

CLAIMS:

1. A method for the treatment of Acute Respiratory Distress Syndrome (ARDS) in a subject, the method comprising the step of administering pentosan polysulfate (PPS) or an acceptable salt thereof, to a subject in need of such treatment.

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2. The method according to claim 1, wherein ARDS is caused by a coronavirus.

3. The method according to claim 1 or claim 2, wherein the animal subject is a mammal.

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4. The method according to claim 3, wherein the mammal is human.

5. The method according to claim 3 or claim 4, wherein the coronavirus is a beta-coronavirus.

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6. The method according to claim 5, wherein the coronavirus is selected from the group consisting of: HKU1, OC43, Severe Acute Respiratory Syndrome coronavirus (SARS-CoV), Middle Eastern Respiratory Syndrome coronavirus (MERS-CoV); Severe Acute Respiratory Syndrome coronavirus 2 (SARS-CoV-2) and strains thereof.

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7. The method according to claim 6, wherein the coronavirus is Severe Acute Respiratory Syndrome coronavirus 2 (SARS-CoV-2) or strains thereof.

8. A composition comprising a pentosan polysulfate (PPS) or an acceptable salt thereof, and an acceptable excipient for the treatment of Acute Respiratory Distress Syndrome (ARDS).
- 5 9. A composition comprising a pentosan polysulfate (PPS) or an acceptable salt thereof, and an acceptable excipient for use in the treatment of Acute Respiratory Distress Syndrome (ARDS).
- 10 10. The composition according to claim 8 or claim 9, wherein ARDS is caused by a coronavirus.
11. The composition according to any one of claims 8 to 10, wherein the animal subject is a mammal.
- 15 12. The composition according to claim 11, wherein the mammal is human.
13. The composition according to claim 11 or claim 12, wherein the coronavirus is a beta-coronavirus.
- 20 14. The composition according to claim 13, wherein the coronavirus is selected from the group consisting of: HKU1, OC43, Severe Acute Respiratory Syndrome coronavirus (SARS-CoV), Middle Eastern Respiratory Syndrome coronavirus (MERS-CoV); Severe Acute Respiratory Syndrome coronavirus 2 (SARS-CoV-2) and strains thereof.

15. The composition according to claim 14, wherein the coronavirus is Severe Acute Respiratory Syndrome coronavirus 2 (SARS-CoV-2) or strains thereof.
16. Use of a pentosan polysulfate (PPS) or an acceptable salt thereof, in the
5 treatment of Acute Respiratory Disease Syndrome (ARDS).
17. Use of a pentosan polysulfate (PPS) or an acceptable salt thereof, in the manufacture of a medicament for the treatment of Acute Respiratory Distress Syndrome (ARDS).
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18. The use according to claim 16 or claim 17, wherein ARDS is caused by a coronavirus.
19. The use according to any one of claims 16 to 18, wherein the animal subject is a
15 mammal.
20. The use according to claim 19, wherein the mammal is human.
21. The use according to claim 19 or claim 20, wherein the coronavirus is a beta-
20 coronavirus.
22. The use according to claim 21, wherein the coronavirus is selected from the group consisting of: HKU1, OC43, Severe Acute Respiratory Syndrome coronavirus (SARS-CoV), Middle Eastern Respiratory Syndrome coronavirus (MERS-CoV);
25 Severe Acute Respiratory Syndrome coronavirus 2 (SARS-CoV-2) and strains thereof.

23. A method according to any one of claims 1 to 7, a composition according to any one of claims 8 to 15, or use according to any one of claims 16 to 22, wherein the PPS is selected from the group consisting of: the sodium salt of pentosan polysulfate (NaPPS), the magnesium salt of pentosan polysulfate (MgPPS), the calcium salt of pentosan polysulfate (CaPPS), and the zinc salt of pentosan polysulfate (ZnPPS).
24. The method, the composition or the use according to claim 23, wherein the PPS is NaPPS.
25. The method, the composition or the use according to any one of claims 1 to 24, wherein treatment is by administering intramuscularly (IM), subcutaneously (SC), intravenously (IV), intra-articularly (IA), peri-articularly, topically, via suppositories or orally.
26. The method, the composition or the use according to any one of claims 1 to 24, wherein treatment is by administering through a respiratory route selected from the group consisting of: an intra-nasal route; intra-tracheal route, endo-tracheal route and a pulmonary route.
27. The method, the composition or the use according to any one of claims 1 to 26, wherein the treatment is by administering an IM injection or SC injection.
28. The method, the composition or the use according to claim 27, wherein the treatment is by administering a SC injection.
29. The method, the composition or the use according to claim 28, wherein the SC injection is a slow subcutaneous injection.

30. The method, the composition or the use according to any one of claims 1 to 29, wherein treatment is by administering the PPS or the acceptable salt thereof to the subject in an effective amount of about 1 to about 2 mg/kg of the subject per dose or an effective amount of between about 1 mg and 4000 mg as a fixed dose.

31. The method, the composition or the use according to any one of claims 1 to 30, wherein the treatment is by administering the polysulfated polysaccharide or the acceptable salt thereof to the subject in an effective amount of about 2 mg/kg of the subject per dose or an effective amount of about 150 mg as a fixed dose.

32. The method, the composition or the use according to any one of claims 25 to 31, wherein administration to a human is by dosing in a treatment regimen once daily, twice weekly or thrice weekly.

33. The method, the composition or the use according to claim 32, wherein administration to a human is by dosing in a treatment regimen twice weekly.

34. The method, the composition or the use according to claim 33, wherein administration to a human is by dosing in a treatment regimen twice weekly with a minimum of three days and a maximum of four days between dosages.

35. The method, the composition or the use according to claim 34, wherein administration to a human is by dosing in a treatment regimen twice weekly for six weeks.

36. The method, the composition or the use according to claim 35, wherein the total dose of polysulfated polysaccharide administered in the human treatment regimen is about 200 to about 4000 mg.
- 5 37. The method, the composition or the use according to any one of the preceding claims, wherein the PPS is co-administered with an additional treatment option for ARDS