

CLAIMS

1. A method for the treatment of post-operative joint pain in a mammal, the method comprising the step of administering a polysulfated polysaccharide or an acceptable salt thereof, to the mammal.
- 5 2. Use of a polysulfated polysaccharide or an acceptable salt thereof, in the treatment of post-operative joint pain in a mammal.
3. Use of a polysulfated polysaccharide or an acceptable salt thereof, in the
10 manufacture of a medicament for the treatment of post-operative joint pain in a mammal.
4. The method according to claim 1 or use according to claim 2 or claim 3, wherein the post-operative joint pain is in at least one articulating joint selected from
15 the group consisting of: an ankle, elbow, a finger, hip, knee, shoulder, and wrist.
5. The method or use according to claim 4, wherein the at least one articulating joint is a knee.
- 20 6. The method or use according to any one of claims 1 to 5, wherein the post-operative pain results from a joint arthroplasty.
7. The method or use according to claim 6, wherein the joint arthroplasty is a total joint arthroplasty or a partial joint arthroplasty selected from the group consisting of: a
25 total ankle arthroplasty, a total elbow arthroplasty, a total finger arthroplasty, a total hip arthroplasty, a total knee arthroplasty, a total shoulder arthroplasty, a total wrist arthroplasty, a partial ankle arthroplasty, a partial elbow arthroplasty, a partial finger arthroplasty, a partial hip arthroplasty, a partial knee arthroplasty, a partial shoulder arthroplasty, and a partial wrist arthroplasty.

8. The method or use according to claim 7, wherein the joint arthroplasty is a total knee arthroplasty or a partial knee arthroplasty.
9. The method or use according to any one of claims 1 to 8, wherein the post-operative joint pain is selected from the group consisting of: acute pain; chronic pain; general pain and persistent pain.
10. The method or use according to claim 9, wherein the persistent pain is selected from the group consisting of: septic persistent pain, persistent pain caused by periprosthetic fracture, and aseptic persistent pain.
11. The method or use according to any one of the preceding claims, wherein the mammal is suffering from an additional arthritic condition further to the post-operative joint pain, wherein the additional arthritic condition is rheumatic arthritis, osteoarthritis or degenerative osteoarthritis.
12. The method or use according to claim 11, wherein the additional arthritic condition is degenerative osteoarthritis.
13. The method or use according to claim 11 or claim 12, wherein the additional arthritic condition is in a second joint different from the joint affected by the post-operative pain.
14. The method or use according to claim 13, wherein the second joint is one knee joint and the joint affected by the post-operative pain is another knee joint.
15. The method or use according to claim 14, wherein the second knee joint is the left knee joint and the joint affected by the post-operative pain is the right knee joint in a human patient.

16. The method or use according to any one of the preceding claims, wherein the polysulfated polysaccharide is selected from the group consisting of: high molecular weight heparin, low molecular weight heparins, the heparan sulfates, pentosan polysulfated (PPS), chondroitin polysulfate, and chitosan polysulfate.

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17. The method or use according to claim 16, wherein the pentosan polysulfate (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).

10 18. The method or use according to claim 17, wherein the pentosan polysulfate (PPS) is sodium pentosan polysulfate (NaPPS).

19. The method or use according to any one of the preceding claims, wherein treatment is by administering the polysulfated polysaccharide or the acceptable salt thereof to the mammal in an effective amount of about 0.5 to about 2 mg/kg; about 0.5 to about 1 mg/kg; about 1.0 to about 1.5 mg/kg or about 1.5 to about 2.0 mg/kg of the mammal per dose or wherein the effective amount is a fixed dose in the range of about 25 mg to about 4000 mg.

20 20. The method or use according to claim 19, wherein the effective amount is about 0.5 mg/kg, about 1.0 mg/kg or about 2.0 mg/kg of the mammal per dose.

21. The method or use according to claim 20, wherein the effective amount is about 2 mg/kg of the mammal per dose.

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22. The method or use according to claim 19, wherein the fixed dose is about 25 mg, about 50 mg, about 75 mg, about 100 mg, about 125 mg, about 150 mg, about 175 mg, about 200 mg, about 225 mg, about 250 mg, about 275 mg, about 300 mg, about 400 mg, about 450 mg, about 500 mg, about 550 mg, about 600 mg, about 650 mg, about 700 mg, about 750 mg, about 800 mg, about 850 mg, about 900 mg, about 950 mg, about 1000 mg, about 2000 mg, about 3000 mg or about 4000 mg.

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23. The method or use according to any one of the preceding claims, wherein the treatment is: by administering a subcutaneous (SC) injection, an intramuscular (IM) injection, intravenous (IV) injection, intra-articular (IA) injection or a peri-articular
5 injection; by topical administration; via suppositories or by oral administration.

24. The method or use according to claim 23, wherein the treatment is by administering a subcutaneous (SC) injection.

10 25. The method or use according to claim 24, wherein the subcutaneous (SC) injection is a slow SC injection.

26. The method or use according to any one of claims 23 to 25, wherein administration to a human patient is by dosing in a treatment regimen once daily, twice
15 weekly or thrice weekly.

27. The method or use according to claim 26, wherein administration to a human is by dosing in a treatment regimen twice weekly.

20 28. The method or use according to claim 27, 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.

29. The method or use according to claim 28, wherein administration to a human is
25 by dosing in a treatment regimen twice weekly for three weeks.

30. The method or use according to claim 28, wherein administration to a human is by dosing in a treatment regimen twice weekly for six weeks.

31. The method or use according to claim 29 or claim 30, wherein the total dose of polysulfated polysaccharide administered in the treatment regimen is about 200 to about 4000 mg.
- 5 32. The method or use according to any one of the preceding claims, wherein pain in a human patient is reduced as determined by using the numerical rating scale (NRS) described herein.
33. The method or use according to any one of the preceding claims, wherein the
10 knee joint function in a human patient is improved as determined by using the Lysholm Knee Score described herein.
34. The method or use according to any one of the preceding claims, wherein the
15 presence of bone marrow edema lesions is reduced.
35. The method or use according to any one of claims 13 to 31, wherein the
presence of bone marrow edema lesions associated with osteoarthritis in the second
joint is reduced.
36. The method according to claim 34 or claim 35, wherein the volume of bone
20 marrow edema lesions is reduced as assessed by magnetic resonance imaging (MRI).