From: Fauci, Anthony (NIH/NIAID) [E]
Sent: Fri, 24 Jul 2020 10:37:46 +0000
To: Jeremy Farrar
Subject: RE: Made it to UK press

I threw a brick! 😊

From: Jeremy Farrar
Sent: Friday, July 24, 2020 4:47 AM
To: Fauci, Anthony (NIH/NIAID) [E]
Subject: Made it to UK press


Wellcome exists to improve health 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.

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Thanks, Jeremy. I hope that I do not embarrass myself 😊

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Enjoy
A STATEMENT FROM THE WASHINGTON NATIONALS REGARDING OPENING DAY

The Washington Nationals are thrilled to announce that Nats super-fan, Dr. Anthony Fauci, Director of the National Institute of Allergy and Infectious Diseases, has accepted our invitation to throw out the ceremonial first pitch on Opening Day, Thursday, July 23.

Dr. Fauci has been a true champion for our country during the Covid-19 pandemic and throughout his distinguished career, so it is only fitting that we honor him as we kick off the 2020 season and defend our World Series Championship title.

From: "Fauci, Anthony (NIH/NIAID) [E]"  
Date: Thursday, 9 July 2020 at 12:55  
To: Jeremy Farrar  
Subject: RE: Hope you are OK

Jeremy:
Thank you for your kind and considerate note. I am hanging in there, but it is not easy. Stay well and safe.
Warm regards,
Tony

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:  
FAX: (301) 496-4409  
E-mail:  
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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.

From: Jeremy Farrar (b) (6)
Sent: Thursday, July 9, 2020 7:37 AM
To: Fauci, Anthony (NIH/NIAID) [E] (b) (6)
Subject: Hope you are OK

Watching events from a distance – all thoughts with you. Best wishes Jeremy

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Let us know if we can help

Dear Francis, Diana and Gary – and Jeremy
Many thanks.
We have a unique opportunity to study this emerging phenomenon and ensure we have all the bases covered in terms of epidemiology, mechanisms and treatment.
I represent the Royal College of Paediatrics & Child Health who have had a role in coordinating responses here in the UK.
Colleagues here in the UK have networked extensively with other European countries in terms of sharing data and organising collection of research samples. I understand they have also linked with colleagues in the USA who particularly work on Kawasaki Disease - in Boston and San Diego.
I wonder if an international effort would be possible to pull together data across Europe and the USA – and ensure that we have adequately powered quality studies of epidemiology, mechanisms and treatment. The number of cases will almost certainly preclude adequately powered studies in single countries, potentially even in the USA.
It appears that case numbers are now dropping in the UK/Europe – as the curve appeared to present and peak approximately a month after the covid peak – and I suspect a similar peak and decline will be seen in the USA if the post-infectious hypothesis is correct. Clearly more cases are likely with any secondary covid peaks.
A collaboration between NIH and Wellcome could be very powerful in ensuring that this initial cluster from the first peak is well studied and prepare for prospective studies for future cases.
Treatment studies in particular might need to be international. None of the current covid-19 treatment studies would appear entirely appropriate as they stand.
We have been planning an expert taskforce to oversee the research and clinical responses here in the UK – and it would make sense for this to be international given the above.
Yours and best
Russell
From: "Collins, Francis (NIH/OD) [E]"
Date: Wednesday, 13 May 2020 at 01:52
To: Russell Viner [E]; Jeremy Farrar [E]; Fauci, Anthony (NIH/NIAID) [E]; "Bianchi, Diana (NIH/NICHD) [E]"
Cc: "Gibbons, Gary (NIH/NHLBI) [E]"
Subject: RE: confidential - update on Paediatric Multisystem Inflammatory Syndrome (PIMS)

Dear Russell,

Thanks for your note and this additional information. I am looping in Dr. Diana Bianchi (Director, National Institute of Child Health and Human Development) and Dr. Gary Gibbons (Director, National Heart, Lung, and Blood Institute). I have asked them to co-chair an urgent NIH team on PMIS. I am sure they will want to connect with you.

Best, Francis

---

From: Viner, Russell [E]
Sent: Tuesday, May 12, 2020 6:12 PM
To: Jeremy Farrar [E]; Collins, Francis (NIH/OD) [E]; Fauci, Anthony (NIH/NIAID) [E]
Subject: Re: confidential - update on Paediatric Multisystem Inflammatory Syndrome (PIMS)

Thanks Jeremy and hello to Francis and Tony

Colleagues here have been linked in with pediatric id/imm colleagues through Boston but a fully national collaborative approach would be very valuable.

We've started a national (across UK and Ireland) surveillance study using a well-established physician reporting system (British Paediatric Surveillance Unit, BPSU) – started yesterday, with weekly reporting by all paediatricians (95% coverage) in the UK - that will provide initially prevalence data next week/fortnight and then start to provide incidence data. Reported cases will be fed into established research systems to obtain biological specimens etc.

However cross national studies clearly much more useful if can be organised quickly. For epi, biological samples and treatment studies.

Re Rx - there is a recommendation to recruit to the multi-arm all-age Recovery Trial (https://www.recoverytrial.net) for more severe cases of this syndrome; however there is a concern that some of the arms may not be appropriate for this potentially post-covid syndrome – e.g. hydroxychloroquine or azithromycin. The standard treatment So there is the potential for a very rapid development of a pediatric rct – however this would be entirely underpowered in one country – and where a joint UK-USA plus others trial might be very powerful
Re etiology – a powerful prospective case-control design might be very useful in identifying environmental and other risk factors – again a single country study will be difficult to power.

The implications for vaccine development is something we’ve been discussing with Andy Pollard from the Oxford Vaccine Centre.

Keen to facilitate dialogue between UK and US teams. Let me know how we might do this.

Best
Russell

From: Jeremy Farrar
Date: Tuesday, 12 May 2020 at 19:33
To: Russell Viner, Francis Collins, "Fauci, Anthony (NIH/NIAID) [E]
Subject: Re: confidential - update on Paediatric Multisystem Inflammatory Syndrome (PIMS)

Russell
I shared your note with Francis Collins and Tony Fauci at NIH.

The NIH is looking at this in the USA – can we link you up with the teams in the USA?

Best wishes Jeremy

From: "Viner, Russell"
Date: Tuesday, 12 May 2020 at 13:16
To: "Vallance, Patrick (GO-Science)", "Whitty, Chris", Jeremy Farrar, Natasha Neill
Cc: 
Subject: confidential - update on Paediatric Multisystem Inflammatory Syndrome (PIMS)

Dear Chris and Patrick, cc to Jeremy

I think you are also being updated by NHSE and perhaps also by Callum Semple but just a quick update from RCPCH perspective

We had an update call yesterday, which somewhat raised my level of concern and changed the picture slightly – so thought you should be in the picture. I have of course
real concerns about how we balance this with the issues about public confidence re schools.

Case definition: RCPCH case definition published Friday a week ago, now adopted in the UK and likely by WHO

Numbers – we appear to be close to 60 across the UK. One concern from the call yesterday was that there appears to be some milder forms sitting on paediatric wards – i.e. not fulfilling case definition but essentially children with very high CRP and a symptom or two. Discussions about revision to case definition – on hold for the moment. I am concerned that this will dilute the situation and artificially inflate figures.

Clinical picture: as before. There appear to be potentially 2-3 phenotypes; one with multisystem inflammatory symptoms, one with shock and perhaps one with essentially Kawasaki Disease (KD e.g. coronary artery aneurisms in young children) but refractory to treatment

Larger numbers coming from across the world, where COVID has been an issue. Italy, Spain, USA.

Deaths: 2 known deaths thus far, one London one Bristol. One was a 6 month old with refractory Kawasaki Disease (KD).

Severity – around 50% need PICU. As before

COVID status: I can’t give you the exact new numbers, but unchanged i.e. a proportion around 25-30% test negative for virus but some later found to be serology positive (where this is available).

The particular concerns for me from yesterday were four:
 a. that some apparently very mild cases have been appearing – as above – potentially inflating the numbers, although these are also increasing for the full syndrome
 b. that some apparently very well children can suddenly deteriorate – this is rare however
 c. some reports, without clear data, that cardiac abnormalities are more common than previously recognised when echoed. Raising concerns about longer term complications.
 d. Aetiology and risk factors: The higher proportion from BME backgrounds has been described before. A new concern was an apparently high proportion of parents who are healthcare workers. This is very concerning and I emphasised the need to recognise this is supposition, to collect good data and keep confidential for now until we have some actual data. However the potential to worry the public is very high.

Aetiology; remains unclear. Speculation that this is a post-inflammatory condition due to i) phenotype; ii) peaking 2-4 weeks after covid peak; iii) virus testing negative in some
patients. The absence of this syndrome in China/Japan/SK is puzzling, given that KD was described in Japan plus high prevalence there, presumably genetic. This remains very much a mostly London phenomenon, with 1-2 cases only in Scotland and NI and a larger cluster in Wales. Which raises concerns about recognition. Note the occurrence in teenagers – and likely a syndrome that overlaps with young adults.

Research
Brit Paediatric Surveillance Unit (BPSU) study started today. This is routine RCPCH rare disease surveillance methodology but will now run weekly to all paediatricians in the UK.
WHO is starting some surveillance as well – Uk people linked into this Routine recruitment into Diamonds/ISARIC studies of patients notified through BPSU.

However I believe that a more comprehensive research strategy is needed – e.g. encompassing a case-control study to examine risk factors such as ethnicity and parent occupation, deprivation etc. We are working very closely with NHSE and we have suggested that a formal joint Taskforce be formed to oversee the research and clinical responses. We hope Steve Powis will agree to this.

Publicity
An Italian description of 10 cases of a KD-like syndrome will appear in Lancet later today or tomorrow, with a commentary (by me and Liz Whittaker from Imperial – trying to balance the importance of recognising the new syndrome with the public health messages).
The UK experience has been submitted (NEJM).
These will undoubtedly raise public concern. The RCPCH is working hard to ensure that messages are clear and recognise the bigger, public health picture.

I hope this is helpful. Let me know if you wish further information or have advice for us.

Best
Russell
Jeremy:

Thank you for your kind note. Much appreciated.

Best regards,
Tony

On May 12, 2020, at 12:57 PM, Jeremy Farrar wrote:

Tony – Hope you are OK, take care, best wishes Jeremy

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Just to update.

Any news on this from US?

