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The threat of zoonotic diseases has prompted Indian medical researchers to start monitoring bat habitats in a bid to locate potential hotspots.

The move by the Indian Council of Medical Research (ICMR) comes at a time when the country is already dealing with the covid-19 pandemic, which is said to have originated from bats in Wuhan, China.

Bats are reservoirs of a host of viruses including Nipah, and have the potential to cause annual outbreaks and pandemics. Last year, Nipah virus was reported in Kerala and is expected to be the next big zoonotic disease.

India has witnessed four outbreaks of Nipah virus during 2001–2019. The first was reported in Siliguri, West Bengal, in 2001 with a case fatality rate (CFR) of 74% having febrile illness and neurological symptoms in the affected population.

Subsequently, an outbreak was reported from Nadia district, West Bengal in 2007 in which five people died. The recent emergence of NiV was reported in Kerala during 2018–19 followed by the latest outbreak last year.

ICMR–National Institute of Virology, Pune carried out a study to determine the presence of NiV in bat populations in Karnataka, Kerala, Tamil Nadu, Telangana, Puducherry and Odisha during January–November 2019.

These states are geographically close to the new hotspot of NiV. However, the study could not be continued for a longer duration due to the ongoing covid-19 pandemic.

A total of 573 bats were collected, out of which 541 belonged to the *Pteropus medius* bat species while 32 were *Rousettus leschenaultii* bats.

“Around 51 bats (20%) of the 255 *Pteropus medius* bats from Karnataka, Kerala, Tamil Nadu and Puducherry demonstrated presence of anti-Nipah IgG antibodies. However, the presence of virus couldn't be detected in any of the throat and rectal swabs of *Pteropus medius* bats and *Rousettus leschenaultii* bats collected during January–November 2019,” said Dr. Pragya Yadav, Senior Scientist at ICMR- NIV Pune adding that they are soon going to resume the bat surveillance activity across the country.

“The evolving epidemiology of NiV infections in human beings in different geographical regions alerts us for a detailed nationwide proactive bats surveillance for Nipah Virus throughout the year to develop effective strategies for the prevention and control of Nipah outbreak in future,” Dr Yadav said.

Dr Yadav said: “The population of bats in the country is unknown. With at least 109 bat species, India has an incredible diversity of bats but information on viruses in bats is very meager.”

“Global surveillance for emerging infectious diseases has led to the isolation of numerous viruses from a variety of bat species which includes pathogenic and non-pathogenic zoonotic and arboviruses. Some of the recent events of bat viruses into humans have occurred through intermediate hosts (Nipah, Menangle, Tioman, Ebola Reston and SARS-CoV), she said.

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