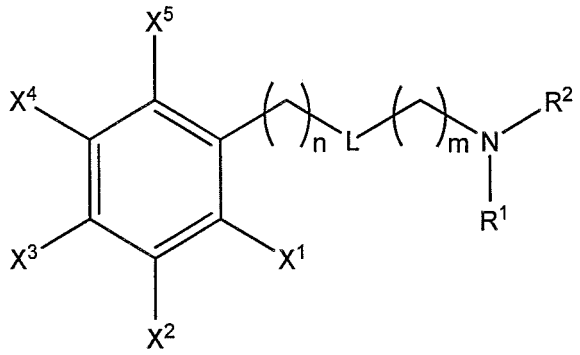


(I),

and pharmaceutically acceptable salts and solvates therof,

wherein

$\mathbf{X^1}$ and $\mathbf{X^5}$ are independently selected from the group consisting of hydrogen, halogen, C1-C4-alkyl, C1-C4-haloalkyl, cyano, nitro, di(C1-C4-alkyl)amino, -NHCOO**R'**, and -COO**R'**, wherein **R'** is methyl, ethyl, *n*-propyl, *n*-butyl, *iso*-propyl, *iso*-butyl or *tert*-butyl;

$\mathbf{X^2}$, $\mathbf{X^3}$, $\mathbf{X^4}$ are independently selected from the group consisting of hydrogen, chloro, C1-C4-alkyl, C1-C4-haloalkyl, C1-C4-alkoxy, cyano, nitro, di(C1-C4-alkyl)amino, -NHCOO**R'**, and -COO**R'**, wherein **R'** is methyl, ethyl, *n*-propyl, *n*-butyl, *iso*-propyl, *iso*-butyl or *tert*-butyl; with the proviso that at least one of $\mathbf{X^1}$, $\mathbf{X^2}$, $\mathbf{X^3}$, $\mathbf{X^4}$, $\mathbf{X^5}$ is not hydrogen and that at least one of $\mathbf{X^2}$, $\mathbf{X^3}$, $\mathbf{X^4}$ is not C1-C4-alkoxy;

L is -NHC(O)- or -$NHSO_2$-;

n is 0, 1 or 2;

m is 1, 2, 3, 4 or 5;

$\mathbf{R^1}$ is C1-C2 alkyl, and

$\mathbf{R^2}$ is 5- or 6-membered arylalkyl, 5- or 6-membered cycloalkylalkyl, wherein the cyclic moiety of said arylalkyl or cycloalkylalkyl is optionally substituted by one or more substituents independently selected from halogen, preferably fluoro; or

$\mathbf{R^1}$ and $\mathbf{R^2}$ form together with the nitrogen atom they are attached to a 5-

membered heterocyclyl group, which is fused to a 5- or 6-membered aryl group and which is optionally substituted by one or more substituents independently selected from C1-C3 alkyl, preferably methyl, and wherein the resulting heterocyclic moiety is optionally substituted by one or more substituents independently selected from halogen, preferably fluoro.

In one embodiment, the compound of Formula I is not one, more or all of the following:

N-[3-[benzyl(methyl)amino]propyl]-4-chlorobenzamide;

N-[3-[benzyl(methyl)amino]propyl]benzamide;

N-[3-[benzyl(methyl)amino]propyl]-4-fluorobenzamide;

N-[3-[benzyl(methyl)amino]propyl]-4-bromobenzamide;

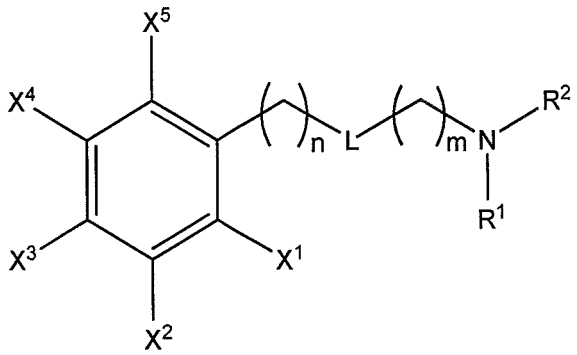
N-[3-[benzyl(methyl)amino]propyl]-4-methoxybenzamide;

N'-benzyl-N-[(4-chlorophenyl)methyl]-N'-methylpropane-1,3-diamine; and

N-[3-[benzyl(methyl)amino]propyl]-4-chlorobenzenesulfonamide.

In another aspect, the present disclosure provides a pharmaceutical composition comprising a compound as disclosed herein or a pharmaceutically acceptable salt or solvate thereof and at least one pharmaceutically acceptable carrier, diluent, excipient and/or adjuvant.

