Abstract:
The present invention relates to an active substance combination comprising at least one compound with 5-HT6 receptor affinity, and at least NMDA-receptor ligand, a medicament comprising said active substance combination, and the use of said active substance combination for the manufacture of a medicament.
FIELD OF THE INVENTION

The present invention relates to an active substance combination comprising at least one compound with 5-HT<sub>6</sub> receptor affinity, and at least one N-methyl-D-aspartate-receptor ligand (NMDA-receptor ligand), a medicament comprising said active substance combination, and the use of said active substance combination for the manufacture of a medicament.

BACKGROUND

Cognitive and/or degenerative brain disorders are characterized clinically by progressive loss of memory, cognition, reasoning, judgement and emotional stability that gradually leads to profound mental deterioration and ultimately death. In an example of such disorders, Alzheimer's disease is a common cause of progressive mental failure (dementia) in aged humans and is believed to represent the fourth most common medical cause of death in the United States. In particular, Alzheimer's disease is associated with degeneration of cholinergic neurons in the basal forebrain that play a fundamental role in cognitive functions, including memory. Cognitive and/or degenerative brain disorders have been observed in varied races and ethnic groups world-wide and present a major public health problem. These diseases are currently estimated to affect about two to three million individuals in the United States alone and the occurrence will increase world-wide as the human life span increases.

Cognitive and/or degenerative brain disorders are incurable with presently used medications, however, the symptoms of these disorders seem to be possibly alleviated by using compounds such as memantine.

Whereas known compounds which act as NMDA-receptor ligands are generally effective for treating disorders related to NMDA-receptors such as cognitive disorders, in particular for treating Alzheimer's disease, in some instances they show undesirable side effects. Specifically, many of these compounds that have been tested in humans can cause potentially serious side effects such as gastrointestinal complications including
insomnia, restlessness, headache, akathisia, fatigue, nausea, emesis, ulcers, constipation, flatulence, diarrhea, hypertension, respiratory depression and psychological and physical dependence.

Therefore, there is a need to provide a medicament suitable for the prophylaxis and/or treatment of disorders related to NMDA-receptors and to 5-HT$_6$ receptors, which preferably does not show the undesired side effects of the conventional compounds which act as NMDA-receptor ligands, or at least less frequent and/or less pronounced.

BRIEF DESCRIPTION OF THE INVENTION

The authors of the present invention have developed a medicament suitable for the prophylaxis and/or treatment of cognitive disorders, in particular for treating Alzheimer's disease, which does not show, or at least reduced significantly, the undesired side effects mentioned above of the conventional medicaments.

Therefore, a first aspect of the present invention relates to an active substance combination comprising:

(A) at least one compound with 5-HT$_6$ receptor affinity,

and

(B) at least one NMDA-receptor ligand.

It has surprisingly been found that the compounds with 5-HT$_6$ receptor affinity and the compounds which act as NMDA-receptor ligands show a synergistic effect in their pharmacological activities. Consequently, the dose of the corresponding compounds may be reduced in comparison to the dose necessary for an individual administration of said compounds.

According to the invention it has also been found that the action of a NMDA-receptor antagonist potentiates the action of the compound with 5-HT$_6$ receptor affinity, so the combination of a NMDA-receptor antagonist and a compound with 5-HT$_6$ receptor
affinity for use in the treatment of disorders that are related to NMDA-receptors, and to
5-HT\textsubscript{6} receptors may result in a faster onset of action and an increased success rate. The
invention therefore particularly resides in the combined action of a NMDA-receptor compound, particularly an antagonist, and a compound with 5-HT\textsubscript{6} receptor affinity, or
the dual action of a substance possessing both NMDA-receptor antagonist activity and
5-HT\textsubscript{6} receptor affinity, for the treatment of disorders that are related to NMDA-
receptors, and/or to 5-HT\textsubscript{6} receptors.

In another aspect, the present invention relates to a medicament comprising the active
substance combination as defined above and optionally one or more pharmacologically
acceptable adjuvants.

A third aspect of the invention refers to a medicament as defined above, for
simultaneous NMDA-receptor inhibition and 5-HT6-receptor regulation.

Also, another aspect of the invention relates to the use of the active substance
combination in the manufacture of a medicament for simultaneous NMDA-receptor
inhibition and 5-HT6-receptor regulation.

Another aspect of the invention refers to a pharmaceutical formulation which comprises
the active substance combination and optionally one or more pharmacologically
acceptable adjuvants.

Finally, the present invention also relates to a method for simultaneous NMDA-receptor
inhibition and 5-HT6-receptor regulation, said method comprises administering to a
patient in need of such a treatment a therapeutically effective amount of an active
substance combination as defined above.

**BRIEF DESCRIPTION OF THE DRAWINGS**

Figure 1 shows the results obtained for the novel object discrimination paradigm trial in
rats, when they have been administered intraperitoneally with different doses of
memantine (0, 5,10, 15 and 20 mg/kg).
Figure 2 shows the results obtained for the novel object discrimination paradigm trial in rats, when they have been administered intraperitoneally with the compound 841 alone, with memantine alone, or with a combination of compound 841 and memantine.

5 DETAILED DESCRIPTION OF THE INVENTION

In the treatment of cognitive disorders, the effect on e.g. memory or novel object discrimination is significantly greater in the group that is treated with a combination of at least one NMDA-receptor antagonist and at least one compound with 5-HT$_6$ receptor affinity than in the group that is treated with at least one NMDA-receptor antagonist or at least one compound with 5-HT$_6$ receptor affinity exclusively.

Also there is an indication that in the treatment of depression, the effect on the symptoms - in an animal model - is more pronounced in the group that is treated with a combination of at least one NMDA-receptor antagonist and at least one compound with 5-HT$_6$ receptor affinity than in the group that is treated with at least one NMDA-receptor antagonist or at least one compound with 5-HT$_6$ receptor affinity exclusively.

In one embodiment of the present invention the binding of compounds present as component (A) to the 5-HT$_6$-receptor is determined by a $K_i$ value of less than 7000 nM, particularly preferably of less than 6500 nM, more particularly preferably of less than 200 nM, more particularly preferably of less than 100 nM.

In one embodiment of the present invention, the compounds present as component (B) act as NMDA-receptor antagonists. The NMDA-receptor antagonist of the invention may be any ligand that binds to and inhibits the NMDA-receptor, thereby resulting in a biological response. The potential of a given substance to act as a NMDA-receptor antagonist may be determined using standard in vitro binding assays and/or standard in vivo functionality tests.

In one embodiment of the present invention the binding of compounds present as component (B) to the NMDA-receptor is determined by an $EC_{50}$ or $IC_{50}$ value of less than 300 µM, preferably less than 100 µM, when determined in a standard functionality assay using a mouse, rat, or human NMDA-receptor ion channel.
In one embodiment the NMDA-receptor antagonist blocks the NMDA receptor at the PCP binding site.

In another embodiment of the present invention as component (A) at least one compound is present, which is selected from the group consisting of the benzoxazinone-derived sulfonamide compounds of general formula (Ia)

![Chemical Structure](image)

wherein

$\text{R}^{1a}$, $\text{R}^{2a}$, $\text{R}^{3a}$ and $\text{R}^{4a}$, independently of one another, each represent a hydrogen atom; halogen; an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as ring member containing cycloaliphatic radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; an unsubstituted or at least mono-substituted aryl- or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ringsystem; nitro; cyano; -
O-R^{10a}; -0-(C=O)-R^{11a}; -(C=O)-OR^{11a}; -SR^{12a}; -SOR^{12a}; -SO_2R^{12a}; -NH-SO_2R^{12a}; -SO_2NH_2 or -NR^{13a}R^{14a};

R^{5a} represents a hydrogen atom; an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical or a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as ring member containing cycloaliphatic radical;

R^{6a}, R^{7a}, R^{8a}, R^{9a}, independently of one another, each represent a hydrogen atom; an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as ring member containing cycloaliphatic radical; a cyano group or a -C(=O)-OR^{15a} moiety;

W^{a} represents an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as ring member containing cycloaliphatic radical, which may be bonded via an optionally mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene or alkenylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

a -NR^{16a}R^{17a} moiety, or

a -C(=O)-R^{18a} moiety;

R^{10a} represents a hydrogen atom; an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated,
unsubstituted or at least mono-substituted, optionally at least one heteroatom as ring
member containing cycloaliphatic radical, which may be bonded via an unsubstituted or
at least mono-substituted alkyylene group and/or which may be condensed with an
unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an
unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be
bonded via an unsubstituted or at least mono-substituted alkyylene group and/or which
may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic
ring system;

R\textsuperscript{11a} represents a hydrogen atom; an unbranched or branched, saturated or unsaturated,
unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated,
unsubstituted or at least mono-substituted, optionally at least one heteroatom as ring
member containing cycloaliphatic radical, which may be bonded via an unsubstituted or
at least mono-substituted alkylene group and/or which may be condensed with an
unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an
unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be
bonded via an unsubstituted or at least mono-substituted alkylene group and/or which
may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic
ring system;

R\textsuperscript{12a} represents an unbranched or branched, saturated or unsaturated, unsubstituted or at
least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at
least mono-substituted, optionally at least one heteroatom as ring member containing
cycloaliphatic radical, which may be bonded via an unsubstituted or at least mono-
substituted alkylene group and/or which may be condensed with an unsubstituted or at
least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least
mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted
or at least mono-substituted alkylene group and/or which may be condensed with an
unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R\textsuperscript{13a} and R\textsuperscript{14a}, independently of one another, each represent a hydrogen atom; an
unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-
substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-
substituted, optionally at least one heteroatom as ring member containing cycloaliphatic radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

or R$_{13a}$ and R$_{14a}$ together with the bridging nitrogen atom form a saturated, unsaturated or aromatic heterocyclic ring, which is unsubstituted or at least mono-substituted and/or which may contain at least one further heteroatom as a ring member;

R$_{15a}$ represents a hydrogen atom; an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as ring member containing cycloaliphatic radical or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R$_{16a}$ represents an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

R$_{17a}$ represents an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical, and

R$_{18a}$ represents an unsubstituted or at least mono-substituted aryl radical;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, its racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a solvate, respectively.
Preferred compounds of general formula (Ia) are those, wherein

R\(^1\)a, R\(^2\)a, R\(^3\)a and R\(^4\)a, independently of one another, each represent a hydrogen atom; a fluorine atom; a chlorine atom; a bromine atom; a methyl group or a methoxy group;

R\(^5\)a represents a hydrogen atom;

R\(^6\)a, R\(^7\)a, R\(^8\)a and R\(^9\)a each represent a hydrogen atom;

W\(^a\) represents an alkyl radical selected from the group consisting of methyl; ethyl; n-propyl; isopropyl; n-butyl; sec-butyl; isobutyl and tert-butyl; vinyl (CH\(_2\)=CH-); -N(CH\(_3\))\(_2\); 1-naphthyl; benzyl; 2-naphtyl; phenyl; 2-methyl-phenyl; 3-methyl-phenyl; 4-methyl-phenyl; 2-ethyl-phenyl; 3-ethyl-phenyl; 4-ethyl-phenyl; 2-n-propyl-phenyl; 3-n-propyl-phenyl; 4-n-propyl-phenyl; 2-isopropyl-phenyl; 3-isopropyl-phenyl; 4-isopropyl-phenyl; 2-n-butyl-phenyl; 3-n-butyl-phenyl; 4-n-butyl-phenyl; 2-isobutyl-phenyl; 3-isobutyl-phenyl; 4-isobutyl-phenyl; 2-tert-butyl-phenyl; 3-tert-butyl-phenyl; 4-tert-butyl-phenyl; 1,1-dimethylpropyl-phenyl; 2-cyclopentyl-phenyl; 3-cyclopentyl-phenyl; 4-cyclopentyl-phenyl; 2-cyclohexyl-phenyl; 3-cyclohexyl-phenyl; 4-cyclohexyl-phenyl; 2-methoxy-phenyl; 3-methoxy-phenyl; 4-methoxy-phenyl; 2-ethoxy-phenyl; 3-ethoxy-phenyl; 4-ethoxy-phenyl; 2-n-propoxy-phenyl; 3-n-propoxy-phenyl; 4-n-propoxy-phenyl; 2-isopropoxy-phenyl; 3-isopropoxy-phenyl; 4-isopropoxy-phenyl; 2-fluoro-phenyl; 3-fluoro-phenyl; 4-fluoro-phenyl; 2-chloro-phenyl; 3-chloro-phenyl; 4-chloro-phenyl; 2-bromo-phenyl; 3-bromo-phenyl; 4-bromo-phenyl; 2-trifluoromethyl-phenyl; 3-trifluoromethyl-phenyl; 4-trifluoromethyl-phenyl; 2-trifluoromethoxy-phenyl; 3-trifluoromethoxy-phenyl; 4-trifluoromethoxy-phenyl; 2-carboxy-phenyl; 3-carboxy-phenyl; 4-carboxy-phenyl; 2-acetyl-phenyl; 3-acetyl-phenyl; 4-acetyl-phenyl; 2-(C=O)-O-CH\(_3\)-phenyl; 3-(C=O)-O-CH\(_3\)-phenyl; 4-(C=O)-O-CH\(_3\)-phenyl; 2-(CH\(_2\))-(CH\(_2\))-(C=O)-O-CH\(_3\)-phenyl; 3-(CH\(_2\))-(CH\(_2\))-(C=O)-O-CH\(_3\)-phenyl; 4-(CH\(_2\))-(CH\(_2\))-(C=O)-O-CH\(_3\)-phenyl; 2-cyanophenyl; 3-cyano-phenyl; 4-cyano-phenyl; 2-nitro-phenyl; 3-nitro-phenyl; 4-nitrophenyl; 4-(4-bromophenooxy)-phenyl; 2-methylsulfonyl-phenyl; 3-methylsulfonyl-phenyl; 4-methylsulfonyl-phenyl; 2-phenyl-phenyl (biphenyl-2-yl); 3-phenyl-phenyl
(biphenyl-3-yl); 4-phenyl-phenyl (biphenyl-4-yl); 2-phenoxy-phenyl; 3-phenoxy-phenyl; 4-phenoxy-phenyl; 2,4-dimethyl-phenyl; 3,4-dimethyl-phenyl; 2,4,6-trimethyl-phenyl; 2,3,5,6-tetramethyl-phenyl; pentamethyl-phenyl; 2,5-dimethoxy-phenyl; 3,4-dimethoxy-phenyl; 2,3-dichloro-phenyl; 2,4-dichloro-phenyl; 2,5-dichloro-phenyl; 3,4-dichloro-phenyl; 3,5-dichloro-phenyl; 2,6-dichloro-phenyl; 2,4-difluoro-phenyl; 3,4-difluoro-phenyl; 2,5-difluoro-phenyl; 2,6-difluoro-phenyl; 3-chloro-2-fluoro-phenyl; 3-chloro-4-fluoro-phenyl; 5-chloro-2-fluoro-phenyl; 2,3,4-trichloro-phenyl; 2,4,5-trichloro-phenyl; 2,4,6-trichloro-phenyl; 2,4,5-trifluoro-phenyl; 2,3,4-trifluoro-phenyl; 2-chloro-4,5-difluoro-phenyl; 2-bromo-4-fluoro-phenyl; 2-bromo-4,6-difluoro-phenyl; 4-chloro-2,5-difluoro-phenyl; 5-chloro-2,4-difluoro-phenyl; 4-bromo-2,5-difluoro-phenyl; 5-bromo-2,4-difluoro-phenyl; pentfluoro-phenyl; 2,4-dinitro-phenyl; 4-chloro-3-nitro-phenyl; 2-methyl-5-nitro-phenyl; 5-bromo-2-methoxy-phenyl; 3-chloro-2-methyl-phenyl; 4-bromo-3-methyl-phenyl; 4-chloro-2,5-dimethyl-phenyl; 4-fluoro-3-methyl-phenyl; 5-fluoro-2-methyl-phenyl; 2-nitro-4-trifluoromethyl-phenyl; 2-methoxy-4-methyl-phenyl; 3,5-dichloro-2-hydroxy-phenyl; 3,5-dichloro-4-hydroxy-phenyl; 5-chloro-2,4-difluoro-phenyl; 3-chloro-4-(NH)-(C=O)-CH₃-phenyl; 2-chloro-6-methyl-phenyl; 2-chloro-5-trifluoromethyl-phenyl; 2-chloro-5-trifluoromethoxy-phenyl; 4-bromo-2-trifluoromethyl-phenyl; 4-bromo-2-trifluoromethoxy-phenyl; 4-bromo-3-trifluoromethyl-phenyl; 3-carboxy-4-fluoro-phenyl; 3-carboxy-4-chloro-6-fluoro-phenyl; 4-methoxy-2,3,6-trimethyl-phenyl--; or one of the following groups:
whereby in each case X denotes the position by which the respective substituent \( W^a \) is bonded to the \(-\text{SO}_2\) group of formula (Ia);

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, its racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a solvate, respectively.

Preferred compounds of general formula (Ia) are those selected from the group consisting of:

1. \( 1-[1-(\text{Naphthalene-2-sulfonyl})-\text{piperidin-4-yl}]-1,4\)-dihydro-benzo\([d]\)\([1,3]\)oxazin-2-one \n
2. \( 1-[1-(\text{Toluene-4-sulfonyl})-\text{piperidin-4-yl}]-1,4\)-dihydro-benzo\([d]\)\([1,3]\)oxazin-2-one
3. 1-(1-Phenylmethanesulfonyl-piperidin-4-yl)-1,4-dihydro-benzo[d][1,3]oxazin-2-one
4. 1-(1-Benzencesulfonyl-piperidin-4-yl)-6-chloro-1,4-dihydro-benzo[d][1,3]oxazin-2-one
5. 6-Chloro-1-[1-(toluene-4-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
6. 6-Chloro-1-(1-phenylmethanesulfonyl-piperidin-4-yl)-1,4-dihydro-benzo[d][1,3]oxazin-2-one
7. 6-Chloro-1-[1-(naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
8. 6-Chloro-1-[1-(naphthalene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
9. 6-Chloro-1-[1-(5-chloro-3-methyl-benzo[b]thiophene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
10. 1-[1-(Thiophene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
11. 1-[1-(4-Acetyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
12. 2-[4-(2-Oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-benzonitrile
13. 1-[1-(2,4-Dimethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
14. 1-[1-(4-Methoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
15. 1-[1-(2-Naphthalene-1-yl-ethanesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
16. 8-Methyl-1-[1-(thiophene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
17. 1-[1-(4-Acetyl-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
18. 2-[4-(8-Methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-benzonitrile
19. 1-[1-(2,4-Dimethyl-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
20 1-[l-(4-Methoxy-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
21 8-Methyl-1-[1-(2-naphthalen-1-yl-ethanesulfonyl)-piperidin-4-yl]-
1,4-dihydro-
benzo[d][1,3]oxazin-2-one
22 4-(8-Methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonic
acid
dimethylamide
23 2-[4-(2-Oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-benzoic
acid
methyl ester
24 1-[1-(3-Trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
25 2-[4-(8-Methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-
benzoic acid methyl ester
26 8-Methyl-1-[1-(3-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-
1,4-dihydro-
benzo[d][1,3]oxazin-2-one
27 1-[1-(4-Acetyl-benzenesulfonyl)-piperidin-4-yl]-6-chloro-1,4-
benzo[d][1,3]oxazin-2-one
28 2-[4-(6-Chloro-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-
benzonitrile
29 6-Chloro-1-[1-(4-methoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-
dihydro-
benzo[d][1,3]oxazin-2-one
30 2-[4-(6-Chloro-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-
benzoic acid methyl ester
31 6-Chloro-1-[1-(2,4-dimethyl-benzenesulfonyl)-piperidin-4-yl]-
1,4-dihydro-
benzo[d][1,3]oxazin-2-one
32 6-Chloro-1-[1-(3-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-
1,4-dihydro-
benzo[d][1,3]oxazin-2-one
33 1-[1-(5-Chloro-3-methyl-benzo[b]thiophene-2-sulfonyl)-piperidin-4-yl]-
8-methyl-
1,4-dihydro-benzo[d][1,3]oxazin-2-one
34 1-[1-[4-(4-Bromo-phenoxy)-benzenesulfonyl]-piperidin-4-yl]-
8-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
35 1-[1-(4-Fluoro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-
dihydro-
benzo[d][1,3]oxazin-2-one
8-Methyl-l-[l-(naphthalene-2-sulfonyl)-piperidin-4-y1]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
8-Methyl-l-(l-phenylmethanesulfonyl-piperidin-4-y1)-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[l-(4-Bromo-benzenesulfonyl)-piperidin-4-y1]-6-chloro-1,4-dihydro-benzo[d][1,3]oxazin-2-one
6-Chloro-1-[1-(4-methanesulfonyl-benzenesulfonyl)-piperidin-4-y1]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[l-(Butane-1-sulfon yl)-piperidin-4-y1]-6-chloro-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[l-(4-Bromo-benzenesulfonyl)-piperidin-4-y1]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(4-Methanesulfonyl-benzenesulfonyl)-piperidin-4-y1]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[l-(Butane-1-sulfon yl)-piperidin-4-y1]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
6-Chloro-1-[1-(2-nitro-benzenesulfonyl)-piperidin-4-y1]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
6-Chloro-1-[1-(3-nitro-benzenesulfonyl)-piperidin-4-y1]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(Biphenyl-4-sulfonyl)-piperidin-4-y1]-6-chloro-1,4-dihydro-benzo[d][1,3]oxazin-2-one
8-Methyl-1-[1-(2-nitro-benzenesulfonyl)-piperidin-4-y1]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
8-Methyl-l-[l-(3-nitro-benzenesulfonyl)-piperidin-4-y1]-l,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[l-(Biphenyl-4-sulfonyl)-piperidin-4-y1]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
8-Methyl-l-[l-(4-nitro-benzenesulfonyl)-piperidin-4-y1]-l,4-dihydro-benzo[d][1,3]oxazin-2-one
6-Chloro-1-[1-(4-nitro-benzenesulfon yl)-piperidin-4-y1]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
8-Methyl-l-[l-(4-nitro-benzenesulfonyl)-piperidin-4-y1]-l,4-dihydro-benzo[d][1,3]oxazin-2-one
6-Chloro-1-[1-(4-nitro-benzenesulfonyl)-piperidin-4-y1]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-(l-Ethanesulfon yl-piperidin-4-y1)-1,4-dihydro-benzo[d][1,3]oxazin-2-one
16

53 1-[1-(Propane-1-sulfonyl)piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
54 1-[1-(Propane-2-sulfonyl)piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
55 6-Chloro 1-[1-ethanesulfonyl-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
56 6-Chloro 1-[1-(propane-1-sulfonyl)piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
57 6-Chloro 1-[1-(propane-2-sulfonyl)piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
58 6-Chloro 1-[1-(quinooline-8-sulfonylel)piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
59 1-[1-(4-Nitro-benzenesulfonyl)piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
60 6-Methyl 1-[1-(quinoline-8-sulfonyl)piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
61 6-Methyl 1-[1-(2-naphthalene-1-yll,sulfonylpiperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
62 6-Methyl 1-[1-(toluene-4-sulfonylpiperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
63 1-[1-(4-Fluoro-benzenesulfonyl)piperidin-4-yl]-6-methyl 1,4-dihydro-benzo[d][1,3]oxazin-2-one
64 6-Methyl 1-[1-(naphthalene-1-sulfonylpiperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
65 6-Methyl 1-[1-(naphthalene-2-sulfonylpiperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
66 1-[1-(5-Chloro-3-methyl-benzo[b]thiophene-2-sulfonyl)piperidin-4-yl]-6-methyl 1,4-dihydro-benzo[d][1,3]oxazin-2-one
67 6-Methyl 1-[1-(4-nitro-benzenesulfonylpiperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
68 1-(1-Benzene-sulfonylpiperidin-4-yl]-6-methyl 1,4-dihydro-benzo[d][1,3]oxazin-2-one
69 1-[1-(4-Chloro-3-nitro-benzenesulfonyl)piperidin-4-yl]-6-methyl 1,4-dihydro-benzo[d][1,3]oxazin-2-one
17

70 1-[(5-Dimethylamino-naphthalene-1-sulfonyl)-piperidin-4-yl]-6-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

71 1-[(4-Chloro-3-nitro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

72 1-[(4-Chloro-3-nitro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

73 6-Chloro-1-[(4-chloro-3-nitro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

74 6-Chloro-1-[(5-dimethylamino-naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

75 1-[(4-Methoxy-2,3,6-trimethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

76 1-[(4-Methoxy-2,3,6-trimethyl-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

77 6-Chloro-1-[(4-methoxy-2,3,6-trimethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

78 1-[(4-Methoxy-2,3,6-trimethyl-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

79 1-[(2-Bromo-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-
2-one

80 1-[(2-Bromo-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

81 1-[(2-Bromo-benzenesulfonyl)-piperidin-4-yl]-6-chloro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

82 1-[(2-Bromo-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

83 6-Chloro-1-[(2,3-dichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

84 1-[(2,3-Dichloro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

85 1-[(2,4,5-Trichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
86 8-Methyl-l-[l-(2,4,5-trichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
87 6-Chloro-l-[l-(2,4,5-trichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
5 88 6-Methyl-l-[l-(2,4,5-trichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
89 l-[l-(5-Bromo-2-methoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
90 l-[l-(5-Bromo-2-methoxy-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
91 1-[l-(5-Bromo-2-methoxy-benzenesulfonyl)-piperidin-4-yl]-6-chloro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
92 1-[l-(5-Bromo-2-methoxy-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
15 93 1-[l-(2,5-Dimethoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
94 1-[l-(2,5-Dimethoxy-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
95 6-Chloro-l-[l-(2,5-dimethoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
20 96 1-[l-(2,5-Dimethoxy-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
97 l-(1-Pentamethylbenzenesulfonyl-piperidin-4-yl)-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
25 98 8-Methyl-l-(l-pentamethylbenzenesulfonyl-piperidin-4-yl)-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
99 6-Chloro- l-(1-pentamethylbenzenesulfonyl-piperidin-4-yl)-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
100 6-Methyl-l-(l-pentamethylbenzenesulfonyl-piperidin-4-yl)-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
30 101 l{-1-[2-(2,2,2-Trifluoro-acetyl)-1,2,3,4-tetrahydro-isoquinoline-7-sulfonyl]-
piperidin-4-yl}-1,4-dihydro-benzo[d][1,3]oxazin-2-one
102  S-Methyl-l-l 1-P-Cl\(^{\wedge}\)-trifluoro-acetyl\(^{\wedge}\)-tetrahydro-isoquinoline-V-
sulfonyl\}-piperidin-4-yl \}-1,4-dihydro-benzo[d][1,3]oxazin-2-one
103  6-Chloro- 1-\{1-[2-(2,2,2-trifluoro-acetyl)-1,2,3,4-tetrahydro-isoquinoline-7-
sulfonyl\}-piperidin-4-yl \}-1,4-dihydro-benzo[d][1,3]oxazin-2-one
104  6-Methyl-1-\{1-2-(2,2,2-trifluoro-acetyl)-1,2,3,4-tetrahydro-isoquinoline-7-
sulfonyl\}-piperidin-4-yl \}-1,4-dihydro-benzo[d][1,3]oxazin-2-one
105  1-[1-(2-Methyl-5-nitro-benzenesulfonfyl)-piperidin-4-yl \}-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
106  8-Methyl-1-[l-(2-methyl-5-nitro-benzenesulfonfyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
107  6-Chloro- 1-[1-(2-methyl-5-nitro-benzenesulfonfyl)-piperidin-4-yl \}-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
108  6-Methyl-1-[l-(2-methyl-5-nitro-benzenesulfonfyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
109  1-[1-(4-Bromo-2,5-difluoro-benzenesulfonyl)-piperidin-4-yl \}-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
110  1-[1-(4-Bromo-2,5-difluoro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
111  1-[1-(4-Bromo-2,5-difluoro-benzenesulfonyl)-piperidin-4-yl]-6-chloro-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
112  1-[1-(4-Bromo-2,5-difluoro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
113  1-[1-(4-Chloro-2,5-dimethyl-benzenesulfonyl)-piperidin-4-yl \}-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
114  1-[1-(4-Chloro-2,5-dimethyl-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
115  6-Chloro- 1-[1-(4-chloro-2,5-dimethyl-benzenesulfonyl)-piperidin-4-yl \}-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
116  1-[1-(4-Chloro-2,5-dimethyl-benzenesulfonyl)-piperidin-4-yl \}-6-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
117  1-[1-(4-Methoxy-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
118 1-[1-(4-Isopropyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
119 1-[l-(4-Isopropyl-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
5 120 6-Chloro-1-[1-(4-isopropyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
121 1-[l-(4-Isopropyl-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
122 1-[l-(3-Chloro-4-fluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
10 123 1-[l-(3-Chloro-4-fluoro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
124 6-Chloro-1-[1-(3-chloro-4-fluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
15 125 1-[1-(3-Chloro-4-fluoro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
126 1-[l-(4-Bromo-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
127 6-Methyl-1-[1-(3-nitro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
20 128 6-Methyl-1-[1-(3-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
129 1-[1-(4-Trifluoromethoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
25 130 1-[1-(2-Nitro-4-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
131 1-[1-(3-Fluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-
2-one
132 1-[1-(2,4-Dichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
30 133 1-[1-(2,4,6-Trimethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
134 1-[1-(2-Trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
135 8-Methyl-1-[1-(4-trifluoromethoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
136 8-Methyl-1-[1-(2-nitro-4-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
137 1-[1-(3-Fluoro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
138 1-[1-(2,4-Dichloro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
139 8-Methyl-1-[1-(2,4,6-trimethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
140 8-Methyl-1-[1-(2-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
141 1-[1-(4-Fluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
142 1-[1-(4-Bromo-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
143 1-[1-(3-Nitro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
144 1-[1-(4-(4-Bromo-phenoxy)-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
145 1-[1-(3-Methoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
146 1-[1-(2-Nitro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
147 8-Methyl-1-[1-(toluene-4-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
148 1-(l-Benzensulfonfonyl-piperidin-4-yl)-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
149 1-[1-(3-Methoxy-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
150 \( \text{1-[(2,4-Dimethyl-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d] [1,3]oxazin-2-one} \)

151 \( \text{1- [1-[(4-(4-Bromo-phenoxy)-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one} \)

152 \( \text{6-Methyl-1-[(thiophene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one} \)

153 \( \text{1-[(Toluene-3-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one} \)

154 \( \text{1-[(5-Fluoro-2-methyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one} \)

155 \( \text{1-[(4-Isopropoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one} \)

156 \( \text{1-[(3-Chloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one} \)

157 \( \text{1-[(3,4-Dimethoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one} \)

158 \( \text{1-[(1-Pentafluorobenzenesulfonyl-piperidin-4-yl)-1,4-dihydro-benzo[d][1,3]oxazin-2-one} \)

159 \( \text{8-Methyl-1-[(toluene-3-sulfonyl)-piperidin-4-y]1,4-dihydro-benzo[d][1,3]oxazin-2-one} \)

160 \( \text{1-[(5-Fluoro-2-methyl-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydrobenzo[d][1,3] oxazin-2-one} \)

161 \( \text{1-[(4-Isopropoxy-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3] oxazin-2-one} \)

162 \( \text{1-[(3-Chloro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one} \)

163 \( \text{1-[(3,4-Dimethoxy-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one} \)

164 \( \text{8-Methyl-1-[(1-pentafluorobenzenesulfonyl-piperidin-4-yl)-1,4-dihydro-benzo[d][1,3]oxazin-2-one} \)

165 \( \text{6-Methyl-1-[(toluene-3-sulfonyl)-piperidin-4-y]1,4-dihydro-benzo[d][1,3]oxazin-2-one} \)

166 \( \text{1-[(5-Fluoro-2-methyl-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one} \)
167 1-[1-(4-Isopropoxy-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
168 1-[1-(3-Chloro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
169 1-[1-(3,4-Dimethoxy-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
170 6-Methyl-1-[1-pentafluorobenzenesulfonyl-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
171 6-Methyl-1-[1-(4-trifluoromethoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
172 6-Methyl-1-[1-(2,4-nitro-4-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
173 1-[1-(3-Fluoro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
174 1-[1-(2,4-Dichloro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
175 6-Methyl-1-[1-(2,4,6-trimethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
176 6-Methyl-1-[1-(2-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
177 1-[1-(3-Methoxy-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
178 6-Methyl-1-[1-(2-nitro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
179 1-[1-(4-Acetyl-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
180 1-[1-(4-Methanesulfonyl-benzenesulfonfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
bienzo[d][1,3]oxazin-2-one
181 6-Methyl-1-(1-phenylmethanesulfonfonyl-piperidin-4-yl)-1,4-dihydro-
bienzo[d][1,3]oxazin-2-one
182 2-[4-(6-Methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonfonyl]benzoic
acid methyl ester
6-Methyl-l-[l-(2-oxo-2H-chromene-6-sulfonyl)-piperidin-4-yl]-l,4-dihydro-
benzo[d][1,3]oxazin-2-one

6-Chloro-1-[l-(4-fluoro-benzenesulfonyl)-piperidin-4-yl]-l,4-dihydro-
benzo[d][1,3]oxazin-2-one

5 6-Chloro-1-[l-(3,5-dichloro-benzenesulfonyl)-piperidin-4-yl]-l,4-dihydro-
benzo[d][1,3]oxazin-2-one

6-Chloro-1-[l-(4-(4-Bromo-phenoxy)-benzenesulfonyl)-piperidin-4-yl]-l,4-
dihydro-benzo[d][1,3]oxazin-2-one

6-Chloro-1-[l-(thiophene-2-sulfonyl)-piperidin-4-yl]-l,4-dihydro-
benzo[d][1,3]oxazin-2-one

6-Chloro-1-[l-(3-methoxy-benzenesulfonyl)-piperidin-4-yl]-l,4-dihydro-
benzo[d][1,3]oxazin-2-one

6-Chloro-1-[l-(2-oxo-2H-chromene-6-sulfonyl)-piperidin-4-yl]-l,4-dihydro-
benzo[d][1,3]oxazin-2-one

6-Chloro-1-[l-(toluene-3-sulfonyl)-piperidin-4-yl]-l,4-dihydro-
benzo[d][1,3]oxazin-2-one

6-Chloro-1-[l-(5-fluoro-2-methyl-benzenesulfonyl)-piperidin-4-yl]-l,4-dihydro-
benzo[d][1,3]oxazin-2-one

6-Chloro-1-[l-(4-isopropoxy-benzenesulfonyl)-piperidin-4-yl]-l,4-dihydro-
benzo[d][1,3]oxazin-2-one

6-Chloro-1-[l-(3-chloro-benzenesulfonyl)-piperidin-4-yl]-l,4-dihydro-
benzo[d][1,3]oxazin-2-one

6-Chloro-1-[l-(4-trifluoromethoxy-benzenesulfonyl)-piperidin-4-yl]-l,4-dihydro-
benzo[d][1,3]oxazin-2-one

6-Chloro-1-[l-(2-nitro-4-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-l,4-
dihydro-benzo[d][1,3]oxazin-2-one

6-Chloro-1-[l-(3-fluoro-benzenesulfonyl)-piperidin-4-yl]-l,4-dihydro-
benzo[d][1,3]oxazin-2-one
199 6-Chloro-1-[1-(2,4-dichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

200 6-Chloro-1-[1-(2,4,6-trimethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

201 6-Chloro-1-[1-(2-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

202 1-[1-(2-Oxo-2H-chromene-6-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

203 1-[1-(3,5-Dichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

204 1-[1-(2,5-Dichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

205 1-[1-(5-Bromo-6-chloro-pyridine-3-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

206 1-[1-(4-Chloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-
2-one

207 1-[1-(2,6-Dichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

208 8-Methyl-1-[1-(2-oxo-2H-chromene-6-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

209 1-[1-(3,5-Dichloro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

210 1-[1-(2,5-Dichloro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

211 1-[1-(5-Bromo-6-chloro-pyridine-3-sulfonyl)-piperidin-4-yl]-8-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

212 1-[1-(4-Chloro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

213 1-[1-(2,6-Dichloro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

214 1-[1-(Biphenyl-4-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

215 6-Chloro-1-[1-(2,5-dichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
l-[l-(5-Bromo-6-chloro-pyridine-3-sulfonyl)-piperidin-4-yl]-6-chloro-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

6-Chloro-1-[1-(4-chloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

6-Chloro-1-[1-(2,6-dichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

l-[l-(Biphenyl-4-sulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

2-[4-(6-Methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-
benzonitrile

1-[1-(2,5-Dichloro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

1-[l-(5-Bromo-6-chloro-pyridine-3-sulfonyl)-piperidin-4-yl]-6-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

1-[1-(2,6-Dichloro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

1-[1-(4-Chloro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

1-[1-(2,5-Dichloro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

6-Methyl-1-[1-(1-methyl-1H-imidazole-4-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

1-[l-(5-Bromo-2,4-difluoro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

1-[1-(4-Methanesulfonyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

1-[1-(1-Methyl-1H-imidazole-4-sulfonyle)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

1-[l-(5-Bromo-2,4-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

1-[l-(6-Chloro-imidazo[2,1-b]thiazole-5-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
1-[1-(4-Ethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[l-(Benzo[b]thiophene-3-sulfonyl)-piperidin-4-yl]-l,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[1-[1-(6-Chloro-imidazo[2,1-b]thiazole-5-sulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[l-(4-Ethyl-benzenesulfonyl)-piperidin-4-yl]-8-methyl-l,4-dihydro-benzo[d][1,3]oxazin-2-one
6-Chloro-1-[1-(6-chloro-imidazo[2,1-b]thiazole-5-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(4-ethyl-benzenesulfonl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[l-(Benzo[b]thiophene-3-sulfonyl)-piperidin-4-yl]-6-chloro-l,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[l-(6-Chloro-imidazo[2,1-b]thiazole-5-sulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[l-(4-Ethyl-benzenesulfonl)-piperidin-4-yl]-6-methyl-l,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[l-(Benzo[b]thiophene-3-sulfonyl)-piperidin-4-yl]-6-methyl-l,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[l-(7-Chloro-benzo[1,2,5]oxadiazole-4-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(2-Methoxy-4-methyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
3-{4-[4-(2-Oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-phenyl}propionic acid methyl ester
1-[l-(2,4-Dinitro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[l-(7-Chloro-benzo[1,2,5]oxadiazole-4-sulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[(2-Methoxy-4-methyl-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

3-{4-[4-(8-Methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-
phenyl}-propionic acid methyl ester

1-[1-(2,4-Dinitro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

1-[1-(7-Chloro-benzo[1,2,5]oxadiazole-4-sulfonyl)-piperidin-4-yl]-6-methyl-
1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[1-(2-Methoxy-4-methyl-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

3-{4-[4-(6-Methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-
phenyl}-propionic acid methyl ester

1-[1-(2,4-Dinitro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

6-Chloro-1-[1-(7-chloro-benzo[1,2,5]oxadiazole-4-sulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

6-Chloro-1-[1-(2-methoxy-4-methyl-benzenesulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

3-{4-[4-(6-Chloro-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-
phenyl}-propionic acid methyl ester

6-Chloro-1-[1-(2,4-dinitro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

6-Chloro-1-[1-(1-methyl-1H-imidazole-4-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

1-[1-(5-Bromo-2,4-difluoro-benzenesulfonyl)-piperidin-4-yl]-6-chloro-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

8-Methyl-1-[1-(1-methyl-1H-imidazole-4-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

1-[1-(5-Bromo-2,4-difluoro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

1-[1-(Benzo[b]thiophene-2-sulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
264 1-[1-(Benzo[b]thiophene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
265 1-[1-(Benzo[b]thiophene-2-sulfonyl)-piperidin-4-yl]-6-chloro-1,4-dihydro-benzo[d][1,3]oxazin-2-one
266 1-[1-(2,5-Difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
267 1-[1-(2,5-Difluoro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
268 1-[1-(2,5-Difluoro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
269 6-Chloro-1-[1-(2,5-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
270 1-[1-(2,5-Difluoro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
271 1-[1-(4-Chloro-2,5-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
272 1-[1-(4-Chloro-2,5-difluoro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
273 6-Chloro-1-[1-(4-chloro-2,5-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
274 1-[1-(4-Chloro-2,5-difluoro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
275 1-[1-(2,4,5-Trifluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
276 8-Methyl-1-[1-(2,4,5-trifluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
277 6-Chloro-1-[1-(2,4,5-trifluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
278 6-Methyl-1-[1-(2,4,5-trifluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
279 1-[1-(3,5-Dichloro-2-hydroxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(2,6-Difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
1-[1-(2,6-Difluoro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
6-Chloro-1-[1-(2,6-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
1-[1-(2,6-Difluoro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
1-[1-(5-Chloro-2,4-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
6-Chloro-1-[1-(5-Chloro-2,4-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(5-Chloro-2,4-difluoro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
6-Chloro-1-[1-(2-chloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]
oxazin-2-one
1-[1-(2-Chloro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
6-Chloro-1-[1-(2-chloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]
oxazin-2-one
1-[1-(2-Chloro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
6-Chloro-1-[1-(4-bromo-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
6-Bromo-1-[1-(4-bromo-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
6-Bromo-1-[1-(toluene-4-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
6-Bromo-1-[1-(2,4-dimethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
6-Bromo-1-[1-(2-naphthalen-1-yl-ethanesulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(quinoline-8-sulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(5-chloro-3-methyl-benzo[b]thiophene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(3-nitro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(naphthalene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one