Dear Chris and Patrick, cc to Jeremy

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The UK experience has been submitted (NEJM).
These will undoubtedly raise public concern. The RCPCH is working hard to ensure that messages are clear and recognise the bigger, public health picture.
I hope this is helpful. Let me know if you wish further information or have advice for us.

Best
Russell
Dear Ian – thank you very much for this. And thank you for the work of the secretariat. I have just two points:

Not each GPMB member has a Sherpa (at least I don’t)

All the very best (until this afternoon) Ilona
Dear Board members,

In preparation for the Board meeting on Tuesday 5 May from 13.00-14.30 CEST, please find attached the draft annotated outline of the Annual Report.

Regards,

Ian
You will also find copied below the call-in details.

We look forward to the meeting.

Regards,

Ian

When it's time, join the Webex meeting here.

Meeting number (access code): [REDACTED]
Meeting password: [REDACTED]

Tuesday, May 5, 2020
1:00 pm | (UTC+02:00) Brussels, Copenhagen, Madrid, Paris | 1 hr 30 mins

Join meeting

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Tap to call in from a mobile device (attendees only)
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Join using Microsoft Lync or Microsoft Skype for Business

Dial (b)(6)@lync.webex.com

Need help? Go to http://help.webex.com

May, April 29, 2020 8:18 PM

To: ‘Dzau Victor’ <VDzau@nas.edu>; Chris.Elias@nas.edu; b.ebner@nas.edu; J.Farrar.P@nas.edu; ‘Fauci Anthony’; ‘Fore Henrietta’; ‘Gao Fu’; ‘Gashumba Diane’; ‘Kaag Sigrid’; ‘Vega Morales Jeanette’; ‘Suzuki Yasuhiro’; ‘Vega Morales Jeanette’; ‘Veronika Skvortsova’; ‘VijayRaghavan Krishnaswamy’
Cc: ‘As Sy’

Subject: GPMB Board Teleconference; Tuesday 5 May 13.00-14.30 CEST

Dear Board members, dear colleagues,

Please find attached an annotated agenda for the Board teleconference scheduled for Tuesday 5 May from 13.00-14.30 CEST. In order to make as much time available as possible for discussion on the outline of the 2020 annual report, we have limited the number of topics for discussion.

Remaining documents for the meeting will be sent to you on Friday.

For those who have not yet done so, we would be grateful if you could confirm your participation in teleconference.

Many thanks,

Ian

Ian Smith
Desk: +41 22 7913979

Mobile/WhatsApp:
Jeremy:

Many thanks for the update. Please continue to keep me informed.

Best,

Tony

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: (301) 496-4409
FAX: (301) 496-4409
E-mail:

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Quick update

Update in confidence

European network from this morning:

16 Paris, 2 Geneva, few Madrid last 10 days - nothing like this usually seen even with seasonal KD or TSS
Barcelona have slightly different experience of 6 ‘Kawasaki’ in last 2 weeks - couple now who have large coronary aneurysms, as have one child South London and one in Bristol.
Most UK PICU have 1-2 of these type of cases
Phenotype seems Diarrhoea and abdominal pain, refractory shock then various degrees of heart involvement and inflammation ++ - several have had their normal appendix whipped out
Most negative respiratory and stool PCR for anything, some positive resp PCR COVID - GOSH early case has seroconverted, but had immunoglobulin
We are establishing database UK and Europe and trying to define what the clinician features are and agree investigations.
Notably, none in US reported (just D/W Boston childrens who have been running shared international COVID experience web calls) and none in Rome, unsure about rest of Italy yet
Does seem BAME preponderance -?? immune related or social phenomenon, in terms of deprivation prevalence and ability to isolate

From: "Fauci, Anthony (NIH/NIAID) [E]"[b][6]
Date: Monday, 27 April 2020 at 12:36
To: Jeremy Farrar[b][6], Victor Dzau <VDzau@nas.edu>, George Gao[b][6], Richard Hatchett[b][6], "Hannon, Emma" <EHannon@nas.edu>, "Conrad, Patricia (NIH/NIAID) [E]" [b][6], Teresa de Vega[b][6], "Rebeka Yasmin - CEPI" [b][6], "ben.tinker@cnn.com" <ben.tinker@cnn.com>, "Amanda.Sealy@cnn.com" <Amanda.Sealy@cnn.com>, "Neel.Khairzada@turner.com" <Neel.Khairzada@turner.com>, "Tia.Miller@turner.com" <Tia.Miller@turner.com>, "McGinnis, J. Michael" <MMcGinnis@nas.edu>, "Mun, Jenny" <JMun@nas.edu>, "Redfield, Robert R. (CDC/OD)"

Subject: RE: NAS Annual Meeting Session on COVID-19 -- Information regarding your Saturday April 25 participation

Jeremy:
Thanks for the heads up. Is there any more detailed description of the precise clinical manifestations? They describe a “multisystem inflammatory state”. It is vasculitis or anything more specific? Could be an infectious agent that has nothing to do with SARS-CoV-2 infection even though some children are circumstantially infected with SARS-CoV-2 or it could be a post-SARS-CoV-2 inflammatory syndrome, perhaps a Kawasaki syndrome-like disease. Please keep me informed if you hear any further information.

Best regards,

Tony

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: (b)(6)
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E-mail: (b)(6)

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From: Jeremy Farrar
Sent: Monday, April 27, 2020 7:13 AM
To: Fauci, Anthony (NIH/NIAID) [E] (b)(6); Dzau, Victor J. <VDzau@nas.edu>; George GAO (b)(6); Hannon, Emma <EHannon@nas.edu>; Conrad, Patricia (NIH/NIAID) [E] (b)(6); Teresa Miller de Vega (b)(6); Rebekah Yasmin - CEPI (b)(6); Richard Hatchett (b)(6); Amanda Sealy@cnn.com; Neel.Khairzada@turner.com; Tia.Miller@turner.com; hujr@chinacdc.cn; McGinnis, J. Michael <JMCGinnis@nas.edu>; Mun, Jenny <JMun@nas.edu>
Subject: Re: NAS Annual Meeting Session on COVID-19 -- Information regarding your Saturday April 25 participation

To be aware of – news over night so a huge amount of uncertainty – important for COVID19 now, and a potential concern for how we view immunity, protection, post-infectious immunopathology.
It was a real pleasure to join all of you on this important session. Many thanks for inviting me.

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: (301) 496-4409
FAX: (301) 496-4409
E-mail: anthony fauci@nih.gov

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To: George GAO
Cc: Fauci, Anthony (NIH/NIAID) [E]; Hannon, Emma <EHannon@nas.edu>; Conrad, Patricia (NIH/NIAID) [E]; Amanda Sealy@cnn.com; Neel.Khairzada@turner.com; Tia.Miller@turner.com; McGinnis, J. Michael <MMcGinnis@nas.edu>; Mun, Jenny <haja.bally@cepi.net>
Subject: Re: NAS Annual Meeting Session on COVID-19 -- Information regarding your Saturday April 25 participation

Dear Jeremy, Tony, Sanjay, George, Susan and Richard,

Thank you so much for your superb contributions. It was a spectacular session - a truly inspiring one. I am grateful to all of you.

Hope to see you soon.

Warmest regards,

Victor

On Apr 25, 2020, at 1:22 PM, George GAO wrote:

I am waiting for being connected and will use slides which were sent to your office

George

在 2020年4月24日，01:49，Dzau，Victor J. <VDzau@nas.edu> 写道：

Dear Jeremy, Tony, Sanjay, George, Susan, and Richard,

I’m really looking forward to this panel on COVID-19 at the NAS Annual Meeting on Saturday, April 25th at 2:00-3:30 pm ET. There is tremendous excitement and enthusiasm, and registration is through the roof.

I am sending this note to do a last minute check to see if there is anything you need from me. I also want to check whether you are planning to use slides. Will you be sending your slides to us to project or use the share screen feature to advance your own slides? Regardless, it would be helpful to me if you could send me your slides for my preparation.

I would greatly appreciate it if you would respond to this email.

Best,
Dear all,

Thank you for agreeing to participate in a special late breaking session on the COVID-19 pandemic at the NAS annual meeting. Knowing how busy you are, I am sending this email in lieu of a call to prepare for the session.

As you know, this is a 90 minute session which aims to provide our audience with deeper insights into the latest developments in the COVID-19 response. I plan to hold an engaging discussion that covers the whole experience on dealing with this pandemic – from US to international, to preparedness and response, the biology of the virus, the state of diagnostic, treatment and vaccine development, and the importance of communication.

I will begin the session by providing brief (~3 min) opening remarks describing the circumstances of the pandemic. Then, I will introduce the panelists and you will each have 7 minutes to provide remarks. You may use a limited number of slides for illustration. I hope that each panelist will provide their own perspective and speak to the issues proposed below.

- Jeremy Farrar will discuss the global response to the pandemic, drawing from his experience as a global leader, the chair of the Scientific Advisory Group for the WHO's R&D Blueprint and as a member of the Global Preparedness Monitoring Board.
- Tony Fauci will discuss the US pandemic and provide his perspective as a member of the White House Coronavirus Task Force addressing the 2019–20 coronavirus pandemic.
- George Gao will discuss China’s response to the pandemic and lessons learned for the rest of the globe.
• Susan Weiss will discuss the viral characteristics of SARS COV2, insights into its pathobiology, immunity and development of a pan-CoV antiviral.

• Richard Hatchett will discuss the development of new vaccines and treatments against COVID-19.

• Sanjay Gupta will comment on the health system response to the pandemic and challenges related to communication and public engagement in responding to COVID-19.

Following remarks from each panelist, we will have a moderated discussion amongst ourselves – I will ask you a set of questions (15 mins) and then we will take questions from the web (25 mins). To prepare me to be your moderator, please send me any questions you would like me to ask you. For those of you who would like to have a prep call, please let me know and I will set it up.

Best,

Victor

From: Mun, Jenny
Sent: Wednesday, April 8, 2020 10:56 AM
To: [List of recipients]
Cc: [List of recipients]
Subject: NAS Annual Meeting Session on COVID-19 – Information regarding your Saturday April 25 participation

Dear Speakers:

I am the logistical contact for the COVID-19 session that will be held as part of the Annual Meeting (online) program on Saturday, April 25 at 2:00 pm EDT. Thank you for agreeing to participate in this session. To help you with your planning, I have provided additional details below.

