

CLAIMS

1. The use of an anti-calnexin (anti-CNX) antibody for the manufacture of a medicament for the treatment or prevention of cartilage degradation in a subject.

~~2. An anti-calnexin (anti CNX) antibody for use in the treatment or prevention of cartilage degradation in a subject.~~

~~3. A method of treating or preventing cartilage degradation, wherein the method involves the administration of an anti-calnexin (anti CNX) antibody to a subject.~~

~~4. The use of claim 1, the antibody for use of claim 2, or the method of treatment of claim 3, wherein the subject has osteoarthritis, rheumatoid arthritis, psoriasis arthritis, juvenile idiopathic arthritis (JIA), arthritic flares, bursitis, gout, chondrocalcinosis, fibromyalgia, costochondritis, cartilage damage, or polychondritis.~~

~~52.~~ The use of claim 1, ~~antibody for use of claim 2, or method of claim 3,~~ wherein the subject has arthritis.

~~63.~~ The use, ~~antibody for use, or method~~ of claim ~~52,~~ wherein the arthritis is selected from osteoarthritis, or rheumatoid arthritis, psoriasis arthritis, juvenile idiopathic arthritis (JIA), and arthritic flares.

~~74.~~ The use, ~~antibody for use, or method of~~ any previous claim, wherein the cartilage degradation is in one or more joints.

~~85.~~ The use, ~~antibody for use, or method~~ of any previous claim, wherein the cartilage degradation is characterised by increased O-glycosylation and/or GALNT Activation (GALA) in joint tissues, cartilage tissue, and/or synovial fibroblasts.

~~96.~~ The use, ~~antibody for use, or method~~ of any previous claim, wherein the cartilage degradation is characterised by increased O-glycosylation of calnexin in joint tissues, cartilage tissue, and/or synovial fibroblasts.

~~107.~~ The use, ~~antibody for use, or method~~ of any previous claim, wherein the cartilage degradation is characterised by increased cell surface expression of calnexin in joint tissues, cartilage tissue, and/or synovial fibroblasts.

~~148.~~ The use, ~~antibody for use, or method~~ of any previous claim, wherein the cartilage degradation is characterised by extracellular matrix (ECM) degradation.

5 ~~129.~~ The use, ~~antibody for use, or method~~ of any previous claim, wherein the cartilage degradation is mediated by the activity of synovial fibroblasts.

~~1310.~~ The use, ~~antibody for use, or method~~ of any previous claim, wherein the ~~antibody against Cnx anti-~~
~~CNX antibody~~ is capable of reducing:

- 10 (a) ECM degradation; or
 (b) an oxidoreductase activity; or
 (c) a disulphide bond reductase activity.

~~14. — The use, antibody for use, or method of any previous claim, wherein the antibody is antagonistic.~~

15 ~~1511.~~ The use, ~~antibody for use, or method~~ of any previous claim, wherein the antibody is monoclonal.

~~1612.~~ The use, ~~antibody for use, or method~~ of any previous claim, wherein the ~~therapeutic agent anti-CNX~~
~~antibody~~ is to be administered together, separately, or sequentially with ~~a further therapeutic agent, wherein~~
 20 ~~the further therapeutic agent is~~ an anti-rheumatic drug.

~~17. — The use, antibody for use, or method of any previous claim, wherein the method comprises~~
~~intravenous, subcutaneous or intraperitoneal administration of the anti-cnx antibody.~~

25 ~~18. — The use, antibody for use, or method of any previous claim, wherein the treatment or prevention is~~
~~in a human subject.~~

~~1913.~~ The use, ~~antibody for use, or method~~ of any previous claim, wherein a subject is determined to be
 suitable for treatment with the anti-~~cnx~~ CNX antibody through the following steps:

- 30 i. detecting the level of ~~Tn antigen,~~ Tn glycan, ~~CNX cell surface expression, CNX glycosylation,~~
~~and/or ECM degradation~~ in a synovial fibroblast sample;
 ii. comparing the level of ~~Tn antigen,~~ Tn glycan, ~~CNX cell surface expression, CNX glycosylation,~~
~~and/or ECM degradation~~ in step (i) with the level of ~~Tn antigen/~~ Tn glycan in a synovial fibroblast sample
 from a control group;

35 wherein an increase in the level of ~~Tn antigen,~~ Tn glycan, ~~CNX expression, CNX glycosylation,~~
~~and/or ECM degradation~~ present in the sample compared to the control group is indicative of the suitability
 for treatment.

14. The use of any previous claim, wherein a subject is determined to be suitable for treatment with the anti-CNX antibody through the following steps:

- i. detecting the level of CNX cell surface expression in a synovial fibroblast sample;
 - ii. comparing the level of CNX cell surface expression in step (i) with the level of CNX cell surface expression in a synovial fibroblast sample from a control group;
- wherein an increase in the level of CNX cell surface expression present in the sample compared to the control group is indicative of the suitability for treatment.

15. The use of any previous claim, wherein a subject is determined to be suitable for treatment with the anti-CNX antibody through the following steps:

- i. detecting the level CNX glycosylation in a synovial fibroblast sample;
 - ii. comparing the level of CNX glycosylation in step (i) with the level of CNX glycosylation in a synovial fibroblast sample from a control group;
- wherein an increase in the level of CNX glycosylation present in the sample compared to the control group is indicative of the suitability for treatment.

~~20. — A method of detecting the presence or absence of a disorder associated with cartilage degradation in a subject, wherein the method comprises the steps of:~~

- ~~i. — detecting the level of Tn antigen, Tn glycan, CNX cell surface expression, CNX glycosylation, and/or ECM degradation in a synovial fibroblast sample;~~
- ~~ii. — comparing the level of Tn antigen, Tn glycan, CNX cell surface expression, CNX glycosylation, and/or ECM degradation in step (i) with the level of Tn antigen/Tn glycan in a synovial fibroblast sample from a control group;~~

~~— wherein an increase in the level of Tn antigen, Tn glycan, CNX expression, CNX glycosylation, and/or ECM degradation present in the sample compared to the control group is indicative of the suitability for treatment.~~

~~21. — The method of claim 20, wherein the method is for detecting the presence or absence of arthritis in a subject.~~

~~22. — The method of claim 20 or claim 21, wherein the method is for detecting the presence or absence of osteoarthritis or rheumatoid arthritis in a subject.~~