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The Covid-19 Pandemic can be stopped with Probiotics

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ABSTRACT

The disastrous COVID19 pandemic is bringing death, suffering, economic crisis and the instability to the world's peace. The solutions for stopping COVID19 pandemic are urgently needed. We present an alternative approach to vaccination, based on the power of nature - a mass prevention and prophylaxis of the COVID 19 with probiotics. This approach is based on the fundamental discoveries of Nobel laureate Ilja Iljić Mećnikov from 1908, as well as on the theoretical and applied scientific papers published during the pandemic: Compared to vaccination, this public health intervention may be more effective, much cheaper, with almost negligible side effects and last but not the least – it is immediately and widely applicable.

Keywords: SARS; Corona virus; Pandemic; Probiotics

Introduction

The COVID-19 is an unprecedented pandemic that is bringing blood, sweat and tears to contemporary world [1]. The vaccines are ante portas but never so fast and so risky in the history [2]. The scientific community is expected to offer alternative solutions also, if there are any? Well, there are! The miraculous commensal lactobacteria in human guts were first described by a Nobel Prize Laureate in Physiology and Medicine for 1908 - Ilya Ilyich Mechnikov, a Russian zoologist from the Pasteur Institute in Paris. Indeed, about 60 trillion commensal bacteria in human colon are a powerful natural barrier against pathogens, including all viruses [3]. Dysbiosis and diarrhea are documented signs of the COVID19 [4]. ACE2 receptors for SARS CoV-2 are identical in the lung and intestinal mucosa and gut microbiota are the guards that do not allow the coronavirus to approach these receptors [5]. The crucial feature of an efficient immune system is a balanced reaction to external and internal threats. This is of a paramount importance for preventing a cytokine storm and an acute respiratory distress syndrome in the COVID19 [6]. The prevention and prophylaxis of COVID-19 with probiotics has been proposed, based both on the biological plausibility and case reports [7-11]. Recent works related to the microbiota in cancer patients on chemotherapy and stem-cell engraftment support the importance of gut microbiota for the whole immune system and their effect on systemic immune cell dynamics [12]. If the diversity of gut microbiota is preserved it allows for a huge immunomodulatory impact and an important epigenetic system [13].

A Model for Stopping the COVID-19 pandemic

Probiotics are over-the-counter drugs with literally no side effects except for bloating and flatulence and probably the only medication that can be freely given to newborns and pregnant women. Caution is necessary only in those with chronic disabling diseases, central venous catheters, and systemic infections [14,15]. A mass public health preventive and prophylactic intervention may be conducted with one probiotic capsule daily with at least 10exp9 of the Lactobacillus and Bifidobacterium species, during a meal [16]. Those with at least one symptom of COVID-19 (raised temperature, weakness, and dry cough) - one capsule three times daily. Those who are on non-invasive or invasive mechanical ventilation - two capsules of probiotics three times daily via oral or enteral feeding. There is no age limit.

Conclusion

We propose a natural alternative to the vaccination solution of the COVID19 pandemic. Based on the evidence for biological

plausibility and the positive experiences from case reports we present a model of stopping the COVID19 pandemic with probiotics.

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