CLAIMS

1. A composition for use in a method of treating a viral infection of the respiratory system caused by a virus belonging to the species severe acute respiratory syndrome coronavirus (SARS-CoV) in a subject in need, such as a severe acute respiratory syndrome coronavirus and of diseases or symptoms related thereto, wherein said composition comprises:
(i) a mixture (M) comprising or, alternatively, consisting of at least one bacterial strain belonging to the species *Lactobacillus paracasei*; and, optionally,
(ii) at least one acceptable pharmaceutical grade additive and/or excipient.

2. The composition for use according to claim 1, wherein said at least one bacterial strain belonging to the species *Lactobacillus paracasei* is selected from the group comprising or, alternatively, consisting of:
- a bacterial strain belonging to the species *Lactobacillus paracasei* identified as Lactobacillus paracasei DG® and deposited at the National Collection of Cultures of Microorganisms of the Pasteur Institute in Paris under the accession number CNCM I-1572,
- a bacterial strain belonging to the species *Lactobacillus paracasei* identified as *Lactobacillus paracasei* LPC-S01 and deposited at Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH (DSMZ) under the accession number DSM 26760,
and a mixture thereof.

3. The composition for use according to claim 1 or 2, wherein said coronavirus is a virus of the strain severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) responsible for the disease COVID-2019.

4. The composition for use according to any one of claims 1-3, wherein said composition is for oral use.

5. The composition for use according to any one of claims 1-4, wherein said mixture (M) consists of *Lactobacillus paracasei* DG® CNCM I-1572 strain.

6. The composition for use according to any one of claims 1-4, wherein said mixture (M) consists of a *Lactobacillus paracasei* DG® CNCM I-1572 strain and a *Lactobacillus paracasei* LPC-S01 DSM 26760 strain.

7. The composition for use according to any one of the preceding claims wherein said mixture M further comprises at least one further bacterial strain selected from the group comprising or, alternatively, consisting of:

- a bacterial strain belonging to the species *Bifidobacterium breve* identified as *Bifidobacterium breve* BbIBS01 and deposited at Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH (DSMZ) under deposit number DSM 33231,

- a bacterial strain belonging to the species *Bifidobacterium breve* identified as *Bifidobacterium breve* BbIBS02 and deposited at Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH (DSMZ) under deposit number DSM 33232,

- a bacterial strain belonging to the species *Bifidobacterium animalis* identified as *Bifidobacterium animalis subsp. lactis* BlIBS01 and deposited at *Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH* (DSMZ) under deposit number DSM 33233,

- a bacterial strain belonging to the species *Lactobacillus plantarum* identified as *Lactobacillus plantarum* LpIBS01 and deposited at Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH (DSMZ) under deposit number DSM 33234,

- a bacterial strain belonging to the species *Bifidobacterium bifidum* identified as *Bifidobacterium bifidum* MIMBb23sg = BbfIBS01 and deposited at *Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH* (DSMZ) under deposit number DSM 32708, and

- a mixture thereof.

8. The composition for use according to any one of the preceding claims, wherein said mixture (M) comprises or, alternatively, consists of a *Lactobacillus paracasei* DG® CNCM I-1572 strain and furthermore a further bacterial strain selected from the group comprising or, alternatively, consisting of: *Bifidobacterium breve* BbIBS01 DSM 33231, *Bifidobacterium breve* BbIBS02 DSM 33232, *Bifidobacterium animalis subsp. lactis* BlIBS01 DSM 33233, *Lactobacillus plantarum* LpIBS01 DSM 33234, *Bifidobacterium bifidum* MIMBb23sg (= BbfIBS01) DSM 32708 and a mixture thereof.

9. The composition for use according to any one of the preceding claims, wherein said at least one bacterial strain is a probiotic viable bacterial strain, a paraprobiotic or a postbiotic.

10. The composition for use according to any one of the preceding claims, wherein said composition further comprises at least one prebiotic; preferably said at least one prebiotic is selected from: inulin, fructooligosaccharide (FOS), galacto-oligosaccharide (GOS), guar gum and mixtures thereof, preferably inulin.

11. The composition for use according to any one of the preceding claims, wherein said related diseases or symptoms are selected from: respiratory complications, asthma, chronic obstructive pulmonary disease (COPD), bronchitis, emphysema, cystic fibrosis, cough, pertussis, pneumonia, pleuritis, bronchiolitis, cold,

sinusitis, rhinitis, tracheitis, pharyngitis, laryngitis, acute laryngotracheobronchitis, epiglottitis, bronchiectasis, difficulty breathing, fever, fatigue, muscle ache and/or pain, nasal congestion, runny nose, sore throat, nausea, diarrhoea, renal insufficiency and loss of appetite.

12. A bacterial strain for use in a treatment method according to any one of the preceding claims, wherein said bacterial strain is selected from the group consisting of:

- *Lactobacillus paracasei* DG® deposited at the National Collection of Cultures of Microorganisms of the Pasteur Institute in Paris under the accession number CNCM I-1572;
- *Lactobacillus paracasei* LPC-S01 deposited at *Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH* (DSMZ) under the accession number DSM 26760;
- *Bifidobacterium breve* BbIBS01 deposited at *Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH* (DSMZ) under deposit number DSM 33231;
- *Bifidobacterium breve* BbIBS02 deposited at *Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH* (DSMZ) under deposit number DSM 33232;
- *Bifidobacterium animalis subsp. lactis* BlIBS01 deposited at *Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH* (DSMZ) under deposit number DSM 33233;
- *Lactobacillus plantarum* LpIBS01 deposited at *Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH* (DSMZ) under deposit number DSM 33234; and
- *Bifidobacterium bifidum* MIMBb23sg = BbfIBS01 deposited at *Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH* (DSMZ) under deposit number DSM 32708.