6-Bromo-1-{1-[4-(4-bromo-phenoxy)-benzenesulfonyl]-piperidin-4-yl}-1,4-dihydrobenzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(thiophene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(2-methyl-5-nitro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(4-bromo-2,5-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(toluene-3-sulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(3-chloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(3,4-dimethoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one
312 6-Bromo-1-(1-pentafluorobenzenesulfonyl-piperidin-4-yl)-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
313 6-Bromo-l-[l-(4-moro-2,5-dimethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
314 6-Bromo-1-[1-(3-methoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
315 6-Bromo-1-[1-(4-isopropyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
316 6-Bromo-1-[1-(4-fluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
317 6-Bromo-1-[1-(2,5-dimethoxy-benzenesulf onyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
318 6-Bromo-1-[1-(pentamethylbenzenesulf onyl-piperidin-4-yl)-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
319 6-Bromo-1-[1-(2-nitro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
320 6-Bromo-1-[1-(4-chloro-3-nitro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
321 6-Bromo-1-[1-(5-dimethylamino-naphthalene-1-sulf onyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
322 6-Bromo-1-[1-(4-methanesulf onyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
323 1-[1-(4-Acetyl-benzenesulfonyl)-piperidin-4-yl]-6-bromo-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
324 6-Bromo-1-[1-(4-methanesulfonyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
325 1-[1-(Biphenyl-4-sulf onyl)-piperidin-4-yl]-6-bromo-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
326 6-Bromo-1-[1-phenylmethanesulfonyl-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
327 6-Bromo-1-[1-(2,5-dimethoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
6-Bromo-l-{ l-[2-(2,2,2-trifluoro-acetyl)-l,2,3,4-tetrahydro-isoquinoline-7-sulfonyl]-piperidin-4-yl } - 1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-l-[l-(2,3-dichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-l-[l-(2,4,5-trichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-l-[l-(2-nitro-4-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-l,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-l-[l-(3-fluoro-benzenesulfonyl)-piperidin-4-yl]-l,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-l-[l-(2,4,6-trimethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-l-[l-(2-bromo-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-l-[l-(4-methoxy-2,3,6-trimethyl-benzenesulfonyl)-piperidin-4-yl]-l,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Chloro-l-[l-(3,5-dichloro-4-hydroxy-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Chloro-l-[l-(3,5-dichloro-4-hydroxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[1-(3,5-Dichloro-4-hydroxy-benzenesulfonyl)-piperidin-4-yl] - 1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[l-(3,5-Dichloro-4-hydroxy-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Chloro-l-[l-(3,5-dichloro-4-hydroxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[1-(3,5-Dichloro-4-hydroxy-benzenesulfonyl)-piperidin-4-yl] - 6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
6-Bromo-1-[1-(3,5-dichloro-4-hydroxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Chloro-1-[1-(3,5-dichloro-2-hydroxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(3,5-dichloro-2-hydroxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

2-[4-(6-Bromo-2-oxo-4H-benzo[d][1,3]oxazin-2-yl)-piperidine-1-sulfonyl]-benzonitrile

6-Bromo-1-[1-(4-methoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

2-[4-(6-Bromo-2-oxo-4H-benzo[d][1,3]oxazin-2-yl)-piperidine-1-sulfonyl]-benzoic acid methyl ester

6-Bromo-1-[1-(3-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(2-oxo-2H-chromene-6-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(3,5-dichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(2,5-dichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(5-bromo-6-chloro-pyridine-3-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(4-chloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(2,6-dichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(2,6-dichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(5-bromo-6-chloro-pyridine-3-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(2,5-dichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(5-bromo-2,4-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(4-ethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(4-ethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
360 6-Bromo-1-[(6-chloro-imidazo[2,1-b]thiazole-5-sulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
361 1-[1-(Benzo[b]thiophene-3-sulfonfyl)-piperidin-4-yl]-6-bromo-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
5 362 6-Bromo-1-[1-(7-chloro-benzo[l,2,5]oxadiazole-4-sulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
363 6-Bromo-1-[1-(2-methoxy-4-methyl-benzenesulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
364 3-[4-{4-(6-Bromo-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl}-
phenyl]-propionic acid methyl ester
365 6-Bromo-1-[1-(2,4-dinitro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
366 1-[1-(Benzo[b]thiophene-2-sulfonyl)-piperidin-4-yl]-6-bromo-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
10 367 6-Bromo-1-[1-(2,5-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
368 6-Bromo-1-[1-(4-chloro-2,5-difluoro-benzenesulfonyl)-piperidin-4-yl]-
1,4-dihydro-benzo[d][1,3]oxazin-2-one
369 6-Bromo-1-[1-(2,4,5-trifluoro-benzenesulfonfyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
20 370 6-Bromo-1-[1-(2,6-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
371 6-Bromo-1-[1-(5-chloro-2,4-difluoro-benzenesulfonyl)-piperidin-4-yl]-
1,4-dihydro-benzo[d][1,3]oxazin-2-one
25 372 6-Bromo-1-[1-(2-chloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
373 6-Bromo-1-[1-(2,3,4-trifluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
374 N-[4-{4-(6-Bromo-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl}-2-
chloro-phenylj-acetamide
375 1-[1-(2,3,4-Trifluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
376 8-Methyl-1-[1-(2,3,4-trifluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one
377 6-Chloro-1-[1-(2,3,4-trifluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one
378 6-Methyl-1-[1-(2,3,4-trifluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one
379 N-[2-Chloro-4-[4-(6-methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-phenyl]-acetamide
380 1-[1-(3,4-Difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one
381 1-[1-(3,4-Difluoro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydrobenzo[d][1,3]oxazin-2-one
382 6-Chloro-1-[1-(3,4-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one
383 1-[1-(3,4-Difluoro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydrobenzo[d][1,3]oxazin-2-one
384 6-Bromo-1-[1-(3,4-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one
385 N-[2-Chloro-4-[4-(8-methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-phenyl]-acetamide
386 1-[1-(2-Chloro-4,5-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one
387 1-[1-(2-Chloro-4,5-difluoro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydrobenzo[d][1,3]oxazin-2-one
388 6-Chloro-1-[1-(2-chloro-4,5-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one
389 1-[1-(2-Chloro-4,5-difluoro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydrobenzo[d][1,3]oxazin-2-one
390 6-Bromo-1-[1-(2-chloro-4,5-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydrobenzo[d][1,3]oxazin-2-one
391 N-[2-Chloro-4-[4-(2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-phenyl]-acetamide
392 1-[1-(Benzo[1,2,5]oxadiazole-4-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
393 1-[l-(Benzo[1,2,5]oxadiazole-4-sulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
394 1-[l-(Benzo[1,2,5]oxadiazole-4-sulfonyl)-piperidin-4-yl]-6-chloro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
395 1-[l-(Benzo[1,2,5]oxadiazole-4-sulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
396 1-[l-(Benzo[1,2,5]oxadiazole-4-sulfonyl)-piperidin-4-yl]-6-bromo-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
397 N-{2-Chloro-4-[4-(6-chloro-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-
sulfonyl]-phenyl }-acetamide
398 1-[l-(Benzo[1,2,5]thiadiazole-4-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
399 1-[1-(Benzo[1,2,5]thiadiazole-4-sulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
400 1-[l-(Benzo[1,2,5]thiadiazole-4-sulfonyl)-piperidin-4-yl]-6-chloro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
401 1-[l-(Benzo[1,2,5]thiadiazole-4-sulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
402 1-[l-(Benzo[1,2,5]thiadiazole-4-sulfonyl)-piperidin-4-yl]-6-bromo-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
403 1-(1-Ethanesulfonyl-piperidin-4-yl)-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-
one
404 1-[1-(2,4-Difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
405 1-[l-(2,4-Difluoro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
406 6-Chloro-1-[1-(2,4-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
407 1-[l-(2,4-Difluoro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
6-Bromo-1-[1-(2,4-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

8-Methyl-1-[1-(propane-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

1-[1-(3,4-Dichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

6-Chloro-1-[1-(3,4-dichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benvo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(3,4-dichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benvo[d][1,3]oxazin-2-one

8-Methyl-1-[1-(propane-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benn[d][1,3]oxazin-2-one

1-[1-(2-Chloro-6-methyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benn[d][1,3]oxazin-2-one

1-[1-(2-Chloro-6-methyl-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benn[d][1,3]oxazin-2-one

6-Chloro-1-[1-(2-chloro-6-methyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benn[d][1,3]oxazin-2-one

1-[1-(2-Chloro-6-methyl-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benn[d][1,3]oxazin-2-one

8-Methyl-1-[1-(2,3,5,6-tetramethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benn[d][1,3]oxazin-2-one

1-[1-(2,3,4-Trichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benn[d][1,3]oxazin-2-one

8-Methyl-1-[1-(2,3,4-trichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benn[d][1,3]oxazin-2-one
424 6-Chloro-1-[1-(2,3,4-trichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
425 6-Methyl-1-[1-(2,3,4-trichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
426 6-Bromo-1-[1-(2,3,4-trichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
427 1-[1-(2,3,5,6-Tetramethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
428 1-[1-(Thiophene-3-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-
one
429 8-Methyl-1-[1-(thiophene-3-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
430 6-Chloro-1-[1-(thiophene-3-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
431 6-Methyl-1-[1-(thiophene-3-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
432 6-Bromo-1-[1-(thiophene-3-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
433 6-Chloro-1-[1-(2,3,5,6-tetramethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
434 1-[1-(2,4,6-Trichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
435 8-Methyl-1-[1-(2,4,6-trichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
436 6-Chloro-1-[1-(2,4,6-trichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
437 6-Methyl-1-[1-(2,4,6-trichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
438 6-Bromo-1-[1-(2,4,6-trichloro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
439 6-Methyl-1-[1-(2,3,5,6-tetramethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
1-[(2-Bromo-4,6-difluoro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[(2-Bromo-4,6-difluoro-benzenesulfonyl)-piperidin-4-yl]-6-chloro-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[(2-Bromo-4,6-difluoro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo- 1-[(2-bromo-4,6-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-1-[(2,3,5,6-tetramethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[(4-Phenoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo- 1-[(3-bromo-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[(4-Bromo-2-trifluoromethoxy-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo- 1-[(2-bromo-4,6-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[(4-Bromo-2-trifluoromethoxy-benzenesulfonyl)-piperidin-4-yl]-6-chloro-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[(4-Bromo-2-trifluoromethoxy-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo- 1-[(4-bromo-2-trifluoromethoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[(4-Bromo-2-trifluoromethoxy-benzenesulfonyl)-piperidin-4-yl]-6-chloro-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[(4-Bromo-2-trifluoromethoxy-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo- 1-[(4-bromo-2-trifluoromethoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[(3-Bromo-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[(3-Bromo-benzenesulfonyl)-piperidin-4-yl]-6-chloro-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[(3-Bromo-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo- 1-[(3-bromo-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
8-Methyl-1-[1-(4-phenoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[1-(4-tert-Butyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[1-(4-tert-Butyl-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[1-(4-tert-Butyl-benzenesulfonyl)-piperidin-4-yl]-6-chloro-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[1-(4-tert-Butyl-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(4-tert-butyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Chloro-1-[1-(4-phenoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[1-(2-Bromo-4,6-difluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[1-(2-Methanesulfonyl-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Chloro-1-[1-(2-methanesulfonyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[1-(2-Methanesulfonyl-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(2-methanesulfonyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

8-Methyl-1-[1-(4-propyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Chloro-1-[1-(4-propyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Methyl-1-[1-(4-propyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Bromo-1-[1-(4-propyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
472 1-[1-(3-Chloro-2-methyl-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
473 6-Chloro-1-[1-(3-chloro-2-methyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
5 474 1-[1-(3-Chloro-2-methyl-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
475 6-Bromo-1-[1-(3-chloro-2-methyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
476 1-[1-(4-Butyl-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
477 1-[1-(4-Butyl-benzenesulfonyl)-piperidin-4-yl]-6-chloro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
478 1-[1-(4-Butyl-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
15 479 6-Bromo-1-[1-(4-butyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
480 1-[1-(4-Bromo-3-methyl-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
481 1-[1-(4-Bromo-3-methyl-benzenesulfonyl)-piperidin-4-yl]-6-chloro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
20 482 1-[1-(4-Bromo-3-methyl-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
483 6-Bromo-1-[1-(4-bromo-3-methyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
25 484 1-[1-[4-(1,1-Dimethyl-propyl)-benzenesulfonyl]-piperidin-4-yl]-8-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
485 6-Chloro-1-[1-[4-(1,1-Dimethyl-propyl)-benzenesulfonyl]-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
486 1-[1-[4-(1,1-Dimethyl-propyl)-benzenesulfonyl]-piperidin-4-yl]-6-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
30 487 6-Bromo-1-[1-[4-(1,1-Dimethyl-propyl)-benzenesulfonyl]-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
1-(1-Ethenesulfonyl-piperidin-4-yl)-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
3-[4-(8-Methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-benzoic acid
3-[4-(6-Methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-benzoic acid
3-[4-(6-Bromo-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-benzoic acid
1-[1-(3-Chloro-2-fluoro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
6-Chloro-1-[1-(3-chloro-2-fluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(3-Chloro-2-fluoro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
6-Bromo-1-[1-(3-chloro-2-fluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
N-{4-Methyl-5-[4-(8-methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-thiazol-2-yl}-acetamide
N-{5-[4-(6-Chloro-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-A-methyl-thiazol-2-yl}-acetamide
N-{4-Methyl-5-[4-(6-methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-thiazol-2-yl}-acetamide
N-{5-[4-(6-Bromo-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-A-methyl-thiazol-2-yl}-acetamide
1-[1-(2-Bromo-4-fluoro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(2-Bromo-4-fluoro-benzenesulfonyl)-piperidin-4-yl]-6-chloro-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(2-Bromo-4-fluoro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one
6-Bromo-1-[1-(2-bromo-4-fluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
| 504 | 1-[(5-Chloro-2-fluoro-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 505 | 6-Chloro-1-[l-(5-chloro-2-fluoro-benzenesulfonyl)-piperidin-4-yl]-l,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 506 | 1-[l-(5-Chloro-2-fluoro-benzenesulfonyl)-piperidin-4-yl]-6-methyl-l,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 507 | 6-Bromo-1-[l-(5-chloro-2-fluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 508 | 1-[l-(4-Bromo-3-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 509 | 1-[l-(4-Bromo-3-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-6-chloro-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 510 | 1-[l-(4-Bromo-3-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 511 | 6-Bromo-1-[l-(4-bromo-3-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 512 | 1-[l-(2-Methanesulfonyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 513 | 1-[l-(4-Propyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 514 | 1-[l-(3-Chloro-2-methyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 515 | 1-[l-(4-Butyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 516 | 1-[l-(4-Bromo-3-methyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 517 | 1-[l-4-(1,1-Dimethyl-propyl)-benzenesulfonyl]-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 518 | N-[4-Methyl-5-[4-(2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-thiazol-2-yl]-acetamide |
| 519 | 1-[l-(3-Chloro-2-fluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
520 1-[(2-Bromo-4-fluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
521 1-[(4-Bromo-3-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
522 1-[(5-Chloro-2-fluoro-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
523 1-[(Isoquinoline-5-sulfonyle)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-
one
524 6-Fluoro-1-[(2-methanesulfonyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
525 6-Fluoro-1-[(4-propyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
526 1-[(3-Chloro-2-methyl-benzenesulfonyl)-piperidin-4-yl]-6-fluoro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
527 1-[(4-Butyl-benzenesulfonyl)-piperidin-4-yl]-6-fluoro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
528 1-[(4-Bromo-3-methyl-benzenesulfonyl)-piperidin-4-yl]-6-fluoro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
529 1-[(4-(1,1-Dimethyl-propyl)-benzenesulfonyl)-piperidin-4-yl]-6-fluoro-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
530 N-{5-[(6-Fluoro-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-4-
methyl-thiazol-2-yl}acetamide
531 1-[(3-Chloro-2-fluoro-benzenesulfonyl)-piperidin-4-yl]-6-fluoro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
532 1-[(2-Bromo-4-fluoro-benzenesulfonyl)-piperidin-4-yl]-6-fluoro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
533 1-[(4-Bromo-3-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-6-fluoro-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
534 1-[(5-Chloro-2-fluoro-benzenesulfonyl)-piperidin-4-yl]-6-fluoro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
535 6-Fluoro-1-[1-(isoquinoline-5-sulfonyle)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
6-Fluoro-l-[l-(quinoline-8-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Fluoro-1-[l-(5-Chloro-3-methyl-benzo[b] thiophene-2-sulfonyl)-piperidin-4-yl]-6-fluoro-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Fluoro-l-[l-(naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Fluoro-l-[l-(naphthalene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Fluoro-l-[l-(Benzo[b] thiophene-2-sulfonyl)-piperidin-4-yl]-6-fluoro-1,4-dihydro-benzo[d][1,3]oxazin-2-one

8-Methoxy-1-[l-(quinoline-8-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

8-Methoxy-1-[l-(naphthalene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

8-Methoxy-1-[l-(naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

5-Chloro-1-[l-(2-methanesulfonyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

5-Chloro-1-[l-(4-propyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

5-Chloro-1-[l-(3-chloro-2-methyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[l-(4-Butyl-benzenesulfonyl)-piperidin-4-yl]-5-chloro-1,4-dihydro-benzo[d][1,3]oxazin-2-one
552 1-[l-(4-Bromo-3-methyl-benzenesulfonyl)-piperidin-4-yl]-5-chloro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
553 5-Chloro-l-[1-[4-(1,1-dimethyl-propyl)-benzenesulfonyl]-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
554 N-[5-[4-(5-Chloro-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-A-
methyl-thiazol-2-yl]-acetamide
555 5-Chloro-l-[l-(3-chloro-2-fluoro-benzenesulfonyl)-piperidin-4-yl]-l,4-dihydro-
benzo[d][1,3]oxazin-2-one
556 l-[l-(2-Bromo-4-fluoro-benzenesulfonyl)-piperidin-4-yl]-5-chloro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
557 l-[l-(4-Bromo-3-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl]-5-chloro-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
558 5-Chloro-l-[l-(5-chloro-2-fluoro-benzenesulfonyl)-piperidin-4-yl]-l,4-dihydro-
benzo[d][1,3]oxazin-2-one
559 5-Chloro-l-[l-(isoquinoline-5-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
560 l-[l-(2-Methanesulfonyl-benzenesulfonyl)-piperidin-4-yl]-8-methoxy-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
561 l-[l-(2-Methanesulfonyl-benzenesulfonyl)-piperidin-4-yl]-8-methoxy-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
562 5-Chloro-l-[l-(3-Chloro-2-methyl-benzenesulfonyl)-piperidin-4-yl]-8-methoxy-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
563 l-[l-(4-Butyl-benzenesulfonyl)-piperidin-4-yl]-8-methoxy-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
564 1-[l-(4-Bromo-3-methyl-benzenesulfonyl)-piperidin-4-yl]-8-methoxy-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
565 1-[1-[4-(1,1-Dimethyl-propyl)-benzenesulfonyl]-piperidin-4-yl]-8-methoxy-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
566 N-[5-[4-(8-Methoxy-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-
4-methyl-thiazol-2-yl]-acetamide
567 l-[l-(3-Chloro-2-fluoro-benzenesulfonyl)-piperidin-4-yl]-8-methoxy-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
1-(1-(2-Bromo-4-fluoro-benzenesulfonyl)-piperidin-4-yl)-8-methoxy-1,4-dihydrobenzo[d][1,3]oxazin-2-one

1-(1-(4-Bromo-3-trifluoromethyl-benzenesulfonyl)-piperidin-4-yl)-8-methoxy-1,4-dihydrobenzo[d][1,3]oxazin-2-one

1-(1-(5-Chloro-2-fluoro-benzenesulfonyl)-piperidin-4-yl)-8-methoxy-1,4-dihydrobenzo[d][1,3]oxazin-2-one

1-(1-(Isoquinoline-5-sulfonyl)-piperidin-4-yl)-8-methoxy-1,4-dihydrobenzo[d][1,3]oxazin-2-one; hydrochloride

1-(1-(4-Methyl-naphthalene-1-sulfonyl)-piperidin-4-yl)-1,4-dihydrobenzo[d][1,3]oxazin-2-one

6-Chloro-1-(1-(4-methyl-naphthalene-1-sulfonyl)-piperidin-4-yl)-1,4-dihydrobenzo[d][1,3]oxazin-2-one

6-Methyl-1-(1-(4-methyl-naphthalene-1-sulfonyl)-piperidin-4-yl)-1,4-dihydrobenzo[d][1,3]oxazin-2-one

8-Methyl-1-(1-(4-methyl-naphthalene-1-sulfonyl)-piperidin-4-yl)-1,4-dihydrobenzo[d][1,3]oxazin-2-one

6-Fluoro-1-(1-(4-methyl-naphthalene-1-sulfonyl)-piperidin-4-yl)-1,4-dihydrobenzo[d][1,3]oxazin-2-one

8-Methoxy-1-(1-(4-methyl-naphthalene-1-sulfonyl)-piperidin-4-yl)-1,4-dihydrobenzo[d][1,3]oxazin-2-one

5-Chloro-1-(1-(4-methyl-naphthalene-1-sulfonyl)-piperidin-4-yl)-1,4-dihydrobenzo[d][1,3]oxazin-2-one

5-Chloro-1-(1-(naphthalene-1-sulfonyl)-piperidin-4-yl)-1,4-dihydrobenzo[d][1,3]oxazin-2-one

5-Chloro-1-(1-(naphthalene-2-sulfonyl)-piperidin-4-yl)-1,4-dihydrobenzo[d][1,3]oxazin-2-one

5-Chloro-1-(1-(5-chloro-3-methyl-benzo[b]thiophene-2-sulfonyl)-piperidin-4-yl)-1,4-dihydrobenzo[d][1,3]oxazin-2-one

1-(1-(Benzo[b]thiophene-2-sulfonyl)-piperidin-4-yl)-5-chloro-1,4-dihydrobenzo[d][1,3]oxazin-2-one
584 1-[1-(Benzo[b]thiophene-3-sulfonyl)-piperidin-4-yl]-5-chloro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
585 6-Bromo-1-[1-(4-methyl-naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
586 2-Chloro-4-fluoro-5-[4-(8-methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-
1-sulfonyl]-benzoic acid
587 2-Chloro-5-[4-(6-chloro-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-
sulfonyl]-4-fluoro-benzoic acid
588 2-Chloro-4-fluoro-5-[4-(6-methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-
1-sulfonyl]-benzoic acid
589 2-Chloro-4-fluoro-5-[4-(2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-
sulfonyl]-benzoic acid
590 2-Chloro-4-fluoro-5-[4-(8-methoxy-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-
piperidine-1-sulfonyl]-benzoic acid
591 3-[4-(2-Oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-
benzoic acid
592 3-[4-(2-Oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-benzoic acid
593 3-[4-(8-Methoxy-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-
benzoic acid
594 3-[4-(5-Chloro-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-
benzoic acid
595 1-[1-(Isoquinoline-5-sulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one; hydrochloride
596 6-Chloro-1-[1-(isoquinoline-5-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one; hydrochloride
597 1-[1-(Isoquinoline-5-sulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one hydrochloride
598 6,7-Difluoro-1-[1-(quinoline-8-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
599 1-[1-(5-Chloro-3-methyl-benzo[b]thiophene-2-sulfonyl)-piperidin-4-yl]-6,7-
difluoro-1,4-dihydro-benzo[d][1,3]oxazin-2-one
600 6,7-Difluoro-1-[1-(naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
601 6,7-Difluoro-1-[1-(naphthalene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
602 1-[1-(Benzo[b]thiophene-2-sulfonyl)-piperidin-4-yl]-6,7-difluoro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
5 603 1-[1-(Benzo[b]thiophene-3-sulfonyl)-piperidin-4-yl]-6,7-difluoro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
604 1-[1-(5-Dimethylamino-naphthalene-1-sulfonyl)-piperidin-4-yl]-6,7-difluoro-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
605 1-[1-(Biphenyl-4-sulfonyl)-piperidin-4-yl]-6,7-difluoro-1,4-dihydro-
10 benzo[d][1,3]oxazin-2-one
606 1-[1-(Benzo[1,2,5]thiadiazole-4-sulfonyl)-piperidin-4-yl]-6,7-difluoro-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
607 1-[1-(Benzo[1,2,5]oxadiazole-4-sulfonyl)-piperidin-4-yl]-6,7-difluoro-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
15 608 1-[1-(7-Chloro-benzo[1,2,5]oxadiazole-4-sulfonyl)-piperidin-4-yl]-6,7-difluoro-
1,4-dihydro-benzo[d][1,3]oxazin-2-one
609 6,7-Difluoro-1-[1-(4-methyl-naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
610 1-[1-(4-Chloro-naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
20 benzo[d][1,3]oxazin-2-one
611 1-[1-(4-Fluoro-naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
612 1-[1-(Dibenzo[b]furan-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-
25 2-one
613 1-[1-(2,3-Dihydro-benzo[b]furan-5-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
614 1-[1-(Biphenyl-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
615 1-[1-(5-Isoxazol-5-yl-thiophene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
30 616 1-[1-(4-Chloro-naphthalene-1-sulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
617 1-[1-(4-Fluoro-naphthalene-1-sulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
618 1-[1-(Dibenzofuran-2-sulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
619 1-[1-(2,3-Dihydro-benzofuran-5-sulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
620 1-[1-(Biphenyl-2-sulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
621 1-[1-(5-Isxazol-5-yl-thiophene-2-sulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
622 5-Chloro 1-[1-(4-chloro-naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
623 5-Chloro 1-[1-(4-fluoro-naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
624 5-Chloro 1-[1-(dibenzofuran-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
625 5-Chloro 1-[1-(2,3-dihydro-benzofuran-5-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
626 1-[1-(Biphenyl-2-sulfonyl)-piperidin-4-yl]-5-chloro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
627 5-Chloro 1-[1-(5-isoxazol-5-yl-thiophene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
628 1-[1-(4-Chloro-naphthalene-1-sulfonyl)-piperidin-4-yl]-8-methoxy-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
629 1-[1-(4-Fluoro-naphthalene-1-sulfonyl)-piperidin-4-yl]-8-methoxy-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
630 1-[1-(Dibenzofuran-2-sulfonyl)-piperidin-4-yl]-8-methoxy-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
631 1-[1-(2,3-Dihydro-benzofuran-5-sulfonyl)-piperidin-4-yl]-8-methoxy-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
632 1-[1-(Biphenyl-2-sulfonyl)-piperidin-4-yl]-8-methoxy-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
633 1-[1-(5-Isxazol-5-yl-thiophene-2-sulfonyl)-piperidin-4-yl]-8-methoxy-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
634 6-Chloro-1-[1-(4-chloro-naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
635 6-Chloro-1-[1-(4-fluoro-naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
636 6-Chloro-1-[1-(dibenzofuran-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
637 6-Chloro-1-[1-(2,3-dihydro-benzofuran-5-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
638 1-[1-(Biphenyl-2-sulfonyl)-piperidin-4-yl]-6-chloro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
639 6-Chloro-1-[1-(5-isoxazol-5-yl-thiophene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
640 1-[1-(4-Chloro-naphthalene-1-sulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
641 1-[1-(4-Fluoro-naphthalene-1-sulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
642 1-[1-(Dibenzofuran-2-sulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
643 1-[1-(2,3-Dihydro-benzofuran-5-sulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
644 1-[1-(Biphenyl-2-sulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
645 1-[1-(5-Isoxazol-5-yl-thiophene-2-sulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
646 1-[1-(4-Chloro-naphthalene-1-sulfonyl)-piperidin-4-yl]-6,7-difluoro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
647 6,7-Difluoro-1-[1-(4-fluoro-naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
648 1-[1-(Dibenzofuran-2-sulfonyl)-piperidin-4-yl]-6,7-difluoro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
649 1-[1-(2,3-Dihydro-benzofuran-5-sulfonyl)-piperidin-4-yl]-6,7-difluoro-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
650  1-[(Biphenyl-2-sulfonyl)-piperidin-4-yl]-6,7-difluoro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
651  6,7-Difluoro-1-[(5-isoxazol-5-yl-thiophene-2-sulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
5  652  1-[(1,2-Dimethyl-1H-imidazole-4-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
653  1-[(5-Methyl-benzo[1,2,5]thiadiazole-4-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
654  1-[(3,5-Dimethyl-isoxazole-4-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
10  655  1-[(1,2-Dimethyl-1H-imidazole-4-sulfonyl)-piperidin-4-yl]-8-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
656  8-Methyl-1-[(5-methyl-benzo[1,2,5]thiadiazole-4-sulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
15  657  1-[(3,5-Dimethyl-isoxazole-4-sulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
658  6-Chloro-1-[(1,2-dimethyl-1H-imidazole-4-sulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
659  6-Chloro-1-[(5-methyl-benzo[1,2,5]thiadiazole-4-sulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
20  660  6-Chloro-1-[(3,5-dimethyl-isoxazole-4-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
661  1-[(1,2-Dimethyl-1H-imidazole-4-sulfonyl)-piperidin-4-yl]-8-methoxy-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
25  662  8-Methoxy-1-[(5-methyl-benzo[1,2,5]thiadiazole-4-sulfonyl)-piperidin-4-yl]-
1,4-dihydro-benzo[d][1,3]oxazin-2-one
663  1-[(3,5-Dimethyl-isoxazole-4-sulfonyl)-piperidin-4-yl]-8-methoxy-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
664  5-Chloro-1-[(1,2-dimethyl-1H-imidazole-4-sulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
30  665  5-Chloro-1-[(5-methyl-benzo[1,2,5]thiadiazole-4-sulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
5-Chloro-1-[1-(3,5-dimethyl-isoxazole-4-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

1-[1-(1,2-Dimethyl-1H-imidazole-4-sulfonyl)-piperidin-4-yl]-6-methyl-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

6-Methyl-1-[1-(5-methyl-benzo[1,2,5]thiadiazole-4-sulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

1-[1-(3,5-Dimethyl-isoxazole-4-sulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

1-[1-(1,2-Dimethyl-1H-imidazole-4-sulfonyl)-piperidin-4-yl]-6-fluoro-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

6-Fluoro-1-[1-(5-methyl-benzo[1,2,5]thiadiazole-4-sulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

1-[1-(3,5-Dimethyl-isoxazole-4-sulfonyl)-piperidin-4-yl]-6-fluoro-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

1-[1-(1,2-Dimethyl-1H-imidazole-4-sulfonyl)-piperidin-4-yl]-6,7-difluoro-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

6,7-Difluoro-1-[1-(5-methyl-benzo[1,2,5]thiadiazole-4-sulfonyl)-piperidin-4-yl]-
1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[1-(3,5-Dimethyl-isoxazole-4-sulfonyl)-piperidin-4-yl]-6,7-difluoro-1,4-
dihydro-benzo[d][1,3]oxazin-2-one

1-[1-(5-Chloro-naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

1-[1-(5-Chloro-naphthalene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

N-{5-[4-(2-Oxo-4H-benzo[1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-naphthalen-
1-yl}-acetamide

1-[1-(5-Chloro-naphthalene-1-sulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

1-[1-(5-Chloro-naphthalene-2-sulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one

N-{5-[4-(8-Methyl-2-oxo-4H-benzo[1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-
naphthalen-1-yl}-acetamide
5-Chloro-1-[1-(5-chloro-naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
5-Chloro-1-[1-(5-chloro-naphthalene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
N-5-{4-(5-Chloro-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl}-naphthalen-1-yl]-acetamide
1-[1-(5-Chloro-naphthalene-1-sulfonyl)-piperidin-4-yl]-8-methoxy-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
1-[1-(5-Chloro-naphthalene-2-sulfonyl)-piperidin-4-yl]-8-methoxy-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
N-5-{4-(8-Methoxy-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl}-naphthalen-1-yl]-acetamide
2,5-Dimethyl-4-[4-(8-methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-sulfonyl]-furan-3-carboxylic acid methyl ester
8-Methyl-1-[1-(2-oxo-2,3-dihydro-benzothiazole-6-sulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(4-Fluoro-3-methyl-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
8-Methyl-1-[1-(2-oxo-2,3-dihydro-benzooxazole-6-sulfonyl)-piperidin-4-yl]-1,4-
dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(4-Cyclohexyl-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
2,5-Dimethyl-4-[4-(2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-
furan-3-carboxylic acid methyl ester
1-[1-(4-Fluoro-3-methyl-benzenesulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro-
benzo[d][1,3]oxazin-2-one
2-Fluoro-5-[4-(8-methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-
sulfonyl]-benzoic acid
2-Fluoro-5-[4-(2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-benzoic acid

1-[l-(2-Oxo-2,3-dihydro-benzothiazole-6-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

1-[l-(5-Pyridin-2-yl-thiophene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

3-[4-(2-Oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-thiophene-2-carboxylic acid methyl ester
<table>
<thead>
<tr>
<th>Page</th>
<th>Molecular Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>715</td>
<td>1-{5-[4-(5-Chloro-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-naphthalen-1-yl }-pyrrolidine-2,5-dione</td>
</tr>
<tr>
<td>716</td>
<td>5-Chloro-1-[1-(2-chloro-5-trifluoromethyl-benzenesulf onyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one</td>
</tr>
<tr>
<td>717</td>
<td>5-Chloro-1-[1-(3,4-dimethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one</td>
</tr>
<tr>
<td>718</td>
<td>6-Methyl-1-[1-(5-pyridin-2-yl-thiophene-2-sulf onyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one</td>
</tr>
<tr>
<td>719</td>
<td>3-[4-(6-Methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-benzonitrile</td>
</tr>
<tr>
<td>720</td>
<td>3-[4-(6-Methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-thiophene-2-carboxylic acid methyl ester</td>
</tr>
<tr>
<td>721</td>
<td>1-{5-[4-(6-Methyl-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-naphthalen-1-yl }-pyrrolidine-2,5-dione</td>
</tr>
<tr>
<td>722</td>
<td>1-[1-(2-Chloro-5-trifluoromethyl-benzenesulf onyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one</td>
</tr>
<tr>
<td>723</td>
<td>1-[1-(3,4-Dimethyl-benzenesulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one</td>
</tr>
<tr>
<td>724</td>
<td>6-Chloro-1-[1-(5-pyridin-2-yl-thiophene-2-sulf onyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one</td>
</tr>
<tr>
<td>725</td>
<td>3-[4-(6-Chloro-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-benzonitrile</td>
</tr>
<tr>
<td>726</td>
<td>3-[4-(6-Chloro-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-thiophene-2-carboxylic acid methyl ester</td>
</tr>
<tr>
<td>727</td>
<td>1-{5-[4-(6-Chloro-2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-naphthalen-1-yl }-pyrrolidine-2,5-dione</td>
</tr>
<tr>
<td>728</td>
<td>6-Chloro-1-[1-(2-chloro-5-trifluoromethyl-benzenesulf onyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one</td>
</tr>
<tr>
<td>729</td>
<td>6-Chloro-1-[1-(3,4-dimethyl-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one</td>
</tr>
<tr>
<td>730</td>
<td>1-[1-(5-Methyl-isoxazole-4-sulf onyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one</td>
</tr>
</tbody>
</table>
1-[1-(2,2-Dimethyl-chroman-6-sulfonyl)-piperidin-4-yl]-l,4-dihydro benz[d][1,3]oxazin-2-one
1-[1-(4-Methyl-3,4-dihydro-2H-benzo[1,4]oxazine-7-sulfonyl)-piperidin-4-yl]-1,4- dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(2,3-Dihydro-benzo[1,4]dioxine-6-sulfonyl)-piperidin-4-yl]-1,4-dihydro benz[d][1,3]oxazin-2-one
1-[1-(3-Methyl-2-oxo-2,3-dihydro-benzoxazole-6-sulfonyl)-piperidin-4-yl]-1,4- dihydro-benzo[d][1,3]oxazin-2-one
8-Methyl-1-[1-(5-methyl-isoxazole-4-sulfonyl)-piperidin-4-yl]-1,4-dihydro benz[d][1,3]oxazin-2-one
1-[1-(2,2-Dimethyl-chroman-6-sulfonyl)-piperidin-4-yl]-8-methyl-1,4-dihydro benz[d][1,3]oxazin-2-one
8-Methyl-1-[1-[1-(1,3,5-trimethyl-1H-pyrazole-4-sulfonyl)-piperidin-4-yl]-1,4- dihydro-benzo[d][1,3]oxazin-2-one
8-Methyl-1-[1-(3-methyl-2-oxo-2,3-dihydro-benzoxazole-6-sulfonyl)-piperidin-4-yl]-1,4- dihydro-benzo[d][1,3]oxazin-2-one
8-Methoxy-1-[1-(3-methyl-2-oxo-2,3-dihydro-benzoxazole-6-sulfonyl)-piperidin-4-yl]-1,4- dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(Benzo[d]isoxazol-3-ylmethanesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(2,2,4,6,7-Pentamethyl-2,3-dihydro-benzofuran-5-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
6-Methyl-5-[4-(2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-1H-pyrimidine-2,4-dione
1-[1-(3-Methyl-quinoline-8-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[1,(2,2,5,7,8-Pentamethyl-chroman-6-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1,4-Dimethyl-6-[4-(2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-1,4-dihydro-quinoxaline-2,3-dione
1-[1-(1H-Imidazole-4-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(2-Oxo-1,2,3,4-tetrahydro-quinoline-6-sulfonyle)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
7-[4-(2-Oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-1,5-dihydro-benzo[b][1,4]diazepine-2,4-dione
8-Methyl-1-[1-(3-methyl-quinoline-8-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
6-Chloro-1-[1-(3-methyl-quinoline-8-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
5-Chloro-1-[1-(3-methyl-quinoline-8-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
8-Methoxy-1-[1-(3-methyl-quinoline-8-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(Pyridine-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(6,7-Dihydroxy-naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
Acetic acid 3-acetoxy-5-[4-(2-oxo-4H-benzo[d][1,3]oxazin-1-yl)-piperidine-1-sulfonyl]-naphthalene-2-yl ester
1-[1-(1H-Benzimidazole-2- sulfonyle)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(1H-Benzimidazole-2-sulfonyl)-piperidin-4-yl]-8-methoxy-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(IH-Benzimidazole-2-sulfonyl)-piperidin-4-yl]-5-chloro-1,4-dihydro-benzo[d][1,3]oxazin-2-one
1-[1-(2,5-Dimethoxy-benzenesulfonyl)-piperidin-4-yl]-6-fluoro-1,4-dihydro-benzo[d][1,3]oxazin-2-one
| 764 | 1-[l-(2,5-Dimethoxy-benzenesulfonyl)-piperidin-4-yl]-8-methoxy-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 765 | 1-[l-(2,5-Dimethoxy-benzenesulfonyl)-piperidin-4-yl]-6,7-difluoro-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 766 | 5-Chloro-1-[l-(2,5-dimethoxy-benzenesulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 767 | 1-[l-(5-Dimethylamino-naphthalene-1-sulfonyl)-piperidin-4-yl]-8-methoxy-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 768 | 5-Chloro-1-[l-(5-dimethylamino-naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 769 | 6-Chloro-1-[l-(5-chloro-naphthalene-1-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 770 | 1-[l-(5-Chloro-naphthalene-1-sulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 771 | 1-[l-(5-Chloro-naphthalene-1-sulfonyl)-piperidin-4-yl]-6-fluoro-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 772 | 6-Chloro-1-[l-(5-chloro-naphthalene-2-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 773 | 1-[l-(5-Chloro-naphthalene-2-sulfonyl)-piperidin-4-yl]-6-methyl-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 774 | 1-[l-(5-Chloro-naphthalene-2-sulfonyl)-piperidin-4-yl]-6-fluoro-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 775 | 6-Methyl-1-[l-(3-methyl-quinoline-8-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 776 | 6-Fluoro-1-[l-(3-methyl-quinoline-8-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 777 | 6,7-Difluoro-1-[l-(3-methyl-quinoline-8-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 778 | 6-Chloro-1-[l-(3-methyl-2-oxo-2,3-dihydro-benzooxazole-6-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
| 779 | 6-Methyl-1-[l-(3-methyl-2-oxo-2,3-dihydro-benzooxazole-6-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one |
6-Fluoro-1-[1-(3-methyl-2-oxo-2,3-dihydro-benzooxazole-6-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6,7-Difluoro-1-[1-(3-methyl-2-oxo-2,3-dihydro-benzooxazole-6-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

5-Chloro-1-[1-(3-methyl-2-oxo-2,3-dihydro-benzooxazole-6-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Chloro-1-[1-(4-methyl-3,4-dihydro-2H-benzo[1,4]oxazine-7-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Methyl-1-[1-(4-methyl-3,4-dihydro-2H-benzo[1,4]oxazine-7-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

6-Fluoro-1-[1-(4-methyl-3,4-dihydro-2H-benzo[1,4]oxazine-7-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

8-Methoxy-1-[1-(4-methyl-3,4-dihydro-2H-benzo[1,4]oxazine-7-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one

5-Chloro-1-[1-(4-methyl-3,4-dihydro-2H-benzo[1,4]oxazine-7-sulfonyl)-piperidin-4-yl]-1,4-dihydro-benzo[d][1,3]oxazin-2-one;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, its racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a solvate, respectively.

The compounds of general formula (Ia) may be prepared according to the disclosure of WO 2005/014045.

In another embodiment, as component (A) at least one compound is present, which is selected from the group consisting of indole-derived sulfonamide compounds of general formula (Ib)
wherein

\[ R_{lb} \] represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; a \(-\text{(CH}_2\text{)}_{mb}\)-NR\text{\textsuperscript{13}b}R\text{\textsuperscript{14}b} moiety with \( mb = 0, 1, 2, 3, 4 \) or \( 5 \); a -C(=O)-R\text{\textsuperscript{8}b} moiety; a -S(=O)\text{\textsuperscript{2}b}R\text{\textsuperscript{9}b} moiety; or a -S(=O)\text{\textsuperscript{2}b}-C(H)A\text{\textsuperscript{A}b}B\text{\textsuperscript{B}b} moiety;

\[ R_{2b} \] represents a hydrogen atom; -F; -Cl; -Br; -I; -NO\text{\textsubscript{2}}; -NH\text{\textsubscript{2}}; -SH; -OH; -CN; -C(=O)-OH; -O-R\text{\textsuperscript{10}b}; -S-R\text{\textsuperscript{11}b}; -C(=O)-OR\text{\textsuperscript{12}b}; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a chain member containing aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group and/or
which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

$R^{3b}$ represents a hydrogen atom; -F; -Cl; -Br; -I; -NO$_2$; -CN; -O-R$^{10b}$; -S-R$^{11b}$; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via an unsubstituted or at least mono-substituted alkyene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkyene group and/or which may be condensed with an unsubstituted or at least mono-substituted alkyene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; a -CH(OC$_2$H$_5$)-CH$_2$-NR$^{13b}$R$^{14b}$ moiety or a -(CH$_2$)$_{nb}$-NR$^{13b}$R$^{14b}$ moiety with nb = 0, 1, 2, 3, 4 or 5; a -S(=O)$_2$-R$^{9b}$ moiety; a -(S(=O)$_2$)$_4$C(H)$_4$AV moiety; or a -(C(=O)-(CH$_2$)$_{pb}$-C(=O)-N-D$^b$E$^b$ moiety with pb = 0, 1, 2, 3, 4 or 5;

$R^{4b}$, $R^{5b}$, $R^{6b}$ and $R^{7b}$, independently of one another, each represent a hydrogen atom; -NO$_2$; -NH$_2$; -SH; -OH; -CN; -C(=O)-OH; -C(=O)-H; -S(=O)$_2$-OH; -C(=O)-NH$_2$; -S(=O)$_2$-NH$_2$; -C(=O)-R$^{8b}$; -S(=O)$_2$-R$^{9b}$; -O-R$^{10b}$; -S-R$^{11b}$; -C(=O)-OR$_{12b}$; -N(R$_{15b}$)-S(=O)$_2$-R$^{16b}$; -NH-R$^{17b}$; -NR$^{18b}$-R$^{19b}$; -C(=O)-NHR$_{20b}$; -C(=O)-NR$_{21b}$R$_{22b}$; -S(=O)$_2$-NHR$_{23b}$; -(S(=O)$_2$)$_2$-NR$_{24b}$R$_{25b}$; -O-C(=O)-R$_{26b}$; -NH-C(=O)-R$_{27b}$; -NR$_{28b}$-C(=O)-R$_{29b}$; NH-C(=O)-O-R$_{30b}$; NR$_{31b}$-C(=O)-O-R$_{32b}$; -S(=O)$_2$-O-R$_{33b}$; a halogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkyene group; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkyene group;

with the proviso that at least one of the substituents $R^{4b}$, $R^{5b}$, $R^{6b}$ and $R^{7b}$ represents a -N(R$_{15b}$)-S(=O)$_2$-R$^{16b}$ moiety;
R^{8b}, R^{12b}, R^{17b}, R^{18b}, R^{19b}, R^{20b}, R^{21b}, R^{22b}, R^{23b}, R^{24b}, R^{25b}, R^{26b}, R^{27b}, R^{28b}, R^{29b}, R^{30b}. R^{31b}, R^{32b} and R^{33b}, independently of one another, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkyne group; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkyne, alkenylene or alkinylene group;

R^{9b} represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkyne group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkyne, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R^{10b} and R^{11b}, independently of one another, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkyne group;

R^{13b} and R^{14b}, independently of one another, each represent a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

or

R^{13b} and R^{14b} together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may
contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

$R^{15b}$ represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical or a $-\text{S}(=\text{O})_2-R^{16b}$ moiety;

$R^{16b}$ represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

$A^b$ and $B^b$ together with the bridging carbon form an unsubstituted or at least mono-substituted, saturated or unsaturated cycloaliphatic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

$D^b$ and $E^b$ together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

or

$D^b$ and $E^b$, independently of one another, each represent a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally
at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkyne group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkyne, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

optionally in form of one of its stereoisomers, preferably enantiomers or diasteromers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively.

