6)

[REDACTED] (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.

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 31 Mar 2020 01:00:15 +0000  
**To:** Ramu Subbramanian  
**Cc:** McDermott, Adrian (NIH/VRC) [E]  
**Subject:** RE: SARS-CoV-2 efforts

Dear Ramu,

Sorry for delayed response. I'm going to forward your email to Adrian McDermott who runs our Vaccine Immunology Program and also specializes in high throughput immunology assays.

Thank you for your interest. It has been very difficult to see how to get everyone involved that wants to help.

Take care,

Barney

-----Original Message-----

From: Ramu Subbramanian <[REDACTED] (b)(6)>  
Sent: Tuesday, March 24, 2020 2:27 PM  
To: Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
Subject: SARS-CoV-2 efforts

Dear Barney,

I am one of late Norman Letvin's Fellows and the Director of Immune Monitoring at Cellular Technology Limited (CTL) based out of Washington, D.C. I wanted to reach out and see if I can contribute in any way to your SARS-CoV-2 vaccine efforts [REDACTED] (b)(4).

I hasten to add that this is not a job request or a company- or product-related query; rather it is my effort to contribute in some way to ongoing vaccine efforts given my expertise [REDACTED] (b)(4)

[REDACTED] (b)(4)

If I have misdirected this request, would you be so kind to point me in the right direction? I would greatly appreciate any input.

Thanks again for your time during this busy period and I truly look forward to hearing from you.

With kind regards,

Ramu Subbramanian Ph.D  
Director, Immune Monitoring  
Cellular Technology LTD  
Tel: [REDACTED] (b)(6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 23 Mar 2020 03:08:50 +0000  
**To:** Loomis, Rebecca (NIH/VRC) [E]  
**Cc:** Dipiazza, Anthony (NIH/VRC) [F]; Morabito, Kaitlyn (NIH/VRC) [E]; Ruckwardt, Tracy (NIH/VRC) [E]  
**Subject:** Re: [REDACTED] (b) (4) Study (PLACEHOLDER)  
**Attachments:** image001.jpg

We need to wait. It's going to become more difficult each day and [REDACTED] (b) (4)  
[REDACTED] (b) (4)

Barney

Sent from my iPhone

On Mar 21, 2020, at 1:07 PM, Loomis, Rebecca (NIH/VRC) [E] <[REDACTED] (b) (6)> wrote:

I am torn on which course is the best. I also see reasons to [REDACTED] (b) (4), (b) (5)  
[REDACTED] (b) (4), (b) (5). First, our primary goal is [REDACTED] (b) (4), (b) (5)  
[REDACTED] (b) (4), (b) (5)

[REDACTED] (b) (4), (b) (5). Second, while not optimal, we can still [REDACTED] (b) (4)  
[REDACTED] (b) (4), (b) (5)

Obviously, if we wait, we can [REDACTED] (b) (4), (b) (5)  
[REDACTED] (b) (4), (b) (5)

Just my thoughts.  
Rebecca

---

**From:** "Dipiazza, Anthony (NIH/VRC) [F]" <[REDACTED] (b) (6)>  
**Date:** Saturday, March 21, 2020 at 12:17:14 PM  
**To:** "Morabito, Kaitlyn (NIH/VRC) [E]" <[REDACTED] (b) (6)> "Ruckwardt, Tracy (NIH/VRC) [E]" <[REDACTED] (b) (6)> "Graham, Barney (NIH/VRC) [E]" <[REDACTED] (b) (6)> "Loomis, Rebecca (NIH/VRC) [E]" <[REDACTED] (b) (6)>  
**Subject:** Re: [REDACTED] (b) (4) Study (PLACEHOLDER)

Hi all,

I am deferring to Tracy and Kaitlyn's experience with these types of studies and collaborating partners.

(b) (4), (b) (5)

Best,  
Tony

---

**From:** "Morabito, Kaitlyn (NIH/VRC) [E]" <(b)(6)>  
**Date:** Friday, March 20, 2020 at 1:13 PM  
**To:** "Ruckwardt, Tracy (NIH/VRC) [E]" <(b)(6)> "Graham, Barney (NIH/VRC) [E]" <(b)(6)> "Loomis, Rebecca (NIH/VRC) [E]" <(b)(6)> "Dipiazza, Anthony (NIH/VRC) [F]" <(b)(6)>  
**Subject:** Re: (b) (4) Study (PLACEHOLDER)

Hi All,

I agree with Tracy here. It sounded like (b) (4), (b) (5)  
(b) (4), (b) (5)

I really think (b) (4), (b) (5)  
(b) (4), (b) (5)

I think if we start the study, we are more likely to (b) (4), (b) (5)  
(b) (4), (b) (5).

Kaitlyn

---

**From:** Tracy Ruckwardt <(b)(6)>  
**Date:** Friday, March 20, 2020 at 12:39 PM  
**To:** Barney Graham <(b)(6)> "Loomis, Rebecca (NIH/VRC) [E]" <(b)(6)> "Morabito, Kaitlyn (NIH/VRC) [E]" <(b)(6)> "Dipiazza, Anthony (NIH/VRC) [F]" <(b)(6)>  
**Subject:** FW: (b) (4) Study (PLACEHOLDER)

Hi All,

(b) (4), (b) (5)

I think our options are:

1. [Redacted] (b) (4), (b) (5)
2. [Redacted]

I just saw Rebecca's e-mail to Chris [Redacted] (b) (4), (b) (5) if the intention is to [Redacted] (b) (4), (b) (5) then I think we should [Redacted] (b) (4), (b) (5) [Redacted] (b) (4), (b) (5). I just want to remind everyone that [Redacted] (b) (4), (b) (5) [Redacted] (b) (4), (b) (5)

Tracy

---

**From:** "Case, Chris (NIH/NCI) [C]" <[Redacted] (b)(6)>  
**Date:** Friday, March 20, 2020 at 10:52 AM  
**To:** "[Redacted] (b)(6) <[Redacted] (b)(6)> "Loomis, Rebecca (NIH/VRC) [E]" <[Redacted] (b)(6)> "Taylor, Alida (NIH/VRC) [E]" <[Redacted] (b)(6)>  
**Cc:** "Ruckwardt, Tracy (NIH/VRC) [E]" <[Redacted] (b)(6)>  
**Subject:** RE [Redacted] (b) (4) Study (PLACEHOLDER)

Hi Rebecca,

Given the new NIH guidance regarding limitations on research, please let us know if there is any impact to the study plans.

Thanks  
Chris

**Chris Case, Ph.D.** (Contractor)  
Manager, Scientific Programs  
Frederick National Laboratory for Cancer Research  
Leidos Biomedical Research, Inc.  
Phone: [Redacted] (b)(6)

---

**From:** Dr. Hanne Andersen <[Redacted] (b)(6)>  
**Sent:** Thursday, March 19, 2020 11:21 AM

**To:** Loomis, Rebecca (NIH/VRC) [E] <[REDACTED] (b)(6)> Taylor, Alida (NIH/VRC) [E] <[REDACTED] (b)(6)> Case, Chris (NIH/NCI) [C] <[REDACTED] (b)(6)>  
**Cc:** Ruckwardt, Tracy (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Subject:** RE: [REDACTED] (b)(4) Study (PLACEHOLDER)

Hi Rebecca,

[REDACTED] (b)(4)

---

**From:** Loomis, Rebecca (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Sent:** Thursday, March 19, 2020 10:54 AM  
**To:** Dr. Hanne Andersen <[REDACTED] (b)(6)> Taylor, Alida (NIH/VRC) [E] <[REDACTED] (b)(6)> Case, Chris (NIH/NCI) [C] <[REDACTED] (b)(6)>  
**Cc:** Ruckwardt, Tracy (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Subject:** Re: [REDACTED] (b)(4) Study (PLACEHOLDER)

**[EXTERNAL EMAIL]** DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Hanne,

Thank you for sending an updated schedule.

Two items;

1. [REDACTED] (b)(4)
2. [REDACTED]

Would you be able to send us [REDACTED] (b) (4)  
[REDACTED] (b) (4) Etc.

Thank you,  
Rebecca

---

**From:** "Dr. Hanne Andersen" <[REDACTED] (b)(6)>  
**Date:** Thursday, March 19, 2020 at 8:29 AM  
**To:** "Taylor, Alida (NIH/VRC) [E]" <[REDACTED] (b)(6)> "Loomis, Rebecca (NIH/VRC) [E]" <[REDACTED] (b)(6)> "Case, Chris (NIH/NCI) [C]" <[REDACTED] (b)(6)>  
**Cc:** "Ruckwardt, Tracy (NIH/VRC) [E]" <[REDACTED] (b)(6)>  
**Subject:** RE: [REDACTED] (b) (4) Study (PLACEHOLDER)

Here is the suggested schedule with the revisions we discussed earlier in the week.

Best regards,  
-Hanne

---

**From:** Taylor, Alida (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Sent:** Wednesday, March 18, 2020 2:34 PM  
**To:** Loomis, Rebecca (NIH/VRC) [E] <[REDACTED] (b)(6)> Dr. Hanne Andersen <[REDACTED] (b)(6)> Case, Chris (NIH/NCI) [C] <[REDACTED] (b)(6)>  
**Cc:** Ruckwardt, Tracy (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Subject:** RE: [REDACTED] (b) (4) Study (PLACEHOLDER)

**[EXTERNAL EMAIL]** DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Good afternoon Rebecca,

Can you let Hane and Diana know about the changes from the original ASP. I believe you are changing the following:

1. [REDACTED] (b) (4)
2. [REDACTED]
3. [REDACTED]

Can you please check with [REDACTED] (b) (4)?

Alida

---

**From:** Loomis, Rebecca (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Sent:** Tuesday, March 17, 2020 1:23 PM  
**To:** Andersen, Hanne <[REDACTED] (b)(6)> Case, Chris (NIH/NCI) [C]

< (b)(6) Taylor, Alida (NIH/VRC) [E] < (b)(6) >  
**Cc:** Ruckwardt, Tracy (NIH/VRC) [E] < (b)(6) >  
**Subject:** Re: (b)(4) Study (PLACEHOLDER)

(b)(4) schedule.

<image001.jpg>

Thank you,  
Rebecca

---

**From:** "Dr. Hanne Andersen" < (b)(6) >  
**Date:** Tuesday, March 17, 2020 at 11:07 AM  
**To:** "Loomis, Rebecca (NIH/VRC) [E]" < (b)(6) > "Case, Chris (NIH/NCI) [C]" < (b)(6) > "Taylor, Alida (NIH/VRC) [E]" < (b)(6) >  
**Cc:** "Ruckwardt, Tracy (NIH/VRC) [E]" < (b)(6) >  
**Subject:** RE: (b)(4) Study (PLACEHOLDER)

Hi Rebecca,  
I have responded to the questions below.