In another aspect, the present disclosure provides a compound of Formula I:



(I),

or a pharmaceutically acceptable salt or solvate thereof for use as a medicament;

wherein

$\mathbf{X^1}$ and $\mathbf{X^5}$ are independently selected from the group consisting of hydrogen, halogen, C1-C4-alkyl, C1-C4-haloalkyl, cyano, nitro, di(C1-C4-alkyl)amino, -NHCOO**R'**, and -COO**R'**, wherein **R'** is methyl, ethyl, *n*-propyl, *n*-butyl, *iso*-propyl, *iso*-butyl or *tert*-butyl;

$\mathbf{X^2}$, $\mathbf{X^3}$, $\mathbf{X^4}$ are independently selected from the group consisting of hydrogen, chloro, C1-C4-alkyl, C1-C4-haloalkyl, C1-C4-alkoxy, cyano, nitro, di(C1-C4-alkyl)amino, -NHCOO**R'**, and -COO**R'**, wherein **R'** is methyl, ethyl, *n*-propyl, *n*-butyl, *iso*-propyl, *iso*-butyl or *tert*-butyl; with the proviso that at least one of $\mathbf{X^1}$, $\mathbf{X^2}$, $\mathbf{X^3}$, $\mathbf{X^4}$, $\mathbf{X^5}$ is not hydrogen and that at least one of $\mathbf{X^2}$, $\mathbf{X^3}$, $\mathbf{X^4}$ is not C1-C4-alkoxy;

L is –C(O)NH-, -NHC(O)-, -SO_2NH-, -NHSO_2-, or –NH-;

n is 0, 1 or 2;

m is 1, 2, 3, 4 or 5;

$\mathbf{R^1}$ is H or alkyl, and

$\mathbf{R^2}$ is 5- or 6-membered arylalkyl, 5- or 6-membered cycloalkylalkyl, wherein the cyclic moiety of said arylalkyl or cycloalkylalkyl is optionally substituted by one or more substituents independently selected from halogen; or

$\mathbf{R^1}$ and $\mathbf{R^2}$ form together with the nitrogen atom they are attached to a 5-membered heterocyclyl group, which is fused to a 5- or 6-membered aryl group and which is optionally substituted by one or more substituents independently selected from C1-C3 alkyl, preferably methyl, and wherein the resulting heterocyclic moiety is optionally substituted by one or more substituents independently selected from halogen.

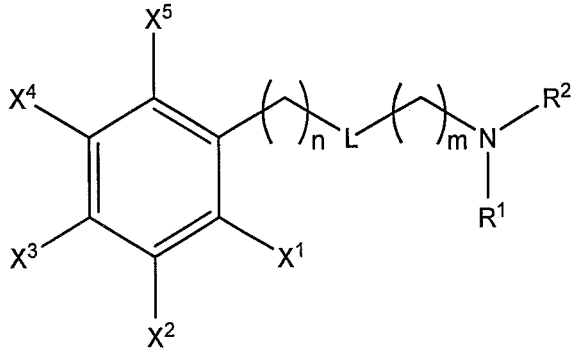
The present disclosure also relates to the use of the above compounds or their pharmaceutically acceptable salts and solvates as modulators of sigma-1 receptor activity, preferably as agonists of sigma-1 receptors.

The present disclosure further provides the use of a compound according

to the present disclosure or a pharmaceutically acceptable salt or solvate thereof as a medicament. Preferably, the medicament is used for the treatment

and/or prevention of sigma-1 related diseases.

In yet another aspect, the present disclosure provides a use of a compound of Formula I:



(I),

or a pharmaceutically acceptable salt or solvate thereof in the manufacture of a medicament for treating and/or preventing a sigma-1 receptor related disease selected from neurodegenerative diseases, psychiatric disorders, drug addiction, pain and cancer,

wherein

X^1 and **X**^{5} are independently selected from the group consisting of hydrogen, halogen, C1-C4-alkyl, C1-C4-haloalkyl, cyano, nitro, di(C1-C4-alkyl)amino, -NHCOO**R'**, and -COO**R'**, wherein **R'** is methyl, ethyl, *n*-propyl, *n*-butyl, *iso*-propyl, *iso*-butyl or *tert*-butyl;

X^2, **X**^{3}, **X**^{4} are independently selected from the group consisting of hydrogen, chloro, C1-C4-alkyl, C1-C4-haloalkyl, C1-C4-alkoxy, cyano, nitro, di(C1-C4-alkyl)amino, -NHCOO**R'**, and -COO**R'**, wherein **R'** is methyl, ethyl, *n*-propyl, *n*-butyl, *iso*-propyl, *iso*-butyl or *tert*-butyl; with the proviso that at least one of **X**^{1}, **X**^{2}, **X**^{3}, **X**^{4}, **X**^{5} is not hydrogen and that at least one of **X**^{2}, **X**^{3}, **X**^{4} is not C1-C4-alkoxy;

L is –C(O)NH-, -NHC(O)-, -SO_2NH-, -NHSO_2-, or –NH-;

n is 0, 1 or 2;

