Coronavirus and Probiotics: Past, Present and Future

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COVID-19 and PROBIOTICS

Coronavirus disease (COVID-19), caused by a new strain of coronavirus (SARS-CoV2) identified in 2019 and previously not identified in humans, was declared a pandemic in March 2020 by the World Health Organization. It is not the first-time coronavirus is being identified in humans. In 2004, a novel coronavirus strain (HCoV-NL63) was isolated from a 7-month-old child suffering from bronchiolitis and conjunctivitis, according to a report in naturemedicine, making it the fourth human coronaviruses ever identified. The other three included, HCoV-229E, HCoV-OC43 and severe acute respiratory syndrome (SARS)-associated coronavirus (SARS-CoV). While HCoV-229E and HCoV-OC43 were identified in mid-1960s and reported to cause common cold, SARS-CoV was identified about 20 years ago and was associated with a life-threatening pneumonia. Other enteropathogenic-coronavirus-transmissible gastroenteritis viruses have also been reported recently in animals. Until now with the COVID-19 pandemic associated with SARS-CoV2, SARS-CoV has been the most pathogenic human coronavirus ever identified with zoonotic transmission. Coronaviruses, which are enveloped viruses with a large plus-strand RNA genome, belong to the genus of the Coronaviridae family. The genomic RNA is 27-32 kb in size, capped and polyadenylated. They are known to be associated with animals and recently a zoonotic transmission of SARS-CoV1 and 2 is observed, causing a variety of severe diseases, including gastroenteritis and respiratory tract diseases.

As known antiviral agents appear not to be potent against the zoonotic coronaviruses, such as SARS-CoV1 and 2, innate defence mechanisms may play a significant role in combating the virus in healthy body system. Probiotics, which have been defined as live microbes which when ingested in sufficient amount confer health-promoting and boosting attributes on the host, can support the body system in fighting the viral infection. This may be possible through several mechanisms of action associated with probiotics including, production of antimicrobial agents, modulation of immune responses and promotion of host innate defence mechanisms.

In this special issue of the Journal of Probiotics and Health “Coronavirus and Probiotics: past, present and future”, we look forward to publishing informative and original articles related to the applications of probiotics in coronavirus and its variants as well as current general findings on coronavirus; aetiology, pathophysiology, prevention and treatments. Both clinical and non-clinical studies are welcomed. To submit your article, kindly follow the link https://www.longdom.org/submissions/probiotics-health.html or contact the Editorial office via probiotics@emedicalscience.com. Do not also forget to refer your colleagues, who may be interested in this special issue, to submit their articles. All articles are peer-reviewed by experts in the fields and the publication is fast, prioritized, streamlined, and cheap (discount available).