CLAIMS

1. A nicotinic acetylcholine receptor alpha 7 agonist or a nicotinic acetylcholine receptor alpha 7 positive allosteric modulator for use in the treatment, prevention or delay of progression of dyskinesia associated with dopamine agonist therapy in Parkinson's Disease.

2. A nicotinic acetylcholine receptor alpha 7 agonist for use in the treatment, prevention or delay of progression of dyskinesia associated with dopamine agonist therapy in Parkinson's Disease.

3. A compound according to any of claims 1 or 2, wherein the therapy comprises the administration of levodopa.

4. A method for the treatment, prevention or delay of progression of dyskinesia associated with dopamine agonist therapy in Parkinson's Disease in a subject in need of such treatment, which comprises administering to said subject a therapeutically effective amount of a nicotinic acetylcholine receptor alpha 7 agonist or a nicotinic acetylcholine receptor alpha 7 positive allosteric modulator.

5. A method for the treatment, prevention or delay of progression of dyskinesia associated with dopamine agonist therapy in Parkinson's Disease in a subject in need of such treatment, which comprises administering to said subject a therapeutically effective amount of a nicotinic acetylcholine receptor alpha 7 agonist.

6. A method according to claims 4 or 5, wherein the therapy comprises the administration of levodopa.

7. A method for the treatment or delay of progression of Parkinson's Disease in a subject in need of such treatment, which comprises administering to said subject a therapeutically effective amount of (i) a dopamine agonist and (ii) a α7-nAChR agonist or a α7-nAChR positive allosteric modulator,
wherein the daily dosage of the dopamine agonist is reduced compared to the daily dosage of said dopamine agonist needed to reach an equal control of Parkinson's Disease in the

subject without co-administration of the α7-nAChR agonist or the α7-nAChR positive allosteric modulator.

8. A method according to claim 7, wherein the dopamine agonist comprises levodopa.

9. A pharmaceutical composition comprising a nicotinic acetylcholine receptor alpha 7 agonist or a nicotinic acetylcholine receptor alpha 7 positive allosteric modulator for the treatment, prevention or delay of progression of dyskinesia associated with dopamine agonist therapy in Parkinson's Disease.

10. A pharmaceutical composition comprising a nicotinic acetylcholine receptor alpha 7 agonist for the treatment, prevention or delay of progression of dyskinesia associated with dopamine agonist therapy in Parkinson's Disease.

11. A composition according to claims 9 or 10, wherein the therapy comprises the administration of levodopa.

12. A combination comprising (A) a nicotinic acetylcholine receptor alpha 7 agonist or nicotinic acetylcholine receptor alpha 7 positive allosteric modulator; and
(B) at least one of levodopa, a levodopa decarboxylase inhibitor, a catechol-O-methyl transferase inhibitor, a monoamine oxidase B-inhibitor or a dopamine receptor agonist.

13. A combination comprising (A) a nicotinic acetylcholine receptor alpha 7 agonist; and (B) at least one of levodopa, a levodopa decarboxylase inhibitor, a catechol-O-methyl transferase inhibitor, a monoamine oxidase B-inhibitor or a dopamine receptor agonist.

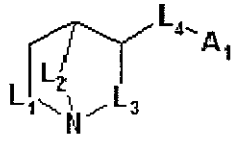
14. A pharmaceutical composition comprising (A) a nicotinic acetylcholine receptor alpha 7 agonist or a nicotinic acetylcholine receptor alpha 7 positive allosteric modulator; and
(B) at least one of levodopa, a levodopa decarboxylase inhibitor, a catechol-O-methyl transferase inhibitor, a monoamine oxidase B-inhibitor or a dopamine receptor agonist.

15. A pharmaceutical composition comprising (A) a nicotinic acetylcholine receptor alpha 7 agonist; and (B) at least one of levodopa, a levodopa decarboxylase inhibitor, a catechol-O-

methyl transferase inhibitor, a monoamine oxidase B-inhibitor or a dopamine receptor agonist.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. Use of a compound of formula (I)



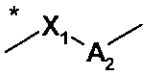
(I),

wherein

L_1 is $-CH_2-$; L_2 is $-CH_2-$ or $-CH_2-CH_2-$; and L_3 is $-CH_2-$ or $-CH(CH_3)-$; or

L_1 is $-CH_2-CH_2-$; L_2 is $-CH_2-$; and L_3 is $-CH_2-CH_2-$;