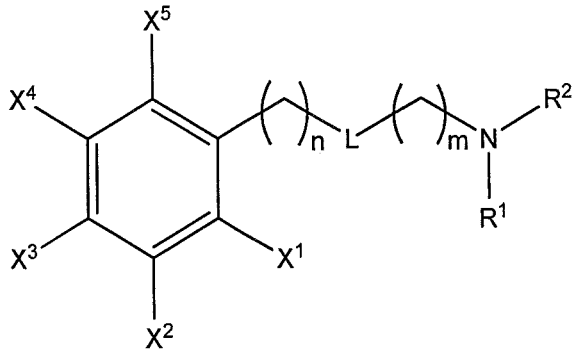
m is 1, 2, 3, 4 or 5;

$\mathbf{R^1}$ is H or alkyl, and

$\mathbf{R^2}$ is 5- or 6-membered arylalkyl, 5- or 6-membered cycloalkylalkyl, wherein the cyclic moiety of said arylalkyl or cycloalkylalkyl is optionally substituted by one or more substituents independently selected from halogen; or

$\mathbf{R^1}$ and $\mathbf{R^2}$ form together with the nitrogen atom they are attached to a 5-membered heterocyclyl group, which is fused to a 5- or 6-membered aryl group and which is optionally substituted by one or more substituents independently selected from C1-C3 alkyl, preferably methyl, and wherein the resulting heterocyclic moiety is optionally substituted by one or more substituents independently selected from halogen.

In a further aspect, the present disclosure provides a use of a compound of Formula I:



(I),

or a pharmaceutically acceptable salt or solvate thereof in the manufacture of a medicament for the diagnosis of a sigma-1 receptor related disease selected from neurodegenerative diseases, psychiatric disorders, drug addiction, pain and cancer,

wherein

$\mathbf{X^1}$ and $\mathbf{X^5}$ are independently selected from the group consisting of hydrogen, halogen, C1-C4-alkyl, C1-C4-haloalkyl, cyano, nitro, di(C1-C4-alkyl)amino, -NHCOOR', and -COOR', wherein R' is methyl, ethyl, *n*-propyl, *n*-butyl, *iso*-propyl, *iso*-butyl or *tert*-

butyl;

$\mathbf{X^2}$, $\mathbf{X^3}$, $\mathbf{X^4}$ are independently selected from the group consisting of hydrogen, chloro, C1-C4-alkyl, C1-C4-haloalkyl, C1-C4-alkoxy, cyano, nitro, di(C1-C4-alkyl)amino, -NHCOO**R'**, and -COO**R'**, wherein **R'** is methyl, ethyl, *n*-propyl, *n*-butyl, *iso*-propyl, *iso*-butyl or *tert*-butyl; with the proviso that at least one of $\mathbf{X^1}$, $\mathbf{X^2}$, $\mathbf{X^3}$, $\mathbf{X^4}$, $\mathbf{X^5}$ is not hydrogen and that at least one of $\mathbf{X^2}$, $\mathbf{X^3}$, $\mathbf{X^4}$ is not C1-C4-alkoxy;

L is –C(O)NH-, -NHC(O)-, -SO_2NH-, -NHSO_2-, or –NH-;

n is 0, 1 or 2;

m is 1, 2, 3, 4 or 5;

$\mathbf{R^1}$ is H or alkyl, and

$\mathbf{R^2}$ is 5- or 6-membered arylalkyl, 5- or 6-membered cycloalkylalkyl, wherein the cyclic moiety of said arylalkyl or cycloalkylalkyl is optionally substituted by one or more substituents independently selected from halogen; or

$\mathbf{R^1}$ and $\mathbf{R^2}$ form together with the nitrogen atom they are attached to a 5-membered heterocyclyl group, which is fused to a 5- or 6-membered aryl group and which is optionally substituted by one or more substituents independently selected from C1-C3 alkyl, preferably methyl, and wherein the resulting heterocyclic moiety is optionally substituted by one or more substituents independently selected from halogen.

In another aspect, the present disclosure provides a diagnostic imaging composition comprising a compound as disclosed herein or a pharmaceutically acceptable salt or solvate thereof and at least one pharmaceutically acceptable carrier, diluent, excipient and/or adjuvant.

DETAILED DESCRIPTION OF THE INVENTION

haloalkyl radicals include chloromethyl, 1-bromoethyl, fluoromethyl, difluoromethyl, trifluoromethyl, 1,1,1-trifluoroethyl and the like. A preferred haloalkyl radical is trifluoromethyl.

The term “cycloalkyl” as used herein is a monovalent, saturated, monocyclic or bicyclic hydrocarbyl group. Cycloalkyl groups may comprise 3 or more carbon atoms in the ring and generally, according to this invention comprise from 3 to 10, more preferably from 3 to 8 carbon atoms still more preferably from 3 to 6 carbon atoms. Examples of cycloalkyl groups include but are not limited to cyclopropyl, cyclobutyl, cyclopentyl, and cyclohexyl.

