

Do our genes affect vulnerability to the coronavirus?

Since the start of the COVID-19 pandemic several months ago, scientists have been puzzling over the different ways the disease manifests itself. They range from cases with no symptoms at all to severe ones that involve acute respiratory distress syndrome, which can be fatal. What accounts for this variability? Might the answer lie in our genes?

Coronaviruses have raised such questions for more than 15 years. ...

Attention has now shifted to SARS-CoV-2, the new coronavirus that causes COVID-19. And TLRs have once again drawn researchers' interest—this time to help explain the excess number of men who suffer from severe infections.

Men made up 73 percent of severe cases of COVID-19 in intensive care in France, according to a national survey published April 23. ...Unlike men, women have two X chromosomes and so carry double the copies of the gene *TLR7*, a key detector of viral activity that helps boost immunity.

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Several projects are underway to investigate the genetic variants that influence SARS-CoV-2 infection in greater depth. Andrea Ganna of the University of Helsinki has launched the [COVID-19 Host Genetics Initiative](#), which aims to mobilize the international community of geneticists working on this topic. ...

We may not all be equal when it comes to SARS-CoV-2. But identifying why these inequalities exist could help reduce them.

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