-Hanne

---

**From:** Loomis, Rebecca (NIH/VRC) [E] < (b)(6) >  
**Sent:** Tuesday, March 17, 2020 10:59 AM  
**To:** Case, Chris (NIH/NCI) [C] < (b)(6) > Dr. Hanne Andersen < (b)(6) > Taylor, Alida (NIH/VRC) [E] < (b)(6) > Loomis, Rebecca (NIH/VRC) [E] < (b)(6) >  
**Cc:** Ruckwardt, Tracy (NIH/VRC) [E] < (b)(6) >  
**Subject:** Re: (b)(4) Study (PLACEHOLDER)

**[EXTERNAL EMAIL]** DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Hi All,

In preparation for our call this afternoon, I had a few questions.

(b)(4)



(b) (4)

Thank you,  
Rebecca

---

**From:** "Case, Chris (NIH/NCI) [C]" <(b)(6)>  
**Date:** Monday, March 16, 2020 at 1:31:51 PM  
**To:** "Andersen, Hanne" <(b)(6)> "Taylor, Alida (NIH/VRC) [E]" <(b)(6)>  
"Loomis, Rebecca (NIH/VRC) [E]" <(b)(6)>  
**Cc:** "Ruckwardt, Tracy (NIH/VRC) [E]" <(b)(6)>  
**Subject:** (b) (4) Study (PLACEHOLDER)

The purpose of this call is to (b) (4)  
(b) (4)

**Participants:**

VRC: Alida Taylor, Rebecca Loomis, Tracy Ruckwardt  
Bioqual: Hanne Andersen  
Leidos Biomed: Chris Case

**Agenda:**

- SOW review (Chris)

(b) (4)

-- Do not delete or change any of the following text. --

**When it's time, join your Webex meeting here.**

Meeting number (access code): (b)(6)

Meeting password: (b)(6)

## [Join meeting](#)

### **Join by phone**

Tap to call in from a mobile device (attendees only)

Dial (b)(6) Call-in toll number (US/Canada)

### **Join from a video system or application**

Dial (b)(6)

You can also dial (b)(6) and enter your meeting number.

### **Join using Microsoft Lync or Microsoft Skype for Business**

Dial (b)(6)

If you are a host, [go here](#) to view host information.

Need help? Go to <http://help.webex.com>

(b) (4)





**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 13 Apr 2020 14:05:48 +0000  
**To:** Embry, Alan (NIH/NIAID) [E]; Stemmy, Erik (NIH/NIAID) [E]  
**Subject:** Fwd: covid 19 anti-viral inhalant to reduce viral load within masks/lungs  
**Attachments:** image001.png, ATT00001.htm, image004.jpg, ATT00002.htm, jpp.2018.6.07.pdf, ATT00003.htm, zanamivir\_inhalant\_study\_181-4-1471.pdf, ATT00004.htm

Here's a new idea for you. Sounds a little like (b) (5)  
(b) (5)

BG

Sent from my iPhone

Begin forwarded message:

**From:** Jason Sweis <jsweis0 (b)(6)>  
**Date:** April 13, 2020 at 9:49:36 AM EDT  
**To:** "Graham, Barney (NIH/VRC) [E]" <(b)(6)>  
**Cc:** Jason Sweis <jsweis0 (b)(6)>  
**Subject:** covid 19 anti-viral inhalant to reduce viral load within masks/lungs

Dear Dr. Graham,

I'm interested in an alternate way to approach the covid 19 pandemic. It's a free concept for an anti-viral inhalant which uses human-safe solvents to attack the virus lipid shell. As I watch world-wide footage of hospital corridors lined with patients in beds I wonder why this simple idea hasn't been implemented as there are not enough ventilators to go around.

The proposed inhalants would be natural mono-terpenes with droplets dispensed **inside** respirators worn by patients and those treating them. Given that the covid 19 virus has a shell which soap can destroy, the theory is that these solvents would severely disrupt the viral load inside the respirator and lungs. The lungs are a replication factory for the virus and therefore spread throughout the bronchial pathways and to the outside. The proposal is to knock the viral load down in order to **buy time** for the immune system to respond. Also, to reduce the internal and external spread of the virus.

I propose using common alpha-pinene and d-limonene because of their high vapor output. Studies have shown that the body can process these terpenes safely without residual toxic problems remaining. Furthermore, alpha-pinene has been shown to have anti-inflammatory and bronchial dilation properties which help breathing. (See attached research for VOCs).

Example of why reducing the viral load is important: (see anti-viral inhalant study of a drug called Zanamivir):

... the moderate reduction in the virus load induced by Zanamivir resulted in a drastic reduction in the median time to alleviation of influenza symptoms, with a 47% difference compared with placebo (before correcting for dependent variables). This difference may be superior to the 25%–30% reduction seen in a previous similar study [5]. Considering the physiopathology of influenza virus infections, we believe that most of the clinical benefit seen in our study is due to the early reduction in virus titers at 12 h, although we cannot exclude a later effect because of the significant reduction found at 96 h.

Advantages of this proposal:

- The terpenes alpha-pinene and d-limonene are commercially available everywhere and easy to deploy on a massive scale immediately.

- This may keep patients from moving into the critical category who might then move onto ventilators.
- If a broader portion of the population could safely move through the infection then we could achieve “herd immunity” before a vaccine is even ready.

For reference, [REDACTED] (b) (6)  
[REDACTED] (b) (6). I've attached a fabric pad (optional) into the respirator where I add 3-4 drops of each. Take deep breaths and hold. Repeat every 3-4 hours or when vapor output has been diminished.

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 30 Mar 2020 02:31:16 +0000  
**To:** Mascola, John (NIH/VRC) [E]  
**Subject:** RE: perspective for Science  
**Attachments:** Risk-benefit for COVID-19 Science 2020 v4.docx

Here is first draft.

BG

---

**From:** Mascola, John (NIH/VRC) [E] <[REDACTED]> (b) (6)  
**Sent:** Sunday, March 29, 2020 9:21 PM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED]> (b) (6)  
**Subject:** Re: perspective for Science

Hi Barney,

[REDACTED] (b) (5)

Happy to read or help as needed.

Just let Tony know once ready to submit. That's all that he would want.

Thanks  
John

Sent from my iPhone

On Mar 29, 2020, at 21:00, Graham, Barney (NIH/VRC) [E] <[REDACTED]> (b) (6) wrote:

Hi John,

[REDACTED] (b) (5)

Barney

\*\*\*\*\*

Barney S. Graham, MD, PhD  
Senior Investigator  
Deputy Director, Vaccine Research Center  
Chief, Viral Pathogenesis Laboratory  
National Institute of Allergy and Infectious Diseases, NIH  
40 Convent Drive, MSC 3017  
Bldg 40, Room 2502  
Bethesda, MD 20892-3017  
Phone: (b)(6)  
URL: <https://www.niaid.nih.gov/research> (b)(6)

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. 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.



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 1 Apr 2020 14:41:24 +0000  
**To:** (b)(6)  
**Cc:** (b)(6); Young, Monique (NIH/VRC) [E]  
**Subject:** RE: Preparation for tomorrow's webinar  
**Attachments:** ADVAC CoV Update 2Apr2020 HO.pdf

Hi Phillipe,

I have attached a handout for the slides I plan to show tomorrow. There may be a few additional slides, but these are the ones I can share. Look forward to the discussion.

Take care,

Barney

---

**From:** (b)(6) <(b)(6)>  
**Sent:** Wednesday, April 1, 2020 9:30 AM  
**To:** Graham, Barney (NIH/VRC) [E] <(b)(6)> 'Melanie Saville'  
<(b)(6)>  
**Cc:** (b)(6) Young, Monique (NIH/VRC) [E] <(b)(6)>  
**Subject:** Preparation for tomorrow's webinar

Dear both,

Just a kind reminder that it would be important for us to receive your slides by end of day today even if late. This way we will be able to share ahead with the discussants which will facilitate the starting of the discussion.

Melanie, will you also rather want to present your slides with sharing your screen or let me show them for you?

With thanks and kind regards,

Philippe

---

**De :** (b)(6) <(b)(6)>  
**Envoyé :** lundi 30 mars 2020 18:16  
**À :** 'Graham, Barney (NIH/VRC) [E]' <(b)(6)>  
**Cc :** 'Melanie Saville' <(b)(6)> '(b)(6)' <(b)(6)>  
**Objet :** RE: Preparation for Thursday's webinar

Thanks Barney, This would be the same link indeed. If you insist I will let you share your screen so that you can directly present your slides.

Philippe

---

**De :** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b) (6)>  
**Envoyé :** lundi 30 mars 2020 18:12  
**À :** [REDACTED] (b)(6)  
**Cc :** Melanie Saville <[REDACTED] (b)(6)> [REDACTED] (b)(6)  
**Objet :** Re: Preparation for Thursday's webinar

Hi Phillippe,

Just to clarify, I will join on the same link sent to all the other participants?

I will join 20 minutes early.

I will send you slides but would prefer to share the presentation from my computer so I can use a pointer.

Take care,

Barney

Sent from my iPhone

On Mar 30, 2020, at 11:07 AM, "[REDACTED] (b)(6)" <[REDACTED] (b)(6)> wrote:

Dear both,

We have over 180 ADVAC alumni registered for the webinar. We have tested the technology with Carol and hope that we will not have glitches during the call.

It will be important that you connect from a computer using the link provided in the booking. It would be great if you can connect 20 minutes ahead of the normal starting time so that we can make sure everything will be working smoothly with respect to your connexions. After your two presentations are finished, Paul-Henri will request up to 9 discussants to ask questions and provide comments directly online. Only you two, as well as the chair and the discussants, will be on video. All other participants will be without video and muted. They will only be able to send written questions and answers, which I will ask on their behalf and within the limit of the time you have. You will be given access to the questions, but to allow you to focus on the discussion, it will be best if you let me work on the questions and ask them directly to you.

Could you kindly confirm when you will be able to share your presentations with us? It would be important to have them on 1 April by midday if at all possible as we would like to share them with the

discussants ahead of the webinar so that they are well prepared. I will then also be able to compile the slides, adding a cover slide and making sure all goes well. As previously indicated, it will be good if you can call your slides by numbers so that I can correctly switch the slides for you.

Also if I am not mistaken, you have not yet confirmed to Carol that you accept the webinar to be recorded and posted on the ADVAC alumni website together with your presentation in Pdf mode.

I look forward to hearing from you both.

With kind regards,

Philippe

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 31 Jan 2020 13:39:42 +0000  
**To:** Davide Robbiani  
**Cc:** Van Voorhis, Wes; Morabito, Kaitlyn (NIH/VRC) [E]; Corbett, Kizzmekia (NIH/VRC) [E]; Mascola, John (NIH/VRC) [E]; Stein, Judy (NIH/VRC) [C]  
**Subject:** Re: 2019-nCoV (b) (4) selection?

