

CoVID19 pandemic: Exploring diagnostics and target based therapeutics

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Abstract

The authorities of Chinese authorities declared a pneumonia outbreak by an unknown virus at Wuhan of Hubei Province during December 2019,. The publication of the genomic sequence of a novel coronavirus (nCoV), the global scientific community jumped into conducting research on varied aspects of this function with great interest. This nCoV or 2019-nCoV was finally renamed as Severe Acute Respiratory Syndrome Corona Virus Type 2 (SARS-CoV-2) by the Coronavirus Study Group of the International Committee on Taxonomy of Viruses. The SARS-CoV-2 belongs to the family: Coronaviridae, genus: Beta coronavirus, and subgenus: Sarbecovirus. This virus enters the human body through mouth, eye and nose. Finally, it reaches into the lung cells via binding of the S1 domain of spike protein with a host cell surface enzyme, angiotensin converting enzyme type 2 (ACE2) receptor. The entry process of this virus is facilitated by the serine protease TMPRSS2 for S protein priming. It has been observed that a TMPRSS2 inhibitor which has been approved for the clinical use can block the entry. Hence, it can serve as a potential therapeutic target and drug development. The SARS-CoV-2 has a positive single strand of RNA with genome size of 29.8 Kb encoding for 29 proteins using 3 open reading frames. After infecting the lung cells, it develops the disease, CoVID19. I would present an update about the structure and function of SARS CoV2, the diagnostic tools, antiCoVID19 agents and the therapeutic targets to combat CoVID19.

Keywords—SARSCoV2, CoVID19, Diagnosis, Treatment, Targets

Biography:

Dr. Bechan Sharma presently working as a senior Professor and Ex-Head, Department of Biochemistry, University of Allahabad, India, has completed his higher education from BHU-Varanasi. The areas of his research interest include Molecular Biology of HIV/AIDS, Drug design and development and Biochemical Toxicology. He has received numerous Awards/ Honors.. He has 32 years of teaching and 37 years of research experience. He has published 217 research papers in many peer reviewed

International and National Journals of repute. He has one US patent to his credit. He has supervised 18 PhDs and 7 PDFs. He is member/life member of various national/international scientific societies. He is Chief-Editor and Member Editorial

Board /Reviewer for 150 International Journals. His 5 books have been published by International publishers. He has worked as a visiting Professor in USA for 3 years and also worked in different labs in Italy, France, Iran, Thailand, Hong Kong, Japan, Germany and Brazil. Prof. Sharma has been awarded with ICMR's Senior Scientist Fellowship 2014-15 in Biomedical Sciences under Indo-USA joint research programme to work at NIEHS-NIH, NC, USA with Prof. Samuel Wilson on DNA repair. Recently Prof. Sharma has been included as a Life Member of World Virology Society-Sweden and in an Indo-Japanese collaborative research initiative. Prof. B. Sharma is a Fellow of Academy of Environmental Biology (AEB), India and Bioved Research Society (BRS), India.



Speaker Publications:

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