

CLAIMS

1. Use of an anti- α -synuclein antibody in the manufacture of a medicament for the treatment of a synucleinopathy in a human subject in need thereof, whereby the medicament is to be administered intravenously to the human subject with the anti- α -synuclein antibody in the medicament, being at a dose of 3 mg per kg, 15 mg per kg, or 45 mg per kg of body weight of the human subject, wherein the anti- α -synuclein antibody in the medicament comprises an immunoglobulin heavy chain variable region (VH) and an immunoglobulin light chain variable region (VL), wherein:
 - (a) the VH comprises VH complementarity determining regions (VH-CDRs), wherein:
 - VH-CDR1 consists of the amino acid residues of SEQ ID NO:1;
 - VH-CDR2 consists of the amino acid residues of SEQ ID NO:2; and
 - VH-CDR3 consists of the amino acid residues of SEQ ID NO:3; and
 - (b) the VL comprises VL-CDRs, wherein:
 - VL-CDR1 consists of the amino acid residues of SEQ ID NO:4;
 - VL-CDR2 consists of the amino acid residues of SEQ ID NO:5; and
 - VL-CDR3 consists of the amino acid residues of SEQ ID NO:6,and wherein the medicament is to be administered to the human subject every 4 weeks.
2. Use of an anti- α -synuclein antibody in the manufacture of a medicament for the treatment of an abnormal accumulation or deposition of α -synuclein in the central nervous system in a human subject in need thereof, whereby the medicament is to be administered intravenously to the human subject with the anti- α -synuclein antibody in the medicament, being at a dose of 3 mg per kg, 15 mg per kg, or 45 mg per kg of body weight of the human subject, wherein the anti- α -synuclein antibody in the medicament comprises an immunoglobulin heavy chain variable region (VH) and an immunoglobulin light chain variable region (VL), wherein:
 - (a) the VH comprises VH complementarity determining regions (VH-CDRs), wherein:
 - VH-CDR1 consists of the amino acid residues of SEQ ID NO:1,
 - VH-CDR2 consists of the amino acid residues of SEQ ID NO:2, and
 - VH-CDR3 consists of the amino acid residues of SEQ ID NO:3, and

- (b) the VL comprises VL-CDRs, wherein:
 - VL-CDR1 consists of the amino acid residues of SEQ ID NO:4,
 - VL-CDR2 consists of the amino acid residues of SEQ ID NO:5, and
 - VL-CDR3 consists of the amino acid residues of SEQ ID NO:6,and wherein the medicament is to be administered to the human subject every 4 weeks.
- 3. A sterile composition comprising a fixed dose of 250 mg, 1250 mg, or 3500 mg of an anti- α -synuclein antibody together with pharmaceutically acceptable carrier, wherein the anti- α -synuclein antibody comprises an immunoglobulin heavy chain variable region (VH) and an immunoglobulin light chain variable region (VL), wherein:
 - (a) the VH comprises VH complementarity determining regions (VH-CDRs), wherein:
 - VH-CDR1 consists of the amino acid residues of SEQ ID NO:1;
 - VH-CDR2 consists of the amino acid residues of SEQ ID NO:2; and
 - VH-CDR3 consists of the amino acid residues of SEQ ID NO:3, and
 - (b) the VL comprises VL-CDRs, wherein:
 - VL-CDR1 consists of the amino acid residues of SEQ ID NO:4,
 - VL-CDR2 consists of the amino acid residues of SEQ ID NO:5, and
 - VL-CDR3 consists of the amino acid residues of SEQ ID NO:6.
- 4. The sterile composition of claim 3, wherein
 - (a) the sterile composition is provided in a vial; or
 - (b) the sterile composition is provided in a syringe or pump adapted for intravenous administration of the anti- α -synuclein antibody.
- 5. Use of an anti- α -synuclein antibody in the manufacture of a medicament for the treatment of a synucleinopathy in a human subject in need thereof, whereby the medicament is to be administered intravenously to the human subject at a fixed dose of 250 mg, 1250 mg, or 3500 mg of the anti- α -synuclein antibody in the medicament, wherein the medicament comprises an immunoglobulin heavy chain variable region (VH) and an immunoglobulin light chain variable region (VL), wherein:
 - (a) the VH comprises VH complementarity determining regions (VH-CDRs), wherein:

VH-CDR1 consists of the amino acid residues of SEQ ID NO:1,

VH-CDR2 consists of the amino acid residues of SEQ ID NO:2, and

VH-CDR3 consists of the amino acid residues of SEQ ID NO:3, and

(b) the VL comprises VL-CDRs, wherein:

VL-CDR1 consists of the amino acid residues of SEQ ID NO:4,

VL-CDR2 consists of the amino acid residues of SEQ ID NO:5, and

VL-CDR3 consists of the amino acid residues of SEQ ID NO:6,

and wherein the medicament is to be administered to the human subject every 4 weeks.

