CLAIMS

1. Use of an Annexin A5 protein in the manufacture of a medicament for the prophylaxis or the treatment of osteoarthritis in one or more joints, in a subject; in which the or each joint is selected from the list consisting of: a synovial joint; an amphiarthrosis joint; and a synarthrosis joint.

2. Use according to Claim 1, in which the Annexin A5 protein is to be administered to the or each joint.

3. Use of an Annexin A5 protein in the manufacture of a medicament for the prophylaxis or the treatment of osteoarthritis in one or more joints, in a subject; in which the Annexin A5 protein is to be administered to the or each joint.

4. Use according to Claim 3, in which the or each joint is selected from the list consisting of: a synovial joint; an amphiarthrosis joint; and a synarthrosis joint.

5. Use according to any preceding claim, in which the osteoarthritis is primary osteoarthritis or secondary osteoarthritis.

6. Use according to Claim 5, in which the primary osteoarthritis is generalised nodal osteoarthritis or erosive osteoarthritis.

7. Use of an Annexin A5 protein in the manufacture of a medicament for the prophylaxis or the treatment of erosive osteoarthritis in one or more joints, in a subject; optionally, in which the Annexin A5 protein is to be administered to the or each joint; and/or optionally, in which the or each joint is selected from the list consisting of: a synovial joint; an amphiarthrosis joint; and a synarthrosis joint.

8. Use according to any preceding claim, in which the subject has osteoarthritis in the or each joint.

9. Use according to any preceding claim, in which the subject has been diagnosed with osteoarthritis; optionally, in which the diagnosis of osteoarthritis is in the or each joint to be treated.

10. Use according to any of Claims 1, 2 or 4 to 9, in which the synovial joint is one or more synovial joint selected from the list consisting of: a plane joint (for example, a costovertebral joint, a facet joint, a midcarpal joint, a carpometacarpal finger joint, an intermetacarpal joint, a sacroiliac joint, a zygapophyseal joint, a sternocostal joint, subtalar joint (or talocalcaneal joint), or an acromioclavicular joint); a ball and socket joint (for example, a tibiotarsal joint, a tibiofibular joint, a shoulder joint, a talocalcaneonavicular joint, or a hip joint); a hinge joint (for example, an ankle joint, an elbow joint, a temporomandibular joint, an interphalangeal joint, a stifle joint, or a knee joint); a pivot joint (for example, an atlantoaxial joint, an atlanto-axial joint, a proximal radioulnar joint, a hock joint, a tarsal joint, a talocalcaneonavicular joint, a calcaneocuboid joint, or a distal radioulnar joint); a condyloid joint (for example, an atlanto-occipital joint, a radiocarpal joint, a metatarsophalangeal joint, a wrist joint, an intercarpal joint, a radiocarpal joint, or a metacarpophalangeal joint); and a saddle joint (for example, a carpometacarpal thumb joint, a calcaneocuboid joint, or a sternoclavicular joint).

11. Use according to any preceding claim, in which the subject is not a juvenile and/or is a subject that has completed physical growth.

12. Use according to any preceding claim, in which the subject is a mammalian subject, such as a human, an equine (including a horse), a bovine, a camel, a pig, a llama, an alpaca, a sheep, a goat, a canine, a feline, a rabbit, or a rodent.

13. Use according to Claim 12, in which the subject is a human.

14. Use according to Claim 13, in which the subject is 45 or more years of age.

15. Use according to Claim 12, in which the subject is a horse.

16. Use according to Claim 15, in which the subject is 5 or more years of age.

17. Use according to any preceding claim, in which the Annexin A5 protein is to be administered at a concentration of at least 1 μg/ml.

18. Use according to any preceding claim, in which the Annexin A5 protein is:

(a) a protein comprising, consisting essentially of, or consisting of the sequence of human Annexin A5 (optionally, a protein consisting of the sequence of SEQ ID NO: 1, either with or without the N-terminal methionine);

(b) a mammalian orthologue of human Annexin A5;

(c) an allelic or genetic variant of (a) or (b);

(d) a functional analogue or variant of Annexin which is a protein which is more than 50%, 60%, 70%, 75%, such as more than 80%, 85%, more than 90%, or even more preferably more than 95% or 99% identical to human Annexin A5, SEQ ID NO: 1 either with, or without, the N-terminal methionine;

(e) a biologically active fragment of any of (a), (b), (c), or (d);

(f) a monomer consisting of, a dimer comprising or consisting of, or a fusion protein comprising, any of (a), (b), (c), (d) or (e); and

(g) a PEGylated variant of any of (a), (b), (c), (d), (e) or (f).

19. Use according to any preceding claim, in which the Annexin A5 protein is formulated in a composition, such as a pharmaceutically acceptable composition or a veterinarially acceptable composition.

20. Use according to any preceding claim, in which the Annexin A5 protein or composition is to be administered into the or each joint at a volume of 1ml or more; optionally, in which the Annexin A5 protein or composition is to be administered into the or each joint at a volume of 10ml or less.

21. Use according to any preceding claim, in which the subject is to be treated with Annexin A5 protein or composition separately, simultaneously or sequentially with one or more additional treatments, selected from one or more of: lifestyle changes; medication; and surgery.

