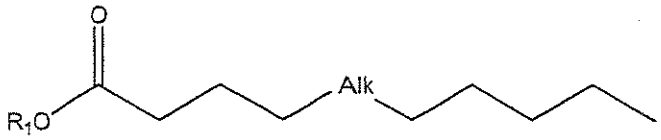
It has now been surprisingly found that 9-HODE, 13-HODE, 5-HETrE, 8-HETrE and 15-HETrE and their derivatives are capable of treating or preventing nerve damage, in particular nerve damage associated with diabetic neuropathy.

Summary of the Invention

In one aspect, there is provided the use of a compound which is a polyunsaturated fatty acid (PUFA) derivative of formula (I),



I

in the form of a racemate, a stereoisomer or a mixture of stereoisomers, or a pharmaceutically acceptable salt, or solvate thereof, wherein

- -Alk- is $-(CH_2)_4-CH(OR_2)-$[*trans*]CH=CH-[*cis*]CH=CH-, $-(CH_2)_4-$[*cis*]CH=CH-[*trans*]CH=CH-CH(OR_2)-, $-CH(OR_2)-$[*trans*]CH=CH-[*cis*]CH=CH-CH_2-[*cis*]CH=CH-$(CH_2)_3$-, $-(CH_2)_3-CH(OR_2)-$[*trans*]CH=CH-[*cis*]CH=CH-CH_2-[*cis*]CH=CH-, or $-(CH_2)_3-$[*cis*]CH=CH-CH_2-[*cis*]CH=CH-[*trans*]CH=CH-CH(OR_2)-;
- R_1 is a hydrogen atom; or
  R_1 is a C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_6-C_{10} aryl, 5- to 10-membered heteroaryl, C_3-C_7 carbocyclyl or 5- to 10-membered heterocyclyl group; or
  R_1 is a group of formula $-CH_2-CH(OR_3)-CH_2-(OR_4)$, wherein R_3 and R_4 are each independently hydrogen atoms or -(C=O)-R_6, wherein R_6 is an aliphatic group having from 3 to 29 carbon atoms; or
  R_1 is a group of formula $-(CH_2OCH_2)_mOH$, wherein m is an integer of from 1 to 200; or
  R_1 is a drug moiety chosen from an aldose reductase inhibitor, an ACE inhibitor, a vitamin or an anti-oxidant;
- each R_2 is the same or different and each independently represents a hydrogen atom; or

a group -(C=O)-R_5, wherein R_5 is unsubstituted C_1-C_4 alkyl, or an aliphatic group having from 3 to 29 carbon atoms; or

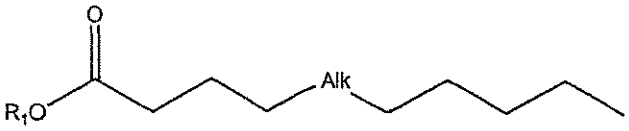
R_2 is a group of formula -$(CH_2OCH_2)_nOH$, wherein n is an integer of from 1 to 200;

and wherein

- said alkyl, alkenyl, alkynyl and aliphatic groups are the same or different and are each unsubstituted or substituted with 1, 2 or 3 unsubstituted substituents which are the same or different and are selected from halogen atoms and C_1-C_4 alkoxy, C_2-C_4 alkenyloxy, C_1-C_4 haloalkyl, C_2-C_4 haloalkenyl, C_1-C_4 haloalkoxy, C_2-C_4 haloalkenyloxy, hydroxyl, -SR′, and -NR′R′′ groups where R′ and R′′ are the same or different and represent hydrogen or unsubstituted C_1-C_2 alkyl;
- said aryl, heteroaryl, carbocyclyl and heterocyclyl groups are the same or different and are each unsubstituted or substituted by 1, 2, 3 or 4 unsubstituted substituents which are the same or different and are selected from halogen atoms, and cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_2-C_4 alkenyl, C_2-C_4 alkenyloxy, C_1-C_4 haloalkyl, C_2-C_4 haloalkenyl, C_1-C_4 haloalkoxy, C_2-C_4 haloalkenyloxy, hydroxyl, C_1-C_4 hydroxyalkyl, -SR′ and -NR′R′′ groups wherein each R′ and R′′ is the same or different and represents hydrogen or unsubstituted C_1-C_4 alkyl;

in the manufacture of a medicament for use in treating or preventing diabetic neuropathy in a mammal by improving nerve function.

