A different strain of coronavirus found in two Indian bat species

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NEW DELHI: Scientists have found the presence of coronavirus—but not the one causing covid-19—in two Indian bat species that are commonly found in the Western Ghats.

Researchers from the Indian Council of Medical Research (ICMR) examined the throat and rectal swabs of more than 586 bats collected from 10 states and Union territories—Kerala, Karnataka, Puducherry, Tamil Nadu, Telangana, Odisha, Gujarat, Himachal Pradesh, Punjab and Chandigarh—over the past two years.

The bats belonged to two Indian species, Pteropus and Rousettus. At least 25 of the bats examined—four Pteropus and 21 Rousettus—were found to be carrying the bat coronavirus. This is not the SARS-CoV2 coronavirus which causes covid-19.

Fifteen of these positive samples came from Kerala, six from Puducherry, two from Himachal Pradesh and one each from Karnataka and Tamil Nadu. The virus was detected mostly in the intestine of the bats.

The origin of SARS-CoV2, which has led to one of the most serious global pandemics, has also been associated with bats.

India has a diverse population of bats with around 117 species. The Western Ghats, particularly in Kerala, is a large habitat of bat populations.

"There is an urgent need for proactive surveillance of zoonotic infections. This would not only enable us to track any potential future outbreaks, but in the timely development of diagnostic assays for novel viruses, which have epidemic potential and mitigate the risks," said the researchers.
Scientists from the ICMR-National Institute of Virology Pune had earlier detected the presence of Nipah virus in bats, which led to an outbreak in Kerala in 2018 and 2019.

Bats have long been known as reservoirs of highly infectious viruses, including the coronavirus, which can infect humans. But the viruses can infect humans only through an intermediate host, which always remains a big mystery to solve.

The origin of the covid-19 pandemic was linked to bats in China. However, the identity of the intermediate host, which could have facilitated its transmission into humans, still remains unclear.

While some studies point to the role of pangolins, a clear link is yet to be established.

It is still not clear why only certain coronaviruses infect humans, while others do not. According to scientists, there are five strains of beta-coronavirus which are known to infect humans.

Two of these cause common cold-like infections, while three others caused the SARS epidemic in 2002-04, MERS in 2013 and the latest covid-19 outbreak.

While it is extremely challenging to monitor the bat-human interaction, scientists said there was an urgent need to understand the circulation of coronavirus in Indian bats.

“"This surveillance is also important for the epidemic preparedness, as it will provide leads for developing specific diagnostics to detect their presence," the study said.

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