Are polymorphisms in the ACE2 locus important for COVID-19 severity?
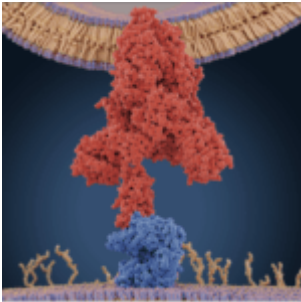
The SARS-CoV-2 virus uses the human angiotensin-converting enzyme 2 (ACE2) receptor to enter a variety of cell types, notably in the upper and lower respiratory tract, although many cell types express ACE2 (Read: Is there a SARS-CoV-2 receptor (ACE2) expression difference between males and females?). The affinity for viral binding may be linked to the level of ACE2 receptor expression in various tissues. In a recent pre-peer reviewed study, authors analysed the association between polymorphisms in the ACE2 locus and COVID-19 severity. They examined 62 COVID-19 positive patients, 23 requiring hospitalisation. They examined ACE2 single nucleotide polymorphisms (SNPs) genotypes and 10/61 SNPs were associated with hospitalisation and 6 of these 10 associated with altered ACE2 tissue expression and disease severity. The authors propose that "the ACE2 genotype may inform COVID-19 risk stratification and need for more intense therapy". In the absence of a predictor of disease, should ACE2 genotypic analysis be examined in different populations?

Wooster et al., Pre-print. Polymorphisms in the ACE2 Locus Associate with Severity of COVID-19 Infection. MedRxiv

Summary by Clive Gray