In another embodiment of the present invention compounds of general formula (Ib) are selected from the group consisting of compounds of general formula (Ih)

![Chemical Structure](image)

(Ih)

wherein

R\textsuperscript{1h} represents a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkyne group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or a -(CH\textsubscript{2})\textsuperscript{mh}-NR\textsuperscript{13h}R\textsuperscript{14h} moiety with mh = 0, 1, 2, 3, 4 or 5;
R\(^{2h}\) represents a hydrogen atom; -F; -Cl; -Br; -I; -NO\(_2\); -CN; -O-R\(^{10h}\); a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R\(^{3h}\) represents a hydrogen atom; -F; -Cl; -Br; -I; -NO\(_2\); -CN; -O-R\(^{10h}\); a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or a -(CH\(_2\))\(_{nh}\)-NR\(^{13h}\)R\(^{14h}\) moiety with nh = 0, 1, 2, 3, 4 or 5;

R\(^{4h}\), R\(^{5h}\) and R\(^{7h}\), independently of one another, each represent a hydrogen atom; -NO\(_2\); -CN; -O-R\(^{10h}\); -C(=O)-OR\(^{12h}\); a halogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group;

R\(^{10h}\) represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group;

R\(^{13h}\) and R\(^{14h}\), independently of one another, each represent a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

or
R\textsuperscript{13h} and R\textsuperscript{14h} together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R\textsuperscript{15h} represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical or a -S(=O)\textsubscript{2}-R\textsuperscript{16h} moiety;

and R\textsuperscript{16h} represents an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

optionally in form of one of its stereoisomers, preferably enantiomers or diasteromers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively.

Particularly preferred compounds of general formula (Ih) are those, wherein

R\textsuperscript{1h} represents a hydrogen atom or a -(CH\_2\textsubscript{WNR\textsuperscript{13h}V\textsuperscript{14h}}) radical,

R\textsuperscript{2h}, and R\textsuperscript{7h} each represent hydrogen,

R\textsuperscript{3h} represents a hydrogen atom, l-methyl-piperidin-4-yl or a -(CH\_2\textsubscript{nh})\textsubscript{nr}NR\textsuperscript{13h}R\textsuperscript{14h} moiety with nh = 0, 1 or 2,

R\textsuperscript{4h} represents chlorine, bromine or a hydrogen atom,

R\textsuperscript{4h} represents -Q=O)-O-C\_2Hs or a hydrogen atom,
R$^{15h}$ represents hydrogen or a -S(=O)$_2$-R$^{16h}$ moiety.

R$^{13h}$ and R$^{14h}$, identical or different, each represent methyl, ethyl, isopropyl or n-propyl, more preferably methyl,

or

R$^{13h}$ and R$^{14h}$, together with the bridging nitrogen atom form a 5- or 6-membered heterocyclic ring, more preferably form a pyrrolidine ring or a piperidine ring

and

R$^{16h}$ represents an aryl or heteroaryl radical selected from the group consisting of phenyl, naphthyl, thiophenyl, benzo[b]furanyl, benzo[b]thiophenyl and imidazo[2,1-b]thiazolyl which may be substituted by 1, 2 or 3 substituents selected from the group consisting of chlorine, methyl, phenyl and -O-phenyl and/or which may be bonded via a C1-2 alkyene group,

and m is 0, 1 or 2,

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a salt thereof, preferably a corresponding, physiologically acceptable salt thereof, or a corresponding solvate thereof.

More particularly preferred compounds of general formula (Ih) are those selected from the group consisting of:

[788] N-[l-(2-Dimethylaminoethyl)-lH-indol-6-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulfonamide,

[789] N-[l-(2-Dimethylaminoethyl)-lH-indol-6-yl]-naphthalene-2-sulfonamide,

[790] N-[l-(2-Dimethylaminoethyl)- lH-indol-6-yl] -naphthalene- 1-sulfonamide,

[791] N-[l- (2-Dimethylaminoethyl)- lH-indol-6-yl] -6-chloroimidazo[2,1-b]thiazole-5-
sulfonamide,
[792] N-[1-(2-Dimethylaminoethyl)-lH-indol-6-yl]-4-phenylbenzenesulfonamide,
[793] N-[l-(2-Dimethylaminoethyl)-lH-indol-6-yl]-2-(naphthalene-1-yl)-
ethanesulfonamide,
[794] N-[l-(2-Dimethylaminoethyl)-lH-indol-6-yl]-4-phenoxylbenzenesulfonamide,
[795] N-[l-(2-Dimethylaminoethyl)-lH-indol-6-yl]-3,5-dichlorobenzensulfonamide,
[796] 5-Chloro-3-methyl-N-[l-(2-(pyrrolidin-1-yl)ethyl)-lH-indol-6-yl]-
benzo [b] thiophene-2- sulfonamide,
[797] N-[l-(2-(Pyrrolidin-1-yl)ethyl)-lH-indol-6-yl]-napthalene-2- sulfonamide,
[798] N-[l-(2-(Pyrrolidin-1-yl)ethyl)-lH-indol-6-yl]-naphthalene-1-sulfonamide,
[799] 6-Chloro-N-[l-(2-(pyrrolidin-1-yl)ethyl)-lH-indol-6-yl]-imidazo[2,1-b]thiazole-5-
sulfonamide,
[800] 4-Phenyl-N-(l-(2-(pyrrolidin-1-yl)ethyl)-lH-indol-6-yl)-benzenesulfonamide
[801] 2-(Naphthalene-1-yl)-N-(1-(2-(pyrrolidin-1-yl)ethyl)-lH-indol-6-yl)-
ethanesulfonamide,
[802] 4-Phenoxy-N-(l-(2-(pyrrolidin-1-yl)ethyl)-lH-indol-6-yl)-benzenesulfonamide
[803] 3,5-Dichloro-N-(l-(2-(pyrrolidin-1-yl)ethyl)-lH-indol-6-yl)-benzenesulfonamide,
[804] 5-chloro-N-(3-(2-(diethylamino)ethyl)-lH-indol-6-yl)-3-
methylbenzo [b] thiophene-2- sulfonamide,
[805] N-(3-(2-(diethylamino)ethyl)-lH-indol-6-yl)naphthalene-2-sulfonamide,
[806] N-(3-(2-(diethylamino)ethyl)-lH-indol-6-yl)naphthalene-1-sulfonamide,
[807] 6-chloro-N-(3-(2-(diethylamino)ethyl)-lH-indol-6-yl)imidazo[2,1-b]thiazole-5-
sulfonamide,
[808] N-(3-(2-(diethylamino)ethyl)-lH-indol-6-yl)-4-phenylbenzenesulfonamide,
[809] N-(3-(2-(diethylamino)ethyl)-lH-indol-6-yl)-4-phenoxylbenzenesulfonamide,
[810] 3,5-dichloro-N-(3-(2-(diethylamino)ethyl)-lH-indol-6-yl)benzenesulfonamide,
[811] 4,5-dichloro-N-(3-(2-(diethylamino)ethyl)-lH-indol-6-yl)thiophene-2-
sulfonamide,
[812] 5-chloro-N-(3-(2-(diethylamino)ethyl)-lH-indol-6-yl)naphthalene-1-
sulfonamide,
[813] 5-chloro-N-(3-(2-(dimethylamino)ethyl)-lH-indol-6-yl)-3-
methylbenzo [b] thiophene-2- sulfonamide,
[814] N-(3-(2-(dimethylamino)ethyl)-lH-indol-6-yl)naphthalene-2-sulfonamide,
N-(3-(2-(dimethylamino)ethyl)-1H-indol-6-yl)naphthalene-1-sulfonamide,
6-chloro-N-(3-(2-(dimethylamino)ethyl)-1H-indol-6-yl)imidazo[2,1-b]thiazole-5-sulfonamide,
N-(3-(2-(dimethylamino)ethyl)-1H-indol-6-yl)-4-phenylbenzenesulfonamide,
N-(3-(2-(dimethylamino)ethyl)-1H-indol-6-yl)-2-(naphthalen-1-yl)ethanesulfonamide,
N-(3-(2-(dimethylamino)ethyl)-1H-indol-6-yl)-4-phenoxybenzenesulfonamide,
3,5-dichloro-N-(3-(2-(dimethylamino)ethyl)-1H-indol-6-yl)benzenesulfonamide,
4,5-dichloro-N-(3-(2-(dimethylamino)ethyl)-1H-indol-6-yl)thiophene-2-sulfonamide,
5-chloro-N-(3-(2-(dimethylamino)ethyl)-1H-indol-6-yl)naphthalene-1-sulfonamide,
6-bis(6-chloroimidazo[2,1-b]thiazol-5-ylsulfonyl)amino-3-(2-(dimethylamino)ethyl)-1H-indole,
6-bis(3,5-dichlorobenzenesulfonyl)amino-3-(2-(dimethylamino)ethyl)-1H-indole,
6-bis(4,5-dichlorothiophene-2-sulfonyl)amino-3-(2-(dimethylamino)ethyl)-1H-indole,
6-bis(5-chloro-3-methylbenzo[b]thiophene-2-sulfonyl)amino-3-(2-(dimethylamino)-1-ethoxyethyl)-1H-indole
Ethyl 6-(5-chloro-3-methylbenzo[b]thiophene-2-sulfonylamido)-3-(1-methylpiperidin-4-yl)-1H-indole-5-carboxylate,
N-(4-bromo-3-(1-methylpiperidin-4-yl)-1H-indol-6-yl)naphthalene-1-sulfonamide,
N-(7-bromo-3-(2-(dimethylamino)ethyl)-1H-indol-5-yl)benzofuran-2-sulfonamide,
N-(7-methoxy-3-(2-(pyrrolidin-1-yl)ethyl)-1H-indol-5-yl)benzo[1,2,5]thiadiazole-4-sulfonamide,
N-(7-methoxy-3-(2-(pyrrolidin-1-yl)ethyl)-1H-indol-5-yl)naphthalene-2-sulfonamide and
6-chloro-N-(7-methoxy-3-(2-(pyrrolidin-1-yl)ethyl)-1H-indol-5-yl)imidazo[2,1-b]thiazole-5-sulfonamide;
and their corresponding salts and solvates.

The compounds of general formula (Ih) may be prepared according to the disclosure of WO 2005/013976 and WO 2006/024535.

In another embodiment of the present invention compounds of general formula (Ib) are selected from the group consisting of compounds of general formula (Ik)

\[
\begin{align*}
\text{R}^{1k} & \text{ represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; an unsubstituted or at least mono-substituted phenyl radical or an unsubstituted or at least mono-substituted benzyl radical;} \\
\text{R}^{3k} & \text{ represents a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or a } -(\text{CH}_2)_n-\text{NR}^{13k}\text{R}^{14k} \text{ moiety with } n = 0, 1, 2, 3, 4 \text{ or } 5; \\
\text{R}^{13k} \text{ and } \text{R}^{14k}, \text{ independently of one another, each represent a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;}
\end{align*}
\]
or

R^{13k} and R^{14k} together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R^{15k} represents a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

and R^{16k} represents an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkyene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively.

Preferred compounds of general formula (Ik) are those wherein

nk represents 0, 1, 2, 3 or 4;

R^{1k} represents hydrogen,

R^{3k} represents a -NR^{13k}R^{14k} moiety or a moiety selected from the group consisting of

\[ \text{N-Y} , \quad \text{N}_{\text{Y}} , \quad \text{N} , \quad \text{Y} \text{ and } \text{Y} \]
wherein, if present, the dotted line represents an optional chemical bond and Y represents hydrogen, a methyl group or an ethyl group,

5 $R^{15k}$ represents hydrogen, a methyl group or an ethyl group,

$R^{13k}$ and $R^{14k}$, identical or different, represent a methyl group, an ethyl group, an $n$-propyl group, an isopropyl group, an $n$-butyl group, an isobutyl group, a sec-butyl group, or a tert-butyl group, or

10 $R^{13k}$ and $R^{14k}$ together with the bridging nitrogen atom form a moiety selected from the group consisting of

\[
\begin{array}{c}
\text{N-Z, N-O, N, N,} \\
\text{and}
\end{array}
\]

wherein Z represents hydrogen, a methyl group or an ethyl group,

15 $R^{16k}$ represents a moiety selected from the group consisting of
wherein

R\(^a\) and R\(^b\) are each independently selected from the group consisting of hydrogen, fluorine, chlorine, bromine, methyl, ethyl, pyridinyl, thiophenyl and furyl,

R\(^c\), R\(^d\) and R\(^e\) are each independently selected from the group consisting of hydrogen, fluorine, chlorine, bromine, methyl, ethyl, methoxy, ethoxy and -CF\(_3\),

W represents a single chemical bond between the two rings, a CH\(_2\)-group, O, S or a NR\(^f\)-moiety, wherein R\(^f\) is hydrogen, methyl or ethyl,

m is 0, 1, 2, 3 or 4;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a salt thereof, preferably a corresponding, physiologically acceptable salt thereof, or a corresponding solvate thereof.
Particularly preferred compounds of general formula (I) are those selected from the group consisting of:

- \([833]\) \text{N-tS-Cl-diethylaminoethy}^<-\text{H}-\text{indol-S-yll-S-chloro-S-methylbenzothiophene-1-sulphonamide},
- \([834]\) \text{N-[3-(2-diethylaminoethyl)-H-indol-5-ylnaphthalene-1-sulphonamide},
- \([835]\) \text{Hydrochloride N-[3-(2-diethylaminoethyl)-H-indol-5-ylnaphthalene-1-sulphonamide},
- \([836]\) \text{N-[3-(2-diethylaminoethyl)-H-indol-5-yl]-3,5-dichlorobenzenesulphonamide},
- \([837]\) \text{N-[3-(2-diethylaminoethyl)-H-indol-5-yl]-4-phenylbenzenesulphonamide},
- \([838]\) \text{N-[3-(2-diethylaminoethyl)-H-indol-5-yl]-5-chlorothiophene-2-sulphonamide},
- \([839]\) \text{N-[3-(2-dimethylaminoethyl)-H-indol-5-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide},
- \([840]\) \text{N-[3-(2-dimethylaminoethyl)-H-indol-5-ylnaphthalene-1-sulphonamide},
- \([841]\) \text{N-[3-(2-dimethylamino-ethyl)-H-indol-5-yl]-6-chloroimidazo[2,1-b]thiazol-5-sulphonamide},
- \([842]\) \text{N-[3-(1-methylpiperidin-4-yl)-H-indol-5-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide},
- \([843]\) \text{N-[3-(1-methylpiperidin-4-yl)-H-indol-5-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide hydrochloride},
- \([844]\) \text{N-[3-(1-methylpiperidin-4-yl)-H-indol-5-ylnaphthalene-1-sulphonamide},
- \([845]\) \text{N-[3-(1-methylpiperidin-4-yl)-H-indol-5-ylnaphthalene-1-sulphonamide hydrochloride},
- \([846]\) \text{N-[3-(1-methylpiperidin-4-yl)-H-indol-5-yl]-5-chlorothiophene-2-sulphonamide},
- \([847]\) \text{N-[3-(1-methylpiperidin-4-yl)-H-indol-5-yl]-4-phenylbenzenesulphonamide},
- \([848]\) \text{N-[3-(1-methylpiperidin-4-yl)-H-indol-5-yl]quinoline-8-sulphonamide},
- \([849]\) \text{N-[3-(2-diethylaminoethyl)-H-indol-5-ylnaphthalene-2-sulphonamide},
- \([850]\) \text{N-[3-(1-methyl-1,2,3,6-tetrahydropyridin-4-yl)-H-indol-5-ylnaphthalene-1-sulphonamide},
- \([851]\) \text{N-[3-(4-methylpiperazin-1-yl)methyl-H-indol-5-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide},
- \([852]\) \text{N-[3-(2-dimethylaminoethyl)-H-indol-5-yl]-5-(2-pyridil)thiophene-2-sulphonamide},
N-[3-(2-dimethylaminoethyl)-1H-indol-5-yl]-2,1,3-benzothiadiazol-4-sulphonamide,
N-[3-(2-dimethylaminoethyl)-1H-indol-5-yl]quinoline-8-sulphonamide,
N-[3-(2-dimethylaminoethyl)-1H-indol-5-yl]-5-chloronaphthalene-2-sulphonamide,
N-[3-(2-dimethylaminoethyl)-1H-indol-5-yl]-4-phenoxybenzenesulphonamide,
N-[3-(2-dimethylaminoethyl)-1H-indol-5-yl]-4-phenylbenzenesulphonamide,
N-[3-(2-diethylaminoethyl)-1H-indol-5-yl]-N-ethyl-naphthalene-2-sulphonamide,
N-[3-(2-morpholin-4-yl)ethyl]-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide,
N-[3-(2-(morpholin-4-yl)ethyl)-1H-indol-5-yl]-naphthalene-1-sulphonamide,
N-[3-(2-diethylaminoethyl)-1H-indol-5-yl]naphthalene-1-sulphonamide,
N-[3-(2-dipropylaminoethyl)-1H-indol-5-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide,
N-[3-(2-dibutylaminoethyl)-1H-indol-5-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide,
N-[3-(2-dibutylaminoethyl)-1H-indol-5-yl]naphthalene-1-sulphonamide,
N-[3-(2-diethylaminoethyl)-1H-indol-5-yl]-6-chloroimidazo[2,l-b]thiazol-5-sulphonamide,
N-[3-(2-(morpholin-4-yl)ethyl)-1H-indol-5-yl]-naphthalene-2-sulphonamide,
N-[3-(4-methylpiperazin-1-yl)methyl-1H-indol-5-yl]-α-toluene-sulphonamide,
N-[3-(2-diethylaminoethyl)-1H-indol-5-yl]-trans-β-styrenesulphonamide,
N-{3-[2-(pyrrolidin-1-yl)ethyl]-1H-indol-5-yl}naphthalene-1-sulphonamide,
N-{3-[2-(pyrrolidin-1-yl)ethyl]-1H-indol-5-yl}naphthalene-2-sulphonamide,
N-[3-(2-dipropylaminoethyl)-1H-indol-5-yl]naphthalene-2-sulphonamide,
N-[3-(2-dimethylaminoethyl)-1H-indol-5-yl]-5-chloronaphthalene-1-sulphonamide,
N-[3-(2-dimethylaminoethyl)-1H-indol-5-yl]naphthalene-2-sulphonamide,
N-[3-(2-methylpiperazin-1-yl)ethyl-1H-indol-5-yl]naphthalene-2-sulphonamide
and
N-[3-(4-methylpiperazin-1-yl)ethyl-1H-indol-5-yl]-5-chloronaphthalene-1-sulphonamide;
and their corresponding salts and solvates.

The compounds of general formula (Ik) may be prepared according to the disclosure of WO 2004/098588.

In another embodiment of the present invention compounds of general formula (Ib) are selected from the group consisting of compounds of general formula (Im)

\[
\text{(Im)}
\]
R^{1m} represents a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or a -(CH_2)_mm-NR^{13m}R^{14m} moiety with mm = 0, 1, 2, 3, 4 or 5;

R^{2m} represents a hydrogen atom; -F; -Cl; -Br; -I; -NO_2; -CN; -O-R^{10m}; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R^{3m} represents a hydrogen atom; -F; -Cl; -Br; -I; -NO_2; -CN; -O-R^{10m}; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R^{4m}, R^{6m} and R^{7m}, independently of one another, each represent a hydrogen atom; -NO_2; -CN; -O-R^{10m}; a halogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group;

R^{10m} represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group;

R^{13m} and R^{14m}, independently of one another, each represent a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;
or

R\textsubscript{13m} and R\textsubscript{14m} together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R\textsubscript{15m} represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical or a -S(=O)\textsubscript{2}-R\textsubscript{16m} moiety;

and R\textsubscript{16m} represents an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

optionally in form of one of its stereoisomers, preferably enantiomers or diasteromers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively.

Preferred compounds of general formula (Im) are those, wherein

R\textsuperscript{1m} represents a -(CH\textsubscript{2})\textsubscript{m}-NR\textsubscript{13m}R\textsubscript{14m} radical,

R\textsubscript{2m} represents hydrogen or an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl and isopropyl, more preferably hydrogen or methyl,

R\textsubscript{3m}, R\textsubscript{4m} and R\textsubscript{6m} each represent hydrogen,

R\textsubscript{7m} represents a hydrogen atom, a chlorine atom, a bromine atom or -0-CH\textsubscript{3},

R\textsubscript{15m} represents hydrogen,
R^{13m} and R^{14m}, identical or different, each represent methyl, ethyl, n-propyl or isopropyl, more preferably methyl or ethyl,

or

R^{13m} and R^{14m} together with the bridging nitrogen form a 5- or 6-membered heterocyclic ring, more preferably form pyrrolidine or piperidine,

R^{16m} represents an aryl or heteroaryl radical selected from the group consisting of phenyl, naphthyl, quinolinyl, benzo[b]furanyl, benzo[b]thiophenyl, benzo[1,2,5]thiadiazolyl, thiophenyl and imidazo[2,1-b]thiazolyl which may be substituted by 1, 2 or 3 substituents selected from the group consisting of fluorine, bromine, chlorine, methyl, phenyl, nitro, -C(=O)-CH$_3$, -O-CH$_3$ and -O-phenyl and/or which may be bonded via a C$_{1-2}$ alkylene group or a C$_2$ alkenylene group,

and

mm is 2 or 3,

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, its racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers or diastereomers, in any mixing ratio, or a salt thereof, preferably a corresponding, physiologically acceptable salt thereof, or a corresponding solvate thereof.

Particularly preferred compounds of general formula (Im) are those selected from the group consisting of:

[886] N-[I-(2-dimethylaminoethyl)-1H-indole-5-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulfonamide,

[887] N-[I-(2-dimethylaminoethyl)-1H-indole-5-yl]-naphthalene-2-sulfonamide,

[888] N-[I- (2-dimethylaminoethyl) -1H-indole-5-yl]-naphthalene-1-sulfonamide,

[889] N-[I-(2-dimethylaminoethyl)-1H-indole-5-yl]-5-chloronaphthalene-1-
sulfonamide,
[890] N-[l-(2-dimethylaminoethyl)-lH-indole-5-yl]-benzenesulfonamide,
[891] N-[I- (2-dimethylaminoethyl) - lH-indole- 5-yl] -quinoline- 8- sulfonamide ,
[892] N-[I- (2-dimethylaminoethyl) - lH-indole- 5-yl] -4-phenoxybenzenesulfonamide,
[893] N-[l-(2-dimethylaminoethyl)-IH-indole-5-yl]-4-methylbenzenesulfonamide,
[894] N-[I- (2-dimethylaminoethyl) - lH-indole- 5-yl] -5-chlorothiophene-2- sulfonamide,
[895] N-[l-(2-dimethylaminoethyl)-IH-indole-5-yl]-benzo[l,2,5]thiadiazole-4- sulfonamide,
[896] N-[l-(2-dimethylaminoethyl)-IH-indole-5-yl]-6-chloroimidazo[2,1-b]thiazole-5- sulfonamide,
[897] N-[l-(2-dimethylaminoethyl)-IH-indole-5-yl]-3,5-dichlorobenzenesulfonamide,
[898] N-[I- (2-dimethylaminoethyl) - lH-indole- 5-yl]-3-bromobenzenesulf onamide,
[899] N-[l-(2-dimethylaminoethyl)-IH-indole-5-yl]-3-nitrobenzenesulfonamide,
[900] N-[l-(2-dimethylaminoethyl)-IH-indole-5-yl]-l-phenylmethanesulfonamide,
[901] N-[I- (2-pyrrolidine- 1-yl-ethyl)- IH-indole-5-yl] -naphthalene-2- sulfonamide,
[902] N-[l-(2-pyrrolidine-1-yl-ethyl)-IH-indole-5-yl]-naphthalene-l-sulfonamide,
[903] N-[l-(2-pyrrolidine-1-yl-ethyl)-lH-indole-5-yl] - 5-chloro-3- methylbenzo[b] thiophene-2- sulfonamide,
[904] trans-N- [1-(2-dimethylaminoethyl)- lH-indole-5-yl] -2- phenylethene sulfonamide,
[905] N-[l-(2-dimethylaminoethyl)-IH-indole-5-yl]-4,5-dichlorothiophene-2- sulfonamide,
[906] N-[l-(2-dimethylaminoethyl)-IH-indole-5-yl]-4-acetylbenzenesulfonamide,
[907] N-[l-(2-dimethylaminoethyl)-IH-indole-5-yl]-4-bromobenzenesulfonamide,
[908] N-[I- (2-dimethylaminoethyl) - lH-indole- 5-yl]-4-methoxybenzene sulfonamide,
[909] N-[3-(2-diethylaminoethyl)-IH-indole-5-yl]-5-chloro-3- methylbenzo[b] thiophene-2- sulfonamide,
[910] N-[l-(2-dimethylaminoethyl)-IH-indole-5-yl]-4-nitrobenzenesulfonamide,
[911] N-[l-(2-dimethylaminoethyl)-IH-indole-5-yl]-4-fluorobenzenesulfonamide,
[912] N-[l-(2-diethylaminoethyl)-IH-indole-5-yl]-6-chloroimidazo[2,1-b]thiazole-5- sulfonamide,
N-(1-(2-(diethylamino)ethyl)-1H-indol-5-yl)-naphthalene-2-sulfonamide,
N-(1-(2-(diethylamino)ethyl)-1H-indol-5-yl)-naphthalene-1-sulfonamide,
N-(1-(2-(diethylamino)ethyl)-1H-indol-5-yl)-4-phenylbenzenesulfonamide,
5-chloro-N-(1-(2-(dimethylamino)ethyl)-2-methyl-1H-indol-5-yl)-3-methylbenzo[b]thiophene-2-sulfonamide,
N-(1-(2-(dimethylamino)ethyl)-2-methyl-1H-indol-5-yl)-naphthalene-2-sulfonamide,
N-(1-(2-(dimethylamino)ethyl)-2-methyl-1H-indol-5-yl)-naphthalene-1-sulfonamide,
6-chloro-N-(1-(2-(dimethylamino)ethyl)-2-methyl-1H-indol-5-yl)imidazo[2,1-b]thiazole-5-sulfonamide,
N-(1-(2-(dimethylamino)ethyl)-2-methyl-1H-indol-5-yl)-4-phenylbenzenesulfonamide,
N-(1-(2-(dimethylamino)ethyl)-2-methyl-1H-indol-5-yl)-2-(naphth-1-yl)-ethane sulfonamide,
N-(1-(2-(dimethylamino)ethyl)-2-methyl-1H-indol-5-yl)-4-phenoxybenzenesulfonamide,
3,5-dichloro-N-(1-(2-(dimethylamino)ethyl)-2-methyl-1H-indol-5-yl)benzenesulfonamide,
N-(1-(2-(dimethylamino)ethyl)-2-methyl-1H-indol-5-yl)benzo[b]thiophene-3-sulfonamide,
N-(1-(2-(dimethylamino)ethyl)-1H-indol-5-yl)benzo[b]thiophene-3-sulfonamide,
N-(1-(2-(diethylamino)ethyl)-1H-indol-5-yl)naphthalene-2-sulfonamide,
N-(1-(2-(diethylamino)ethyl)-1H-indol-5-yl)naphthalene-1-sulfonamide,
6-chloro-N-(1-(3-(piperidin-1-yl)propyl)-1H-indol-5-yl)imidazo[2,1-b]thiazole-5-sulfonamide,
4-phenyl-N-(1-(3-(piperidin-1-yl)propyl)-1H-indol-5-yl)benzenesulfonamide,
2-(naphth-1-yl)-N-(1-(3-(piperidin-1-yl)propyl)-1H-indol-5-yl)ethanesulfonamide,
4-phenoxy-N-(1-(3-(piperidin-1-yl)propyl)-1H-indol-5-yl)benzenesulfonamide,

3,5-dichloro-N-(1-(3-(piperidin-1-yl)propyl)-1H-indol-5-yl)benzenesulfonylamide,

4,5-dichloro-N-(1-(3-(piperidin-1-yl)propyl)-1H-indol-5-yl)thiophene-2-sulfonamide

and

5-chloro-N-(1-(3-(piperidin-1-yl)propyl)-1H-indol-5-yl)naphthalene-1-sulfonamide,

N-(3-(2-(diethylamino)ethyl)-7-methoxy-1H-indol-5-yl)naphthalene-2-sulfonamide,

6-chloro-N-(3-(2-(diethylamino)ethyl)-7-methoxy-1H-indol-5-yl)imidazo[2,1-b]thiazole-5-sulfonamide,

and their corresponding salts and solvates.

The compounds of general formula (Im) may be prepared according to the disclosure of WO 2005/013977 and WO 2006/024535.

In another embodiment of the present invention compounds of general formula (Ib) are selected from the group consisting of compounds of general formula (In)

wherein
R^{1n} represents a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylenic group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or a -(CH_{2})_{mn}-NR^{13n}R^{14n} moiety with mn = 0, 1, 2, 3, 4 or 5;

R^{2n} represents a hydrogen atom; -F; -Cl; -Br; -I; -NO_{2}; -CN; -O-R^{10n}; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylenic group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R^{3n} represents a hydrogen atom; -F; -Cl; -Br; -I; -NO_{2}; -CN; -O-R^{10n}; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkylenic group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or a -(CH_{2})_{mn}-NR^{13n}R^{14n} moiety with mn = 0, 1, 2, 3, 4 or 5;

R^{5n}, R^{6n} and R^{7n}, independently of one another, each represent a hydrogen atom; -NO_{2}; -CN; -O-R^{10n}; a halogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylenic group;

R^{10n} represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylenic group;

R^{13n} and R^{14n}, independently of one another, each represent a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;
or

R\textsubscript{13n} and R\textsubscript{14n} together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R\textsubscript{15n} represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical or a -S(=O)\textsubscript{2}-R\textsubscript{16n} moiety;

R\textsubscript{16n} represents an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively.

Preferred compounds of general formula (In) are those, wherein

R\textsubscript{1n} represents a hydrogen atom or a -(CH\textsubscript{2})\textsubscript{m}NR\textsubscript{13n}R\textsubscript{14n} radical,

R\textsubscript{2n}, R\textsubscript{5n}, R\textsubscript{6n} and R\textsubscript{7n} each represent hydrogen,

R\textsubscript{3n} represents a hydrogen atom or or a -(CH\textsubscript{2})\textsubscript{nn}NR\textsubscript{13n}R\textsubscript{14n} moiety with nn = 0, 1 or 2;

R\textsubscript{15n} represents hydrogen,

R\textsubscript{13n} and R\textsubscript{14n}, identical or different, each represent methyl, ethyl, n-propyl, isopropyl,
more preferably methyl,

or

5 $R^{13n}$ and $R^{14n}$ together with the bridging nitrogen form a 5- or 6-membered heterocyclic ring, more preferably form pyrrolidine or piperidine,

and

10 $R^{16n}$ represents an aryl or heteroaryl radical selected from the group consisting of phenyl, naphthyl, benzo[b]thiophenyl and imidazo[2,1-b]thiazolyl which may be substituted by 1, 2 or 3 substituents selected from the group consisting of chlorine, methyl, phenyl and -O-phenyl and/or which may be bonded via a C$_{1-2}$ alkyene group, and

15 mn is 1 or 2;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, its racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers or diastereomers, in any mixing ratio, or a salt thereof, preferably a corresponding, physiologically acceptable salt thereof, or a corresponding solvate thereof.

Particularly preferred compounds of general formula (In) are those selected from the group consisting of:

[941] N-[l-(2-dimethylaminoethyl)-IH-indole-4-yl]-5-chloro-3-methylbenzo [b] thiophene-2- sulfonamide,
[942] N-[l-(2-dimethylaminoethyl)-IH-indole-4-yl]-naphtalene-2- sulfonamide,
[943] N-[l-(2-dimethylaminoethyl)-IH-indole-4-yl]-naphtalene-1-sulfonamide,
[944] N-[l-(2-dimethylaminoethyl)-IH-indole-4-yl]-4-phenylbenzenesulfonamide,
[945] N-[l-(2-dimethylaminoethyl)-IH-indole-4-yl]-2-(naphtalene-1-yl)-ethane sulfonamide,
[946] N-[l-(2-dimethylaminoethyl)-IH-indole-4-yl]-4-phenoxybenzenesulfonamide,
88

[947] N-[1-(2-dimethylaminoethyl)-1H-indole-4-yl]-3,5-dichlorobenzenesulfonamide and

[948] 6-chloro-N-[1-(2-dimethylaminoethyl)-1H-indol-4-yl]-imidazo[2,1-b]thiazole-5-sulfonamide

5[949] N-(3-(2-(dimethylamino)ethyl)-1H-indol-4-yl)-4-biphenylsulfonamide,
[950] N-(3-(2-(dimethylamino)ethyl)-1H-indol-4-yl)-4-phenoxybenzenesulfonamide,
[951] 3,5-dichloro-N-(3-(2-(dimethylamino)ethyl)-1H-indol-4-yl)benzenesulfonamide,
[952] 5-chloro-N-(3-(2-(dimethylamino)ethyl)-1H-indol-4-yl)-3-methylbenzo[b]thiophene-2-sulfonamide,

10[953] N-(3-(2-(dimethylamino)ethyl)-1H-indol-4-yl)naphthalene-1-sulfonamide,
[954] 5-chloro-N-(3-(2-(dimethylamino)ethyl)-1H-indol-4-yl)naphthalene-2-sulfonamide,
[955] N-(3-(2-(dimethylamino)ethyl)-1H-indol-4-yl)naphthalene-2-sulfonamide,
[956] 6-chloro-N-(3-(2-(dimethylamino)ethyl)-1H-indol-4-yl)imidazo[2,1-b]thiazole-5-sulfonamide,

15[957] N-(3-(2-(dimethylamino)ethyl)-1H-indol-4-yl)-2-(naphthalen-1-yl)ethanesulfonamide,

and their corresponding salts and solvates.

20

The compounds of general formula (In) may be prepared according to the disclosure of WO 2005/13978 and WO 2006/024535.

In another embodiment of the present invention compounds of general formula (Ib) are selected from the group consisting of compounds of general formula (Io)
wherein

$R_{10}$ represents a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or a $-(\text{CH}_2)_{\text{mo}}-\text{NR}_{13}^n-\text{R}_{14}^0$ moiety with $\text{mo} = 0, 1, 2, 3, 4$ or $5$;

$R_{30}^0$ represents a hydrogen atom; -F; -Cl; -Br; -I; -NO$_2$; -CN; -O-$R_{10}^0$; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

$R_{50}^0$ represents a hydrogen atom; -F; -Cl; -Br; -I; -NO$_2$; -CN; -O-$R_{10}^0$; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; a $-\text{CH(OC}_2\text{H}_5)-\text{CH}_2-\text{NR}_{13}^n-\text{R}_{14}^0$ moiety or a $-(\text{CH}_2)_{\text{mo}}-\text{NR}_{13}^n-\text{R}_{14}^0$ moiety with $\text{no} = 0, 1, 2, 3, 4$ or $5$. 


R⁴°, R⁵° and R⁶°, independently of one another, each represent a hydrogen atom; -NO₂; -CN; -O-R¹⁰°; a halogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkyene group;

R¹⁰° represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkyene group;

R¹³° and R¹⁴°, independently of one another, each represent a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

or

R¹³° and R¹⁴° together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R¹⁵° represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical or a -S(=O)₂-R¹⁶° moiety;

and R¹⁶° represents an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkyene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

optionally in form of one of its stereoisomers, preferably enantiomers or diasteromers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably
enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively.

Preferred compounds of general formula (I0) are those, wherein

R₁ is -(CH₂)ₘo-NR₁³₀R₁⁴₀ radical,

R₂°, R₄° and R₆° each represent hydrogen,

R₃° represents a hydrogen atom, a -CH(OC₂H₅)-CH₂-NR₁³₀R₁⁴₀ moiety or a -(CH₂)ₙ₀-NR₁³₀R₁⁴₀ moiety with no = 0, 1 or 2,

R₅° represents a hydrogen atom, chlorine or bromine,

R₁⁵° represents hydrogen or a -S(=O)₂-R₁₆° moiety,

R₁³° and R₁⁴°, identical or different, each represent methyl, ethyl, n-propyl or isopropyl, more preferably methyl,

or

R₁³° and R₁⁴° together with the bridging nitrogen atom form a 5- or 6-membered heterocyclic ring, more preferably form a pyrrolidine or piperidine ring,

R₁⁶° represents an aryl or heteroaryl radical selected from the group consisting of phenyl, naphthyl, benzo[b]thiophenyl and imidazo[2,1-b]thiazolyl which may be substituted by 1, 2 or 3 substituents selected from the group consisting of chlorine, methyl and phenyl and/or which may be bonded via a C₁₋₂ alkylene group,

and

no is 1 or 2;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers,
its racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers or diastereomers, in any mixing ratio, or a salt thereof, preferably a corresponding, physiologically acceptable salt thereof, or a corresponding solvate thereof.

Particularly preferred compounds of general formula (Io) are those selected from the group consisting of:

[958] N-[I-(2-dimethylaminoethyl)-1H-indole-7-yl]-naphtalene-1-sulfonamide,
[959] N-[l-(2-dimethylaminoethyl)-1H-indole-7-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulfonamide,
[960] N-[l-(2-dimethylaminoethyl)-1H-indole-7-yl]-4-phenylbenzenesulfonamide and
[961] N-[l-(2-dimethylaminoethyl)-1H-indole-7-yl]-6-chloroimidazo[2,1-b]thiazole-5-sulfonamide
[962] 5-chloro-3-methyl-N-(l-(2-(pyrrolidin-1-yl)ethyl)-1H-indol-7-yl)-benzo[b]thiophene-2-sulfonamide,
[963] N-(l-(2-(pyrrolidin-1-yl)ethyl)-1H-indol-7-yl)naphthalene-1-sulfonamide,
[964] 6-chloro-N-(1-(2-(pyrrolidin-1-yl)ethyl)-1H-indol-7-yl)imidazo[2,1-b]thiazole-5-sulfonamide and
[965] 2-(naphth-1-yl)-N-(l-(2-(pyrrolidin-1-yl)ethyl)-1H-indol-7-yl)ethansulfonamide
[966] 5-chloro-N-(3-(2-(dimethylamino)-1-ethoxyethyl)-1H-indol-7-yl)-3-methylbenzo[b]thiophene-2-sulfonamide,
[967] 5-chloro-N-(3-(2-(dimethylamino)ethyl)-1H-indol-7-yl)-3-methylbenzo[b]thiophene-2-sulfonamide,
[968] 7-bis(5-chloro-3-methylbenzo[b]thiophene-2-sulfonyl)amino-3-(2-(diethylamino)-1-ethoxyethyl)-1H-indole,
[969] 5-chloro-N-(3-(2-(diethylamino)-1-ethoxyethyl)-1H-indol-7-yl)-3-methylbenzo[b]thiophene-2-sulfonamide,
[970] 7-bis(5-chloro-3-methylbenzo[b]thiophene-2-sulfonyl)amino-3-(2-(dimethylamino)ethyl)-1H-indole,
[971] 7-bis(5-chloro-3-methylbenzo[b]thiophene-2-sulfonyl)amino-3-(2-(diethylamino)ethyl)-1H-indole,
5-chloro-N-(3-(2-(diethylamino)ethyl)-1H-indol-7-yl)-3-methylbenzo[b]thiophene-2-sulfonamide,

7-bis(6-chloroimidazo[2,1-b]thiazol-5-ylsulfonyl)amino-3-(2-(dimethylamino)ethyl)-1H-indole,

N-(5-bromo-3-(2-(pyrrolidin-1-yl)ethyl)-1H-indol-7-yl)-6-chloroimidazo[2,1-b]thiazole-5-sulfonamide,

and their corresponding salts and solvates.

The compounds of general formula (Io) may be prepared according to the disclosure of WO 2005/13979 and WO 2006/024535.

