CLAIMS

1. A pharmaceutical composition for articular delivery of a steroid, the pharmaceutical composition comprising:

(a) a lipid mixture comprising a first phospholipid, a second phospholipid and cholesterol, wherein the cholesterol is present in a mole percent of 10 % to 33% of the lipid mixture; and

(b) an effective amount of the steroid or a pharmaceutically acceptable salt thereof;

wherein the first phospholipid is dioleoylphosphatidylcholine (DOPC), 1-palmitoyl-2-oleoyl-sn-glycero-3-phosphatidylcholine (POPC), soy phosphatidylcholine (SPC) or egg phosphatidylcholine (EPC), and the second phospholipid is polyethyleneglycol distearoylphosphatidylethanolamine (PEG-DSPE) or dioleoylphosphatidylglycerol (DOPG); and

wherein the total amount of the phospholipids ranges from 70 μmol to 150 μmol per 1 mL of said pharmaceutical composition.

2. The pharmaceutical composition of claim 1, wherein the steroid is an intra-articular corticosteroid.

3. The pharmaceutical composition of claim 1, wherein the steroid is dexamethasone sodium phosphate, dexamethasone, betamethasone, betamethasone sodium phosphate, betamethasone acetate, betamethasone dipropioinate, betamethasone valerate, mometasone furonate, triamcinolone acetonide, triamcinolone hexacetonide, triamcinolone diacetate, methylprednisolone sodium succinate, methylprednisolone acetate, prednisolone tebutate, hydrocortisone acetate, alclometasone dipropionate, halcinonide, fluocortolone, fluocinolone acetonide or a combination thereof.

4. The pharmaceutical composition of claim 1, wherein the steroid is dexamethasone sodium phosphate.

5. The pharmaceutical composition of claim 4, wherein dexamethasone sodium phosphate is present in an amount ranging from 6 mg to 18 mg per mL of the pharmaceutical composition.

6. The pharmaceutical composition of claim 4, wherein dexamethasone sodium phosphate is present in an amount ranging from 6 mg to 12 mg per mL of the pharmaceutical composition.

7. The pharmaceutical composition of claim 4, wherein dexamethasone sodium phosphate is present in an amount of 12 mg per mL of the pharmaceutical composition.

8. The pharmaceutical composition of claim 1, wherein the first phospholipid is DOPC and the second phospholipid is DOPG.

9. The pharmaceutical composition of any one of claims 1 to 8, wherein the total amount of the phospholipids ranges from 70 μmol to 140 μmol per mL of the pharmaceutical composition.

10. The pharmaceutical composition of any one of claims 1 to 8, wherein the total amount of the phospholipids ranges from 70 μmol to 135 μmol per mL of the pharmaceutical composition.

11. The pharmaceutical composition of any one of claims 1 to 8, wherein the total amount of the phospholipids ranges from 70 μmol to 120 μmol per mL of the pharmaceutical composition.

12. The pharmaceutical composition of any one of claims 1 to 8, wherein the total amount of the phospholipids ranges from 70 μmol to 110 μmol per mL of the pharmaceutical composition.

13. The pharmaceutical composition of any one of claims 1 to 8, wherein the total amount of the phospholipids is 70 μmol to 100 μmol per mL of the pharmaceutical composition.

14. Use of a pharmaceutical composition in manufacture of an articular injection for treatment of joint pain, wherein the pharmaceutical composition comprises:

(a) a lipid mixture comprising a first phospholipid, a second phospholipid and cholesterol, wherein the cholesterol is present in a mole percent of 10 % to 33% of the lipid mixture; and

(b) an effective amount of a steroid or a pharmaceutically acceptable salt thereof;

wherein the first phospholipid is dioleoylphosphatidylcholine (DOPC), 1-palmitoyl-2-oleoyl-sn-glycero-3-phosphatidylcholine (POPC), soy phosphatidylcholine (SPC) or egg phosphatidylcholine (EPC), and the second phospholipid is polyethyleneglycol distearoylphosphatidylethanolamine (PEG-DSPE) or dioleoylphosphatidylglycerol (DOPG); and

wherein the total amount of the phospholipids ranges from 70 μmol to 150 μmol per each articular injection, and wherein the efficacy of said pharmaceutical composition is enhanced, relative to the efficacy of a pharmaceutical composition having more than 150 μmol of the phospholipids per each articular injection.

15. The use of claim 14, wherein the steroid is an intra-articular corticosteroid.

16. The use of claim 14, wherein the steroid is dexamethasone sodium phosphate, dexamethasone, betamethasone, betamethasone sodium phosphate, betamethasone acetate, betamethasone dipropioinate, betamethasone valerate, mometasone furonate, triamcinolone

acetonide, triamcinolone hexacetonide, triamcinolone diacetate, methylprednisolone sodium succinate, methylprednisolone acetate, prednisolone tebutate, hydrocortisone acetate, alclometasone dipropionate, halcinonide, fluocortolone, fluocinolone acetonide or a combination thereof.

17. The use of claim 14, wherein the steroid is dexamethasone sodium phosphate.

18. The use of claim 17, wherein dexamethasone sodium phosphate is present in an amount ranging from 6 mg to 18 mg per articular injection.

19. The use of claim 17, wherein dexamethasone sodium phosphate is present in an amount of 12 mg per articular injection.

20. The use of any one of claims 14 to 19, wherein the first phospholipid is DOPC and the second phospholipid is DOPG.

21. The use of any one of claims 14 to 19, wherein the total amount of the phospholipids ranges from 70 μmol to 140 μmol per articular injection.

22. The use of any one of claims 14 to 19, wherein the total amount of the phospholipids ranges from 70 μmol to 135 μmol per articular injection.

23. The use of any one of claims 14 to 19, wherein the total amount of the phospholipids ranges from 70 μmol to 120 μmol per articular injection.

24. The use of any one of claims 14 to 19, wherein the total amount of the phospholipids ranges from 70 μmol to 110 μmol per articular injection.

25. The use of any one of claims 14 to 19, wherein the total amount of the phospholipids is 90 μmol per articular injection.

26. The use of any one of claims 14 to 19, wherein the efficacy refers to the reduction of at least one clinical sign selected from joint pain, tenderness, transient morning stiffness or crepitus on joint motion.

27. The use of any one of claims 14 to 19, wherein the pharmaceutical composition is to be administered once over a period of a week, a fortnight, six weeks, a month, two months, at least 3 months, or at least 6 months until the joint pain resolved.

28. The use of claim 14, wherein the joint pain is due to arthritis.

29. The use of claim 28, wherein the arthritis is selected from the group consisting of osteoarthritis, rheumatoid arthritis, acute gouty arthritis, psoriatic arthritis, reactive arthritis, or arthritis caused by Ehlers-Danlos Syndrome, haemochromatosis, hepatitis, Lyme disease,

Sjogren's disease, Hashimoto's thyroiditis, celiac disease, non-celiac gluten sensitivity, inflammatory bowel disease, Henoch–Schönlein purpura, Hyperimmunoglobulinemia D with recurrent fever, sarcoidosis, Whipple's disease, TNF receptor associated periodic syndrome, Granulomatosis with polyangiitis, familial Mediterranean fever, and systemic lupus erythematosus.