Do you mean as (b) (4)?

Barney

Sent from my iPhone

> On Jan 30, 2020, at 11:45 PM, Davide Robbiani <(b) (6)> wrote:  
>  
> Thank you Wes and Barney, (b) (4).  
> We would be interested in the (b) (4).  
> With best regards,  
> Davide

> --  
> Davide F. Robbiani, MD, PhD  
> Research Associate Professor  
> Molecular Immunology  
>  
> The Rockefeller University  
> Browne Center for Immunology  
> 1230 York Avenue, Box 220  
> New York, NY 10065, USA  
>  
> (b) (6)  
> (b) (6) - phone  
> (b) (6) fax

>> On Jan 30, 2020, at 17:40, Van Voorhis, Wes <(b) (6)> wrote:  
>>  
>> Barney, thanks for your immediate response. It would be great to (b) (4)  
(b) (4) Dr. Robbiani at Rockefeller University as they will actually (b) (4)  
(b) (4) But I'm happy to participate (b) (4). Thanks again, Wes

>> Wes Van Voorhis MD PhD  
>> Professor, Allergy and Infectious Diseases  
>> Director, Center for Emerging and Re-emerging Infectious Diseases (CERID)  
>> University of Washington  
>> Office: (b) (6)  
>> Fax: 206-616-4898

>> MS 358061, 750 Republican St., Rm E-606  
>> Seattle WA 98109-4766 USA  
>> SKYPE NAME (b)(6)  
>>  
>> From: Graham, Barney (NIH/VRC) [E] <(b)(6)>  
>> Sent: Thursday, January 30, 2020 1:08 PM  
>> To: Van Voorhis, Wes <(b)(6)>  
>> Cc: Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)> Davide Robbiani  
>> (b)(6) <(b)(6)> Corbett, Kizzmekia (NIH/VRC) [E]  
>> <(b)(6)> Mascola, John (NIH/VRC) [E] <(b)(6)> Stein, Judy (NIH/VRC)  
>> [C] <(b)(6)>  
>> Subject: Re: 2019-nCoV (b)(4) selection?  
>>

>> Thanks for your email and interest. (b)(4)  
(b)(4)

>>  
>> Barney  
>>  
>>  
>>  
>>  
>> Sent from my iPhone  
>>  
>>

>> On Jan 30, 2020, at 9:49 PM, Van Voorhis, Wes <(b)(6)> wrote:

>> Dear Dr. Graham,

>> I am at the University of Washington and (b)(4)  
(b)(4)

>> I understand you are traveling, so have cc.ed your laboratory contact as well, Dr. Morabito.

>> Thanks for your consideration!

>> Wes Van Voorhis

>> Wes Van Voorhis MD PhD

>> Professor, Allergy and Infectious Diseases  
>> Director, Center for Emerging and Re-emerging Infectious Diseases (CERID)  
>> University of Washington  
>> Office: (b)(6)  
>> Fax: (b)(6)  
>> MS 358061, 750 Republican St., Rm E-606  
>> Seattle WA 98109-4766 USA  
>> SKYPE NAME (b)(6)  
>>  
>> From: Mascola, John (NIH/VRC) [E] <(b)(6)>  
>> Sent: Sunday, January 26, 2020 10:18 AM  
>> To: Wald, Anna1 <(b)(6)> Suhana, Tina (NIH/VRC) [E] <(b)(6)>  
>> Cc: Corey MD, Larry <(b)(6)> Helen, Chu <(b)(6)> Julie McElrath  
<(b)(6)> Kathleen Neuzil <(b)(6)> Van Voorhis, Wesley  
<(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)> Corbett, Kizzmekia (NIH/VRC)  
[E] <(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)> Bok, Karin  
(NIH/VRC) [E] <(b)(6)> Stein, Judy (NIH/VRC) [C] <(b)(6)> Ledgerwood, Julie  
(NIH/NIAID) [E] <(b)(6)> Chen, Grace (NIH/NIAID) [E] <(b)(6)> Marston,  
Hilary (NIH/NIAID) [E] <(b)(6)> Austin, Sarah (NIH/NIAID) [E] <(b)(6)>  
>> Subject: RE: Patient with coronavirus  
>>  
>> Great.  
>>  
>> Helen – I just talked to Barney who will be out of town next week, but suggested we proceed with a call. Kaitlyn Morabito is coordinating efforts for his lab and our clinical staff now also copied.  
>>  
>> So lets wait to get confirmation for Hilary Marson from Tony’s office – and then Tina can find time for a call.  
>>  
>> A key goal is to discuss providing (b)(4)  
(b)(4)  
>>  
>> John  
>>  
>>  
>> From: Anna Wald <(b)(6)>  
>> Sent: Sunday, January 26, 2020 12:56 PM  
>> To: Mascola, John (NIH/VRC) [E] <(b)(6)>  
>> Cc: Corey MD, Larry <(b)(6)> Helen Y Chu <(b)(6)> Julie McElrath  
<(b)(6)> Kathleen Neuzil <(b)(6)> Wesley C. Van Voorhis  
<(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)> Corbett, Kizzmekia (NIH/VRC)  
[E] <(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)> Bok, Karin  
(NIH/VRC) [E] <(b)(6)> Stein, Judy (NIH/VRC) [C] <(b)(6)>  
>> Subject: Re: Patient with coronavirus  
>>  
>> Dear John,  
>>  
>> That sounds perfect. While I would like to remain in the loop, I am teaching in subSaharan Africa for the next 2 weeks so calls may be hard to coordinate with my schedule and I don’t want to delay the discussions. Please go ahead and work with Helen directly- I know she is excited to collaborate. Helen and I will talk so she can update me.  
>>  
>> Please don’t hesitate to call my cell if there is anything we should discuss.  
>>  
>> Best, Anna  
>>  
>>

>>  
>> Anna Wald, MD, MPH  
>>  
>> Head of Allergy and Infectious Diseases Division  
>> Professor of Medicine, Laboratory Medicine & Epidemiology, University of Washington  
>>  
>> tel. (b)(6)  
>> fax. 206/520-4371  
>> University of Washington Virology Research Clinic  
>> <http://depts.washington.edu/herpes/>  
>>

>> PHYSICAL LOCATION:  
>> 908 Jefferson St, Suite 11NJ-1166, Seattle, WA 98104  
>>

>> MAILING ADDRESS:  
>> Harborview Medical Center, 325 9th Ave, Box #359928, Seattle, WA 98104  
>>

>> Privileged, confidential or patient identifiable information may be contained in this message. This information is meant only for the use of the intended recipients. If you are not the intended recipient, or if the message has been addressed to you in error, do not read, disclose, reproduce, distribute, disseminate or otherwise use this transmission. Instead, please notify the sender by reply e-mail, and then destroy all copies of the message and any attachments.

>> From: Mascola, John (NIH/VRC) [E] <(b)(6)>  
>> Sent: Sunday, January 26, 2020 9:49:31 AM  
>> To: Anna Wald <(b)(6)>  
>> Cc: Corey MD, Larry <(b)(6)> Helen Y Chu <(b)(6)> Julie McElrath  
<(b)(6)> Kathleen Neuzil <(b)(6)> Wesley C. Van Voorhis  
<(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)> Corbett, Kizzmekia (NIH/VRC)  
[E] <(b)(6)> Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)> Bok, Karin  
(NIH/VRC) [E] <(b)(6)> Stein, Judy (NIH/VRC) [C] <(b)(6)>  
>> Subject: RE: Patient with coronavirus  
>>

>> Dear Anna,  
>>

>> Thank you for this important email. We have had discussion with CDC leadership that NIAID/NIH should be primarily involved here. I'm copying the NIH POC, Dr. Hillary Marston, special assistant to Dr. Fauci.  
>>

(b)(4)



>> Hilary, with help from Karin Bock on our end, can help set up a call, which I suggest would first be between your group and our NIH staff.  
>>

>> Thank you,  
>>  
>>

>> John R. Mascola, M.D.  
>> Director, Vaccine Research Center  
>> National Institute of Allergy and Infectious Diseases  
>> National Institutes of Health  
>> email: (b)(6)

>> office tel: (b)(6)

>>  
>>  
>>  
>>

>> From: Anna Wald <(b)(6)>

>> Sent: Sunday, January 26, 2020 12:02 PM

>> To: Mascola, John (NIH/VRC) [E] <(b)(6)>

>> Cc: Corey MD, Larry <(b)(6)> Helen Y Chu <(b)(6)> Julie McElrath

<(b)(6)> Kathleen Neuzil <(b)(6)> Wesley C. Van Voorhis

<(b)(6)>

>> Subject: Patient with coronavirus

>>

>> Dear Dr. Mascola,

>>

>> I am reaching out on suggestion of Larry Corey to touch base about the patient with coronavirus who is (b)(4)

(b)(4)

(b)(4).

>>

(b)(4)

>> I am heading to the airport in few hours for a trip to Kenya so will not be on email. However, if anyone is trying to reach me, my cell phone is (b)(6)

>>

>> Thank you, Anna

>>

>>

>> Anna Wald, MD, MPH

>>

>> Head of Allergy and Infectious Diseases Division,

>> Professor of Medicine, Laboratory Medicine & Epidemiology,

>> University of Washington

>>

>> tel. 206/ (b)(6)

>> fax. 206/520-4371

>> University of Washington Virology Research Clinic

>> <http://depts.washington.edu/herpes/>

>> pronouns: she/her/hers

>>

>> PHYSICAL LOCATION:

>> 908 Jefferson St, Suite 11NJ-1166, Seattle, WA 98104

>>

>> MAILING ADDRESS:



>> Harborview Medical Center, 325 9th Ave, Box #359928, Seattle, WA 98104

>>

>> Privileged, confidential or patient identifiable information may be contained in this message. This information is meant only for the use of the intended recipients. If you are not the intended recipient, or if the message has been addressed to you in error,

>> do not read, disclose, reproduce, distribute, disseminate or otherwise use this transmission. Instead, please notify the sender by reply e-mail, and then destroy all copies of the message and any attachments.

>

>

>

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 18 Mar 2020 14:40:49 +0000  
**To:** Meagan Phelan  
**Cc:** Gadi Ben-Yehuda  
**Subject:** Re: We are online now :)

I'm on but don't hear voices

BG

Sent from my iPhone

On Mar 18, 2020, at 10:39 AM, Meagan Phelan <(b)(6)> wrote:

Thank you!

**Meagan Phelan**, *Science Press Package Executive Director*  
American Association for the Advancement of Science (AAAS)  
1200 New York Avenue, NW | Washington, DC 20005  
**Office Phone:** (b)(6)  
**Cell Phone:** (b)(6)  
**E-mail:** (b)(6)  
**Follow me on [Twitter](#)**

---

**From:** Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Sent:** Wednesday, March 18, 2020 10:38 AM  
**To:** Meagan Phelan <(b)(6)>  
**Cc:** Gadi Ben-Yehuda <(b)(6)>  
**Subject:** Re: We are online now :)

Ok. Joining now.