In another embodiment of the present invention compounds of general formula (Ib) are selected from the group consisting of compounds of general formula (Ip)

\[
\text{(Ip)}
\]

wherein

\( R^{1p} \) represents a \( \text{-S(=O)}_2R^{9p} \) moiety or a \( \text{-S(=O)}_2\text{C(H)}APB^p \) moiety;

\( R^{2p} \) represents a hydrogen atom; \( \text{-F; -Cl; -Br; -I; -NO}_2; -\text{OH; -CN; -O-R}^{10p}; -\text{S-R}^{11p} \); a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or a saturated or unsaturated, unsubstituted or at least mono-
substituted, optionally at least one heteroatom as a ring member containing
cycloaliphatic radical, which may be bonded via a linear or branched alkylene group
and/or which may be condensed with an unsubstituted or at least mono-substituted
mono- or bicyclic ring system;

R\(^{3p}\) represents a saturated or unsaturated, unsubstituted or at least mono-substituted,
one of another, each represent a hydrogen atom; -
NO\(_2\); -NH\(_2\); -OH; -CN; -C(=O)-R\(^{8p}\); -O-R\(^{10p}\); -S-R\(^{11p}\); -NH-R\(^{17p}\); -NR\(^{18p}\)R\(^{19p}\); a halogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-
substituted aliphatic radical; or a saturated or unsaturated, unsubstituted or at least mono-
substituted, optionally at least one heteroatom as a ring member containing
cycloaliphatic radical, which may be bonded via a linear or branched alkylene group;

R\(^{8p}\) represents a hydrogen atom or a linear or branched, saturated or unsaturated,
unsubstituted or at least mono-substituted aliphatic radical;

R\(^{8p}\), R\(^{17p}\), R\(^{18p}\) and R\(^{19p}\), independently of one another, each represent a linear or
branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic
radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which
may be bonded via a linear or branched alkylene, alkenylene or alkinylene group;

R\(^{9p}\) represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-
substituted aliphatic radical;

R\(^{10p}\) and R\(^{11p}\), independently of one another, each represent a linear or branched,
saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or
an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group;

\( R^{13p} \) and \( R^{14p} \), independently of one another, each represent a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

or

\( R^{13p} \) and \( R^{14p} \) together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

\( A^p \) and \( B^p \) together with the bridging carbon form an unsubstituted or at least mono-substituted, saturated or unsaturated cycloaliphatic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively.

Preferred compounds of general formula (Ip) are those, wherein

\( R^{1p} \) represents a \(-S(=O)_{2}-C(H)A^{P}B^{P}\) moiety;

\( R^{2p}, R^{3p}, R^{4p} \) and \( R^{6p} \) each represent hydrogen,
R₃ₚ represents a -(CH₂)ₚ-NR₁₃ₚR₁₄ₚ moiety or an unsaturated, optionally at least one nitrogen atom as a ring member containing 5- or 6-membered cycloaliphatic radical, which may be substituted by a methyl group and/or which may be condensed with a 5-membered cycloaliphatic ring,

more preferably R₃ₚ represents a -(CH₂)ₚ-NR₁₃ₚR₁₄ₚ moiety or a moiety selected from the group consisting of

R₅ₚ represents H, fluorine, chlorine, nitro or a -NH₂ group,

R¹³ₚ and R¹⁴ₚ, identical or different, each represent methyl, ethyl, n-propyl or isopropyl, more preferably methyl,

or

R¹³ₚ and R¹⁴ₚ together with the bridging nitrogen atom form a 5- or 6-membered heterocyclic ring, more preferably form a pyrrolidine or piperidine ring,

Aₚ and Bₚ together with the carbon atom to which they are bonded form a saturated or unsaturated C₃-C₈ cycloaliphatic ring, more preferably form a cyclohexyl ring,

and

np is 0, 1 or 2;

optionally in form of one of their stereoisomers, preferably enantiomers or diastereomers, their racemate or in form of a mixture of at least two of their stereoisomers, preferably enantiomers or diastereomers, in any mixing ratio, or a salt
thereof, preferably a corresponding physiologically acceptable salt thereof or a corresponding solvate thereof.

Particularly preferred compounds of general formula (Ip) are those selected from the group consisting of:

- 1-Cyclohexanesulfonyl-3-(1-methyl-1,2,3,6-tetrahydropyridine-4-yl)-5-nitro-lH-indole,
- 5-Chloro-1-cyclohexanesulfonyl-3-(1-methyl-1,2,3,6-tetrahydropyridine-4-yl)-lH-indole,
- 5-Amino-1-cyclohexanesulfonyl-3-(1-methyl-1,2,3,6-tetrahydropyridine-4-yl)-lH-indole and
- 1-Cyclohexanesulfonyl-5-fluoro-3-(1,2,3,5,8,8a-hexahydro-indolizine-7-yl)-lH-indole hydrochloride

and their corresponding salts and solvates.

The compounds of general formula (Ip) may be prepared according to the disclosure of WO 2005/013974.

In another embodiment of the present invention compounds of general formula (Ib) are selected from the group consisting of compounds of general formula (Iq)
wherein

$R^{1q}$ represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical,

which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; a $-C(=O)-R^{8q}$ moiety; a $-S(=O)_{2}-R^{9q}$ moiety;

$R^{2q}$ represents a hydrogen atom; -F; -Cl; -Br; -I; -NO$_2$; -NH$_2$; -SH; -OH; -CN; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a chain member containing aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

$R^{4q}$, $R^{5q}$, $R^{6q}$ and $R^{7q}$, independently of one another, each represent a hydrogen atom; -NO$_2$; -NH$_2$; -SH; -OH; -CN; -C(=O)-OH; -C(=O)-H; -S(=O)$_2$-OH; -C(=O)-NH$_2$; -S(=O)$_2$-NH$_2$; -C(=O)-R$^{8q}$; -S(=O)$_2$-R$^{9q}$; -O-R$^{10q}$; -S-R$^{11q}$; -C(=O)-OR$^{12q}$; -N(R$^{15q}$)-S(=O)$_2$-R$^{16q}$; -NH-R$^{17q}$; -NR$^{18q}$-R$^{19q}$; -C(=O)-NHR$^{20q}$; -C(=O)-NR$^{21q}$-R$^{22q}$; -S(=O)$_2$-NHR$^{23q}$; -S(=O)$_2$-NR$^{24q}$-R$^{25q}$; -O-C(=O)-R$^{26q}$; -NH-C(=O)-R$^{27q}$; -NR$^{28q}$-C(=O)-R$^{29q}$;

NH-C(=O)-O-R$^{30q}$; NR$^{31q}$-C(=O)-O-R$^{32q}$; -S(=O)$_2$-O-R$^{33q}$; a halogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may
be bonded via a linear or branched alkyylene group; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkyylene group;

with the proviso that at least one of the substituents $R^{4q}$, $R^{5q}$, $R^{6q}$ and $R^{7q}$ represents a -N($R^{15q}$)-S(=O)$_2$-$R^{16q}$ moiety;

$R^{8q}$, $R^{12q}$, $R^{17q}$, $R^{18q}$, $R^{19q}$, $R^{20q}$, $R^{21q}$, $R^{22q}$, $R^{23q}$, $R^{24q}$, $R^{25q}$, $R^{26q}$, $R^{27q}$, $R^{28q}$, $R^{29q}$, $R^{30q}$, $R^{31q}$, $R^{32q}$ and $R^{33q}$, independently of one another, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkyylene group; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkyylene, alkenylene or alkinylene group;

$R^{9q}$ represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkyylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

$R^{10q}$ and $R^{11q}$, independently of one another, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkyylene group;
R$^{15q}$ represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical or a -S(=O)2-R$^{16q}$ moiety;

R$^{16q}$ represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

D$^q$ and E$^q$ together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

or

D$^q$ and E$^q$, independently of one another, each represent a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;
optionally in form of one of its stereoisomers, preferably enantiomers or diasteromers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively.

5 Preferred compounds of general formula (Iq) are those, wherein

\[ p q \] is 0,

10 \( R^{1q} \) represents a hydrogen atom,

\( R^{2q} \) represents a hydrogen atom,

\( D^q \) and \( E^q \), identical or different, represent an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl,

one of the substituents \( R^{4q}, R^{5q}, R^{6q} \) and \( R^{7q} \) represents an \(-N(R^{15q})-S(=O)-R^{16q}\)-moiety while the other three of these substituents each represent a hydrogen atom,

20 \( R^{15q} \) represents a hydrogen atom,

\( R^{16q} \) represents an aryl or heteroaryl radical selected from the group consisting of phenyl, 1-naphthyl, 2-naphthyl, pyrazolyl, thiophenyl (thiophenyl), benzo[b]-thiophenyl, benzo[b]furanyl, quinolinyl, isoquinolinyl, imidazo[2,1-b]thiazolyl, 2-oxo-2,3-dihydrobenzo[d]thiazolyl, whereby said aryl or heteroaryl radical may be bonded via a \(-(CH_2)_{1,2,3}\)- group and/or may be substituted by 1, 2, 3, 4 or 5 substituents independently selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl, tert-butyl, F, Cl, Br, I, -\( \text{CN}, -\text{CF}_3, -\text{CF}_2\text{H}, \text{CFH}_2, -\text{C}(=\text{O})-\text{O}-\text{CH}_3, \text{C}(=\text{O})-\text{O}-\text{CH}_2-\text{CH}_3, \text{cyclopropyl}, \text{cyclobutyl}, \text{cyclopentyl}, \text{cyclohexyl}, \text{phenyl}, \text{phenoxy} \) and benzyl;
optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively.

 Particularly preferred compounds of general formula (Iq) are those selected from the group consisting of:

[979] 2-[5-(5-Chloro-3-methyl-benzo[b]thiophene-2-sulfonylamino)-1H-indol-3-yl]-N,N-diethyl-2-oxoacetamide,

[980] N,N-Diethyl-2-[5-(naphthalene-2-sulfonylamino)-1H-indol-3-yl]-2-oxoacetamide,

[981] N,N-Diethyl-2-[5-(naphthalene-1-sulfonylamino)-1H-indol-3-yl]-2-oxoacetamide,

[982] 2-[5-(Biphenyl-4-sulfonylamino)-1H-indol-3-yl]-N,N-diethyl-2-oxoacetamide,

[983] N,N-Diethyl-2-oxo-2-[5-(quinoline-8-sulfonylamino)-1H-indol-3-yl]-acetamide,

[984] N,N-Dimethyl-2-[5-(naphthalene-2-sulfonylamino)-1H-indol-3-yl]-2-oxoacetamide,

[985] N,N-Dimethyl-2-[5-(naphthalene-1-sulfonylamino)-1H-indol-3-yl]-2-oxoacetamide,

[986] 2-[5-(5-Chloro-3-methyl-benzo[b]thiophene-2-sulfonylamino)-1H-indol-3-yl]-N,N-dimethyl-2-oxoacetamide,

[987] 2-[5-(6-Chloro-imidazo[2,1-b]thiazole-5-sulfonylamino)-1H-indol-3-yl]-N,N-diethyl-2-oxoacetamide,

[988] 2-[5-(6-Chloro-imidazo[2,1-b]thiazole-5-sulfonylamino)-1H-indol-3-yl]-N,N-dimethyl-2-oxoacetamide,

[989] N,N-Dimethyl-2-[4-(naphthalene-1-sulfonylamino)-1H-indol-3-yl]-2-oxoacetamide,

[990] 2-[4-(5-Chloro-3-methyl-benzo[b]thiophene-2-sulfonylamino)-1H-indole-3-yl]-N,N-dimethyl-2-oxoacetamide,

[991] 2-[4-(6-Chloro-imidazo[2,1-b]thiazole-5-sulfonylamino)-1H-indol-3-yl]-N,N-dimethyl-2-oxoacetamide,

[992] N,N-Dimethyl-2-[5-[(4-fluoro-3-methyl-phenyl)-1-sulfonylamino]-1H-indol-3-yl]-2-oxoacetamide,
| 595 | 5-(3-Dimethylaminooxalyl-1H-indol-5-ylsulfamoyl)-3-methyl-benzofuran-2-carboxylic acid ethyl ester, |
| 596 | 2-[5-(Biphenyl-4-sulfonylamino)-1H-indol-3-yl]-N,N-dimethyl-2-oxoacetamide, |
| 597 | N,N-Dimethyl-2-oxo-2-[5-(2-oxo-2,3-dihydro-benzoxazole-6-sulfonlamino)-1H-indol-3-yl]-acetamide, |
| 598 | N,N-Dimethyl-2-oxo-2-[5-(2-oxo-2,3-dihydrobenzo[d]thiazole-6-sulfonamido)-1H-indol-3-yl]acetamide, |
| 599 | 2-[5-[(4-Cyclohexyl-phenyl)-1-sulfonylamino]-1H-indol-3-yl]-N,N-dimethyl-2-oxoacetamide, |
| 600 | N,N-Dimethyl-2-[5-[(4-phenoxy-phenyl)-1-sulfonylamino]-1H-indol-3-yl]-2-oxoacetamide, |
| 601 | 2-(5-(5-chloro-3-methylbenzo[b]thiophene-2-sulfonamido)-2-methyl-1H-indol-3-yl)-N,N-dimethyl-2-oxoacetamide, |
| 602 | 2-(5-(6-chloroimidazo[2,1-b]thiazole-5-sulfonamido)-2-methyl-1H-indol-3-yl)-N,N-dimethyl-2-oxoacetamide, |
| 603 | 2-(6-(5-chloro-3-methylbenzo[b]thiophene-2-sulfonamido)-1H-indol-3-yl)-N,N-dimethyl-2-oxoacetamide, |
| 604 | N,N-dimethyl-2-(6-(naphthalene-3-sulfonamido)-1H-indol-3-yl)-2-oxoacetamide |
| 605 | 2-(6-(biphenyl-4-sulfonamido)-1H-indol-3-yl)-N,N-dimethyl-2-oxoacetamide, |
| 606 | N,N-dimethyl-2-(6-(naphthalene-1-sulfonamido)-1H-indol-3-yl)-2-oxoacetamide, |
| 607 | N,N-dimethyl-2-(6-((2-naphthalen-1-yl)ethylsulfonamido)-1H-indol-3-yl)-2-oxoacetamide, |
| 608 | 2-(6-(3,4-dichlorothiophene-2-sulfonamido)-1H-indol-3-yl)-N,N-dimethyl-2-oxoacetamide, |
| 609 | 2-(6-(3,5-dichlorophenylsulfonamido)-1H-indol-3-yl)-N,N-dimethyl-2-oxoacetamide, |
| 610 | 2-(6-(1-chloronaphthalene-6-sulfonamido)-1H-indol-3-yl)-N,N-dimethyl-2-oxoacetamide, |
[1010] 2-(6-(6-chloroimidazo[2,1-b]thiazole-5-sulfonamido)-1H-indol-3-yl)-N,N-dimethyl-2-oxoacetamide,

[1011] N,N-diethyl-2-(2-methyl-5-(methyl-1-phenyl-1H-pyrazole-4-sulfonamido)-1H-indol-3-yl)-2-oxoacetamide and

[1012] N,N-diethyl-2-(2-methyl-5-(1,3,5-trimethyl-1H-pyrazole-4-sulfonamido)-1H-indol-3-yl)-2-oxoacetamide;

and their corresponding salts and solvates.

The compounds of general formula (Iq) may be prepared according to the disclosure of WO 2006/015867.

In another embodiment of the present invention as component (A) at least one compound is present which is selected from the group consisting of indazolyl- and (2,3)-dihydro-indolyl-derived sulfonamide compounds of general formula (Ic)

\[
\begin{align*}
\text{(Ic)}
\end{align*}
\]

wherein

\(X^c\cdot Y^c\) from left to right represents \(CR^1c=N\) and \(Z^c\) is \(N[(CH_{2\cdot})_{ac}\cdot R^6c]\)

or

\(X^c\cdot Y^c\) from left to right represents \(CR^2c=N\), \(Z^c\) is \(NH\), \(R^7c\) represents the following moiety

\[
\begin{align*}
\text{(Ic)}
\end{align*}
\]
A represents CH or N and B represents NR, O or S.

X-Y from left to right represents C[(CH₂)ₙcR] = N and Z is NRₙc

or

X-Y represents CH₂-CH₂ and Z is N[(CH₂)ₙcR] = Uc;

nc is 0, 1, 2, 3 or 4;

R represents a hydrogen atom; NO₂; -NH₂; -SH; -OH; -CN; -C(=O)-R; -OR; -SR; -F; -Cl; -Br; -I; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R₂c, R₃c, R₄c and R₅c, independently of one another, each represent a hydrogen atom; NO₂; -NH₂; -SH; -OH; -CN; -C(=O)-H; -C(=O)-R; -OR; -SR; -F; -Cl; -Br; -I; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

with the proviso that at least one of the substituents R₂c, R₃c, R₄c and R₅c represents a -N(Rₙc)S(=O)₂-R₁₆c moiety;

R₆c, R₉c and R₉c, independently of one another, each represent a -NR₂₀cR₂₁c radical.
or

a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkyene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

\( R^8c \) represents \(-\text{C}=(\text{O})\text{-}\text{-}\text{R}^{22c} \); a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkyene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

\( R^{10c} \) represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or a \(-\text{S}(=\text{O})\text{2-}\text{R}^{23c} \) moiety;

\( R^{12c}, R^{13c}, R^{14c}, R^{17c}, R^{18c} \) and \( R^{19c} \), independently of one another, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkyene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkyene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

\( R^{15c} \) represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or a \(-\text{S}(=\text{O})\text{2-}\text{R}^{24c} \) moiety;
R^{16c} and R^{24c}, independently of one another, each represent an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R^{20c} and R^{21c}, independently of one another, each represent a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

or R^{20c} and R^{21c} together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R^{22c} represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

and

R^{23c} represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted
alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively.

Preferred compounds of general formula (Ic) are selected from the group consisting of compounds of general formula (Ir)

\[
\text{(Ir),}
\]

wherein

nr is 0, 1 or 2;

\( R^{1r} \) represents a hydrogen atom or an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl;

\( R^{2r}, R^{3r}, R^{4r} \) and \( R^{5r} \), independent from one another, each represent a hydrogen atom; -NO₂; -NH₂; -SH; -OH; -CN; -N(R^{15r})-S(=O)₂-R^{16r}; F; Cl; Br; I; or an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl;

with the proviso that at least one of the substituents \( R^{2r}, R^{3r}, R^{4r} \) and \( R^{5r} \) represents a -N(R^{15r})-S(=O)₂-R^{16r} moiety;
R^6_r represents an -NR^20_rR^21_r radical;

R^15_r represents a hydrogen atom or an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl

R^16_r represents an aryl or heteroaryl radical selected from the group consisting of phenyl, naphthyl, benzo[b]furanyl, benzo[b]thiophenyl and imidazo[2,1-b]thiazolyl, which may be substituted with 1, 2 or 3 substituent(s) independently selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl, tert-butyl, F, Cl, Br, I, -CN, phenyl, phenoxy and benzyl

and

R^20_r and R^21_r, independent from one another, each represent an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively.

Particularly preferred compounds of general formula (Ir) are those selected from the group consisting of:

[1013] N-(1-(2-(Dimethylamino)ethyl)-1H-indazol-6-yl)napthalene-2-sulfonamide and
[1014] 5-Chloro-N-(1-(2-(dimethylamino)ethyl)-1H-indazol-6-yl)-3-methylbenzo [b] thiophene-2- sulfonamide;

optionally in form of a physiologically acceptable salt thereof, or a corresponding solvate thereof.
Preferred compounds of general formula (Ic) are selected from the group consisting of compounds of general formula (Ia)

wherein

A\(^s\) represents CH and B\(^s\) represents NR\(^{8s}\)

or

A\(^s\) represents N and B\(^s\) represents NR\(^{8s}\)

or

A\(^s\) represents N and B\(^s\) represents O

or

A\(^s\) represents N and B\(^s\) represents S;

R\(^{2s}\), R\(^{3s}\), R\(^{4s}\) and R\(^{5s}\), independent from one another, each represent a hydrogen atom; -NO\(_2\); -NH\(_2\); -SH; -OH; -CN; -N(R\(^{15s}\))-S(=O)\(_2\)-R\(^{16s}\); F; Cl; Br; I; or an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl;

with the proviso that at least one of the substituents R\(^{2s}\), R\(^{3s}\), R\(^{4s}\) and R\(^{5s}\) represents a -N(R\(^{15s}\))-S(=O)\(_2\)-R\(^{16s}\) moiety;

R\(^{8s}\) represents an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl;
R^{15s} represents a hydrogen atom or an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl and

R^{16s} represents an aryl or heteroaryl radical selected from the group consisting of phenyl, naphthyl, benzo[b]furanyl, benzo[b]thiophenyl and imidazo[2,1-b]thiazoly1, which may be substituted with 1, 2 or 3 substituent(s) independently selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl, tert-butyl, F, Cl, Br, I, -CN, phenyl, phenoxy and benzyl;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively.

Particularly preferred compounds of general formula (I) are those selected from the group consisting of:

\[1015\] Naphthalene-2-sulfonic acid [3-(1-methyl-piperidin-4-yl)-lH-indazol-5-yl]-amide,

\[1016\] 5-Chloro-3-methyl-benzo[b]thiophene-2-sulfonic acid [3-(1-methyl-piperidin-4-yl)-lH-indazol-5-yl]-amide,

\[1017\] Naphthalene-1-sulfonic acid [3-(1-methyl-piperidin-4-yl)-lH-indazol-5-yl]-amide,

\[1018\] 4-Phenylbenzene-4-sulfonic acid [3-(1-methyl-piperidin-4-yl)-lH-indazol-5-yl]-amide,

\[1019\] N-[3-(1-Methyl-piperidin-4-yl)-lH-indazol-5-yl]-4-phenoxybenzene sulfonamide

and

\[1020\] N-[3-(1-Methyl-piperidin-4-yl)-lH-indazol-5-yl]-benzenesulfonamide;
optionally in form of a physiologically acceptable salt thereof, or a corresponding solvate thereof.

Preferred compounds of general formula (Ic) are selected from the group consisting of compounds of general formula (Iit)

\[
\begin{align*}
\text{R}^{2t}, \text{R}^{3t}, \text{R}^{4t} \text{ and } \text{R}^{5t}, \text{ independent from one another, each represent a hydrogen atom; -NO}_2; \text{-NH}_2; \text{-SH; -OH; -CN; -N(R}^{15t})\text{-S(O)=O)_2-R}^{16t}; \text{ F; Cl; Br; I; or an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl; with the proviso that at least one of the substituents R}^{2t}, \text{R}^{3t}, \text{R}^{4t} \text{ and R}^{5t} \text{ represents an -N(R}^{15t})\text{-S(O)=O)_2-R}^{16t} \text{ moiety;}
\end{align*}
\]

\[
\text{R}^{9t} \text{ represents a -NR}^{20t}\text{R}^{21t} \text{ radical;}
\]

\[
\text{R}^{10t} \text{ represents an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl or a -S(O)=O)_2-R}^{23t} \text{ moiety;}
\]

\[
\text{R}^{15t} \text{ represents a hydrogen atom or an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl}
\]

\[
\text{R}^{16t} \text{ represents an aryl or heteroaryl radical selected from the group consisting of phenyl, naphthyl, benzo[b]furan, benzo[b]thiophen and imidazo[2,1-b]thiazolyl,}
\]

which may be substituted with 1, 2 or 3 substituent(s) independently selected from the
group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl, tert-
butyl, F, Cl, Br, I, -CN, phenyl, phenoxy and benzyl;

R²₀ᵗ and R²¹ᵗ, independent from one another, each represent an alkyl radical selected
from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl;

or

R²₀ᵗ and R²¹ᵗ together with the bridging nitrogen atom form an unsubstituted moiety
selected from the group consisting of

\[ \text{N} \quad \text{O} \quad \text{S} \quad \text{N-H} \quad \text{N} \quad \text{N} \quad \text{O} \quad \text{N} \quad \text{N} \]

and

\[ \text{N} \quad \text{N} \quad \text{N} \quad \text{N} \quad \text{N} \quad \text{N} \quad \text{N} \quad \text{N} \quad \text{N} \]

wherein, if present, the dotted line represents an optional chemical bond;

and

R²₃ᵗ represents an alkyl radical selected from the group consisting of methyl, ethyl, n-
propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl
or an aryl or heteroaryl radical selected from the group consisting of phenyl, naphthyl,
benzo[b]furan, benzo[b]thiophen and imidazo[2,1-b]thiazole, which may be
substituted with 1, 2 or 3 substituent(s) independently selected from the group
consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl, tert-butyl,
F, Cl, Br, I, -CN, phenyl, phenoxy and benzyl;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a
racemate or in form of a mixture of at least two of its stereoisomers, preferably
enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable
salt thereof, or a corresponding solvate thereof, respectively.
Preferred compounds of general formula (Ic) are selected from the group consisting of compounds of general formula (Iu)

\[
\begin{align*}
R^2u &\quad R^{2u} \\
R^3u &\quad R^{3u} \\
R^4u &\quad R^{4u} \\
R^5u &\quad R^{5u} \\
&\quad \text{(CH}_2\text{)}_{nu}\quad -R^{11u}
\end{align*}
\]

(Iu),

wherein

nu is 0, 1 or 2;

\( R^{2u}, R^{3u}, R^{4u} \) and \( R^{5u} \), independent from one another, each represent a hydrogen atom; -NO\(_2\); -NH\(_2\); -SH; -OH; -CN; -C(=O)-H; -C(=O)-R\(_{12u}\); -OR\(_{13u}\); -SR\(_{14u}\); -N(R\(_{15u}\))-S(=O)\(_2\)\(-R^{16u}\); -NH-R\(_{17u}\); -NR\(_{18u}\)R\(_{19u}\); F; Cl; Br; I; or an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl which may be substituted with 1, 2 or 3 substituent(s) independently selected from the group consisting of F, Cl, Br, -OH, -NH\(_2\), -SH, -O-CH\(_3\), -O-C\(_2\)H\(_5\), -NO\(_2\), -CN and -S-CH\(_3\);

with the proviso that at least one of the substituents \( R^{2u}, R^{3u}, R^{4u} \) and \( R^{5u} \) represents a -N(R\(_{15u}\))-S(=O)\(_2\)\(-R^{16u}\) moiety;

\( R^{11u} \) represents a -NR\(^{20u}\)R\(^{21u}\) radical

or

a (hetero)cycloaliphatic radical selected from the group consisting of
whereby each of these afore mentioned cyclic moieties may be substituted with 1, 2 or 3 substituent(s) independently selected from the group consisting of oxo (=O), thioxo (=S), methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl, tert-butyl, -O-CH₃, -O-C₂H₅, -S-CH₃, -S-C₂H₅, -C(=O)-OH, -C(=O)-O-CH₃, F, Cl, Br, I, -CN, -OCF₃, -SCF₃, -OH, -SH, -NH₂, -NH-CH₃, -NH-C₂H₅, -N(CH₃)₂, -N(C₂H₅)₂, -NO₂, -CHO, -CF₃H and -CFH₂ in any position including the -NH groups and is not bonded via a nitrogen atom and, if present, the dotted line represents an optional chemical bond;

R¹₂, R¹³, R¹⁴, R¹⁷, R¹⁸ and R¹⁹, independent from one another, each represent an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl; a (hetero)cycloaliphatic radical selected from the group consisting of cyclopentyl, cyclohexyl, pyrrolidinyl, piperidinyl, morpholinyl, thiomorpholinyl and piperazinyl, which may be bonded via a -(CH₂)₁₋₃ group and which may be substituted with 1, 2 or 3 substituent(s) independently selected from the group consisting of oxo (=O), thioxo (=S), methyl, ethyl, -O-CH₃, -O-C₂H₅, -S-CH₃, -C(=O)-OH, -C(=O)-O-CH₃, -F, Cl, Br, I, -CN, -OCF₃, -SCF₃, -OH, -SH, -NH₂, -NH-CH₃, -NH-C₂H₅, -N(CH₃)₂ and -N(C₂H₅)₂; or an aryl or heteroaryl radical selected from the group consisting of phenyl, naphthyl, pyridinyl, furyl (furanyl), thiophenyl (thiophenyl) and pyrrolyl, which may be bonded via a -(CH₂)₁₋₃ group and which may be substituted with 1, 2 or 3 substituent(s) independently selected from the group consisting of -CF₃, methyl, ethyl, -O-CH₃, -O-C₂H₅, -O-CH₂-CH₂-CH₃, -S-CH₃, -S-C₂H₅, -C(=O)-OH, -C(=O)-O-CH₃, -C(=O)-O-CH₂-CH₃, F, Cl, Br, I, -CN, -OCF₃, -SCF₃, -OH, -SH, -NH₂, -NH-CH₃, -NH-C₂H₅, -N(CH₃)₂ and -N(C₂H₅)₂;
R\textsuperscript{15u} represents a hydrogen atom; or an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl which may be substituted with 1, 2 or 3 substituent(s) independently selected from the group consisting of F, Cl, Br, -OH, -NH\textsubscript{2}, -SH, -0-CH\textsubscript{3}, -0-C\textsubscript{2}H\textsubscript{5}, -NO\textsubscript{2}, -CN and -S-CH\textsubscript{3};

R\textsuperscript{16u} represents an aryl or heteroaryl radical selected from the group consisting of phenyl, naphthyl, pyridinyl, furyl (furanyl), thiophenyl (thiophenyl), pyrrol, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl, imidazolyl, pyrazolyl, oxadiazolyl, thiadiazolyl, triazolyl, pyridazinyl, indolyl, isoindolyl, pyrimidinyl, pyrazinyl, quinolinyl, isoquinolinyl, benzo[b]furanyl, benzo[b]thiophenyl, benzothiadiazolyl, benzoazadiazolyl, benzoxazolyl, benzothiazolyl, benzisoxazolyl, benzisothiazolyl and imidazo[2,1-b]thiazolyl, which may be bonded via a -(CH\textsubscript{2})\textsubscript{1,2or3} group and which may be substituted with 1, 2 or 3 substituent(s) independently selected from the group consisting of -CF\textsubscript{3}, methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl, tert-butyl, -0-CH\textsubscript{3}, -0-C\textsubscript{2}H\textsubscript{5}, -S-CH\textsubscript{3}, -S-C\textsubscript{2}H\textsubscript{5}, F, Cl, Br, I, -CN, -OCF\textsubscript{3}, -SCF\textsubscript{3}, -OH, -SH, -NH\textsubscript{2}, -NH-CH\textsubscript{3}, -NH-C\textsubscript{2}H\textsubscript{5}, -N(CH\textsubscript{3})\textsubscript{2}, -N(C\textsubscript{2}H\textsubscript{5})\textsubscript{2}, -NO\textsubscript{2}, phenyl, phenoxy and benzyl;

and

R\textsuperscript{20u} and R\textsuperscript{21u}, independent from one another, each represent a hydrogen atom; or an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl;

or

R\textsuperscript{20u} and R\textsuperscript{21u} together with the bridging nitrogen atom form a moiety selected from the group consisting of

\[\begin{align*}
N & \quad = \quad \text{O} \\
\text{and} & \\
\text{and} & \\
N & \quad = \quad \text{N} \\
\end{align*}\]
whereby each of these afore mentioned cyclic moieties may be substituted with 1, 2 or 3 substituent(s) independently selected from the group consisting of oxo (=O), thioxo (=S), methyl, ethyl, -0-CH\textsubscript{3}, -0-C\textsubscript{2}H\textsubscript{5}, -S-CH\textsubscript{3}, -S-C\textsubscript{2}H\textsubscript{5}, -C(=O)-OH, -C(=O)-O-CH\textsubscript{3}, -C(=O)-O-CH\textsubscript{2}-CH\textsubscript{3}, F, Cl, Br, I, -CN, -OCF\textsubscript{3}, -SCF\textsubscript{3}, -OH, -SH, -NH\textsubscript{2}, -NH-CH\textsubscript{3}, -NH-C\textsubscript{2}H\textsubscript{5}, -N(CH\textsubscript{3})\textsubscript{2} and -N(C\textsubscript{2}H\textsubscript{5})\textsubscript{2} in any position including the -NH groups; and, if present, the dotted line represents an optional chemical bond;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof.

Particularly preferred compounds of general formula (Iu) are those selected from the group consisting of:

\[ [1021] \quad \text{N-}[1-(2-Dimethylamino)ethyl]-2,3-dihydro-1H-indol-6-yl]-6-chloro-imidazo[2,1-b]thiazol-5-sulfonamide; \]

optionally in form of a physiologically acceptable salt thereof, or a corresponding solvate thereof.

The compounds of general formulae Ic, Ir, Is, It or Iu given above are prepared by a process, wherein at least one compound of general formula II,

\[
\begin{align*}
\text{R}^{16c} \quad & X \\
\text{O} \quad & \text{S} \\
\pi & \text{O} 
\end{align*}
\]

wherein R\textsuperscript{16c} has the meaning given above and X represents a leaving group, preferably a halogen atom, more preferably a chlorine atom, is reacted with at least one compound of general formula III,
wherein \( X^c, Y^c, Z^c \) and \( R^{2c} \) to \( R^{5c} \) have the meaning given above with the proviso that at least one of the substituents \( R^{2c}, R^{3c}, R^{4c} \) and \( R^{5c} \), represents a -NH\(_2\) group, in a suitable reaction medium, preferably in the presence of at least one base, to yield a compound of general formula I, wherein \( X^c, Y^c, Z^c \) and \( R^{2c} \) to \( R^{5c} \) have the meaning given above with the proviso that at least one of the substituents \( R^{2c}, R^{3c}, R^{4c} \) and \( R^{5c} \) represents a -N(H)-S(=O)\(_2\)-R\(^{16c}\) group and \( R^{16c} \) has the meaning given above, which is optionally purified and/or isolated,

and optionally said compound of general formula I, wherein \( X^c, Y^c, Z^c \) and \( R^{2c} \) to \( R^{5c} \) have the meaning given above with the proviso that at least one of the substituents \( R^{2c}, R^{3c}, R^{4c} \) and \( R^{5c} \) represents a -N(H)-S(=O)\(_2\)-R\(^{16c}\) group and \( R^{16c} \) has the meaning given above, is reacted with at least one compound of general formula \( R^{15c} \)-X, wherein \( R^{15c} \) has the meaning given above and \( X \) represents a halogen atom, preferably a chlorine atom, in a suitable reaction medium, in the presence of at least one base, preferably at least one base selected from the group consisting of metal hydroxides, metal carbonates, metal alcoxides, preferably sodium methoxide or potassium tert-butoxid, metal hydrides and organometallic compounds, preferably n-butyllithium and tert-butyllithium,

or with at least one compound of general formula \( X\)-S(=O)\(_2\)-R\(^{24c}\), wherein \( R^{24c} \) has the meaning given above and \( X \) represents a leaving group, preferably a halogen atom, more preferably a chlorine atom, in a suitable reaction medium, preferably in the presence of at least one base,
to yield a compound of general formula I, wherein Xc, Yc, Zc and R2c to R5c have the meaning given above with the proviso that at least one of the substituents R2c, R3c, R4c and Rc5 represents a -N(R15c)-S(=O)2-R16c group and R15c and R16c have the meaning given above, which is optionally purified and/or isolated.

Suitable reaction media for the reaction between compounds of general formulae II and III include organic solvents, such as dialkyl ether, preferably diethyl ether, or a cyclic ether, preferably tetrahydrofuran or dioxane; or a halogenated hydrocarbon, preferably dichloromethane or chloroform; an alcohol, preferably methanol or ethanol; a dipolar aprotic solvent, preferably acetonitrile, pyridine or dimethylformamide, or any other suitable reaction medium. Of course, mixtures of at least two classes of solvents or of at least two solvents of one class may also be used.

The reaction between compounds of general formulae II and III is preferably carried out in the presence of at least one suitable base, for example, an inorganic base such as a hydroxide or a carbonate of an alkali metal and/or an organic base, preferably triethylamine or pyridine.

The reaction between compounds of general formulae II and III is preferably carried out at a temperature between -10 °C and ambient temperature, i.e. approximately 25 °C and the reaction time is preferably between 5 minutes and 24 hours.

Suitable reaction media for the reaction between compounds of general formula I, wherein Xc, Yc, Zc and R2c to R5c have the meaning given above with the proviso that at least one of the substituents R2c, R3c, R4c and R5c represents a -N(H)-S(=O)2-R16c group and R16c has the meaning given above and compounds of general formula R15c-X are dialkyl ether, preferably diethyl ether, or a cyclic ether, preferably tetrahydrofuran or dioxane, a hydrocarbon, preferably toluene, an alcohol, preferably methanol or ethanol, a dipolar aprotic solvent, preferably acetonitrile, pyridine or dimethylformamide, or any other suitable reaction medium. Of course, mixtures of at least two classes of solvents or of at least two solvents of one class may also be used.
The afore mentioned reaction is preferably carried out at a temperature between -10 °C and ambient temperature, i.e. approximately 25 °C and the reaction time is preferably 1 and 24 hours.

Suitable reaction media for the reaction between compounds of general formula \( \text{I}, \) wherein \( X^c, Y^c, Z^c \) and \( R^{2c} \) to \( R^{5c} \) have the meaning given above with the proviso that at least one of the substituents \( R^{2c}, R^{3c}, R^{4c} \) and \( R^{5c} \) represents a \(-\text{N}(\text{H})-\text{S} (=\text{O})_2-\) group and \( R^{16c} \) has the meaning given above, and compounds of general formula \( X-\text{S} (=\text{O})_2-\) \( R^{24c} \) include organic solvents, such as dialkyl ether, preferably diethyl ether, or a cyclic ether, preferably tetrahydrofuran or dioxane; or a halogenated hydrocarbon, preferably dichloromethane or chloroform; an alcohol, preferably methanol or ethanol; a dipolar aprotic solvent, preferably acetonitrile, pyridine or dimethylformamide, or any other suitable reaction medium. Of course, mixtures of at least two classes of solvents or of at least two solvents of one class may also be used.

The afore mentioned reaction is preferably carried out in the presence of at least one suitable base, for example, an inorganic base such as a hydroxide or a carbonate of an alkali metal and/or an organic base, preferably triethylamine or pyridine.

The afore mentioned reaction is preferably carried out at a temperature between -10 °C and ambient temperature, i.e. approximately 25 °C and the reaction time is preferably between 5 minutes and 24 hours.

Those skilled in the art understand that the process described above can also be applied to the synthesis of compounds of general formula \( \text{Ir}, \) \( \text{Is}, \) \( \text{It} \) and \( \text{Iu} \) given above.

The compounds of general formula \( \text{Ic}, \) \( \text{Ir}, \) \( \text{Is}, \) \( \text{It} \) or \( \text{Iu} \) given above may be purified and/or isolated according to methods well known to those skilled in the art. Preferably, the compounds of general formula \( \text{Ic}, \) \( \text{Ir}, \) \( \text{Is}, \) \( \text{It} \) or \( \text{Iu} \) may be isolated by evaporating the reaction medium, addition of water and adjusting the pH value to obtain the compound in form of a solid that can be isolated by filtration, or by extraction with a solvent that is not miscible with water such as chloroform and purification by chromatography or recrystallisation from a suitable solvent.
The compounds of general formula II are commercially available or may be prepared according to methods well known in the art, for example, analogous to the methods described in the bibliography of E.E. Gilbert, Synthesis, 1969, 1, 3. The respective part of the literature description cited above is hereby incorporated by reference and forms part of the disclosure.


The compounds of general formula Ic, Ir, Is, It or Iu given above may be purified and/or isolated according to methods well known to those skilled in the art. Preferably, the
compounds of general formula Ic, Ir, Is, It or Iu may be isolated by evaporating the reaction medium, addition of water and then adjusting the pH value to obtain the compound in form of a solid that can be isolated by filtration, or by extraction with a solvent that is not miscible with water such as chloroform and purified by chromatography or recrystallisation from a suitable solvent.

During some synthetic reactions described above or while preparing the compounds of general formulae Ic, Ir, Is, It, Iu, II and III the protection of sensitive or reactive groups may be necessary and/or desirable. This can be performed by using conventional protective groups like those described in Protective groups in Organic Chemistry, ed. J. F. W. McOmie, Plenum Press, 1973; T.W. Greene & P.G.M. Wuts and Protective Groups in Organic Chemistry, John Wiley & sons, 1991. The respective parts of the description are hereby incorporated by reference and forms part of the disclosure. The protective groups may be eliminated when convenient by means well-known to those skilled in the art.

If the substituted indazolyl sulfonamide or 2,3-dihydro-indolyl sulfonamide compounds of general formula Ic are obtained in form of a mixture of stereoisomers, particularly enantiomers or diastereomers, said mixtures may be separated by standard procedures known to those skilled in the art, e.g. chromatographic methods or crystallization with chiral reagents.

The substituted indazolyl sulfonamide or 2,3-dihydro-indolyl sulfonamide compounds of general formula Ic and in each case stereoisomers thereof may be obtained in form of a corresponding salt according to methods well known to those skilled in the art, e.g. by reacting said compound with at least one inorganic and/or organic acid, preferably in a suitable reaction medium. Suitable reaction media include, for example, any of the ones given above. Suitable inorganic acids include but are not limited to hydrochloric acid, hydrobromic acid, phosphoric acid, sulfuric acid, nitric acid, suitable organic acids include but are not limited to citric acid, maleic acid, fumaric acid, tartaric acid, or derivatives thereof, p-toluenesulphonic acid, methanesulphonic acid or camphersulphonic acid.
In another embodiment of the present invention as component (A) at least one compound is present which is selected from the group consisting of phenyl-piperazine-derived compounds of general formula (Id)

\[
\begin{align*}
\text{NO}_2 & \\
\text{R}^4 & \\
\text{R}^5 & \\
\text{R}^6 & \\
\text{R}^7 & \\
\text{R}^8 & \\
\text{R}^9 & \\
\text{R}^{10} & \\
\text{X}^d & \\
\text{R}_1 & \\
\text{R}_2 & \\
\text{R}_3 & \\
\text{R}_4 & \\
\end{align*}
\]

(Id)

wherein

\[X^d \text{ represents a } -\text{NR}^{1d}\text{R}^{2d} \text{ moiety or a } -\text{OR}^{3d} \text{ moiety;}
\]

\[R_{10} \text{ represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;}
\]

an unsubstituted or at least mono-substituted radical selected from the group consisting of adamantyl, bicyclo[2.2.1]heptyl and bicyclo[3.1.1]heptyl, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group which may contain 1, 2 or 3 heteroatom(s) independently selected from the group consisting of nitrogen, oxygen and sulfur as chain member(s);

a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene,
alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;
or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group which may contain 1, 2 or 3 heteroatom(s) independently selected from the group consisting of nitrogen, oxygen and sulfur as chain member(s);
or a -C(=O)-R<sup>1d</sup> moiety;

R<sup>2d</sup> represents a hydrogen atom or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;
or

R<sup>1d</sup> and R<sup>2d</sup> together with the bridging nitrogen form an optionally at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R<sup>3d</sup> represents or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group;

R<sup>4d</sup>, R<sup>3d</sup> and R<sup>6d</sup>, independently of one another, each represent a hydrogen atom or a halogen atom;
or

R<sup>4d</sup> and R<sup>5d</sup> together with the bridging carbon atoms form an unsubstituted 5- or 6-membered heterocyclic ring which contains 1, 2 or 3 heteroatom(s) independently
selected from the group consisting of nitrogen, oxygen and sulfur as ring member(s) and which together with the phenyl ring which it is fused with forms a 9- or 10-membered bicyclic aromatic ring system;

5  R^{7d} and R^{8d}, independently of one another, each represent a hydrogen atom or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

R^{9d} and R^{10d}, independently of one another, each represent a hydrogen atom or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

R^{11d} represents a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical, which may contain 1, 2 or 3 heteroatom(s) independently selected from the group consisting of nitrogen, oxygen and sulfur as chain member(s);

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkyene, alkenylene or alkinylene group; -a \cdot \text{-C}(=\text{O})\text{-R}^{13d} moiety or a \cdot \text{-S}(=\text{O})_2\text{-R}^{14d} moiety;

R^{12d} represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkyene, alkenylene or alkinylene group; and
$R^{13d}$ and $R^{14d}$, independently of one another, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group which may contain 1, 2 or 3 heteroatom(s) independently selected from the group consisting of nitrogen, oxygen and sulfur as chain member(s);

optionally in form of one of its stereoisomers, preferably enantiomers or diasteromers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively.

