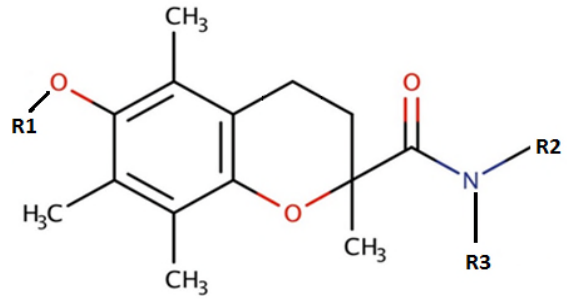
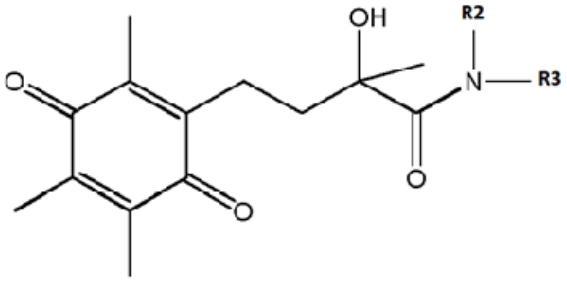
Claims

1. Use of a compound according to formula (I) or (II), or a pharmaceutically acceptable salt thereof in the manufacture of a medicament for the treatment of Alzheimer's disease, for improving the memory function, and/or for reducing plaque load in an Alzheimer disease patient;



(I)



(II)

- wherein R1 represents a hydrogen or prodrug moiety that can be removed in living tissue
- and wherein either
    - R2 and R3 together with the N atom to which they are attached form a saturated or unsaturated, non-aromatic, optionally substituted 5-8 membered ring, having one to four N, O, or S atoms, wherein R2 and R3 together contain 3-12 carbon atoms;
    - or R2 is a hydrogen atom, or an alkyl group with 1-6 carbon atoms, and R3 is an alkyl group comprising 3-12 carbon atoms, wherein the alkyl group in R3comprises a 5-7 membered ring comprising one additional amine group, which ring is attached to the amide-nitrogen, and which ring is optionally substituted with methyl, ethyl, or alcohol substituted methyl or ethyl.

2. Use according to claim 1, wherein R1 is hydrogen or forms together with the 6-oxygen an ester group with 2 - 6 carbon atoms.

3. Use according to any one of claims 1-2, wherein in either compounds according to formula (I) or according to formula (II), R2 and R3 together with the N atom to which they are attached form a saturated ring incorporating an additional N atom, which ring is unsubstituted or substituted with an alcohol, or alkanol group having 1-4 carbon atoms.

4. Use according to claim 3, wherein the compound is a compound according to formula I.

5. Use according to claim 4, wherein R2 and R3 together with the N atom to which they are attached form a 5-7 membered ring comprising one additional amine group, which ring is optionally substituted with methyl, ethyl, or alcohol substituted methyl or ethyl.

6. Use according to claim 1, wherein the compound is (6-hydroxy-2,5,7,8-tetramethylchroman-2yl)(piperazin-1-yl)methanone (SUL-121), ((S)-6-hydroxy-2,5,7,8-tetramethyl-N-((R)-piperidin-3-yl)chroman-2-carboxamide hydrochloride (SUL-13) or (6-hydroxy-2,5,7,8-tetramethylchroman-2-yl)(4-(2-hydroxyethyl)piperazin-1-yl)methanone (SUL-109).

7. Use according to claim 6, wherein the compound is the S-enantiomer of SUL-109: S-(6-hydroxy-2,5,7,8-tetramethylchroman-2-yl)(4-(2-hydroxyethyl)piperazin-1-yl)methanone (SUL-138).

8. Use according to any of claims 1-5, wherein the compound according formula (I) or formula (II) has a molecular weight lower than 500 Da.

9. Use according to any of the preceding claims, wherein the use is for treating Alzheimer’s disease.

10. Use according to any of claims 1-9, wherein the use is for improving memory function.

11. Use according to any of claims 1-10, wherein the use is for reducing plaque load in an Alzheimer disease patient.

12. Use of a compound as described in any one of claims 1-14 for improving the memory function in a mammal, preferably a human.