promoting and neurite outgrowth actions, and be useful as a therapeutic agent for central and peripheral neurological diseases (Patent Literature 1). Furthermore, a publication discloses that usually the drug may be administered to an adult in a dose or divided doses of 0.01 to 500 mg per day (Patent Literature 2).

Prior Art Literatures

Patent Literature

[0005]

Patent Literature 1: International Publication No. WO 2003/035647

Patent Literature 2: International Publication No. WO 2003/105830

Non-Patent Literature

[0006]

Non Patent Literature 1: 2012 Alzheimer's Disease Facts and Figures. (http://www.alz.org/downloads/facts_figures_2012.pdf)

Non Patent Literature 2: YAKUGAKU ZASSHI, 2010, Vol. 130, No. 4, pp. 521-526

Non Patent Literature 3: Japanese Journal of Clinical Medicine, 2008, Vol. 66 (Extra ed. 1), pp. 23-27

Non Patent Literature 4: Press Release by Seed Planning (December 28, 2010) (http://www.seedplanning.co.jp/press/2010/2010122801.html)

Non Patent Literature 5: Japanese Journal of Clinical Psychopharmacology, 2011, Vol. 14, No. 7, pp. 1123-1129

Non Patent Literature 6: Japanese Journal of Clinical Psychopharmacology, 2012, Vol. 15, No. 3, pp. 311-321

Non-patent Literature 7: Proceedings of the Annual Meeting of the Japanese Research Group on Senile Dementia, 2010, Vol. 15, pp. 79-81

Non-patent Literature 8: Archives of Neurology, 2011, Vol. 68, No. 10, pp. 1257-1266

Non-patent Literature 9: Japanese Journal of Geriatrics, 2013, Vol. 50, No. 1, pp. 1-8

Summary

[0006a]

In one aspect, the present disclosure refers to an agent for preventing or treating tauopathy, comprising 1-(3-(2-(1-Benzothiophen-5-yl)ethoxy)propyl)azetidin-3-ol or a salt thereof as an active ingredient.

[0006b]

In one aspect, the present disclosure refers to a use of an agent comprising 1-(3-(2-(1-Benzothiophen-5-yl)ethoxy)propyl)azetidin-3-ol or a salt thereof as an active ingredient, in the manufacture of a medicament for preventing or treating tauopathy.

Problem to be Solved by the Invention

[0007]

Drugs which suppress progress of AD by inhibiting neurodegeneration need to be developed early. An object of the present invention is to provide a drug and a method which suppress progress of tauopathy such as AD.

Means for Solving Problem

[0008]

In such circumstances, the present inventors have found that Compound A or a salt thereof has an effect of reducing the amount of p-Tau and an effect of reducing the amount of Aβ in the brain parenchyma, and thus is effective in prevention or treatment of tauopathy, and the present invention has been completed.

[0009]

The present invention provides the following.

(1) An agent for preventing or treating tauopathy, comprising Compound A or a salt thereof as an active ingredient.

(2) The agent for preventing or treating tauopathy according to (1), wherein the agent has an effect of reducing the amount of p-Tau.

(3) The agent for preventing or treating tauopathy according to (2), wherein the amount of p-Tau is an amount of p-Tau in CSF.

(4) The agent for preventing or treating tauopathy according to any one of (1) to (3), wherein the agent has an effect of reducing the amount of Aβ in the brain.

(5) The agent for preventing or treating tauopathy according to any one of (1) to (4), wherein the agent has an effect of increasing the amount of Aβ in CSF.

(6) The agent for preventing or treating tauopathy according to any one of (1) to (5), wherein the agent is orally administered in a dose of 100 mg to 400 mg in terms of Compound A once a day.

CLAIMS

[Claim 1] An agent for preventing or treating tauopathy, comprising 1-(3-(2-(1-Benzothiophen-5-yl)ethoxy)propyl)azetidin-3-ol or a salt thereof as an active ingredient.

[Claim 2] The agent for preventing or treating tauopathy according to Claim 1, wherein the agent has an effect of reducing the amount of phosphorylated Tau protein.

[Claim 3] The agent for preventing or treating tauopathy according to Claim 2, wherein the amount of phosphorylated Tau protein is an amount of phosphorylated Tau protein in CSF.

[Claim 4] The agent for preventing or treating tauopathy according to any one of Claims 1 to 3, wherein the agent has an effect of reducing the amount of amyloid β protein in the brain.

[Claim 5] The agent for preventing or treating tauopathy according to any one of Claims 1 to 4, wherein the agent has an effect of increasing the amount of amyloid β protein in cerebrospinal fluid.