Also disclosed is the~~The present invention therefore provides~~ use of compounds which are polyunsaturated fatty acid (PUFA) derivatives of formula (I),



I

in the form of racemates, stereoisomers or mixtures of stereoisomers, or pharmaceutically acceptable salts or solvates thereof, wherein

- -Alk- is -$(CH_2)_4$-CH(OR_2)-[*trans*]CH=CH-[*cis*]CH=CH-, -$(CH_2)_4$-[*cis*]CH=CH-[*trans*]CH=CH-CH(OR_2)-, -CH(OR_2)-[*trans*]CH=CH-[*cis*]CH=CH-CH_2-[*cis*]CH=CH-$(CH_2)_3$-, -$(CH_2)_3$-CH(OR_2)-[*trans*]CH=CH-[*cis*]CH=CH-CH_2-[*cis*]CH=CH-, or -$(CH_2)_3$-[*cis*]CH=CH-CH_2-[*cis*]CH=CH-[*trans*]CH=CH-CH(OR_2)-;
- R_1 is a hydrogen atom; or
  R_1 is a C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_6-C_{10} aryl, 5- to 10-membered heteroaryl, C_3-C_7 carbocyclyl or 5- to 10-membered heterocyclyl group; or
  R_1 is a group of formula -CH_2-CH(OR_3)-CH_2-(OR_4), wherein R_3 and R_4 are each independently hydrogen atoms or -(C=O)-R_6, wherein R_6 is an aliphatic group having from 3 to 29 carbon atoms; or
  R_1 is a group of formula -$(CH_2OCH_2)_m$OH, wherein m is an integer of from 1 to 200; or
  R_1 is a drug moiety;
- each R_2 is the same or different and each independently represents a hydrogen atom; or

a group -(C=O)-R_5, wherein R_5 is a C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_6-C_{10} aryl, 5- to 10-membered heteroaryl, C_3-C_7 carbocyclyl or 5- to 10-membered heterocyclyl group, or R_5 is an aliphatic group having from 3 to 29 carbon atoms, or R_5 is a drug moiety; or

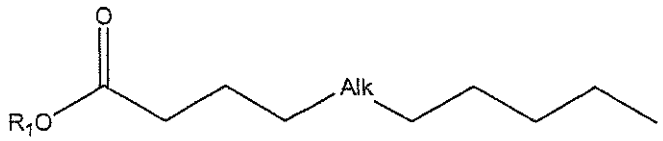
a group of formula -$(CH_2OCH_2)_nOH$, wherein n is an integer of from 1 to 200; or a drug moiety;

and wherein

- said alkyl, alkenyl, alkynyl and aliphatic groups are the same or different and are each unsubstituted or substituted with 1, 2 or 3 unsubstituted substituents which are the same or different and are selected from halogen atoms and C_1-C_4 alkoxy, C_2-C_4 alkenyloxy, C_1-C_4 haloalkyl, C_2-C_4 haloalkenyl, C_1-C_4 haloalkoxy, C_2-C_4 haloalkenyloxy, hydroxyl, -SR′, and -NR′R′′ groups where R′ and R′′ are the same or different and represent hydrogen or unsubstituted C_1-C_2 alkyl;
- said aryl, heteroaryl, carbocyclyl and heterocyclyl groups are the same or different and are each unsubstituted or substituted by 1, 2, 3 or 4 unsubstituted substituents which are the same or different and are selected from halogen atoms, and cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_2-C_4 alkenyl, C_2-C_4 alkenyloxy, C_1-C_4 haloalkyl, C_2-C_4 haloalkenyl, C_1-C_4 haloalkoxy, C_2-C_4 haloalkenyloxy, hydroxyl, C_1-C_4 hydroxyalkyl, -SR′ and -NR′R′′ groups wherein each R′ and R′′ is the same or different and represents hydrogen or unsubstituted C_1-C_4 alkyl;

in the manufacture of a medicament for use in treating or preventing nerve damage in a mammal.

