

To: Peter Daszak[daszak@ecohealthalliance.org]
Cc: Pope, Andrew[APope@nas.edu]; Chakravarti, Aravinda[Aravinda.Chakravarti@nyulangone.org]; Baric, Ralph S[rbaric@email.unc.edu]; Trevor Bedford (trevor@bedford.io)[trevor@bedford.io]; Gigi Gronvall[ggronvall@jhu.edu]; Tom Inglesby (tinglesby@jhu.edu)[tinglesby@jhu.edu]; Stanley Perlman (stanley-perlman@uiowa.edu)[stanley-perlman@uiowa.edu]; Shore, Carolyn[CShore@nas.edu]; Chao, Samantha[Schao@nas.edu]
From: Kristian G. Andersen[kga1]
Sent: Tue 2/4/2020 12:05:54 PM (UTC-05:00)
Subject: Re: URGENT: Please review by NOON if at all possible...

I too agree with all that has been said, but would caution against adding language suggesting that the virus might evolve (i.e., "mutate" to most people) towards better infectivity or transmission - a lot has been said about that for Ebola and other viruses, and it's been driving fear because most people don't fully understand what it means. I'm not arguing that it's not something that might well happen - the SARS data beautifully show it - but I would be worried about the message it could send.

Reading through the letter I think it's great, but I do wonder if we need to be more firm on the question of engineering. The main crackpot theories going around at the moment relate to this virus being somehow engineered with intent and that is demonstrably not the case. Engineering can mean many things and could be done for either basic research or nefarious reasons, but the data conclusively show that neither was done (in the nefarious scenario somebody would have used a SARS/MERS backbone and optimal ACE2 binding as previously described, and for the basic research scenario would have used one of the many already available reverse genetic systems). If one of the main purposes of this document is to counter those fringe theories, I think it's very important that we do so strongly and in plain language ("consistent with" [natural evolution] is a favorite of mine when talking to scientists, but not when talking to the public - especially conspiracy theorists).

Best,
Kristian

On Tue, Feb 4, 2020 at 9:02 AM Peter Daszak <daszak@ecohealthalliance.org> wrote:

I agree with all of the other comments so far sent in, and want to add the following:

- 1) In the 3rd paragraph, it's important to add "including further samples from wildlife", and perhaps the rationale for this "to identify other viruses closely related to nCoV"
- 2) Re. references for #3 that there are current and planned studies underway on the bat origins of CoVs. Here are some references to pick from if they make sense:

- Latinne A, Hu B, Olival KJ, et al.; Origin and cross-species transmission of bat coronaviruses in China. *Nature Communications* 2020;**In review**.
- Wang N, Li S-Y, Yang X-L, et al.; Serological Evidence of Bat SARS-Related Coronavirus Infection in Humans, China. *Virologica Sinica* 2018. doi: 10.1007/s12250-018-0012-7.
- Hu B, Zeng L-P, Yang X-L, et al.; Discovery of a rich gene pool of bat SARS-related coronaviruses provides new insights into the origin of SARS coronavirus. *PLOS Pathogens* 2017;**13**(11):e1006698. doi: 10.1371/journal.ppat.1006698.
- Zhou P, Fan H, Lan T, et al.; Fatal Swine Acute Diarrhea Syndrome caused by an HKU2-related Coronavirus of Bat Origin. *Nature* 2018

Cheers,

Peter

Peter Daszak

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EcoHealth Alliance leads cutting-edge research into the critical connections between human and wildlife health and delicate ecosystems. With this science we develop solutions that prevent pandemics and promote conservation.

From: Pope, Andrew [mailto:APope@nas.edu]

Sent: Tuesday, February 4, 2020 9:11 AM

To: 'Chakravarti, Aravinda'; Kristian Andersen (KGA1978@gmail.com); Ralph Baric (rbaric@email.unc.edu); Trevor Bedford (trevor@bedford.io); Peter Daszak; Gigi Gronvall; Tom Inglesby (tinglesby@jhu.edu); Stanley Perlman (stanley-perlman@uiowa.edu)

Cc: Shore, Carolyn; Chao, Samantha

Subject: URGENT: Please review by NOON if at all possible...

Importance: High

Many thanks again for your thoughtful participation yesterday. The plans have changed in terms of our product. Instead of a “Based on Science” web posting, we are now developing a letter that will be signed by the 3 Presidents of our 3 Academies (NAS, Marcia McNutt; NAM, Victor Dzau; NAE, John Anderson), in response to a letter from OSTP. We think this will be more appropriate and expeditious.

Thus, given the urgency of the request from OSTP and HHS we ask that you please review the attached DRAFT CONFIDENTIAL letter, and let us know if you have any concerns or suggested edits. In particular, we would like to ask if there might be some additional detail added to the data needs that are identified. We think it would be helpful to be a bit more specific, but don't want to go into too much detail either. Your help there would be most helpful.

Many sincere thanks again for your continued engagement on this important activity!

Andy

Andrew M. Pope, Ph.D.

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