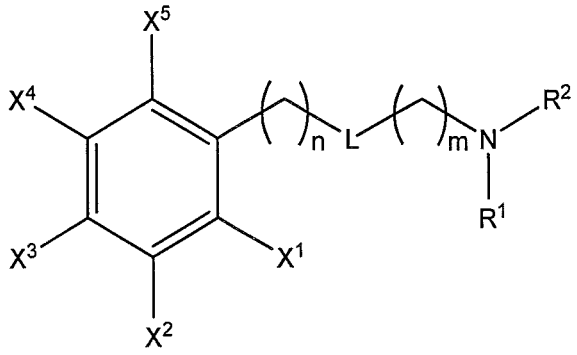
The terms "heterocyclyl", “heterocycloalkyl” or "heterocyclo" as used herein by itself or as part of another group refer to non-aromatic, fully saturated or partially unsaturated cyclic groups (for example, 3 to 7 member monocyclic, 7 to 11 member bicyclic, or containing a total of 3 to 10 ring atoms) which have at least one heteroatom in at least one carbon atom-containing ring. Each ring of the heterocyclic group containing a heteroatom may have 1, 2, 3 or 4 heteroatoms selected from nitrogen, oxygen and/or sulfur atoms, where the nitrogen and sulfur heteroatoms may optionally be oxidized and the nitrogen heteroatoms may optionally be quaternized. The heterocyclic group may be attached at any heteroatom or carbon atom of the ring or ring system, where valence allows.

The term “aryl" as used herein refers to a polyunsaturated, aromatic hydrocarbyl group having a single ring (*i.e.* phenyl) or multiple aromatic rings fused together (e.g. naphtyl), typically containing 5 to 12 atoms; preferably 6 to 10, wherein at least one ring is aromatic.

The term “heteroaryl” as used herein by itself or as part of another group refers but is not limited to 5 to 12 carbon-atom aromatic rings or ring systems containing 1 to 2 rings which are fused together, typically containing 5 to 6 atoms; at least one of which is aromatic, in which one or more carbon atoms in one or more of these rings is replaced by oxygen, nitrogen and/or sulfur atoms where the nitrogen and sulfur heteroatoms may optionally be oxidized and the

CLAIMS

1. A compound of Formula I:



(I),

and pharmaceutically acceptable salts and solvates therof,

wherein

X^1 and X^5 are independently selected from the group consisting of hydrogen, halogen, C1-C4-alkyl, C1-C4-haloalkyl, cyano, nitro, di(C1-C4-alkyl)amino, -NHCOOR', and -COOR', wherein R' is methyl, ethyl, *n*-propyl, *n*-butyl, *iso*-propyl, *iso*-butyl or *tert*-butyl;

X^2, X^3, X^4 are independently selected from the group consisting of hydrogen, chloro, C1-C4-alkyl, C1-C4-haloalkyl, C1-C4-alkoxy, cyano, nitro, di(C1-C4-alkyl)amino, -NHCOOR', and -COOR', wherein R' is methyl, ethyl, *n*-propyl, *n*-butyl, *iso*-propyl, *iso*-butyl or *tert*-butyl; with the proviso that at least one of X^1, X^2, X^3, X^4, X^5 is not hydrogen and that at least one of X^2, X^3, X^4 is not C1-C4-alkoxy;

L is -NHC(O)- or -$NHSO_2$-;

n is 0, 1 or 2;

m is 1, 2, 3, 4 or 5;

R^1 is C_1-C_2 alkyl, and

R^2 is 5- or 6-membered arylalkyl, 5- or 6-membered cycloalkylalkyl, wherein the cyclic moiety of said arylalkyl or cycloalkylalkyl is optionally substituted by one or more substituents independently selected from halogen; or

$\mathbf{R^1}$ and $\mathbf{R^2}$ form together with the nitrogen atom they are attached to a 5-membered heterocyclyl group, which is fused to a 5- or 6-membered aryl group and which is optionally substituted by one or more substituents independently selected from C1-C3 alkyl, preferably methyl, and wherein the resulting heterocyclic moiety is optionally substituted by one or more substituents independently selected from halogen.