BG

Sent from my iPhone

On Mar 18, 2020, at 10:36 AM, Meagan Phelan <(b)(6)> wrote:

(b)(6)

**Meagan Phelan**, *Science* Press Package Executive Director  
American Association for the Advancement of Science (AAAS)  
1200 New York Avenue, NW | Washington, DC 20005

**Office Phone:** (b)(6)

**Cell Phone:** (b)(6)

**E-mail:** (b)(6)

Follow me on [Twitter](#)

---

**From:** Meagan Phelan

**Sent:** Wednesday, March 18, 2020 10:10 AM

**To:** Graham, Barney (NIH/VRC) [E] <(b)(6)> Jason McLellan

<(b)(6)> Young, Monique (NIH/VRC) [E] <(b)(6)> Gadi Ben-Yehuda <(b)(6)>

**Cc:** Olivia Tarantino <(b)(6)> Walter Beckwith <(b)(6)> Matthew Wright

<(b)(6)> Valeria Sabate <(b)(6)> Sinatra, Christine

<(b)(6)>

**Subject:** RE: Promotional link to Friday March 20 9am US ET Science Facebook Live on SARS-CoV-2 vaccine

Hi Barney, thanks so much for this. This is very helpful. Speak with you in about 20 minutes. We'll be connecting here, as a reminder: (b)(6)

best,

**Meagan Phelan**, *Science* Press Package Executive Director  
American Association for the Advancement of Science (AAAS)  
1200 New York Avenue, NW | Washington, DC 20005

**Office Phone:** (b)(6)

**Cell Phone:** (b)(6)

**E-mail:** (b)(6)

Follow me on [Twitter](#)

---

**From:** Graham, Barney (NIH/VRC) [E] <(b)(6)>

**Sent:** Wednesday, March 18, 2020 9:05 AM

**To:** Jason McLellan <(b)(6)> Meagan Phelan <(b)(6)> Young, Monique (NIH/VRC) [E] <(b)(6)> Gadi Ben-Yehuda <(b)(6)>

**Cc:** Olivia Tarantino <(b)(6)> Walter Beckwith <(b)(6)> Matthew Wright

<(b)(6)> Valeria Sabate <(b)(6)> Sinatra, Christine

<(b)(6)>

**Subject:** RE: Promotional link to Friday March 20 9am US ET Science Facebook Live on SARS-CoV-2 vaccine

If you need a bio, I have attached here.

Barney

---

**From:** Jason McLellan <[REDACTED] (b)(6)>  
**Sent:** Tuesday, March 17, 2020 3:16 PM  
**To:** Meagan Phelan <[REDACTED] (b)(6)> Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
Young, Monique (NIH/VRC) [E] <[REDACTED] (b)(6)> Gadi Ben-Yehuda <[REDACTED] (b)(6)>  
**Cc:** Olivia Tarantino <[REDACTED] (b)(6)> Walter Beckwith <[REDACTED] (b)(6)> Matthew Wright  
<[REDACTED] (b)(6)> Valeria Sabate <[REDACTED] (b)(6)> Sinatra, Christine  
<[REDACTED] (b)(6)>  
**Subject:** RE: Promotional link to Friday March 20 9am US ET Science Facebook Live on SARS-CoV-2 vaccine

Hi Meagan,

I do have a personal FB account and will use that tomorrow. Attached is a very brief bio

Jason

---

**From:** Meagan Phelan <[REDACTED] (b)(6)>  
**Sent:** Tuesday, March 17, 2020 1:50 PM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)> Jason McLellan  
<[REDACTED] (b)(6)> Young, Monique (NIH/VRC) [E] <[REDACTED] (b)(6)> Gadi Ben-Yehuda <[REDACTED] (b)(6)>  
**Cc:** Olivia Tarantino <[REDACTED] (b)(6)> Walter Beckwith <[REDACTED] (b)(6)> Matthew Wright  
<[REDACTED] (b)(6)> Valeria Sabate <[REDACTED] (b)(6)> Sinatra, Christine  
<[REDACTED] (b)(6)>  
**Subject:** Promotional link to Friday March 20 9am US ET Science Facebook Live on SARS-CoV-2 vaccine

Thanks so much, Barney and Jason. Below, please find the promotional link to Friday's FBL event, using this text. We would be thankful if you and your affiliated press officers (Monique and Christine) might share this from your institutional / personal accounts to help draw good audiences to this discussion. We will do the same, promoting from Science and AAAS, and from other accounts here at AAAS.  
<https://www.facebook.com/ScienceMagazine/videos/631121874133472>

Barney and Jason, may I confirm you each have your own Facebook accounts? If so, logging in to the run-through at 10:30 US ET tomorrow will be quick and easy, at the link our social media director, Gadi, shared in a calendar invite yesterday. That link is also [REDACTED] (b)(6) **you do not have a FB account, you could create one for the week and then delete it, if needed.**

Tomorrow at our run-through, Gadi will review technical considerations and I will review how I will introduce the event, how I will introduce you both (I will ask you both: "Is this bio ok?"), questions I may pose as moderator (we will also take questions from the audience), and finally, how we will "wrap" (perhaps with a lightning-round question to you both). I will make sure I understand the scope of questions you are comfortable answering in this space, so as to stay within it.

Monique and Christine: If you have bios for Jason and Barney you might like me to have on hand to use to inform my introduction, please feel free to send them.

And again, thank you to all. See you tomorrow at 10:30 at our run-through.

**Meagan Phelan**, *Science* Press Package Executive Director  
American Association for the Advancement of Science (AAAS)  
1200 New York Avenue, NW | Washington, DC 20005

**Office Phone:** (b)(6)

**Cell Phone:** (b)(6)

**E-mail:** (b)(6)

**Follow me on** [Twitter](#)

---

**From:** Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Sent:** Tuesday, March 17, 2020 2:40 PM  
**To:** Meagan Phelan <(b)(6)> Jason McLellan <(b)(6)> Young, Monique (NIH/VRC) [E] <(b)(6)> Gadi Ben-Yehuda <(b)(6)>  
**Cc:** Olivia Tarantino <(b)(6)> Walter Beckwith <(b)(6)> Matthew Wright <(b)(6)> Valeria Sabate <(b)(6)> Sinatra, Christine <(b)(6)>  
**Subject:** RE: Promotional language. Science Facebook Live on how viral structure informs vaccine design

I think this looks OK.

BG

---

**From:** Meagan Phelan <(b)(6)>  
**Sent:** Tuesday, March 17, 2020 12:29 PM  
**To:** Jason McLellan <(b)(6)> Young, Monique (NIH/VRC) [E] <(b)(6)> Gadi Ben-Yehuda <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Cc:** Olivia Tarantino <(b)(6)> Walter Beckwith <(b)(6)> Matthew Wright <(b)(6)> Valeria Sabate <(b)(6)> Sinatra, Christine <christine.sinat (b)(6)>  
**Subject:** RE: Promotional language. Science Facebook Live on how viral structure informs vaccine design

Hi Jason, thank you so much for that important correction (now noted in the updated text below). I also suggest text by which we could refer to the trial—great idea. I hope to talk more about it during Friday's FBL.

Barney, does the below text read ok to you, too? If you could let me know ASAP today (or by 5pm ET as a hard deadline), we'll use this in a promotional post we'll finalize so we can begin sharing about/promoting the FBL event first thing tomorrow. We will share the promotional link with you, too. Our colleagues in the Office of Government Relations at AAAS are eager to share the event link with Hill staffers, as one audience.

I also look forward to our 10:30 ET run-through tomorrow. I will bring a few candidate questions I plan to ask as moderator of the FBL. Gadi will talk about technical considerations.

Just weeks after the genome sequence of the recently emerged coronavirus was published online, researchers reported the cryogenic electron microscopy structure of the spike protein the virus uses to gain entry to host cells in a 19 February *Science* paper (<https://science.sciencemag.org/lookup/doi/10.1126/science.abb2507>). The insights from their study are already helping to inform vaccines against SARS-CoV-2. Earlier this week, as one example, the first human Phase I trial of an mRNA vaccine developed leveraging these findings began.

This Friday at 9am US ET, join coauthors of this study Jason McLellan and Barney Graham as they discuss how they visualized the spike protein, as well as how their work to improve understanding of SARS-CoV2 viral structure will inform therapeutics against this virus going forward.

best,

**Meagan Phelan**, *Science* Press Package Executive Director  
American Association for the Advancement of Science (AAAS)  
1200 New York Avenue, NW | Washington, DC 20005

**Office Phone:** (b)(6)

**Cell Phone:** (b)(6)

**E-mail:** (b)(6)

**Follow me on [Twitter](#)**

---

**From:** Jason McLellan <(b)(6)>

**Sent:** Tuesday, March 17, 2020 10:36 AM

**To:** Meagan Phelan <(b)(6)> Young, Monique (NIH/VRC) [E] <(b)(6)>

Gadi Ben-Yehuda <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)>

**Cc:** Olivia Tarantino <(b)(6)> Walter Beckwith <(b)(6)> Matthew Wright

<(b)(6)> Valeria Sabate <(b)(6)> Sinatra, Christine

<(b)(6)>

**Subject:** RE: Promotional language: Science Facebook Live on how viral structure informs vaccine design

Hi Meagan,

That all sounds good. Regarding the social media post, COVID-19 should be replaced with SARS-CoV-2. COVID-19 is the name of the disease, which is caused by the SARS-CoV-2 virus.

Depending on how Barney feels, you may want to include that the engineered spike protein that was used for structure determination is being tested as a vaccine antigen expressed from mRNA developed by Moderna. The first human in the Phase I trial was injected yesterday: <https://www.nih.gov/news-events/news-releases/nih-clinical-trial-investigational-vaccine-covid-19-begins> or <https://www.bostonglobe.com/2020/03/16/business/first-patient-dosed-with-potential-coronavirus-vaccine-cambridge-biotech/>

Cheers,

Jason

---

**From:** Meagan Phelan <(b)(6)>

**Sent:** Monday, March 16, 2020 5:28 PM

**To:** Young, Monique (NIH/VRC) [E] <[REDACTED] (b)(6) Jason McLellan <[REDACTED] (b)(6) Gadi Ben-Yehuda <[REDACTED] (b)(6) Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)  
**Cc:** Olivia Tarantino <[REDACTED] (b)(6) Walter Beckwith <[REDACTED] (b)(6) Matthew Wright <[REDACTED] (b)(6) Valeria Sabate <[REDACTED] (b)(6) Sinatra, Christine <[REDACTED] (b)(6)

**Subject:** Promotional language: Science Facebook Live on how viral structure informs vaccine design

Thanks so much, Jason and Barney and colleagues. It looks like we'll do our test call Wednesday at 10:30 US ET and our event Friday at 9am US ET, dialing in a little in advance to the latter (Friday's event).

