

Omicron study finds clues to fast spread & possible milder cases

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Omicron multiplies much faster in the human bronchi and much more slowly in lung tissue, according to a Hong Kong study that offers a potential explanation for why the Covid-19 variant spreads so rapidly but may inflict less severe disease on some patients.

Using tissue removed from people's bodies, researchers found that 24 hours after infection omicron had replicated 70 times faster in the human bronchus than with the delta variant or the original coronavirus strain. The bronchi are large airways that lead to the lungs.

Meanwhile, the replication rate in human lung tissue was more than 10 times lower than what was seen with the original strain — an observation that “may suggest lower severity of disease,” according to a statement from the LKS Faculty of Medicine at The University of Hong Kong. The research — still under peer review for publication — could shine a biological light on reports from health officials in South Africa and elsewhere that Omicron spreads faster than anything yet in the pandemic but is generally causing less severe bouts of Covid.

Severity of disease isn't just a function of virus replication, but also relates to how the immune system responds to infection, potentially leading to the so-called cytokine storms that have caused many of the deaths in the pandemic, said Michael Chan Chi-wai, associate professor at the university's school of public health, in the statement.

Beyond that, “by infecting many more people, a very infec

tious virus may cause more severe disease and death even though the virus itself may be less pathogenic,” said

Chan, who led the team that conducted the research. “Taken together with our recent studies showing that the Omicron variant can partially escape immunity from vaccines and past infection, the overall threat from Omicron variant is likely to be very significant,” Chan said.