

From: Fauci, Anthony (NIH/NIAID) [E]
Sent: Mon, 3 Feb 2020 22:21:41 +0000
To: Steinberg, Danielle
Cc: Conrad, Patricia (NIH/NIAID) [E]; Billet, Courtney (NIH/NIAID) [E]
Subject: RE: PBS Nature inquiry about Coronavirus

Danielle:

Many coronaviruses exist in animal reservoirs, particularly in bats. Remember that for the SARS outbreak in 2002, bats infected palm civet cats who were sold in live/wet markets and the civet cats spread the virus to human. Same for MERS – bats to camels to humans. You ask that there have been animal markets for a long time, and so why now. The fact is that this is likely pure chance +/- more interactions in the human-animal interface. Animal viruses mutate and most of the time the mutations have no significant impact on virus transmission to humans. Sometimes they mutate and allow single “dead end” transmissions to individual humans with no efficiency in going human to human and so we get individual infections and no outbreak as we have seen with H5N1 and H7N9 influenzas that jump from chickens to humans but do not go from human to human. And then rarely, animal viruses mutate and the mutation allows them not only to jump species to humans, but to also efficiently spread from human to human. That is what we saw in SARS and now we see this with 2019-nCoV, which seems to have adapted itself very well to human to human transmission, as per what is happening in China.

I hope that this is helpful.

Best regards,

Tony

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