

CLAIMS

1. Use of an alpha-synuclein binding monoclonal antibody, or an antigen-binding fragment thereof in the manufacture of a medicament for inhibiting aggregation of tau wherein said alpha-synuclein antibody is to be administered to a patient with Alzheimer's disease and wherein the patient with Alzheimer's disease does not have Lewy body variant of Alzheimer's disease or combined Parkinson and Alzheimer's disease and wherein the alpha-synuclein antibody, or an antigen-binding fragment thereof, is selected from the group consisting of antibodies (1)-(5):.
- Antibody (1)** or an antigen-binding fragment thereof, comprising:
- (a) a Heavy Chain CDR1 having the amino acid sequence of **SEQ ID NO:1**;
 - (b) a Heavy Chain CDR2 having the amino acid sequence of **SEQ ID NO:2**;
 - (c) a Heavy Chain CDR3 having the amino acid sequence of **SEQ ID NO:3**;
 - (d) a Light Chain CDR1 having the amino acid sequence of **SEQ ID NO:4**;
 - (e) a Light Chain CDR2 having the amino acid sequence of **SEQ ID NO:5**; and
 - (f) a Light Chain CDR3 having the amino acid sequence of **SEQ ID NO:6**;
- Antibody (2)** or an antigen-binding fragment thereof, comprising:
- (a) a Heavy Chain CDR1 having the amino acid sequence of **SEQ ID NO:1**;
 - (b) a Heavy Chain CDR2 having the amino acid sequence of **SEQ ID NO:33**;
 - (c) a Heavy Chain CDR3 having the amino acid sequence of **SEQ ID NO:3**;
 - (d) a Light Chain CDR1 having the amino acid sequence of **SEQ ID NO:4**;
 - (e) a Light Chain CDR2 having the amino acid sequence of **SEQ ID NO:5**; and

(f) a Light Chain CDR3 having the amino acid sequence of **SEQ ID NO:6**;

Antibody (3) or an antigen-binding fragment thereof, comprising:

5 (a) a Heavy Chain CDR1 having the amino acid sequence of **SEQ ID NO:1**;

(b) a Heavy Chain CDR2 having the amino acid sequence of **SEQ ID NO:34**;

10 (c) a Heavy Chain CDR3 having the amino acid sequence of **SEQ ID NO:3**;

(d) a Light Chain CDR1 having the amino acid sequence of **SEQ ID NO:4**;

(e) a Light Chain CDR2 having the amino acid sequence of **SEQ ID NO:5**; and

15 (f) a Light Chain CDR3 having the amino acid sequence of **SEQ ID NO:6**;

Antibody (4) or an antigen-binding fragment thereof, comprising:

20 (a) a Heavy Chain CDR1 having the amino acid sequence of **SEQ ID NO:1**;

(b) a Heavy Chain CDR2 having the amino acid sequence of **SEQ ID NO:35**;

(c) a Heavy Chain CDR3 having the amino acid sequence of **SEQ ID NO:3**;

25 (d) a Light Chain CDR1 having the amino acid sequence of **SEQ ID NO:4**;

(e) a Light Chain CDR2 having the amino acid sequence of **SEQ ID NO:5**; and

30 (f) a Light Chain CDR3 having the amino acid sequence of **SEQ ID NO:6**;

and

Antibody (5) or an antigen-binding fragment thereof, comprising:

- (a) a Heavy Chain CDR1 having the amino acid sequence of **SEQ ID NO:20**;
- (b) a Heavy Chain CDR2 having the amino acid sequence of **SEQ ID NO:21**;
- 5 (c) a Heavy Chain CDR3 having the amino acid sequence of **SEQ ID NO:22**;
- (d) a Light Chain CDR1 having the amino acid sequence of **SEQ ID NO:23**;
- (e) a Light Chain CDR2 having the amino acid sequence of **SEQ ID NO:24**; and
- 10 (f) a Light Chain CDR3 having the amino acid sequence of **SEQ ID NO:25**.
- 15 2. A pharmaceutical composition for use according to claim 1, comprising the monoclonal antibody, or an antigen-binding fragment thereof, as defined in claim 1, and a pharmaceutically acceptable carrier.