

Message

From: Jeremy Farrar [REDACTED]
Sent: 7/28/2020 12:36:51 AM
To: Edward Holmes [REDACTED]
CC: Kristian G. Andersen [REDACTED]; Fauci, Anthony (NIH/NIAID) [E] [REDACTED]
Subject: Re: The authors who wrote the paper saying that SARS-CoV-2 is not human engineered first tried convincing Anthony Fauci of the opposite.

Thanks Eddie.

I will recheck emails and phones, I will try and do that today.

I think it really starts on the 8/9th January and the calls you and I had with China and the original sequence.

And others were also on those calls – Francis Collins, Mike Ferguson, Patrick Vallance.

I would suggest we get the sequence of events absolutely right before replying.

Best wishes Jeremy

From: Edward Holmes [REDACTED]
Date: Tuesday, 28 July 2020 at 08:30
To: Jeremy Farrar [REDACTED]
Cc: "Kristian G. Andersen" [REDACTED]; "Fauci, Anthony (NIH/NIAID) [E]" [REDACTED]
Subject: Re: The authors who wrote the paper saying that SARS-CoV-2 is not human engineered first tried convincing Anthony Fauci of the opposite.

Hi Jeremy,

Here is the exact time-line which I have now checked.

1. Jan 26. You call me (I was in Switzerland) to talk about some concerns coming out the US that the virus might be a lab escape. Patrick Vallance might have been on that call, I can't recall. You later forward me an email from Marc Lipsitch and others containing some comments from Richard Ebright. I take a quick look at the sequence and say that I saw no evidence for lab escape in SARS-CoV-2 because it's pattern of variability was the same as in RaTG13.
2. Jan 31. Kristian contacts me to say that he has spotted some strange things in the issue - specifically the furin cleavage site and restriction sites - that we was concerned about. Given our conversation earlier that week, I called you and informed you of Kristian's findings. We then decided to have a broader discussion with key parties on this ASAP. I think Kristian told Tony at this point but he can confirm. You and I then decided that Ron Fouchier, Christian Drosten and Marion Koopmans would be good to include. Christian also wanted Stephan Pollman involved.
3. Feb 1 (6 am on Feb 2 for me). We have the conference call and then start an email chain about how we should deal with this. Writing it up for a paper was on the agenda and discussed. I have all the emails on this.

For Tony's benefit a revised draft of the email to Jon is pasted below.

I can't for the life of me see what we have done wrong here. I strongly believe we have just tried to get on top of a very vexing question as quickly and openly as possible.

Cheers,

Eddie

Hi Jon,

Here are the facts:

1. In early Feb we had spotted some features in the SARS-CoV-2 genome that at the time appeared unusual - particularly the furin cleavage site and the receptor binding domain.

2. At this stage we thought it was wise to ask for other expert's opinions on this, so a conference call was arranged. There were indeed other coronavirus experts on the call. It is worth pointing out that the senior author on our paper - Bob Garry - has published a significant number of papers on coronaviruses, including on the SARS spike protein, and even commented on this on the [virological.org](https://virological.org/t/analysis-of-wuhan-coronavirus-deja-vu/357) website prior to the call taking place (<https://virological.org/t/analysis-of-wuhan-coronavirus-deja-vu/357>). Importantly, our study was an evolutionary study based on genomic information, which is the only way to investigate the origins of SARS-CoV-2 - we believe all the authors on our paper have a strong demonstrated record in answering exactly those types of questions for a multitude of viruses.

3. Clearly, some people on the call were very strongly of the opinion that the possibility of a lab escape was ridiculous and listed reasons why it should be dismissed out of hand (although there was also some initial confusion about whether we were referring to the crazy HIV origins theory that had just been touted - obviously we were not). Some of those comments we agreed with, others we did not. A take-home message from the call was that we should investigate further and write a scientific paper to clearly set-out the background on the topic and our findings. Indeed, one of the emailed agenda items for discussion after the call was "Advice on whether KA, AR, RG and EH should publish this".

4. We eventually wrote up our findings as a scientific (peer reviewed) paper. Critically, drafts of this paper were sent to all the people on the call, including those with the information that has been emailed to you. We have attached our first draft of what would eventually become our paper from Feb 7, which was circulated to everyone on the call. As you can see, it is essentially the basis of our final study and people on the call commented on it.

5. Very shortly after the call, the pangolin data came out. This was critical and as Eddie wrote in an email to everyone on the call on Feb 9th:

"Personally, with the pangolin virus possessing 6/6 key sites in the receptor binding domain, I am in favour of the natural evolution theory."

and Rndrew Rambaut replied to this stating:

"I am of the view that the natural selection hypothesis is the most likely (specifically the non-bat reservoir). And as Eddie mentioned this is becoming more likely from day to day with the pangolin story."

6. Hence, it is completely and utterly false to claim that we (1) all thought it was a lab escape, (2) that we were corrected ("schooled") in our views by the coronavirus experts on the call, and (3) then submitted a Nature paper without anyone else knowing about it. The truth is that we had a range of views among us, our paper included the pangolin data that was not available at the time of the call, and we circulated drafts of our document to everyone.

