

How Did the Coronavirus Come to Be?

In the beginning (pun intended!).....no, really, in order to understand how we got to where we are I think it's important to understand how we got to where we are.

Numerous scientific studies done by virologists (scientists who study viruses), epidemiologists ("disease detectives", scientists, physicians, veterinarians who study diseases & the control of them), infectious disease specialists, etc. over the past 15 years seem to show a consensus that bats were the initial vector (something that transmits a disease or virus from one (1) animal to another) for Covid-19.

In the past 15 years researchers have completed genome sequences for over 30 different coronaviruses found in bat populations around the world. Bats are known to harbor numerous highly pathogenic (an organism/bacteria/virus capable of causing disease) viruses, such as rabies & Ebola. As well as what we now know as Covid-19. Bats are the only known mammals capable of sustained flight, which enhances their ability to disseminate the viruses they harbor. So how does this work?

Does a bear poop in the forest? Well, does a bat poop while flying? The answer is yes. And since bats can be found almost all over the place, guess what else can be all over the place. YUCK! As other animals roam the planet in search of food, is it possible some of what they ingest could be bat poop? Hmmmm....if virus particles are in the bat poop (which they have been shown to be) can another animal ingest the virus as they forage for food? Yup! And viruses, being what they are, are able to recombine into a different form in that "new" animal in order to survive. In the case of Covid-19 it seems that a pangolin (scaly anteater) was the next link in the chain. Then what?

In China, pangolins are considered a delicacy. (I'm with you....GGRROOSS!) Who eats anteaters? Well, who eats cows? Who eats fish? Over the millennia cultures all over the world evolved to eat, literally, a world of different things. Humans have learned to eat whatever is available/easy to capture/affordable in order to survive. That being said, another mammal used for food in China & Southeast Asia is the bat. If the food being consumed by humans harbors the virus that causes Covid-19, & with viruses being what they are, recombine in order to survive, well... you get the picture.

What I found as I did research for this article is that there are any number of steps between bats harboring coronaviruses & the transition to that virus being able to infect humans. However, it is all extremely detailed &, in some instances, at least for me, it became gobbledygook. To the best of my ability I have tried to simplify the path in order to make it understandable: even for myself.

Covid-19 is considered a zoonotic disease, a disease that can be spread between animals & humans. It is a virus that lives, in some form, in other animals &, over time, is able to change to a form that causes disease in humans.

To date there are seven (7) coronaviruses that cause disease in humans. There are four (4) coronaviruses that continually circulate in humans. Those four (4) generally cause mild symptoms one might see with the common cold. It is thought they account for 15% of all colds.

Another human coronavirus caused the SARS (Severe acute respiratory syndrome) outbreak that was seen in 2002-2004. That seems, at this time, to have burned itself out. Another caused MERS (Middle East respiratory syndrome). There have been outbreaks of that disease in 2012, 2015, & 2018. And the last, SARS-CoV-2, which began in late 2019 & whose story has not yet ended.

Information from:

- NIH – National Institute of Health
- Numerous scientific publications
- Global Epidemiology of Bat Coronaviruses by Wong & Woo 2019 @ www.ncbi.nlm.nih.gov

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