

CLAIMS

1. Use of an anti-sclerostin antibody in the manufacture of a medicament for the treatment of osteogenesis imperfecta (OI) in a human patient, wherein a therapeutically effective amount of the anti-sclerostin antibody is to be administered to the human patient, wherein the OI is type I OI, type III OI or type IV OI, wherein the human patient has one or more mutations in the COL1A1 and/ or COL1A2 genes, wherein the anti-sclerostin antibody is to be administered at a dose of 1-50 mg per kg body weight of the human patient on a monthly, bi-monthly or quarterly basis, and wherein the antisclerostin antibody comprises:
 - (a) a heavy chain variable region CDR1 comprising an amino acid sequence set forth in SEQ ID NO:4;
 - (b) a heavy chain variable region CDR2 comprising an amino acid sequence set forth in SEQ ID NO: 15;
 - (c) a heavy chain variable region CDR3 comprising an amino acid sequence set forth in SEQ ID NO:26;
 - (d) a light chain variable region CDR1 comprising an amino acid sequence set forth in SEQ ID NO:37;
 - (e) a light chain variable region CDR2 comprising an amino acid sequence set forth in SEQ ID NO:48; and
 - (f) a light chain variable region CDR3 comprising an amino acid sequence set forth in SEQ ID NO:59.
2. The use according to claim 1, wherein the anti-sclerostin antibody comprises:
 - a) a VH polypeptide sequence having at least 90 percent sequence identity to the amino acid sequences set forth as SEQ ID NO:70; and/ or
 - b) a VL polypeptide sequence having at least 90 percent sequence identity to the amino acid sequences set forth as SEQ ID NO:81.
3. The use according to claim 1 or 2, wherein the anti-sclerostin antibody comprises:

- a) a full length heavy chain amino acid sequence having at least 90 percent sequence identity to the amino acid sequence set forth as SEQ ID NO: 172; and/ or
 - b) a full length light chain amino acid sequence having at least 90 percent sequence identity to the amino acid sequence set forth as SEQ ID NO: 173.
- 4. The use according to any one of claims 1-3, wherein the anti-sclerostin antibody comprises a VL polypeptide sequence comprising the amino acid sequence set forth as SEQ ID NO:81 and a VH polypeptide sequence comprising the amino acid sequence set forth as SEQ ID NO:70.
 - 5. The use according to any one of claims 1-4, wherein the anti-sclerostin antibody comprises a full length light chain amino acid sequence comprising the amino acid sequence set forth as SEQ ID NO: 173 and a full length heavy chain amino acid sequence comprising the amino acid sequence set forth as SEQ ID NO: 172.
 - 6. The use according to any one of claims 1-5, wherein the anti-sclerostin antibody is to be administered at a dose of 2-45 mg per kg body weight of the human patient.
 - 7. The use according to any one of claims 1-5, wherein the anti-sclerostin antibody is to be administered at a dose of 8-45 mg per kg body weight of the human patient.
 - 8. The use according to any one of claims 1-5, wherein the anti-sclerostin antibody is to be administered at a dose of 10-40 mg per kg body weight of the human patient.
 - 9. The use according to any one of claims 1-5, wherein the anti-sclerostin antibody is to be administered at a dose of 8-25 mg per kg body weight of the human patient.
 - 10. The use according to any one of claims 1-5, wherein the anti-sclerostin antibody is to be administered at a dose of 5-20 mg per kg body weight of the human patient.

11. The use according to any one of claims 1-10, wherein the anti-sclerostin antibody is to be administered to the human patient on a monthly basis.
12. The use according to any one of claims 1-10, wherein the anti-sclerostin antibody is to be administered to the human patient on a quarterly basis
13. The use according to any one of claims 1-12, wherein the treatment regimen comprises a first dosing regimen optionally followed by a second dosing regimen.
14. The use according to claim 13, wherein:
 - (a) the first dosing regimen is 1-50 mg per kg body weight of the human patient to be administered on a monthly basis;
 - (b) the second dosing regimen is 1-50 mg per kg body weight of the human patient to be administered on a bi-monthly or quarterly basis; and/or
 - (c) the first dosing regimen is 20 mg per kg body weight of the human patient to be administered on a monthly basis and the second dosing regimen is 20 mg per kg body weight of the human patient to be administered on a bi-monthly or quarterly basis.
15. The use according to any one of claims 1-14, wherein the anti-sclerostin antibody is to be administered intravenously or subcutaneously.
16. The use according to any one of claims 1-15, wherein a further therapeutic agent, such as bisphosphonate, parathyroid hormone, calcilytics, calcimimetics (e.g., cinacalcet), statins, anabolic steroids, lanthanum and strontium salts, and/or sodium fluoride is to be administered.
17. The use according to any one of claims 1-16, wherein the patient is an adult patient.
18. The use according to any one of claims 1-16, wherein the patient is a pediatric patient.

19. The use according to any one of claims 1-18, wherein the antibody is formulated in a pharmaceutical composition.