7. We categorically deny that we were "spreading the rumor" that the virus was human engineered. At the time, there were indeed rumours - which persists to this day - that SARS-CoV-2 was an engineered virus, but these certainly did not come from us. As you know, the White House OSTP asked for expert opinions on this question too (spurred by the HIV

nonsense preprint), and Kristian was part of that panel (<https://www.the-scientist.com/news-opinion/lab-made-coronavirus-triggers-debate-34502>). Our study directly addressed these rumours in a scientific way by considering that a lab escape could have occurred. We did not dismiss this possibility out of hand, but we scientifically investigated it.

We strongly reject the idea that we should not have raised nor discussed the possibility of lab escape: as scientists we have to present all the data and discuss it openly. That's what we did. To not have considered or mentioned the possibility of a lab escape would have been negligent. Is the person who emailed you seriously suggesting that we should not have discussed these issues? Wouldn't that be a cover-up? Indeed, the great irony is that 99.9% of the feedback we have received on our paper - including death threats - are people accusing us of dismissing the lab escape theory too quickly. Can you imagine if we had not mentioned - or considered - it all as suggested by some "coronavirus experts"?

This clearly appears to be a case of sour grapes based on half-truths and likely stimulated by your recent (great) article with quotes from us on the questions you raised with Dr. Zhengli. It's telling that the person who emailed you is anonymous. We have absolutely no problem with people knowing that our views on this issue have evolved as more data have appeared - and continues to evolve to this day, should more data become available. That's science. And it's the only way to do it well. Indeed, we have told this to many people: the way we set this up was a study of alternative hypotheses equally weighted priors, which we tested - our posterior clearly favors the hypothesis that this is a natural virus. As far as we can tell we are only 'guilty' of following the proper scientific method - but maybe we offended an ivory tower "coronavirus expert" in the process. It likely won't be the last time.

Best,

Eddie and Kristian

PROFESSOR EDWARD C. HOLMES FAA FRS

ARC Australian Laureate Fellow

THE UNIVERSITY OF SYDNEY

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School of Life & Environmental Sciences and School of Medical Sciences,
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E

On 28 Jul 2020, at 4:54 pm, Jeremy Farrar <[REDACTED]> wrote:

Thanks for forwarding this and the other emails.

I would like to get the sequence of events absolutely right from the start. Eddie the start goes back to the calls you and I had on the 8/9th January.

Can we get that sequence of events right and agreed before a substantive reply goes back to Jon?

Jeremy

On 28 Jul 2020, at 02:07, Kristian G. Andersen <[REDACTED]> wrote:

Dear Tony,

I am sorry to be contacting you, as I know you have critically important priorities, including developing a vaccine for COVID-19. **We just received the email below from Jon Cohen** (from Science) about our conversations back in February investigating the **origins of SARS-CoV-2**. As you know, we considered the theory that SARS-CoV-2 could have been a lab escape and therefore did what any good scientist should do - investigate likely hypotheses and let the data decide. As you know, the data strongly suggests that this is a natural virus and clearly this person gets a lot of things wrong about how this all played out.

We need to reply back to Jon, which would have to include confirming that this meeting did indeed take place with you and Jeremy present. Please let me know if you have any comments or concerns in this regard.

At the very end of this email, I have added a draft email that Eddie put together. I have a few clarifying points that I will add and then Eddie and I will reply back to Jon.

Again, sorry to take up your time - please let me know if you have any comments, questions, or concerns. **We are planning to email Jon tomorrow afternoon.**

Best,
Kristian

Kristian G. Andersen, PhD

Professor | Scripps Research
Director of Infectious Disease Genomics | Scripps Research Translational Institute
Vice President | Viral Hemorrhagic Fever Consortium
Principal Investigator | Center for Viral Systems Biology
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t: @K.G.Andersen
e: [REDACTED]
w: www.andersen-lab.com

Assistant: [REDACTED]

----- Forwarded message -----

From: **Jon Cohen** [REDACTED]
Date: Mon, Jul 27, 2020 at 3:02 PM
Subject: Re: The authors who wrote the paper saying that SARS-CoV-2 is not human engineered first tried convincing Anthony Fauci of the opposite.
To: Kristian G. Andersen [REDACTED], Edward Holmes [REDACTED]

Here's what one person who claims to have inside knowledge is saying behind your backs...

Jon

On Jul 25, 2020, at 7:22 AM, ofu8ledu8z <ofu8ledu8z> [REDACTED] wrote:

[EXTERNAL EMAIL]

Hello Jon

Given your recent mentions of the origin of SARS-CoV-2 I thought you might be interested to hear the bizarre back-story of the paper "The proximal origin of SARS-CoV-2" (<https://www.nature.com/articles/s41591-020-0820-9>).

In summary, four of the authors managed to organize a conference call with Anthony Fauci and others, after quietly raising the alarm (or "spreading the rumor", as Jeremy Farrar apparently put it) that the virus **WAS** in fact human engineered. On the call were two world-class virologists who actually work on coronaviruses, who set them straight in great detail. That seemed to be the end of the affair.

