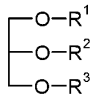
CLAIMS

1. Use of a compound of the formula (I)



(I)

wherein R^1, R^2 and R^3 are independently selected from H or -C(O)R^4, wherein R^4 is

- (C_5-C_{20}) alkyl, which is optionally mono-, di- or trisubstituted with OH, NH_2, $NHCH_3$, $N(CH_3)_2$, F or Cl; or
- (C_5-C_{20}) alkenyl, bearing 1, 2 or 3 double bonds;

whereby at least one of R^1, R^2 and R^3 is -C(O)R^4 with R^4 being (C_6-C_{20}) alkyl with an even number of carbon atoms;

or a pharmaceutically acceptable salt thereof, for the manufacture of a medicament for humans and/or animals.

2. The use of the compound of the formula (I) according to claim 1, wherein R^1, R^2 and R^3 are independently selected from H or -C(O)R^4 and wherein at least one of R^1, R^2 and R^3 is -C(O)R^4 withR^4 being (C_6-C_{20}) alkyl with an even number of carbon atoms.

3. The use of the compound of the formula (I) according claim 1 or 2, wherein R^1, R^2 and R^3 are independently selected from -C(O)R^4 with R^4 being (C_6-C_{20}) alkyl with an even number of carbon atoms.

4. The use of the compound of the formula (I) according to claim 1 or 2, wherein one or two of R^1, R^2 and R^3 are H and the other(s) is/are -C(O)R^4 with R^4 being C_{12}-alkyl, C_{14}-alkyl, C_{16}-alkyl, C_{18}-alkyl or C_{20}-alkyl.

5. The use of the compound of the formula (I) according to any one of claim 1 to 3, wherein R^1, R^2, and R^3 are -C(O)R^4 with R^4 being C_{14}-alkyl.

6. A metabolite or prodrug of the compound of formula (I) according to claim 4, wherein the metabolite or prodrug is $HOC(O)C_{12}$-alkyl, $HOC(O)C_{14}$-alkyl, $HOC(O)C_{16}$-alkyl, $HOC(O)C_{18}$-alkyl or $HOC(O)C_{20}$-alkyl for the manufacture of a medicament for humans and/or animals.

7. The use of the compound of the formula (I) according to any one of claims 1 to 6 for the manufacture of a medicament for the treatment and/or prevention of neurodegenerative diseases, retinal or optic nerve degenerative diseases, demyelinating diseases, neuromuscular disorders and muscular dystrophy, brain or spinal cord nerve injury, cranial nerve disorders, or seizures, amyloid deposit related diseases, chronic diseases selected from the group consisting of kidney diseases, diabetes and asthma, and for the use of anti-aging or life-span prolongation and improving brain function.

8. The use of the compound of the formula (I) according to any one of claim 1 to 6 for the manufacture of a medicament for the treatment and/or prevention of neurodegenerative diseases which are selected from the group consisting of Alzheimer's disease (AD), Parkinson's disease (PD), Huntington's disease (HD), Amyotrophic lateral sclerosis (ALS), dementia, Dementia with Lewy bodies (DLB), frontotemporal dementia (FTD), Creutzfeldt-Jakob disease, and brain atrophy.

9. The use of the compound of the formula (I) according to any one of claims 1 to 6 for the manufacture of a medicament for the treatment and/or prevention of retinal and optic degenerative diseases which are selected from the group consisting of optical atrophy, Leber's hereditary optic neuropathy (LHON), Dominant Optic Atrophy (DOA) and age-related macular degeneration, glaucoma and retinitis pigmentosa.

