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Australia's CSIRO suggests nasal delivery of Oxford-AZ vaccine to improve efficacy

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The Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia's national science agency, has published the peer-reviewed results of its independent preclinical evaluation of the University of Oxford-AstraZeneca (AZ) COVID-19 vaccine in an animal model, conducted in early 2020.

The study was conducted in partnership with the Coalition for Epidemic Preparedness Innovations (CEPI). Quality assured and quality-controlled data was shared last year with CEPI and the University of Oxford to support human clinical trials.

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The preclinical study evaluated the efficacy of the vaccine when delivered in one or two doses, through either an intramuscular injection or by nasal drops.

The study found:

- The vaccine triggered a strong immune response in ferrets.
- A significant reduction in viral loads in nasal and oral samples from vaccinated ferrets, indicating the vaccine may be helpful in preventing ongoing transmission of the virus.
- Nasal delivery of the vaccine has the potential to further improve the efficacy of the vaccine.

The study took place at the Australian Centre for Disease Preparedness, CSIRO's high-containment biosecurity facility in Geelong.