But, incredibly, Andersen et al. turned around and submitted the Proximal paper to *Nature* with the exact opposite claim, i.e., that the virus was **NOT** human engineered. They used (without acknowledgment, of course) all the arguments provided by the coronavirologists on the initial call in which they had tried to raise the human-engineered alarm.

I don't think it would be too hard to verify all this, if you feel like digging a little. If you're wondering if this could all possibly be true: ask yourself how this group of authors, none of whom work on coronaviruses, could have such detailed arguments about why SARS-CoV-2 was not human-engineered. The answer is that they couldn't (and didn't) - they were schooled by the coronavirus experts on the call.

For the phone conference, Anthony Fauci called in Jeremy Farrar (Director of the Wellcome Trust). Farrar asked the coronavirus experts to join the call to listen to the claims. The call took place on a Saturday in early February (either the 1st or 8th, I'm not sure but I could probably find out). On the call making the claim were: Kristian G. Andersen, Andrew Rambaut, Edward C. Holmes, Robert F. Garry, but not Ian Lipkin.

The coronavirus experts listened for a while and both quickly concluded that the reasoning was completely flawed, that the non-coronavirus virologists had no idea what they were talking about, and that the human-engineered claim was totally wrong. One of the coronavirus experts was entertaining guests that day and told the people on the conference call that they wanted to give their opinion and then go back to the guests. So they told them it was nonsense, gave them a list of reasons why, and got off the call. The other coronavirus expert stayed on the call, gave a similar opinion and the morning afterwards sent a detailed list of the reasons why the claim was certainly wrong.

After the paper with the exact opposite claim was received at *Nature*, senior editor, Clare Thomas sent it out for review to some of the best people in the world... Not surprisingly, this happened to include a very close colleague of one of the experts who had been on the conference call. You can perhaps imagine the shock. Thomas was quickly appraised of the situation and *Nature* rejected the paper. It was then sent to *Nature Medicine*, where it was soon published.

One author on the paper was not on the conference call: Ian Lipkin. It's not clear how much of the back-story he is aware of. It might be worth giving him a call to ask, in case you feel like investigating. If his co-authors left him in the dark as to what actually happened and he's worried about the possible fallout he may want to help.

I apologize for mailing you without revealing my name (at least for now). I work in the field and have heard this story from two people who were on the initial call with Fauci. I'm not keen to be personally involved, but I find the situation so outrageous, hypocritical, and shameless that I also find I can't keep silent. It doesn't change anything with respect to knowledgeable thinking about the origin of the virus, of course, but it's a pretty ugly situation that I (obviously) think should be exposed.

----- EMAIL REPLY DRAFT -----

Hi Jon,

Here are the facts:

1. In early Feb we had spotted some features in the SARS-CoV-2 genome that at the time appeared unusual - particularly the furin cleavage site and the receptor binding domain.

2. At this stage we thought it was wise to ask for some other expert opinion on this, so a conference call was arranged. There were indeed some coronavirus experts on the call who we chose.

3. Clearly, some people on the call were very strongly of the opinion the possibility of a lab escape was ridiculous and listed reasons why it was unlikely (although there was also some initial confusion about whether we were referring to the crazy HIV origins theory that had just been touted - obviously we were not). Some of those comments we agreed with, others we didn't. There was a long email discussion about what the data said. A take-home message from the call was that we should go away and write something to clearly set-out the background science on the issue.

4. So, we eventually wrote up a paper. Critically, however, drafts of this paper were sent to all the people on the call, including those that have leaked out the information. I've attached here the draft of the document from Feb 7 that was circulated to everyone. As you can see, it is essentially the basis of the document and people on the call commented on it.

5. Very shortly after the call the pangolin data came out. This was critical. As I wrote in an email to everyone on the call on Feb 9th:

"Personally, with the pangolin virus possessing 6/6 key sites in the receptor binding domain, I am in favour of the natural evolution theory."

6. Hence, it is completely and utterly false to claim that we all thought it was a lab escape, we were corrected in our views by the coronavirus experts on the call, and then submitted a Nature paper without anyone else knowing about it. The truth is that we had a range of views among us, our paper included the pangolin data that was not available at the time of the call, and we circulated drafts of our document to everyone.

I also strongly reject the idea that we should not have raised nor discussed the possibility of lab escape: as scientists we have to present all the data and discuss it openly. That's all we did. To have not mentioned the possibility of lab escape would have been negligent. Is the person who emailed you seriously suggesting that we should have not discussed these issues? Wouldn't that be a cover-up? Indeed, the great irony is that 99.9% of the feedback I've had on the paper - including death threats - are people accusing me of dismissing the lab escape theory too quickly!! Can you imagine if we had not mentioned it all?

This is clearly just case of sour grapes based on some half-truths. It's telling that the person who emailed you is anonymous. I've absolutely no problem with people knowing that my views on this issue have evolved as more data have appeared. That's science. Indeed, I've told this to many people: the way we see it is that we set-up an hypothesis and then tested it. As far as I can tell we are only 'guilty' of following the proper scientific method.

Hope this helps.

Eddie

<Summary.Feb7.pdf>