

## 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 20 mg per kg body weight of the human patient on a monthly 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 intravenously or subcutaneously.
  - 7. The use according to any one of claims 1-6, 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.
  - 8. The use according to any one of claims 1-7, wherein the patient is an adult patient.
  - 9. The use according to any one of claims 1-7, wherein the patient is a pediatric patient.
  - 10. The use according to any one of claims 1-9, wherein the antibody is formulated in a pharmaceutical composition.