Preferred compounds of general formula (Id) are those, wherein

$X^d$ represents a -NR$^{1d}$R$^{2d}$ moiety or a -OR$^{3d}$ moiety;

$R^{1d}$ represents an alkyl radical selected from the group consisting of -CH$_2$-CH$_2$-OH and -CH$_2$-CH$_2$-CH$_2$-OH;

an unsubstituted adamantyl radical;

an unsubstituted phenyl or pyrrolyl radical;

an unsubstituted napthyl radical which is bonded via an alkylene group selected form the group consisting of -CH$_2$-, -CH(CH$_3$)-, -CH$_2$-CH$_2$-, -CH$_2$-CH$_2$-CH$_2$- and -CH$_2$-CH$_2$-O-;

a phenyl radical which may be substituted with 1, 2 or 3 substituent(s) independently selected from the group consisting of methyl, ethyl, tert-butyl, methoxy, F and Cl and said phenyl radical is bonded via an alkylene group selected form the group consisting of -CH$_2$-, -CH(CH$_3$)-, -CH(Phenyl)-, -CH$_2$-CH$_2$-, -CH$_2$-CH$_2$-CH$_2$- and -CH$_2$-CH$_2$-O-;
a heteroaryl radical selected from the group consisting of pyridinyl, furanyl and pyrrolyl, whereby said pyridinyl, furanyl or pyrrolyl radical may be substituted with 1, 2 or 3 substituent(s) independently selected from the group consisting of methyl, ethyl, tert-butyl, methoxy, F and Cl and said pyridinyl, furanyl or pyrrolyl radical is bonded via an alkylene group selected from the group consisting of -CH₂-, -CH(CH₃)-, -CH₂-CH₂-, -CH₂-CH₂-CH₂- and -CH₂-CH₂-O-;

or a -C(=O)-R¹₂ moiety;

R²ᵈ represents a hydrogen atom or a methyl radical;

or

R¹ᵈ and R²ᵈ together with the bridging nitrogen atom form a moiety selected from the group consisting of:

\[ \text{R}^{3d} \] represents an unsubstituted phenyl radical;

R⁴ᵈ, R⁵ᵈ and R⁶ᵈ, identical or different, each represent a hydrogen atom or a fluorine atom;
or

\[ R^{4d} \] and \[ R^{5d} \] together with the bridging carbon atoms form the following moiety,

\[
\begin{array}{c}
\text{N} \\
\text{O} \\
\text{N}
\end{array}
\]

which together with the phenyl ring which it is fused with forms the following substituted bicyclic aromatic ring system

\[ R^{7d} \] and \[ R^{8d} \] each represent a hydrogen atom;

\[ R^{9d} \] and \[ R^{10d} \], identical or different, each represent a hydrogen atom or a methyl radical;

\[ R^{11d} \] represents a hydrogen atom;

an alkyl radical selected from the group consisting of methyl, n-butyl and \(-\text{CH}_2\text{-CH}_2-\text{OH};\)

an unsubstituted phenyl or pyridinyl radical whereby said phenyl or pyridinyl radical may be bonded via a \(-\text{(CH}_2)_n-\) group;

\[ a \text{-C(=O)-} R^{12d} \text{ moiety or a -S(=O)\text{_2-}R^{13d} moiety;} \]
R^{12d} represents a phenyl or a thiophenyl radical whereby said phenyl or thiophenyl radical may be substituted with 1, 2 or 3 substituent(s) selected from the group consisting of methyl and chlorine;

R^{13d} represents a methyl radical or a phenyl or a thiophenyl radical whereby said phenyl or thiophenyl radical may be substituted with 1, 2 or 3 substituent(s) selected from the group consisting of methyl and chlorine

and

R^{14d} represents a methyl radical or a phenyl radical which may be substituted with 1, 2 or 3 methyl radical(s);

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof.

Particularly preferred compounds of general formula (Id) are those selected from the group consisting of:

[1022] 5-(4-Methyl-piperazin-1-yl)-2-nitro-phenyl-(2-pyrrol-1-yl-ethyl)-amine,
[1023] 4-Fluoro-benzyl-[5-(4-methyl-piperazin-1-yl)-2-nitro-phenyl]-amine,
[1024] N-[5-(4-Methyl-piperazin-1-yl)-2-nitro-phenyl]-benzamide,
[1025] N-Methyl-N-[5-(4-methyl-piperazin-1-yl)-2-nitro-phenyl]-benzamide,
[1026] 5-(4-Methyl-piperazin-1-yl)-2-nitro-phenyl-1-yl-amine,
[1027] 2-[5-(4-Methyl-piperazin-1-yl)-2-nitro-phenyl]-2H-pyridazin-3-one,
[1028] 1-Methyl-4-(4-nitro-3-phenoxy-phenyl)-piperazine,
[1029] Benzyl-[5-(4-butyl-piperazin-1-yl)-2-nitro-phenyl]-amine,
[1030] Benzyl-[2-nitro-5-(4-pyridin-2-yl-piperazin-1-yl)-phenyl]-amine and
[1031] Benzyl-[2-nitro-5-(4-phenyl-2-yl-piperazin-1-yl)-phenyl]-amine;
[1032] Furan-2-ylmethyl-[5-(4-methyl-piperazin-1-yl)-2-nitro-phenyl]-amine,
[1033] 2-[4-(4-Nitro-3-phenethylamino-phenyl)-piperazin-1-yl]-ethanol,
(2-Nitro-5-piperazin-1-yl-phenyl)-(2-o-tolyloxy-ethyl)-amine

[1034] 2-[4-(3-Benzylamino-4-nitro-phenyl)-piperazin-1-yl]-ethanol,
[1035] 4-[5-(4-Methyl-piperazin-1-yl)-2-nitro-phenyl]-morpholine,
[1036] 2-[5-(4-Methyl-piperazin-1-yl)-2-nitro-phenyl]-4-phenyl-2H-phthalazine-1-one,
[1037] 2-(4-Chloro-phenoxy)-ethyl]-[5-(3,5-dimethyl-piperazin-1-yl)-2-nitro-phenyl]-amine,
[1038] 2-[4-[3-(Benzhydryl-amino)-4-nitro-phenyl]-piperazin-1-yl]-ethanol,
[1039] 4-[4-Fluoro-5-(4-methyl-piperazin-1-yl)-2-nitro-phenyl]-morpholine,
[1040] 2-[2-Nitro-5-(4-[toluene-4-sulfonyl]-piperazin-1-yl)-phenyl]-1,2,3,4-tetrahydro-isoquinoline,
[1041] 1-[3-(3,5-Dimethyl-pyrazol-1-yl)-4-nitro-phenyl]-4-methyl-piperazine,
[1042] Benzyl-(2-nitro-5-piperazin-1-yl-phenyl)-amine,
[1043] 4-[5-(4-Methyl-piperazin-1-yl)-2-nitro-phenyl]-phenethyl-amine,
[1044] 5-(4-Methyl-piperazin-1-yl)-2-nitro-phenyl]-pyridin-3-ylmethyl-amine,
[1045] 5-(4-Methyl-piperazin-1-yl)-2-nitro-phenyl]-pyridin-3-ylmethyl-amine,
[1046] (3-Chloro-phenyl)-[4-[3-[(furanyl-2-ylmethyl)-amino]-4-nitro-phenyl]-piperazin-1-yl]-methanone,
[1047] (2-Nitro-5-piperazin-1-yl-phenyl)-pyridin-3-ylmethyl-amine,
[1048] 1-Benzyl-4-(2-nitro-5-piperazin-1-yl-phenyl)-piperazine,
[1049] Furan-2-ylmethyl-[5-(4-methanesulfonyl-piperazin-1-yl)-2-nitro-phenyl]-amine,
[1050] Benzhydryl-[5-(4-methyl-piperazin-1-yl)-2-nitro-phenyl]-amine,
[1051] 2-Nitro-5-piperazin-1-yl-phenyl)-(2-phenoxy-ethyl)-amine,
[1052] 2-[5-(4-Methyl-piperazin-1-yl)-2-nitro-phenyl]-4-phenyl-2H-phthalazine-1-one,
[1053] 1-[3-(3,5-Dimethyl-pyrazol-1-yl)-4-nitro-phenyl]-piperazine,
[1054] (2-Nitro-5-piperazin-1-yl-phenyl)-phenethyl-amine,
[1055] 5-(4-Benzenesulfonyl-piperazin-1-yl)-2-nitro-phenyl]-furan-2-ylmethyl-amine,
[1056] 2-[3,4-Dimethoxy-phenyl]-ethyl]-[2-nitro-5-piperazin-1-yl-phenyl]-amine,
[1057] 4-[3-[(Furan-2-ylmethyl)-amino]-4-nitro-phenyl]-piperazin-1-yl]-m-tolyl-methanone,
[1058] [4-[3-[(Furan-2-ylmethyl)-amino] -4-nitro-phenyl] -piperazin- 1-yl]-phenyl-
methanone,

[1059] [4-[3-(3,5-Dimethyl-pyrazol-1-yl)-4-nitro-phenyl] -piperazin- 1-yl]-

[1060] thiofen-2-yl-methanone,

[1061] 4-[4-(4-Ethyl-phenyl)-2-[5-[4-methyl-piperazin-1-yl]-2-nitro-phenyl] -2H-

[1062] phthalalazin- 1-one,

[1063] [7-(4-Methyl-piperazin-1-yl)-4-nitro-benzo[1,2,5]oxadiazol-5-ylamino]-

[1064] propan-1-ol,

[1065] [4-Nitro-7-(4-phenyl-piperazin-l-yl)-benzo[1,2,5]oxadiazol-5-ylamino]-

[1066] ethan-1-ol,

[1067] [4-Nitro-7-(4-pyridin-piperazin-l-yl)-benzo[1,2,5]oxadiazol-5-ylamino]-

[1068] propan-1-ol,

[1069] [2-(3,4-Dimethoxy-phenyl)-ethyl]-[5-(4-methyl-piperazin-l-yl)-2-nitro-

[1070] phenyl]-amine,

[1071] [2-(3,4-Dimethyl-phenyl)-ethyl]-[5-(4-methyl-piperazin-l-yl)-2-nitro-

[1072] phenyl]-amine,

[1073] [2-(4-Chloro-phenoxo)-ethyl]-[5-(4-methyl-piperazin-l-yl)-2-nitro-phenyl]-

[1074] amine,

[1075] [2-(3-Methoxy-phenoxo)-ethyl]-[5-(4-methyl-piperazin-l-yl)-2-nitro-

[1076] phenyl]-amine,

[1077] [2-(4-Methyl-piperazin-l-yl)-2-nitro-phenyl]-(2-o-tolyloxy-ethyl)-amine,

[1078] [2-(4-Chloro-benzyl)-(2-nitro-5-piperazin-l-yl-phenyl)-amine,

[1079] [2-(2-Methoxy-phenoxo)-ethyl]-[5-(4-methyl-piperazin-l-yl)-2-nitro-

[1080] phenyl]-amine,

[1081] [2-(2-Methoxy-phenoxo)-ethyl]-[5-(4-methyl-piperazin-l-yl)-2-nitro-

[1082] phenyl]-amine,

[1083] [4-Chloro-benzyl)-(2-nitro-5-piperazin-l-yl-phenyl)-amine,

[1084] Benzyl-[5-(4-benzyl-piperazin-l-yl)-2-nitro-phenyl]-amine,

[1085] Benzyl-[5-(4-methyl-piperazin-l-yl)-2-nitro-phenyl]-amine,
(4-Chloro-benzyl)-[5-(4-methyl-piperazin-1-yl)-2-nitro-phenyl]-amine,
Furan-2-ylmethyl-(2-nitro-5-piperazin-1-yl-phenyl)-amine,
[2-(4-Chloro-phenoxy)-ethyl]-(2-nitro-5-piperazin-1-yl-phenyl)-amine,
[5-(4-Methyl-piperazin-1-yl)-2-nitro-phenyl]-(1-phenyl-ethyl)-amine

1-[4-(3-Benzylamino-4-nitro-phenyl)-piperazin-1-yl]-ethanone,
2-[4-[3-(4-Methylpiperazin-1-yl)-4-nitrophenyl]piperazin-1-yl]ethanol,
2-[4-[3-[2-(Naphthalen-2-yloxy)ethylamino]-4-nitrophenyl]piperazin-1-yl]ethanol,
2-[4-[3-[1-(1-Adamantyl)ethyl] amino]-4-nitrophenyl]piperazin-1-yl]ethanol

and

2-[4-[3-(3,4-Dimethoxyphenethylamino)-4-nitrophenyl]piperazin-1-yl]ethanol;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a
racemate or in form of a mixture of at least two of its stereoisomers, preferably
enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable
salt thereof, or a corresponding solvate thereof.

The compounds of general formula Id are prepared by a process, wherein at least one
nitrobenzene compound of general formula II,

\[
\begin{array}{c}
\text{NO}_2 \\
\text{R}^{4d} \\
\text{Y}^d \\
\text{R}^{5d} \\
\text{Z}^d \\
\text{R}^{6d}
\end{array}
\]

wherein \( \text{R}^{4d} \) to \( \text{R}^{6d} \) have any of the above given meanings, \( \text{Y}^d \) represents a chlorine
atom, and \( \text{Z}^d \) represents a bromine or iodine atom; is reacted with at least one compound
of general formula III,
wherein R₇ to R₁₁ have any of the above given meanings in a suitable reaction medium, preferably in at least an organic solvent, more preferably in at least an organic solvent selected from the group consisting of tetrahydrofuran, toluene and dioxane, preferably in the presence of at least one catalyst, more preferably in the presence of at least a palladium source, even more preferably in the presence of PdCl₂(dppf) wherein dppf is 1,1-bis(diphenylphosphino)-ferrocene, and/or at least one auxiliary agent, preferably 1,1-bis(diphenylphosphino)-ferrocene, and/or at least one base, preferably sodium tert-pentoxide, to yield a compound of general formula IV,

wherein R₄ to R₁₁ have any of the above given meanings and Y represents a chlorine atom; which is optionally purified and/or isolated, and the compound of general formula IV is reacted with at least one compound of general formula V,
wherein $R^{1d}$ and $R^{2d}$ have any of the above given meanings, in a suitable reaction medium, preferably in at least an organic solvent, more preferably in at least an organic solvent selected from the group consisting of toluene or dimethoxyethane, preferably in the presence of at least one catalyst, more preferably in the presence of at least a palladium source, even more preferably in the presence of at least a palladium source selected from the group consisting of Pd(OAc)$_2$, wherein OAc is acetate, and Pd$_2$dba$_3$, wherein dba is dibenzylidene acetone, and/or at least one auxiliary agent, preferably (biph)P(tertBu)$_2$, wherein biph is biphenyl and tertBu is tert-butyl, and/or at least one base, preferably at least one base selected from the group consisting of K$_3$PO$_4$ and sodium tert-pentoxide to yield a compound of general formula VI,

$$\begin{array}{c}
\text{NO}_2 \\
R^{1d} \\
R^{2d} \\
R^{3d} \\
R^{4d} \\
R^{5d} \\
R^{6d} \\
R^{7d} \\
R^{8d} \\
R^{9d} \\
R^{10d} \\
R^{11d} \\
\end{array}
$$

VI

wherein $R^{1d}$, $R^{2d}$ and $R^{4d}$ to $R^{11d}$ have any of the above given meanings which is optionally purified and/or isolated.

The compounds of general formula Id are prepared by a process, wherein at least one nitrobenzene compound of general formula VII,

$$\begin{array}{c}
\text{NO}_2 \\
R^{4d} \\
Z^d \\
R^{5d} \\
R^{6d} \\
Y^d \\
\end{array}
$$

VII
wherein $R^4_d$ to $R^6_d$ have any of the above given meanings, $Z^d$ represents a bromine or iodine atom, and $Y^d$ represents a chlorine atom, is reacted with at least one compound of general formula V,

$$
\begin{align*}
\text{V} & : \quad R^1_d \text{NH} \\
& \quad \quad \quad R^2_d \\
\end{align*}
$$

wherein $R^1_d$ and $R^2_d$ have any of the above given meanings in a suitable reaction medium, preferably in at least an organic solvent, more preferably in at least an organic solvent selected from the group consisting of toluene and dioxane, preferably in the presence of at least one catalyst, more preferably in the presence of at least a palladium and/or copper source, even more preferably in the presence of at least a palladium and/or copper source selected from the group consisting of Pd(OAc)$_2$, wherein OAc is acetate, Pd$_2$dba$_3$, wherein dba is dibenzylidene acetone, and copper(I)iodide, and/or at least one auxiliary agent, preferably at least one auxiliary agent selected from the group consisting of 4,5-bis(diphenylphosphino)-9,9-dimethylxanthene (Xantphos), 1,1-bis(diphenylphosphino)-ferrocene and P($^t$Bu)$_3$, wherein $tBu$ is tert-Butyl, and/or at least one base, preferably at least one base selected from the group consisting of $K_3PO_4$, $Cs_2CO_3$ and trans-1,2-diamino-methylcyclohexane, to yield a compound of general formula VIII,
wherein $R_{1d}$, $R_{2d}$ and $R_{4d}$ to $R_{6d}$ have any of the above given meanings and $Y_{d}$ represents a chlorine atom; which is optionally purified and/or isolated, and the compound of general formula VIII is reacted with at least one compound of general formula III,

![Image of molecule VIII]

wherein $R_{7d}$ to $R_{11d}$ have any of the above given meanings, in a suitable reaction medium, preferably in at least an organic solvent, more preferably in at least an organic solvent selected from the group consisting of toluene, tetrahydrofuran and dimethoxyethane, preferably in the presence of at least one catalyst, more preferably in the presence of at least a palladium source, even more preferably in the presence of at least a palladium source selected from the group consisting of $\text{Pd(OAc)}_2$, wherein OAc is acetate, and $\text{Pd}_2\text{dba}_3$, wherein dba is dibenzylidene acetone, and/or at least one auxiliary agent, preferably $(\text{biph})\text{P(}^{\text{tBu}})$, wherein biph is biphenyl and $\text{tBu}$ is tert-butyl, and/or at least one base, preferably at least one base selected from the group consisting of $\text{K}_3\text{PO}_4$ or sodium tert-pentoxide, to yield a compound of general formula VI,

![Image of molecule VI]

wherein $R_{1d}$, $R_{2d}$ and $R_{4d}$ to $R_{11d}$ have any of the above given meanings, which is optionally purified and/or isolated.
The compounds of general formula I<sub>d</sub> are prepared by a process, wherein at least one nitrobenzene compound of general formula II,

\[
\text{II}
\]

wherein R<sup>4d</sup> to R<sup>6d</sup> have any of the above given meanings, Y<sup>d</sup> represents a chlorine atom, and Z<sup>d</sup> represents a bromine or iodine atom; is reacted with at least one compound of general formula III,

\[
\text{III}
\]

wherein R<sup>7d</sup> to R<sup>11d</sup> have any of the above given meanings, in a suitable reaction medium, preferably in at least an organic solvent, more preferably in at least an organic solvent selected from the group consisting of tetrahydrofuran or dioxane, preferably in the presence of at least one catalyst, more preferably in the presence of at least a palladium source, even more preferably in the presence of PdCl<sub>2</sub>(dppe), wherein dppe is 1,1-bis(diphenylphosphino)-ferrocene, and/or at least one auxiliary agent, preferably 1,1-bis(diphenylphosphino)-ferrocene, and/or at least one base, preferably sodium tert-pentoxide, to yield a compound of general formula IV,
wherein $R^{4d}$ to $R^{11d}$ have any of the above given meanings and $Y^d$ represents a chlorine atom; which is optionally purified and/or isolated, and the compound of general formula IV is reacted with at least one compound of general formula IX,

$$\text{H}_2\text{N} = \text{OR}^{3d}$$

wherein $R^d$ has any of the above given meanings, in a suitable reaction medium, preferably in at least an organic solvent, more preferably in at least an organic solvent selected from the group consisting of toluene or dimethoxyethane, preferably in the presence of at least one catalyst, more preferably in the presence of at least a palladium source, even more preferably in the presence of at least a palladium source selected from the group consisting of Pd(OAc)$_2$, wherein OAc is acetate, and Pd$_2$dba$_3$, wherein dba is dibenzylidene acetone, and/or at least one auxiliary agent, preferably (biph)P(??Bu)$_2$, wherein biph is biphenyl and $tBu$ is tert-butyl, and/or at least one base, preferably at least one base selected from the group consisting of $K_3$PO$_4$ and sodium te/t-pentoxideto yield a compound of general formula X,

$$\text{X}$$
wherein $R^{3d}$ to $R^{1ld}$ have any of the above given meanings, which is optionally purified and/or isolated.

Suitable reaction media include organic solvents, such as dialkyl ether, preferably diethyl ether and dimethoxymethane, or a cyclic ether, preferably tetrahydrofuran or dioxane; or a halogenated hydrocarbon, preferably dichloromethane or chloroform; an alcohol, preferably methanol or ethanol; an aprotic solvent, preferably acetonitrile, toluene, pyridine or dimethylformamide, or any other suitable reaction medium. Of course, mixtures of at least two classes of solvents or of at least two solvents of one class may also be used.

All of above mentioned reactions are preferably carried out in an oven-dried vial. The catalyst, the auxiliary agent, the base and the compound of general formula II, IV, VII or VIII are added in each case and the vial is subsequently evacuated and purged with argon. The organic solvent and the compound of general formula III, V or IX are added and the reaction is carried out in a sealed vial at a temperature between 100 °C and 110 °C, preferably at 100 °C in case of tetrahydrofuran or toluene as the organic solvent and at 110 °C in case of dimethoxymethane and dioxane as the organic solvent.


The compounds of general formulas IV, VI, VIII and X given above may be purified and/or isolated according to methods well known to those skilled in the art.

The compounds of general formulas IV, VI, VIII and X may be isolated by evaporating the reaction medium, addition of water and adjusting the pH value to obtain the compound in form of a solid that can be isolated by filtration, or by extraction with a
solvent that is not miscible with water such as chloroform and purification by chromatography or recrystallisation from a suitable solvent.

Preferably, the compounds of general formula IV, VI, VIII and X may be obtained by filtration of the reaction mixture and subsequent separation of the reaction mixture on a TLC plate. Alternatively, the compounds of general formula I may be isolated by addition of water and methanol to the reaction mixture, evaporating the reaction mixture and purifying the residue by preparative HPLC.

The compounds of general formula II and VII are commercially available or may be prepared according to methods well known in the art, for example, analogous to the methods described in the bibliography of A. McKillop et al., Tetrahedron 1987, 43, 1753. The respective part of the literature description cited above is hereby incorporated by reference and forms part of the disclosure.

The compounds of general formula III, V and IX are commercially available or may be prepared according to methods well known in the art.

During some synthetic reactions described above or while preparing the compounds of general formulas III, V, VI, IX or X the protection of sensitive or reactive groups may be necessary and/or desirable. This can be performed by using conventional protective groups like those described in Protective groups in Organic Chemistry, ed. J. F. W. McOmie, Plenum Press, 1973; T.W. Greene & P.G.M. Wuts and Protective Groups in Organic Chemistry, John Wiley & sons, 1991. The respective parts of the description is hereby incorporated by reference and forms part of the disclosure. The protective groups may be eliminated when convenient by means well-known to those skilled in the art.

If the nitro-substituted phenyl-piperazine compounds of general formula Id are obtained in form of a mixture of stereoisomers, particularly enantiomers or diastereomers, said mixtures may be separated by standard procedures known to those skilled in the art, e.g. chromatographic methods or crystallization with chiral reagents.
The nitro-substituted phenyl-piperazine compounds of general formula I_d and in each case stereoisomers thereof may be obtained in form of a corresponding salt according to methods well known to those skilled in the art, e.g. by reacting said compound with at least one inorganic and/or organic acid, preferably in a suitable reaction medium. Suitable reaction media include, for example, any of the ones given above.

Preferably as component (A) at least one compound is present which is selected from the group consisting of phenyl-piperazine-derived compounds of general formula (I_e)

![Chemical structure](image)

wherein

- $X_e$ represents $\text{-CN}$, $\text{-C(=O)-OH}$, $\text{-C(=O)-OR}$, $\text{-O-}$, $\text{-NH_2}$, $\text{-NR_6}$, $\text{-C(=O)-R}$, $\text{-NH-S(=O)}_2$, $\text{-NH-R}$;

- $R^1_e$ represents a hydrogen atom;

- a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;
or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkynylene group which may contain 1, 2 or 3 heteroatom(s) independently selected from the group consisting of nitrogen, oxygen and sulfur as chain member(s);

\[ R^{2e} \] represents a hydrogen atom or a \(-\text{C}(=\text{O})-R^{10e}\) moiety;

or

\[ R^{1e} \text{ and } R^{2e} \text{ together with the bridging nitrogen form a nitro (NOi)-group or } \]

an unsubstituted or at least mono-substituted 5- or 6-membered heteroaryl radical which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

\[ R^{3e} \] represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

\[ R^{4e} \] represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

\[ R^{5e} \] represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkynylene group;

\[ R^{6e} \] represents a hydrogen atom or
an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group;

$R^7_e$ represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

$R^8_e$ represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group;

$R^9_e$ represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group;

and

$R^{10_e}$ represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively.
Preferred compounds of general formula (Ie) are those, wherein

Xe represents -CN, -C(=O)-OH, -C(=O)-OR, -O-R, \( S(=O)_{2} \) or -NH-R;

R1e represents

a hydrogen atom; or

an aryl or heteroaryl radical selected from the group consisting of phenyl, naphthyl, furyl (furanyl) and thiophenyl (thiophenyl), whereby said aryl or heteroaryl radical is bonded via a -(CH\(_2\))\(_n\), -(CH\(_2\))-(CH\(_2\))\(_n\), -(CH\(_2\)MCH\(_2\)MCH\(_2\))\(_n\), -0-(CH\(_2\))\(_n\)-, or -(CH\(_2\))-(CH\(_2\))-O-group and/or may be unsubstituted or substituted with 1, 2 or 3 substituent(s) independently selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, sec-butyl, isobutyl, -O-CH\(_3\), -O-C\(_2\)H\(_5\), -O-CH\(_2\)CH\(_3\), -O-CH(CH\(_3\))\(_2\), -O-C(CH\(_3\))\(_3\), F, Cl, Br, -CN, -CF\(_3\), -OCF\(_3\), -OH and -SH.

R2 represents a hydrogen atom or a -C(=O)-R moiety;

R1e and R2e together with the bridging nitrogen atom form a nitro group or moiety selected from the group consisting of

\[
\begin{align*}
\text{N} & \quad \text{N} \\
\text{C} & \quad \text{N} \\
\text{C} & \quad \text{N} \\
\end{align*}
\]

whereby each of these afore mentioned cyclic moieties may be unsubstituted or substituted with 1, 2 or 3 substituent(s) independently selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, sec-butyl, isobutyl, F, Cl, Br, I, -CN and -CF\(_3\),

R3e represents a methyl or ethyl radical;
R⁴ₑ represents a methyl or ethyl radical;

R⁵ₑ represents an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl;

or an aryl or heteroaryl radical selected from the group consisting of phenyl, naphthyl, furyl (furanyl) and thiophenyl (thiophenyl), whereby said aryl or heteroaryl radical is bonded via a -(CH₂)ₙ, -(CH₂MCH₂)ₙ or -(CH₂MCH₂MCH₂)ₙ group and/or may be unsubstituted or substituted with 1, 2 or 3 substituent(s) independently selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, sec-butyl, isobutyl, -0-CH₃, -0-C₂H₅, -0-CH₂-CH₂-CH₃, -O-CH(CH₃)₂, -O-C(CH₃)₃, F, Cl, Br, -CN, -CF₃, -OCF₃, -OH and -SH;

R⁶ₑ represents a hydrogen atom, or

a phenyl radical, whereby said phenyl radical may be bonded via a -(CH₂)ₙ-group and/or may be unsubstituted or substituted with 1, 2 or 3 substituent(s) independently selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, sec-butyl, isobutyl, -0-CH₃, -0-C₂H₅, F, Cl, Br, -CF₃, -OCF₃, -OH and -SH;

R⁷ₑ represents a methyl or ethyl radical;

R⁸ₑ represents an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl; or

an aryl radical selected from the group consisting of phenyl and naphthyl, whereby said aryl radical may be bonded via a -(CH₂)ₙ, or -(CH₂)ₙ-(CH₂)ₙ-group and/or may be unsubstituted or substituted with 1, 2 or 3 substituent(s) independently selected from the
group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, sec-butyl, isobutyl, -0-CH$_3$, -0-C$_2$H$_5$, -0-CH$_2$CH$_2$CH$_3$, -O-CH(CH$_3$)$_2$, -O-C(CH$_3$)$_3$, F, Cl, Br, -CN, -CF$_3$, -OCF$_3$, -OH and -SH,

5 R$^{\text{Re}}$ represents

an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl;

10 or an aryl radical selected from the group consisting of phenyl and naphthyl, whereby said aryl radical may be bonded via a -(CH$_2$)$_n$-, -(CH$_2$)$_n$-(CH$_2$)$_m$- or -(CH$_2$)$_n$-(CH$_2$)$_m$-(CH$_2$)$_n$- group and/or may be unsubstituted or substituted with 1, 2 or 3 substituent(s) independently selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, sec-butyl, isobutyl, -0-CH$_3$, -0-C$_2$H$_5$, -0-CH$_2$CH$_2$CH$_3$, -O-CH(CH$_3$)$_2$, -O-C(CH$_3$)$_3$, F, Cl, Br, -CN, -CF$_3$, -OCF$_3$, -OH and -SH;

R$^{\text{Re}}$ represents a methyl or ethyl radical;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively.

Particularly preferred compounds of general formula (Ie) are those selected from the group consisting of

[1086] 4-(4-Methyl-piperazin-1-yl)-2-phenethylamino-benzoic acid,
[1087] 2-[(Furan-2-ylmethyl)-amino]-4-(4-methyl-piperazin-1-yl)-benzonitrile,
[1088] 2-[(Furan-2-ylmethyl)-amino]-4-(4-methyl-piperazin-1-yl)-benzoic acid,
[1089] 2-Benzylamino-4-(4-methyl-piperazin-1-yl)-benzoic acid methyl ester,
[1090] 2-Benzylamino-4-(4-methyl-piperazin-1-yl)-benzonitrile,
[1091] 4-(4-Methyl-piperazin-1-yl)-2-phenethylamino-benzoic acid methyl ester,
[1092] 2-[(Furan-2-ylmethyl)-amino] -4-(4-methyl-piperazin-1-yl)-benzoic acid
methyl ester,
[1093] 2-Benzylamino-4-(4-methyl-piperazin-1-yl)-benzoic acid,
[1094] [2-Benzylxy-5-(4-methyl-piperazin-1-yl)-phenyl]-phenethyl-amine,
[1095] [2-Benzylxy-5-(4-methyl-piperazin-1-yl)-phenyl]-furan-2-yl-methyl amine,
[1096] Benzyl-[2-methoxy-5-(4-methyl-piperazin-1-yl)-phenyl]-amine,
[1097] [2-Methoxy-5-(4-methyl-piperazin-1-yl)-phenyl]-phenethyl-amine,
[1098] Furan-2-ylmethyl-[2-methoxy-5-(4-methyl-piperazin-1-yl)-phenyl]-amine,
[1099] Benzyl-[2-benzyloxy-5-(4-methyl-piperazin-1-yl)-phenyl]-amine,
[1100] N-[2-Acetyl-(2-phenoxyethyl)-amino]-4-(4-methyl-piperazin-1-yl)-phenyl]-acetamide,
[1101] N-[4-(4-Methyl-piperazin-1-yl)-2-(2-phenoxy-ethylamino)-phenyl]-acetamide,
[1102] N-[2-(Acetyl-amino)-4-(4-methyl-piperazin-1-yl)-phenyl]-N-benzyl-acetamide,
[1103] N-[2-(3,5-Dimethyl-pyrazol-1-yl)-4-(4-methyl-piperazin-1-yl)-phenyl]-acetamide,
[1104] N-[2-(Acetyl-furan-2-ylmethyl-amino)-4-(4-methyl-piperazin-1-yl)-phenyl]-acetamide,
[1105] N-[2-Benzylamino-4-(4-methyl-piperazin-1-yl)-phenyl]-acetamide,
[1106] N-[2-[Furan-2-ylmethyl-amino]-4-(4-methyl-piperazin-1-yl)-phenyl]-acetamide,
[1107] N-[2-Amino-5-(4-methyl-piperazin-1-yl)-phenyl]-N-furan-2-ylmethyl-acetamide,
[1108] N-[2-Amino-4-(4-methyl-piperazin-1-yl)-phenyl]-N-benzyl-acetamide,
[1109] N-[2-Benzylamino-4-(4-methyl-piperazin-1-yl)-phenyl]-benzenesulfonamide,
[1110] N-[2-Benzylamino-4-(4-methyl-piperazin-1-yl)-phenyl]-methansulfonamide,
[1111] 2-Benzylxy-5-(4-methyl-piperazin-1-yl)-phenylamine,
[1112] Benzyl-[4-(4-methyl-piperazin-1-yl)-2-nitro-phenyl]-amine and
[1113] 2-Cyano-(5-piperazin-1-yl-methyl)-2-phenoxy-ethylamine

optionally in form of one of their stereoisomers, preferably enantiomers or diasteromers, a racemate or in form of a mixture of at least two stereoisomers, preferably enantiomers
and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof.

The compounds of general formula Ie are prepared by a process, wherein at least one substituted benzene compound of general formula II,

\[
\text{II}
\]

wherein \(X^e\) represents -CN, -C(=O)-OR\(^4\text{e}\), -O-R\(^5\text{e}\) or -NO\(_2\), \(R^4\text{e}\) and \(R^5\text{e}\) have any of the above given meanings, \(Y^e\) represents a chlorine atom, and \(Z^e\) represents a bromine or iodine atom; is reacted with at least one piperazine compound of general formula III,

\[
\text{III}
\]

wherein \(R^3\text{e}\) has any of the above given meanings, in a suitable reaction medium, preferably in at least one organic solvent, more preferably in at least one organic solvent selected from the group consisting of tetrahydrofuran, toluene or dioxane, preferably in the presence of at least one catalyst, more preferably in the presence of at least a palladium source, even more preferably in the presence of at least one palladium source selected from the group consisting of Pd(OAc)$_2$, wherein OAc is acetate, and PdCl$_2$(dppf), wherein dppf is 1,1-bis(diphenylphosphino)-ferrocene, and/or at least one auxiliary agent, preferably at least one auxiliary agent selected from the group consisting of 1,1-bis(diphenylphosphino)-ferrocene and 2,2'-bis(diphenylphosphino)-
ri-binaphthyl (BINAP), optionally in form of its enantiomers or a racemate, and/or at least one base, preferably at least one base selected from the group consisting of sodium tert-pentoxide and Cs₂CO₃ to yield a compound of general formula IV,

![Diagram of general formula IV]

wherein Xₑ represents -CN, -C(=O)-ORₑ, -O-Rₑ or -NO₂, R₃ₑ, R₄ₑ and R₅ₑ have any of the above given meanings and Yₑ represents a chlorine atom; which is optionally purified and/or isolated, and the compound of general formula IV is reacted with at least one compound of general formula V,

![Diagram of general formula V]

wherein R₁ₑ and R₂ₑ have any of the above given meanings or one of them represents a protecting group, preferably a -C(=O)-O-C(CH₃)₃ group, in a suitable reaction medium, preferably in at least one organic solvent, more preferably in at least one organic solvent selected from the group consisting of toluene, dioxane and dimethoxyethane, preferably in the presence of at least one catalyst, more preferably in the presence of at least one palladium source, even more preferably in the presence of at least a palladium source selected from the group consisting of Pd(OAc)₂, wherein OAc is acetate, and Pd₂dba₃, wherein dba is dibenzylidene acetone, and/or at least one auxiliary agent, preferably at least one auxiliary agent selected from the group consisting of (biph)P(?Bu)₂, wherein biph is biphenyl and tBu is tert-butyl, and 4,5-bis(diphenylphosphino)-9,9-dimethylxanthene (xantphos), and and/or at least one base, preferably at least one base
selected from the group consisting of $K_3PO_4$, $CS_2CO_3$ and sodium tetra-pentoxide to yield a compound of general formula $VI$,

\[
\begin{array}{c}
\text{Xe} \\
\text{R}^1_e \\
\text{R}^2_e \\
\text{R}^3_e \\
\end{array}
\]

wherein Xe represents -CN, $-C(=O)-OR^4_e$, $-O-R^5_e$ or $-NO_2$, R$^1_e$, R$^2_e$ have any of the above given meanings or one of them represents a protecting group, preferably $-C(=O)-O-C(CH_3)_3$ and R$^3_e$, R$^4_e$ and R$^5_e$ have any of the above given meanings, said compound of general formula $VI$ is being optionally purified and/or isolated,

or at least one substituted benzene compound of general formula $Ha$,

\[
\begin{array}{c}
\text{Xe} \\
\text{Ye} \\
\text{Ze} \\
\end{array}
\]

wherein Xe represents -CN, $-C(=O)-OR^4_e$, $-O-R^5_e$ or $-NO_2$, R$^4_e$ and R$^5_e$ have any of the above given meanings, Ze represents a chlorine atom, Ye represents a bromine or iodine atom, is reacted with at least one compound of general formula $V$,

\[
\begin{array}{c}
\text{R}^1_e-\text{NH} \\
\text{R}^2_e \\
\end{array}
\]

wherein R$^1_e$ and R$^2_e$ have any of the above given meanings or one of them represents a protecting group, preferably a $-C(=O)-O-C(CH_3)_3$ group in a suitable reaction medium, preferably in at least one organic solvent, more preferably in at least one organic solvent.
selected from the group consisting of toluene, dimethoxyethane and dioxane, preferably in the presence of at least one catalyst, more preferably in the presence of at least a palladium and/or copper source, even more preferably in the presence of at least a palladium and/or copper source selected from the group consisting of Pd(OAc)$_2$, wherein OAc is acetate, Pd$_2$dba$_3$, wherein dba is dibenzylidene acetone, and copper(I)iodide, and/or at least one auxiliary agent, preferably at least an auxiliary agent selected from the group consisting of 4,5-bis(diphenylphosphino)-9,9-dimethylxanthene (Xantphos), 1,1-bis(diphenylphosphino-ferrocene and P($^{t}$Bu)$_3$ wherein $^{t}$Bu is tert-Butyl, and/or at least one base, preferably at least one base selected from the group consisting of K$_3$PO$_4$, Cs$_2$CO$_3$ and trans-1,2-diamino-methylcyclohexane to yield a compound of general formula VII,

\[
\begin{align*}
\text{VII} & \\
\text{wherein } X^e & \text{ represents } -\text{CN, } -\text{C(=O)-OR}^4e, -\text{O-R}^5e \text{ or } -\text{NO}_2, R^{1e} \text{ and } R^{2e} \text{ have any of the above given meanings or one of them represents a protecting group, preferably a } -\text{C(=O)-O-C(CH}_3)_3 \text{ group, } R^{4e} \text{ and } R^{5e} \text{ have any of the above given meanings, and } Y \text{ represents a chlorine atom; said compound of general formula being optionally purified and/or isolated, and the compound of general formula VII is reacted with at least one compound of general formula III,} \\
\end{align*}
\]

\[
\begin{align*}
\text{III} & \\
\text{wherein } R^{3e} \text{ has any of the above given meanings, in a suitable reaction medium, preferably in at least one organic solvent, more preferably in at least one organic solvent selected from the group consisting of tetrahydrofuran, toluene or dioxane, preferably in the presence of at least one catalyst, more preferably in the presence of at least a}
\end{align*}
\]
palladium source, even more preferably in the presence of at least one palladium source selected from the group consisting of Pd(OAc)$_2$, wherein OAc is acetate, and PdCl$_2$(dppf), wherein dppf is 1,1-bis(diphenylphosphino)-ferrocene, and/or at least one auxiliary agent, preferably at least one auxiliary agent selected from the group consisting of 1,1-bis(diphenylphosphino)-ferrocene and 2,2'-bis(diphenylphosphino)-1'1-binaphthyl (BINAP), optionally in form of its enantiomers or a racemate, and/or at least one base, preferably at least one base selected from the group consisting of sodium tetrart-pentoxide and Cs$_2$CO$_3$, to yield a compound of general formula VI,

\[
\begin{array}{c}
\text{R}^{1e} \\
\text{R}^{2e} \\
\text{X}^e \\
\text{N} \\
\text{R}^{3e} \\
\end{array}
\]

wherein X$^e$ represents -CN, -C(=O)-OR$^{4e}$, -O-R$^{5e}$ or -NO$_2$, R$^{1e}$ and R$^{2e}$ have any of the above given meanings or one of them represents a protecting group, preferably a -C(=O)-O-C(CH$_3$)$_3$ group, and R$^{3e}$, R$^{4e}$ and R$^{5e}$ have any of the above given meanings, and said compound of general formula VI is optionally purified and/or isolated,

\[
\begin{array}{c}
\text{Z}^e \\
\text{Y}^e \\
\text{NO}_2 \\
\end{array}
\]

wherein Z$^e$ represents bromine or iodine and Y$^e$ represents chlorine, is reacted with at least one compound of general formula IX,
wherein \( R^{6e} \) has any of the above given meanings and \( PG \) represents a protecting group, preferably an \(-C(=O)-O-C(CH_3)_3 \) group, in a suitable reaction medium, preferably in at least one organic solvent, more preferably in at least one organic solvent selected from the group consisting of toluene and dioxane, preferably in the presence of at least one catalyst, more preferably in the presence of at least one palladium and/or copper source, even more preferably in the presence of at least one palladium and/or copper source selected from the group consisting of \( \text{Pd(OAc)}_2 \) wherein \( \text{OAc} \) is acetate, \( \text{Pd}_2\text{dba}_3 \) wherein \( \text{dba} \) is dibenzylidene acetone and copper(I)iodide, and/or at least one auxiliary agent, preferably at least an auxiliary agent selected from the group consisting of \( \text{4,5-bis(diphenylphosphino)-9,9-dimethylxanthene (Xantphos)} \), \( \text{1,1-bis(diphenylphosphino-ferrocene} \) and \( \text{P(}^\text{tBu}\text{)}_3 \) wherein \( \text{tBu} \) is tert-Butyl, and/or at least one base, preferably at least one base selected from the group consisting of \( \text{K}_3\text{PO}_4 \), \( \text{Cs}_2\text{CO}_3 \) and \( \text{trans-1,2-diamino-methylcyclohexane} \) to yield a compound of general formula XI,

\[
\text{XI}
\]

wherein \( R^{6e} \) has any of the above given meanings, \( PG \) represents a protecting group, preferably an \(-C(=O)-O-C(CH_3)_3 \) group and \( Ye \) represents chlorine; which is optionally purified and/or isolated, and the compound of general formula XI reacted with at least one compound of general formula III,
wherein R^3e has any of the above given meanings, in a suitable reaction medium, preferably in at least one organic solvent, more preferably in at least one organic solvent selected from the group consisting of tetrahydrofuran, toluene or dioxane, preferably in the presence of at least one catalyst, more preferably in the presence of at least a palladium source, even more preferably in the presence of at least one palladium source selected from the group consisting of Pd(OAc)_2, wherein OAc is acetate, and PdCl_2(dpff), wherein dpff is 1,1-bis(diphenylphosphino)-ferrocene, and/or at least one auxiliary agent, preferably at least one auxiliary agent selected from the group consisting of 1,1-bis(diphenylphosphino)-ferrocene and 2,2'-bis(diphenylphosphino)-1'1-binaphthyl (BINAP), optionally in form of its enantiomers or a racemate, and/or at least one base, preferably at least one base selected from the group consisting of sodium tetrabutylammonium fluoride and Cs_2CO_3, to yield a compound of general formula XII,

wherein R^3e and R^6e have any of the above given meanings and PG represents a protecting group, preferably a-C(=O)-O-C(CH_3)_3 group, which is optionally purified and/or isolated, and the compound of general formula XII is reacted with at least one acid in a suitable reaction medium to yield a compound of general formula XIII,
wherein \( R^{3e} \) and \( R^{6e} \) have any of the above given meanings, which is optionally purified and/or isolated, and the compound of general formula is reacted with hydrogen in the presence of at least one catalyst, preferably in the presence of at least one palladium source, more preferably in the presence of palladium on charcoal, in a suitable reaction medium, preferably in at least one organic solvent, more preferably in an organic solvent selected from the group consisting of dioxane, tetrahydrofuran and diethyl ether, to yield a compound of general formula XIV,

wherein \( R^{3e} \) and \( R^{6e} \) have any of the above given meanings, which is optionally purified and/or isolated, and the compound of general formula XIV is reacted with at least one compound of general formula \( R^{7e} \cdot C(=O) \cdot O \cdot C(=O) \cdot R^{7e} \), wherein \( R^{7e} \) any of the above given meanings, and/or at least one compound of general formula \( R^{10e} \cdot C(=O) \cdot O \cdot C(=O) \cdot R^{10e} \), wherein \( R^{10e} \) has any of the above given meanings, optionally in the presence of at least one base, preferably in the presence of at least one organic base, more preferably in the presence of at least one organic base selected from the group consisting of pyridine, triethylamine and diisopropylethylamine, in a suitable reaction
medium, preferably in at least one organic solvent, more preferably in at least one organic solvent selected from the group consisting of dioxane, tetrahydrofuran and diethyl ether, to yield a compound of general formula I, wherein $X^c$ represents -$NR^{6e}$-C(=O)R$^{7e}$, $R^{1e}$ represents a hydrogen atom, $R^{2e}$ represents a hydrogen atom or a -C(=O)-R$^{10e}$-moiety and $R^{3e}$, $R^{5e}$, $R^{7e}$ and $R^{10e}$ have any of the above given meanings, which is optionally purified and/or isolated.

