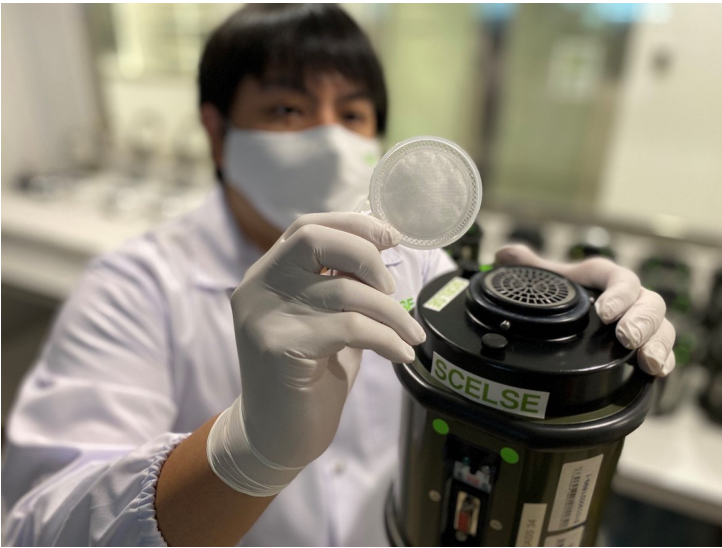


Singapore uses indoor air sampling surveillance to sniff out COVID-19

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The scientists deployed air sampling devices in combination with an ultra-low biomass analysis approach



A team of scientists and doctors from the Singapore Centre for Environmental Life Sciences Engineering (SCElse) at Nanyang Technological University, Singapore (NTU Singapore) and the NUS Yong Loo Lin School of Medicine has developed a capability to detect airborne SARS-CoV-2 RNA – the nucleic acid coding for the virus that causes COVID-19 – indoors through air sampling.

When trialled in two inpatient wards of a major Singaporean hospital caring for active COVID-19 patients the air surveillance approach produced a higher detection rate of environmental SARS-CoV-2 RNA compared to surface swab samples collected in the same area.

The findings indicate the potential for an airborne surveillance system that monitors for the presence of the virus and provides early warning of infection risks, which would be especially valuable in hospitals and nursing homes, and in enclosed places where large numbers of people congregate, said the research team.

Future air surveillance studies will need to be tested in locations outside of hospital environments where mass gatherings occur for rapid and sensitive high throughput communal testing at the population level, said the research team.