Also, we will want to promote this excellent event in advance from our *Science* social media accounts. I drafted language, below, derived from our press package summary. Please let me know of any edits to it by noon US ET tomorrow, if/as you have them. Otherwise, we will prepare to post soon after, to promote this event! Again, thank you.

++++

Just weeks after the genome sequence of the recently emerged coronavirus – COVID-19 – was published online, researchers reported the cryogenic electron microscopy structure of the spike protein the virus uses to gain entry to host cells, in a 19 February *Science* paper (<https://science.sciencemag.org/lookup/doi/10.1126/science.abb2507>). The insights from their study will inform efforts to design a precision vaccine and antivirals against COVID-19. This Friday at 9am US ET, join coauthors Jason McLellan and Barney Graham as they discuss how they visualized the spike protein, as well as how their work to improve understanding of SARS-CoV2 viral structure will inform therapeutics against this virus.

---

**From:** Young, Monique (NIH/VRC) [E] <[REDACTED] (b)(6)  
**Sent:** Monday, March 16, 2020 3:51 PM  
**To:** Jason McLellan <[REDACTED] (b)(6) Gadi Ben-Yehuda <[REDACTED] (b)(6) Meagan Phelan <[REDACTED] (b)(6) Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)  
**Cc:** Olivia Tarantino <[REDACTED] (b)(6) Walter Beckwith <[REDACTED] (b)(6) Matthew Wright <[REDACTED] (b)(6) Valeria Sabate <[REDACTED] (b)(6) Sinatra, Christine <[REDACTED] (b)(6)  
**Subject:** RE: Possible Science Facebook Live on how viral structure informs vaccine design

Good Afternoon –

I will hold 10:30 am EDT on Wed for the walk through for Dr. Graham's calendar.

Thanks...Monique  
[REDACTED] (b)(6)

---

**From:** Jason McLellan <[REDACTED] (b)(6)  
**Sent:** Monday, March 16, 2020 11:41 AM

**To:** Gadi Ben-Yehuda <(b)(6)> Young, Monique (NIH/VRC) [E] <(b)(6)>  
Meagan Phelan <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Cc:** Olivia Tarantino <(b)(6)> Walter Beckwith <(b)(6)> Matthew Wright  
<(b)(6)> Valeria Sabate <(b)(6)> Sinatra, Christine  
<(b)(6)>  
**Subject:** RE: Possible Science Facebook Live on how viral structure informs vaccine design

That would work for me  
Jason

---

**From:** Gadi Ben-Yehuda <(b)(6)>  
**Sent:** Monday, March 16, 2020 10:32 AM  
**To:** Young, Monique (NIH/VRC) [E] <(b)(6)> Jason McLellan  
<(b)(6)> Meagan Phelan <(b)(6)> Graham, Barney (NIH/VRC) [E]  
<(b)(6)>  
**Cc:** Olivia Tarantino <(b)(6)> Walter Beckwith <(b)(6)> Matthew Wright  
<(b)(6)> Valeria Sabate <(b)(6)> Sinatra, Christine  
<(b)(6)>  
**Subject:** Re: Possible Science Facebook Live on how viral structure informs vaccine design

Hello, all.

I'm free most of the day. How would 10:30 AM be for everyone? I can send a calendar invite with the link if that works!

Gadi.

---

**From:** Young, Monique (NIH/VRC) [E] <(b)(6)>  
**Sent:** Sunday, March 15, 2020 6:30 PM  
**To:** Jason McLellan <(b)(6)> Meagan Phelan <(b)(6)> Graham,  
Barney (NIH/VRC) [E] <(b)(6)> Gadi Ben-Yehuda <(b)(6)>  
**Cc:** Olivia Tarantino <(b)(6)> Walter Beckwith <(b)(6)> Matthew Wright  
<(b)(6)> Valeria Sabate <(b)(6)> Sinatra, Christine  
<(b)(6)>  
**Subject:** RE: Possible Science Facebook Live on how viral structure informs vaccine design

Good Afternoon –

Dr. Graham's schedule is noted for Fri 9:00 am EDT.

Wed could be doable for the walk through, depending on the time.

Thanks...Monique  
(b)(6)



---

**From:** Jason McLellan <(b)(6)>  
**Sent:** Sunday, March 15, 2020 1:35 PM  
**To:** Meagan Phelan <(b)(6)> Graham, Barney (NIH/VRC) [E] <(b)(6)>  
Gadi Ben-Yehuda <(b)(6)>  
**Cc:** Olivia Tarantino <(b)(6)> Young, Monique (NIH/VRC) [E] <(b)(6)>  
Walter Beckwith <(b)(6)> Matthew Wright <(b)(6)> Valeria Sabate  
<(b)(6)> Sinatra, Christine <(b)(6)>  
**Subject:** RE: Possible Science Facebook Live on how viral structure informs vaccine design

8 am Central is so early, but I can make it work. I'll get some coffee on the way in to lab.

Wednesday is wide open for me, so that would be my preference for the walk through.

Cheers,  
Jason

---

**From:** Meagan Phelan <(b)(6)>  
**Sent:** Saturday, March 14, 2020 9:13 PM  
**To:** Graham, Barney (NIH/VRC) [E] <(b)(6)> Gadi Ben-Yehuda <(b)(6)>  
Jason McLellan <(b)(6)>  
**Cc:** Olivia Tarantino <(b)(6)> Young, Monique (NIH/VRC) [E] <(b)(6)>  
Walter Beckwith <(b)(6)> Matthew Wright <(b)(6)> Valeria Sabate  
<(b)(6)> Sinatra, Christine <(b)(6)>  
**Subject:** RE: Possible Science Facebook Live on how viral structure informs vaccine design

Thanks so much, Barney. I hope Friday at 9am US ET may work for Jason also. We will stand by to hear and confirm.

Would you and Jason have a preference for Tuesday vs. Wednesday, for the brief (20-minute) run-through? There, we'd review technical needs, as well as event format. I might run over a few candidate questions I'd pose as moderator, too.

Again, thank you!

**Meagan Phelan**, *Science* Press Package Executive Director  
American Association for the Advancement of Science (AAAS)  
1200 New York Avenue, NW | Washington, DC 20005  
**Office Phone:** (b)(6)  
**Cell Phone:** (b)(6)  
**E-mail:** (b)(6)  
**Follow me on** [Twitter](#)

---

**From:** Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Sent:** Saturday, March 14, 2020 6:28 PM  
**To:** Gadi Ben-Yehuda <(b)(6)> Meagan Phelan <(b)(6)> Jason McLellan  
<(b)(6)>  
**Cc:** Olivia Tarantino <(b)(6)> Young, Monique (NIH/VRC) [E] <(b)(6)>

Walter Beckwith < (b)(6) > Matthew Wright < (b)(6) > Valeria Sabate  
< (b)(6) > Sinatra, Christine < (b)(6) >

**Subject:** RE: Possible Science Facebook Live on how viral structure informs vaccine design

I think I'll be free to do this at 9AM next Friday morning EDT. If Jason can do this at 8 and Monique Young verifies the time, we can do it then if you are available.

Barney

---

**From:** Gadi Ben-Yehuda < (b)(6) >

**Sent:** Saturday, March 14, 2020 6:03 PM

**To:** Meagan Phelan < (b)(6) > Jason McLellan < (b)(6) > Graham,  
Barney (NIH/VRC) [E] < (b)(6) >

**Cc:** Olivia Tarantino < (b)(6) > Young, Monique (NIH/VRC) [E] < (b)(6) >

Walter Beckwith < (b)(6) > Matthew Wright < (b)(6) > Valeria Sabate  
< (b)(6) > Sinatra, Christine < (b)(6) >

**Subject:** Re: Possible Science Facebook Live on how viral structure informs vaccine design

Hello!

The broadcast itself will probably last for around 30 minutes. we recommend that all participants log in 30 minutes prior to ensure that if there are any technical difficulties we can get them sorted out before the broadcast begins.

Additionally, we schedule a technical run-through that lasts between 10 and 20 minutes. we do those at least 24 hours and preferably 48 to 72 hours prior to the broadcast.

if there's a lot of interest in our conversation there may be quite a few relevant questions from the viewers. In that case the broadcast may extend beyond 30 minutes, always with the consent of our participants.

Please let me know if you have any additional questions. I think that this will be a very well attended and interactive broadcast.

---

**From:** Graham, Barney (NIH/VRC) [E] < (b)(6) >

**Sent:** Saturday, March 14, 2020 5:16:16 PM

**To:** Meagan Phelan < (b)(6) > Jason McLellan < (b)(6) >

**Cc:** Olivia Tarantino < (b)(6) > Young, Monique (NIH/VRC) [E] < (b)(6) >

Walter Beckwith < (b)(6) > Matthew Wright < (b)(6) > Valeria Sabate  
<vsabat (b)(6) > Sinatra, Christine < (b)(6) >; Gadi Ben-Yehuda

< (b)(6) >

**Subject:** RE: Possible Science Facebook Live on how viral structure informs vaccine design

Can you tell me again how long it will take? We can probably find a time next Thursday or Friday. Monique Young is copied here to help.

Barney

---

**From:** Meagan Phelan <[REDACTED] (b)(6)>  
**Sent:** Friday, March 13, 2020 10:31 AM  
**To:** Jason McLellan <[REDACTED] (b)(6)>  
**Cc:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)> Olivia Tarantino <[REDACTED] (b)(6)>  
Walter Beckwith <[REDACTED] (b)(6)> Matthew Wright <[REDACTED] (b)(6)> Valeria Sabate  
<[REDACTED] (b)(6)> Sinatra, Christine <[REDACTED] (b)(6)> Gadi Ben-Yehuda  
<[REDACTED] (b)(6)>  
**Subject:** RE: Possible Science Facebook Live on how viral structure informs vaccine design

Dear Jason,

Thanks so much for your reply and confirmation, and also for copying Christine. This is very helpful to keep us moving well now.

Barney,

I know you were still considering this event in your calendar. Perhaps you might let us know, as you can, if in fact this event would fit in your schedule. We could pick up planning from there, if so.

