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Lactoferrin as potential preventative and adjunct treatment for COVID-19

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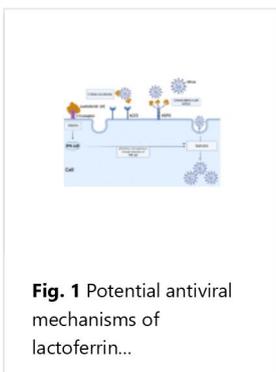
Abstract

The coronavirus disease 2019 (COVID-19) pandemic is rapidly advancing across the globe despite drastic public and personal health measures. Antivirals and nutritional supplements have been proposed as potentially useful against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the novel coronavirus that causes COVID-19, but few have been clinically established. Lactoferrin (Lf) is a naturally occurring, non-toxic glycoprotein that is orally available as a nutritional supplement and has established in vitro antiviral efficacy against a wide range of viruses, including SARS-CoV, a closely related coronavirus to SARS-CoV-2. Furthermore, Lf possesses unique immunomodulatory and anti-inflammatory effects that may be especially relevant to the pathophysiology of severe COVID-19 cases. Here we review the underlying biological mechanisms of Lf as an antiviral and immune regulator, and propose its unique potential as a preventative and adjunct treatment for COVID-19. We hope that further research and development of Lf nutritional supplementation would establish its role for COVID-19.

Keywords: Antiviral; COVID-19; Lactoferrin; SARS-CoV-2; Viral prophylaxis.

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