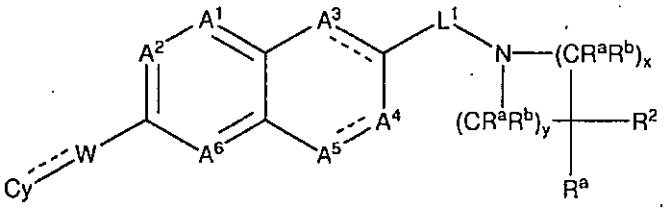
WHAT IS CLAIMED IS:

1. A compound of formula (I):



(I)

wherein:

A^1 is -CH= or -N=;

A^2 is -CH= or -N=;

A^3 is $-CH_2-$, -CH=, or -N=;

A^4 is $-CH_2-$, -CH=, or -N=;

A^5 is $-CH_2-$, -CH=, or -N=;

A^6 is -CH= or -N=;

W is -O-, $=CR^5-$, or $-CHR^5-$;

R^5 is hydrogen, halo, alkyl, or haloalkyl;

Cy is a 4- to 7-membered cycloalkyl group, a 4- to 7-membered cycloalkenyl group, or Cy is a 4- to 7-membered heterocycloalkyl group having 1 heteroatom which is O; wherein Cy is optionally substituted by one to four R^1;

each R^1, independently, is halo, alkyl, haloalkyl, hydroxyalkyl, cycloalkyl, trialkylsilyl, alkoxy, cycloalkoxy, alkoxyalkyl, cycloalkoxyalkyl, or aryl, or two R^1, taken together, are C_1 to C_5 alkylene;

L^1 is -C(O)- or $-C(R^3)_2-$;

each R^3, independently, is hydrogen, alkyl, or haloalkyl;

x is 0, 1, 2, 3, 4, or 5;

y is 0, 1, 2, 3, 4, or 5;

wherein the sum of x and y is 4 or 5;

each R^a and each R^b, independently, is hydrogen, halo, hydroxy, $-CO_2R^c$, alkyl, or aryl;

R^2 is $-(CH_2)_nCO_2R^c$, wherein n is 0 or 1;

R^c is hydrogen, alkyl, haloalkyl, cycloalkyl, or aryl;

provided that the compound is not 1-((2-(trans-4-tert-butylcyclohexyloxy)naphthalen-6-yl)methyl)piperidine-4-carboxylic acid, 1-((2-(trans-4-tert-butylcyclohexyloxy)naphthalen-6-yl)methyl)piperidine-3R-carboxylic acid, or 1-((2-(trans-4-tert-butylcyclohexyloxy)naphthalen-6-yl)methyl)piperidine-3S-carboxylic acid;

or a pharmaceutically acceptable salt thereof.

2. The compound of claim 1, or a pharmaceutically acceptable salt thereof, wherein:

Cy can be a 4- to 7-membered cycloalkyl group or Cy can be a heterocycloalkyl group having 1 heteroatom which can be O; wherein Cy can be optionally substituted by one to four R^1,

each R^1, independently, is halo, alkyl, haloalkyl, cycloalkyl, alkoxy, cycloalkoxy, alkoxyalkyl, cycloalkoxyalkyl, or aryl, or two R^1, taken together, are C_2 to C_5 alkylene;

each R^a and each R^b, independently, is hydrogen, halo, hydroxy, alkyl, or aryl.

3. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein no more than two of A^1, A^2, A^3, A^4, A^5, and A^6 is -N=.

4. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein A^1, A^2, A^3, A^4, A^5, and A^6 are -CH=.

5. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein A^1 is -CH=, A^2 is -CH=, and A^5 is -CH=.

6. The compound of any one of claims 1-3, or a pharmaceutically acceptable salt thereof, wherein:

A^3 is -CH=, A^4 is -CH=, and A^5 is -CH=; or

A^3 is -N=, A^4 is -CH=, and A^5 is -CH=; or

A^3 is -N=, A^4 is -N=, and A^5 is -CH=; or

A^2 is -N= and A^6 is -N=; or

A^1 is -N= and A^6 is -N=; or

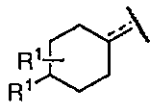
A^3 is $-CH_2-$, A^4 is $-CH_2-$, and A^5 is $-CH_2-$.

7. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein the sum of x and y is 4.

8. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein x is 2 and y is 2.

9. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein Cy is bicyclic or spiro-bicyclic.

10. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein Cy has the formula



11. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein one R^1 is hydrogen and the other R^1 is ethyl, isopropyl, n-butyl, or t-butyl; or both R^1, taken together, are C_2 to C_5 alkylene.

12. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein L^1 is $-C(R^3)_2-$, wherein at least one R^3 is hydrogen.

13. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein L^1 is $-CH_2-$.

14. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein W is -O-.

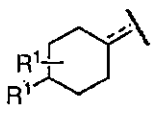
15. The compound of claim 1, or a pharmaceutically acceptable salt thereof, wherein:

A^1 is -CH=, A^2 is -CH=, A^3 is -CH=, A^4 is -CH=, A^5 is -CH=, and A^6 is -CH=;

L^1 is $-C(R^3)_2-$, wherein at least one R^3 is hydrogen;

the sum of x and y is 4;

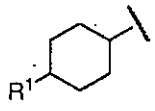
Cy has the formula



; and

W is -O-.

16. The compound of claim 15, or a pharmaceutically acceptable salt thereof, wherein Cy has the formula:



17. A compound or pharmaceutically acceptable salt thereof selected from the group consisting of:

1-((6-(trans-4-tert-butylcyclohexyloxy)quinazolin-2-yl)methyl)piperidine-4-carboxylic acid;

1-(1-(6-(trans-4-tert-butylcyclohexyloxy)naphthalen-2-yl)-2,2,2-trifluoroethyl)piperidine-4-carboxylic acid;

1-((6-(4-isopropylcyclohexyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(cis-4-tert-butylcyclohexyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(4-(trifluoromethyl)cyclohexyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(4-ethylcyclohexyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(4-butylcyclohexyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(spiro[4.5]decan-8-yloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(cis-4-ethylcyclohexyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(trans-4-ethylcyclohexyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(trans-4-tert-butylcyclohexyloxy)quinolin-2-yl)methyl)piperidine-4-carboxylic acid;

1-(6-(trans-4-tert-butylcyclohexyloxy)-2-naphthoyl)piperidine-4-carboxylic acid;

1-((6-((4-tert-butylcyclohexylidene)methyl)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((2-(trans-4-tert-butylcyclohexyloxy)quinolin-6-yl)methyl)piperidine-4-carboxylic acid;

1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-4-ethyl-piperidine-4-carboxylic acid;

1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-4-propyl-piperidine- 4-carboxylic acid;

1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-3-methyl-piperidine-4-carboxylic acid;

1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-4-phenyl-piperidine-4-carboxylic acid;

1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-perhydro-azepine-4-carboxylic acid;

1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-4-hydroxy-piperidine-4-carboxylic acid;

{1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-piperidin-4-yl}-acetic acid;

1-[7-(trans-4-tert-butyl-cyclohexyloxy)-isoquinolin-3-ylmethyl]-piperidine-4-carboxylic acid;

1-((6-(trans-4-tert-butylcyclohexyloxy)naphthalen-2-yl)methyl)-4-methylpiperidine-4-carboxylic acid;

1-((6-(cyclopentyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(cycloheptyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(tetrahydro-2H-pyran-4-yloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(spiro[5.5]undecan-3-yloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(spiro[3.5]nonan-7-yloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-piperidine-2-carboxylic acid;

1-((6-((trans-4-(tert-Butyl)cyclohexyl)oxy)-1,2,3,4-tetrahydronaphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((cis-4-phenylcyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((cis-4-(tert-pentyl)cyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((trans-4-(tert-butyl)cyclohexyl)oxy)naphthalen-2-yl)methyl)-3-methylpiperidine-4-carboxylic acid;