And again, thank you to all in this busy time! It is much appreciated. We believe this event would have great value to public audiences.

best,

**Meagan Phelan**, *Science* Press Package Executive Director  
American Association for the Advancement of Science (AAAS)  
1200 New York Avenue, NW | Washington, DC 20005

**Office Phone:** [REDACTED] (b)(6)

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

**E-mail:** [REDACTED] (b)(6)

Follow me on [Twitter](#)

---

**From:** Jason McLellan <[REDACTED] (b)(6)>  
**Sent:** Friday, March 13, 2020 12:18 AM  
**To:** Meagan Phelan <[REDACTED] (b)(6)>  
**Cc:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)> Olivia Tarantino <[REDACTED] (b)(6)>  
Walter Beckwith <[REDACTED] (b)(6)> Matthew Wright <[REDACTED] (b)(6)> Valeria Sabate  
<[REDACTED] (b)(6)> Sinatra, Christine <[REDACTED] (b)(6)>  
**Subject:** RE: Possible Science Facebook Live on how viral structure informs vaccine design

Hi Meagan,

The Altmetrics data looks great! Good to see our paper being widely discussed and shared.

I would love to participate in a Facebook live event provided that Barney is able to participate. I'm sure many of the questions will be better addressed by him.

I have Cc'd Christine Sinatra, director of communications for the UT College of Natural Science. She can work with you to schedule the time and book a studio on campus.

Best regards,  
Jason

---

**From:** Meagan Phelan <(b)(6)>  
**Sent:** Thursday, March 12, 2020 7:36 AM  
**To:** Jason McLellan <(b)(6)>  
**Cc:** Graham, Barney (NIH/VRC) [E] <(b)(6)> Olivia Tarantino <(b)(6)>  
Walter Beckwith <(b)(6)> Matthew Wright <(b)(6)> Valeria Sabate  
<(b)(6)>  
**Subject:** Possible Science Facebook Live on how viral structure informs vaccine design

Dear Dr. McLellan, I hope this note finds you well. Thank you for your help to us last month; it's been wonderful to see all the attention to your paper, much of which is captured on its Altmetrics tab, at the bottom of this page: <https://science.sciencemag.org/content/early/2020/02/19/science.abb2507/tab-article-info>

Separately, my team, the Science Press Package team (some of whom are copied here), has been considering holding one of our popular Facebook Live events—a way to connect the public with recently published experts—on your paper, with a focus on how cutting-edge viral structure information informs vaccine and antiviral design. I have already reached Dr. Graham, here copied, who expressed interest (if his communications office will confirm). He also recommended I reach you.

Is participating in such an event something you may wish to (and have availability) to do? If so, we'd be delighted for you to participate along with Dr. Graham (we do hope), in an event I would moderate. The event itself would require about an hour and a half, on the slated day (including prep time). A few days prior, we would hold a run-through (where your press officers would be welcome) to address both technical specs and event format – including likely questions you'd receive from the audience, and also how to pivot on questions not in your scope of expertise. We would plan the event as soon as might be feasible for you in the coming two weeks.

Thank you for considering participating in such a discussion, something we hope could help the public better understand how research into virus structure paves the way for the therapies from which they will benefit.

best,  
**Meagan Phelan**, Science Press Package Executive Director

American Association for the Advancement of Science (AAAS)  
1200 New York Avenue, NW | Washington, DC 20005

**Office Phone:** (b)(6)

**Cell Phone:** (b)(6)

**E-mail:** (b)(6)

**Follow me on** [Twitter](#)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 17 Mar 2020 18:16:54 +0000  
**To:** Oplinger, Anne (NIH/NIAID) [E]; Hiatt, Nissa (NIH/VRC) [C]  
**Cc:** Routh, Jennifer (NIH/NIAID) [E]  
**Subject:** RE: New Zealand Radio Interview Request

Thanks.

BG

---

**From:** Oplinger, Anne (NIH/NIAID) [E] <(b)(6)>  
**Sent:** Tuesday, March 17, 2020 1:28 PM  
**To:** Graham, Barney (NIH/VRC) [E] <(b)(6)> Hiatt, Nissa (NIH/VRC) [C]  
<(b)(6)>  
**Cc:** Routh, Jennifer (NIH/NIAID) [E] <(b)(6)>  
**Subject:** RE: New Zealand Radio Interview Request

(b)(5). Recommend we (b)(5)

Anne A. Oplinger  
NIAID Office of Communications  
Media Line: (b)(6)  
General Line: (b)(6)  
(b)(6)

---

**From:** Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Sent:** Tuesday, March 17, 2020 1:27 PM  
**To:** Hiatt, Nissa (NIH/VRC) [C] (b)(6)  
**Cc:** Routh, Jennifer (NIH/NIAID) [E] <(b)(6)> Oplinger, Anne (NIH/NIAID) [E]  
<(b)(6)>  
**Subject:** FW: New Zealand Radio Interview Request

FYI

BG

---

**From:** Sam Carran <(b)(6)>  
**Sent:** Tuesday, March 17, 2020 5:17 AM  
**To:** Graham, Barney (NIH/VRC) [E] (b)(6)  
**Cc:** Michael Allan <(b)(6)>  
**Subject:** New Zealand Radio Interview Request

Hi Barney,

My name is Sam Carran and I am a producer for the Mike Hosking Breakfast show on Newstalk ZB in New Zealand, the number one radio news show in the country.

I'm getting in touch in regards to the first human trials for the coronavirus vaccine.

We would love to be able to speak to you about what the process is from here, how it is tested and what kind of a timeframe we might expect in the best possible scenario.

We would look at doing an interview either on Wednesday or Thursday your time for about 5mins between 11am - 12:45pm. Do you think this could suit?

The interview would be with my host Mike over the phone.

I have copied in my lead producer Michael Allan so if you could please reply to us both that would be greatly appreciated.

Thanks very much,

**Sam Carran**

**PRODUCER, NEWSTALK ZB**

D: +64 9 366 0466 M: +64 (b)(6)

E: (b)(6)



---

This email and any attachments are strictly confidential and subject to copyright. They may contain privileged information. If you are not the intended recipient please delete the message and notify the sender. You should not read, copy, use, change, alter or disclose this email or its attachments without authorisation. The company and any related or associated companies do not accept any liability in connection with this email and any attachments including in connection with computer viruses, data corruption, delay, interruption, unauthorised access or unauthorised amendment. Any views expressed in this email and any attachments do not necessarily reflect the views of the company or the views of any of our related or associated companies.

Any information contained in this e-mail in relation to an advertising booking are subject to, and should be read in conjunction with, our standard advertising [Terms & Conditions](#)

NZME Ltd / NZME Holdings Ltd / NZME Publishing Ltd / NZME Radio Ltd / NZME Educational Media Ltd /





**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 1 Apr 2020 12:54:30 +0000  
**To:** Mittelman, Abraham (NIH/VRC) [C]; Ledgerwood, Julie (NIH/NIAID) [E]  
**Subject:** RE: Statement of collaboration towards a COVID-19 vaccine

Good question. "sharing of data" to "reduce inefficiencies and duplication" (b) (5)  
(b) (5) in my opinion, but (b) (5)  
my opinion (b) (5).

Barney

---

**From:** Mittelman, Abraham (NIH/VRC) [C] <(b) (6)>  
**Sent:** Wednesday, April 1, 2020 7:51 AM  
**To:** Graham, Barney (NIH/VRC) [E] <(b) (6)> Ledgerwood, Julie (NIH/NIAID) [E]  
<(b) (6)>  
**Subject:** RE: Statement of collaboration towards a COVID-19 vaccine

Hi Barney:

A few questions regarding sharing of data:

(b) (5)

Abe

---

**From:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Sent:** Wednesday, April 1, 2020 6:43 AM  
**To:** Mascola, John (NIH/VRC) [E] <(b) (6)> Koup, Richard (NIH/VRC) [E]  
<(b) (6)> Ledgerwood, Julie (NIH/NIAID) [E] <(b) (6)> Daucher,  
Marybeth (NIH/NIAID) [E] <(b) (6)> Mittelman, Abraham (NIH/VRC) [C]  
<(b) (6)> Gall, Jason (NIH/VRC) [C] <(b) (6)>  
**Subject:** Fwd: Statement of collaboration towards a COVID-19 vaccine

(b) (5)

Barney

Sent from my iPhone

Begin forwarded message:

**From:** Cesar Munoz-Fontela <(b)(6)>  
**Date:** April 1, 2020 at 6:36:40 AM EDT  
**To:** Carolyn Clark <(b)(6)> "(b)(6)" <(b)(6)>  
<(b)(6)> "(b)(6)" <(b)(6)> <(b)(6)>  
"Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)" <(b)(6)> "(b)(6)" <(b)(6)>  
<(b)(6)> "(b)(6)" "Hensley, Lisa (NIH/NIAID) [E]" <(b)(6)> Adolfo Garcia-Sastre <(b)(6)> Alyson Kelvin <(b)(6)> "(b)(6)" <(b)(6)>  
<(b)(6)> "(b)(6)" <(b)(6)> <amy.c.shurt<(b)(6)> "Smith, Ashley (OS/ASPR/BARDA)" <(b)(6)> "(b)(6)" <(b)(6)>  
<(b)(6)> "B.L. Haagmans" <(b)(6)> "(b)(6)" <(b)(6)>  
" <(b)(6)> <(b)(6)> "(b)(6)" <(b)(6)> "(b)(6)" <(b)(6)>  
<(b)(6)> "Graham, Barney (NIH/VRC) [E]" <(b)(6)> "(b)(6)" "Kerscher, Bernhard" <(b)(6)> "Gerber, Susan I. (CDC/DDID/NCIRD/DVD)" <(b)(6)>  
"Bozick, Brooke (NIH/OD) [E]" <(b)(6)> "(b)(6)" <(b)(6)> <(b)(6)>  
" <(b)(6)> <(b)(6)> Christian Drosten <(b)(6)>  
<(b)(6)> <(b)(6)> "(b)(6)" <(b)(6)> <(b)(6)>  
"Florence, Clint (NIH/NIAID) [E]" <(b)(6)> "Schmaljohn, Connie (NIH/NIAID) [E]" <(b)(6)>  
<(b)(6)> "Roy, Chad" <(b)(6)> <(b)(6)> <(b)(6)>  
" <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)>  
<(b)(6)> "(b)(6)" "Dan Barouch ( <(b)(6)> <(b)(6)>  
<(b)(6)> <(b)(6)> "(b)(6)" <(b)(6)> <(b)(6)> <(b)(6)>  
<(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)>  
<(b)(6)> <(b)(6)> "(b)(6)" "De wit, Emmie (NIH/NIAID) [E]" <(b)(6)>  
<(b)(6)> "(b)(6)" "Stemmy, Erik (NIH/NIAID) [E]" <(b)(6)> "(b)(6)" "Rodriguez-Burgos, Estefania" <(b)(6)> "(b)(6)" "Krammer, Florian" <(b)(6)>  
<(b)(6)> Gary Kobinger <(b)(6)> <(b)(6)> "(b)(6)" "Kovacs, Gerald (OS/ASPR/BARDA) (CTR)" <(b)(6)> "(b)(6)" <(b)(6)> <(b)(6)>  
<(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)>  
" <(b)(6)> <(b)(6)> "(b)(6)" "Palacios, Gustavo F CIV USARMY MEDCOM USAMRIID (USA)" <(b)(6)> <(b)(6)> "Golding, Hana (FDA/CBER)" <(b)(6)>  
<(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)>  
<(b)(6)> <(b)(6)> "(b)(6)" <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)>  
"Crozier, Ian (NIH) [C]" <(b)(6)> "Guthrie, Erica (CDC/DDID/NCIRD/ID)" <(b)(6)> <(b)(6)>  
<(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> "(b)(6)" "Little, James (OS/ASPR/BARDA)" <(b)(6)> <(b)(6)> "Lathey, Janet (NIH/NIAID) [E]" <(b)(6)> <(b)(6)>  
Jason Kindrachuk <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)>  
<(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)>  
<(b)(6)> "(b)(6)" "Treanor, John (OS/ASPR/BARDA) (CTR)" <(b)(6)> <(b)(6)> "Johnson, Reed (NIH/NIAID) [E]" <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)>  
<(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)>  
<(b)(6)> <(b)(6)> <(b)(6)> "Mellors, John W" <(b)(6)> <(b)(6)> "Morabito, Kaitlyn (NIH/VRC) [E]" <kait<(b)(6)> <(b)(6)> <(b)(6)>  
<(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)>  
<(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)>  
<(b)(6)> <(b)(6)> "Bok, Karin (NIH/VRC) [E]" <(b)(6)> <(b)(6)> <(b)(6)> "Erlandson, Karl (OS/ASPR/BARDA)" <(b)(6)> <(b)(6)> "Corbett, Kizzmekia (NIH/VRC) [E]" <(b)(6)>  
<(b)(6)> Kayvon Modjarrad <(b)(6)> <(b)(6)> Luis Enjuanes