In another aspect, there is provided the use of a compound which is a polyunsaturated fatty acid (PUFA) derivative of formula (I),



I

in the form of a racemate, a stereoisomer or a mixture of stereoisomers, or a pharmaceutically acceptable salt, or solvate thereof, wherein

- -Alk- is -$(CH_2)_4$-$CH(OR_2)$-[*trans*]CH=CH-[*cis*]CH=CH-, -$(CH_2)_4$-[*cis*]CH=CH-[*trans*]CH=CH-$CH(OR_2)$-, -$CH(OR_2)$-[*trans*]CH=CH-[*cis*]CH=CH-CH_2-[*cis*]CH=CH-$(CH_2)_3$-, -$(CH_2)_3$-$CH(OR_2)$-[*trans*]CH=CH-[*cis*]CH=CH-CH_2-[*cis*]CH=CH-, or -$(CH_2)_3$-[*cis*]CH=CH-CH_2-[*cis*]CH=CH-[*trans*]CH=CH-$CH(OR_2)$-;
- R_1 is a hydrogen atom; or

  R_1 is a C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_6-C_{10} aryl, 5- to 10-membered heteroaryl, C_3-C_7 carbocyclyl or 5- to 10-membered heterocyclyl group; or

  R_1 is a group of formula -CH_2-$CH(OR_3)$-CH_2-(OR_4), wherein R_3 and R_4 are each independently hydrogen atoms or -(C=O)-R_6, wherein R_6 is an aliphatic group having from 3 to 29 carbon atoms; or

  R_1 is a group of formula -$(CH_2OCH_2)_mOH$, wherein m is an integer of from 1 to 200; or

  R_1 is a drug moiety chosen from an aldose reductase inhibitor, an ACE inhibitor, a vitamin or an anti-oxidant;
- each R_2 is the same or different and each independently represents a hydrogen atom; or

  a group -(C=O)-R_5, wherein R_5 is unsubstituted C_1-C_4 alkyl, or an aliphatic group having from 3 to 29 carbon atoms; or

  R_2 is a group of formula -$(CH_2OCH_2)_nOH$, wherein n is an integer of from 1 to 200;

and wherein

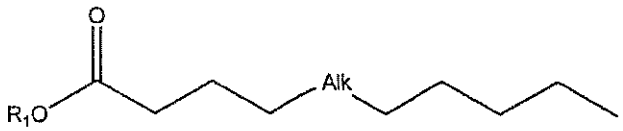
- said alkyl, alkenyl, alkynyl and aliphatic groups are the same or different and are each unsubstituted or substituted with 1, 2 or 3 unsubstituted substituents which are the same or different and are selected from halogen atoms and C_1-C_4 alkoxy, C_2-C_4 alkenyloxy, C_1-C_4 haloalkyl, C_2-C_4 haloalkenyl, C_1-C_4 haloalkoxy, C_2-C_4 haloalkenyloxy, hydroxyl, -SR′, and

-NR′R″ groups where R′ and R″ are the same or different and represent hydrogen or unsubstituted C_1-C_2 alkyl;

- said aryl, heteroaryl, carbocyclyl and heterocyclyl groups are the same or different and are each unsubstituted or substituted by 1, 2, 3 or 4 unsubstituted substituents which are the same or different and are selected from halogen atoms, and cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_2-C_4 alkenyl, C_2-C_4 alkenyloxy, C_1-C_4 haloalkyl, C_2-C_4 haloalkenyl, C_1-C_4 haloalkoxy, C_2-C_4 haloalkenyloxy, hydroxyl, C_1-C_4 hydroxyalkyl, -SR′ and -NR′R″ groups wherein each R′ and R″ is the same or different and represents hydrogen or unsubstituted C_1-C_4 alkyl;

in the manufacture of a medicament for use in improving nerve function in a mammal suffering from diabetic neuropathy.