2. The compound according to Claim 1 and pharmaceutically acceptable salts or solvates thereof, wherein

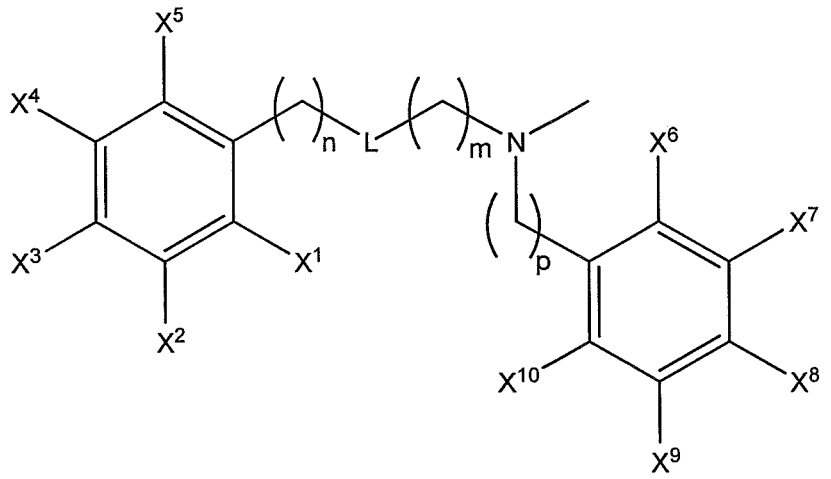
n is 1 and **L** is–NHC(O)-.

3. The compound according to Claim 1 or 2, and pharmaceutically acceptable salts or solvate thereof, wherein $\mathbf{R^1}$ is methyl.

4. The compound according to any of the preceeding claims, and pharmaceutically acceptable salts or solvates thereof, wherein $\mathbf{R^2}$ is 5- or 6-membered aryl-C1-C2-alkyl.

5. The compound according to any of the preceeding claims, and a pharmaceutically acceptable salts or solvates thereof, wherein **m** is 2, 3 or 4.

6. The compound according to any of the preceeding claims, having Formula III



III

and pharmaceutically acceptable salts and solvates thereof,

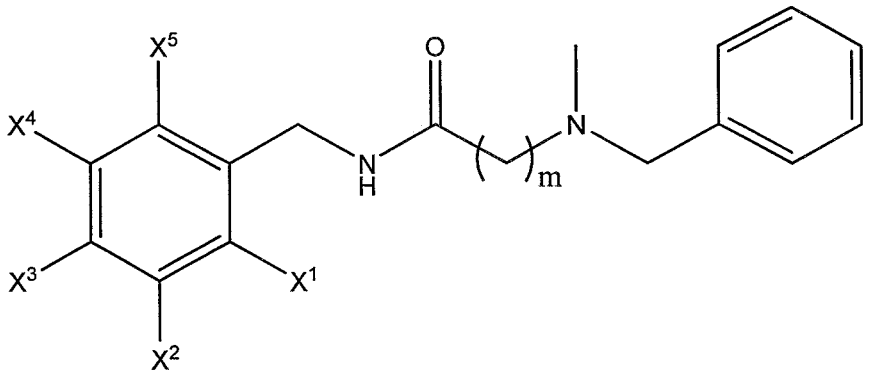
wherein

$\mathbf{X^1}$, $\mathbf{X^2}$, $\mathbf{X^3}$, $\mathbf{X^4}$, $\mathbf{X^5}$, **L**, **n** and **m** are as defined in any of the preceeding claims;

p is 1 or 2;

$\mathbf{X^6}$, $\mathbf{X^7}$, $\mathbf{X^8}$, $\mathbf{X^9}$, $\mathbf{X^{10}}$ are independently selected from H, halogen.

7. The compound according to claim 1, having Formula V



(V).

8. The compound according to Claim 1 selected from the group consisting of:

4-(benzylmethylamino)-*N*-(4-chlorophenyl)butanamide,

N-(4-chlorobenzyl)-3-(benzylmethylamino)propanamide,

N-(4-nitrobenzyl)-3-(benzylmethylamino)propanamide,

N-(4-cyanobenzyl)-3-(benzylmethylamino)propanamide,

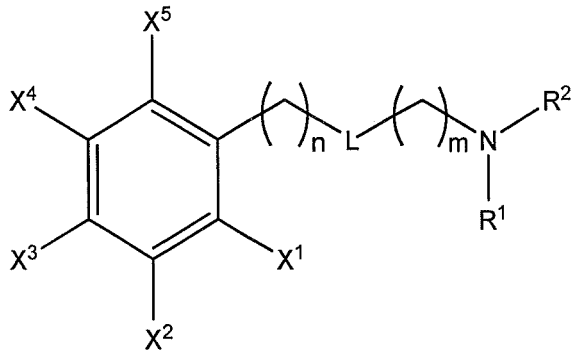
N-(2,4-dichlorobenzyl)-3-(benzylmethylamino)propanamide, and

N-(3-chlorobenzyl)-3-(benzylmethylamino)propanamide.

9. A pharmaceutical composition comprising a compound according to any one of the preceeding claims or a pharmaceutically acceptable salt or

solvate thereof and at least one pharmaceutically acceptable carrier, diluent, excipient and/or adjuvant.