Please note that the session will be live webcast and the general public will also be able to watch the session. Video from the session will also be uploaded on the NAS YouTube channel (https://www.youtube.com/user/theNASciences) after the meeting. We will need to obtain signed speaker release forms for your participation in this session. I have attached the speaker release form for your review and submission. Please return the signed speaker release form by Monday, April 13.

Session speakers are asked to connect 30 minutes prior to the session start time (by Saturday, April 25 at 1:30 pm EDT) to allow the technical staff to check connections and prepare for the session. Details on how to connect will be sent before the meeting.

We will list you in our promotional materials as noted below. If this is incorrect, please let me know.

Anthony S. Fauci, Director, National Institute of Allergy and Infectious Diseases
Jeremy Farrar, Director, Wellcome Trust
George F. Gao, Director-General, Chinese Center for Disease Control & Prevention
Sanjay Gupta, Chief Medical Correspondent, CNN
Richard J. Hatchett, CEO, Coalition for Epidemic Preparedness Innovations
Susan R. Weiss, Professor of Microbiology, Perelman School of Medicine, University of Pennsylvania

Since many of us have moved to remote work environments, you may already be proficient with Zoom and other online meeting/collaboration applications. I am attaching a ‘speaker guidelines’ file in case you have any questions on how best to prepare for and stage your remote talk. We have technical staff available to help you become familiar with Zoom and its settings – such as “sharing your screen” (if you have slide presentations that need to be shown during your talk). We can arrange for a training session this week or next week. If you would like to schedule a session, please let me know as soon as possible.

Dr. Dzau’s office will be in touch regarding the agenda for this session. If you have any other questions, please let me know.

Regards, Jenny

*********************************************

Jenny Mun
Membership Director
National Academy of Sciences
Thanks, Jeremy. I saw the report in the Post from Saturday. These children had mostly respiratory disease and diarrhea. I will check with the docs at DC Children’s Hospital about the presence of “multisystem inflammatory state”. This could just be the advanced stage of their disease compatible with advanced SARS-COV-2

Best,
Tony

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: [301] 496-4409
E-mail:

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Thanks Tony – have asked for that and will share as soon as I can.
I believe there have been reports in the Washington Post.


Jeremy:

Thanks for the heads up. Is there any more detailed description of the precise clinical manifestations? They describe a “multisystem inflammatory state”. It is vasculitis or anything more specific? Could be an infectious agent that has nothing to do with SARS-CoV-2 infection even though some children are circumstantially infected with SARS-CoV-2 or it could be a post-SARS-CoV-2 inflammatory syndrome, perhaps a Kawasaki syndrome-like disease. Please keep me informed if you hear any further information.

Best regards,

Tony
From: Jeremy Farrar
Sent: Monday, April 27, 2020 7:13 AM
To: Fauci, Anthony (NIH/NIAID) [E] Dzau, Victor J. <VDzau@nas.edu>; George GAO 
Cc: Richard Hatchett [b] (b) [b] (b) (b) 
Hannon, Emma <EHannon@nas.edu>; Conrad, Patricia (NIH/NIAID) [E] [b] (b) (b) (b) 
Teresa Miller de Vega [b] (b) [b] (b) 
Rebeca Yasmin - CEPI [b] (b) [b] (b) [b] [b] 
Amanda Sealy@cn.com; Neel.Khairzada@turner.com; Tia.Miller@turner.com; Huir@chinacdc.cn; 
McGinnis, J. Michael [b] (b) (b) Mun, Jenny [b] (b) [b] [b] (b) [b] (b) 
Subject: Re: NAS Annual Meeting Session on COVID-19 -- Information regarding your Saturday April 25 participation

To be aware of – news over night so a huge amount of uncertainty – important for COVID19 now, and a potential concern for how we view immunity, protection, post-infectious immunopathology.


https://t.co/Bj6YH18zi

From: "Fauci, Anthony (NIH/NIAID) [E]"
Date: Sunday, 26 April 2020 at 19:52
To: Victor Dzau <VDzau@nas.edu>, George Gao 
Cc: Jeremy Farrar [b] (b) (b) (b) (b) 
Hannon, Emma <EHannon@nas.edu>, "Conrad, Patricia (NIH/NIAID) [E]" [b] (b) (b) (b) 
Teresa de Vega [b] (b) [b] (b) 
Rebeca Yasmin - CEPI [b] (b) [b] (b) [b] [b] 
"Amanda.Sealy@cn.com" <Amanda.Sealy@cn.com>, "Neel.Khairzada@turner.com" <Neel.Khairzada@turner.com>, "Tia.Miller@turner.com" <Tia.Miller@turner.com>, "McGinnis, J. Michael" <MMcGinnis@nas.edu>,
It was a real pleasure to join all of you on this important session. Many thanks for inviting me.

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: (301) 496-4409  
FAX: (301) 496-4409  
E-mail: anthonyfauci@nih.gov

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From: Dzau, Victor J. <VDzau@nas.edu>  
Sent: Saturday, April 25, 2020 3:59 PM  
To: George GA  
Cc: Fauci, Anthony (NIH/NIAID) [E]; WEISSR@pennmedicine.upenn.edu; Hannon, Emma <EHannon@nas.edu>; Conrad, Patricia (NIH/NIAID) [E]; ben.tinker@cnn.com; Amanda.Sealy@cnn.com; Neel.Khairzada@turner.com; Tia.Miller@turner.com; McGinnis, J. Michael <VMcGinnis@nas.edu>; haja.bally@cepi.net  
Subject: Re: NAS Annual Meeting Session on COVID-19 -- Information regarding your Saturday April 25 participation

Dear Jeremy, Tony, Sanjay, George, Susan and Richard,  
Thank you so much for your superb contributions. It was a spectacular session- a truly inspiring one. I am grateful to all of you.  
Hope to see you soon.  
Warmest regards,  
Victor
On Apr 25, 2020, at 1:22 PM, George GAO wrote:

I am waiting for being connected and will use slides which were sent to your office
George

在2020年4月24日，01:49，Dzau, Victor J. wrote:

Dear Jeremy, Tony, Sanjay, George, Susan, and Richard,

I’m really looking forward to this panel on COVID-19 at the NAS Annual Meeting on Saturday, April 25th at 2:00-3:30 pm ET. There is tremendous excitement and enthusiasm, and registration is through the roof.

I am sending this note to do a last minute check to see if there is anything you need from me. I also want to check whether you are planning to use slides. Will you be sending your slides to us to project or use the share screen feature to advance your own slides? Regardless, it would be helpful to me if you could send me your slides for my preparation.

I would greatly appreciate it if you would respond to this email.

Best,
Victor

PS, my special assistant, will be sending you additional information about the session logistics shortly.

From: Dzau, Victor J. <VDzau@nas.edu>
Sent: Thursday, April 9, 2020 11:01 AM
To: Mun, Jenny <JMun@nas.edu>;

Cc: Hannon, Emma <EHannon@nas.edu>;
ben.tinker@cn.com <ben.tinker@cn.com>;
Amanda.Sealy@cn.com <Amanda.Sealy@cn.com>;
Neel.Khairzada@turner.com <Neel.Khairzada@turner.com>;
Tia.Miller@turner.com <Tia.Miller@turner.com>
Subject: RE: NAS Annual Meeting Session on COVID-19 -- Information regarding your Saturday April 25 participation

Dear all,

Thank you for agreeing to participate in a special late breaking session on the COVID-19 pandemic at the NAS annual meeting. Knowing how busy you are, I am sending this email in lieu of a call to prepare for the session.

As you know, this is a 90 minute session which aims to provide our audience with deeper insights into the latest developments in the COVID-19 response. I plan to hold an engaging discussion that covers the whole experience on dealing with this pandemic – from US to international, to preparedness and response, the biology of the virus, the state of diagnostic, treatment and vaccine development, and the importance of communication.

I will begin the session by providing brief (~3 min) opening remarks describing the circumstances of the pandemic. Then, I will introduce the panelists and you will each have 7 minutes to provide remarks. You may use a limited number of slides for illustration. I hope that each panelist will provide their own perspective and speak to the issues proposed below.

- Jeremy Farrar will discuss the global response to the pandemic, drawing from his experience as a global leader, the chair of the Scientific Advisory Group for the WHO's R&D Blueprint and as a member of the Global Preparedness Monitoring Board.
- Tony Fauci will discuss the US pandemic and provide his perspective as a member of the White House Coronavirus Task Force addressing the 2019–20 coronavirus pandemic.
- George Gao will discuss China’s response to the pandemic and lessons learned for the rest of the globe.
- Susan Weiss will discuss the viral characteristics of SARS COV2, insights into its pathobiology, immunity and development of a pan-CoV antiviral.
- Richard Hatchett will discuss the development of new vaccines and treatments against COVID-19.
- Sanjay Gupta will comment on the health system response to the pandemic and challenges related to communication and public engagement in responding to COVID-19.

Following remarks from each panelist, we will have a moderated discussion amongst ourselves – I will ask you a set of questions (15 mins) and then we will take questions from the web (25 mins). To prepare me to be your moderator, please send me any questions you would like me to ask you. For those of you who would like to have a prep call, please let me know and I will set it up.

Best,
Victor

From: Mun, Jenny
Sent: Wednesday, April 8, 2020 10:56 AM
To:
Dear Speakers:

I am the logistical contact for the COVID-19 session that will be held as part of the Annual Meeting (online) program on Saturday, April 25 at 2:00 pm EDT. Thank you for agreeing to participate in this session. To help you with your planning, I have provided additional details below.

Please note that the session will be live webcast and the general public will also be able to watch the session. Video from the session will also be uploaded on the NAS YouTube channel (https://www.youtube.com/user/theNASciences) after the meeting. We will need to obtain signed speaker release forms for your participation in this session. I have attached the speaker release form for your review and submission. Please return the signed speaker release form by Monday, April 13.

Session speakers are asked to connect 30 minutes prior to the session start time (by Saturday, April 25 at 1:30 pm EDT) to allow the technical staff to check connections and prepare for the session. Details on how to connect will be sent before the meeting.

We will list you in our promotional materials as noted below. If this is incorrect, please let me know.

