

CAN CAMELS BE INFECTED WITH COVID-19 VIRUS?

Coronaviruses (CoV) are a family of RNA (ribonucleic acid) viruses, they exhibit a characteristic 'corona' (crown) of spike proteins around its lipid envelope. CoV infections are common in animals and humans. Some strains of CoV are zoonotic, but many strains are not zoonotic. In humans, CoV can cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (caused by MERS-CoV), and Severe Acute Respiratory Syndrome (caused by SARS-CoV). Detailed investigations have demonstrated that SARS-CoV was transmitted from civets to humans, and MERS-CoV from dromedary camels to humans. In December 2019, human cases of pneumonia of unknown origin were reported in Wuhan City, Hubei Province of China. A new CoV was identified as the causative agent by Chinese Authorities. Since then, human cases have been reported by almost all countries around the world and the COVID-19 event has been declared by the World Health Organisation (WHO) to be a pandemic. The predominant route of transmission of COVID-19 is from human to human.

Current evidence suggests that the COVID-19 virus emerged from an animal source. Genetic sequence data reveals that the COVID-19 virus is a close relative of other CoV found circulating in *Rhinolophus* bat (Horseshoe Bat) populations. However, to date, there is not enough scientific evidence to identify the source of the COVID-19 virus or to explain the original route of transmission to humans (which may have involved an intermediate host).

Now that COVID-19 virus infections are widely distributed in the human population there is a possibility for some animals to become infected through close contact with infected humans. Several dogs and cats (domestic cats and a tiger) have tested positive to COVID-19 virus following close contact with infected humans.

Preliminary findings from laboratory studies suggest that, of the animal species investigated so far, cats are the most susceptible species for COVID-19, and cats can be affected with clinical disease. In the laboratory setting cats were able to transmit infection to other cats. Ferrets also appear to be susceptible to infection but less so to disease. In the laboratory setting ferrets were also able to transmit infection to other ferrets. Dogs appear to be susceptible to infection but appear to be less affected than ferrets or cats. Egyptian fruit bats were also infected in the laboratory setting but did not show signs of disease or the ability to transmit infection efficiently to other bats. To date, preliminary findings from studies suggest that poultry and pigs, are not susceptible to SARS-CoV-2 infection. Currently, there is no evidence to suggest that animals infected by humans are playing a role in the spread of COVID-19. Human outbreaks are driven by person to person contact.

(Factual Excerpts verified from the websites of WHO and OIE)



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