10. A compound of Formula I:



(I),

or a pharmaceutically acceptable salt or solvate thereof for use as a medicament;

wherein

$\mathbf{X^1}$ and $\mathbf{X^5}$ are independently selected from the group consisting of hydrogen, halogen, C1-C4-alkyl, C1-C4-haloalkyl, cyano, nitro, di(C1-C4-alkyl)amino, -NHCOO**R'**, and -COO**R'**, wherein **R'** is methyl, ethyl, *n*-propyl, *n*-butyl, *iso*-propyl, *iso*-butyl or *tert*-butyl;

$\mathbf{X^2}$, $\mathbf{X^3}$, $\mathbf{X^4}$ are independently selected from the group consisting of hydrogen, chloro, C1-C4-alkyl, C1-C4-haloalkyl, C1-C4-alkoxy, cyano, nitro, di(C1-C4-alkyl)amino, -NHCOO**R'**, and -COO**R'**, wherein **R'** is methyl, ethyl, *n*-propyl, *n*-butyl, *iso*-propyl, *iso*-butyl or *tert*-butyl; with the proviso that at least one of $\mathbf{X^1}$, $\mathbf{X^2}$, $\mathbf{X^3}$, $\mathbf{X^4}$, $\mathbf{X^5}$ is not hydrogen and that at least one of $\mathbf{X^2}$, $\mathbf{X^3}$, $\mathbf{X^4}$ is not C1-C4-alkoxy;

L is –C(O)NH-, -NHC(O)-, -SO_2NH-, -NHSO_2-, or –NH-;

n is 0, 1 or 2;

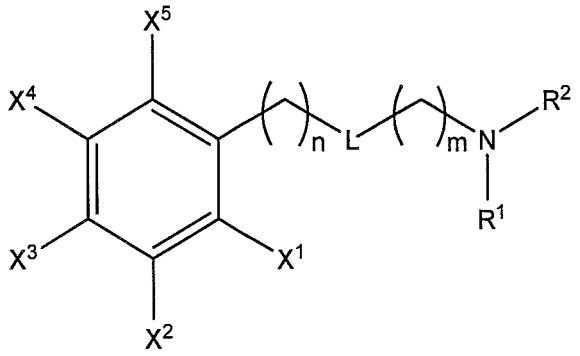
m is 1, 2, 3, 4 or 5;

$\mathbf{R^1}$ is H or alkyl, and

$\mathbf{R^2}$ is 5- or 6-membered arylalkyl, 5- or 6-membered cycloalkylalkyl, wherein the cyclic moiety of said arylalkyl or cycloalkylalkyl is optionally substituted by one or more substituents independently selected from halogen; or

R^1 and R^2 form together with the nitrogen atom they are attached to a 5-membered heterocyclyl group, which is fused to a 5- or 6-membered aryl group and which is optionally substituted by one or more substituents independently selected from C1-C3 alkyl, preferably methyl, and wherein the resulting heterocyclic moiety is optionally substituted by one or more substituents independently selected from halogen.

11. Use of a compound of Formula I:



(I),

or a pharmaceutically acceptable salt or solvate thereof in the manufacture of a medicament for treating and/or preventing a sigma-1 receptor related disease selected from neurodegenerative diseases, psychiatric disorders, drug addiction, pain and cancer;

wherein

X^1 and X^5 are independently selected from the group consisting of hydrogen, halogen, C1-C4-alkyl, C1-C4-haloalkyl, cyano, nitro, di(C1-C4-alkyl)amino, -NHCOO**R'**, and -COO**R'**, wherein **R'** is methyl, ethyl, *n*-propyl, *n*-butyl, *iso*-propyl, *iso*-butyl or *tert*-butyl;

X^2, X^3, X^4 are independently selected from the group consisting of hydrogen, chloro, C1-C4-alkyl, C1-C4-haloalkyl, C1-C4-alkoxy, cyano, nitro, di(C1-C4-alkyl)amino, -NHCOO**R'**, and -COO**R'**, wherein **R'** is methyl, ethyl, *n*-propyl, *n*-butyl, *iso*-propyl, *iso*-butyl or *tert*-butyl; with the proviso that at least one of X^1, X^2, X^3, X^4, X^5 is not hydrogen and that at least one of X^2, X^3, X^4 is not C1-C4-alkoxy;

L is –C(O)NH-, -NHC(O)-, -SO_2NH-, -NHSO_2-, or –NH-;

n is 0, 1 or 2;

m is 1, 2, 3, 4 or 5;

$\mathbf{R^1}$ is H or alkyl, and

$\mathbf{R^2}$ is 5- or 6-membered arylalkyl, 5- or 6-membered cycloalkylalkyl, wherein the cyclic moiety of said arylalkyl or cycloalkylalkyl is optionally substituted by one or more substituents independently selected from halogen; or

$\mathbf{R^1}$ and $\mathbf{R^2}$ form together with the nitrogen atom they are attached to a 5-membered heterocyclyl group, which is fused to a 5- or 6-membered aryl group and which is optionally substituted by one or more substituents independently selected from C1-C3 alkyl, preferably methyl, and wherein the resulting heterocyclic moiety is optionally substituted by one or more substituents independently selected from halogen.