1-((6-(((1R,2S,5R)-2-isopropyl-5-methylcyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((4,4-dimethylcyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((4-propylcyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-cyclobutoxynaphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-(1-(6-((trans-4-(tert-butyl)cyclohexyl)oxy)naphthalen-2-yl)ethyl)piperidine-4-carboxylic acid;

1-((6-((4-(tert-butyl)cyclohexyl)methyl)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((tetrahydrofuran-3-yl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(cyclohexyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(cyclohexyloxy)quinolin-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((trans-4-methylcyclohexyl)oxy)quinolin-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((trans-4-ethylcyclohexyl)oxy)quinolin-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((trans-4-(tert-pentyl)cyclohexyl)oxy)quinolin-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((trans-4-(trifluoromethyl)cyclohexyl)oxy)quinolin-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((4,4-dimethylcyclohexyl)oxy)quinolin-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(spiro[3.5]nonan-7-yloxy)quinolin-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(spiro[5.5]undecan-3-yloxy)quinolin-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((cis-4-ethylcyclohexyl)oxy)quinolin-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(spiro[2.5]octan-6-yloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(spiro[4.5]decan-8-yloxy)quinolin-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((3,3,5-trimethylcyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((cis-4-isopropylcyclohexyl)oxy)quinolin-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((3-methylcyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((4-(tert-pentyl)cyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((cis-4-(ethoxymethyl)cyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((octahydro-1H-inden-5-yl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(spiro[2.5]octan-6-yloxy)quinolin-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((3,4-dimethylcyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((cis-4-(methoxymethyl)cyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((cis-4-(tert-butoxymethyl)cyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((cis-4-(isobutoxymethyl)cyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((trans-4-(tert-butoxymethyl)cyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((trans-4-(isobutoxymethyl)cyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((trans-4-(propoxymethyl)cyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((2-methylcyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((trans-4-phenylcyclohexyl)oxy)quinolin-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((trans-4-(isopropoxymethyl)cyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((cis-4-(propoxymethyl)cyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((trans-4-(tert-butyl)cyclohexyl)oxy)quinolin-2-yl)methyl)piperidine-3-carboxylic acid;

1-((6-((4,4-difluorocyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((2-methylcyclopentyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((4-(2-hydroxypropan-2-yl)cyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((3-methylcyclopentyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(bicyclo[3.1.0]hexan-3-yloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((trans-4-isopropylcyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-((trans-4-(tert-butyl)cyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4,4-dicarboxylic acid;

2-(1-((6-((trans-4-(tert-butyl)cyclohexyl)oxy)naphthalen-2-yl)methyl)piperidin-2-yl)acetic acid;

1-((6-((4,4-dimethylcyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-3-carboxylic acid;

1-((6-((4,4-dimethylcyclohexyl)oxy)naphthalen-2-yl)methyl)-4-methylpiperidine-4-carboxylic acid;

1-((6-((4,4-dimethylcyclohexyl)oxy)naphthalen-2-yl)methyl)-4-ethylpiperidine-4-carboxylic acid;

1-[6-(Bicyclo[2.2.1]hept-5-en-2-yloxy)-naphthalen-2-ylmethyl]-piperidine-4-carboxylic acid;

1-[6-(1,3,3-Trimethyl-bicyclo[2.2.1]hept-2-yloxy)-naphthalen-2-ylmethyl]-piperidine-4-carboxylic acid;

1-[2-(4-tert-Butyl-cyclohexyloxy)-quinoxalin-6-ylmethyl]-piperidine-4-carboxylic acid;

1-[2-(4-tert-Butyl-cyclohexyloxy)-quinazolin-6-ylmethyl]-piperidine-4-carboxylic acid;

1-[7-(4-tert-Butyl-cyclohexyloxy)-[1,8]naphthyridin-3-ylmethyl]-piperidine- 4-carboxylic acid; and

1-((6-(((trans-4-(trimethylsilyl)cyclohexyl)oxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid.

18. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein the compound is selective for the S1P4 receptor.

19. The compound of any one of the preceding claims, wherein the compound has a greater affinity for the S1P4 receptor, by at least 5-fold, than for S1P1 receptor, S1P2 receptor, S1P3 receptor, or S1P5 receptor.

20. A pharmaceutical composition comprising a compound of any one of claims 1-19, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable excipient or carrier.

21. A method for prevention or treatment of a pathological condition or symptom in a mammal, wherein the activity of S1P receptors is implicated, comprising

administering to said mammal an effective amount of a compound of any one of claims 1 through 19, or a pharmaceutically acceptable salt thereof.

22. A method for prevention or treatment of multiple sclerosis, an autoimmune disease, a chronic inflammatory disorder, asthma, an inflammatory neuropathy, arthritis, transplantation rejection, Crohn's disease, ulcerative colitis, lupus erythematosis, psoriasis, an ischemia-reperfusion injury, a solid tumor, a tumor metastasis, a disease associated with angiogenesis, a vascular disease, a pain condition, an acute viral disease, an inflammatory bowel condition, insulin-dependent diabetes, or non-insulin dependent diabetes in a mammal, comprising administering to said mammal an effective amount of a compound according to any one of claims 1 through 19, or a pharmaceutically acceptable salt thereof.

23. A method for prevention or treatment of a neurologic disease in a mammal, comprising administering to said mammal an effective amount of a compound according to any one of claims 1 through 19, or a pharmaceutically acceptable salt thereof.

24. The method of claim 23, wherein the neurologic disease is Alzheimer's disease, Parkinson's disease, Huntington's disease, a motor neuron disease, amyotrophic lateral sclerosis, multiple sclerosis, neuronal trauma, or cerebral ischemia.

25. The method of claim 21, wherein the prevention or treatment of the pathological condition includes remyelination and axon regeneration for multiple sclerosis, blocking astrogliosis, or microglial activation for neural-inflammation related disease.

26. A method for prevention or treatment of neuropathic pain in a mammal comprising administering to said mammal an effective amount of a compound according to any one of claims 1 through 19, or a pharmaceutically acceptable salt thereof.

27. A method for prevention or treatment of an autoimmune disease in a mammal, comprising administering to said mammal an effective amount of a compound

according to any one of claims 1 through 19, or a pharmaceutically acceptable salt thereof.

28. The method of claim 27, wherein the autoimmune disease is multiple sclerosis.

29. A method of promoting myelination or remyelination, comprising administering to cells a compound according to any one of claims 1 through 19, or a pharmaceutically acceptable salt thereof .

30. A method of promoting myelination or remyelination in a mammal in need thereof, comprising administering to cells a compound according to any one of claims 1 through 19, or a pharmaceutically acceptable salt thereof.

31. A compound according to any one of claims 1 through 19, or a pharmaceutically acceptable salt thereof, for use in treating or preventing multiple sclerosis, an autoimmune disease, a chronic inflammatory disorder, asthma, an inflammatory neuropathy, arthritis, transplantation rejection, Crohn's disease, ulcerative colitis, lupus erythematosis, psoriasis, an ischemia-reperfusion injury, a solid tumor, a tumor metastasis, a disease associated with angiogenesis, a vascular disease, a pain condition, an acute viral disease, an inflammatory bowel condition, insulin-dependent diabetes, or non-insulin dependent diabetes.

32. Use of a compound according to any one of claims 1 through 19, or a pharmaceutically acceptable salt thereof, for the manufacture of a medicament for treating or preventing multiple sclerosis, an autoimmune disease, a chronic inflammatory disorder, asthma, an inflammatory neuropathy, arthritis, transplantation rejection, Crohn's disease, ulcerative colitis, lupus erythematosis, psoriasis, an ischemia-reperfusion injury, a solid tumor, a tumor metastasis, a disease associated with angiogenesis, a vascular disease, a pain condition, an acute viral disease, an inflammatory bowel condition, insulin-dependent diabetes, or non-insulin dependent diabetes.