L_4 is the group L4b

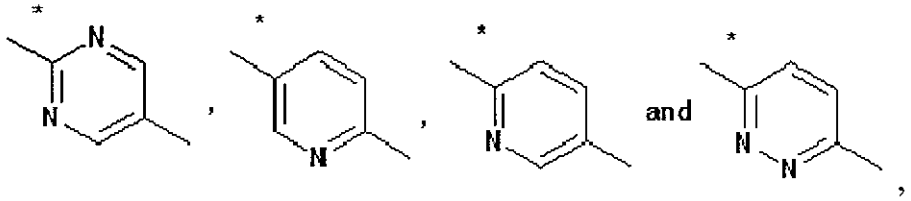


L4b

wherein the bond marked with the asterisk is attached to the azabicycloalkyl moiety;

X_1 is –O- or –NH-;

A_2 is selected from



wherein the bond marked with the asterisk is attached to X_1;

A_1 is a five- to ten-membered monocyclic or fused polycyclic aromatic ring system which may contain from 1 to 4 hetero atoms selected from nitrogen, oxygen and sulfur, wherein the ring system may contain not more than 2 oxygen atoms and not more than 2 sulfur atoms, and wherein the ring system may be substituted once or more than once by R_2, and wherein a substituent on a nitrogen in a heterocyclic ring system may not be halogen;

each R_2 independently is C_{1-6}alkyl, C_{1-6}halogenalkyl, C_{1-6}alkoxy, C_{1-6}halogenalkoxy, halogen, cyano or a three- to six-membered monocyclic ring system which may be aromatic, saturated or partially saturated and which may contain from 1 to 4 hetero atoms selected from nitrogen, oxygen and sulfur, and wherein each ring system may contain not

more than 2 oxygen atoms and not more than 2 sulfur atoms, and wherein each ring system may in turn be substituted once or more than once by C_{1-6}alkyl, C_{1-6}halogenalkyl, C_{1-6}alkoxy, C_{1-6}halogenalkoxy, halogen or cyano, and wherein a substituent on a nitrogen in a heterocyclic ring system may not be halogen ;

or two R_2 at adjacent ring atoms form a C_{3-4}alkylene group, wherein 1-2 carbon atoms may be replaced by X_2, and wherein the C_{3-4}alkylene group may be substituted once or more than once by R_3;

each X_2 independently is –O- or -N(R_4)-;

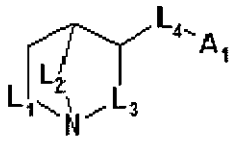
each R_4 independently is hydrogen or C_{1-6}alkyl; and

each R_3 independently is halogen or C_{1-6}alkyl;

in free base form or in acid addition salt form,

in the manufacture of a medicament for the treatment, prevention or delay of progression of dyskinesia associated with dopamine agonist therapy in Parkinson's Disease.

2. A composition comprising a compound of formula (I)



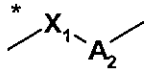
(I),

wherein

L_1 is $–CH_2-$; L_2 is $–CH_2-$ or $–CH_2-CH_2-$; and L_3 is $–CH_2-$ or $–CH(CH_3)-$; or

L_1 is $–CH_2-CH_2-$; L_2 is $–CH_2-$; and L_3 is $–CH_2-CH_2-$;

L_4 is the group L4b

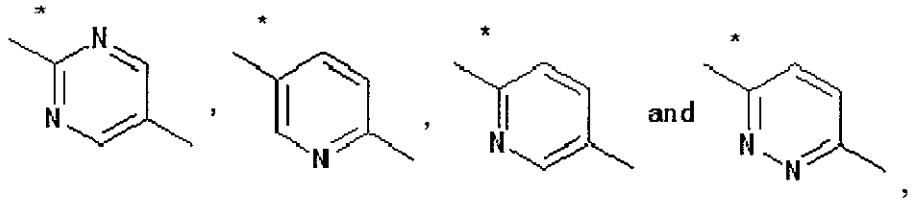


L4b

wherein the bond marked with the asterisk is attached to the azabicycloalkyl moiety;

X_1 is –O- or –NH-;

A_2 is selected from



wherein the bond marked with the asterisk is attached to X_1;

A_1 is a five- to ten-membered monocyclic or fused polycyclic aromatic ring system which may contain from 1 to 4 hetero atoms selected from nitrogen, oxygen and sulfur, wherein the ring system may contain not more than 2 oxygen atoms and not more than 2 sulfur atoms, and wherein the ring system may be substituted once or more than once by R_2, and wherein a substituent on a nitrogen in a heterocyclic ring system may not be halogen;

each R_2 independently is C_{1-6}alkyl, C_{1-6}halogenalkyl, C_{1-6}alkoxy, C_{1-6}halogenalkoxy, halogen, cyano or a three- to six-membered monocyclic ring system which may be aromatic, saturated or partially saturated and which may contain from 1 to 4 hetero atoms selected from nitrogen, oxygen and sulfur, and wherein each ring system may contain not more than 2 oxygen atoms and not more than 2 sulfur atoms, and wherein each ring system may in turn be substituted once or more than once by C_{1-6}alkyl, C_{1-6}halogenalkyl, C_{1-6}alkoxy, C_{1-6}halogenalkoxy, halogen or cyano, and wherein a substituent on a nitrogen in a heterocyclic ring system may not be halogen ;

or two R_2 at adjacent ring atoms form a C_{3-4}alkylene group, wherein 1-2 carbon atoms may be replaced by X_2, and wherein the C_{3-4}alkylene group may be substituted once or more than once by R_3;

each X_2 independently is –O- or -N(R_4)-;