12. Use according to claim 11, wherein the compound is selected from the group consisting of:

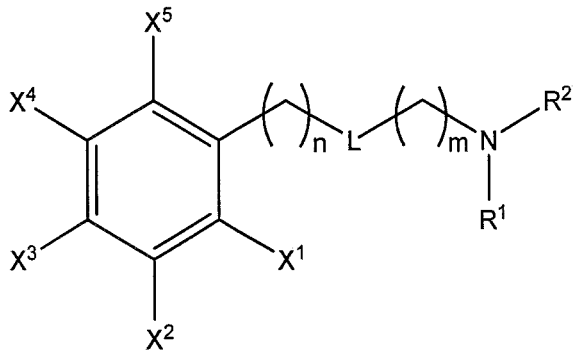
N-[3-(benzylmethylamino)propyl]-4-propylbenzamide,
N-[3-(benzylmethylamino)propyl]-4-butylbenzamide,
N-[3-(benzylmethylamino)propyl]-4-*tert*butylbenzamide,
N-[3-(benzylmethylamino)propyl]-4-trifluoromethylbenzamide,
N-[3-(benzylmethylamino)propyl]-2-chlorobenzamide,
N-[3-(benzylmethylamino)propyl]-3-chlorobenzamide,
N-[3-(2-(N-methylbenzyl)amino)ethyl]-4-chlorobenzamide,
N-[3-(benzylmethylamino)propyl]-4-chlorobenzamide,
N-[4-(benzylmethylamino)butyl]-4-chlorobenzamide,
N-[3-(N-methyl-2-phenylethylamino)propyl]-4-chlorobenzamide,
N-[3-(isoindolin-2-yl)methylamino)propyl]-4-chlorobenzamide,
N-[3-(benzylmethylamino)propyl]-2-bromobenzamide,
N-[3-(benzylmethylamino)propyl]-2,3-dichlorobenzamide,
N-[3-(benzylmethylamino)propyl]-2,4-dichlorobenzamide,
N-[3-(benzylmethylamino)propyl]-3,4-dichlorobenzamide,
N-[3-(benzylmethylamino)propyl]-3,5-dichlorobenzamide,
N-[3-(benzylmethylamino)propyl]-3-methoxybenzamide,
N-[3-(benzylmethylamino)propyl]-4-methoxybenzamide,
N-[3-(benzylmethylamino)propyl]-3-dimethylaminobenzamide,
N-[3-(benzylmethylamino)propyl]-4-cyanobenzamide,

N-[3-(benzylmethylamino)propyl]-4-nitrobenzamide,
N-(2-(benzyl(methyl)amino)ethyl)-3-chlorobenzamide,
N-(2-(benzyl(methyl)amino)ethyl)-2,4-dichlorobenzamide,
N-(2-(benzyl(methyl)amino)ethyl)-4-cyanobenzamide,
N-(2-(benzyl(methyl)amino)ethyl)-4-nitrobenzamide,
N-[3-(benzylmethylamino)propyl]-4-chlorobenzensulfonamide,
4-(benzylmethylamino)-*N*-(4-chlorophenyl)butanamide,
N-(4-chlorobenzyl)-3-(benzylmethylamino)propanamide,
N-(4-nitrobenzyl)-3-(benzylmethylamino)propanamide,
N-(4-cyanobenzyl)-3-(benzylmethylamino)propanamide,
N-(2,4-dichlorobenzyl)-3-(benzylmethylamino)propanamide,
N-(3-chlorobenzyl)-3-(benzylmethylamino)propanamide, and
N-(4-chlorobenzyl)-3-(benzylmethylamino)propanamine.

13. The use according to any of claims 11 and 12, wherein the sigma-1 receptor related disease is a neurodegenerative disease.

14. The use according to claim 13, wherein the neurodegenerative disease is selected from the group consisting of multiple sclerosis, Alzheimer's disease, Parkinson's disease, Huntington's disease, and Amyotrophic lateral sclerosis.