Claims

1. A compound selected from the group consisting of:

1-((6-(trans-4-tert-butylcyclohexyloxy)quinazolin-2-yl)methyl)piperidine-4-carboxylic acid;

1-(1-(6-(trans-4-tert-butylcyclohexyloxy)naphthalen-2-yl)-2,2,2-trifluoroethyl)piperidine-4-carboxylic acid;

1-((6-(4-isopropylcyclohexyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(cis-4-tert-butylcyclohexyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(4-(trifluoromethyl)cyclohexyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(4-ethylcyclohexyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(4-butylcyclohexyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(spiro[4.5]decan-8-yloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(cis-4-ethylcyclohexyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(trans-4-ethylcyclohexyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(trans-4-tert-butylcyclohexyloxy)quinolin-2-yl)methyl)piperidine-4-carboxylic acid;

1-(6-(trans-4-tert-butylcyclohexyloxy)-2-naphthoyl)piperidine-4-carboxylic acid;

1-((6-((4-tert-butylcyclohexylidene)methyl)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((2-(trans-4-tert-butylcyclohexyloxy)quinolin-6-yl)methyl)piperidine-4-carboxylic acid;

1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-4-ethyl-piperidine-4-carboxylic acid;

1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-4-propyl-piperidine-4-carboxylic acid;

1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-3-methyl-piperidine-4-carboxylic acid;

1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-4-phenyl-piperidine-4-carboxylic acid;

1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-perhydro-azepine-4-carboxylic acid;

1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-4-hydroxy-piperidine-4-carboxylic acid;

{1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-piperidin-4-yl}-acetic acid;

1-[7-(trans-4-tert-butyl-cyclohexyloxy)-isoquinolin-3-ylmethyl]-piperidine-4-carboxylic acid;

1-((6-(trans-4-tert-butylcyclohexyloxy)naphthalen-2-yl)methyl)-4-methylpiperidine-4-carboxylic acid;

1-((6-(cyclopentyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(cycloheptyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(tetrahydro-2H-pyran-4-yloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(spiro[5.5]undecan-3-yloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid;

1-((6-(spiro[3.5]nonan-7-yloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid; and

1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-piperidine-2-carboxylic acid; or a pharmaceutically acceptable salt thereof.

2. The compound of claim 1, wherein the compound is 1-((6-(trans-4-tert-butylcyclohexyloxy)quinazolin-2-yl)methyl)piperidine-4-carboxylic acid or a pharmaceutically acceptable salt thereof.

3. The compound of claim 1, wherein the compound is 1-(1-(6-(trans-4-tert-butylcyclohexyloxy)naphthalen-2-yl)-2,2,2-trifluoroethyl)piperidine-4-carboxylic acid or a pharmaceutically acceptable salt thereof.

4. The compound of claim 1, wherein the compound is 1-((6-(spiro[4.5]decan-8-yloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid or a pharmaceutically acceptable salt thereof.

5. The compound of claim 1, wherein the compound is 1-((6-(cis-4-ethylcyclohexyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid or a pharmaceutically acceptable salt thereof.

6. The compound of claim 1, wherein the compound is 1-((6-(trans-4-tert-butylcyclohexyloxy)quinolin-2-yl)methyl)piperidine-4-carboxylic acid or a pharmaceutically acceptable salt thereof.

7. The compound of claim 1, wherein the compound is 1-(6-(trans-4-tert-butylcyclohexyloxy)-2-naphthoyl)piperidine-4-carboxylic acid or a pharmaceutically acceptable salt thereof.

8. The compound of claim 1, wherein the compound is 1-((6-((4-tert-butylcyclohexylidene)methyl)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid or a pharmaceutically acceptable salt thereof.

9. The compound of claim 1, wherein the compound is 1-((2-(trans-4-tert-butylcyclohexyloxy)quinolin-6-yl)methyl)piperidine-4-carboxylic acid or a pharmaceutically acceptable salt thereof.

