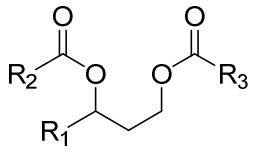
CLAIMS

1. A compound of formula I:



Formula I

wherein

R_1 is H or C(1-6) alkyl or substituted alkyl; and

R_2 and R_3 are independently unsubstituted or substituted C(4-30) alkyl.

2. The compound according to claim 1, wherein R_1 is an unsubstituted C(1-6) alkyl.

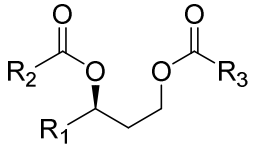
3. The compound according to claim 2, wherein R_1 is methyl.

4. The compound according to any one of claims 1-3, wherein R_2 and R_3 are independently unsubstituted C(6-18) alkyl.

5. The compound according to any one of claims 1-3, wherein R_2 and R_3 are independently unsubstituted C6 alkyl.

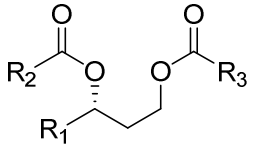
6. The compound according to any one of claims 1-3, wherein R_2 and R_3 are independently unsubstituted C8 alkyl.

7. A compound according to any one of claims 1-6, wherein the compound is of formula Ia:



Formula Ia.

8. A compound according to any one of claims 1-6, wherein the compound is of formula Ib:



Formula Ib.

9. A composition comprising a compound according to any one of claims 1-8 and a pharmaceutically acceptable carrier.

10. A compound according to any one of claims 1-8 or a composition according to claim 9 for use as a medicament.

11. Use of a compound according to any one of claims 1-8 or a composition according to claim 9 in the manufacture of a medicament for treating one or more of Alzheimer's disease, epilepsy, Parkinson's disease, heart failure, traumatic brain injury, stroke, hemorrhagic shock, acute lung injury after fluid resuscitation, acute kidney injury, myocardial infarction, myocardial ischemia, diabetes, glioblastoma multiforme, diabetic neuropathy, prostate cancer, amyotrophic lateral sclerosis, Huntington's disease, cutaneous T cell lymphoma, multiple myeloma, peripheral T cell lymphoma, HIV, Niemann-Pick Type C disease, age-related macular degeneration, gout, atherosclerosis, rheumatoid arthritis and multiple sclerosis.

12. Use of a compound according to any one of claims 1-8 or a composition according to claim 9 in the manufacture of a medicament for reducing epileptiform activity in the brain of a subject.

13. A food supplement comprising a compound according to any one of claims 1-8.

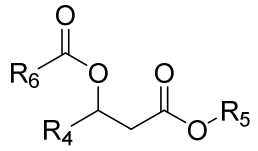
14. A composition comprising:
a food supplement comprising a compound according to any one of claims 1-8; and
one or more additional components of a ketogenic diet.

15. The composition according to claim 14, wherein the compound is present in the composition in an amount of from about 1% w/w to about 25% w/w, or in an amount of from about 5% w/w to about 15% w/w, or in an amount of about 10% w/w.

16. The composition according to any one of claims 14-15, wherein the ketogenic diet comprises a ratio by mass of fat to protein and carbohydrates of from about 2:1 to about

10:1, or a ratio by mass of fat to protein and carbohydrates of from about 3:1 to about 6:1, or a ratio by mass of fat to protein and carbohydrates of about 4:1.

17. A compound of formula II:



Formula II

wherein

R_4 is H or C(1-6) alkyl or substituted alkyl; and

R_5 and R_6 are independently unsubstituted or substituted C(4-30) alkyl.

18. The compound according to claim 17, wherein R_4 is an unsubstituted C(1-6) alkyl.

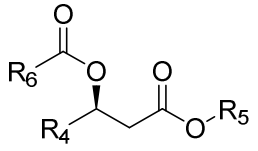
19. The compound according to claim 18, wherein R_4 is methyl.

20. The compound according to any one of claims 17-19, wherein R_5 and R_6 are independently unsubstituted C(6-18) alkyl.

21. The compound according to any one of claims 17-19, wherein R_5 and R_6 are independently unsubstituted C6 alkyl.

22. The compound according to any one of claims 17-19, wherein R_5 and R_6 are independently unsubstituted C8 alkyl.

23. The compound according to any one of claims 17-22, wherein the compound is of formula IIa:



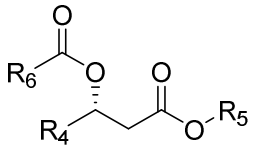
Formula IIa

wherein

R_4 is H or C(1-6) alkyl or substituted alkyl; and

R_5 and R_6 are independently unsubstituted or substituted C(4-30) alkyl.

24. A compound according to any one of claims 17-22, wherein the compound is of formula IIb:



Formula IIb

wherein

R_4 is H or C(1-6) alkyl or substituted alkyl; and

R_5 and R_6 are independently unsubstituted or substituted C(4-30) alkyl.

25. A composition comprising a compound according to any one of claims 17-24 and a pharmaceutically acceptable carrier.

26. A compound according to any one of claims 17-24 or a composition according to claim 25 for use as a medicament.

27. Use of a compound according to any one of claims 17-24 or a composition according to claim 25 in the manufacture of a medicament for treating one or more of Alzheimer's disease, epilepsy, Parkinson's disease, heart failure, traumatic brain injury, stroke, hemorrhagic shock, acute lung injury after fluid resuscitation, acute kidney injury, myocardial infarction, myocardial ischemia, diabetes, glioblastoma multiforme, diabetic neuropathy, prostate cancer, amyotrophic lateral sclerosis, Huntington's disease, cutaneous T cell lymphoma, multiple myeloma, peripheral T cell lymphoma, HIV, Niemann-Pick Type C disease, age-related macular degeneration, gout, atherosclerosis, rheumatoid arthritis and multiple sclerosis.

28. Use of a compound according to any one of claims 17-24 or a composition according to claim 25 in the manufacture of a medicament for reducing epileptiform activity in the brain of a subject.

29. A food supplement comprising a compound according to any one of claims 17-24.

30. A composition comprising:

a food supplement comprising a compound according to any one of claims 17-24; and

one or more components of a ketogenic diet.

31. The composition according to claim 30, wherein the compound is present in the composition in an amount of from about 1% w/w to about 25% w/w, or the compound is present in the composition in an amount of from about 5% w/w to about 15% w/w, or the compound is present in the composition in an amount of about 10% w/w.

32. The composition according to any one of claims 30-31, wherein the ketogenic diet comprises a ratio by mass of fat to protein and carbohydrates of from about 2:1 to about 10:1, or the ketogenic diet comprises a ratio by mass of fat to protein and carbohydrates of from about 3:1 to about 6:1, or the ketogenic diet comprises a ratio by mass of fat to protein and carbohydrates of about 4:1.