Dr. Hemant Mishra Got Awarded in Rapid Response Grant To Discover Treatment Against COVID19

STUDY TO ELUCIDATE THE MECHANISMS OF INHIBITING COVID-19 (SARS-COV-2) VIRAL ENTRY INTO THE LUNG EPITHELIAL CELLS

The proteases ACE2 and TMPRSS2 expressed on human lung epithelial cells facilitate the cellular uptake of COVID19 (SARS-CoV-2) via spike proteins and play a major role in their pathogenesis.

In this study, a team of scientists led by Hemant Mishra, Ph.D., Veterinary and Biomedical Sciences, will investigate whether the combinatorial approach of blocking both ACE2 and TMPRSS2 proteases by various means can effectively prevent the cellular entry of the virus.

"The compromised epithelium, after viral entry, can increase susceptibility toward a number of opportunistic infections encouraging a dysregulated immune response which is inefficient in combating with the pathogens. This could also instigate a storm of cytokines in the blood leading to septic shock and/or a decline in the lung functions causing various respiratory distress-related disorders. Hence, understanding the mechanisms to block the viral entry into pulmonary epithelial cells can greatly assist in the treatment by preventing some of the complications attributed to the higher mortality rate." said Mishra.