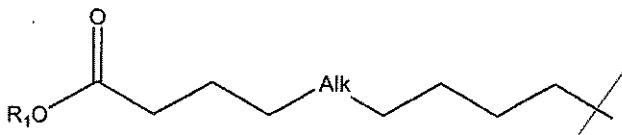
Also provided is use of compounds which are polyunsaturated fatty acid (PUFA) derivatives of formula (I),



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CLAIMS

1. Use of a compound which is a polyunsaturated fatty acid (PUFA) derivative of formula (I),



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in the form of a racemate, a stereoisomer or a mixture of stereoisomers, or a pharmaceutically acceptable salt, or solvate thereof, wherein

- -Alk- is $-(CH_2)_4-CH(OR_2)-$[*trans*]CH=CH-[*cis*]CH=CH-, $-(CH_2)_4-$[*cis*]CH=CH-[*trans*]CH=CH-CH(OR_2)-, $-CH(OR_2)-$[*trans*]CH=CH-[*cis*]CH=CH-CH_2-[*cis*]CH=CH-$(CH_2)_3-$, $-(CH_2)_3-CH(OR_2)-$[*trans*]CH=CH-[*cis*]CH=CH-CH_2-[*cis*]CH=CH-, or $-(CH_2)_3-$[*cis*]CH=CH-CH_2-[*cis*]CH=CH-[*trans*]CH=CH-CH(OR_2)-;
- R_1 is a hydrogen atom; or
  R_1 is a C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_6-C_{10} aryl, 5- to 10-membered heteroaryl, C_3-C_7 carbocyclyl or 5- to 10-membered heterocyclyl group; or
  R_1 is a group of formula $-CH_2-CH(OR_3)-CH_2-(OR_4)$, wherein R_3 and R_4 are each independently hydrogen atoms or $-(C=O)-R_6$, wherein R_6 is an aliphatic group having from 3 to 29 carbon atoms; or
  R_1 is a group of formula $-(CH_2OCH_2)_mOH$, wherein m is an integer of from 1 to 200; or
  R_1 is a drug moiety;
- each R_2 is the same or different and each independently represents a hydrogen atom; or
  a group $-(C=O)-R_5$, wherein R_5 is a C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_6-C_{10} aryl, 5- to 10-membered heteroaryl, C_3-C_7 carbocyclyl or

5- to 10-membered heterocyclyl group, or R_5 is an aliphatic group having from 3 to 29 carbon atoms, or R_5 is a drug moiety; or

a group of formula $-(CH_2OCH_2)_nOH$, wherein n is an integer of from 1 to 200; or

a drug moiety;

and wherein

- said alkyl, alkenyl, alkynyl and aliphatic groups are the same or different and are each unsubstituted or substituted with 1, 2 or 3 unsubstituted substituents which are the same or different and are selected from halogen atoms and C_1-C_4 alkoxy, C_2-C_4 alkenyloxy, C_1-C_4 haloalkyl, C_2-C_4 haloalkenyl, C_1-C_4 haloalkoxy, C_2-C_4 haloalkenyloxy, hydroxyl, -SR′, and -NR′R′′ groups where R′ and R′′ are the same or different and represent hydrogen or unsubstituted C_1-C_2 alkyl;
- said aryl, heteroaryl, carbocyclyl and heterocyclyl groups are the same or different and are each unsubstituted or substituted by 1, 2, 3 or 4 unsubstituted substituents which are the same or different and are selected from halogen atoms, and cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_2-C_4 alkenyl, C_2-C_4 alkenyloxy, C_1-C_4 haloalkyl, C_2-C_4 haloalkenyl, C_1-C_4 haloalkoxy, C_2-C_4 haloalkenyloxy, hydroxyl, C_1-C_4 hydroxyalkyl, -SR′ and -NR′R′′ groups wherein each R′ and R′′ is the same or different and represents hydrogen or unsubstituted C_1-C_4 alkyl;

in the manufacture of a medicament for use in treating or preventing nerve damage in a mammal.