10. The use of the compound of the formula (I) according to any one of claim 1 to 6 for the manufacture of a medicament for the treatment and/or prevention of demyelinating diseases which are selected from the group consisting of adrenoleukodystrophy, multiple sclerosis, optical neuritis, Acute Inflammatory Demyelinating Polyneuropathy (AIDP), Chronic Inflammatory Demyelinating Polyneuropathy (CIDP), Guillian-Barre syndrome,

encephalitis caused by or related to Zika virus, cranial nerve palsy, neuromyelitis optica (NMO), acute disseminated encephalomyelitis, acute necrotizing hemorrhagic encephalitis, concentric sclerosis, diffuse sclerosis, metachromatic leukodystrophy, ball-like cell leukodystrophy, spongy degeneration of the central nervous system, Perry-plum disease, Alexander disease, radiation injury leukoencephalopathy, hypoxic leukoencephalopathy, periventricular leukomalacia disease, arteriosclerotic cortex under encephalopathy, progressive multifocal leukoencephalopathy, and central pontine myelinolysis syndrome.

11. The use of the compound of the formula (I) according to any one of claims 1 to 6 for the manufacture of a medicament for the treatment and/or prevention of neuromuscular disorders and muscular dsytrophy diseases which are selected from the group consisting of myasthenia gravis, Lambert–Eaton syndrome, Duchenne muscular dystrophy, Becker muscular dystrophy, facioscapulohumeral muscular dystrophy, myotonic dystrophy, Charcot-Marie-Tooth disease (CMT).

12. The use of the compound of the formula (I) according to any one of claims 1 to 6 for the manufacture of a medicament for the treatment and/or prevention of neurological injury related diseases or mixed neurological diseases selected from the group consisting of acute or chronic brain injury or spinal cord nerve injury, cranial nerve disorders and seizures.

13. The use of the compound of the formula (I) according to any one of claims 1 to 6 for the manufacture of a medicament for the treatment and/or prevention of amyloid deposit related diseases which are selected from the group consisting of diabetes, cardiac amyloidosis, primary amyloidosis, familial amyloidosis, senile systemic amyloidosis (SSA), secondary amyloidosis, and haemodialysis-associated amyloidosis.

14. The use of the compound of the formula (I) according to any one of claim 1 to 6 for the manufacture of a medicament for the treatment and/or prevention of chronic diseases selected from the group consisting of kidney diseases, diabetes, and asthma.

15. The use of the compound of the formula (I) according to any one of claims 1 to 6 for the manufacture of a medicament for the treatment and/or prevention of the diseases and conditions of claims 7 to 14, wherein the compound is contained in a dosage from 1 mg/day to 1000 mg/day.

16. A pharmaceutical composition for the use in the treatment and/or prevention of the diseases and conditions of claims 7 to 14, wherein the composition contains the compound of claims 1 to 6 and a pharmaceutically acceptable carrier.

17. A compound of the formula (I) according to any one of claims 1 to 6, or a pharmaceutically acceptable salt thereof, for the use as a medicament for human and/or animals.

18. The compound according to claim 17, or a pharmaceutically acceptable salt thereof, for the use as a medicament for the treatment and/or prevention of the diseases and conditions according to any one of claims 7 to 14.

19. A method for treating and/or preventing of the diseases and conditions of claims 7 to 14, comprising administering to a patient an effective amount of the compound according to any one of claims 1 to 6.

20. Use of the compound according to any one of claims 1 to 6 as functional food or food supplement for human and/or animal.

21. Use according to claim 20, wherein the dosage of the compound is from 1 μg (microgram)/day to 50 mg/day.

22. Use of ophioglossum for the manufacture of a medicament for the treatment and/or prevention of the diseases and conditions of any one of claims 7 to 14.

23. Use according to claim 22, wherein tripentadecanoin is contained in ophioglossum in an amount of 1 mg/day to 1000 mg/day.

24. A pharmaceutical composition for the use in the treatment and/or prevention of the diseases and conditions of claims 7 to 14, wherein the composition contains ophioglossum.

25. Use of ophioglossum as functional food or food supplement for human and/or animal.

26. Use according to claim 25, wherein tripentadecanoin contained in ophioglossum in an amount of 1 μg (microgram)/day to 50 mg/day.