and/or at least one compound of general formula VI, wherein $X^c$ represents -CN, -C(=O)-OR$^{4e}$ or -O-R$^{5e}$, $R^{1e}$ and $R^{2e}$ have any of the above given meanings or one of them represents a protecting group, preferably a -C(=O)-O-C(CH$_3$)$_3$-group, $R^{3e}$, $R^{4e}$ and $R^{5e}$ have any of the above given meanings, is reacted with at least one acid, preferably at least one acid selected from the group consisting of sulfuric acid, hydrochloric acid and acetic acid, in a suitable reaction medium, preferably in at least one organic solvent, more preferably in at least one organic solvent selected from the group consisting of dioxane and tetrahydrofuran, to yield a compound of general formula I, wherein $X^c$ represents -CN, -C(=O)-OR$^{4e}$ or -O-R$^{5e}$, $R^{1e}$ and $R^{3e}$ to $R^{5e}$ have any of the above given meanings and $R^{2e}$ represents hydrogen, which is optionally purified and/or isolated.

and optionally at least one compound of general formula I, wherein $X^c$ represents -CN, -C(=O)-OR$^{4e}$ or -O-R$^{5e}$, $R^{1e}$ and $R^{3e}$ to $R^{5e}$ have any of the above given meanings and $R^{2e}$ represents hydrogen, is reacted with hydrogen in the presence of at least one catalyst, preferably in the presence of at least one palladium source, more preferably in the presence of palladium on charcoal, in a suitable reaction medium, preferably in at least one organic solvent, more preferably in an organic solvent selected from the group consisting of dioxane, tetrahydrofuran and diethyl ether, to yield a compound of general formula I, wherein $X^c$ represents -CN, -C(=O)-OR$^{4e}$ or -O-R$^{5e}$, $R^{3e}$ to $R^{5e}$ have any of the above given meanings and $R^{1e}$ and $R^{2e}$ each represent hydrogen.

and/or

at least one compound of general formula VI, wherein $X^c$ represents -C(=O)-OR$^{4e}$, $R^{1e}$ and $R^{2e}$ have any of the above given meanings or one of them represents a protecting
group, preferably a -C(=O)-O-C(CH\textsubscript{3})\textsubscript{3}-group, R\textsuperscript{3e} and R\textsuperscript{4e} have any of the above given meanings, is reacted with at least one base, preferably at least one metal hydroxide, more preferably at least one metal hydroxide selected from the group consisting of lithium hydroxide and potassium hydroxide, in a suitable reaction medium, preferably in a mixture of at least one organic solvent and water, more preferably in a mixture of at least one organic solvent selected from the group consisting of dioxane, ethanol and methanol and water, to yield a compound of general formula XV, wherein X\textsuperscript{e} represents -C(=O)-OH, R\textsuperscript{1e} and R\textsuperscript{2e} have any of the above given meanings or one of them represents a protecting group, preferably a -C(=O)-O-C(CH\textsubscript{3})\textsubscript{3}-group, R\textsuperscript{3e} has any of the above given meanings, which is optionally purified and/or isolated and at least one compound of general formula XV is reacted with at least one acid, preferably at least one acid selected from the group consisting of sulfuric acid, hydrochloric acid and acetic acid, in a suitable reaction medium, preferably in at least one organic solvent, more preferably in at least one organic solvent selected from the group consisting of dioxane and tetrahydrofuran, to yield a compound of general formula I, wherein X\textsuperscript{e} represents -C(=O)-OH, R\textsuperscript{1e} and R\textsuperscript{3e} have any of the above given meanings and R\textsuperscript{2e} represents hydrogen, which is optionally purified and/or isolated, and/or

at least one compound of general formula XVI, wherein X\textsuperscript{e} represents -NO\textsubscript{2}, R\textsuperscript{1e} and R\textsuperscript{2e} have any of the above given meanings or one of them represents a protecting group, preferably a -C(=O)-O-C(CH\textsubscript{3})\textsubscript{3}-group and R\textsuperscript{3e} has any of the above given meanings, is reacted with hydrogen in the presence of at least one catalyst, preferably in the presence of at least one palladium source, more preferably in the presence of palladium on charcoal, in a suitable reaction medium, preferably in at least one organic solvent, more preferably in an organic solvent selected from the group consisting of dioxane, tetrahydrofuran and diethyl ether, to yield a compound of general formula XVI, wherein X\textsuperscript{e} represents -NH\textsubscript{2}, R\textsuperscript{1e} and R\textsuperscript{2e} have any of the above given meanings or one of them represents a protecting group, preferably a -C(=O)-O-C(CH\textsubscript{3})\textsubscript{3}-group, and R\textsuperscript{3e} has any of the above given meanings, which is optionally purified and/or isolated, and at least one compound of general formula XVI, is reacted with at least one acid, preferably at least one acid selected from the group consisting of sulfuric acid, hydrochloric acid and
acetic acid, in a suitable reaction medium, preferably in at least one organic solvent,
more preferably in at least one organic solvent selected from the group consisting of
dioxane and tetrahydrofuran, to yield a compound of general formula I, wherein X represents
-NH₂, R¹ and R³ have any of the above given meanings and R² represents hydrogen, which is optionally purified and/or isolated,

and optionally at least one compound of general formula I, wherein X represents
-NH₂, R¹ and R³ have any of the above given meanings and R² represents hydrogen, is reacted with at least one compound of general formula R⁷e-C(=O)-O-C(=O)-R⁷e and/or
at least one compound of general formula R¹₀e-C(=O)-O-C(=O)-R¹₀e, wherein R⁷e and
R¹₀e have any of the above given meanings optionally in the presence of at least one base, preferably in the presence of at least one organic base, more preferably in the presence of at least an organic base selected from the group consisting of pyridine, triethylamine and diisopropylethylamine, in a suitable reaction medium, preferably in at
least one organic solvent, more preferably in at least one organic solvent selected from
the group consisting of dioxane, tetrahydrofuran and diethyl ether, to yield a compound
of general formula I, wherein X represents -NH-C(=O)-R ᵇ and R¹ to R³ have any of
the above given meanings, which is optionally purified and/or isolated,

and/or optionally at least one compound of general formula I, wherein X represents
-NH₂ and R¹ and R³ have any of the above given meanings and R² represents hydrogen, is reacted with at least one compound of general formula R⁸e-S(=O)-W, wherein R⁸e has any of the above given meanings and W represents a halogen atom, preferably a chlorine atom, optionally in the presence of at least one base, preferably in the presence of at least one organic base, more preferably in the presence of an organic base selected from the group consisting of pyridine, triethylamine and diisopropylethylamine, in a suitable reaction medium, preferably in at least one organic solvent, more preferably in at least one organic solvent selected from the group consisting of dioxane, tetrahydrofuran and diethyl ether, to yield a compound of general formula I, wherein X represents -NH-S(=O)₂-R⁸e and R¹, R³ and R⁸e have any of the above given meanings and R² represents hydrogen, which is optionally purified and/or isolated.
Suitable reaction media include organic solvents, such as dialkyl ether, preferably diethyl ether and dimethoxyethane, or a cyclic ether, preferably tetrahydrofuran or dioxane; or a halogenated hydrocarbon, preferably dichloromethane or chloroform; an alcohol, preferably methanol or ethanol; an aprotic solvent, preferably acetonitrile, pyridine, toluene or dimethylformamide, or any other suitable reaction medium. Of course, mixtures of at least two classes of solvents or of at least two solvents of one class may also be used.

If the above mentioned reactions are carried out in an oven-dried vial, the catalyst, the auxiliary agent, the base and the compound of general formula II, Ha, IV, VII, VIII or XI are added in each case and the vial is subsequently evacuated and purged with argon. The organic solvent and the compound of general formula III, V and IX are added and the reaction is carried out in a sealed vial at a temperature between 100 °C and 110 °C, preferably at 100 °C in case of tetrahydrofuran or toluene as the organic solvent and at 110 °C in case of dimethoxyethane and dioxane as the organic solvent.


The compounds of general formula I, IV, VI, VII, XI, XII, XIII, XIV, XV and XVI may be isolated by evaporating the reaction medium, addition of water and adjusting the pH value to obtain the compound in form of a solid that can be isolated by filtration, or by extraction with a solvent that is not miscible with water such as chloroform and purification by chromatography or recrystallisation from a suitable solvent.

Preferably, the compounds of general formula I, IV, VI, VII, XI, XII, XIII, XIV, XV and XVI may be obtained by filtration of the reaction mixture and subsequent
separation of the reaction mixture on a TLC plate. Alternatively, the compounds of general formula I, IV, VI, VII, XI, XII, XIII, XIV, XV and XVI may be isolated by addition of water and methanol to the reaction mixture, evaporating the reaction mixture and purifying the residue by preparative HPLC.

5

The compounds of general formula II, Ha, VIII and IX are commercially available or may be prepared according to methods well known in the art, for example, analogous to the methods described in the bibliography of A. McKillop et al., Tetrahedron 1987, 43, 1753. The respective part of the literature description cited above is hereby incorporated by reference and forms part of the disclosure.

During some synthetic reactions described above or while preparing the compounds of general formulas II, Ha, VIII and IX the protection of sensitive or reactive groups may be necessary and/or desirable. This can be performed by using conventional protective groups like those described in Protective groups in Organic Chemistry, ed. J. F. W. McOmie, Plenum Press, 1973; T.W. Greene & P.G.M. Wuts and Protective Groups in Organic Chemistry, John Wiley & sons, 1991. The respective parts of the description are hereby incorporated by reference and forms part of the disclosure. The protective groups may be eliminated when convenient by means well-known to those skilled in the art.

If the substituted phenyl-piperazine compounds of general formula Ie are obtained in form of a mixture of stereoisomers, particularly enantiomers or diastereomers, said mixtures may be separated by standard procedures known to those skilled in the art, e.g. chromatographic methods or crystallization with chiral reagents.

The substituted phenyl-piperazine compounds of general formula Ie and in each case stereoisomers thereof may be obtained in form of a corresponding salt according to methods well known to those skilled in the art, e.g. by reacting said compound with at least one inorganic and/or organic acid, preferably in a suitable reaction medium. Suitable reaction media include, for example, any of the ones given above.
In another embodiment of the present invention as component (A) at least one compound is present which is selected from the group consisting of tetrahydroisoquinoline-derived sulfonamide compounds of general formula (I).

\[ \text{(I)} \]

wherein

10 \( R^{1f} \) represents a hydrogen atom; a \(-\text{C}(=\text{O})-\text{OR}^{32f}\) moiety;

a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

20 \( R^{2f}, R^{3f}, R^{4f}, \text{and } R^{5f} \), independently of one another, each represent a hydrogen atom; F, Cl, Br, I, -NO\(_2\); -NH\(_2\); -SH; -OH; -CN; -C(=O)-OH; -C(=O)-H; -S(=O)\(_2\)-OH; -C(=O)-NH\(_2\); -S(=O)\(_2\)-NH\(_2\); -C(=O)-R\(^6f\); -S(=O)-R\(^7f\); -S(=O)\(_2\)-R\(^7f\); -OR\(^8f\); -SR\(^9f\); -C(=O)-OR\(^{10f}\); -N(R\(^{11f}\))-S(=O)\(_2\)-R\(^{12f}\); -NR\(^{13f}\)R\(^{14f}\); -NH-R\(^{15f}\); -C(=O)-NR\(^{16f}\)R\(^{17f}\); C(=O)-NHR\(^{18f}\);

25 a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;
a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene, alkenylene or alkinylene group and which may be condensed with an unsubstituted or at least mono-substituted saturated, unsaturated or aromatic mono- or bicyclic ring system;

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene, alkenylene or alkinylene group and which may be condensed with an unsubstituted or at least mono-substituted saturated or unsaturated, but not aromatic, mono- or bicyclic ring system;

with the proviso that at least one of the substituents R²f, R³f, R⁴f and R⁵f represents a -N(R₁lf)-S(=O)₂-R¹lf moiety;

R⁶f, R⁷f, R⁸f, R⁹f, R¹⁰f, R¹¹f, R¹²f, R¹³f, R¹⁴f, R¹⁵f, R¹⁶f, R¹⁷f and R¹⁸f, independently of one another, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene, alkenylene or alkinylene group and which may be condensed with an unsubstituted or at least mono-substituted saturated, unsaturated or aromatic mono- or bicyclic ring system;

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene, alkenylene or alkinylene group and which may be condensed with an unsubstituted or at least mono-substituted saturated or unsaturated, but not aromatic, mono- or bicyclic ring system;

R¹lf represents a hydrogen atom or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;
$R^{12f}$ represents a phenyl radical of general formula (Af),

![Diagram of R$^{19f}$, R$^{20f}$, R$^{21f}$, R$^{22f}$ and R$^{38f}$](#)

wherein

$R^{19f}$, $R^{20f}$, $R^{21f}$, $R^{22f}$ and $R^{38f}$, independently of one another, each represent a hydrogen atom; F, Cl, Br, I, -NO$_2$; -NH$_2$; -SH; -OH; -CN; -C(=O)-OH; -C(=O)-H; -S(=O)$_2$-OH; -C(=O)-NH$_2$; -S(=O)$_2$-NH$_2$; -C(=O)-R$^{23f}$; -S(=O)-R$^{24f}$; -S(=O)$_2$-R$^{24f}$; -OR$^{25f}$; -SR$^{26f}$; -C(=O)-OR$^{27f}$; -N(R$^{28f}$)-S(=O)$_2$-R$^{29f}$; -NH-S(=O)$_2$-R$^{30f}$; -NR$^{31f}$R$^{32f}$; -NH-R$^{33f}$; -C(=O)-NHR$^{34f}$; -C(=O)-NR$^{35f}$R$^{36f}$; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group;

or a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be condensed with an unsubstituted or at least mono-substituted saturated, unsaturated or aromatic mono- or bicyclic ring system;
R\textsuperscript{23f}, R\textsuperscript{27f}, R\textsuperscript{28f}, R\textsuperscript{29f} and R\textsuperscript{30f}, independently of one another, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene, alkenylene or alkinylene group and which may be condensed with an unsubstituted or at least mono-substituted saturated, unsaturated or aromatic mono- or bicyclic ring system;

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene, alkenylene or alkinylene group and which may be condensed with an unsubstituted or at least mono-substituted saturated or unsaturated, but not aromatic, mono- or bicyclic ring system;

R\textsuperscript{24f}, R\textsuperscript{26f}, R\textsuperscript{31f}, R\textsuperscript{32f} and R\textsuperscript{33f}, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene, alkenylene or alkinylene group and which may be condensed with an unsubstituted or at least mono-substituted saturated, unsaturated or aromatic mono- or bicyclic ring system;

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted saturated or unsaturated, but not aromatic, mono- or bicyclic ring system;

R\textsuperscript{25f}, R\textsuperscript{34f}, R\textsuperscript{35f} and R\textsuperscript{36f}, represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

and R\textsuperscript{37f} represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;
a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene, alkenylene or alkinylene group and which may be condensed with an unsubstituted or at least mono-substituted saturated, unsaturated or aromatic mono- or bicyclic ring system;

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene, alkenylene or alkinylene group and which may be condensed with an unsubstituted or at least mono-substituted saturated or unsaturated, but not aromatic, mono- or bicyclic ring system;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a salt thereof, or a corresponding solvate thereof.

Preferred compounds of general formula (If) are those, wherein

\[ R^{1f} \] represents a hydrogen atom; a \(-C(=O)-O\) moiety; a radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl, tert-butyl, n-pentyl, n-hexyl, \(-CH_2-NH_2\), \(-CH_2-NH-CH_3\), \(-CH_2-N(CH_3)_2\), \(-CH_2-N(C(\text{C}_2\text{H}_5))_2\), \(-CH_2-N(C_2\text{H}_5)_2\), \(-CH_2-CH_2-NH-C_2\text{H}_5\), \(-CH_2-CH_2-NH-CH_3\), \(-CH_2-CH_2-N(CH_3)_2\), \(-CH_2-CH_2-N(C_2\text{H}_5)_2\), \(-CH_2-CH_2-CH_2-N(C_2\text{H}_5)_2\), \(-CH_2-CH_2-CH_2-N(C_2\text{H}_5)\) and \(-CH_2-CH_2-CH_2-NH-C_2\text{H}_5\); or a (hetero)cycloaliphatic radical selected from the group consisting of imidazolidinyl, aziridinyl, azetidinyl, pyrrolidinyl, piperidinyl, morpholinyl, thiomorpholinyl, piperazinyl, pyrazolidinyl and azepanyl, which may be bonded via a \(-\text{CH}_2\) \(1, 2, 3, 4 \text{ or } 5\) substituent(s) independently selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, sec-butyl and isobutyl;

\( R^{2f}, R^{3f}, R^{4f} \) and \( R^{5f} \), independently of one another, each represent a hydrogen atom;
F, Cl, Br, I, -NO₂; -0-CH₃; -0-C₂H₅; -0-CF₃; -0-CF₂H; -0-CH₂-CF₃; -0-CF₂-CF₃; -S-CH₃; -S-C₂H₅; -S-CF₃; -S-CFH₂; -S-CF₂H₂; -S-CH₂-CF₃; -S-CF₂-CF₃; -N(R³f)₂=S(=O)₂-R₁²f; or a radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, tert-butyl, -CF₃, -CF₂H, -CF₂H₂, -CH₂-CF₃ and -CF₂-CF₃;

with the proviso that at least one of the substituents R²f, R³f, R⁴f and R⁵f represents a -N(R³f)₂=S(=O)₂-R₁²f moiety;

R³f represents a hydrogen atom, -S(=O)₂-R₁²f or an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl and tert-butyl;

R₁²f represents a phenyl radical of general formula (Af),

\[
\begin{align*}
R^{19f} & \quad R^{20f} \\
R^{21f} & \quad R^{22f} \\
R^{38f} &
\end{align*}
\]

wherein

R¹⁹f, R²⁰f, R²¹f, R²²f and R³⁸f, independently of one another, each represent a hydrogen atom; F, Cl, Br, I, -NO₂; -NH₂; -SH; -OH; -CN; -C(=0)-OH; -C(=0)-H; -C(=0)-CH₃; -C(=O)-C₂H₅; -0-CH₃; -0-C₂H₅; -0-CF₃; -0-CF₂H; -0-CF₂H₂; -0-CH₂-CF₃; -0-CF₂-CF₃; -S-CH₃; -S-C₂H₅; -S-CF₃; -S-CFH₂; -S-CF₂H₂; -S-CH₂-CF₃; -S-CF₂-CF₃; -C(=0)-OCH₃; -C(=O)-OC₂H₅; methyl, ethyl, n-propyl, isopropyl, n-butyl, isobutyl, sec-butyl, tert-butyl, -CF₃, -CF₂H, -CFH₂, -CH₂-CF₃ and -CF₂-CF₃;

a radical selected from the group consisting of naphthyl, [1,3]-benzodioxoyl, [1,4]-benzodioxanyly, benzo[b]furany1, benzo[b]thiophenyl, benzo[2,1,3]thiadiazolyl, [1,2,3]-
benzothiadiazolyl, [2,1,3]-benzoxadiazolyl, [1,2,3]-benzoxadiazolyl, benzoxazolyl, benzothiazolyl, benzisoxazolyl, benzisothiazolyl and imidazo[2,1-b]thiazolyl, which may be unsubstituted or optionally substituted with 1, 2, 3, 4 or 5 substituent(s) independently selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, sec-butyl, isobutyl, n-pentyl, -0-CH₃, -0-C₂H₅, F, Cl, Br, I, -CN, -CF₃, -OCF₃, -SCF₃, -CF₂H and -CFH₂;

or a radical selected from the group consisting of pyridinyl, pyrrolyl, imidazolyl, pyrazolyl, triazolyl, pyridazinyl, pyrimidinyl and pyrazinyl, which may be unsubstituted or optionally substituted with 1, 2, 3, 4 or 5 substituent(s) independently selected from the group consisting of F, Cl, Br, I, -NO₂; methyl, ethyl, n-propyl, isopropyl, n-butyl, isobutyl, sec-butyl, tert-butyl, -CF₃, -CF₂H, -CFH₂, -CH₂-CF₃ and -CF₂-CF₃;

and R³⁷f represents a radical selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl, tert-butyl, n-pentyl, n-hexyl, fluorenyl, fluorenylmethyl, phenyl, benzyl and naphthyl;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a salt thereof, or a corresponding solvate thereof.

Particularly preferred compounds of general formula (If) are those selected from the group consisting of

- N-(1,2,3,4-tetrahydroisoquinolin-6-yl)naphthalene-1-sulfonamide hydrochloride,
- 2,2-dimethyl-6-(N-methylnaphthalene-1-sulfonamido)-1,2,3,4-tetrahydroisoquinolinium iodide,
- N-(2-methyl-1,2,3,4-tetrahydroisoquinolin-6-yl)naphthalene-1-sulfonamide hydrochloride,
- 5-chloro-3-methyl-N-(1,2,3,4-tetrahydroisoquinolin-6-yl)benzo[b]thiophene-2-sulfonamide hydrochloride,
[1118] 5-chloro-3-methyl-N-(2-methyl-1,2,3,4-tetrahydroisoquinolin-6-yl)benzo[b]thiophene-2-sulfonamide hydrochloride,
[1119] 4-methyl-N-(1,2,3,4-tetrahydroisoquinolin-6-yl)naphthalene-1-sulfonamide hydrochloride,
[1120] 4-methyl-N-(2-methyl-1,2,3,4-tetrahydroisoquinolin-6-yl)naphthalene-1-sulfonamide hydrochloride,
[1121] N-(1,2,3,4-tetrahydroisoquinolin-6-yl)naphthalene-2-sulfonamide hydrochloride,
[1122] N-(2-methyl-1,2,3,4-tetrahydroisoquinolin-6-yl)naphthalene-2-sulfonamide hydrochloride,
[1123] 6-chloro-N-(1,2,3,4-tetrahydroisoquinolin-6-yl)imidazo[2,1-b]thiazole-5-sulfonamide hydrochloride,
[1124] 2-methoxy-5-methyl-N-(1,2,3,4-tetrahydroisoquinolin-6-yl)benzenesulfonamide hydrochloride,
[1125] N-(1,2,3,4-tetrahydroisoquinolin-6-yl)pyridine-3-sulfonamide dihydrochloride,
[1126] 6-(naphthalene-1-sulfonylamino)-3,4-dihydro-lH-isoquinoline-2-carboxylic acid tert-butyl ester,
[1127] 6-(5-chloro-3-methyl-benzo[b]thiophene-2-sulfonylamino)-3,4-dihydro-lH-isoquinoline-2-carboxylic acid tert-butyl ester,
[1128] 6-(4-methyl-naphthalene-1-sulfonylamino)-3,4-dihydro-lH-isoquinoline-2-carboxylic acid tert-butyl ester,
[1129] 6-(naphthalene-2-sulfonylamino)-3,4-dihydro-lH-isoquinoline-2-carboxylic acid tert-butyl ester,
[1130] 6-(2-methoxy-5-methyl-benzenesulfonylamino)-3,4-dihydro-lH-isoquinoline-2-carboxylic acid tert-butyl ester and
[1131] 6-(pyridine-3-sulfonylamino)-3,4-dihydro-lH-isoquinoline-2-carboxylic acid tert-butyl ester;

optionally in form of one of its stereoisomers, preferably enantiomers or diasteromers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably
enantiomers and/or diastereomers, in any mixing ratio, or a salt thereof, or a corresponding solvate thereof.

The compounds of general formula If are prepared by a process, wherein at least one compound of general formula IV,

\[
\begin{array}{c}
\text{O} \\
\text{SO} \\
\text{R}^{12f} \\
\text{X}
\end{array}
\]

IV,

wherein \( R^{12f} \) has the meaning given above and \( X \) represents a leaving group, preferably a halogen atom, particularly preferably a chlorine atom, is reacted with at least one compound of general formula V,

\[
\begin{array}{c}
R^{3f} \\
R^{2f} \\
R^{4f} \\
R^{5f} \\
N \\
R^{1f}
\end{array}
\]

V,

wherein \( R^{1f} \) to \( R^{5f} \) have the meaning given above, with the proviso that at least one substituent of the group consisting of \( R^{2f}, R^{3f}, R^{4f} \) and \( R^{5f} \) represents a \(-N(H)(R^{1f})\) moiety, wherein \( R^{1f} \) has the meaning given above, or a protected derivative thereof, in a reaction medium, preferably in a reaction medium selected from the group consisting of pyridine, chloroform, dichloromethane, tetrahydrofuran and mixtures thereof, preferably in the presence of at least one base, more preferably in the presence of at least one base selected from the group consisting of triethylamine, diisopropylethylamine and diethylisopropylamine, preferably at a temperature between 0 °C and 30 °C.
If the substituted tetrahydroisoquinoline compounds of general formula I are obtained in form of a mixture of stereoisomers, particularly enantiomers or diastereomers, said mixtures may be separated by standard procedures known to those skilled in the art, e.g. chromatographic methods or crystallization with chiral reagents.

The substituted tetrahydroisoquinoline compounds of general formula I and in each case stereoisomers thereof may be obtained in form of a corresponding salt according to methods well known to those skilled in the art, e.g. by reacting said compound with at least one inorganic and/or organic acid, preferably in a suitable reaction medium. Suitable reaction media include, for example, any of the ones given above.

Compounds of general formula IV are in most cases commercially available or may be prepared by processes known to those skilled in the art.

Compounds of general formula V are in most cases commercially available or may be prepared by processes known to those skilled in the art.

In particular, 1,2,3,4-tetrahydroisoquinoline compounds with an amino group in position 5 can be prepared starting from 5-nitro-1,2,3,4-tetrahydroisoquinoline compounds. A process for the preparation of the latter compounds is described in K. V. Rao et al., Journal of Heterocyclic Chemistry, 1973, 10, 213 to 215.

In particular, 1,2,3,4-tetrahydroisoquinoline compounds with an amino group in position 6 are commercially available or can be prepared starting from 6-nitro-1,2,3,4-tetrahydroisoquinoline compounds. A process for the preparation of the latter compounds is described in G. J. Quallich, Journal of Organic Chemistry, 1998, 63, 4116 to 4119.

1,2,3,4-tetrahydroisoquinoline compounds with a nitro group in position 6 or 8 may be prepared by established procedures described in M. Tercel, Journal of Medicinal Chemistry, 1996, 39, 1084 to 1094.
In particular, 1,2,3,4-tetrahydroisoquinoline compounds with an amino group in position 7 are commercially available or can be prepared starting from 7-nitro-1,2,3,4-tetrahydroisoquinoline compounds. A process for the preparation of the latter compounds is described in J. F. Ajao et al., Journal of Heterocyclic Chemistry, 1985, 22, 329 to 331.

The N-methyl-8-amino-substituted 1,2,3,4-tetrahydroisoquinoline compounds were prepared by bromination and nitration of the corresponding 1,2,3,4-tetrahydroisoquinolines followed by two-step standard reduction conditions as described in M. Rey, Helvetica Chimica Acta, 1985, 66, 1828 to 1834.

If any of the substituents in any of the above defined formulae represents or comprises a (hetero)cycloaliphatic radical, preferably a C$_{3-9}$ cycloalkyl radical or a C$_{4-9}$ cycloalkeny1 radical, or a heterocyclic ring, preferably a 3- to 8-membered heterocyclic ring, said (hetero)cycloaliphatic radical, heterocyclic ring, C$_{3-9}$ cycloalkyl radical or C$_{4-9}$ cycloalkeny1 radical may - if not defined otherwise - be unsubstituted or substituted by one or more substituents, preferably unsubstituted or optionally substituted with 1, 2, 3, 4 or 5 substituent(s). Said substituent(s) may preferably be selected independently from the group consisting of oxo (=O), thioxo (=S), Ci$_{-5}$-alkyl, -O-Ci$_{-5}$-alkyl, -S-Ci$_{-5}$-alkyl, -C(=O)-OH, -C(=O)-Ci$_{-5}$-alkyl, -O-C(=O)-Ci$_{-5}$-alkyl, -O-C(=O)-C$_{1-5}$-alkyl, F, Cl, Br, I, -CN, -CF$_3$, -OCF$_3$, -SCF$_3$, -OH, -SH, -NH$_2$, -NH(C$_{1-5}$-alkyl), -N(C$_{1-5}$-alkyl)$_2$, -NO$_2$, -CHO, -CF$_2$H, -CFH$_2$, -C(=O)-NH$_2$, -C(=O)-NH(C$_{1-5}$-alkyl), -C(=O)-N(C$_{1-5}$-alkyl)$_2$, -S(=O)$_2$-Ci$_{-5}$-alkyl, -S(=O)$_2$-phenyl, phenyl, phenoxy and benzyl; whereby in each occurrence Ci$_{-5}$-alkyl may be linear or branched and whereby said cyclic substituents may be unsubstituted or substituted by 1, 2 or 3 substituent(s) independently selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, methoxy, ethoxy, F, Cl, Br, -CN, -CF$_3$, -OCF$_3$, -SCF$_3$, -OH, -SH, -NH$_2$ and -NO$_2$.

More preferably said substituents may be selected independently from the group consisting of oxo (=O), thioxo (=S), methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, sec-butyl, isobutyl, n-pentyl, -0-CH$_3$, -0-C$_2$H$_5$, -0-CH$_2$CH$_2$CH$_3$, -0-CH(CH$_3$)$_2$, -0-C(CH$_3$)$_3$, -S-CH$_3$, -S-C$_2$H$_5$, -S-CH$_2$CH$_2$CH$_3$, -S-CH(CH$_3$)$_2$, -S-C(CH$_3$)$_3$, -C(=0)-OH, -C(=0)-0-CH$_3$, -C(=O)-O-C$_2$H$_5$, -C(=O)-0-CH$_3$CH$_3$CH$_3$, -C(=O)-O-CH(CH$_3$)$_2$, -
C(=O)-O-C(CH$_3$)$_3$, -CC=O)-CH$_3$, -CC=O)-C$_2$H$_5$, -C(=O)-CH$_3$-CH$_3$-CH$_3$, -C(=O)-CH(CH$_3$)$_2$, -C(=O)-C(CH$_3$)$_3$, F, Cl, Br, I, -CN, -CF$_3$, -OCF$_3$, -SCF$_3$, -OH, -SH, -NH$_2$, -NH-CH$_3$, -NH-C$_2$H$_5$, -NH-CH$_2$-CH$_2$-CH$_3$, -NH-CH(CH$_3$)$_2$, -NH-C(CH$_3$)$_3$, -N(CH$_3$)$_2$, -N(C$_2$H$_5$)$_2$, -NO$_2$, -CHO, -CF$_2$H, -CFH$_2$, -C(=O)-NH$_2$, -C(=O)-NH-CH$_3$, -N(=C)$\_$(NO$_2$)$_2$, -N(S=O)$_2$, - phenyl, phenoxy and benzyl; whereby in each occurrence said cyclic substituents may be unsubstituted or substituted by 1, 2 or 3 substituent(s) independently selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, methoxy, ethoxy, F, Cl, Br,-CN, -CF$_3$, -OCF$_3$, -SCF$_3$, -OH, -SH, -NH$_2$ and -NO$_2$.

If any of the substituents in any of the above defined formulae represents or comprises a cycloaliphatic radical, C$_3$-$\_$(4)-cycloalkyl radical or C$_4$-$\_$(9)-cycloalkenyl radical which contains one or more, preferably 1, 2 or 3 heteroatom(s) as ring member(s), unless defined otherwise, each of these heteroatom(s) may preferably be selected independently from the group consisting of N, O and S.

If any of the substituents in any of the above defined formulae represents or comprises a heterocyclic ring which contains at least one further, preferably 1 or 2 further heteroatom(s) as ring member(s), unless defined otherwise, each of these heteroatom(s) may preferably be selected independently from the group consisting of N, O and S.

Suitable saturated or unsaturated, optionally at least one heteroatom as ring member containing cycloaliphatic radicals, C$_3$-$\_$(4)-cycloalkyl radicals or C$_4$-$\_$(9)-cycloalkenyl radicals may preferably be selected from the group consisting of cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl, cyclooctyl, cyclononyl, cyclopentenyl, cyclohexenyl, cycloheptenyl, cyclooctenyl, pyrrolidinyl, piperidinyl, piperazinyl, homopiperazinyl, morpholinyl, aziridinyl, azetidinyl, imidazolidinyl, thiomorpholinyl, pyrazolidinyl, tetrahydrofuranyl, tetrahydrothiophenyl, azepanyl, diazepanyl, azocanoyl, (2,5)-dihydrofuranyl, (2,5)-dihydrothiophenyl, (2,3)-dihydrofuranyl, (2,3)-dihydrofuranyl, (2,3)-dihydro-IH-pyrrolyl, (2,3)-dihydro-IH-pyrrolyl, tetrahydrothiopyranyl, tetrahydropyranyl, (3,4)-dihydro-2H-pyranyl, (3,4)-dihydro-2H-thiopyranyl, (1,2,3,6)-tetrahydropyridinyl, (1,2,3,4)-tetrahydropyridinyl, (1,2,5,6)-
tetrahydropyridinyl, [1,3]-oxazinanyl, hexahydropyrimidinyl, (5,6)-dihydro-4H-pyrimidinyl, oxazolidinyl, (1,3)-dioxany, (1,4)-dioxany and (1,3)-dioxolany.

Suitable saturated or unsaturated heterocyclic rings which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system may preferably be selected from the group consisting of pyrrolidinyl, piperidinyl, piperazinyl, homopiperazinyl, morpholinyl, aziridinyl, azetidinyl, imidazolidinyl, thiomorpholinyl, pyrazolidinyl, azepanyl, diazepanyl, azocanyl, (1,2,3,6)-tetrahydropyridinyl, (1,2,3,4)-tetrahydropropyridinyl, (1,2,5,6)-tetrahydropropyridinyl, hexahydropyrimidinyl, (5,6)-dihydro-4H-pyrimidinyl, pyridazin-3(2H)-onyl, phthalazin-1(2H)-onyl, indoliny, isoindoliny, decahydronaphthyl, (1,2,3,4)-tetrahydroquinolinyl, (1,2,3,4)-tetrahydroisoquinolinyl, (1,2,3,4)-tetrahydropropyridinyl, octahydrocyclopenta[c]pyrrolyl, (1,3,4,7,9a)-hexahydro-2H-quinolizynl, (1,2,3,5,6,8a)-hexahydro-indolizinyln, decahydroquinolinyl, octahydropropyrol[1,2-a]pyrazinyln, octahydro-1H-pyrdo[1,2-a]pyrazinyl, dodecahydrocarbazolyln, 9H-carbazolyln, decahydroisoquinolinyl and (2,3)-dihydro-1H-benzo[de]isoquinolinynl.

Suitable aromatic heterocyclic rings which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system may preferably be selected from the group consisting of imidazolyl, pyrazolyl, triazolyl, (4,5,6,7)-tetrahydro-2H-indazolyl, indazolyl and benzimidazolyl.

Suitable saturated or unsaturated, optionally at least one heteroatom as ring member containing cycloaliphatic radicals, C₃₋⁹ cycloalkyl radicals or C₄₋⁹ cycloalkenyl radicals which are condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system may preferably be selected from the group consisting of indoliny, isoindoliny, decahydronaphthyl, (1,2,3,4)-tetrahydroquinolinyl, (1,2,3,4)-tetrahydroisoquinolinyl, (1,2,3,4)-tetrahydropropyridinyl, octahydrocyclopenta[c]pyrrolyl, (1,3,4,7,9a)-hexahydro-2H-quinolizynl, (1,2,3,5,6,8a)-hexahydro-indolizinyln, decahydroquinolinyl, dodecahydrocarbazolyln, 9H-carbazolyln, decahydroisoquinolinyl, (6,7)-dihydro-4H-thieno[3,2-c]pyrindynl, (2,3)-dihydro-1H-benzo[de]isoquinolinynl, octahydropropyrol[1,2-a]pyrazinyl, octahydro-1H-pyrdo[1,2-a]pyrazinyl, (1,2,3,7,8,8a)-hexahydroindolizynl, (2,6,7,8,9,9a)-hexahydro-1H-quinolizynl, octahydroindolizynl,
octahydro-lH-quinolizinyl, (1,2,3,5,8,8a)-hexahydroindolizinyl, (4,6,7,8,9,9a)-hexahydro-lH-quinolizinyl, fluorenly and (1,2,3,4)-tetrahydroquinoxalinyl.

If any of the substituents in any of the above defined formulae represents an alkylene group, preferably an C<sub>1-6</sub> alkylene group, an alkenylene group, preferably an C<sub>2-6</sub> alkenylene group or an alkinylene group, preferably an C<sub>2-6</sub> alkinylene group, which may be substituted, said alkylene group, C<sub>2-6</sub> alkenylene group, alkenylene group, C<sub>2-6</sub> alkenylene group, alkinylene group or C<sub>2-6</sub> alkinylene group may be unsubstituted or substituted by one or more substituents, preferably unsubstituted or optionally substituted with 1, 2 or 3 substituent(s). Said substituent(s) may preferably be selected independently from the group consisting of -O-C<sub>1-5</sub>-alkyl, -S-C<sub>1-5</sub>-alkyl, -F, Cl, Br, I, -CN, -CF<sub>3</sub>, -OCF<sub>3</sub>, -SCF<sub>3</sub>, -OH, -SH, -NH<sub>2</sub>, -NH(C<sub>1-5</sub>-alkyl) and -N(C<sub>1-5</sub>-alkyl)<sub>2</sub>, whereby in each occurrence Ci-5-alkyl may be linear or branched. An alkenylene group comprises at least one carbon-carbon double bond, an alkinylene group comprises at least one carbon-carbon triple bond.

Suitable alkenylene groups include -(CH<sub>2</sub>)<sup>2</sup>, -CH(phenyl), -(CH<sub>2</sub>)<sub>2</sub>-(CH<sub>2</sub>)<sub>3</sub>, -(CH<sub>2</sub>)<sub>4</sub>-(CH<sub>2</sub>)<sub>2</sub> and -(CH<sub>2</sub>)<sub>6</sub>, suitable alkenylene groups include -CH=CH-, -CH<sub>2</sub>-CH=CH- and -CH=CH-CH<sub>2</sub>- and suitable alkinylene groups include -C≡C- , -CH<sub>2</sub>-C≡C-.