(b)(6)>, "Jayashankar, Lakshmi (OS/ASPR/BARDA)" < (b)(6)  
"Wolfram, Larry (NIH/NIAID) [E]" < (b)(6) " (b)(6)  
< (b)(6) " (b)(6) < (b)(6) " (b)(6)  
< (b)(6) " (b)(6) < (b)(6)  
" (b)(6) < (b)(6) "Pallansch, Mark A.  
(CDC/DDID/NCIRD/OD)" < (b)(6)>, "Degrace, Marciela (NIH/NIAID) [E]"  
< (b)(6) " (b)(6) < (b)(6) (b)(6)  
" (b)(6) < [margaret.](#) (b)(6) " (b)(6)  
< (b)(6) " (b)(6) < (b)(6) (b)(6)  
"Holbrook, Michael (NIH/NIAID) [C]" < (b)(6) "Carroll, Miles"  
< (b)(6) " (b)(6) < [mit](#) (b)(6)  
" (b)(6) < (b)(6) "Lewis, Mark" < (b)(6) " (b)(6)  
< (b)(6) " (b)(6)  
(b)(6) " (b)(6) < (b)(6) (b)(6)  
" (b)(6) < (b)(6) " (b)(6) < (b)(6) (b)(6)  
" (b)(6) < (b)(6) "Thornburg, Natalie (CDC/DDID/NCIRD/DVD)"  
< (b)(6) " (b)(6) < (b)(6) " (b)(6)  
< (b)(6) " (b)(6) < (b)(6) " (b)(6)  
< (b)(6) " (b)(6) < (b)(6)  
" (b)(6) < (b)(6) "Duprex, Paul" < (b)(6)  
" (b)(6) < (b)(6) " (b)(6)  
< (b)(6) "Krause, Philip (FDA/CBER)" < (b)(6) Paul Scott  
< (b)(6) 秦川 < (b)(6) "Delgado Vazquez.Rafael"  
< (b)(6) "Albrecht, Randy" < (b)(6)  
" (b)(6) < (b)(6) "Baric, Ralph" < (b)(6)  
" (b)(6) < (b)(6) " (b)(6)  
< (b)(6) "Levis, Robin (FDA/CBER)" < (b)(6) (b)(6)  
< (b)(6) sandra cordo < (b)(6) (b)(6)  
" (b)(6) < [scott.](#) (b)(6) (b)(6)" < (b)(6)  
" (b)(6) < (b)(6) " (b)(6)  
< (b)(6) "Hild, Sheri (NIH/OD) [E]" < (b)(6) " (b)(6)  
< (b)(6) "[skt](#) (b)(6) < (b)(6) "Spergel, Jonathan"  
< (b)(6) " (b)(6) < (b)(6)  
" (b)(6) < (b)(6) " (b)(6) (b)(6)  
< (b)(6) >, " (b)(6) < (b)(6) (b)(6)  
" (b)(6) < (b)(6) " (b)(6)  
< (b)(6) " (b)(6) < (b)(6) "Wang, Tony (FDA/CBER)"  
< (b)(6) " (b)(6) < (b)(6) " (b)(6)  
< (b)(6) "Vasan, Vasan (H&B, Geelong AAHL)" < (b)(6) "Munster,  
Vincent (NIH/NIAID) [E]" < (b)(6) " (b)(6)  
< (b)(6) " (b)(6) < (b)(6) " (b)(6)  
< (b)(6) >, " (b)(6) < (b)(6) " (b)(6)  
< (b)(6) "Carroll, Darin (CDC/DDID/NCEZID/OD)" < (b)(6)  
Cc: "Munoz-Fontela, Cesar" (b)(6)>, William Dowling  
(b)(6)>, Simon Funnell < (b)(6) "RIVEROS BALTA, Alina  
Ximena" < (b)(6) "GSELL, Pierre" < (b)(6) "HENAO RESTREPO, Ana Maria"  
< (b)(6) "COSTA, Alejandro Javier" < (b)(6)

**Subject: Statement of collaboration towards a COVID-19 vaccine**

Dear colleagues,

During a recent meeting with vaccine manufacturers and funders there was a suggestion to have a statement to support the RD of a vaccine against COVID-19. WHO would like to extend this invitation to all groups working on vaccine development, which of course includes the *ad hoc* expert groups for development of COVID-19 animal models as well as assays and reagents. If you support the statement below and are willing to sign it please acknowledge it by emailing Ximena Riveros at [REDACTED] (b)(6)

Thank you all very much for your continued support

César Muñoz-Fontela, Simon Funnell and William Dowling (seconded to WHO).

*We are scientists, physicians, funders, and manufacturers who have come together as part of an international collaboration, coordinated by WHO, to help speed the availability of a vaccine against COVID-19. While a vaccine for general use will not be available quickly, a vaccine may ultimately be instrumental in controlling this worldwide pandemic. In the interim, we applaud the implementation of measures that reduce spread of the virus and protect vulnerable populations, and pledge to use the time gained by use of such measures to develop a vaccine as efficiently as possible. We will continue and strengthen the unprecedented world-wide collaboration, cooperation and sharing of data already underway to reduce inefficiencies and duplication of effort, working tenaciously to increase the likelihood that one or more safe and effective vaccines will soon be made available to all whose health would benefit.*

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 16 Mar 2020 14:40:45 +0000  
**To:** Wang, Lingshu (NIH/VRC) [E];Zhang, Yi (NIH/NIAID) [C];Liu, Catherine (NIH/VRC) [C];Kong, Wing-Pui (NIH/VRC) [E]  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E];Mascola, John (NIH/VRC) [E]  
**Subject:** FW: Lab attendance and duties

Hi All,

This is a message I sent to our VPL lab group yesterday. I just wanted you to know our philosophy of working through this complicated time. Please let me know if you see any problems or concerns about how the 2<sup>nd</sup> and 4<sup>th</sup> floor VRC groups are communicating. So far, it seems to me that the work is stressful, but going smoothly and has been very productive.

What you are doing seems to be leading the world in both vaccine development and identification of mAbs. I recognize this is a lot of pressure, but there are also a lot of people (including me) in different organization on all the calls I am on who are grateful for your efforts.

Best wishes,

Barney

---

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sunday, March 15, 2020 10:49 PM  
**To:** Ruckwardt, Tracy (NIH/VRC) [E] <(b)(6)> Kanekiyo, Masaru (NIH/VRC) [E] <(b)(6)> Corbett, Kizzmekia (NIH/VRC) [E] <(b)(6)>  
**Cc:** Morabito, Kaitlyn (NIH/VRC) [E] <(b)(6)> Bok, Karin (NIH/VRC) [E] <(b)(6)> Alvarado, Gabriela (NIH/VRC) [C] <(b)(6)> Young, Monique (NIH/VRC) [E] <(b)(6)> Boyoglu-Barnum, Seyhan (NIH/VRC) [E] <(b)(6)> Creanga, Adrian (NIH/VRC) [E] <(b)(6)> Gillespie, Rebecca (NIH/VRC) [E] <(b)(6)> Lederhofer, Julia (NIH/VRC) [F] <(b)(6)> Dipiazza, Anthony (NIH/VRC) [F] <(b)(6)> Nair, Deepika (NIH/VRC) [E] <(b)(6)> Chang, Lauren (NIH/VRC) [F] <(b)(6)> Phung, Emily (NIH/VRC) [F] <(b)(6)> Fisher, Brian (NIH/VRC) [E] <(b)(6)> Moin, Syed (NIH/VRC) [E] <(b)(6)> Kumar, Azad (NIH/VRC) [E] <(b)(6)> Chintalacheruvu, Saavan (NIH/VRC) [F] <(b)(6)> Hutchinson, Geoffrey (NIH/VRC) [F] <(b)(6)> Ziwawo, Cynthia (NIH/VRC) [F] <(b)(6)> Abiona, Olubukola (NIH/VRC) [F] <(b)(6)> Corbett, Kizzmekia (NIH/VRC) [E] <(b)(6)> Derrien-Colemyn, Alexandrine (NIH/VRC) [C] <(b)(6)> Loomis, Rebecca (NIH/VRC) [E] <(b)(6)> Yap, Christina (NIH/VRC) [F] <(b)(6)> Chen, Man (NIH/VRC) [E] <(b)(6)> Krug, Peter (NIH/VRC) [C] <(b)(6)> Chapman, Latanya (NIH/VRC) [C] <(b)(6)>  
**Subject:** Lab attendance and duties

Dear Lab,

You recently received emails from Dr. Collins and the VRC leadership about what to do during the looming coronavirus pandemic. Let me say a little more about what I expect from you. These are interesting and unprecedented times at least within my lifetime. We have to balance our own personal health against the public health and the functioning of the lab against the functioning of our families. I want this to work out well for everyone and for everyone to stay well. However, it is likely that some of us will eventually encounter the new coronavirus and if that happens we need to be mindful of our own health and the health of others around us. If you think you have been exposed or are developing symptoms, please stay home and contact me and seek medical help if needed.