10. The compound of claim 1, wherein the compound is 1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-3-methyl-piperidine-4-carboxylic acid, or a pharmaceutically acceptable salt thereof.

11. The compound of claim 1, wherein the compound is 1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-4-phenyl-piperidine-4-carboxylic acid, or a pharmaceutically acceptable salt thereof.

12. The compound of claim 1, wherein the compound is 1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-perhydro-azepine-4-carboxylic acid or a pharmaceutically acceptable salt thereof.

13. The compound of claim 1, wherein the compound is {1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-piperidin-4-yl}-acetic acid, or a pharmaceutically acceptable salt thereof.

14. The compound of claim 1, wherein the compound is 1-[7-(trans-4-tert-butyl-cyclohexyloxy)-isoquinolin-3-ylmethyl]-piperidine-4-carboxylic acid, or a pharmaceutically acceptable salt thereof.

15. The compound of claim 1, wherein the compound is 1-((6-(cyclopentyloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid, or a pharmaceutically acceptable salt thereof.

16. The compound of claim 1, wherein the compound is 1-((6-(tetrahydro-2H-pyran-4-yloxy)naphthalen-2-yl)methyl)piperidine-4-carboxylic acid or a pharmaceutically acceptable salt thereof.

17. The compound of claim 1, wherein the compound is 1-[6-(4-tert-butyl-cyclohexyloxy)-naphthalen-2-ylmethyl]-piperidine-2-carboxylic acid, or a pharmaceutically acceptable salt thereof.

18. The compound or pharmaceutically acceptable salt of any one of the preceding claims, wherein the compound has a greater affinity for the S1P4 receptor, by at least 5-fold, than for S1P1 receptor, S1P2 receptor, S1P3 receptor, or S1P5 receptor.

19. A pharmaceutical composition comprising the compound or pharmaceutically acceptable salt of any one of claims 1 to 18, and a pharmaceutically acceptable excipient or carrier.

20. The compound or pharmaceutically acceptable salt of any one of claims 1 to 18, for use in a method for prevention or treatment of a neurologic disease in a mammal.

21. The compound or pharmaceutically acceptable salt for use according to claim 20, wherein the neurologic disease is Alzheimer's disease, Parkinson's disease, Huntington's disease, a motor neuron disease, amyotrophic lateral sclerosis, multiple sclerosis, neuronal trauma, or cerebral ischemia.

22. The compound or pharmaceutically acceptable salt of any one of claims 1 to 18, for use in a method for prevention or treatment of neuropathic pain in a mammal.

23. The compound or pharmaceutically acceptable salt of any one of claims 1 to 18, for use in a method for prevention or treatment of an autoimmune disease in a mammal.

24. The compound or pharmaceutically acceptable salt for use according to claim 23, wherein the autoimmune disease is multiple sclerosis.

25. The compound or pharmaceutically acceptable salt of any one of claims 1 to 18, for use in method of treating or preventing multiple sclerosis, an autoimmune disease, a chronic inflammatory disorder, asthma, an inflammatory neuropathy, arthritis, transplantation rejection, Crohn's disease, ulcerative colitis, lupus erythematosis, psoriasis, an ischemia-reperfusion injury, a solid tumor, a tumor metastasis, a disease associated with angiogenesis, a vascular disease, a pain condition, an acute viral disease, an inflammatory bowel condition, insulin-dependent diabetes, or non-insulin dependent diabetes.

26. The compound or pharmaceutically acceptable salt of any one of claims 1 to 18, for use in a method of treating multiple sclerosis in combination with at least one further medicament used in the treatment of multiple sclerosis.

27. The compound or pharmaceutically acceptable salt for use according to claim 26, wherein the further medicament is natalizumab, dimethyl fumarate, an interferon, or glatiramer acetate, optionally wherein the interferon is a pegylated interferon, a non-pegylated interferon, interferon β-1a or pegylated interferon β -1a.