2. Use according to claim 1, wherein R_1 is a hydrogen atom.

3. Use according to claim 1 or 2, wherein R_2 is a hydrogen atom.

4. Use according to any one of the preceding claims, wherein -Alk- is

-$(CH_2)_4$-[*cis*]CH=CH-[*trans*]CH=CH-CH(OR_2)- or -$(CH_2)_3$-[*cis*]CH=CH-CH_2-[*cis*]CH=CH-[*trans*]CH=CH-CH(OR_2)-, wherein each R_2 is the same or different and is as defined in claim 1 or claim 3.

5. Use according to claim 4, wherein -Alk- is -$(CH_2)_3$-[*cis*]-CH=CH-CH_2-[*cis*]-CH=CH-[*trans*]-CH=CH-CH(OR_2)-, wherein R_2 is as defined in claim 1 or claim 3.

6. Use according to any one of the preceding claims, wherein the PUFA derivative is present as the R enantiomer.

7. Use according to any one of claims 1 to 4, wherein the PUFA derivative is present as the S enantiomer.

8. Use according to any one of the preceding claims, wherein the mammal is a human.

9. Use according to any one of the preceding claims, wherein the compound is administered orally, parenterally or intravenously.

10. Use according to any one of the preceding claims, wherein the nerve damage is peripheral neuropathy.

11. Use according to claim 10, wherein the peripheral neuropathy is diabetic neuropathy.

12. Use according to claim 11, wherein the diabetic neuropathy is diabetic neuropathy of the sensory nerves, motor nerves, and/or autonomic nerves.

13. Use of a compound which is a polyunsaturated fatty acid (PUFA) derivative of formula (I), as defined in any one of claims 1 to 7 in the form of a racemate, a

stereoisomer or a mixture of stereoisomers, or a pharmaceutically acceptable salt, or solvate thereof, in the manufacture of a medicament for use in treating or preventing dizziness, indigestion, bladder infections, foot sores, wastage of thigh muscles, sexual dysfunction, numbness, burning sensations, pain, tingling in the legs and feet, decreased temperature perception, decreased ankle reflex and/or decreased sensitivity to vibrations, arising from diabetic neuropathy.

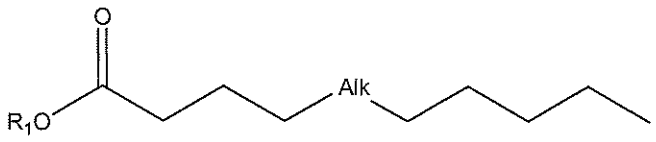
14. Use according to claim 13, in treating erectile dysfunction.

15. A pharmaceutical composition comprising a compound, as defined in any one of claims 1 to 7, and a pharmaceutically acceptable diluent or carrier, for use in a method of treating or preventing nerve damage, as defined in any one of claims 1 and 10 to 12, in a mammal, as defined in claim 1 or claim 8.

16. A method of treating or preventing nerve damage, as defined in any one of claims 1 and 10 to 12, in a mammal, as defined in claim 1 or claim 8, which method comprises administering to said mammal a therapeutically effective amount of a compound which is a PUFA derivative of formula (I) as defined in any one of claims 1 to 7 or a pharmaceutically acceptable salt, or solvate thereof.

CLAIMS

1. Use of a compound which is a polyunsaturated fatty acid (PUFA) derivative of formula (I),



I

in the form of a racemate, a stereoisomer or a mixture of stereoisomers, or a pharmaceutically acceptable salt, or solvate thereof, wherein

- -Alk- is -$(CH_2)_4$-$CH(OR_2)$-[*trans*]CH=CH-[*cis*]CH=CH-, -$(CH_2)_4$-[*cis*]CH=CH-[*trans*]CH=CH-$CH(OR_2)$-, -$CH(OR_2)$-[*trans*]CH=CH-[*cis*]CH=CH-CH_2-[*cis*]CH=CH-$(CH_2)_3$-, -$(CH_2)_3$-$CH(OR_2)$-[*trans*]CH=CH-[*cis*]CH=CH-CH_2-[*cis*]CH=CH-, or -$(CH_2)_3$-[*cis*]CH=CH-CH_2-[*cis*]CH=CH-[*trans*]CH=CH-$CH(OR_2)$-;
- R_1 is a hydrogen atom; or
  R_1 is a C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_6-C_{10} aryl, 5- to 10-membered heteroaryl, C_3-C_7 carbocyclyl or 5- to 10-membered heterocyclyl group; or
  R_1 is a group of formula -CH_2-$CH(OR_3)$-CH_2-(OR_4), wherein R_3 and R_4 are each independently hydrogen atoms or -(C=O)-R_6, wherein R_6 is an aliphatic group having from 3 to 29 carbon atoms; or
  R_1 is a group of formula -$(CH_2OCH_2)_mOH$, wherein m is an integer of from 1 to 200; or
  R_1 is a drug moiety chosen from an aldose reductase inhibitor, an ACE inhibitor, a vitamin or an anti-oxidant;
- each R_2 is the same or different and each independently represents a hydrogen atom; or

