

From: [Su, Lishan](#)
To: [Lu, Shan](#); [Liu, Shan-Lu](#)
Subject: Re: 2019-nCoV-EMI_commentary
Date: Tuesday, February 11, 2020 3:39:31 PM
Attachments: [image001.png](#)
[SHC014-MA15 v 2019 nCoVb.docx](#)

I have inserted your paragraph at the beginning, or we can end with it.

-Lishan

From: "Lu, Shan" <Shan.Lu@umassmed.edu>
Date: Tuesday, February 11, 2020 at 2:03 PM
To: "Su, Lishan" <lishan_su@med.unc.edu>, "Liu, Shan-Lu" <liu.6244@osu.edu>
Subject: RE: 2019-nCoV-EMI_commentary

Sure, we are not saying we are trying to defend Ralph but just don't want to give others the wrong impression.

Feng Gao piece will be published tomorrow so we do not include any details in this commentary. There is only one short paragraph at the end of our document to mention it briefly.

The RaTG13 topic can also be very simple. Please take a look at what we wrote below:

This led to speculations and rumors that the 2019-CoV is of a laboratory origin. First, certain people suspected that the 2019-nCoV is directly leaked from a laboratory in Wuhan as a bat CoV (RaTG13) was recently reported by that laboratory and it shared ~96% homology with the 2019-nCoV (Nature, 2020). However, as we now know, the SARS-CoV and palm civets CoV shared 99.8% homology, which is only about 60 nt. On the other hand, there are greater than 1000 nt differences between 2019-nCoV and RaTG13, suggesting RaTG13 is not the immediate source of 2019-nCoV given the large size genome like beta-coronaviruses (~30 kb) and the slow the mutation rate of the coronaviruses. Searching for an immediate host between bat and humans is needed.

My view is that as long as we compared the sequence difference (1000 nt) which is very different from that of SARS (60nt), it is quite clear. Most non-viral people do not understand what does 96% mean. We don't have to explain how long it will take to do the mutations because it will not cover other issues such as some recombination etc. We just say the difference between RaTG13 and 2019-nCoV is very big so they are not the same leaked from Wuhan Virology Lab.

Shan

From: Su, Lishan <lishan_su@med.unc.edu>
Sent: Tuesday, February 11, 2020 1:52 PM