Anthony S. Fauci, Director, National Institute of Allergy and Infectious Diseases
Jeremy Farrar, Director, Wellcome Trust
George F. Gao, Director-General, Chinese Center for Disease Control & Prevention
Sanjay Gupta, Chief Medical Correspondent, CNN
Richard J. Hatchett, CEO, Coalition for Epidemic Preparedness Innovations
Susan R. Weiss, Professor of Microbiology, Perelman School of Medicine, University of Pennsylvania

Since many of us have moved to remote work environments, you may already be proficient with Zoom and other online meeting/collaboration applications. I am attaching a 'speaker guidelines' file in case you have any questions on how best to prepare for and stage your remote talk. We have technical staff available to help you become familiar with Zoom and its settings – such as "sharing your screen" (if you have slide presentations that need to be shown during your talk). We can arrange for a training session this week or next week. If you would like to schedule a session, please let me know as soon as possible.

Dr. Dzau's office will be in touch regarding the agenda for this session. If you have any other questions, please let me know.

Regards, Jenny
Jenny Mun
Membership Director
National Academy of Sciences
jmun@nas.edu
(b) (6)
From: Jeremy Farrar
Sent: Fri, 24 Apr 2020 16:55:47 +0000
To: SMITH, Ian Michael; Dzau Victor; Chris. Elias; Fauci, Anthony (NIH/NIAID) [E]; Fore Henrietta; Gao Fu; Gashumba Diane; Kaag Sigrid; Ilona Kickbusch; Suzuki Yasuhiro; Vega Morales Jeanette; Vega Morales Jeanette; Veronika Skvortsova; Vijay Raghavan Krishnaswamy
Cc: "As Sy"; Gro
Subject: Re: Statement from the GPMB Co-chairs on the Access to COVID-19 Tools Accelerator

Thank you

---

From: "SMITH, Ian Michael"  
Date: Friday, 24 April 2020 at 16:08  
Cc: "As Sy"  
Subject: Statement from the GPMB Co-chairs on the Access to COVID-19 Tools Accelerator

Dear Board members,

Today, WHO and many partners launched the Access to COVID-19 Tools (ACT) Accelerator, a global collaboration mechanism to accelerate development, production and deployment of safe and effective technologies to prevent, diagnose and treat COVID-19. The GPMB Co-Chairs have issued the attached statement welcoming the initiative.

We encourage you to circulate the attached statement through your channels and networks.

With kind regards,

Ian

Ian Smith
Desk: +41 22 7913979
Mobile/WhatsApp: 
Join Microsoft Teams Meeting

Local numbers | Reset PIN | Learn more about Teams | Meeting options
Join with a video conferencing device
Alternate VTC dialing instructions

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Jeremy:

Many thanks for your kind note. Much appreciated. Running on fumes, but still running. Hope to chat with you soon to catch up.
Warm regards,
Tony

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: (301) 496-4409
FAX: (301) 496-4410
E-mail: anthony.sfauci@nih.gov

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Tony

Hope you are OK

Thank you, again, for your remarkable leadership – best wishes Jeremy

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OK. Let us talk over the weekend.

Sorry Tony....

Cannot tonight I am afraid.

Weekends marginally few things on – if better for you!

My number is:

Jeremy

Will call before 9:00 AM EST. I cannot find your cell phone number. Please send it to me by e-mail

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: (301) 496-4409
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From: Jeremy Farrar
Sent: Wednesday, March 25, 2020 8:23 AM
To: Fauci, Anthony (NIH/NIAID) [E]
Subject: COVID19

Tony
Good to hear you on these WHO calls.

And your leadership in USA!

If you have time for a 5 min update let me know – very best wishes Jeremy

Physically Distanced, socially connected

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Tony
A privilege to know you and to observe and learn from your leadership, particularly over the last few weeks in the media and elsewhere.

I may be in Washington on Wednesday and Thursday next week, with a few meetings, seeing Victor etc – assuming still possible to fly UK-USA.

You are 24/7 I know, but if you had anytime, always great to see you.

Best wishes Jeremy

---

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Subject: Re: URGENT - GPMB COVID-19 FUNDING NOTE

Agree, very positive and appreciated

From: Jeremy Farrar
Sent: Fri, 6 Mar 2020 14:33:45 +0000
To: Alex Harris, 'Gro Brundtland', 'As Sy', Victor Dzau <VDzau@nas.edu>, Jeremy Farrar, Anthony Fauci, Diane Gashumba, Henrietta Fore, Gao Fu, 'R', Suzuki Yasuhiro <Suzuki.Yasuhiro@nih.gov>, Jeanette Vega Morales, Vijay Raghavan Krishnaswamy, Skvortsova Veronika
Cc: Bernhard Schwartlander, Pate Muhamed, 'Amelie RIOUX', Tore Godal, 'Godal, Tore', Michael Ryan, 'Kanarek, Morgan', Scott Dowell, Sheila Austria, William Hall, Teresa de Vega, 'Marston Hilary'

Date: Friday, 6 March 2020 at 14:13
Wonderful news Ilona

Dear Marja,

This is very good news and we greatly appreciate Minister Kaag's flexibility and support on this. With very best wishes,

Alex

Alex Harris
Head of Global Policy & Advocacy
Wellcome
Dear all, sorry to bother you again but after careful considerations internally, I am happy to confirm that our Minister is willing to sign the letter.

Kind regards,
Marja
Dear Alex and others,

Although it has not been possible yet to discuss the letter and note with our Minister, I would like to give you an update: We certainly see the need for investments in R&D and other important – underserved – areas related to the current outbreak.

I will keep you updated.

Kind regards,

Marja

From: Alex Harris
Sent: donderdag 5 maart 2020 15:29
To: Gro Brundtland; As Sy; Dzau, Victor J. <VDzau@nas.edu>; Jeremy Farrar; Anthony Fauci; Fore Henrietta; Gao Fu
Subject: URGENT - GPMB COVID-19 FUNDING NOTE

Importance: High

Dear Board Members,

Thank you for your input on the call yesterday regarding the COVID-19

With many thanks,

Alex
## G7 leaders and Sherpas

<table>
<thead>
<tr>
<th>Country</th>
<th>Rep</th>
<th>Sherpa (amendments welcome)</th>
<th>GPMB lead(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Justin Trudeau, Prime Minister</td>
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<td>(b) (6)</td>
</tr>
<tr>
<td>France</td>
<td>Emmanuel Macron, President</td>
<td></td>
<td></td>
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<tr>
<td>Germany</td>
<td>Angela Merkel, Chancellor</td>
<td></td>
<td>Jeremy Farrar</td>
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<tr>
<td>Italy</td>
<td>Giuseppe Conte, Prime Minister</td>
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<tr>
<td>Japan</td>
<td>Shinzō Abe, Prime Minister</td>
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<tr>
<td>United Kingdom</td>
<td>Boris Johnson, Prime Minister</td>
<td></td>
<td>Jeremy Farrar</td>
</tr>
<tr>
<td>United States</td>
<td>Donald Trump, President</td>
<td></td>
<td>Victor Dzau</td>
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</table>

### Participants

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<tr>
<th>Country</th>
<th>Rep</th>
<th>Sherpa (amendments welcome)</th>
<th>GPMB lead(s)</th>
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<tr>
<td>European Union</td>
<td>Charles Michel, President of the European Council</td>
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<tr>
<td>European Union</td>
<td>Ursula von der Leyen, President of the European Commission</td>
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## International financial institutions

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<th>Institution</th>
<th>Leadership</th>
<th>Sherpa/equivalent or suggested contacts</th>
<th>GPMB lead</th>
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<td></td>
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<td>(b) (6) (6) (4)</td>
<td>Victor Dzau</td>
</tr>
</tbody>
</table>

|                   |                             |                                        | As Sy     |
From: Alex Harris
Sent: 03 March 2020 23:06
To: 'Amelie RIOUX'; Dzau, Victor J. <VDzau@nas.edu>; Jeremy Farrar; Anthony Fauci; Fore Henrietta; Gao Fu; Gashumba Diane; Ilona Kickbusch; Suzuki Yasuhiro; Vega Morales Jeanette; Vijay Raghavan Krishnaswamy; Skvortsova Veronika
Cc: Gro Brundtland; As Sy; Tore Godal; Godal, Tore; SCHWARTLANDER, Bernhard; Michael J.; Pate Muhamed; Kanarek, Morgan; 'Sheila Austria'; William Hall; Teresa Miller de Vega; 'Marston Hilary'; Zacharie Gahungu
Subject: RE: GPMB: COVID-19 FUNDING NOTE

Dear Board Members,

Ahead of the GPMB Board call on Wednesday, I’m pleased to attach a note (on behalf of Jeremy Farrar, Victor Dzau and a small working group) setting out the urgent need for new funding for the global COVID-19 response.

You will have seen the strong announcement today from the World Bank of up to $12bn to support country response, which we warmly welcome. We are asking for your feedback on the call and

We look forward to the discussion.

With best wishes,

Alex

Alex Harris
Head of Global Policy & Advocacy
Wellcome
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From: Jeremy Farrar  
Sent: Sun, 1 Mar 2020 14:37:48 +0000  
To: Fauci, Anthony (NIH/NIAID) [E]  
Subject: Phone call  

Sorry just not possible Saturday.

I can phone you any time after 2pm EST if you have 10 mins!

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Thanks Kim!

Hi Teresa,
17:30 UK / 13:30 DC time on Thursday, 27 February will work well.

Thank you,
Kim

Kim Barasch [c]
Office of the Director
National Institute of Allergy & Infectious Diseases

Hi Kim,

Jeremy will be able to call Tony after 17:30 UK / 13:30 DC time.

I hope this works.

Thank you,
Teresa
Thursday would be better. Any time between 11:00 AM and 4:00 PM DC time. Call my office at [REDACTED] and Kim will pull me out of any meeting I am in.

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]  
FAX: (301) 496-4409  
E-mail: [REDACTED]

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I can much later at night (anytime up to midnight UK time) here Tony if that helps.....or Thursday also ok, if that is better for you?
Unfortunately, I will be in the middle of a Congressional Hearing with Secretary Azar at 4:00 PM DC time. Any possibility for 1:00 PM DC time?

Of course, I will be in and out of meetings, but call my office at My staff will find me. If that does not work use my cell phone at
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
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From: Jeremy Farra[Redacted]
Sent: Wednesday, February 26, 2020 7:36 AM
To: Fauci, Anthony (NIH/NIAID) [E][Redacted]
Subject: Can I give you a ring today

Tony – Can I give you a ring anytime this evening UK time – can be late and fit in with you. Jeremy

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Many thanks all

Sydney had a complete power cut over the weekend which has delayed things a little.