[Claim 6] The agent for preventing or treating tauopathy according to any one of Claims 1 to 5, wherein the agent is to be orally administered in a dose of 100 mg to 400 mg in terms of 1-(3-(2-(1-Benzothiophen-5-yl)ethoxy)propyl)azetidin-3-ol once a day.

[Claim 7] The agent for preventing or treating tauopathy according to any one of Claims 1 to 5, wherein the agent is to be orally administered in a dose of 160 mg or 320 mg in terms of 1-(3-(2-(1-Benzothiophen-5-yl)ethoxy)propyl)azetidin-3-ol once a day.

[Claim 8] The agent for preventing or treating tauopathy according to any one of Claims 1 to 7, wherein the tauopathy is Alzheimer's disease, Probable Alzheimer's disease, Possible Alzheimer's disease, Preclinical Alzheimer's disease, Prodromal Alzheimer's disease, mild cognitive impairment due to Alzheimer's disease (MCI due to AD) or mild cognitive impairment.

[Claim 9] The agent for preventing or treating tauopathy according to any one of Claims 1 to 7, wherein the tauopathy is Alzheimer's disease, mild cognitive impairment due to Alzheimer's disease (MCI due to AD) or mild cognitive impairment.

[Claim 10] The agent for preventing or treating tauopathy according to any one of Claims 1 to 7, wherein the tauopathy is Alzheimer's disease.

[Claim 11] The agent for preventing or treating tauopathy according to any one of Claims 1 to 7, wherein the tauopathy is a disease excluding Alzheimer's disease.

[Claim 12] The agent for preventing or treating tauopathy according to Claim 11, wherein the disease excluding Alzheimer's disease is mild cognitive impairment due to Alzheimer's disease (MCI due to AD), mild cognitive impairment, frontotemporal dementia, Pick's disease, progressive supranuclear palsy, corticobasal degeneration or Down syndrome.

[Claim 13] The agent for preventing or treating tauopathy according to claim 11, wherein the disease excluding Alzheimer's disease is mild cognitive impairment due to Alzheimer's disease (MCI due to AD) or mild cognitive impairment.

[Claim 14] Use of an agent comprising 1-(3-(2-(1-Benzothiophen-5-yl)ethoxy)propyl)azetidin-3-ol or a salt thereof as an active ingredient, in the manufacture of a medicament for preventing or treating tauopathy.

[Claim 15] The use according to Claim 14, wherein the medicament has an effect of reducing the amount of phosphorylated Tau protein.

[Claim 16] The use according to Claim 15, wherein the amount of phosphorylated Tau protein is an amount of phosphorylated Tau protein in CSF.

[Claim 17] The use according to any one of Claims 14 to 16, wherein the medicament has an effect of reducing the amount of amyloid β protein in the brain.

[Claim 18] The use according to any one of Claims 14 to 17, wherein the medicament has an effect of increasing the amount of amyloid β protein in cerebrospinal fluid.

[Claim 19] The use according to any one of Claims 14 to 18, wherein the medicament is to be orally administered in a dose of 100 mg to 400 mg in terms of 1-(3-(2-(1-Benzothiophen-5-yl)ethoxy)propyl)azetidin-3-ol once a day.

[Claim 20] The use according to any one of Claims 14 to 19, wherein the medicament is to be orally administered in a dose of 160 mg or 320 mg in terms of 1-(3-(2-(1-Benzothiophen-5-yl)ethoxy)propyl)azetidin-3-ol once a day.

[Claim 21] The use according to any one of Claims 14 to 20, wherein the tauopathy is Alzheimer's disease, Probable Alzheimer's disease, Possible Alzheimer's disease, Preclinical Alzheimer's disease, Prodromal Alzheimer's disease, mild cognitive impairment due to Alzheimer's disease (MCI due to AD) or mild cognitive impairment.

[Claim 22] The use according to any one of Claims 14 to 21, wherein the tauopathy is Alzheimer's disease, mild cognitive impairment due to Alzheimer's disease (MCI due to AD) or mild cognitive impairment.

[Claim 23] The use to any one of Claims 14 to 22, wherein the tauopathy is Alzheimer's disease.

[Claim 24] The use according to any one of Claims 14 to 23, wherein the tauopathy is a disease excluding Alzheimer's disease.

[Claim 25] The use according to Claim 24, wherein the disease excluding Alzheimer's disease is mild cognitive impairment due to Alzheimer's disease (MCI due to AD), mild cognitive impairment, frontotemporal dementia, Pick's disease, progressive supranuclear palsy, corticobasal degeneration or Down syndrome.

[Claim 26] The use according to claim 24, wherein the disease excluding Alzheimer's disease is mild cognitive impairment due to Alzheimer's disease (MCI due to AD) or mild cognitive impairment.