

## Genetic susceptibility to severe COVID-19 symptoms.

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### Abstract

We are beginning to understand how COVID-19 causes symptoms in individuals. The coronavirus attaches to ACE2 receptors, which are found on the outside of cells in the human body and normally helps to stabilize blood pressure. There are slight variations in the genes that encode for these ACE2 receptors, which may explain why some people become sicker than others, and could potentially be used to predict a patient's future response to the virus. The genetic variability of immunity lies particularly in the genes of HLA (Human Leukocyte Antigen) system. These genes produce HLA molecules that are positioned on the surface of cells. When a virus infects an organism, the invader's proteins are first cut into small fragments called peptides. The HLA molecules then bind on to these fragments and expose them to the surface of the cells, thereby triggering a cascade of immunity reactions designed to eliminate the virus.

Affiliations (past/current): School of Biosciences VIT Vellore, Biotech Bay San Francisco, Lilac Medicare Mumbai, iMedPub Ltd, SAGenome Pvt Ltd Trivandrum, Rajeev Gandhi Biotech Research Institute Trivandrum, OhMyGene.

Years of experience in Molecular Diagnostics: 16 years

Domain Expertise: Immunogenetics & biochemical genetics, Cancer genetics, Genomics in modern medicine, prenatal genetic screening and counselling, cytogenetic, Bioinformatics, Bio-Statistics and Research Methodologies, Developmental Genetics and Radiation Genetics.

### Biograph :

Anushree Dileep is working as a Geneticist/ genetic counsellor. She has done Master's in Bio-Medical Genetics from Vellore Institute of

Technology; She have completed a course in "Genomics and Genetics in Medicine" from St George's, University of London .

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