Although we have been granted liberal telework options, it is important that we find a way to continue the coronavirus work. There are 4 major efforts that need to continue. 1) continue the preclinical work (b) (4), 2) prepare for the clinical trial assays that will be coming soon, 3) (b) (4) we will be receiving on Tuesday, and 4) continue to supply the reagents for internal experiments and to external collaborators. People involved in those activities should try to be in the lab and outside of the lab please take care and avoid any exposures. We do not have a very solid plan for what happens if a member of our coronavirus team has to be quarantined. This is going to be discussed and determined with more clarity during the next few days. In the meantime, please be careful.

We obviously have other important work going on in (b) (5), (b) (5)

(b) (5). This could be a good time to catch up on your writing and finish those manuscripts that have been waiting. Alternatively, you can catch up on your lab notebooks, required NIH training modules, animal protocols, file organization, future talks, reading, etc. If you have any questions about what to do, please talk to the head of your group, either Tracy, Masaru, or Kizzy. You are also welcome to talk with me if needed.

I will be working off site for the next few days, and will be back in the office on Thursday. I am available by email and phone if needed.

Best wishes,

Barney

\*\*\*\*\*

Barney S. Graham, MD, PhD  
Senior Investigator  
Deputy Director, Vaccine Research Center  
Chief, Viral Pathogenesis Laboratory  
National Institute of Allergy and Infectious Diseases, NIH  
40 Convent Drive, MSC 3017  
Bldg 40, Room 2502

Bethesda, MD 20892-3017

Phone: (b)(6)

URL: <https://www.niaid.nih.gov/research/> (b)(6)

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. 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.

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 20 Mar 2020 18:31:50 +0000  
**To:** Bushar, Nicholas (NIH/NIAID) [E]  
**Subject:** Accepted: NIAID Coronavirus SWAT Weekly Meeting



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sun, 1 Mar 2020 03:15:36 +0000  
**To:** (b)(6) Lora Hargrove'  
**Cc:** 'Alice Barnett'; Corbett, Kizzmekia (NIH/VRC) [E]; (b)(6)  
**Subject:** coronavirus presentation  
**Attachments:** 03.01.20\_Mt. Calvary Baptist Church\_KC\_BG v3.pptx

Dr. Corbett will be coming with me to church tomorrow and will give a brief presentation after the pastoral comments. Would it be possible to add these 4 slides in after that? I will also bring on a USB drive tomorrow morning.

Thanks,

Barney

\*\*\*\*\*

Barney S. Graham, MD, PhD  
Senior Investigator  
Deputy Director, Vaccine Research Center  
Chief, Viral Pathogenesis Laboratory  
National Institute of Allergy and Infectious Diseases, NIH  
40 Convent Drive, MSC 3017  
Bldg 40, Room 2502  
Bethesda, MD 20892-3017  
Phone: (b)(6)  
URL: <https://www.niaid.nih.gov/research> (b)(6)

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. 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.

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 2 Mar 2020 23:43:39 +0000  
**To:** Hiatt, Nissa (NIH/VRC) [C]  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E];VRC\_CoV;Prince, Tasheema (NIH/VRC) [C];Harris, Christina (NIH/NIAID) [E];Young, Monique (NIH/VRC) [E]  
**Subject:** RE: NBC News Online: Phone Interview Request for Wed or Thurs

Why don't you check with him to make sure he knows what happened today.

BG

---

**From:** Hiatt, Nissa (NIH/VRC) [C] <(b)(6)>  
**Sent:** Monday, March 2, 2020 6:06 PM  
**To:** Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E] <(b)(6)> VRC\_CoV <(b)(6)>  
Prince, Tasheema (NIH/VRC) [C] <(b)(6)> Harris, Christina (NIH/NIAID) [E]  
<(b)(6)> Young, Monique (NIH/VRC) [E] <(b)(6)>  
**Subject:** RE: NBC News Online: Phone Interview Request for Wed or Thurs

It looks like it is not connected to today's filming according to Ken Pekoc who is the lead on this request from NBC news online service. Ken was pretty sure that Mike Hixenbaugh was not aware of today's filming in Bldg 40. I also checked with Elizabeth who coordinated with the NBC TV crew today and she agreed that they were unrelated.

If you would like us to look into this further, please let me know.

Best,  
Nissa

**Nissa Hiatt**  
Communications  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive, Bldg 40, Room 1100  
Bethesda, MD 20892

(b)(6)

(b)(6)



---

**From:** Graham, Barney (NIH/VRC) [E] <(b)(6)>  
**Sent:** Monday, March 2, 2020 5:45 PM

**To:** Hiatt, Nissa (NIH/VRC) [C] <[REDACTED] (b)(6)>  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E] <[REDACTED] (b)(6) VRC\_CoV <[VRC](#) [REDACTED] (b)(6)>  
Prince, Tasheema (NIH/VRC) [C] <[REDACTED] (b)(6) Harris, Christina (NIH/NIAID) [E]  
<[REDACTED] (b)(6) Young, Monique (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Subject:** RE: NBC News Online: Phone Interview Request for Wed or Thurs

Is this connected to the story that was filmed today at the VRC by NBC or is this entirely separate conversation?

Barney

---

**From:** Hiatt, Nissa (NIH/VRC) [C] <[REDACTED] (b)(6)>  
**Sent:** Monday, March 2, 2020 5:43 PM  
**To:** Graham, Barney (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E] <[REDACTED] (b)(6) VRC\_CoV <[VRC](#) [REDACTED] (b)(6)>  
Prince, Tasheema (NIH/VRC) [C] <[REDACTED] (b)(6) Harris, Christina (NIH/NIAID) [E]  
<[REDACTED] (b)(6) Young, Monique (NIH/VRC) [E] <[REDACTED] (b)(6)>  
**Subject:** RE: NBC News Online: Phone Interview Request for Wed or Thurs

Hi Barney,

The reporter was told that you would only discuss vaccines (not anti-virals or therapeutics including monoclonal antibodies) and he said that was OK by him. There's a bit more information about the story below. He has been provided with both of the VRC vaccine technology papers (JAMA and Nature Reviews Immunology) but he is not science journalist so you may need to catch him up a bit. Both you and Kizzmekia are cleared for the interview and either of you can move forward with scheduling.

Thanks as always! Please let me know if I can provide additional information.  
Nissa

**Requested deadline:**  
COB Thursday, March 5

**About the story:**  
Story is about the process for rapidly developing a vaccine in response to an outbreak and how that compares with the standard vaccine development process. I'm interested in discussing whether it would have been possible to have a vaccine ready in anticipation of this outbreak and whether there are lessons learned for the future.

**Mike Hixenbaugh**

*NBC News*

National investigative reporter

Twitter: [@Mike\\_Hixenbaugh](#)

Cell/Signal: (b)(6)

(b)(6)

**Nissa Hiatt**

Communications

Vaccine Research Center, NIAID, NIH

40 Convent Drive, Bldg 40, Room 1100

Bethesda, MD 20892

(b)(6)

(b)(6)



---

**From:** Graham, Barney (NIH/VRC) [E] <(b)(6)>

**Sent:** Monday, March 2, 2020 3:34 PM

**To:** Hiatt, Nissa (NIH/VRC) [C] <(b)(6)>

**Cc:** Corbett, Kizzmekia (NIH/VRC) [E] <(b)(6)> VRC\_CoV (b)(6)

Prince, Tasheema (NIH/VRC) [C] <(b)(6)> Harris, Christina (NIH/NIAID) [E]  
<(b)(6)>

**Subject:** Re: NBC News Online: Phone Interview Request for Wed or Thurs

We would only do this for vaccines, not for anti-virals or therapeutics.

BG

Sent from my iPhone

On Mar 2, 2020, at 3:28 PM, Hiatt, Nissa (NIH/VRC) [C] <(b)(6)> wrote:

Hi Barney and Kizzmekia,

Would one of you be interested in a phone interview with NBC News Online about VRC vaccine development efforts for SARS-CoV-2? The story is about the drug development process for CoV and NIAID has already shared general background information with the reporter regarding NIH vaccine and therapeutic efforts.

The reporter requested a phone interview by COB Thursday - if one of you is interested and available, I will send your name for clearance. We know that this is a very busy time so they would understand if you are not available or the timing does not work for this week.

Best,  
Nissa

**Nissa Hiatt**  
Communications  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive, Bldg. 40, Room 1107  
Bethesda, MD 20892  
office: (b)(6)  
mobile: (b)(6)  
(b)(6)

<image001.png>

Disclaimer: The information in this email and any of its attachments is confidential and may contain sensitive information. It should not be used by anyone who is not the originally intended recipient. If you have received this email 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 the sender's own and not expressly made on behalf of NIAID by one of its representatives.

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 24 Apr 2020 19:44:02 +0000  
**To:** Nguyen, Tram (NIH/VRC) [C]  
**Subject:** Accepted: Covid-19 (b) (4) meeting

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 10 Feb 2020 13:15:21 +0000  
**To:** (b)(6)  
**Subject:** Re: Reminder - Request to review Wellcome application 220349/Z/20/Z

Sorry, I must have missed this first time through. We are extremely busy in the response to this new coronavirus. I recommend Dr. Robert Seder at the VRC. He is an expert in this area. I am familiar with Dr. Draper's work and would (b) (5), (b) (4).

(b)(6)

Barney

Sent from my iPhone

On Feb 10, 2020, at 4:58 AM, Freddie Peakman <(b)(6)> wrote:

Dear Dr Graham

I recently wrote to you with a request to provide feedback on an application by Prof Simon Draper from the University of Oxford for a Wellcome Senior Research Fellowship renewal entitled 'Preventing Blood-Stage Malaria by Precision Immunology'.

You are among a select group of researchers chosen by Wellcome to provide input into our research funding decisions. I appreciate this request may come at a busy time, but the Wellcome panel would really value your thoughts about this application.

Could you please get back to me by the end of this week? Please use the following link to respond:

Click the following link (b)(6) the link doesn't work, select and copy the code below (b)(6) and paste in the textbox on the following URL (b)(6)

I would need your feedback on the application by 26 February 2020, but may be able to extend this deadline for you a bit if needed. If you don't think you can review this proposal, I would really appreciate your suggestions of alternative reviewers.

For an overview of the Senior Research Fellowship renewal scheme, visit <https://wellcome.ac.uk/funding/schemes/senior-research-fellowships> If you have any questions, please let me know.

Kind regards,

Dr Freddie Peakman  
Grants Adviser  
Infection and Immunobiology

T: [REDACTED] (b)(6)

E: [REDACTED] (b)(6)

**Wellcome exists to improve health for everyone by helping great ideas to thrive. We support researchers, we take on big health challenges, we campaign for better science, and we help everyone get involved with science and health research. We are a politically and financially independent foundation.**

The Wellcome Trust is a charity registered in England and Wales, no. 210183. Its sole trustee is The Wellcome Trust Limited, a company registered in England and Wales, no. 2711000 (whose registered office is at 215 Euston Road, London NW1 2BE, UK).