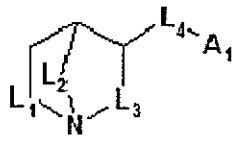
each R_4 independently is hydrogen or C_{1-6}alkyl; and

each R_3 independently is halogen or C_{1-6}alkyl;

in free base form or in acid addition salt form,

and levodopa.

3. A combination comprising a compound of formula (I)



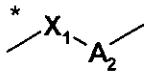
(I),

wherein

L_1 is $-CH_2-$; L_2 is $-CH_2-$ or $-CH_2-CH_2-$; and L_3 is $-CH_2-$ or $-CH(CH_3)-$; or

L_1 is $-CH_2-CH_2-$; L_2 is $-CH_2-$; and L_3 is $-CH_2-CH_2-$;

L_4 is the group L4b

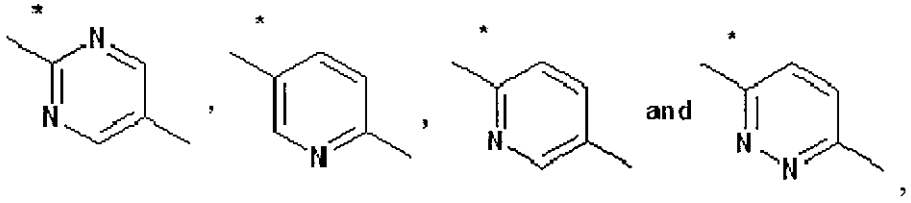


L4b

wherein the bond marked with the asterisk is attached to the azabicycloalkyl moiety;

X_1 is –O- or –NH-;

A_2 is selected from



wherein the bond marked with the asterisk is attached to X_1;

A_1 is a five- to ten-membered monocyclic or fused polycyclic aromatic ring system which may contain from 1 to 4 hetero atoms selected from nitrogen, oxygen and sulfur, wherein the ring system may contain not more than 2 oxygen atoms and not more than 2 sulfur atoms, and wherein the ring system may be substituted once or more than once by R_2, and wherein a substituent on a nitrogen in a heterocyclic ring system may not be halogen;

each R_2 independently is C_{1-6}alkyl, C_{1-6}halogenalkyl, C_{1-6}alkoxy, C_{1-6}halogenalkoxy, halogen, cyano or a three- to six-membered monocyclic ring system which may be aromatic, saturated or partially saturated and which may contain from 1 to 4 hetero atoms selected from nitrogen, oxygen and sulfur, and wherein each ring system may contain not more than 2 oxygen atoms and not more than 2 sulfur atoms, and wherein each ring system may in turn be substituted once or more than once by C_{1-6}alkyl, C_{1-6}halogenalkyl,

C_{1-6}alkoxy, C_{1-6}halogenalkoxy, halogen or cyano, and wherein a substituent on a nitrogen in a heterocyclic ring system may not be halogen;
or two R_2 at adjacent ring atoms form a C_{3-4}alkylene group, wherein 1-2 carbon atoms may be replaced by X_2, and wherein the C_{3-4}alkylene group may be substituted once or more than once by R_3;
each X_2 independently is –O- or -N(R_4)-;
each R_4 independently is hydrogen or C_{1-6}alkyl; and
each R_3 independently is halogen or C_{1-6}alkyl;
in free base form or in acid addition salt form,
and levodopa,
when used simultaneously, separately or sequentially in therapy.