a group -(C=O)-R_5, wherein R_5 is unsubstituted C_1-C_4 alkyl, or an aliphatic group having from 3 to 29 carbon atoms; or

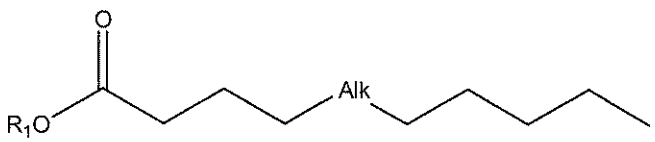
R_2 is a group of formula -$(CH_2OCH_2)_nOH$, wherein n is an integer of from 1 to 200;

and wherein

- said alkyl, alkenyl, alkynyl and aliphatic groups are the same or different and are each unsubstituted or substituted with 1, 2 or 3 unsubstituted substituents which are the same or different and are selected from halogen atoms and C_1-C_4 alkoxy, C_2-C_4 alkenyloxy, C_1-C_4 haloalkyl, C_2-C_4 haloalkenyl, C_1-C_4 haloalkoxy, C_2-C_4 haloalkenyloxy, hydroxyl, -SR′, and -NR′R′′ groups where R′ and R′′ are the same or different and represent hydrogen or unsubstituted C_1-C_2 alkyl;
- said aryl, heteroaryl, carbocyclyl and heterocyclyl groups are the same or different and are each unsubstituted or substituted by 1, 2, 3 or 4 unsubstituted substituents which are the same or different and are selected from halogen atoms, and cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_2-C_4 alkenyl, C_2-C_4 alkenyloxy, C_1-C_4 haloalkyl, C_2-C_4 haloalkenyl, C_1-C_4 haloalkoxy, C_2-C_4 haloalkenyloxy, hydroxyl, C_1-C_4 hydroxyalkyl, -SR′ and -NR′R′′ groups wherein each R′ and R′′ is the same or different and represents hydrogen or unsubstituted C_1-C_4 alkyl;

in the manufacture of a medicament for use in treating or preventing diabetic neuropathy in a mammal by improving nerve function.

2. Use of a compound which is a polyunsaturated fatty acid (PUFA) derivative of formula (I),



I

in the form of a racemate, a stereoisomer or a mixture of stereoisomers, or a pharmaceutically acceptable salt, or solvate thereof, wherein

- -Alk- is -$(CH_2)_4$-$CH(OR_2)$-[*trans*]CH=CH-[*cis*]CH=CH-, -$(CH_2)_4$-[*cis*]CH=CH-[*trans*]CH=CH-$CH(OR_2)$-, -$CH(OR_2)$-[*trans*]CH=CH-[*cis*]CH=CH-CH_2-[*cis*]CH=CH-$(CH_2)_3$-, -$(CH_2)_3$-$CH(OR_2)$-[*trans*]CH=CH-[*cis*]CH=CH-CH_2-[*cis*]CH=CH-, or -$(CH_2)_3$-[*cis*]CH=CH-CH_2-[*cis*]CH=CH-[*trans*]CH=CH-$CH(OR_2)$-;
- R_1 is a hydrogen atom; or
  R_1 is a C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_6-C_{10} aryl, 5- to 10-membered heteroaryl, C_3-C_7 carbocyclyl or 5- to 10-membered heterocyclyl group; or
  R_1 is a group of formula -CH_2-$CH(OR_3)$-CH_2-(OR_4), wherein R_3 and R_4 are each independently hydrogen atoms or -(C=O)-R_6, wherein R_6 is an aliphatic group having from 3 to 29 carbon atoms; or
  R_1 is a group of formula -$(CH_2OCH_2)_m$OH, wherein m is an integer of from 1 to 200; or
  R_1 is a drug moiety chosen from an aldose reductase inhibitor, an ACE inhibitor, a vitamin or an anti-oxidant;
- each R_2 is the same or different and each independently represents a hydrogen atom; or
  a group -(C=O)-R_5, wherein R_5 is unsubstituted C_1-C_4 alkyl, or an aliphatic group having from 3 to 29 carbon atoms; or
  R_2 is a group of formula -$(CH_2OCH_2)_n$OH, wherein n is an integer of from 1 to 200;

