



## Molecular Medicine : Innovative Technology for Understanding the Molecular Pathogenesis of COVID 19 Infection

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### Abstract:

Molecular Medicine is one of the new branches of Medicine, where innovative techniques are being used to understand the fundamental molecular and genetic defects created in various diseases and further to develop a technology which can intervene to correct these disorders. Molecular Medicine has existed since Dr. Francis Collins, Director of National Institute of Health (NIH), USA has published the complete Human Genome project in 2003. There are several sensitive and precise technologies being developed so far which help clinicians and scientists to diagnose and treat the disease more precisely. Therefore Molecular Medicine technology has a great role in elucidating the exact mechanism of COVID19 infection in this pandemic situation. We know that the coronavirus disease 2019 (COVID-19), is a highly contagious transmittable disease caused by a recently discovered pathogenic coronavirus, SARS-CoV-2, which is associated with a global "pandemic" situation since January 2020. In humans, it is believed that there is an interaction between angiotensin converting enzyme 2 (ACE2) cell receptor and viral Spike protein mediates the coronavirus entry into human respiratory epithelial cells and establishes the host tropism. The ACE2 receptor is highly expressed in airway epithelial cells as well many target organs of the adult human body. The proteolytic cleavability of Spike protein has also been considered as one of the factor for severity of COVID19 infection. Several studies have highlighted the occurrence of impaired host immune response and expression of excessive inflammatory response especially cytokines by infection with COVID19 virus inducing cytokine storm which causes injury to lung as well as other human organs of human body resulting in increase in mortality rate. Understanding the cellular, and molecular factors involved in immune dysregulation and the high virulence capacity of COVID-19 will help scientists in finding out most potential targeted therapy against COVID19 infection. Globally, extensive research



is in progress to discover a new drug and Vaccine for novel COVID-19.

### Biography:

Dr. Pravin potdar is now serving as Department of Molecular Medicine & Biology at Jaslok Hospital & Research Centre, India. He served as Senior Scientist from 1981-2002 at Cancer Research Institute Tata Memorial Centre, Mumbai. He is the • Organizing Committee Member of International conference on Advances in Biomedical Engineering to be held at Philadelphia, USA .

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