If any of the substituents in any of the above defined formulae represents or comprises an aryl radical, including a 6-membered aryl radical such as phenyl or a 10-membered aryl radical such as naphthyl or a 14-membered aryl radical such as anthracenyl, said aryl radical may - if not defined otherwise - be unsubstituted or substituted by one or more substituents, preferably unsubstituted or substituted with 1, 2, 3, 4 or 5 substituent(s). Said substituent(s) may preferably be selected independently from the group consisting of C<sub>1-5</sub>-alkyl, -O-C<sub>1-5</sub>-alkyl, -S-C<sub>1-5</sub>-alkyl, -C(=O)-OH, -C(=O)-C<sub>1-5</sub>-alkyl, -C(=O)-O-C<sub>1-5</sub>-alkyl, -O-C(=O)-C<sub>1-5</sub>-alkyl, F, Cl, Br, I, -CN, -CF<sub>3</sub>, -OCF<sub>3</sub>, -SCF<sub>3</sub>, -SH, -NH<sub>2</sub>, -NH(C<sub>1-5</sub>-alkyl), -N(C<sub>1-5</sub>-alkyl)<sub>2</sub>, -NO<sub>2</sub>, -CHO, -CF<sub>2</sub>H, -CFH<sub>2</sub>, -C(=O)-NH<sub>2</sub>, -C(=O)-NH(C<sub>1-5</sub>-alkyl), -C(=O)-N(C<sub>1-5</sub>-alkyl)<sub>2</sub>, -S(O)<sub>2</sub>-Ci<sub>5</sub>-alkyl, -S(O)<sub>2</sub>-phenyl, -Ci<sub>5</sub>-alkylene-C(=O)-OH, -Ci<sub>5</sub>-alkylene-C(=O)-O-Ci<sub>5</sub>-alkyl, -NH-C(=O)-Ci<sub>5</sub>-alkyl, -NH-S(O)<sub>2</sub>-Ci<sub>5</sub>-alkyl, pyrrolidinyl, piperdinyl, morpholinyl, oxazolyl, isoxazolyl, pyridinyl,
cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, thiophenyl, furanyl, pyrrolidin-2,5-dionyl, phenyl, phenoxy and benzyl; whereby in each occurrence Ci-5-alkyl may be linear or branched and whereby said cyclic substituent(s) may be unsubstituted or substituted by 1, 2 or 3 substituent(s) independently selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, methoxy, ethoxy, F, Cl, Br, -CN, -CF₃, -OCF₃, -SCF₂, -OH, -SH, -NH₂ and -NO₂.

More preferably said substituents may be selected independently from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, sec-butyl, isobutyl, n-pentyl, -O-CH₃, -O-C₂H₅, -O-CH₂CH₂CH₃, -O-CH(CH₃)₂, -O-C(CH₃)₃, -S-CH₃, -S-C₂H₅, -S-CH₂CH₂CH₃, -S-CH(CH₃)₂, -S-C(CH₃)₃, -C(=O)-O-CH₂CH₂CH₃, -C(=O)-O-CH(CH₃)₂, -C(=O)-O-C(CH₃)₃, -C(=O)-CH₂CH₂CH₃, -C(=O)-CH(CH₃)₂, -C(=O)-CH₂CH(CH₃)₂, -C(=O)-C(CH₃)₃, -C(=O)-C₂H₅, -C(=O)-CH₂CH₂CH₃, -C(=O)-CH₂CH(CH₃)₂, -NH-C(CH₃)₂, -N(CH₃)₂, -N(C₂H₅)₂, -NO₂, -CHO, -CF₂H, -CFH₂, -C(=O)-NH₂, -C(=O)-NH-CH₃, -C(=O)-NH-C₂H₅, -C(=O)-N(CH₃)₂, -C(=O)-N(C₂H₅)₂ and -S(O)₂CH₃.

Preferred aryl radicals, which may optionally be at least mono-substituted, are phenyl and naphthyl.

Suitable aryl radicals, which are condensed with an unsubstituted or at least mono-substituted saturated or unsaturated mono- or bicyclic ring system, may preferably be selected from the group consisting of indoliny1, isoindoliny1, (1,2,3,4)-tetrahydroquinolinyl, (1,2,3,4)-tetrahydroisoquinolinyl, (1,2,3,4)-tetrahydronaphthyl, (1,2,3,4)-tetrahydroquinoxalinyl, benzo[d]oxazol-2(3H)-ony1, benzo[d]thiazol-2(3H)-ony1, 2,3-dihydrobenzo[b][1,4]dioxinyl, benzo[d][1,3]dioxoyl, 3,4-dihydro-2H-benzo[b][1,4]oxazinyl, isochromany1, chromany1, 2,3-dihydrobenzofurany1 and 1H-benzo[b][1,4]diazepine-2,4(3H,5H)-dionyl.

If any of the substituents in any of the above defined formulae represents or comprises a heteroaryl radical, including a monocyclic 5- or 6-membered heteroaryl radical or a bicyclic 8-, 9-, 10-, 11-, 12-, 13- or 14 membered heteroaryl radical, said heteroaryl
radical may - if not defined otherwise - be unsubstituted or substituted by one or more substituents, preferably unsubstituted or substituted with 1, 2, 3, 4 or 5 substituent(s). Said substituent(s) may preferably be selected independently from the group consisting of \(\text{C}_{i\text{-}5}\)-alkyl, -O-C\(_{1\text{-}5}\)-alkyl, -S-C\(_{1\text{-}5}\)-alkyl, -C(=O)-OH, -C(=O)-C\(_{1\text{-}5}\)-alkyl, -C(=O)-O-C\(_{1\text{-}5}\)-alkyl, -O-C\(_{1\text{-}5}\)-alkyl, F, Cl, Br, I, -CN, -CF\(_3\), -OCF\(_3\), -SCF\(_3\), -SH, -NH\(_2\), -NH(Cl\(_{i\text{-}5}\)-alkyl), -N(C\(_{1\text{-}5}\)-alkyl\(_2\), -NO\(_2\), -CHO, -CF\(_2\)H, -CFH\(_2\), -C(=O)-NH\(_2\), -C(=O)-NH(d \_5-alkyl), -C(=O)-N(Ci\(_{i\text{-}5}\)-alkyl\(_2\), -S(=O)\(_2\)-Ci\(_{i\text{-}5}\)-alkyl, -S(=O)\(_2\)-phenyl, -Ci\(_{i\text{-}5}\)-alkylene-C(=O)-OH, -Ci\(_{i\text{-}5}\)-alkylene-C(=O)-O-Ci\(_{i\text{-}5}\)-alkyl, -NH-C(=O)-Ci\(_{i\text{-}5}\)-alkyl, -NH-S(=O)\(_2\)-Ci\(_{i\text{-}5}\)-alkyl, pyrrolidinyl, piperidinyl, morpholinyl, oxazolyl, isoxazolyl, pyridinyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, thiophenyl, furanyl, pyrrolidin-2,5-dionyl, phenyl, phenoxy and benzyl; whereby in each occurrence C\(_{1\text{-}5}\)-alkyl may be linear or branched and whereby said cyclic substituent(s) may be unsubstituted or substituted by 1, 2 or 3 substituent(s) independently selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, methoxy, ethoxy, F, Cl, Br, -CN, -CF\(_3\), -OCF\(_3\), -SCF\(_3\), -OH, -SH, -NH\(_2\) and -NO\(_2\).

More preferably said substituents may be selected independently from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, sec-butyl, isobutyl, n-pentyl, -0-CH\(_3\), -0-C\(_2\)H\(_5\), -0-CH\(_2\)-CH\(_2\)-CH\(_3\), -O-CH(CH\(_3\))\(_2\), -O-C(CH\(_3\))\(_3\), -S-CH\(_3\), -S-CH\(_2\)-CH\(_2\)-CH\(_3\), -S-CH(CH\(_3\))\(_2\), -S-C(CH\(_3\))\(_3\), -C(=O)-0H, -C(=O)-O-CH\(_3\), -C(=O)-O-C\(_2\)H\(_5\), -Q(=O)-O-CH\(_3\)-CH\(_2\)-CH\(_3\), -C(=O)-O-CH(CH\(_3\))\(_2\), -C(=O)-O-C(CH\(_3\))\(_3\), -C(=O)-CH\(_3\), -C(=O)-C\(_2\)H\(_5\), -C(=O)-CH\(_3\)-CH\(_2\)-CH\(_3\), -C(=O)-CH(CH\(_3\))\(_2\), -C(=O)-CH(CH\(_3\))\(_2\), -C(=O)-C(CH\(_3\))\(_3\), -F, Cl, Br, I, -CN, -CF\(_3\), -OCF\(_3\), -SCF\(_3\), -OH, -SH, -NH\(_2\), -NH-CH\(_3\), -NH-C\(_2\)H\(_5\), -NH-CH\(_2\)-CH\(_2\)-CH\(_3\), -NH-CH(CH\(_3\))\(_2\), -NH-C(CH\(_3\))\(_3\), -N(CH\(_3\))\(_2\), -N(C\(_2\)H\(_5\))\(_2\), -NO\(_2\), -CHO, -CF\(_2\)H, -CFH\(_2\), -C(=O)-NH\(_2\), -C(=O)-NH-CH\(_3\), -C(=O)-NH-C\(_2\)H\(_5\), -C(=O)-N(CH\(_3\))\(_2\), -C(=O)-N(C\(_2\)H\(_5\))\(_2\) and -S(=O)\(_2\)-CH\(_3\).

The heteroatom(s), which are present as ring member(s) in the heteroaryl radical, may, unless defined otherwise, independently be selected from the group consisting of nitrogen, oxygen and sulphur. Preferably the heteroaryl radical comprises 1, 2, 3 or 4 heteroatom(s).
Suitable bi- or tricyclic heteroaryl radicals, which may optionally be at least mono-
substituted, may preferably be selected from the group consisting of indolyl, isoindolyl, quinolinyl, isoquinolinyl, benzo[b]furanyl, benzo[b]thiophenyl, benzimidazolyl, benzo[2,1,3]thiadiazolyl, [1,2,3]-benzothiadiazolyl, [2,1,3]-benzoxadiazolyl, [1,2,3]-

Suitable mono-, bi- or tricyclic heteroaryl radicals, which are condensed with an
unsubstituted or at least mono-substituted saturated or unsaturated mono- or bicyclic
ring system, may preferably be selected from the group consisting of [1,3]-
benzodioxolyl, [1,4]-benzodioxanyl, [1,2,3,4]-tetrahydronaphthyl, (2,3)-dihydro-1H-
cyclopenta[b]indolyl, [1,2,3,4]-tetrahydroquinolinyl, [1,2,3,4]-tetrahydroisoquinolinyl,
[1,2,3,4]-tetrahydroquinazolinyl and [3,4]-dihydro-2H-benzo[1,4]oxazinyl.

Suitable monocyclic heteroaryl radicals, which may optionally be at least mono-
substituted, may preferably be selected from the group consisting of pyridinyl, furyl
(furany1), thiophenyl (thiophenyl), pyrrolyl, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl,
imidazolyl, pyrazolyl, oxadiazolyl, thia diazolyl, triazolyl, pyridazinyl, pyrimidinyl,
pyrazinyl and pyranyl.

A mono- or bicyclic ring system according to the present invention - if not defined
otherwise - means a mono- or bicyclic hydrocarbon ring system that may be saturated,
unsaturated or aromatic. Each of its different rings may show a different degree of
saturation, i.e. it may be saturated, unsaturated or aromatic. Optionally each of the rings
of the mono- or bicyclic ring system may contain one or more, preferably 1, 2 or 3,
heteroatom(s) as ring member(s), which may be identical or different and which can
preferably be selected from the group consisting of N, O and S. The rings of the mono-
or bicyclic ring system are preferably 5-, 6- or 7-membered.

Preferably a mono-or bicyclic ring system according to the present invention is a phenyl
or naphthyl ring system.
The term "condensed" according to the present invention means that a ring or ring system is attached to another ring or ring system, whereby the terms "annulated" or "annelated" are also used by those skilled in the art to designate this kind of attachment.

Such a mono- or bicyclic ring system may - if not defined otherwise - be unsubstituted or substituted by one or more substituents, preferably unsubstituted or substituted with 1, 2, 3, 4 or 5 substituent(s). Said substituents may preferably be selected independently from the group consisting of Ci-5-alkyl, -O-Ci-5-alkyl, -S-Ci-5-alkyl, -C(=O)-OH, oxo (=0), thioxo (=S), -C(=O)-O-Ci-5-alkyl, -O-C(=O)-Ci-5-alkyl, F, Cl, Br, I, -CN, -CF3, -OCF3, -SCF3, -OH, -SH, -NH2, -NH(Ci-5-alkyl), -N(=C(=O)-alkyl)2, -NO2, -CHO, -CF2H, -CFH2, -CC=O)-NH2, -C(=O)-NH(Ci-5-alkyl), -C(=O)-N(=C(=O)-alkyl)2, -S(=O)2-Ci-5-alkyl, -S(=O)-phenyl, phenyl, phenoxy and benzyl; whereby in each occurrence Ci-5-alkyl may be linear or branched and whereby said cyclic substituents may be unsubstituted or substituted by 1, 2 or 3 substituent(s) independently selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, methoxy, ethoxy, F, Cl, Br, -CN, -CF3, -OCF3, -SCF3, -OH, -SH, -NH2 and -NO2.

More preferably said substituents may be selected from the group consisting of oxo (=0), thioxo (=S), methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, sec-butyl, isobutyl, n-pentyl, -0-CH3, -0-C2H5, -0-CH2-CH2-CH3, -0-CH(CH3)2, -O-C(CH3)3, -S-CH3, -S-C2H5, -S-CH2-CH2-CH3, -S-CH(CH3)2, -S-C(CH3)3, -C(=O)-OH, -C(=O)-O-CH3, -C(=O)-O-C2H5, -Q=O)-O-CH3-CH3-CH3, -C(=O)-O-CH(CH3)2, -C(=O)-O-CH(CH3)3, -C(=O)-C(CH3)3, F, Cl, Br, I, -CN, -CF3, -OCF3, -SCF3, -OH, -SH, -NH2, -NH-CH3, -NH-C2H5, -NH-CH2-CH2-CH3, -NH-CH(CH3)2, -NH-C(CH3)3, -N(CH3)2, -N(C2H5)2, -NO2, -CHO, -CF2H, -CFH2, -C(=O)-NH2, -C(=O)-NH-CH3, -C(=O)-NH-C2H5, -C(=O)-N(CH3)2, -C(=O)-N(C2H5)2, -S(=O)2-CH3, -S(=O)2-phenyl, phenyl, phenoxy and benzyl; whereby in each occurrence said cyclic substituents may be unsubstituted or substituted by 1, 2 or 3 substituent(s) independently selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, methoxy, ethoxy, F, Cl, Br, -CN, -CF3, -OCF3, -SCF3, -OH, -SH, -NH2 and -NO2.
If any of the substituents in any of the above defined formulae represents a saturated or unsaturated aliphatic radical, i.e. an alkyl radical, preferably an C_{1-10} alkyl radical; an alkenyl radical, preferably an C_{2-10} alkenyl radical or an alkynyl radical, preferably an C_{2-10} alkynyl radical; said aliphatic radical may - if not defined otherwise - be unsubstituted or substituted by one or more substituents, preferably unsubstituted or substituted with 1, 2, 3, 4 or 5 substituent(s). Said substituent(s) may preferably be selected independently from the group consisting of -O-Ci_{-5}-alkyl, -S-Ci_{-5}-alkyl, F, Cl, Br, I, -CN, -CF_{3}, -OCF_{3}, -SCF_{3}, -OH, -SH, -NH_{2}, -NH(C_{1-5}-alkyl) and -N(C_{1-5}-alkyl)_{2}, whereby in each occurrence Ci_{-5}-alkyl may be linear or branched. More preferably said substituent(s) may preferably be selected independently from the group consisting of -0-CH_{3}, -0-C_{2}H_{5}, -0-CH_{2}CH_{2}CH_{3}, -0-CH(CH_{3})_{2}, -O-C(CH_{3})_{3}, -S-CH_{3}, -S-C_{2}H_{5}, -S-CH_{2}CH_{2}CH_{3}, -S-CH(CH_{3})_{2}, -S-C(C_{2}H_{5})_{3}, F, Cl, Br, I, -CN, -CF_{3}, -OCF_{3}, -SCF_{3}, -OH, -SH, -NH_{2}, NH-CH_{3}, -NH-C_{2}H_{5}, -NH-CH_{2}CH_{2}CH_{3}, -NH-CH(CH_{3})_{2}, -NH-C(C_{2}H_{5})_{3}, -N(CH_{3})_{2}, -N(C_{2}H_{5})_{2}.

An alkenyl radical comprises at least one carbon-carbon double bond, an alkynyl radical comprises at least one carbon-carbon triple bond.

Suitable alkyl radicals, which may be substituted by one or more substituents, may preferably be selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, isobutyl, sec-butyl, tert-butyl, n-pentyl, n-hexyl, n-heptyl, n-octyl, n-nonyl and n-decyl.

Suitable alkenyl radicals, which may be substituted by one or more substituents, may preferably be selected from the group consisting of vinyl, 1-propenyl, 2-propenyl, 1-buteryl, 2-buteryl and 3-buteryl.

Suitable alkynyl radicals, which may be substituted by one or more substituents, may preferably be selected from the group consisting of ethinyl, 1-propinyl, 2-propinyl, 1-butinyl, 2-butinyl and 3-butinyl.

The NMDA receptor is a cell-surface protein complex, widely distributed in the mammalian central nervous system that belongs to the class of ionotrophic-glutamate...
receptors. It is involved in excitatory-synaptic transmission and the regulation of neuronal growth. The structure comprises a ligand-gated/voltage-sensitive ion channel. The NMDA receptor is highly complex and is believed to contain at least five distinct binding (activation) sites: a glycine-binding site, a glutamate-binding site (NMDA-binding site); a PCP-binding site, a polyamine-binding site, and a zinc-binding site. In general, a receptor antagonist is a molecule that blocks or reduces the ability of an agonist to activate the receptor. As used herein, an "NMDA-receptor antagonist" means any compound or composition, known or to be discovered, that when contacted with an NMDA receptor in vivo or in vitro, inhibits the flow of ions through the NMDA-receptor ion channel.

According to the present invention the meaning of the phrase "NMDA-receptor antagonist" encompasses any compound or composition that antagonizes the NMDA receptor by binding at the glycine site. Glycine-site NMDA-receptor antagonists can be identified by standard in vitro and in vivo assays. See, for example, the assays described in U.S. Pat. No. 6,251,903 (issued Jun. 26, 2001); U.S. Pat. No. 6,191,165 (issued Feb. 20, 2001); Grimwood et al. MOLECULAR PHARMACOLOGY 923 (1992); Yoneda et al. J. NEUROCHEM. 102 (1994); and Mayer et al. J. NEUROPHYSIOL. 645 (1988).

According to the present invention the meaning of the phrase "NMDA-receptor antagonist" encompasses any compound or composition that antagonizes the NMDA receptor by binding at the glutamate site. References that disclose NMDA-receptor antagonists as well as assays for identifying competitive NMDA-receptor antagonists include Jia-He Li, et al., J. MED. CHEM. 1955 (1995); Steinberg et al., NEUROSCI. LETT. 225 (1991); Meldrum et al., TRENDS PHARMACOL. SCI. 379 (1990); Willetts et al., TRENDS PHARMACOL. SCI. 423 (1990); Faden et al., TRENDS PHARMACOL. SCI. 29 (1992); Rogawski TRENDS PHARMACOL. SCI. 325 (1993); Albers et al., CLINICAL NEUROPHARM. 509 (1992); Wolfe et al., AM. J. EMERG. MED., 174 (1995); and Bigge, BIOCHEM. PHARMACOL. 1547 (1993).

According to the present invention the meaning of the phrase "NMDA-receptor antagonist" encompasses any compound or composition that antagonizes the NMDA receptor by binding at the PCP (phencyclidine) site. Non-competitive NMDA-receptor
antagonists can be identified using routine assays, for example, those described in U.S. Pat. Nos. 6,251,948 (issued Jun. 26, 2001); 5,985,586 (issued Nov. 16, 1999), and 6,025,369 (issued Feb. 15, 2000); Jacobson et al., J. PHARMACOL. EXP. THER. 243 (1987); and Thurkauf et al., J. MED. CHEM. 2257 (1988).

According to the present invention the meaning of "NMDA-receptor antagonist" encompasses compounds that block the NMDA receptor at the polyamine binding site, the zinc-binding site, and other NMDA-receptor antagonists that are either not classified herein according to a particular binding site or that block the NMDA receptor by another mechanism. Examples of NMDA-receptor antagonists that bind at the polyamine site include, but are not limited to, sperrine, spermidine, putrescine, and arcaine. Examples of assays useful to identify NMDA-receptor antagonists that act at the zinc or polyamine binding site are disclosed in U.S. Pat. No. 5,834,465 (issued Nov. 10, 1998).

NMDA-receptor antagonists for use in the present invention include 3-((-)-2-carboxypiperazin-4-ylpropyl-1-phosphate (CPP); 3-(2-carboxypiperazin-4-yl)-propenyl-1-phosphonate (CPP-ene); l-(cis-2-carboxypiperidine-4-yl)methyl-l-phosphonic acid (CGS 19755); D-2-Amino-5-phosphonopentanoic acid (AP5); 2-amino-phosphonoheptanoate (AP7); D.L-(E)-2-amino-4-methyl-5-phosphono-3-pentenoic acid carboxyethyl ester (CGP39551); 2-amino-4-methyl-5-phosphono-pent-3-enoic acid (CGP 40116); (4-phosphono-but-2-enylamino)-acetic acid (PD 132477); 2-amino-4-oxo-5-phosphono-pentanoic acid (MDL 100,453); 3-((phosphonylethyl)-sulfinyl)-DL-alanine; amino-(4-phosphonomethyl-phenyl)-acetic acid (PD 129635); 2-amino-3-(5-chloro-l-phosphonomethyl-lH-benzoimidazol-2-yl)-propionic acid; 2-amino-3-(3-phosphonomethyl-quinoxalin-2-yl)-propionic acid; 2-amino-3-(5-phosphonomethyl-biphenyl-3-yl)-propionic acid (SDZ EAB 515); 2-amino-3-[2-(2-phosphono-ethyl)-cyclohexyl]-propionic acid (NPC 17742); 4-(3-phosphono-propyl)-piperazine-2-carboxylic acid (D-CPP); 4-(3-phosphono-allyl)-piperazine-2-carboxylic acid (D-CPP-ene); 4-phosphonomethyl-piperidine-2-carboxylic acid (CGS 19755); 3-(2-phosphono-acetyl)-piperidine-2-carboxylic acid (MDL 100,925); 5-phosphono-l,2,3,4-tetrahydro-isoquinoline-3-carboxylic acid (SC 48981); 5-(2-phosphono-ethyl)-l,2,3,4-tetrahydro-isoquinoline-3-carboxylic acid (PD 145950); 6-phosphonomethyl-decahydro-
isoquinoline-3-carboxylic acid (LY 274614); 4-[(lH-tetrazol-5-yl)methyl]-piperidine-2-carboxylic acid (LY 233053 and 235723); 6-[(lH-Tetrazol-5-ylmethyl)-decahydroisoquinoline-3-carboxylic acid (LY 233536); ketamine; phencyclidine; dextromethorphan; dextrophan; dexoxadrol; dizocilpine (MK-801); remacemide; thienylcyclohexylpiperidine (TCP); N-allylnometazocine (SKF 10,047); cyclazocine; etoxadrol; (1,2,3,4,9,9a-hexahydro-fluoren-4a-yl)-m-ethyl-amine (PD 137889); (1,3,4,9,10,10a-hexahydro-2H-phenanthren-4a-yl)-methyl-amine (PD 138289); PD 138558; tiletamine; kynurenic acid; 7-chloro-kynurenic acid; memantine; nitromemantine; quinoxalinediones such as 6-cyano-7-nitroquinoxaline-2,3-dione (CNQX) and 6,7-dinitro-quinoxaline-2,3-dione (DNQX); amantadine; eliprodil; iamotrigine; riluzole; aptiganel; flupirtine; celfotel; levemopamil; 1-(4-hydroxyphenyl)-2-(4-phenylsulfanyl-piperidin-l-yl)-propan-l-one; 2-[4-(4-fluoro-benzoyl)-piperidin-l-yl]-l-naphthalen-2-yl-ethanone (E 2001); 3-[(l,1-dimethyl-heptyl)-9-hydroxymethyl-6,6-dimethyl-6a,7,8,10a-tetrahydro-6H-benzo[c]chromen-l-ol (HU-211); 1-{4-[(4-chloro-phenyl)-l-methyl-ethyl]-2-methoxy-phenyl }-IH-[l,2,4]triazole-3-carboxylic acid amide (CGP 31358); acetic acid 10-hydroxy-7,9,7',9'-tetramethoxy-3,3'-dimethyl-3,4,3',4'-tetrahydro-IH,l'H-[5,5']bi[benzo[g]isochromenyl]-4-yl ester (ES 242-1); M-hydroxy-l-l-isopropyl-l0-methyl-S-octyl-lOJS-diazatricyclo[6.6.1.04,1-5]pentadeca-l,4,6,8(15)-tetraen-12-one; and 4,5-dioxo-4,5-dihydro-IH-benzo-[g]indole-2,7,9-tricarboxylic acid (PQQ).

Particularly preferably memantine is present as component (B). Memantine (CAS Registry No. 41100-52-1), is an uncompetitive N-methyl-D-aspartate antagonist currently used for the treatment of dementia syndrome, spinal spasticity and Parkinson's disease. Chemically, memantine is l-amino-3,5-dimethyladamantane of the adamantane class.

Further derivatives of memantine and nitromemantine can be prepared as outlined in U.S. patent application 2004/0122090.

The term "cognitive disorder" indicates disruptions in performance including one or more of the following signs:
1) memory deficits (impaired ability to learn new information or recall previously learned information;
2) one (or more) of the following disturbances:
   a) aphasia (language disturbance)
   b) apraxia (impaired ability to carry out motor activities despite intact motor function)
   c) agnosa (failure to recognize or identify objects despite intact sensory function)
   d) disturbance in executive functioning (i.e. planning, organizing, sequencing, abstracting);
3) memory disturbances causing significant impairment in social or occupational functioning, and representing a significant decline from a previous level of functioning; and
4) impairment in cognitive functioning as evidenced by neuropsychological testing or quantified clinical assessment, accompanied by objective evidence of a systemic general medical condition or central nervous system dysfunction.

Cognitive disorders (or memory disorders) may include Alzheimer's disease, senile dementia process, learning disabilities caused by degenerative disorders, learning disabilities caused by non-degenerative disorders, memory or cognitive dysfunction such as mild cognitive impairment, age-related cognitive decline, cerebral senility, vascular dementia, AIDS-associated dementia, electric shock induced amnesia, memory impairment associated with depression or anxiety, cognitive defects in Parkinson's disease, Down's syndrome, stroke, traumatic brain injury, Huntington's disease, and attention deficit disorder; especially ADHD (attention deficit / hyperactivity disorder).

"Treatment" (e.g. of cognitive disorders, e.g. depression or e.g. of obesity and obesity-related disorders) refers to the administration of the compounds or combinations of the present invention to treat (in the case of cognitive disorders or depression) the disorder or - more often - the symptoms of these disorders; or (for obesity) reduce or maintain the body weight of an obese subject. One outcome of treatment may be ameliorating the symptoms of e.g. Alzheimer's disease or the clinical depression or may be reducing the body weight of an obese subject relative to that subject's body weight immediately before the administration of the compounds or combinations of the present invention. A preferred aspect of the treatment, especially for cognitive disorders or depression, also
involves the prophylaxis against the disorder, thus preventing the occurrence of its symptoms. Another outcome of treatment may be preventing body weight regain of body weight previously lost as a result of diet, exercise, or pharmacotherapy.

Another outcome of treatment may be decreasing the occurrence of and/or the severity of obesity-related diseases. Another outcome of treatment may be to maintain weight loss. The treatment may suitably result in a reduction in food or calorie intake by the subject, including a reduction in total food intake, or a reduction of intake of specific components of the diet such as carbohydrates or fats; and/or the inhibition of nutrient absorption; and/or the inhibition of the reduction of metabolic rate; and in weight reduction in patients in need thereof. The treatment may also result in an alteration of metabolic rate, such as an increase in metabolic rate, rather than or in addition to an inhibition of the reduction of metabolic rate; and/or in minimization of the metabolic resistance that normally results from weight loss.

The term "depression" or especially "clinical depression" is referring to a state of sadness, melancholia or despair that has advanced to the point of being disruptive to an individual's social functioning and/or activities of daily living.

"Obesity" is a condition in which there is an excess of body fat. The operational definition of obesity is based on the Body Mass Index (BMI), which is calculated as body weight per height in meters squared (kg/m²). "Obesity" refers to a condition whereby an otherwise healthy subject has a Body Mass Index (BMI) greater than or equal to 30 kg/m², or a condition whereby a subject with at least one co-morbidity has a BMI greater than or equal to 27 kg/m². An "obese subject" is an otherwise healthy subject with a Body Mass Index (BMI) greater than or equal to 30 kg/m² or a subject with at least one co-morbidity with a BMI greater than or equal to 27 kg/m². A "subject at risk of obesity" is an otherwise healthy subject with a BMI of 25 kg/m² to less than 30 kg/m² or a subject with at least one co-morbidity with a BMI of 25 kg/m² to less than 27 kg/m².

The increased risks associated with obesity occur at a lower Body Mass Index (BMI) in Asians. In Asian countries, including Japan, "obesity" refers to a condition whereby a
subject with at least one obesity-induced or obesity-related co-morbidity, that requires weight reduction or that would be improved by weight reduction, has a BMI greater than or equal to 25 kg/m². In Asian countries, including Japan, an "obese subject" refers to a subject with at least one obesity-induced or obesity-related co-morbidity that requires weight reduction or that would be improved by weight reduction, with a BMI greater than or equal to 25 kg/m². In Asia-Pacific, a "subject at risk of obesity" is a subject with a BMI of greater than 23 kg/m² to less than 25 kg/m².

As used herein, the term "obesity" is meant to encompass all of the above definitions of obesity.

Obesity-induced or obesity-related co-morbidities include, but are not limited to, diabetes, non-insulin dependent diabetes mellitus-type II (2), impaired glucose tolerance, impaired fasting glucose, insulin resistance syndrome, dyslipidemia, hypertension, hyperuricacidemia, gout, coronary artery disease, myocardial infarction, angina pectoris, sleep apnea syndrome, Pickwickian syndrome, fatty liver; cerebral infarction, cerebral thrombosis, transient ischemic attack, orthopedic disorders, arthritis deformans, lumbodynia, emmeniopathy, and infertility.

In particular, co-morbidities include: hypertension, hyperlipidemia, dyslipidemia, glucose intolerance, cardiovascular disease, sleep apnea, diabetes mellitus, and other obesity-related conditions.

The term "Metabolic syndrome", also known as syndrome X, is defined in the Third Report of the National Cholesterol Education Program Expert Panel on Detection, Evaluation and Treatment of High Blood Cholesterol in Adults (ATP-E). E. S. Ford et al., JAMA, Vol. 287 (3), Jan. 16, 2002, pp 356-359. Briefly, a person is defined as having Metabolic syndrome if the person has three or more of the following symptoms: abdominal obesity, hypertriglyceridemia, low HDL cholesterol, high blood pressure, and high fasting plasma glucose.
The terms "administration of" and or "administering a" compound should be understood to mean providing a compound of the invention or a prodrug of a compound of the invention to a subject in need of treatment.

The instant pharmaceutical composition includes administration of a single pharmaceutical dosage formulation which contains both the compound with 5-HT₆ receptor affinity, and at least one NMDA-receptor ligand, as well as administration of each active agent in its own separate pharmaceutical dosage formulation. Where separate dosage formulations are used, the individual components of the composition can be administered at essentially the same time, i.e., concurrently, or at separately staggered times, i.e. sequentially prior to or subsequent to the administration of the other component of the composition. The instant pharmaceutical composition is therefore to be understood to include all such regimes of simultaneous or alternating treatment, and the terms "administration" and "administering" are to be interpreted accordingly.

Administration in these various ways are suitable for the present compositions as long as the beneficial pharmaceutical effect of the combination of the compound with 5-HT₆ receptor affinity, and at least one NMDA-receptor ligand, is realised by the patient at substantially the same time.

Such beneficial effect is preferably achieved when the target blood level concentrations of each active drug are maintained at substantially the same time. It is preferred that the combination of the compound with 5-HT₆ receptor affinity, and at least one NMDA-receptor ligand, be co-administered concurrently on a once-a-day dosing schedule; however, varying dosing schedules, such as the compound with 5-HT₆ receptor affinity once a day and the NMDA-receptor ligand once, twice or more times per day, is also encompassed herein. A single oral dosage formulation comprised of both a compound with 5-HT₆ receptor affinity and a NMDA-receptor ligand is preferred. A single dosage formulation will provide convenience for the patient, which is an important consideration especially for patients with diabetes or obese patients who may be in need of multiple medications.
The term "subject" as used herein refers to an animal, preferably a mammal, most preferably a human, who has been the object of treatment, observation or experiment.

The administration of the composition of the present invention in order to practice the present methods of therapy is carried out by administering a therapeutically effective amount of the compounds in the composition to a subject in need of such treatment or prophylaxis. The need for a prophylactic administration according to the methods of the present invention is determined via the use of well known risk factors. The effective amount of an individual compound is determined, in the final analysis, by the physician in charge of the case, but depends on factors such as the exact disease to be treated, the severity of the disease and other diseases or conditions from which the patient suffers, the chosen route of administration, other drugs and treatments which the patient may concomitantly require, and other factors in the physician's judgement.

The term "therapeutically effective amount" as used herein means the amount of the active compounds in the composition that will elicit the biological or medical response in a tissue, system, subject, or human that is being sought by the researcher, veterinarian, medical doctor or other clinician, which includes alleviation of the symptoms of the disorder being treated. The novel methods of treatment of this invention are for disorders known to those skilled in the art.

The term "salt" as used herein is to be understood as meaning any form of the compounds in which they assume an ionic form or are charged and are coupled with a counter-ion (a cation or anion) or are in solution. By this are also to be understood complexes of the active compound with other molecules and ions, in particular complexes which are complexed via ionic interactions.

The term "physiologically acceptable salt" is understood in particular, in the context of this invention, as salt (as defined above) formed either with a physiologically tolerated acid, that is to say salts of the particular active compound with inorganic or organic acids which are physiologically tolerated - especially if used on humans and/or mammals - or with at least one, preferably inorganic, cation which are physiologically tolerated - especially if used on humans and/or mammals. Examples of physiologically
tolerated salts of particular acids are salts of: hydrochloric acid, hydrobromic acid, sulfuric acid, hydrobromide, monohydrobromide, monohydrochloride or hydrochloride, methiodide, methanesulfonic acid, formic acid, acetic acid, oxalic acid, succinic acid, malic acid, tartaric acid, mandelic acid, fumaric acid, lactic acid, citric acid, glutamic acid, hippuric acid, picric acid and/or aspartic acid. Examples of physiologically tolerated salts of particular bases are salts of alkali metals and alkaline earth metals and with \( \text{NH}_4 \).

Solvates, preferably hydrates, of the compounds of the present invention and in each case of corresponding stereoisomers may also be obtained by standard procedures known to those skilled in the art.

The term "solvate" according to this invention is to be understood as meaning any form of the compounds in which they have attached to it via non-covalent binding another molecule (most likely a polar solvent) especially including hydrates and alcoholates, e.g. methanolate.

The active substance combination according to this invention comprises preferably 1-99% by weight of the component (A) and 99-1% by weight of the component (B), more preferably 10-80% by weight of the component (A) and 80-20% by weight of the component (B), these percentages referring to the total weight of both components (A) and (B).

Another aspect of the present invention is a medicament, which comprises an inventive active substance combination and optionally one or more pharmacologically acceptable adjuvants.

Said medicament is suitable for simultaneous NMDA-receptor inhibition and 5-HT$_6$-receptor regulation.

Said medicament is particularly preferably suitable for the prophylaxis and/or treatment of disorders related to food ingestion, preferably for prophylaxis and/or treatment of
obesity, anorexia, cachexia, bulimia, diabetes, preferably type II diabetes (non-insulin-dependent diabetes mellitus), or for prophylaxis and/or treatment of gastrointestinal tract disorders, preferably of the irritable bowel syndrome, for prophylaxis and/or treatment of Metabolic Syndrome, Peripheral Nervous System Disorders, Central Nervous System Disorders, arthritis, epilepsy, anxiety, panic, depression, cognitive disorders, memory disorders, cardiovascular diseases, senile dementia processes, such as Alzheimer's, Parkinson's and/or Huntington's Disease, schizophrenia, psychosis, infantile hyperkinesia (ADHD, attention deficit / hyperactivity disorder), pain, hypertensive syndrome, inflammatory diseases, immunologic diseases or for improvement of cognition.

Said medicament is more particularly preferably suitable for the prophylaxis and/or treatment of cognitive disorders or memory disorders like Alzheimer's disease, senile dementia process, learning disabilities caused by degenerative disorders, learning disabilities caused by non-degenerative disorders, memory or cognitive dysfunction such as mild cognitive impairment, age-related cognitive decline, cerebral senility, vascular dementia, AIDS-associated dementia, electric shock induced amnesia, memory impairment associated with depression or anxiety, cognitive defects in Parkinson's disease, Down's syndrome, stroke, traumatic brain injury, Huntington's disease, and attention deficit disorder; especially ADHD (attention deficit / hyperactivity disorder).

Said medicament is more particularly preferably also suitable for the prophylaxis and/or treatment of depression as well as anxiety and panic.

Said medicament is more particularly preferably also suitable for the regulation of appetite, for maintenance, increase or reduction of body weight, for prophylaxis and/or treatment of disorders related to food ingestion, preferably for prophylaxis and/or treatment of obesity, anorexia, cachexia, bulimia, diabetes, preferably type II diabetes (non-insulin-dependent diabetes mellitus), or for prophylaxis and/or treatment of gastrointestinal tract disorders, preferably of the irritable bowel syndrome.

Said medicament is even more particularly preferably suitable for the prophylaxis and/or treatment of obesity.
Said medicament is also particularly preferably suitable for the prophylaxis and/or treatment of obesity-related disorders such as elevated plasma insulin concentrations and insulin resistance, dyslipidemias, hyperlipidemia, endometrial, breast, prostate and colon cancer, osteoarthritis, obstructive sleep apnea, cholelithiasis, gallstones, heart disease, abnormal heart rhythms and arrhythmias, myocardial infarction, congestive heart failure, coronary heart disease, sudden death, stroke, polycystic ovary disease, craniopharyngioma, the Prader-Willi Syndrome and Frohlich's syndrome. Further examples of obesity-related disorders are reproductive hormone abnormalities, sexual and reproductive dysfunction, such as impaired fertility, infertility, hypogonadism in males and hirsutism in females, fetal defects associated with maternal obesity, gastrointestinal motility disorders, such as obesity-related gastro-esophageal reflux, respiratory disorders, such as obesity-related hypoventilation syndrome (Pickwickian syndrome), breathlessness, cardiovascular disorders, inflammation, such as systemic inflammation of the vasculature, arteriosclerosis, hypercholesterolemia, hyperuricaemia, lower back pain, gallbladder disease, gout, kidney cancer, and increased anesthetic risk.

Another aspect of the present invention is the use of an inventive active substance combination for the manufacture of a medicament for simultaneous NMDA-receptor inhibition and 5-HT₆-receptor regulation.

Another aspect of the present invention is the use of an inventive active substance combination for the manufacture of a medicament for the regulation of appetite, for maintenance, increase or reduction of body weight, for prophylaxis and/or treatment of disorders related to food ingestion, preferably for prophylaxis and/or treatment of obesity, anorexia, cachexia, bulimia, diabetes, preferably type II diabetes (non-insulin-dependent diabetes mellitus), or for prophylaxis and/or treatment of gastrointestinal tract disorders, preferably of the irritable bowel syndrome, for prophylaxis and/or treatment of Peripheral Nervous System Disorders, Central Nervous System Disorders, arthritis, epilepsy, anxiety, panic, depression, preferably bipolar disorders, cognitive disorders, memory disorders, cardiovascular diseases, senile dementia processes, neurodegenerative disorders, preferably Alzheimer's disease, Parkinson's disease, Huntington's Disease and/or multiple sclerosis, schizophrenia, psychosis, infantile hyperkinesia (ADHD, attention deficit/ hyperactivity disorder), pain, hypertensive
syndrome, inflammatory diseases, immunologic diseases or for improvement of cognition.

Particularly preferred is the use of an inventive active substance combination for the manufacture of a medicament for the prophylaxis and/or treatment of cognitive disorders or memory disorders like Alzheimer's disease, senile dementia process, learning disabilities caused by degenerative disorders, learning disabilities caused by non-degenerative disorders, memory or cognitive dysfunction such as mild cognitive impairment, age-related cognitive decline, cerebral senility, vascular dementia, AIDS-associated dementia, electric shock induced amnesia, memory impairment associated with depression or anxiety, cognitive defects in Parkinson's disease, Down's syndrome, stroke, traumatic brain injury, Huntington's disease, and attention deficit disorder; especially ADHD (attention deficit / hyperactivity disorder).

Also particularly preferred is the use of an inventive active substance combination for the manufacture of a medicament for the prophylaxis and/or treatment of depression as well as anxiety and panic.

Also particularly preferred is the use of an inventive active substance combination for the manufacture of a medicament for the regulation of appetite, for maintenance, increase or reduction of body weight, for prophylaxis and/or treatment of disorders related to food ingestion, preferably for prophylaxis and/or treatment of obesity, anorexia, cachexia, bulimia, diabetes, preferably type II diabetes (non-insulin-dependent diabetes mellitus), or for prophylaxis and/or treatment of gastrointestinal tract disorders, preferably of the irritable bowel syndrome.

Those skilled in the art understand that the components (A) and (B) of the active substance combination according to the present invention may be administered simultaneously or sequentially to one another, whereby in each case components (A) and (B) may be administered via the same or different administration pathways, e.g. orally or parentally, preferably both components (A) and (B) are administered simultaneously in one and the same administration form.
Yet another aspect of the present invention are pharmaceutical formulations in different pharmaceutical forms comprising an inventive active substance combination and optionally one or more pharmacologically acceptable adjuvants.

As well known to somebody skilled in the art the pharmaceutical formulations may - depending on their route of administration, also contain one or more auxiliary substances known to those skilled in the art.


Preferred pharmaceutical formulations are solid pharmaceutical forms, preferably tablets, chewing tablets, chewing gums, dragees, capsules, suppositories, powder preparations, transdermal therapeutic systems, transmucosal therapeutic systems, preferably tablets or capsules.