6. Use of an anti- α -synuclein antibody in the manufacture of a medicament for the treatment of an abnormal accumulation or deposition of α -synuclein in the central nervous system in a human subject in need thereof, whereby the medicament is to be administered intravenously to the human subject at a fixed dose of 250 mg, 1250 mg, or 3500 mg of the anti- α -synuclein antibody in the medicament, wherein the medicament comprises an immunoglobulin heavy chain variable region (VH) and an immunoglobulin light chain variable region (VL), wherein:

(a) the VH comprises VH complementarity determining regions (VH-CDRs), wherein:

VH-CDR1 consists of the amino acid residues of SEQ ID NO: 1;

VH-CDR2 consists of the amino acid residues of SEQ ID NO:2; and

VH-CDR3 consists of the amino acid residues of SEQ ID NO:3; and

(b) the VL comprises VL-CDRs, wherein:

VL-CDR1 consists of the amino acid residues of SEQ ID NO:4;

VL-CDR2 consists of the amino acid residues of SEQ ID NO:5; and

VL-CDR3 consists of the amino acid residues of SEQ ID NO:6,

and wherein the medicament is to be administered to the human subject every 4 weeks.

7. The use of claim 1 or claim 2, the sterile composition of claim 3 or claim 4, or the use of claim 5 or claim 6, wherein

(a) the VH consists of the amino acid sequence set forth in SEQ ID NO:8;

(b) the VL consists of the amino acid sequence set forth in SEQ ID NO:9; or

- (c) the VH consists of the amino acid sequence set forth in SEQ ID NO:8 and the VL consists of the amino acid sequence set forth in SEQ ID NO:9.
8. The use of claim 1 or claim 2, the sterile composition of claim 3 or claim 4, or the use of any one of claims 5 to 7, wherein
- (a) the antibody comprises a human IgG1 heavy chain constant region; or
- (b) the antibody comprises a human lambda light chain constant region.
9. The use of claim 1 or claim 2, the sterile composition of claim 3 or claim 4, or the use of claim 5 or claim 6, wherein the antibody comprises a heavy chain and a light chain, wherein the heavy chain consists of the amino acid sequence set forth in SEQ ID NO:10 and the light chain consists of the amino acid sequence set forth in SEQ ID NO:11.
10. Use of an anti- α -synuclein antibody in the manufacture of a medicament for the treatment of a synucleinopathy in a human subject in need thereof, whereby the medicament is to be administered intravenously to the human subject at a fixed dose of anti- α -synuclein antibody in the medicament, the fixed dose coming from the sterile composition of any one of claims 3, 4, or 7 to 9.
11. Use of an anti- α -synuclein antibody in the manufacture of a medicament for the treatment of an abnormal accumulation or deposition of α -synuclein in the central nervous system in a human subject in need thereof, whereby the medicament is to be administered intravenously to the human subject at a fixed dose of the anti- α -synuclein antibody in the medicament, the fixed dose coming from the sterile composition of any one of claims 3, 4, or 7 to 9.
12. The use of any one of claims 2, 6 or 11, wherein the human subject has been identified as having abnormal accumulation or deposition of α -synuclein in the central nervous system.
13. The use of any one of claims 1, 2, or 5 to 12, wherein
- (a) the human subject is to be administered at least 2 doses of the medicament; or
- (b) the human subject is to be administered at least 12 doses of the medicament.
14. The sterile composition of any one of claims 3, 4, or 7 to 9, or the use of any one of claims 5 to 13, wherein the fixed dose is 250 mg of the anti- α -synuclein antibody.
15. The sterile composition of any one of claims 3, 4, or 7 to 9, or the use of any one of claims 5 to 14, wherein the fixed dose is 1250 mg of the anti- α -synuclein antibody.

16. The sterile composition of any one of claims 3, 4, or 7 to 9, or the use of any one of claims 5 to 14, wherein the fixed dose is 3500 mg of the anti- α -synuclein antibody.
17. The use of any of claims 1, 2, or 5-16, wherein the synucleinopathy is Parkinson's disease (PD), Parkinson's disease dementia (PDD), dementia with Lewy bodies (DLB), the Lewy body variant of Alzheimer's disease (LBVAD), multiple systems atrophy (MSA), pure autonomic failure (PAF), or neurodegeneration with brain iron accumulation type-1 (NBIA-I).
18. The use of claim 17, wherein the synucleinopathy is Parkinson's disease.