Wow...took off from e-mail for a day.....
On 8 Feb 2020, at 22:15, Kristian G. Andersen wrote:

Best,
Kristian

On Sat, Feb 8, 2020 at 12:38 PM Drosten, Christian wrote:
OK, I see.
Else it reads a bit funny.
Christian
--

Professor Christian Drosten
Director, Institute of Virology
Scientific Director, Charité Global Health
Charité - Universitätsmedizin Berlin
Campus Charité Mitte
Charitéplatz 1
D-10117 Berlin
Germany

E-Mail: [REDACTED]

Von: Jeremy Farrar
Datum: Samstag, 8. Februar 2020 um 21:21
An: Edward Holmes, Christian Drosten
Cc: Andrew Rambaut, Josie Golding, Mike Ferguson

Betreff: Re: [ext] 2019 N-CoV
Hi Christian,

Best wishes,

Eddie

PROFESSOR EDWARD C. HOLMES FAA FRS
ARC Australian Laureate Fellow

THE UNIVERSITY OF SYDNEY
Marie Bashir Institute for Infectious Diseases & Biosecurity,
School of Life & Environmental Sciences and School of Medical Sciences,
The University of Sydney | Sydney | NSW | 2006 | Australia
On Feb 2020, at 6:52 am, Drosten, Christian wrote:

Dear All,

I am overloaded with nCoV patient-related work and will need a few days before I can work on this text.

Christian

---

Professor Christian Drosten
Director, Institute of Virology
Scientific Director, Charité Global Health

Charité - Universitätsmedizin Berlin
Campus Charité Mitte
Chariteplatz 1
D-10117 Berlin
Germany

E-Mail:
APOLOGIES WITH ALL CORRECT EMAILS

These and other thoughts welcome in confidence.
From: Fauci, Anthony (NIH/NIAID) [E]
Sent: Sat, 8 Feb 2020 17:36:34 +0000
To: Jeremy Farrar; Vallance, Patrick (GO-Science); Edward Holmes; Andrew Rambaut; Collins, Francis (NIH/OD) [E]; Josie Collins, Francis; Mike Ferguson; Government Chief Scientific Adviser (GO-Science)
Subject: RE: 2019 N-CoV

From: Jeremy Farrar
Sent: Saturday, February 8, 2020 10:13 AM
To: Vallance, Patrick (GO-Science); Edward Holmes; Andrew Rambaut; Collins, Francis (NIH/OD) [E]; Fauci, Anthony (NIH/NIAID) [E]; Josie Golding; Mike Ferguson; Government Chief Scientific Adviser (GO-Science) <GCSA@go-science.gov.uk>
Subject: Re: 2019 N-CoV

From: "Vallance, Patrick (GO-Science)" [E]
Date: Saturday, 8 February 2020 at 12:03
To: Jeremy Farrar; Edward Holmes; Fauci, Anthony (NIH/NIAID) [E]; Vallance, Patrick (GO-Science) [E]; Francis Collins
Best wishes

Patrick

From: Jeremy Farrar
Sent: 08 February 2020 09:46
To: Edward Holmes; Andrew Rambaut
Cc: Vallance, Patrick (GO-Science); Josie Golding; Mike Ferguson
Subject: FW: 2019 N-CoV

APOLOGIES WITH ALL CORRECT EMAILS
These and other thoughts welcome in confidence.
I do not think so yet but ... chasing!

Francis

Jeremy
Victor
Let me know if a call on this would help, with either Tony, Patrick or I


Tony (Francis), Patrick, myself and a close knit group have been looking at this for the last 10 days and might have some information to share which might help.

Best wishes Jeremy

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Perfect, thank you

Jeremy:

Thanks for the note. Looks like things are moving along with WHO. I will list below a number of names for potential members of the working group to examine the evolutionary origin of the 2019-nCoV in addition to the individuals who were on the call with us last Saturday:

Harold Varmus – Weill Cornell Medical Center – New York City
Feng Zhang – MIT (CRISPR expert)
Joseph DeRisi - Chan Zuckerberg (CZ) BioHub (he’s paying close attention to the Wuhan strain vs other bat viruses and the SARS virus)
Don Ganem - University of California at San Francisco (UCSF) and the CZ BioHub (knows more about hepadnaviruses but an outstanding clinical and basic virologist)
John Coffin - Tufts and National Cancer Institute, NIH (worked out the confusion over the alleged Chronic Fatigue Syndrome retrovirus that proved to be a xenotropic MLV)
Eugene Koonin - NCBI/National Library of Medicine, NIH;  
Wayne Hendrickson – Columbia University and the New York Structural Biology Center
Gary Nabel – Sanofi (Boston)

Best regards,

Tony
Francis and Tony

Couple of things:

- I spoke again with WHO this morning. I believe they have listened and acted. Let me know if you agree
  - At the WHO meeting next week they will set up the Group who will "look at the origins and evolution of 2019n-CoV"
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  - With names to be put forward into the Group from us and pressure on this group from your and our teams next week.
- The team will update the draft today and I will forward immediately – they will add further comments on the glycans

Does that sound reasonable to you?

Jeremy
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: (301) 496-4409  
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E-mail:  

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From: Collins, Francis (NIH/OD) [E]  
Sent: Tuesday, February 4, 2020 6:12 AM  
To: Jeremy Farrar  
Cc: Fauci, Anthony (NIH/NIAID) [E]  
Subject: RE: Prevalence of infection and stage of the epidemic in Wuhan  

Yes,  

Francis  

From: Jeremy Farrar  
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ARC Australian Laureate Fellow

THE UNIVERSITY OF SYDNEY
Marie Bashir Institute for Infectious Diseases & Biosecurity,
School of Life & Environmental Sciences and School of Medical Sciences,
The University of Sydney | Sydney | NSW | 2006 | Australia
Thank you. Pardis is great, respected by everyone – best wishes Jeremy

Jeremy:

I left out an important name for the coronavirus evolution working group. Please include her: Pardis Sabeti at the Broad Institute of MIT and Harvard

Thanks,
Tony

Anthony S. Fauci, MD
Director
National Institute of Allergy and Infectious Diseases
Building 31, Room 7A-03
31 Center Drive, MSC 2520
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Jeremy

---

From: "Fauci, Anthony (NIH/NIAID) [E]" (b) (6)
Date: Tuesday, 4 February 2020 at 13:18
To: Francis Collins (b) (6), Jeremy Farrar (b) (6)
Subject: RE: Prevalence of infection and stage of the epidemic in Wuhan

Anthony S. Fauci, MD
Director
National Institute of Allergy and Infectious Diseases
Building 31, Room 7A-03
31 Center Drive, MSC 2520
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Tony and Francis

The revised draft from Eddie, copied here.
Tidied up

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From: Jeremy Farrar
Sent: Tue, 4 Feb 2020 20:26:23 +0000
To: Collins, Francis (NIH/OD) [E]; Fauci, Anthony (NIH/NIAID) [E]
Subject: Re: Prevalence of infection and stage of the epidemic in Wuhan

Wild West....

From: Francis Collins
Date: Tuesday, 4 February 2020 at 20:23
To: Jeremy Farrar, Fauci, Anthony (NIH/NIAID) [E]
Subject: RE: Prevalence of infection and stage of the epidemic in Wuhan

From: Jeremy Farrar
Sent: Tuesday, February 4, 2020 9:03 AM
To: Fauci, Anthony (NIH/NIAID) [E]; Collins, Francis (NIH/OD) [E]
Subject: Re: Prevalence of infection and stage of the epidemic in Wuhan

Exactly!

From: "Fauci, Anthony (NIH/NIAID) [E]
Date: Tuesday, 4 February 2020 at 13:18
To: Francis Collins, Jeremy Farrar
Subject: RE: Prevalence of infection and stage of the epidemic in Wuhan

??

Anthony S. Fauci, MD
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The University of Sydney | Sydney | NSW | 2006 | Australia  
T (b) (6)  
E (b) (6)
Agree. Very thoughtful summary and analysis. We really need to get WHO moving on getting the convening started.

Francis

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The University of Sydney | Sydney | NSW | 2006 | Australia
T: (b) (6)
E: (b) (6)
Subject: 2019nC-V

Mike and Bernhard
Thank you for phoning – very helpful, copying in Francis and Tony as well as Tedros.

Fully agree with your summary.

Hope that is a reasonable summary

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Tedros and Bernhard have apparently gone into conclave....they need to decide today in my view. If they do prevaricate, I would appreciate a call with you later tonight or tomorrow to think how we might take forward.

Meanwhile....


Jeremy:

Sorry that I took so long to weigh in on your e-mails with Francis and me. I was on conference calls.

Best regards,
Tony

....Really appreciate us thinking through the options.....
Hi Jeremy,

Thanks for forwarding these additional reflections from Mike and Bob.

Francis

Thank you

See thoughts overnight from others.

Jeremy
Jeremy,

I’m available any time today except 3:15 – 5:45 pm EST (on a plane) for a call to Tedros. Let me know if I can help get through his thicket of protectors.

Francis

---

From: Jeremy Farrar
Sent: Sunday, February 2, 2020 4:48 AM
To: Andrew Rambaut
Cc: R.A.M. Fouchier; Fauci, Anthony (NIH/NIAID); Patrick Vallance; M.P.G. Koopmans; Eddie Holmes; Paul Schreier; Ferguson, Mike; Collins, Francis (NIH/OD); Eddie Holmes; Eddie Holmes; Eddie Holmes; Eddie Holmes; Eddie Holmes; Eddie Holmes; Eddie Holmes; Eddie Holmes; Eddie Holmes; Paul Schreier; Ferguson, Mike; Collins, Francis (NIH/OD); Tabak, Lawrence; (NIH/OD); Josie Golding
Subject: Re: Teleconference

This is a very complex issue.

I will:

I suggest we don’t get into a further scientific discussion here, but wait for that group to be established.

Jeremy
Dear Jeremy, Ron and all,

Thanks for inviting me on the call yesterday.

Best,
Andrew

---

On 2 Feb 2020, at 08:40, Jeremy Farrar wrote:

Thanks Ron
Thoughts on that very welcome,

On 2 Feb 2020, at 08:30, R.A.M. Fouchier wrote:

Dear Jeremy and others,

This was a very useful teleconference.

