

Statement on the use of a Coronavirus surrogate in Virology testing by MSL

Due to the markets demand to combat the pandemic, manufacturers are being asked to provide proof that their product is effective against SARS-CoV2 or COVID19. MSL is working every day to help towards this goal in any way we can.

Currently the strain of the organism related to the pandemic poses a significant threat to people handling it outside of high-level research laboratories, it is therefore not available commercially for use in public laboratories. In this case like this and other outbreaks before it, the position of the industry is to use a suitable surrogate in its place which would represent the target strain and would therefore have representative results of a products performance.

This has been the case previously in similar situations, like combatting Ebola in Central Africa where Respiratory syncytial virus was used as a surrogate in testing as Ebola was for obvious reasons limited in access. This testing was widely accepted by competent authorities and healthcare services.

	Feline coronavirus	COVID-19 (SARS—CoV2)
Realm	Riboviria	Riboviria
Order	Nidovirales	Nidovirales
Family	Coronaviridae	Coronaviridae
Genus	Alphacoronavirus	Betacoronavirus
Species	Alphacoronavirus 1	COVID-19

The members of the family Coronaviridae are enveloped and have a positive sense RNA genome. Coronaviruses have a distinct morphology with an outer ‘corona’ of embedded

envelope spikes. These viruses cause a broad spectrum of animal and human disease.

Andrew M.Q. King, Michael J. Adams, Eric B. Carstens, and Elliot J. Lefkowitz 'Virus Taxonomy, Classification and Nomenclature of Viruses, Ninth Report of the International Committee on Taxonomy of Viruses' 2012 ISBN 9780123846846

Image 1: Table of comparison between the pandemic strain and the MSL surrogate organism

For Coronavirus claims MSL uses Feline coronavirus for the surrogate organism, there are several reasons for this. 1) It poses no risk to our staff. 2) It shares a strong family design to the outbreak strain with only small differences in RNA. 3) It is currently used in other EN methodologies, so it has been tested in ring trial and was proven to provide reliable and repeatable results.

These points allow us to say that any result on Feline coronavirus would be representative of the results achieved on the pandemic strain if it was tested and that they are repeatable by other labs.

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