

Scientists detect Omicron's flaw

By PAUL ASH

● Omicron is less adept at infecting lung tissue than previous Covid variants, according to new research.

At least six studies on Omicron have been published in Europe, the UK and US, based on observations in hamsters and mice. They all suggest Omicron does less damage to people's lungs than Delta and other variants of Covid, but is more likely to infect the throat.

This could also explain why Omicron infections have generally turned out to be shorter and less severe than illness caused by previous variants.

"Within the first few days doctors were saying that patients were presenting with mild symptoms," said infectious diseases epidemiologist professor Salim Abdool Karim. Karim and colleagues, including Dr Waasila Jassat of the National Institute for Communicable Diseases, spent the first four weeks of SA's fourth wave of Covid assessing Omicron's severity.

Their findings, to be published soon in *The Lancet*, are that 4.9% of cases were admitted to hospital during the fourth wave compared with 18.9% and 13.7% during the second and third waves.

Of the fourth wave admissions, 28.8% had severe disease compared with 60.1% and 66.9% in the second and third waves. Moreover, patients admitted to hospital during the fourth wave were 73% less likely to present with severe disease than patients admitted during the third wave.

The animal-based studies chime with what Karim and his colleagues found. "Omicron loves bronchial tissue but it's very inefficient in infecting lung tissue," he said. "This fits so well with what we are seeing clinically."

The studies used animals because previous infection and vaccination might have skewed the results in human-based studies.

In a study at Washington University in St Louis, Missouri, published this week in the journal *Nature*, virologist Michael Diamond and colleagues infected hamsters and mice with Omicron and other variants to track disease progression.

Within days of infection the concentration of virus in the lungs of animals with Omicron was 10 times lower than those infected with the other variants.

Karim said the evolution of the virus "is now shifting in the direction that we would prefer", but emphasised that it was premature to say it had been beaten. "Yes, it's encouraging news but let's not count our chickens," he said.