CLAIMS

1. An isolated anti-tau antibody, or an antigen-binding fragment thereof, capable of binding tau at one or more of the minimal epitopes selected from the group consisting of HQPGGG (SEQ ID NO: 223), HVPGGG (SEQ ID NO: 154), and HKPGGG (SEQ ID NO: 224).

2. The antibody or antigen-binding fragment according to claim 1, wherein the antibody or antigen-binding fragment is chosen from:

a) a monoclonal antibody;

b) a polyclonal antibody;

c) a recombinant antibody;

d) a chimeric antibody; and

e) a humanized antibody.

3. The antibody or antigen-binding fragment according to claim 1 or claim 2, wherein the antibody or antigen-binding fragment is detectably labeled with one or more labeling agents.

4. The antibody or antigen-binding fragment of claim 3, wherein at least one labeling agent is chosen from an enzyme, a radioisotope, a fluorophore, a nuclear magnetic resonance marker, and a heavy metal.

5. The antibody or antigen-binding fragment according to any one of claims 1 to 4, further comprising at least one drug attached to the antibody or antigen-binding fragment.

6. The antibody or antigen-binding fragment according to claim 3, wherein the antibody or antigen-binding fragment is labeled with an agent that is detectable by Positron Emission Tomography (PET).

7. The antibody or antigen-binding fragment of any one of claims 1 to 6, wherein the antibody or antigen-binding fragment binds tau at the minimal epitope HVPGGG (SEQ ID NO: 154).

8. A composition comprising at least one antibody or antigen-binding fragment according to any one of claims 1 to 7, and a diluent or a carrier.

9. The antibody or antigen-binding fragment according to claim 7, wherein the antibody or antigen-binding fragment is detectably labeled with one or more labeling agents.

10. The antibody or antigen-binding fragment according to claim 9, wherein the antibody or antigen-binding fragment is labeled with a labeling agent that is detectable by Positron Emission Tomography (PET).

11. The antibody or antigen-binding fragment of any one of claims 1 to 6, wherein the antibody or antigen-binding fragment binds tau at epitope HQPGGG (SEQ ID NO: 223).

12. The antibody or antigen-binding fragment of any one of claims 1 to 6, wherein the antibody or antigen-binding fragment binds tau at epitope HKPGGG (SEQ ID NO: 224).

13. The composition according to claim 8, further comprising at least one compound or agent selected from the group consisting of a detectable label, keyhole limpet hemocyanin, tetanus toxoid or a toxoid derived from other pathogenic bacteria, serum albumins, bovine serum albumin, an immunoglobulin molecule or fragment thereof, thyroglobulin, ovoglobulin, a universal T-cell epitope, a cytokine, a chemokine, IL-1α, IL-1β, IL-2, IL-10, IFN-γ, GM-CSF, MIP1α, MIP1β, RANTES, acetylcholinesterase inhibitors, NMDA receptor antagonists, transition metal chelators, growth factors, hormones, non-steroidal anti-inflammatory drugs (NSAID), antioxidants, lipid lowering agents, selective phosphodiesterase inhibitors, inhibitors of tau aggregation, inhibitors of protein kinases, inhibitors of heat shock proteins, anti-amyloid-passive and -active immunization reagents, anti-amyloid aggregation inhibitors, and secretase inhibitors.

14. Use of an effective amount of the antibody or antigen-binding fragment according to any one of claims 1 to 7 or any one of claims 9 to 12 in the manufacture of a medicament for ameliorating at least one of the symptoms associated with Alzheimer's disease or another tauopathy in a subject.

15. The use of claim 14, wherein the at least one symptom is chosen from progressive memory impairment, cognitive decline, decline in language, behavioral changes, psychological symptoms, disturbances in mood, emotion, appetite, wake sleep cycle, confusion, agitation, depression, impaired motor function, apraxia, myoclonus, gait impairment, decreased muscle strength, extrapyramidal features, bradykinesia, rigidity, resting tremor, impaired performance of basic activities of daily living, and disorientation.

16. An isolated anti-tau antibody, or an antigen-binding fragment thereof, capable of binding tau at all three of the epitopes HQPGGG (SEQ ID NO: 223), HVPGGG (SEQ ID NO: 154), and HKPGGG (SEQ ID NO: 224).

17. The antibody or antigen-binding fragment according to claim 16, wherein the antibody or antigen-binding fragment is chosen from:

a) a monoclonal antibody;

b) a polyclonal antibody;

c) a recombinant antibody;

d) a chimeric antibody; and

e) a humanized antibody.

18. The antibody or antigen-binding fragment according to claim 16 or claim 17, wherein the antibody or antigen-binding fragment is detectably labeled with one or more labeling agents.

19. The antibody or antigen-binding fragment of claim 18, wherein at least one labeling agent is chosen from an enzyme, a radioisotope, a fluorophore, a nuclear magnetic resonance marker, and a heavy metal.

20. The antibody or antigen-binding fragment according to any one of claims 16 to 19, further comprising at least one drug attached to the antibody or antigen-binding fragment.

21. A composition comprising at least one antibody or antigen-binding fragment according to any one of claims 16 to 20 and a diluent or a carrier.

22. The composition according to claim 21, further comprising at least one compound or agent selected from the group consisting of a detectable label, keyhole limpet hemocyanin, tetanus toxoid or a toxoid derived from other pathogenic bacteria, serum albumins, bovine serum albumin, an immunoglobulin molecule or fragment thereof, thyroglobulin, ovoglobulin, a universal T-cell epitope, a cytokine, a chemokine, IL-1α, IL-1β, IL-2, IL-10, IFN-γ, GM-CSF, MIP1α, MIP1β, RANTES, acetylcholinesterase inhibitors, NMDA receptor antagonists, transition metal chelators, growth factors, hormones, non-steroidal anti-inflammatory drugs (NSAID), antioxidants, lipid lowering agents, selective phosphodiesterase inhibitors, inhibitors of tau aggregation, inhibitors of protein kinases, inhibitors of heat shock proteins, anti-amyloid-passive and -active immunization reagents, anti-amyloid aggregation inhibitors, and secretase inhibitors.

23. Use of an effective amount of the antibody or antigen-binding fragment according to any one of claims 16 to 20 in the manufacture of a medicament for ameliorating at least one of the symptoms associated with Alzheimer's disease or another tauopathy in a subject.

24. The use of claim 23, wherein the at least one symptom is chosen from progressive memory impairment, cognitive decline, decline in language, behavioral changes, psychological symptoms, disturbances in mood, emotion, appetite, wake sleep cycle, confusion, agitation, depression, impaired motor function, apraxia, myoclonus, gait impairment, decreased muscle strength, extrapyramidal features, bradykinesia, rigidity, resting tremor, impaired performance of basic activities of daily living, and disorientation.

25. The antibody or antigen-binding fragment according to any one of claims 1 to 7, 9 to 12, and 16 to 20, for use in therapy.