4. The composition according to claim 2 or combination according to claim 3 when used simultaneously, separately or sequentially in therapy wherein the compound of formula (I) is selected from the group consisting of
(R)-3-(5-phenyl-pyrimidin-2-yloxy)-1-aza-bicyclo[2.2.2]octane;
(R)-3-(5-p-tolyl-pyrimidin-2-yloxy)-1-aza-bicyclo[2.2.2]octane;
(R)-3-(5-(2-fluoro-4-methyl-phenyl)-pyrimidin-2-yloxy)-1-aza-bicyclo[2.2.2]octane;
(R)-3-(5-(3,4-dimethyl-phenyl)-pyrimidin-2-yloxy)-1-aza-bicyclo[2.2.2]octane;
(R)-3-(6-p-tolyl-pyridin-3-yloxy)-1-aza-bicyclo[2.2.2]octane;
(R)-3-(6-phenyl-pyridin-3-yloxy)-1-aza-bicyclo[2.2.2]octane;
(R)-3-(6-(3,4-dimethyl-phenyl)-pyridin-3-yloxy)-1-aza-bicyclo[2.2.2]octane;
(R)-3-[6-(2-fluoro-4-methyl-phenyl)-pyridazin-3-yloxy]-1-aza-bicyclo[2.2.2]octane;
(R)-3-[6-(4,5-dimethyl-2-fluoro-phenyl)-pyridazin-3-yloxy]-1-aza-bicyclo[2.2.2]octane;
(R)-3-[6-(3,4-dimethyl-phenyl)-pyridazin-3-yloxy]-1-aza-bicyclo[2.2.2]octane;
(R)-3-[6-(4-methyl-phenyl)-pyridazin-3-yloxy]-1-aza-bicyclo[2.2.2]octane;
(R)-3-[6-(2,5-difluoro-4-methyl-phenyl)-pyridazin-3-yloxy]-1-aza-bicyclo[2.2.2]octane;
(2S,3R)-3-[6-(1H-indol-5-yl)-pyridazin-3-yloxy]-2-methyl-1-aza-bicyclo[2.2.2]octane;
(2R,3S)-3-[6-(1H-indol-5-yl)-pyridazin-3-yloxy]-2-methyl-1-aza-bicyclo[2.2.2]octane;
(2S,3R)-3-[5-(1H-indol-5-yl)-pyrimidin-2-yloxy]-2-methyl-1-aza-bicyclo[2.2.2]octane;
(2R,3S)-3-[5-(1H-indol-5-yl)-pyrimidin-2-yloxy]-2-methyl-1-aza-bicyclo[2.2.2]octane;

3-[6-(1H-indol-5-yl)-pyridin-3-yloxy]-2-methyl-1-aza-bicyclo[2.2.2]octane;
(2S,3R)-2-methyl-3-[6-(5-methyl-thiophen-2-yl)-pyridazin-3-yloxy]-1-aza-bicyclo[2.2.2]octane;
3-[6-(2,3-dimethyl-1H-indol-5-yl)-pyridazin-3-yloxy]-2-methyl-1-aza-bicyclo[2.2.2]octane;
trans-2-methyl-1-aza-bicyclo[2.2.2]oct-3-yl)-(6-phenyl-pyridin-3-yl)-amine; and
trans -[6-(1H-indol-5-yl)-pyridin-3-yl]-(2-methyl-1-aza-bicyclo[2.2.2]oct-3-yl)-amine;
wherein each of said compound is in free base form or in acid addition salt form.

5. The composition according to claim 2 or combination according to claim 3 when used simultaneously, separately or sequentially in therapy wherein the compound of formula (I) is selected from the group consisting of
(4S,5R)-4-[5-(1H-indol-5-yl)-pyrimidin-2-yloxy]-1-aza-bicyclo[3.3.1]nonane;
5-{2-[(4S,5R)-(1-aza-bicyclo[3.3.1]non-4-yl)oxy]-pyrimidin-5-yl}-1,3-dihydro-indol-2-one;
(4S,5R)-4-[6-(1H-indol-5-yl)-pyridin-3-yloxy]-1-aza-bicyclo[3.3.1]nonane;
(4S,5R)-4-[5-(1H-indol-5-yl)-pyridin-2-yloxy]-1-aza-bicyclo[3.3.1]nonane;
(4S,5R)-4-[6-(1H-indol-5-yl)-pyridazin-3-yloxy]-1-aza-bicyclo[3.3.1]nonane;
5-{6-[(4S,5R)-(1-aza-bicyclo[3.3.1]non-4-yl)oxy]-pyridazin-3-yl}-1,3-dihydro-indol-2-one;
(1-aza-bicyclo[3.3.1]non-4-yl)-[5-(1H-indol-5-yl)-pyridin-2-yl]-amine;
(1-aza-bicyclo[3.3.1]non-4-yl)-[5-(1H-indol-5-yl)-pyrimidin-2-yl]-amine;
(1-aza-bicyclo[3.3.1]non-4-yl)-[6-(1H-indol-5-yl)-pyridin-3-yl]-amine;
(1-aza-bicyclo[3.3.1]non-4-yl)-[6-(1H-indol-5-yl)-pyridin-3-yl]-amine;
(1-aza-bicyclo[3.3.1]non-4-yl)-[5-(1H-indol-4-yl)-pyrimidin-2-yl]-amine; and
(1-aza-bicyclo[3.3.1]non-4-yl)-[6-(1H-indol-5-yl)-pyridazin-3-yl]-amine;
wherein each of said compound is in free base form or in acid addition salt form.