

# SURVIVAL OF THE FITTEST

Reports of the latest Variant of Concern, Omicron, have exploded and waves of familiar dread are washing ashore just when there was fresh hope we would soon put all this behind us

Omicron is by far the most heavily mutated variant

50 mutations overall

32 mutations on the spike protein alone

Delta has 9 mutations

The higher number of mutations may mean that it could be more transmissible and/or better at evading immune protection

## How Delta became dominant

- Delta is between 40% and 60% more transmissible than Alpha variant and twice as transmissible as the original SARS-CoV-2
- It replicates faster than previous variants
- Delta-infected patients make and shed more virus
- Its mutations in spike protein led to more efficient binding to the host
- It has mutations allowing it to evade neutralising antibodies

## Will Omicron replace Delta

- The new variant has 10 mutations in the receptor-binding domain, compared to the two in Delta
- Natural selection and adaptation could result in more variants that could plausibly be more transmissible than Delta
- Lower vaccination means there are a lot of susceptible hosts