

Tentative Outline

Special/Thematic Issue for the journal “Coronaviruses”

Title of the Thematic Issue: Interaction between gut microbiota and COVID-19 infection and vaccination: unrecognized sequelae

Executive Guest Editor: Dr. Reza Rastmanesh

• **Scope of the Thematic Issue:**

Altered oral/gut microbiota is implicated in the development and progression of many medical conditions. A recent two-sample Mendelian randomization study suggested that gut microbiota might influence the susceptibility and severity of Covid-19 in a causal way. On the other hand, it is known that Covid-19 infection and/or vaccination change the oral/gut microbiota per se. Recent findings on person-to-person transmission of the gut and oral microbiomes detected amazing patterns of extensive bacterial strain sharing across individuals with marked and recognizable intra-household, mother-to-infant, and intra-population transmission patterns. Other studies conducted during the Covid-19 pandemic show that “closeness” between parents and children/infants was highly dynamic and different among families across the globe. This means that some of the relations among the people, leading and contributing to microbiome transmission, has dramatically changed and it can be expected that these altered patterns to directly influence the trend of the diseases in the mid/long-term through untimely diagnosis, drug policies and treatments. For instance, infant’s immunity which is developed early in life, directly depends on mother’s gut and oral microbiota. When gut microbiota changes following Covid-19 infection/vaccination, it is not surprising to expect uncommon physiologic and pathologic scenarios.

This Research Topic is aimed at discovering forms of unrecognized patterns brought about by the Covid-19 pandemic and oral/gut microbiota alterations.

Keywords: gut microbiota, oral microbiota, microbiome alteration, Covid-19, vaccination, treatment strategy

Sub-topics:

This Research Topic would like to explore the bilateral effect of oral/gut microbiota changes and Covid-19 infection/vaccination focusing on but not limited to the following topics:

- Screening and diagnosis of the diseases
- Management and treatment of the diseases
- Drug policies
- Medical education curriculums

Tentative titles of the articles:

- Gut microbiota dynamics in Covid-19 patients and its relation to immunity and immunopathogenesis
- Gut microbiota dynamics in Covid-19 patients and its relation to intestinal damage
- Gut microbiota dynamics in Covid-19 patients and its relation to liver injury
- Gut microbiota dynamics in Covid-19 patients and its relation to obesity and type 2 diabetes mellitus
- Gut microbiota dynamics in Covid-19 patients and its relation to Vaccine Immunogenicity
- Gut microbiota dynamics in Covid-19 patients and its relation to nutritional factors
- Gut microbiota dynamics in Covid-19 patients and its relation to mortality and morbidity
- Gut microbiota dynamics in Covid-19 patients and its relation to neuroinvasion
- Gut microbiota dynamics in Covid-19 patients and its relation to cardiovascular health
- Alterations of the gut microbiota in coronavirus disease 2019 and its therapeutic potential

Schedule:

- ✧ Thematic issue submission deadline: 28 December 2023

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