CLAIMS

1. Use of an Annexin A5 protein in the manufacture of a medicament for the treatment of osteoarthritis in one or more joints, in a subject; in which the or each joint is selected from the list consisting of: a synovial joint; an amphiarthrosis joint; and a synarthrosis joint.

2. Use according to Claim 1, in which the Annexin A5 protein is to be administered to the or each joint.

3. Use of an Annexin A5 protein in the manufacture of a medicament for the treatment of osteoarthritis in one or more joints, in a subject; in which the Annexin A5 protein is to be administered to the or each joint.

4. Use according to Claim 3, in which the or each joint is selected from the list consisting of: a synovial joint; an amphiarthrosis joint; and a synarthrosis joint.

5. Use according to any preceding claim, in which the osteoarthritis is primary osteoarthritis or secondary osteoarthritis.

6. Use according to Claim 5, in which the primary osteoarthritis is generalised nodal osteoarthritis or erosive osteoarthritis.

7. Use of an Annexin A5 protein in the manufacture of a medicament for the treatment of erosive osteoarthritis in one or more joints, in a subject; optionally, in which the Annexin A5 protein is to be administered to the or each joint; and/or optionally, in which the or each joint is selected from the list consisting of: a synovial joint; an amphiarthrosis joint; and a synarthrosis joint.

8. Use according to Claim 7, in which the subject has erosive osteoarthritis in the or each joint.

9. Use according to any of Claims 1 to 6, in which the subject has osteoarthritis in the or each joint.

10. Use according to Claim 7 or 8, in which the subject has been diagnosed with erosive osteoarthritis; optionally, in which the diagnosis of erosive osteoarthritis is in the or each joint to be treated.

11. Use according to any of Claims 1 to 6, in which the subject has been diagnosed with osteoarthritis; optionally, in which the diagnosis of osteoarthritis is in the or each joint to be treated.

12. Use according to any of Claims 1, 2 or 4 to 11, in which the synovial joint is one or more synovial joint selected from the list consisting of: a plane joint (for example, a costovertebral joint, a facet joint, a midcarpal joint, a carpometacarpal finger joint, an intermetacarpal joint, a sacroiliac joint, a zygapophyseal joint, a sternocostal joint, subtalar joint (or talocalcaneal joint), or an acromioclavicular joint); a ball and socket joint (for example, a tibiotarsal joint, a tibiofibular joint, a shoulder joint, a talocalcaneonavicular joint, or a hip joint); a hinge joint (for example, an ankle joint, an elbow joint, a temporomandibular joint, an interphalangeal joint, a stifle joint, or a knee joint); a pivot joint (for example, an atlantoaxial joint, an atlanto-axial joint, a proximal radioulnar joint, a hock joint, a tarsal joint, a talocalcaneonavicular joint, a calcaneocuboid joint, or a distal radioulnar joint); a condyloid joint (for example, an atlanto-occipital joint, a radiocarpal joint, a metatarsophalangeal joint, a wrist joint, an intercarpal joint, a radiocarpal joint, or a metacarpophalangeal joint); and a saddle joint (for example, a carpometacarpal thumb joint, a calcaneocuboid joint, or a sternoclavicular joint).

13. Use according to any preceding claim, in which the subject is not a juvenile and/or is a subject that has completed physical growth.

14. Use according to any preceding claim, in which the subject is a mammalian subject, such as a human, an equine (including a horse), a bovine, a camel, a pig, a llama, an alpaca, a sheep, a goat, a canine, a feline, a rabbit, or a rodent.

15. Use according to Claim 14, in which the subject is a human.

16. Use according to Claim 15, in which the subject is 45 or more years of age.

17. Use according to Claim 14, in which the subject is a horse.

18. Use according to Claim 17, in which the subject is 5 or more years of age.

19. Use according to any preceding claim, in which the Annexin A5 protein is to be administered at a concentration of at least 1 μg/ml.

20. Use according to any preceding claim, in which the Annexin A5 protein is:

(a) a protein comprising, consisting essentially of, or consisting of the sequence of human Annexin A5 (optionally, a protein consisting of the sequence of SEQ ID NO: 1, either with or without the N-terminal methionine);

(b) a mammalian orthologue of human Annexin A5;

(c) an allelic or genetic variant of (a) or (b);

(d) a functional analogue or variant of Annexin A5 that is capable of binding to phosphatidylserine on a biological membrane and which is a protein which is more than 95% or 99% identical to human Annexin A5, SEQ ID NO: 1 either with, or without, the N-terminal methionine;

(e) a monomer consisting of, a dimer comprising or consisting of, or a fusion protein comprising, any of (a), (b), (c) or (d); and

(f) a PEGylated variant of any of (a), (b), (c), (d) or (e).

21. Use according to any preceding claim, in which the Annexin A5 protein is formulated in a composition, such as a pharmaceutically acceptable composition or a veterinarially acceptable composition.

22. Use according to any preceding claim, in which the Annexin A5 protein or composition is to be administered into the or each joint at a volume of 1ml or more; optionally, in which the Annexin A5 protein or composition is to be administered into the or each joint at a volume of 10ml or less.

23. Use according to any preceding claim, in which the subject is to be treated with Annexin A5 protein or composition separately, simultaneously or sequentially with one or more additional treatments, selected from one or more of: lifestyle changes; medication; and surgery.