15. Use of a compound of Formula I:



(I),

or a pharmaceutically acceptable salt or solvate thereof in the manufacture of a medicament for the diagnosis of a sigma-1 receptor related disease selected from neurodegenerative diseases, psychiatric disorders, drug addiction, pain and cancer;

wherein

X^1 and **X^5** are independently selected from the group consisting of hydrogen, halogen, C1-C4-alkyl, C1-C4-haloalkyl, cyano, nitro, di(C1-C4-alkyl)amino, -NHCOO**R'**, and -COO**R'**, wherein **R'** is methyl, ethyl, *n*-propyl, *n*-butyl, *iso*-propyl, *iso*-butyl or *tert*-butyl;

X^2, **X^3**, **X^4** are independently selected from the group consisting of hydrogen, chloro, C1-C4-alkyl, C1-C4-haloalkyl, C1-C4-alkoxy, cyano, nitro, di(C1-C4-alkyl)amino, -NHCOO**R'**, and -COO**R'**, wherein **R'** is methyl, ethyl, *n*-propyl, *n*-butyl, *iso*-propyl, *iso*-butyl or *tert*-butyl; with the proviso that at least one of **X^1**, **X^2**, **X^3**, **X^4**, **X^5** is not hydrogen and that at least one of **X^2**, **X^3**, **X^4** is not C1-C4-alkoxy;

L is –C(O)NH-, -NHC(O)-, -SO_2NH-, -$NHSO_2$-, or –NH-;

n is 0, 1 or 2;

m is 1, 2, 3, 4 or 5;

R^1 is H or alkyl, and

R^2 is 5- or 6-membered arylalkyl, 5- or 6-membered cycloalkylalkyl, wherein the cyclic moiety of said arylalkyl or cycloalkylalkyl is optionally substituted by one or more substituents independently selected from halogen; or

R^1 and **R^2** form together with the nitrogen atom they are attached to a 5-membered heterocyclyl group, which is fused to a 5- or 6-membered aryl group and which is optionally substituted by one or more substituents independently selected from C1-C3 alkyl, preferably methyl, and wherein the resulting heterocyclic moiety is optionally substituted by one or more substituents independently selected from halogen.

16. Use according to claim 15, wherein the compound is selected from the group consisting of:

N-[3-(benzylmethylamino)propyl]-4-propylbenzamide,
N-[3-(benzylmethylamino)propyl]-4-butylbenzamide,
N-[3-(benzylmethylamino)propyl]-4-*tert*butylbenzamide,
N-[3-(benzylmethylamino)propyl]-4-trifluoromethylbenzamide,
N-[3-(benzylmethylamino)propyl]-2-chlorobenzamide,
N-[3-(benzylmethylamino)propyl]-3-chlorobenzamide,

N-[3-(2-(N-methylbenzyl)amino)ethyl]-4-chlorobenzamide,
N-[3-(benzylmethylamino)propyl]-4-chlorobenzamide,
N-[4-(benzylmethylamino)butyl]-4-chlorobenzamide,
N-[3-(N-methyl-2-phenylethylamino)propyl]-4-chlorobenzamide,
N-[3-(isoindolin-2-yl)methylamino)propyl]-4-chlorobenzamide,
N-[3-(benzylmethylamino)propyl]-2-bromobenzamide,
N-[3-(benzylmethylamino)propyl]-2,3-dichlorobenzamide,
N-[3-(benzylmethylamino)propyl]-2,4-dichlorobenzamide,
N-[3-(benzylmethylamino)propyl]-3,4-dichlorobenzamide,
N-[3-(benzylmethylamino)propyl]-3,5-dichlorobenzamide,
N-[3-(benzylmethylamino)propyl]-3-methoxybenzamide,
N-[3-(benzylmethylamino)propyl]-4-methoxybenzamide,
N-[3-(benzylmethylamino)propyl]-3-dimethylaminobenzamide,
N-[3-(benzylmethylamino)propyl]-4-cyanobenzamide,
N-[3-(benzylmethylamino)propyl]-4-nitrobenzamide,
N-(2-(benzyl(methyl)amino)ethyl)-3-chlorobenzamide,
N-(2-(benzyl(methyl)amino)ethyl)-2,4-dichlorobenzamide,
N-(2-(benzyl(methyl)amino)ethyl)-4-cyanobenzamide,
N-(2-(benzyl(methyl)amino)ethyl)-4-nitrobenzamide,
N-[3-(benzylmethylamino)propyl]-4-chlorobenzensulfonamide,
4-(benzylmethylamino)-*N*-(4-chlorophenyl)butanamide,
N-(4-chlorobenzyl)-3-(benzylmethylamino)propanamide,
N-(4-nitrobenzyl)-3-(benzylmethylamino)propanamide,
N-(4-cyanobenzyl)-3-(benzylmethylamino)propanamide,
N-(2,4-dichlorobenzyl)-3-(benzylmethylamino)propanamide,
N-(3-chlorobenzyl)-3-(benzylmethylamino)propanamide, and
N-(4-chlorobenzyl)-3-(benzylmethylamino)propanamine.

17. Diagnostic imaging composition comprising a compound according to any of Claims 1 to 8 or a pharmaceutically acceptable salt or solvate thereof and at least one pharmaceutically acceptable carrier, diluent, excipient and/or adjuvant.