Thanks for organizing this on such short notice,
Kind regards
Ron

Ron’s notes:
Van: Jeremy Farrar
Datum: zaterdag 1 februari 2020 om 21:59
Aan: "Fauci, Anthony (NIH/NIAID) [E]" (b) (6) Patrick Vallance
CC: Christian Drosten (b) (6), "R.A.M. Holmes" (b) (6), "M. Koopmans" (b) (6), Edward Holmes (b) (6), Andrew Rambaut (b) (6), "Kristian G. Andersen" (b) (6), Paul Schreier (b) (6), "Ferguson, Mike" (b) (6), Francis Collins (b) (6), Josie Golding (b) (6)

Onderwerp: Re: Teleconference

Thank you to everyone for joining.

There is clearly much to understand in this. This call was very helpful to hear some of our current understanding and the many gaps in our knowledge.
I hope that is a reasonable approach, please send any thoughts or suggestions.

Once again, thank you for making time over a weekend and for such an informed discussion on a complex issue.

Thank you and best wishes Jeremy

From: Jeremy Farrar
Date: Saturday, 1 February 2020 at 15:34
To: "Fauci, Anthony (NIH/NIAID) [E]", (b)(6), Patrick Vallance
Cc: "Drosten, Christian" (b)(6), Marion Koopmans (b)(6), Edward Holmes (b)(6), "Kristian G. Andersen" (b)(6), Paul Schreier (b)(6), "Michael FMedSci" (b)(6)
Subject: Teleconference

1st February (2nd Feb for Eddie)
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Dial in details attached.
Please mute phones.
I will be on email throughout – email Paul or I Paul if any problems
If you cannot make it, I will phone you afterwards to update.

One Hour

6am Sydney
8pm CET
7pm GMT
2pm EST
11am PST
(Hope I have the times right!)

Thank you for the series of calls and for agreeing to join this call.

**Agenda**
- Introduction, focus and desired outcomes - JF
- Summary – KA
- Comments – EH
- Q&A – All
- Summary and next steps - JF

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Bob Garry - I have not been able to contact Bob. Please forward if you can.
Christian Drosten
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Marion Koopmans
Stefan Pohlmann
Andrew Rambaut
Paul Schreier
Patrick Vallance

Andrew Rambaut
Institute for Evolutionary Biology
Ashworth Laboratories, University of Edinburgh, Edinburgh, EH9 3FL, UK

contact – (b) (6) | [http://itrecc.bio.ed.ac.uk](http://itrecc.bio.ed.ac.uk) | tel (b) (6)

The University of Edinburgh is a charitable body, registered in Scotland, with registration number SC0035336.
Thanks, Jeremy. We really appreciate what you are doing here. Pleasure to work with you.
Best,
Tony

We are altogether as you know! Conversations with you and Tony, and Patrick and others – always
great working with you both

Hi Jeremy,
I can make myself available at any time 24/7 for the call with Tedros. Just let me know.
Thanks for your leadership on this critical and sensitive issue.
Francis

Sent from my iPhone

I have rejoined so a line is open if any help to rejoin.
Can I suggest we shut down the call and then redial in?
Just for 5-10mins?

On 1 Feb 2020, at 19:12, Jeremy Farrar wrote:
Kristen and Eddie have shared this and will talk through it on the call. Thank you.
Hope it will help frame the discussions.

From: Marion Koopmans
Date: Saturday, 1 February 2020 at 19:43
To: Jeremy Farrar
Subject: Re: Teleconference
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<Coronavirus sequence comparison[1], pdf>
From: Jeremy Farrar  
Sent: Sat, 1 Feb 2020 20:13:15 +0000  
To: Collins, Francis (NIH/OD) [E]; Fauci, Anthony (NIH/NIAID) [E]; Ferguson, Mike; Patrick Vallance  
Subject: Re: Teleconference

sure

From: Francis Collins  
Date: Saturday, 1 February 2020 at 20:12  
To: Jeremy Farrar  
Subject: RE: Teleconference  

Just saw this, still want me to call in?

From: Jeremy Farrar  
Sent: Saturday, February 1, 2020 2:56 PM  
To: Fauci, Anthony (NIH/NIAID) [E]; Collins, Francis (NIH/OD) [E]; Ferguson, Mike; Patrick Vallance  
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<Coronavirus sequence comparison[1].pdf>
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Patrick Vallance

<!--Coronavirus sequence comparison[1].pdf-->
If any issues come up, please email me and I will try and adjust or try and help.

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Paul Schreier  
Patrick Vallance
Kristen and Eddie have shared this and will talk through it on the call. Thank you.

Hope it will help frame the discussions.

1st February (2nd Feb for Eddie)
Information and discussion is shared in total confidence and not to be shared until agreement on next steps.

Dial in details attached.
Please mute phones.
I will be on email throughout – email Paul or I Paul if any problems
If you cannot make it, I will phone you afterwards to update.

One Hour

6am Sydney
8pm CET
7pm GMT
2pm EST
11am PST
(Hope I have the times right!)

Thank you for the series of calls and for agreeing to join this call.

Agenda
- Introduction, focus and desired outcomes - JF
Kristian Anderson
Bob Garry - I have not been able to contact Bob. Please forward if you can.
Christian Drosten
Tony Fauci
Mike Ferguson
Ron Fouchier
Eddie Holmes
Marion Koopmans
Stefan Pohlmann
Andrew Rambaut
Paul Schreier
Patrick Vallance
From: Jeremy Farrar
Sent: Sat, 1 Feb 2020 16:12:51 +0000
To: Fauci, Anthony (NIH/NIAID) [E]; Patrick Vallance
Cc: Drosten, Christian; Marion Koopmans; R.A.M. Fouchier; Edward Holmes; Andrew Rambaut; Kristian G. Andersen; Paul Schreier
Subject: Re: Teleconference

Dial in details

Participant Code  

From: Jeremy Farrar
Date: Saturday, 1 February 2020 at 15:34
To: "Fauci, Anthony (NIH/NIAID) [E]", Patrick Vallance
Cc: "Drosten, Christian", Marion Koopmans, Edward Holmes, Andrew Rambaut, Kristian G. Andersen, Paul Schreier, Michael FMedSci
Subject: Teleconference

1st February (2nd Feb for Eddie)
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**Agenda**
- Introduction, focus and desired outcomes - JF
- Summary – KA
- Comments – EH
- Q&A – All
- Summary and next steps - JF

Kristian Anderson
Bob Garry - I have not been able to contact Bob. Please forward if you can.
Christian Drosten
Tony Fauci
Mike Ferguson
Ron Fouchier
Eddie Holmes
Marion Koopmans
Stefan Pohlmann
Andrew Rambaut
Paul Schreier
Patrick Vallance
From: Jeremy Farrar
Sent: Sat, 1 Feb 2020 15:51:54 +0000
To: Fauci, Anthony (NIH/NIAID) [E]; Garry, Robert F
Cc: Patrick Vallance; Drosten, Christian; Marion Koopmans; R.A.M. Fouchier; Edward Holmes; Andrew Rambaut; Kristian G. Andersen; Paul Schreier; Ferguson, Mike; Collins, Francis (NIH/OD) [E]; Tabak, Lawrence (NIH/OD) [E]
Subject: Re: Teleconference

Francis
Call me on

From: "Fauci, Anthony (NIH/NIAID) [E]"
Date: Saturday, 1 February 2020 at 15:50
To: "Garry, Robert F"; Jeremy Farrar
Cc: Patrick Vallance; Marion Koopmans; Edward Holmes; Andrew Rambaut; "Kristian G. Andersen"; Paul Schreier; Michael FMedSci; Francis Collins
Subject: RE: Teleconference

Please include Francis Collins (copied here) on all subsequent correspondence regarding this call. Thanks.

From: Garry, Robert F
Sent: Saturday, February 1, 2020 10:49 AM
To: Jeremy Farrar
Cc: Fauci, Anthony (NIH/NIAID) [E]; Patrick Vallance; Drosten, Christian; Marion Koopmans; R.A.M. Fouchier; Edward Holmes; Andrew Rambaut; Kristian G. Andersen; Paul Schreier; Ferguson, Mike
Subject: Re: Teleconference

Thanks Jeremy
I will be on the call

Bob Garry

Sent from my iPhone

On Feb 1, 2020, at 9:34 AM, Jeremy Farrar wrote:

External Sender. Be aware of links, attachments and requests.

1st February (2nd Feb for Eddie)
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One Hour

6am Sydney
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(Hope I have the times right!!)

Thank you for the series of calls and for agreeing to join this call.

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Kristian Anderson
Bob Garry - I have not been able to contact Bob. Please forward if you can.
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Stefan Pohlmann
Andrew Rambaut
Paul Schreier
Patrick Vallance

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<Teleconference Dial In.jpg>
excellent

From: "Fauci, Anthony (NIH/NIAID) [E]" >
Date: Saturday, 1 February 2020 at 15:48
To: Jeremy Farrar
Cc: Francis Collins
Subject: RE: Teleconference

Jeremy:

Francis will be on the call. He is trying to phone you.

Tony

From: Jeremy Farrar
Sent: Saturday, February 1, 2020 10:34 AM
To: Fauci, Anthony (NIH/NIAID) [E]  Patrick Vallance  Drosten, Christian  Marion Koopmans  R.A.M. Fouchier  Edward Holmes  Andrew Rambaut  Kristian G. Andersen  Paul Schreier  Ferguson, Mike
Cc:
Subject: Teleconference

1st February (2nd Feb for Eddie)
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One Hour

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11am PST

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Thank you for the series of calls and for agreeing to join this call.

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From: Jeremy Farrar
Sent: Sat, 1 Feb 2020 13:27:42 +0000
To: Fauci, Anthony (NIH/NIAID) [E]
Subject: Re: Conf details

Thanks Tony!

I will make sure we have the correct times.

On 01/02/2020, 13:26, "Fauci, Anthony (NIH/NIAID) [E]" wrote:

Jeremy:
I can be on the 2:00 PM EST call (8:00 PM CET). Note for West Coast callers, that 2:00 PM EST equal 11:00 AM West Coast and not 9:00 AM West Coast
Thanks,
Tony

Could you join?

Trying to set up an initial call with

Kristian Andersen
Bob Garry
Christian Drosten
Tony Fauci
Ron Fouchier
Eddie Holmes
Marion Koopmans
Patrick Vallance - Chief Scientist UK

Time zones a challenge

Suggestion - Today 1st February (2nd Feb for Eddie) - I will confirm later today. If you cannot make it, we will phone you afterwards to update.
6am Sydney
8pm CET
7pm GMT
2pm EST
9am West Coast

My preference is to keep this really tight group.

To listen to the work Eddie, Bob and Kristian have done.
Question it
And think through next steps.
Obviously ask everyone to treat in total confidence.
Could you join?

