

The Potential Role of Probiotics in the Management of COVID-19

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COVID-19 caused by SARS-CoV-2 is an ongoing global pandemic that causes catastrophic devastation to humankind. COVID-19 virus mainly affects the human respiratory and gastrointestinal systems. Currently, vaccines are available globally and are a game-changer in the fight against COVID-19. However, it has a long way to go to achieve the war against COVID-19 as it will take some more years to completely vaccinate the people, and there are threats and concerns of COVID-19 due to the high mutagenicity rate of the virus. The current methods of treatment involve the use of antiviral drugs and anti-inflammatory drugs but without much success. To date, there is no established prevention or treatment method for this novel virus. The best preventive strategy to combat this disease is to keep the immune system strong. Evidence showed a correlation between gut dysbiosis, COVID-19, and immunomodulation. Since time immemorial, probiotics have improved general health and immunity to various diseases. Probiotics are beneficial bacteria when administered in the right doses conferring a health benefit to the host. Various scientific evidence has proved the therapeutic and protective effects of probiotics against respiratory and gastrointestinal diseases. This review aims to outline the potential role of probiotics in fighting COVID-19 by highlighting the recent evidence on the association between dysbiosis, COVID-19, and probiotics and outlining the antiviral and anti-inflammatory effects of probiotics. This review highlight the association between gut and lung in the gut-lung axis. Furthermore, this review also provides

an insight into the indirect evidence of the potential protective role of probiotics in combating COVID-19 or its associated symptoms.

Keywords: COVID-19, SARS-CoV-2, dysbiosis, immunomodulation, probiotic, pandemic.