

## Covid-19 prophylactic tested on Ferrets; humans infected by mutated Covid-19 in Mink

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*The New York Times* and other news media have reported that a nasal spray applied to laboratory Ferrets *Mustela putorius furo*, the domesticated form of the Western (also known as European) Polecat, prevents transmission of Covid-19.

The spray contains a lipopeptide that precisely matches a stretch of amino acids in the spike protein of the SARS-CoV-2 virus. It works like this: “Before a virus can inject its RNA into a cell, the spike must effectively unzip, exposing two chains of amino acids, in order to fuse to the cell wall. As the spike zips back up to complete the process, the lipopeptide in the spray inserts itself, latching on to one of the spike’s amino acid chains and preventing the virus from attaching” (McNeil 2020).

In the study, Ferrets inoculated with the nasal spray were not infected by animals carrying the virus when they were housed together for 24 hours. All the untreated animals were infected when co-housed with infected Ferrets.

According to the researchers, the Ferret is an “ideal model” for assessing the transmission of respiratory viruses by aerosols of direct contact in part because Ferrets, like other mustelids, are highly susceptible to infection by SARS-CoV-2 (de Vries *et al.* unpublished, p. 6).

The researchers’ report of their study has not yet been peer-reviewed or formally published but is available online for preview (de Vries *et al.* unpublished).

There have been no human trials of the nasal spray yet.

In related news, the BBC reports that Denmark plans to cull as many 17 million American Mink *Neovison vison* after a mutated form of SARS-CoV-2 carried by some Mink on the country’s fur farms has been found to spread to humans (Anonymous 2020).

Covid-19 has been documented at fur-producing facilities in the Netherlands, Spain, Sweden and the US, in addition to Denmark, resulting in the extermination of millions of Mink (Briggs 2020). Farmed Mink catch the disease from humans. However, genetic analysis indicates that in the Netherlands and now Denmark, SARS-CoV-2 has been transmitted from Mink to people in a small number of instances (Briggs 2020). A mutated form of the virus passing from Mink to humans has public health implications as it may impede the effectiveness of human vaccines. Some experts are therefore calling for a ban on Mink

production (Briggs 2020), an industry that has for decades been the focus of criticism on animal welfare grounds.

Around the world, more than 50 million Mink are bred for their commercially valuable fur every year (Briggs 2020).

## References

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