

## Title: Role of probiotics and prebiotics in the management of gastrointestinal disorders from SARS-CoV-2 and bacterial secondary infections

**Shyamapada Mandal**

University of Gour Banga, India

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The COVID-19, caused with the infection of SARS-CoV-2, has been a pandemic since December 2019. The virus, SARS-CoV-2, primarily infects lungs, and also causes dysbiosis of the gut microbiota, leading to the disruption of immune homeostasis (by invading gut epithelium using angiotensin-converting enzyme 2), thereby facilitating bacterial secondary infections causing gastrointestinal disorders. These events lead to a condition called blood-brain-barrier (BBB) dysfunction, which causes inflammation of the brain, and leads to severe and/or prolonged COVID-19. Prebiotics (including those derived from plant sources) —the components that enhance the viability and functionality of probiotics (in the gut), — act symbiotically thereby restoring the gut homeostasis and the BBB functionality as well, through gut-microbiota-brain axis. Thus, COVID-19 and the associated bacterial secondary infections causing gastrointestinal disorders might be prevented with probiotics as well as prebiotics supplementations

### Biography

Dr. Shyamapada Mandal is Professor and Head of the Department of Zoology, and Dean (Science), University of Gour Banga, India. He is working on infectious diseases, probiotics, and genomics and bioinformatics research. He did pre-PhD, PhD, and post-PhD research under the guidance of Professor Nishith Kumar Pal at the Calcutta School of Tropical Medicine, India. He has published 122 articles with eight book chapters. He is life member of IAMM and IASR, India, and fellow member of SASS, India. Eight national academic and research awards have been conferred to him. He has guided 58 post graduate students; supervised three MPhil and three PhD students and supervising 7 PhD and one MPhil students. Professor Mandal is among the world's top 2% scientists as per the survey of the Stanford University, published in PLOS (Public Library of Science) Biology (October 2020). He is featured in the top 2% world scientists list for second and third consecutive time as published by the Stanford University-Elsevier BV (October 2021 and October 2022).