

SCIENTISTS GET READY TO TEST RIVAL COVID-19 PANDEMIC VACCINES IN ANIMALS

Relevant for: Developmental Issues | Topic: Health & Sanitation and related issues

“Monkeys, mice and ferrets are helping scientists to fight [coronavirus](#) because animal models can reveal how infections develop and aid efforts to develop drugs and vaccines”, the prestigious scientific journal ‘Nature’ has reported in its latest issue (12 March).

The [disease is now a pandemic](#) according to the World Health Organization.

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It is notable that the ferret work is led by India-born Professor S.S. Vasan at the Commonwealth Scientific and Industrial Research (CSIRO), Australia’s national science agency.

His Dangerous Pathogens team is the first in the world to establish the ferret model for [SARS-CoV-2](#).

“A team led by S. S. Vasan at the Australian Animal Health Laboratory in Geelong has found that the animals are susceptible to SARS-CoV-2. The researchers are now studying the course of infection, before testing potential vaccines. Ferrets are a popular model for influenza and other respiratory infections because their lung physiology is similar to that of humans, and researchers hope they will mimic aspects of [COVID-19](#) in people, such as its spread.”, says the journal Nature.

Researchers in China, who had a headstart, are leading the work on infecting monkeys and transgenic mice that have the human ACE2 gene. But the journal warns that no animal model is perfect, and monkeys and mice tell researchers different things about infection, shedding light on factors such as the role of the immune system or how the virus spreads.

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Prof. Vasan, whose research is funded by the global Coalition for Epidemic Preparedness Innovations (CEPI) at the CSIRO, has said: “We are operating at speed in response to a global public health emergency while adhering to strict attention to detail and regulatory requirements which makes this so challenging. We’ve grown the virus for our research and have also reconfirmed the genomic sequence published by the Doherty Institute. Next we’re aiming to get a better understanding of the virus, so CSIRO can begin testing new potential vaccines and therapeutics being developed for efficacy. We have got promising results with our initial susceptibility studies and are in the process of conducting natural disease progression studies.”

[COVID-19](#) | [Interactive map of confirmed coronavirus cases in India](#)

In the meantime, CEPI has announced funding for two additional vaccines, taking the total number of rival vaccine candidates to six.

These will have to be tested in animals such as mice, ferrets and monkeys before they can enter human clinical trials. Whether this whole process will be fast enough as we now have a pandemic is the multi-billion dollar question.

[The Hindu Group's BusinessLine](#) previously reported that the Asian Development Bank has estimated the loss to global economy could be more than \$100 billion.

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The WHO had to come up the name in line with the 2015 guidelines between the global agency, the World Organisation for Animal Health and the Food and Agriculture Organization.

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