and wherein

- said alkyl, alkenyl, alkynyl and aliphatic groups are the same or different and are each unsubstituted or substituted with 1, 2 or 3 unsubstituted substituents which are the same or different and are selected from halogen atoms and C_1-C_4 alkoxy, C_2-C_4 alkenyloxy, C_1-C_4 haloalkyl, C_2-C_4 haloalkenyl, C_1-C_4 haloalkoxy, C_2-C_4 haloalkenyloxy, hydroxyl, -SR′, and

-NR′R′′ groups where R′ and R′′ are the same or different and represent hydrogen or unsubstituted C_1-C_2 alkyl;

- said aryl, heteroaryl, carbocyclyl and heterocyclyl groups are the same or different and are each unsubstituted or substituted by 1, 2, 3 or 4 unsubstituted substituents which are the same or different and are selected from halogen atoms, and cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_2-C_4 alkenyl, C_2-C_4 alkenyloxy, C_1-C_4 haloalkyl, C_2-C_4 haloalkenyl, C_1-C_4 haloalkoxy, C_2-C_4 haloalkenyloxy, hydroxyl, C_1-C_4 hydroxyalkyl, -SR′ and -NR′R′′ groups wherein each R′ and R′′ is the same or different and represents hydrogen or unsubstituted C_1-C_4 alkyl;

in the manufacture of a medicament for use in improving nerve function in a mammal suffering from diabetic neuropathy.

3. Use according to claim 1 or claim 2, wherein R_1 is a hydrogen atom.

4. Use according to any one of the preceding claims, wherein R_2 is a hydrogen atom.

5. Use according to any one of the preceding claims, wherein -Alk- is $-(CH_2)_4$-[*cis*]CH=CH-[*trans*]CH=CH-CH(OR_2)- or $-(CH_2)_3$-[*cis*]CH=CH-CH_2-[*cis*]CH=CH-[*trans*]CH=CH-CH(OR_2)-, wherein each R_2 is the same or different and is as defined in claim 1 or claim 4.

6. Use according to claim 5, wherein -Alk- is $-(CH_2)_3$-[*cis*]-CH=CH-CH_2-[*cis*]-CH=CH-[*trans*]-CH=CH-CH(OR_2)-, wherein R_2 is as defined in claim 1 or claim 4.

7. Use according to any one of the preceding claims, wherein the PUFA derivative is present as the R enantiomer.

8. Use according to any one of claims 1 to 5, wherein the PUFA derivative is present as the S enantiomer.

9. Use according to any one of the preceding claims, wherein the mammal is a human.

10. Use according to any one of the preceding claims, wherein the compound is administered orally, parenterally or intravenously.

11. Use according to any one of the preceding claims, wherein the diabetic neuropathy is diabetic neuropathy of the sensory nerves, motor nerves, and/or autonomic nerves.

12. Use according to any one of the preceding claims, in the manufacture of a medicament for use in treating or preventing dizziness, indigestion, bladder infections, foot sores, wastage of thigh muscles, sexual dysfunction, numbness, burning sensations, pain, tingling in the legs and feet, decreased temperature perception, decreased ankle reflex and/or decreased sensitivity to vibrations.

13. Use according to claim 12, in treating erectile dysfunction.