CLAIMS

~~1. A method for the treatment of post-operative joint pain in a mammal, the method comprising the step of administering a pentosan polysulfate or an acceptable salt thereof, to the mammal, wherein the post-operative joint pain results from a joint arthroplasty.~~

~~2. Use of a pentosan polysulfate or an acceptable salt thereof, in the treatment of post-operative joint pain in a mammal, wherein the post-operative joint pain results from a joint arthroplasty.~~

~~3~~1. Use of a pentosan polysulfate or an acceptable salt thereof, in the manufacture of a medicament for the treatment of aseptic post-operative joint pain in a mammal, wherein the aseptic post-operative joint pain is intra-articular pain that results from a joint arthroplasty.

~~4~~2. ~~The method according to claim 1 or use according to claim 2 or claim 3~~The use according to claim 1, wherein the aseptic post-operative joint pain is in at least one articulating joint selected from the group consisting of: an ankle, an elbow, a finger, a hip, a knee, a shoulder, and a wrist.

~~5~~3. The ~~method or~~ use according to claim ~~4~~2, wherein the at least one articulating joint is a knee.

~~6~~4. The ~~method or~~ use according to any one of claims 1 to ~~5~~3, wherein the joint arthroplasty is a partial joint arthroplasty selected from the group consisting of: 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.

~~7. The method or use according to claim 6, wherein the partial joint arthroplasty is a partial knee arthroplasty.~~

~~8~~5. The ~~method or~~ use according to any one of claims 1 to ~~5~~3, wherein the joint arthroplasty is a total joint arthroplasty selected from the group consisting of: a total ankle arthroplasty, a total elbow arthroplasty, a total finger arthroplasty, a total hip arthroplasty, a total knee arthroplasty, a total shoulder arthroplasty, and a total wrist arthroplasty.

~~9. The method or use according to claim 8, wherein the total joint arthroplasty is a total knee arthroplasty.~~

~~10~~6. The ~~method or~~ use according to any one of claims 1 to ~~9~~5, wherein the aseptic post-operative joint pain is selected from the group consisting of: acute pain; chronic pain; general pain and persistent pain.

~~11~~7. The ~~method or~~ use according to claim ~~10~~6, wherein the persistent pain is intra-articular persistent pain caused by a condition selected from the group consisting of: ~~septic persistent pain, persistent pain caused by periprosthetic fracture, and aseptic persistent pain~~aseptic prosthetic loosening, prosthetic wear, instability, recurrent hemarthrosis, patellar maltracking and stiffness.

~~12~~8. 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 selected from the group consisting of: rheumatic arthritis, osteoarthritis ~~or~~ and degenerative osteoarthritis.

~~13. The method or use according to claim 12, wherein the additional arthritic condition is degenerative osteoarthritis.~~

~~14~~9. The ~~method or~~ use according to claim ~~8~~12 ~~or claim 13~~, wherein the additional arthritic condition is in a second joint different from the joint affected by the post-operative pain and the pain in the second joint is reduced.

~~15~~10. The ~~method or~~ use according to claim ~~14~~9, wherein the second joint is one knee joint and the joint affected by the post-operative pain is another knee joint.

~~16. The method or use according to claim 15, 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.~~

~~17~~11. The ~~method or~~ use according to any one of the preceding claims, 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).

~~18~~12. The ~~method or~~ use according to claim ~~17~~11, wherein the pentosan polysulfate (PPS) is sodium pentosan polysulfate (NaPPS).

~~19~~13. 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~~14. The ~~method or~~ use according to claim ~~19~~13, 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.~~

~~22~~15. The ~~method or~~ use according to claim ~~19~~13, 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.

~~23~~16. 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 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.~~

~~25~~17. The ~~method or~~ use according to claim ~~24~~16, wherein the subcutaneous (SC) injection is a slow SC injection.

~~26~~18. The ~~method or~~ use according to ~~any one of claims 23 to 25~~claim 16 or claim 17, wherein administration to a human patient is by dosing in a treatment regimen once daily, twice 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.~~

~~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 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.~~

~~32~~19. 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).

~~33. The method or use according to claim 15, wherein the function of the knee joint with post-operative pain and/or function of the knee joint with the additional arithritic condition in a human patient is improved as determined by using the Lysholm Knee Score.~~

~~34. The method or use according to any one of the preceding claims, wherein the presence of bone marrow edema lesions is reduced.~~

~~35. The method or use according to any one of claims 14 to 34, 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 marrow edema lesions is reduced as assessed by magnetic resonance imaging (MRI).~~