CLAIMS

1.Use of a composition comprising an isolated polypeptide comprising the carboxy terminal-most 4 to 30 contiguous amino acids of an alpha Connexin in the manufacture of a medicament for treating or preventing a complication of a respiratory viral disease in a subject.

2. The use of claim 1, wherein the respiratory viral disease is caused by SARS-CoV-2, Influenza A virus, Influenza B virus, or Influenza C virus.

3. The use of claim 2, wherein the complication of the respiratory viral disease is SARS-CoV-2-induced ARDS and/or ALI.

4. The use of any one of claims 1-3, wherein the polypeptide comprises the amino acid sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, and SEQ ID NO: 5.

5. The use of any one of claims 1-4, wherein the polypeptide further comprises a cellular internalization sequence.

6. The use of claim 5, wherein the cellular internalization sequence is Antennapedia, and wherein the sequence comprises the amino acid sequence of SEQ ID NO:7.

7. The use of any one of claims 1-6, wherein the polypeptide comprises the amino acid sequence selected from the group consisting of SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, and SEQ ID NO:12.

8. The use of any one of claims 1-7, wherein the composition is formulated for parenteral, intranasal, intratracheal, inhalation or topical intranasal administration.

9. The use of any one of claims 1-8, wherein the polypeptide is present in a drug loaded microcarrier formulation.

10. The method of claim 9, wherein the drug loaded microcarrier formulation comprises nanoparticles or exosomes.

11. The use of any one of claims 1-10, wherein use of the medicament is prior to the onset of symptoms of the respiratory viral disease, at the onset of infection or after the onset of symptoms of the respiratory viral disease.

12. The use of any one of claims 1-11, wherein use of the medicament limits the progression of lung injury caused by the respiratory viral disease, prevents lung injury caused by the respiratory viral disease or maintains lung function after the onset of the respiratory viral disease.

13. Use of a composition comprising an isolated polypeptide comprising the carboxy terminal-most 4 to 30 contiguous amino acids of an alpha Connexin in the manufacture of a medicament for treating or preventing a respiratory disease or disorder in a subject in need thereof.

14. The use of claim 13, wherein the respiratory disease or disorder is acute respiratory distress syndrome (ARDS), alcoholic lung syndrome, acute lung injury, chronic obstructive pulmonary disease (COPD), or pulmonary fibrosis.

15. The use of claims 13 or 14, wherein the polypeptide comprises the amino acid sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, and SEQ ID NO: 5.

16. The use of any one of claims 13-15, wherein the polypeptide further comprises a cellular internalization sequence.

17. The use of claim 16, wherein the cellular internalization sequence is Antennapedia, and wherein the sequence comprises the amino acid sequence of SEQ ID NO:7.

18. The use of any one of claims 13-17, wherein the polypeptide comprises the amino acid sequence selected from the group consisting of SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, and SEQ ID NO:12.

19. The use of any one of claims 13-18, wherein the composition is formulated for parenteral, intranasal, intratracheal, inhalation or topical intranasal administration.

20. The use of any one of claims 13-19, wherein the polypeptide is present in a drug loaded microcarrier formulation.