

- aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex;
- (iii) detecting the formation of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex;
- 5 (iv) correlating the presence or absence of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex with the presence or absence of alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites in the sample or specific body part or body area;
- 10 (v) optionally comparing the amount of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex to a normal control value; and
- (vi) the patient is to be treated with the medicament;
- and wherein the method further comprises step (A) after step (d) or step (e):
- 15 (A) comparing the amount of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex determined in step (iv) to the amount of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex determined in step (d).
23. The method according to claim 21 or 22, wherein steps (a) to (c) and optionally steps (d) and (e) are repeated one or more times.
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24. A method of collecting data for predicting responsiveness of a patient suffering from a disorder or abnormality associated with alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites and being treated with a medicament comprising:
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- (a) bringing a sample or specific body part or body area suspected to contain alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites into contact with a compound as defined in any one of claims 1 to 8, which compound specifically binds to the alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites;
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- (b) allowing the compound to bind to the alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites to form a compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex;

- (c) detecting the formation of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex;
 - (d) optionally correlating the presence or absence of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex with the presence or absence of alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites in the sample or specific body part or body area; and
 - (e) optionally comparing the amount of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex to a normal control value.
25. The method according to claim 24, wherein step (d) is present and wherein the method further comprises steps (i) to (vi) before step (a):
- (i) bringing a sample or specific body part or body area suspected to contain alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites into contact with the compound as defined in any one of claims 1 to 8, which compound specifically binds to the alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites;
 - (ii) allowing the compound to bind to the alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites to form a compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex;
 - (iii) detecting the formation of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex;
 - (iv) correlating the presence or absence of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex with the presence or absence of alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites in the sample or specific body part or body area;
 - (v) optionally comparing the amount of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex to a normal control value; and
 - (vi) the patient is to be treated with the medicament;
- and wherein the method further comprises step (A) after step (d) or step (e):

with the presence or absence of alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites in the sample or specific body part or body area; and

- (e) optionally comparing the amount of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex to a normal control value.

30. The method according to claim 29, wherein step (d) is present and wherein the method further comprises steps (i) to (vi) before step (a):

- (i) bringing a sample or specific body part or body area suspected to contain alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites into contact with the compound as defined in any one of claims 1 to 8, which compound specifically binds to the alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites;

- (ii) allowing the compound to bind to the alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites to form a compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex;

- (iii) detecting the formation of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex;

- (iv) correlating the presence or absence of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex with the presence or absence of alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites in the sample or specific body part or body area;

- (v) optionally comparing the amount of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex to a normal control value; and

- (vi) the patient is to be treated with the medicament;

and wherein the method further comprises step (A) after step (d) or step (e):

- (A) comparing the amount of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex determined in step (iv) to the amount of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex determined in step (d).

- (ii) allowing the compound to bind to the alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites to form a compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex;
- 5 (iii) detecting the formation of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex;
- (iv) correlating the presence or absence of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex with the presence or absence of alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites in the sample or specific body part or body area;
- 10 (v) optionally comparing the amount of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex to a normal control value; and
- (vi) the patient is to be treated with the medicament;
- 15 and wherein the method further comprises step (A) after step (d) or step (e):
- (A) comparing the amount of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex determined in step (iv) to the amount of the compound/(alpha-synuclein aggregates including, but not limited to, Lewy bodies and/or Lewy neurites) complex determined in step (d).
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- 34. The method according to claim 32 or 33, wherein steps (a) to (c) and optionally steps (d) and (e) are repeated one or more times.
- 35. The method according to any one of claims 19 to 34, wherein the disorder is selected from
- 25 Parkinson's disease (including sporadic, familial with alpha-synuclein mutations, familial with mutations other than alpha-synuclein, pure autonomic failure or Lewy body dysphagia), dementia with Lewy bodies (including "pure" Lewy body dementia), sporadic Alzheimer's disease, familial Alzheimer's disease with APP mutations, familial Alzheimer's disease with PS-1, PS-2 or other mutations, familial British dementia, Lewy body variant of
- 30 Alzheimer's disease, normal aging (including Down syndrome), multiple system atrophy (including Shy-Drager syndrome, striatonigral degeneration or olivopontocerebellar atrophy), traumatic brain injury, chronic traumatic encephalopathy, tauopathies (including Pick's disease, frontotemporal dementia, progressive supranuclear palsy, corticobasal degeneration or Niemann-Pick type C1 disease), motor neuron disease, amyotrophic