Trying to set up an initial call with

Kristian Anderson
Bob Garry
Christian Drosten
Tony Fauci
Ron Fouchier
Eddie Holmes
Marion Koopmans
Patrick Vallance - Chief Scientist UK

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My preference is to keep this really tight group.

To listen to the work Eddie, Bob and Kristian have done. Question it
And think through next steps.

Obviously ask everyone to treat in total confidence.
Chairman's Office
Meeting Space No:
International No:
Participant Access Code:
Host Access Code:
From: Fauci, Anthony (NIH/NIAID) [E]
Sent: Sat, 1 Feb 2020 02:47:39 +0000
To: Jeremy Farrar; Kristian G. Andersen
Subject: FW: Science: Mining coronavirus genomes for clues to the outbreak’s origins

Jeremy/Kristian:

This just came out today. You may have seen it. If not, it is of interest to the current discussion.

Best,
Tony

From: Folkers, Greg (NIH/NIAID) [E]
Sent: Friday, January 31, 2020 8:43 PM
Subject: Science: Mining coronavirus genomes for clues to the outbreak’s origins

As part of a long-running effort to see what viruses bats harbor, researchers in China collect one from a cave in Guandong.
EcoHealth Alliance

**Mining coronavirus genomes for clues to the outbreak’s origins**

By Jon Cohen Jan. 31, 2020, 6:20 PM
at taaaggtt tataccttc caggaacaa acacaac accaa di fttccttc ctttagatct ...
That string of apparent gibberish is anything but: It’s a snippet of a DNA sequence from the viral pathogen, dubbed 2019 novel coronavirus (2019-nCoV), that is overwhelming China and frightening the entire world. Scientists are publicly sharing an ever-growing number of full sequences of the virus from patients—53 at last count in the Global Initiative on Sharing All Influenza Data database. These viral genomes are being intensely studied to try to understand the origin of 2019-nCoV and how it fits on the family tree of related viruses found in bats and other species. They have also given glimpses into what this newly discovered virus **physically looks like**, **how it’s changing**, and **how it might be stopped**.
“One of the biggest takeaway messages [from the viral sequences] is that there was a single introduction into humans and then human-to-human spread,” says Trevor Bedford, a bioinformatics specialist at the University of Washington, Seattle. The role of Huanan Seafood Wholesale Market in Wuhan, China, in spreading 2019-nCoV remains murky, though such sequencing, combined with sampling the market’s environment for the presence of the virus, is clarifying that it indeed had an important early role in amplifying the outbreak. The viral sequences, most researchers say, also knock down the idea the pathogen came from a virology institute in Wuhan.

In all, 2019-nCoV has nearly 29,000 nucleotides bases that hold the genetic instruction book to produce the virus. Although it’s one of the many viruses whose genes are in the form of RNA, scientists convert the viral genome into DNA, with bases known in shorthand as A, T, C, and G, to make it easier to study. Many analyses of 2019-nCoV’s sequences have already appeared on virological.org, nextstrain.org, preprint servers like bioRxiv, and even in peer-reviewed journals. The sharing of the sequences by Chinese researchers allowed public health labs around the world to develop their own diagnostics for the virus, which now has been found in 18 other countries. (Science’s news stories on the outbreak can be found here.)

When the first 2019-nCoV sequence became available, researchers placed it on a family tree of known coronaviruses—which are abundant and infect many species—and found that it was most closely related to relatives found in bats. A team led by Shi Zheng-Li, a coronavirus specialist at the Wuhan Institute of Virology, reported on 23 January on bioRxiv that 2019-nCoV’s sequence was 96.2% similar to a bat virus and had 79.5% similarity to the coronavirus that causes severe acute respiratory syndrome (SARS), a disease whose initial outbreak was also in China more than 15 years ago. But the SARS coronavirus has a similarly close relationship to bat viruses, and sequence data make a powerful case that it jumped into people from a coronavirus in civets that differed from human SARS viruses by as few as 10 nucleotides. That’s one reason why many scientists suspect there’s an “intermediary” host species—or several—between bats and 2019-nCoV.

According to Bedford’s analysis, the bat coronavirus sequence that Shi Zheng-Li’s team highlighted, dubbed RaTG13, differs from 2019-nCoV by nearly 1100 nucleotides. On nextstrain.org, a site he co-founded, Bedford has created coronavirus family trees (example below) that include bat, civet, SARS, and 2019-nCoV sequences. (The trees are interactive—by dragging a computer mouse over them, it’s easy to see the differences and similarities between the sequences.)
Bedford's analyses of RaTG13 and 2019-nCoV suggest that the two viruses shared a common ancestor 25 to 65 years ago, an estimate he arrived at by combining the difference in nucleotides between the viruses with the presumed rates of mutation in other coronaviruses. So it likely took decades for RaTG13-like viruses to mutate into 2019-nCoV. Middle East respiratory syndrome (MERS), another human disease caused by a coronavirus, similarly has a link to bat viruses. But studies have built a compelling case it jumped to humans from camels. And the phylogenetic tree from Shi’s bioRxiv paper (below) makes the camel-MERS link easy to see.
The longer a virus circulates in a human populations, the more time it has to develop mutations that differentiate strains in infected people, and given that the 2019-nCoV sequences analyzed to date differ from each other by seven nucleotides at most, this suggests it jumped into humans very recently. But it remains a mystery which animal spread the virus to humans. “There’s a very large gray area between viruses detected in bats and the virus now isolated in humans,” says Vincent Munster, a virologist at the U.S. National Institute of Allergy and Infectious Diseases who studies coronaviruses in bats, camels, and others species.

Strong evidence suggests the marketplace played an early role in spreading 2019-nCoV, but whether it was the origin of the outbreak remains uncertain. Many of the initially confirmed 2019-nCoV cases—27 of the first 41 in one report, 26 of 47 in another—were connected to the Wuhan market, but up to 45%, including the earliest handful, were not. This raises the possibility that the initial jump into people happened elsewhere.
According to Xinhua, the state-run news agency, “environmental sampling” of the Wuhan seafood market has found evidence of 2019-nCoV. Of the 585 samples tested, 33 were positive for 2019-nCoV and all were in the huge market’s western portion, which is where wildlife were sold. “The positive tests from the wet market are hugely important,” says Edward Holmes, an evolutionary biologist at the University of Sydney who collaborated with the first group to publicly release a 2019-nCoV sequence. “Such a high rate of positive tests would strongly imply that animals in the market played a key role in the emergence of the virus.”

Yet there have been no preprints or official scientific reports on the sampling, so it’s not clear which, if any, animals tested positive. “Until you consistently isolate the virus out of a single species, it’s really, really difficult to try and determine what the natural host is,” says Kristian Andersen, an evolutionary biologist at Scripps Research.

One possible explanation for the confusion about where the virus first entered humans is if there was a batch of recently infected animals sold at different marketplaces. Or an infected animal trader could have transmitted the virus to different people at different markets. Or, Bedford suggests, those early cases could have been infected by viruses that didn’t easily transmit and sputtered out. “It would be hugely helpful to have just a sequence or two from the marketplace [environmental sampling] that could illuminate how many zoonoses occurred and when they occurred,” Bedford says.

A research group sent fecal and other bodily samples from bats they trapped in caves to the Wuhan Institute of Virology to search for coronaviruses.

EcoHealth Alliance

In the absence of clear conclusions about the outbreak’s origin, theories thrive, and some have been scientifically shaky. A sequence analysis led by Wei Ji of Peking University and published online by the Journal of Medical Virology received substantial press coverage when it suggested that “snake is the most probable wildlife animal reservoir for the 2019-nCoV.” Sequence specialists, however, pilloried it. Conspiracy theories also abound. A CBC News report about the Canadian government deporting Chinese scientists who worked in a Winnipeg lab that studies dangerous pathogens was distorted on social media to suggest that they were spies who had smuggled out coronaviruses. The Wuhan Institute of Virology, which is the premier lab in China that studies bat and human coronaviruses, has also come under fire. “Experts debunk fringe theory linking China’s coronavirus to weapons research,” read a headline on a story in The Washington Post that focused on the facility.

Concerns about the institute predate this outbreak. Nature ran a story in 2017 about it building a new biosafety level 4 lab and included molecular biologist Richard Ebright of Rutgers University, Piscataway, expressing concerns about accidental infections, which he noted repeatedly happened with lab workers handling SARS in Beijing. Ebright, who has a long history of raising red flags about studies with
dangerous pathogens, also in 2015 criticized an experiment in which modifications were made to a SARS-like virus circulating in Chinese bats to see whether it had the potential to cause disease in humans. Earlier this week, Ebright questioned the accuracy of Bedford’s calculation that there are at least 25 years of evolutionary distance between RaTG13—the virus held in the Wuhan virology institute—and 2019-nCoV, arguing that the mutation rate may have been different as it passed through different hosts before humans. Ebright tells ScienceInsider that the 2019-nCoV data are “consistent with entry into the human population as a natural accident.”

Shi did not reply to emails from Science, but her longtime collaborator, disease ecologist Peter Daszak of the EcoHealth Alliance, dismissed Ebright’s conjecture. “Every time there’s an emerging disease, a new virus, the same story comes out: This is a spillover or the release of an agent or a bioengineered virus,” Daszak says. “It’s just a shame. It seems humans can’t resist controversy and these myths, yet it’s staring us right in the face. There’s this incredible diversity of viruses in wildlife and we’ve just scratched the surface. Within that diversity, there will be some that can infect people and within that group will be some that cause illness.”

A team of researchers from the Wuhan Institute of Virology and the EcoHealth Alliance have trapped bats in caves all over China, like this one in Guangdong, to sample them for coronaviruses.

EcoHealth Alliance

Daszak and Shi’s group have for 8 years been trapping bats in caves around China to sample their feces and blood for viruses. He says they have sampled more than 10,000 bats and 2000 other species. They have found some 500 novel coronaviruses, about 50 of which fall relatively close to the SARS virus on the family tree, including RaTG13—it was fished out of a bat fecal sample they collected in 2013 from a cave in Moglang in Yunnan province. “We cannot assume that just because this virus from Yunnan has high sequence identity with the new one that that’s the origin,” Daszak says, noting that only a tiny fraction of coronaviruses that infect bats have been discovered. “I expect that once we’ve sampled and sampled and sampled across southern China and central China that we’re going to find many other viruses and some of them will be closer [to 2019-nCoV].”

It’s not just a “curious interest” to figure out what sparked the current outbreak, Daszak says. “If we don’t find the origin, it could still be a raging infection at a farm somewhere, and once this outbreak dies, there could be a continued spillover that’s really hard to stop. But the jury is still out on what the real origins of this are.”

Posted in:

- Asia/Pacific
- Health
Coronavirus
doi:10.1126/science.abb1256

Jon Cohen
Jon is a staff writer for Science.

- Email Jon
- Twitter

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Jeremy:

Best regards,
Tony

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: (301) 496-2524
FAX: (301) 496-4409
E-mail: (301) 496-4409

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Thanks Tony

Can you phone Kristian Anderson

He is expecting your call now.

The people involved are:

Kristian Anderson
https://www.scripps.edu/faculty/andersen/

Bob Garry
https://medicine.tulane.edu/departments/microbiology-immunology-tulane-cancer-center/faculty/robert-f-garry-jr-phd

Eddie Holmes

Will call shortly...

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
301-496-4409 fax
Tony
Really would like to speak with you this evening

It is 10pm now UK

Can you phone me on

Jeremy

Welcome exists to improve health 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.

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Thanks, Jeremy. Great chatting with you and Patrick. Will stay in close touch.

Best,
Tony

> On Jan 30, 2020, at 7:13 AM, Jeremy Farrar wrote:
> Prefect timing - thank you. Great to catch up.
> Patrick Vallance
> Chief Scientific Advisor UK
> You have mine
> Keep in touch
> J

> Wellcome exists to improve health 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)
From: Jeremy Farrar
Sent: Wed, 29 Jan 2020 20:43:32 +0000
To: Fauci, Anthony (NIH/NIAID) [E]
Subject: Re: Informal coronavirus teleconference, 29 January, 19.00 CET

So kind!!

From: "Conrad, Patricia (NIH/NIAID) [E]" on behalf of "Fauci, Anthony (NIH/NIAID) [E]"
Date: Wednesday, 29 January 2020 at 20:42
To: Jeremy Farrar
Subject: RE: Informal coronavirus teleconference, 29 January, 19.00 CET

Ok – we will try to call you early morning our time tomorrow. Thanks.

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
301-496-4409 fax

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From: Jeremy Farrar
Sent: Wednesday, January 29, 2020 3:40 PM
To: Fauci, Anthony (NIH/NIAID) [E]
Subject: Re: Informal coronavirus teleconference, 29 January, 19.00 CET

Will probably run over at the WH. Thank you and him so much!

Tomorrow is fine.
On 29 Jan 2020, at 20:38, Fauci, Anthony (NIH/NIAID) [E] wrote:

Dr Fauci is in meeting at the WH until about 5 pm ET so he would likely call you between 5 pm – 7 pm ET – is that too late today?

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
301-496-4409 (b) (6)

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To: Fauci, Anthony (NIH/NIAID) [E]
Subject: Re: Informal coronavirus teleconference, 29 January, 19.00 CET

Sure

Anytime - (b) (6)

Tonight from 5pm would be fine, but tomorrow also possible....

From: "Conrad, Patricia (NIH/NIAID) [E]" on behalf of "Fauci, Anthony (NIH/NIAID) [E]"
Date: Wednesday, 29 January 2020 at 19:29
To: Jeremy Farrar [E], "Fauci, Anthony (NIH/NIAID) [E]"
Subject: RE: Informal coronavirus teleconference, 29 January, 19.00 CET

Is there a cell number to reach you? or best number?

Patricia L. Conrad
Public Health Analyst and
Special Assistant to the Director
National Institute of Allergy and Infectious Diseases
From: Jeremy Farrar
Sent: Wednesday, January 29, 2020 2:21 PM
To: Fauci, Anthony (NIH/NIAID) [E] (b)(6)
Subject: Re: Informal coronavirus teleconference, 29 January, 19.00 CET

I could not make it until 5pm CET today. But next few days also OK.

From: "Conrad, Patricia (NIH/NIAID) [E]" (b)(6) on behalf of "Fauci, Anthony (NIH/NIAID) [E]" (b)(6)
Date: Wednesday, 29 January 2020 at 18:54
To: Jeremy Farrar
Subject: RE: Informal coronavirus teleconference, 29 January, 19.00 CET

Dr Fauci is in back to back meetings but hopes to be able to step out and call you between 3:00 pm ET – 4:00 pm ET. Is that time ok and what is the best number to reach you at that time?

Best,

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
301-496-4409 fax
Tony - Would be very keen to hear your personal views on n-CoV. If you have 5 mins for a phone call. Best wishes Jeremy

Mike:

I am sorry but I have an important meeting with Secretary Azar that is a prep meeting for another important meeting at the White House. These overlap with the 19:00 CET time frame of your call. Unless something changes I cannot be on the call. If that is the case, I will ask Hilary Marston from my staff to fill in for me and report back to me. Please send the call in information to my Special Assistant, Patty Conrad, and me just in case something changes.

Thanks,

Tony
From: RYAN, Michael J. [redacted]
Sent: Wednesday, January 29, 2020 10:45 AM
To: Redfield, Robert R. (CDC/OD) [redacted]; [redacted]; [redacted]; [redacted]; [redacted]; [redacted]; [redacted]; [redacted]; [redacted]; [redacted]; [redacted]; [redacted]; [redacted]
Cc: GHEBREYESUS, Tedros Adhanom [redacted]; SCHWARTLANDER, Bernhard F. [redacted]; MINHAS, Raman [redacted]
Subject: Informal coronavirus teleconference, 29 January, 19.00 CET

Dear colleagues,

Dr Tedros would like to take the opportunity to informally discuss with you the ongoing 2019 novel coronavirus.

We are planning to host a teleconference today at 19.00 CET and will provide a dial-in number with a passcode.

If you face any difficulties with the dial-in number, please provide us with a contact number and we will attempt to dial you in.

Best,

Mike
Looks fine. Please see my comments in attached document.

Thanks,

Tony

The message is clear and appropriate. I support it.

From: GPMB Secretariat
Sent: Tuesday, January 28, 2020 7:09 AM
To: As Sy Elhadji<br>Brundtland Gro Harlem<br>Dzau, Victor J.<br>Farrar Jeremy<br>Gao Fu<br>Gashumba Diane<br>Kaag Sigrid<br>Iliana Kickbusch<br>Suzuki Yasuhiro<br>Vega Morales Jeanette<br>VigayRaghavan Krishnaswamy<br>Walter, R<br>Wu, Bo<br>Yielder, Tom<br>Yielder<br>Zhang Li<br>Subject: TIME SENSITIVE Message from GPMB Co-Chairs: review of draft GPMB Statement on 2019-novel coronavirus
Importance: High

Dear Board members,

Thank you to all who participated in yesterday's teleconference call regarding the novel 2019-Coronavirus outbreak.

We received excellent updates from WHO and from Professor Gao.
There was consensus for the GPMB to issue a statement supportive of countries’ (especially China) and WHO response efforts, and to call for urgent actions to further strengthen global preparedness and response to this outbreak.

Please find attached a draft GPMB Statement.

We ask that you please send us any feedback (preferably in track change mode) no later than 1700 Wednesday 29 January, Geneva time

Thank you very much.

Kinds regards,

Gro and As
Subject: Re: TIME SENSITIVE Message from GPMB Co-Chairs: review of draft GPMB Statement on 2019-novel coronavirus
Attachments: Draft GPMB Statement nCOV_28Jan_for Bd member review_JF.docx

Suggestions – thank you

Dear Gro and As

As requested please see attached

Best,

Jeanette

From: GPMB Secretariat
Sent: martes, 28 de enero de 2020 9:09
To: As Sy Elhadj; Brundtland Gro Harlem; Dzau Victor; Chris Elias; Farrar Jeremy; Gao Fu; Gašumba Diane; Ilona Kickbusch; Fore Henrietta; Kaag Sigrid; Gao Fu; Gashurba Diane; Kabagire Christine; MURIUKI, Hilda Wairimu; Muzenda Sindiso; Gahungu Zacharie; Del Sol Dinia; Harikumar M K; Harikumar M K; Kabagire Christine; Harikumar M K; MURUKI, Hilda Wairimu; Muzenda Sindiso; de Vega Teresa
Cc: MAHJOUB, Jaouad; MINHAS, Raman; Toomas Palu; Pate Muhamed; Riyan, Michael J.; SCHWARTLANDER, Bernhard F.; Alex Harris; Alveberg, Benedikt Louise; Chiaki NOGUCHI; Esveld Marja; Gonggrijp Mette; Julie HALL; Kanarek Morgan; Marston Hilary; Omar Abdi; Amelie RIoux; Tore Godal; Banks Lynn; Block Bruce; Conrad Jane; Conrad Patricia; Del Sol Dinia; Diaz Fay; Gahungu Zacharie; Harikumar M K; Harikumar M K; de Vega Teresa

Dear Gro and As

As requested please see attached

Best,

Jeanette
Subject: TIME SENSITIVE Message from GPMB Co-Chairs: review of draft GPMB Statement on 2019-novel coronavirus

Importance: High

Dear Board members,

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Thank you very much.

Kinds regards,

Gro and As
From: Fauci, Anthony (NIH/NIAID) [E]
Sent: Fri, 24 Jan 2020 11:16:47 +0000
To: Jeremy Farrar
Cc: Collins, Francis (NIH/OD) [E] (b) (6)
Subject: RE: nCoV

Jeremy:
Thank you for letting me know. Very sad and a great loss. Every day is a blessing.
Best,
Tony

From: Jeremy Farrar [b] (b) (6)
Sent: Friday, January 24, 2020 6:08 AM
To: Fauci, Anthony (NIH/NIAID) [E] (b) (6)
Cc: Collins, Francis (NIH/OD) [E] (b) (6)
Subject: Re: nCo-V

Tragic news - Pete Salama died last night, life is very fragile - what a loss.

On 23 Jan 2020, at 20:32, Fauci, Anthony (NIH/NIAID) [E] (b) (6) > wrote:

Jeremy:
I hope that all is well with you. Happy New Year! I, like you,
I do not necessarily agree with that opinion. We have a rapidly evolving outbreak with the epicenter in Wuhan, but with multiple cities in China and multiple countries in Asia involved.

Best regards,
Tony

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
Tony
Happy New Year!

Difficult to understand the advice from the Emergency Ctte at WHO.

Reach out if anything – best wishes Jeremy.

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