Preferred pharmaceutical formulations are also liquid and semi-liquid pharmaceutical forms such as drops or such as juice, sirup, solution, emulsion, suspension, preferably drops or solutions.

In an additional preferred embodiment, the pharmaceutical formulations are in the form of multiparticulates, preferably microtablets, microcapsules, microspheroids, granules, crystals or pellets, optionally compacted in a tablet, filled in a capsule or suspended in a suitable liquid.
The pharmaceutical formulations according to the present invention are particularly preferably suitable for oral, intravenous, intramuscular, subcutaneous, intrathecal, epidural, buccal, sublingual, pulmonal, rectal, transdermal, nasal or intracerebroventricular application, more particularly for oral, intravenous or intraperitoneal application.

In one embodiment of the present invention the pharmaceutical formulation comprises at least one of the components (A) and (B) of the active substance combination at least partially in a sustained-release form.

By incorporating one or both of these components (A) and (B) at least partially or completely in a sustained-release form it is possible to extend the duration of their effect, allowing for the beneficial effects of such a sustained-release form, e.g. the maintenance of even concentrations in the blood.


If the pharmaceutical formulation according to the present invention comprises at least one of the components (A) and (B) at least partially in a sustained-release form, said sustained release may preferably be achieved by the application of at least one coating or provision of a matrix comprising at least one sustained-release material.
The sustained-release material is preferably based on an optionally modified, water-insoluble, natural, semisynthetic or synthetic polymer, or a natural, semisynthetic or synthetic wax or fat or fatty alcohol or fatty acid, or on a mixture of at least two of these aforementioned components.

The water-insoluble polymers used to produce a sustained-release material are preferably based on an acrylic resin, which is preferably selected from the group of poly(meth)acrylates, particularly preferably poly(Ci₄)alkyl (meth)acrylates, poly(Ci₂)diethylamino(Ci₄)alkyl (meth)acrylates and/or copolymers or mixtures thereof, and very particularly preferably copolymers of ethyl acrylate and methyl methacrylate with a monomer molar ratio of 2:1 (Eudragit NE30D®), copolymers of ethyl acrylate, methyl methacrylate and trimethylammonium ethyl methacrylate-chloride with a monomer molar ratio of 1:2:0.1 (Eudragit RS®), copolymers of ethyl acrylate, methyl methacrylate and trimethylammonium ethyl methacrylate-chloride with a monomer molar ratio of 1:2:0.2 (Eudragit RL®), or a mixture of at least two of the above-mentioned copolymers. These coating materials are commercially available as 30 wt.% aqueous latex dispersions, i.e. as Eudragit RS30D®, Eudragit NE30D® or Eudragit RL30D®, and may also be used as such for coating purposes.

In another embodiment, the sustained-release material is based on water-insoluble cellulose derivatives, preferably alkyl celluloses, particularly preferably ethyl cellulose, or cellulose esters, e.g. cellulose acetate. Aqueous ethyl cellulose dispersions are commercially available, for example, under the trademarks Aquacoat® or Surelease®.

As natural, semisynthetic or synthetic waxes, fats or fatty alcohols, the sustained-release material may be based on carnauba wax, beeswax, glycerol monostearate, glycerol monobehenate, glycerol ditripalmitostearate, microcrystalline wax, cetyl alcohol, cetylstearyl alcohol or a mixture of at least two of these components.

The aforementioned polymers of the sustained-release material may also comprise a conventional, physiologically acceptable plasticizer in amounts known to those skilled in the art.
Examples of suitable plasticizers are lipophilic diesters of a C6-C40 aliphatic or aromatic dicarboxylic acid and a Ci-Cs aliphatic alcohol, e.g. dibutyl phthalate, diethyl phthalate, dibutyl sebacate or diethyl sebacate, hydrophilic or lipophilic citric acid esters, e.g. triethyl citrate, tributyl citrate, acetyltributyl citrate or acetyltriethyl citrate, polyethylene glycols, propylene glycol, glycerol esters, e.g. triacetin, Myvacet® (acetylated mono- and diglycerides, C13-H44-C5 to C25-H40-O7), medium-chain triglycerides (Miglyol®), oleic acid or mixtures of at least two of said plasticizers.

Aqueous dispersions of Eudragit RS® and optionally Eudragit RL® preferably contain triethyl citrate. The sustained-release material may comprise one or more plasticisers in amounts of, for example, 5 to 50 wt.% based on the amount of polymer(s) used.

The sustained-release material may also contain other conventional auxiliary substances known to those skilled in the art, e.g. lubricants, coloured pigments or surfactants.

The pharmaceutical formulation of the present invention may also comprise at least one of the components (A) and (B) covered by an enteric coating form which dissolves as a function of pH. Because of this coating, part or all of the pharmaceutical formulation can pass through the stomach undissolved and the components (A) and/or (B) are only released in the intestinal tract. The enteric coating preferably dissolves at a pH of between 5 and 7.5.

The enteric coating may be based on any enteric material known to those skilled in the art, e.g. on methacrylic acid/methyl methacrylate copolymers with a monomer molar ratio of 1:1 (Eudragit L®), methacrylic acid/methyl methacrylate copolymers with a monomer molar ratio of 1:2 (Eudragit S®), methacrylic acid/ethyl acrylate copolymers with a monomer molar ratio of 1:1 (Eudragit L30D-55®), methacrylic acid/methyl acrylate/methyl methacrylate copolymers with a monomer molar ratio of 7:3:1 (Eudragit FS®), shellac, hydroxypropyl methyl cellulose acetate-succinates, cellulose acetate-phthalates or a mixture of at least two of these components, which can optionally also be used in combination with the above-mentioned water-insoluble
poly(meth)acrylates, preferably in combination with Eudragit NE30D® and/or Eudragit RL® and/or Eudragit RS®.


In another embodiment, the pharmaceutical formulation of the present invention contains one or both of components (A) and (B) not only in sustained-release form, but also in non-sustained-release form. By combination with the immediately released form, a high initial dose can be achieved for the rapid onset of the beneficial effect. The slow release from the sustained-release form then prevents the beneficial effect from diminishing. Such a pharmaceutical formulation is particularly useful for the treatment of acute health problems.

This may be achieved, for example, by a pharmaceutical formulation having at least one immediate-release coating comprising at least one of the components (A) and (B) to provide for rapid onset of the beneficial effect after administration to the patient.

The present invention also relates to the treatment the aforementioned disorders and/or diseases with a combination of at least one compound with 5-HT₆ receptor affinity and at least one NMDA-receptor ligand which may be administered separately, therefore the invention also relates to combining separate pharmaceutical compositions into a kit form. The kit, according to this invention, comprises two separate pharmaceutical compositions: a first unit dosage form comprising a prophylactically or therapeutically
effective amount of at least one NMDA-receptor ligand, or a pharmaceutically
acceptable salt or ester thereof, and a pharmaceutically acceptable carrier or diluent in a
first unit dosage form, and a second unit dosage form comprising a prophylactically or
therapeutically effective amount of at least one compound with 5-HT₆ receptor affinity,
or a pharmaceutically acceptable salt or ester thereof, and a pharmaceutically acceptable
carrier or diluent in a second unit dosage form. The kit further comprises a container.
Such kits are especially suited for the delivery of solid oral forms such as tablets or
capsules. Such a kit preferably includes a number of unit dosages. Such kits can include
a card having the dosages oriented in the order of their intended use. An example of
such a kit is a “blister pack”. Blister packs are well known in the packaging industry and
are widely used for packaging pharmaceutical unit dosage forms. If desired, a memory
aid can be provided, for example in the form of numbers, letters, or other markings or
with a calendar insert, designating the days or time in the treatment schedule in which
the dosages can be administered.

Example
Example 1. Test of novel object discrimination in rats
Adult male Lister Hooded rats (Charles River, UK) weighing 200-350g at the start of
the experiment were housed in groups of four on a 12:12 h light:dark cycle (lights on at
07:00 h). Food and water were available ad libitum throughout the study, and the room
temperature (21 ± 2°C) and relative humidity (45-65%) were kept constant. In one
experiment, rats received i.p. injections (2ml/kg, -20 minutes prior to the familiarisation
trial) of memantine (n=12) at 5, 10, 15 and 20mg/kg compared with vehicle (0.5% m
ethylcellulose in saline, 2ml/kg), such that all rats received all doses of the compound
in a random order with each behavioural test occurring at seven day intervals.
In the combination study, a group of rats (n=12 each) received injection of a sub-
effective dose of compound 841 (1mg/kg i.p.) or vehicle (0.5% methylcellulose in
saline, 2ml/kg), either alone or combined with memantine (5mg/kg). Each drug
combination was administered to all rats in the group over a period of 4 weeks in a
random order using a seven day behavioural test interval.
The two trial novel object discrimination paradigm utilised, was as described by
Ennanceur and Delacour, (A new one-trial test for neurobiological studies of memory in
rats. 1: Behavioral data. Behav Brain Res 31, 47-59, 1988) with minor modification
(King et al., "5-ht6 receptor antagonists reverse delay-dependent deficits in novel object discrimination by enhancing consolidation-an effect sensitive to NMDA receptor antagonism", Neuropharmacol. 41, 195-204, 2004; Woolley et al., "Reversal of a cholinergic-induced deficit in a rodent model of recognition memory by the selective 5-HT6 receptor antagonist, Ro 04-6790", Psychopharmacol. 170, 358-367, 2003). The twelve open field test arenas used for object discrimination were clear perspex boxes (39 x 23.5 cm with 24.5 cm high walls) to which each rat was habituated for 60 minutes the day prior to test days. On the test day, for the first experiment, the administration was 20 minutes before acclimatisation. For the combination experiment, the first drug was administered 40 minutes and the second drug 20 minutes before the familiarisation trial. Therefore, 20 minutes after the injection each rat received 3 minutes acclimatisation to the perspex box in absence of objects which was then followed by the 3 minute familiarisation trial and a second 3 minute choice trial following a 4 hour inter-trial interval. During both trials, exploration of each object was defined as the time spent (s) snifffing (within 1 cm of it with active vibrissae), licking, chewing or touching the object with the nose. The results obtained for the first trial were shown in Figure 1. As can be seen, when memantine is administered alone, high amounts of said compound are necessary for rats to discriminate a novel object against a familiar object. On the contrary, as shown in Figure 2 for the second trial, the combined administration of memantine and compound 841 in lower doses (5 and 1 mg/kg, respectively) makes the animal to spend more time exploring the novel/unknown object than when the object is familiar for him, thus proving a better ability to memorize or distinguish a novel from a known object.
Claims:

1. An active substance combination that comprises

   (A) at least one compound with 5-HT$_6$ receptor affinity,

   and

   (B) at least one NMDA-receptor ligand.

2. The combination according to claim 1, characterized in that the binding of compounds present as component (A) to the 5-HT$_6$-receptor is determined by a $K_1$ value of less than 7000 nM, preferably of less than 200 nM, more preferably of less than 100 nM.

3. The combination according to claim 1 or 2, characterized in that the compound present as component (B) acts as NMDA-receptor antagonist.

4. The combination according to any of claim 1 to 3, characterized in that the binding of compounds present as component (B) to the NMDA-receptor is determined by an EC$_{50}$ or IC$_{50}$ value of less than 300 µM, preferably less than 100 µM.

5. The combination according to one or more of claims 1 to 4, characterized in that as component (A) at least one compound is present which is selected from the group consisting of the benzoxazinone-derived sulfonamide compounds of general formula (Ia)
wherein

$R_{1a}$, $R_{2a}$, $R_{3a}$ and $R_{4a}$, independently of one another, each represent a hydrogen atom; halogen; an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as ring member containing cycloaliphatic radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; an unsubstituted or at least mono-substituted aryl- or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ringsystem; nitro; cyano; -O-$R_{1a}^\beta$; -O-(C=O)-$R_{1a}^\beta$; -(C=O)-OR$^\beta$; -SR$^\beta$; -SOR$^\beta$; -SO$_2$R$^\beta$; -NH-SO$_2$R$^{12a}$; -SO$_2$NH$_2$ or -NR$^{13a}$-$R_{14a}$;

$R_{5a}$ represents a hydrogen atom; an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical or a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as ring member containing cycloaliphatic radical;
R\textsuperscript{6a}, R\textsuperscript{7a}, R\textsuperscript{8a}, R\textsuperscript{9a}, independently of one another, each represent a hydrogen atom; an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as ring member containing cycloaliphatic radical; a cyano group or a -C(=O)-OR\textsuperscript{15a} moiety;

W\textsuperscript{a} represents an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as ring member containing cycloaliphatic radical, which may be bonded via an optionally mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene or alkenylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

a -NR\textsuperscript{16a}R\textsuperscript{17a} moiety, or

a -C(=O)-R\textsuperscript{18a} moiety;

R\textsuperscript{10a} represents a hydrogen atom; an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as ring member containing cycloaliphatic radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted
or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R_{1a} \text{ represents a hydrogen atom; an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as ring member containing cycloaliphatic radical, which may be bonded via an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;}

R_{12a} \text{ represents an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as ring member containing cycloaliphatic radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;}

R_{13a} \text{ and } R_{14a}, \text{ independently of one another, each represent a hydrogen atom; an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as ring member containing cycloaliphatic radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which}
may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

or R\textsuperscript{13a} and R\textsuperscript{14a} together with the bridging nitrogen atom form a saturated, unsaturated or aromatic heterocyclic ring, which is unsubstituted or at least mono-substituted and/or which may contain at least one further heteroatom as a ring member;

R\textsuperscript{15a} represents a hydrogen atom; an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as ring member containing cycloaliphatic radical or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R\textsuperscript{16a} represents an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

R\textsuperscript{17a} represents an unbranched or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical, and

R\textsuperscript{18a} represents an unsubstituted or at least mono-substituted aryl radical;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, its racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a solvate, respectively:

and indole-derived sulfonamide compounds of general formula (Ib)
wherein

$R^{1b}$ represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; a $-(CH_2)_{mb}-NR^{13b}R^{14b}$ moiety with $mb$ = 0, 1, 2, 3, 4 or 5; a $-C(=O)-R^{8b}$ moiety; a $-S(=O)_{2}-R^{9b}$ moiety; or a $-S(=O)_{2}-C(H)AV$ moiety;

$R^{2b}$ represents a hydrogen atom; -F; -Cl; -Br; -I; -NO$_2$; -NH$_2$; -SH; -OH; -CN; -C(=O)-OH; -O-R$^{10b}$; -S-R$^{11b}$; -C(=O)-OR$^{12b}$; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a chain member containing aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group and/or which may be
condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

\[ R^{3b} \] represents a hydrogen atom; -F; -Cl; -Br; -I; -NO\(_2\); -CN; -O-R\(^{10b}\); -S-R\(^{11b}\); a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; a -CH(O\(_2\)C\(_2\)H\(_3\))-CH\(_2\)-NR\(^{13b}\)R\(^{14b}\) moiety or a -\((\text{CH}_2)_{\text{nb}}\)-NR\(^{13b}\)R\(^{14b}\) moiety with \(\text{nb} = 0, 1, 2, 3, 4\) or \(5\); a -S(=O)\(_2\)R\(^{9b}\) moiety; a -S(=O)\(_2\)C(H)A\(^b\)B\(^b\) moiety; or a -C(=O)-(\text{CH}_2)_{\text{pb}}-C(=O)-N-D\(^b\)E\(^b\) moiety with \(\text{pb} = 0, 1, 2, 3, 4\) or \(5\);

\[ R^{4b}, R^{5b}, R^{6b} \text{ and } R^{7b}, \text{ independently of one another, each represent a hydrogen atom; } -\text{NO}_2; -\text{NH}_2; -\text{SH}; -\text{OH}; -\text{CN}; -\text{C}(=\text{O})-\text{OH}; -\text{C}(=\text{O})-\text{H}; -\text{S}(=\text{O})_2-\text{OH}; -\text{C}(=\text{O})-\text{NH}_2; -\text{S}(=\text{O})_2-\text{NH}_2; -\text{C}(=\text{O})-\text{R}^{8b}; -\text{S}(=\text{O})_2\text{-R}^{9b}; -\text{O-R}^{10b}; -\text{S-R}^{11b}; -\text{C}(=\text{O})-\text{OR}^{12b}; -\text{N}(=\text{R}^{15b})-\text{S}(=\text{O})_2-\text{R}^{16b}; -\text{NH-R}^{17b}; -\text{NR}^{18b}-\text{R}^{19b}; -\text{C}(=\text{O})-\text{NHR}^{20b}; -\text{C}(=\text{O})-\text{NR}^{21b}\text{R}^{22b}; -\text{S}(=\text{O})_2\text{-NHR}^{23b}; -\text{S}(=\text{O})_2\text{-NR}^{24b}\text{R}^{25b}; -\text{O-C}(=\text{O})-\text{R}^{26b}; -\text{NH-C}(=\text{O})-\text{R}^{27b}; -\text{NR}^{28b}-\text{C}(=\text{O})-\text{R}^{29b}; -\text{NH-C}(=\text{O})-\text{O-R}^{30b}; -\text{NR}^{31b}-\text{C}(=\text{O})-\text{O-R}^{32b}; -\text{S}(=\text{O})_2\text{-O-R}^{33b}; \] a halogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene group; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group;
with the proviso that at least one of the substituents $R^{4b}$, $R^{5b}$, $R^{6b}$ and $R^{7b}$ represents a $-N(R^{15b})-S(=O)\,_2-R^{16b}$ moiety;

$R^{8b}, R^{12b}, R^{17b}, R^{18b}, R^{19b}, R^{20b}, R^{21b}, R^{22b}, R^{23b}, R^{24b}, R^{25b}, R^{26b}, R^{27b}, R^{28b}, R^{29b}$.  

$R^{30b}, R^{31b}, R^{32b}$ and $R^{33b}$, independently of one another, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene group; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylenyl, alkenylene or alkinylene group;

$R^{3b}$ represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylenyl, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

$R^{10b}$ and $R^{11b}$, independently of one another, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group;

$R^{13b}$ and $R^{14b}$, independently of one another, each represent a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;
or

R^{13b} and R^{14b} together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R^{15b} represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical or a -S(=O)2-R^{16b} moiety;

R^{16b} represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkyene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkyene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

A^b and B^b together with the bridging carbon form an unsubstituted or at least mono-substituted, saturated or unsaturated cycloaliphatic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

D^b and E^b together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may
be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

or

D\textsuperscript{b} and E\textsuperscript{b}, independently of one another, each represent a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkyne group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively:

and indazolyl- and (2,3)-dihydro-indolyl-derived sulfonamide compounds of general formula (Ic)
wherein

\[ X^c - Y^c \text{ from left to right represents } CR^1c = N \text{ and } Z^c \text{ is } N[(CH_2c)_ncR^6c] \]

or

\[ X^c - Y^c \text{ from left to right represents } CR^7c = N, \quad Z^c \text{ is } NH, \quad R^7c \text{ represents the following moiety} \]

\[ A^c \]

\[ \]

\[ B^c \]

\[ \]

\[ A^c \text{ represents } CH \text{ or } N \text{ and } B^c \text{ represents } NR^8c, O \text{ or } S; \]

\[ X^c - Y^c \text{ from left to right represents } C[(CH_2c)_ncR^8c] = N \text{ and } Z^c \text{ is } NR^{10c} \]

or

\[ X^c - Y^c \text{ represents } CH_2 - CH_2 \text{ and } Z^c \text{ is } N[(CH2c)ncR^{12c}]; \]

\[ nc \text{ is } 0, 1, 2, 3 \text{ or } 4; \]

\[ R^1c \text{ represents a hydrogen atom; } NO_2; -NH_2; -SH; -OH; -CN; -C(=O)-R^{12c}; -OR^{13c}; -SR^{14c}; -F; -Cl, -Br; -I; \text{ a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkynylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; } \]

\[ R^2c, R^3c, R^4c \text{ and } R^5c, \text{ independently of one another, each represent a hydrogen atom; } -NO_2; -NH_2; -SH; -OH; -CN; -C(=O)-H; -C(=O)-R^{12c}; -OR^{13c}; -SR^{14c}; -N(R^{15c})-S(=O)_2-R^{16c}; -NH-R^{17c}; -NR^{18c}R^{19c}; -F; -Cl, -Br; -I; \text{ a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl } \]
radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

with the proviso that at least one of the substituents $R^{2c}$, $R^{3c}$, $R^{4c}$ and $R^{5c}$ represents a -N($R^{15c}$)-S(=O)$_2$-$R^{16c}$ moiety;

$R^{6c}$, $R^{9c}$ and $R^{11c}$, independently of one another, each represent a -NR$^{20c}$-$R^{21c}$ radical

or

a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

$R^{8c}$ represents -C(=O)-$R^{22c}$; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

$R^{10c}$ represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical--; or a -S(=O)$_2$-$R^{23c}$ moiety;

$R^{12c}$, $R^{13c}$, $R^{14c}$, $R^{17c}$, $R^{18c}$ and $R^{19c}$, independently of one another, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least
mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R$^{15c}$ represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or a -S(=O)2-R$^{24c}$ moiety;

R$^{16c}$ and R$^{24c}$, independently of one another, each represent an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R$^{20c}$ and R$^{21c}$, independently of one another, each represent a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

or R$^{20c}$ and R$^{21c}$ together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R$^{22c}$ represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or
branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

and

$R^{23c}$ represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively;

and phenyl-piperazine-derived compounds of general formula (Id)
wherein

$X^d$ represents a $-NR^l d R^2 d$ moiety or a $-OR^3 d$ moiety;

$R^{ld}$ represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

an unsubstituted or at least mono-substituted radical selected from the group consisting of adamantyl, bicyclo[2.2.1]heptyl and bicyclo[3.1.1]heptyl, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group which may contain 1, 2 or 3 heteroatom(s) independently selected from the group consisting of nitrogen, oxygen and sulfur as chain member(s);

a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-
substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylen group which may contain 1, 2 or 3 heteroatom(s) independently selected from the group consisting of nitrogen, oxygen and sulfur as chain member(s);

or a -C(=O)-R^{12d} moiety;

R^{2d} represents a hydrogen atom or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

or

R^{1d} and R^{2d} together with the bridging nitrogen form an optionally at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R^{3d} represents or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylen group;

R^{4d}, R^{5d} and R^{6d}, independently of one another, each represent a hydrogen atom or a halogen atom;

or

R^{4d} and R^{5d} together with the bridging carbon atoms form an unsubstituted 5- or 6- membered heterocyclic ring which contains 1, 2 or 3 heteroatom(s) independently selected from the group consisting of nitrogen, oxygen and
sulfur as ring member(s) and which together with the phenyl ring which it is fused with forms a 9- or 10-membered bicyclic aromatic ring system;

$R^{7d}$ and $R^{8d}$, independently of one another, each represent a hydrogen atom or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

$R^{9d}$ and $R^{10d}$, independently of one another, each represent a hydrogen atom or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

$R^{11d}$ represents a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical, which may contain 1, 2 or 3 heteroatom(s) independently selected from the group consisting of nitrogen, oxygen and sulfur as chain member(s);

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group;

-a -C(=O)-$R^{13d}$ moiety or a -S(=O)$_2$-$R^{14d}$ moiety;

$R^{12d}$ represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group;

and
$\mathbf{R}_{13d}^{13d}$ and $\mathbf{R}_{14d}^{14d}$, independently of one another, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkylene group which may contain 1, 2 or 3 heteroatom(s) independently selected from the group consisting of nitrogen, oxygen and sulfur as chain member(s); optionally in form of one of its stereoisomers, preferably enantiomers or diasteromers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively;

and phenyl-piperazine-derived compounds of general formula (Ie)

\[\begin{array}{c}
\text{Ph} \\
\text{N} \\
\text{N} \\
\text{R}^{3e} \\
\text{R}^{2e} \\
\text{R}^{1e} \\
\text{X}^{e}
\end{array}\]  

(Ie)

wherein

$\mathbf{X}^{e}$ represents $\text{-CN}$, $\text{-C}(=\text{O})\text{-OH}$, $\text{-C}(=\text{O})\text{-OR}^{4e}$, $\text{-O-}\text{R}^{5e}$, $\text{-NH}_2$, $\text{-NR}^{6e}\text{-C}(=\text{O})\text{-R}^{7e}$, $\text{-NH-S}(=\text{O})_2\text{-R}^{8e}$ or $\text{-NH}\text{-R}^{9e}$.
R\textsuperscript{1e} represents a hydrogen atom; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group which may contain 1, 2 or 3 heteroatom(s) independently selected from the group consisting of nitrogen, oxygen and sulfur as chain member(s);

R\textsuperscript{2e} represents a hydrogen atom or a \(-\text{C}(=\text{O})\)-R\textsuperscript{10e} moiety; or

R\textsuperscript{1e} and R\textsuperscript{2e} together with the bridging nitrogen form a nitro (NO\textsubscript{i})-group or an unsubstituted or at least mono-substituted 5- or 6-membered heteroaryl radical which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R\textsuperscript{3e} represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

R\textsuperscript{4e} represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;
R⁵e represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkyene, alkenylene or alkinylene group;

R⁶e represents a hydrogen atom or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkyene, alkenylene or alkinylene group;

R⁷e represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

R⁸e represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkyene, alkenylene or alkinylene group;

R⁹e represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-
substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group;

and

and tetrahydroisoquinoline-derived sulfonamide compounds of general formula (If):

wherein

R^{1f} represents a hydrogen atom; a -C(=O)-OR^{3f} moiety;

a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one
heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R²⁻, R³⁻, R⁴⁻ and R⁵⁻, independently of one another, each represent a hydrogen atom; F, Cl, Br, I, -NO₂; -NH₂; -SH; -OH; -CN; -C(=O)-OH; -C(=O)-H; -S(=O)₂-OH; -CC(=O)-NH₂; -S(=O)₂-NH₂; -C(=O)-RO⁻; -S(=O)-RO⁻; -S(=O)₂-RO⁻; -OR; -SR; -C(=O)-OR; -N(R⁻⁻⁻)-S(=O)₂-R⁻⁻⁻; -N⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻searchModel
independently of one another, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene, alkenylene or alkinylene group and which may be condensed with an unsubstituted or at least mono-substituted saturated, unsaturated or aromatic mono- or bicyclic ring system;

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene, alkenylene or alkinylene group and which may be condensed with an unsubstituted or at least mono-substituted saturated or unsaturated, but not aromatic, mono- or bicyclic ring system;

$R^{11f}$ represents a hydrogen atom or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

$R^{12f}$ represents a phenyl radical of general formula (Af),

$R^{19f}$, $R^{20f}$, $R^{21f}$, $R^{22f}$ and $R^{38f}$, independently of one another, each represent a hydrogen atom; F, Cl, Br, I, -NO$_2$; -NH$_2$; -SH; -OH; -
222
CN; -C(=O)-OH; -C(=O)-H; -S(=O)$_2$-OH; -C(=O)-NH$_2$; -S(=O)$_2$-NH$_2$; -C(=O)-R$_{23f}$; -S(=O)-R$_{24f}$; -S(=O)$_2$-R$_{24f}$; -OR$_{25f}$; -SR$_{26f}$; -C(=O)-OR$_{27f}$; -N(R$_{28f}$)-S(=O)$_2$-R$_{29f}$; -NH-S(=O)$_2$-R$_{30f}$; -NR$_{31f}$R$_{32f}$; -NH-R$_{33f}$; -C(=O)-NHR$_{34f}$; -C(=O)-NR$_{35f}$R$_{36f}$; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system and/or which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group;

or a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be condensed with an unsubstituted or at least mono-substituted saturated, unsaturated or aromatic mono- or bicyclic ring system;

R$_{23f}$, R$_{27f}$, R$_{28f}$, R$_{29f}$ and R$_{30f}$, independently of one another, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene, alkenylene or alkinylene group and which may be condensed
with an unsubstituted or at least mono-substituted saturated, unsaturated or aromatic mono- or bicyclic ring system;

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkyne, alkenylene or alkinylene group and which may be condensed with an unsubstituted or at least mono-substituted saturated or unsaturated, but not aromatic, mono- or bicyclic ring system;

R\textsuperscript{24f}, R\textsuperscript{26f}, R\textsuperscript{31f}, R\textsuperscript{32f} and R\textsuperscript{33f}, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkyne, alkenylene or alkinylene group and which may be condensed with an unsubstituted or at least mono-substituted saturated, unsaturated or aromatic mono- or bicyclic ring system;

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be condensed with an unsubstituted or at least mono-substituted saturated or unsaturated, but not aromatic, mono- or bicyclic ring system;

R\textsuperscript{25f}, R\textsuperscript{34f}, R\textsuperscript{35f} and R\textsuperscript{36f}, represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

and R\textsuperscript{37f} represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing
cycloaliphatic radical, which may be bonded via a linear or branched alkylene, alkenylene or alkinylene group and which may be condensed with an unsubstituted or at least mono-substituted saturated, unsaturated or aromatic mono- or bicyclic ring system;

or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene, alkenylene or alkinylene group and which may be condensed with an unsubstituted or at least mono-substituted saturated or unsaturated, but not aromatic, mono- or bicyclic ring system;

optionally in form of one of its stereoisomers, preferably enantiomers or diasteromers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a salt thereof, or a corresponding solvate thereof.

The combination according to claim 5, characterized in that the indole-derived sulfonamide is selected from the group consisting of compounds of general formula (Ih)

wherein

R\textsuperscript{1h} represents a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing
cycloaliphatic radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or a \(-(\text{CH}_2)_{n_{\text{h}}}\)-NR\textsuperscript{13h}R\textsuperscript{14h} moiety with \(n_{\text{h}} = 0, 1, 2, 3, 4 \text{ or } 5\);

\(R^{3h}\) represents a hydrogen atom; -F; -Cl; -Br; -I; -NO\textsubscript{2}; -CN; -O-R\textsuperscript{10h}; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

\(R^{3h}\) represents a hydrogen atom; -F; -Cl; -Br; -I; -NO\textsubscript{2}; -CN; -O-R\textsuperscript{10h}; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or a \(-(\text{CH}_2)_{n_{\text{h}}}\)-NR\textsuperscript{13h}R\textsuperscript{14h} moiety with \(n_{\text{h}} = 0, 1, 2, 3, 4 \text{ or } 5\);

\(R^{4h}, R^{5h} \text{ and } R^{7h}\), independently of one another, each represent a hydrogen atom; -NO\textsubscript{2}; -CN; -O-R\textsuperscript{10h}; -C(=O)-OR\textsuperscript{12h}; a halogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group;
R\textsuperscript{10h} represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group;

R\textsuperscript{13h} and R\textsuperscript{14h}, independently of one another, each represent a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

or

R\textsuperscript{13h} and R\textsuperscript{14h} together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R\textsuperscript{15h} represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical or a -S(=O)\textsubscript{2}-R\textsuperscript{16h} moiety;

and R\textsuperscript{16h} represents an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

optionally in form of one of its stereoisomers, preferably enantiomers or diasteromers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively;
and compounds of general formula (Ik)

\[ Rxk \]

wherein

- \( R_{1k} \) represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; an unsubstituted or at least mono-substituted phenyl radical or an unsubstituted or at least mono-substituted benzyl radical;

- \( R_{3k} \) represents a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via an unsubstituted or at least mono-substituted alkyene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or a - \((\text{CH}_2)_n\) -NR\(^{13k}\)R\(^{14k}\) moiety with \( n k = 0, 1, 2, 3, 4 \) or 5;

- \( R_{13k} \) and \( R_{14k} \), independently of one another, each represent a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

or

- \( R_{13k} \) and \( R_{14k} \) together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or
which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

\[ R^{15k} \] represents a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

and \( R^{16k} \) represents an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkyene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

optionally in form of one of its stereoisomers, preferably enantiomers or diasteromers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively;

and compounds of general formula (Im)

![Chemical structure](image)

(Im)

wherein

\[ R^{1m} \] represents a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing
cycloaliphatic radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or a \((\text{CH}_2)^m\)\(_{13m}\)\(\text{NR}^e_{14m}\) moiety with \(m = 0, 1, 2, 3, 4\) or 5;

\(R^{2m}\) represents a hydrogen atom; -F; -Cl; -Br; -I; -NO\(_2\); -CN; -O-R\(_{10m}\); a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

\(R^{3m}\) represents a hydrogen atom; -F; -Cl; -Br; -I; -NO\(_2\); -CN; -O-R\(_{10m}\); a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

\(R^{4m}, R^{6m}\) and \(R^{7m}\), independently of one another, each represent a hydrogen atom; -NO\(_2\); -CN; -O-R\(_{10m}\); a halogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group;

\(R^{10m}\) represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group;

\(R^{13m}\) and \(R^{14m}\), independently of one another, each represent a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;
R^{13m} and R^{14m} together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

\( R^{15m} \) represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic or at least mono-substituted ary1 or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alky1ene, alkeny1ene or alkiny1ene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

optionally in form of one of its stereoisomers, preferably enantiomers or diasteromers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diasteromers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively;

and compounds of general formula (In)
wherein

\[ R^{1n} \text{ represents a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylenegroup and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or a } (CH_2)_{mn} -NR^{13n}R^{14n} \text{ moiety with } mn = 0, 1, 2, 3, 4 \text{ or } 5; \]

\[ R^{2n} \text{ represents a hydrogen atom; -F; -Cl; -Br; -I; -NO}_2; -CN; -O-R^{10n}; \text{ a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylenegroup and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; } \]

\[ R^{3n} \text{ represents a hydrogen atom; -F; -Cl; -Br; -I; -NO}_2; -CN; -O-R^{10n}; \text{ a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkylenegroup and/or which may be condensed with an unsubstituted or at least mono-} \]


mono-substituted mono- or bicyclic ring system; or a -(CH₂)ₙn-NR¹³nR¹⁴n moiety
with nn = 0, 1, 2, 3, 4 or 5:

R⁵ⁿ, R⁶ⁿ and R⁷ⁿ, independently of one another, each represent a hydrogen atom;
-NO₂; -CN; -O-R¹⁰ⁿ; a halogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group;

R¹⁰ⁿ represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group;

R¹³ⁿ and R¹⁴ⁿ, independently of one another, each represent a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

or

R¹³ⁿ and R¹⁴ⁿ together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R¹⁵ⁿ represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical or a -S(=O)₂-R¹⁶ⁿ moiety;

R¹⁶ⁿ represents an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least
mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

optionally in form of one of its stereoisomers, preferably enantiomers or diasteromers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively;

and compounds of general formula (Io)

wherein

$R^{Io}$ represents a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or a -(CH$_2$)$_{mo}$-NR$_{13o}$R$_{14o}$ moiety with $mo = 0, 1, 2, 3, 4$ or $5$;
R²° represents a hydrogen atom; -F; -Cl; -Br; -I; -NO₂; -CN; -O-R¹°; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R³° represents a hydrogen atom; -F; -Cl; -Br; -I; -NO₂; -CN; -O-R¹°; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; a -CH(OCH₂H₅)-CH₂-NR¹³°R¹⁴° moiety or a -(CH₂)ₙo-NR¹³°R¹⁴° moiety with n = 0, 1, 2, 3, 4 or 5;

R⁴°, R⁵° and R⁶°, independently of one another, each represent a hydrogen atom; -NO₂; -CN; -O-R¹°; a halogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group;

R¹⁰° represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group;

R¹³° and R¹⁴°, independently of one another, each represent a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;
R_{13}^\circ \text{ and } R_{14}^\circ \text{ together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; }

R_{15}^\circ \text{ represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical or a } \text{-S(=O)2-} R_{16}^\circ \text{ moiety; }

\text{and } R_{16}^\circ \text{ represents an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; }

\text{optionally in form of one of its stereoisomers, preferably enantiomers or diasteromers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively; }

\text{and compounds of general formula } (Ip)
wherein

R_{lp} Represents a -S(=O)_{2}-R_{9p} moiety or a -S(=O)_{2}-C(H)A_{lp}B_{lp} moiety;

R_{lp} Represents a hydrogen atom; -F; -Cl; -Br; -I; -NO_{2}; -OH; -CN; -O-R^{10p}; -S-R^{10p}; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R_{lp} Represents a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via an unsubstituted or at least mono-substituted alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or a -(CH_{2})_{np}-NR^{13p}R^{14p} moiety with np = 0, 1, 2, 3, 4 or 5;

R^{1p}, R^{5p}, R^{6p} and R^{7p}, independently of one another, each represent a hydrogen atom; -NO_{2}; -NH_{2}; -OH; -CN; -C(=O)-R^{9p}; -O-R^{10p}; -S-R^{10p}; -NH-R^{17p}; -NR^{18p}R^{19p}; a halogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene group;

R^{8p} represents a hydrogen atom or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

R^{8p}, R^{17p}, R^{18p} and R^{19p}, independently of one another, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or
heteroaryl radical, which may be bonded via a linear or branched alkylene, alkenylene or alMnylene group;

$R^{9p}$ represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

$R^{10p}$ and $R^{11p}$, independently of one another, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group;

$R^{13p}$ and $R^{14p}$, independently of one another, each represent a hydrogen atom; or a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical;

or

$R^{13p}$ and $R^{14p}$ together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

$A^p$ and $B^p$ together with the bridging carbon form an unsubstituted or at least mono-substituted, saturated or unsaturated cycloaliphatic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

optionally in form of one of its stereoisomers, preferably enantiomers or diasteromers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio,
or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively;

and compounds of general formula (Iq)

\[ \text{(Iq)} \]

wherein

\( R^{1q} \) represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; a \(-C(=O)-R^{8q}\) moiety; a \(-S(=O)_{2}-R^{9q}\) moiety;

\( R^{2q} \) represents a hydrogen atom; \(-F\); \(-Cl\); \(-Br\); \(-I\); \(-NO_{2}\); \(-NH_{2}\); \(-SH\); \(-OH\); \(-CN\); a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a chain member containing aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing
cycloaliphatic radical, which may be bonded via a linear or branched alkyene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkyene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R^{4q}, R^{5q}, R^{6q} and R^{7q}, independently of one another, each represent a hydrogen atom; -NO_{2}; -NH_{2}; -SH; -OH; -CN; -C(=O)-OH; -C(=O)-H; -S(=O)_{2}-OH; -C(=O)-NH_{2}; -S(=O)_{2}-NH_{2}; -C(=O)-R^{8q}; -S(=O)_{2}-R^{9q}; -O-R^{10q}; -S-R^{11q}; -C(=O)-OR^{12q}; -N(R^{15q})-S(=O)_{2}-R^{16q}; -NH-R^{17q}; -NR^{18q}R^{19q}; -C(=O)-NHR^{20q}; -C(=O)-NR^{21q}R^{22q}; -S(O)_{2}-NR^{23q}; -S(=O)_{2}-NR^{24q}R^{25q}; -O-C(=O)-R^{26q}; -NH-C(=O)-R^{27q}; -NR^{28q}-C(=O)-R^{29q}; NH-C(=O)-O-R^{30q}; NR^{31q}-C(=O)-O-R^{32q}; -S(=O)_{2}-O-R^{33q}; a halogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkyene group; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkyene group;

with the proviso that at least one of the substituents R^{4q}, R^{5q}, R^{6q} and R^{7q} represents a -N(R^{15q})-S(=O)_{2}-R^{16q} moiety;

R^{8q}, R^{12q}, R^{17q}, R^{18q}, R^{19q}, p^{20q}, R^{21q}, p^{22q}, R^{23q}, p^{24q}, p^{25q}, R^{26q}, R^{27q}, p^{28q}, p^{29q}, R^{30q}, R^{31q}, R^{32q} and R^{33q}, independently of one another, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkyene group; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkyene, alkenylene or alkinylene group;
R<sup>9q</sup> represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

R<sup>10q</sup> and R<sup>11q</sup>, independently of one another, each represent a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched alkylene group;

R<sup>15q</sup> represents a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical or a -S(=O)<sub>2</sub>R<sup>16q</sup> moiety;

R<sup>16q</sup> represents a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom as a ring member containing cycloaliphatic radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;
D₄ and E₄ together with the bridging nitrogen form an unsubstituted or at least mono-substituted, saturated, unsaturated or aromatic heterocyclic ring which may contain at least one further heteroatom as a ring member and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

or

D₄ and E₄, independently of one another, each represent a hydrogen atom; a linear or branched, saturated or unsaturated, unsubstituted or at least mono-substituted aliphatic radical; a saturated or unsaturated, unsubstituted or at least mono-substituted, optionally at least one heteroatom containing cycloaliphatic radical, which may be bonded via a linear or branched alkylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system; or an unsubstituted or at least mono-substituted aryl or heteroaryl radical, which may be bonded via a linear or branched, unsubstituted or at least mono-substituted alkylene, alkenylene or alkinylene group and/or which may be condensed with an unsubstituted or at least mono-substituted mono- or bicyclic ring system;

optionally in form of one of its stereoisomers, preferably enantiomers or diasteromers, a racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers and/or diastereomers, in any mixing ratio, or a physiologically acceptable salt thereof, or a corresponding solvate thereof, respectively.

The combination according to one or more of claims 1 to 6, characterized in that as component (B) at least one compound is present which is selected from the group consisting of

3-((−)-2-carboxypiperazin-4-yl)propyl-l-phosphate (CPP); 3-(2-carboxypiperazin-4-yl)-propenyl-l-phosphonate (CPP-ene); 1-(cis-2-carboxypiperidine-4-yl)methyl-l-phosphonic acid (CGS 19755); D-2-Amino-5-
phosphonopentanoic acid (AP5); 2-amino-phosphonoheptanoate (AP7); D,L-(E)-2-amino-4-methyl-5-phosphono-3-pentenoic acid carboxyethyl ester (CGP39551); 2-amino-4-methyl-5-phosphono-pent-3-enoic acid (CGP 40116); (4-phosphono-but-2-enylamino)-acetic acid (PD 132477); 2-amino-4-oxo-5-phosphono-pentanoic acid (MDL 100,453); 3-((phosphonylmethyl)-sulfinyl)-D,L-alanine; amino-(4-phosphonomethyl-phenyl)-acetic acid (PD 129635); 2-amino-3-(5-chloro-l-phosphonomethyl-lH-benzoimidazol-2-yl)-propionic acid; 2-amino-3-(3-phosphonomethyl-quinoxalin-2-yl)-propionic acid; 2-amino-3-(5-phosphonomethyl-biphenyl- 3-yl)-propionic acid (SDZ EAB 515); 2-amino-3-[2-(2-phosphono-ethyl)-cyclohexyl]-propionic acid (NPC 17742); 4-(3-phosphonopropyl)-piperazine-2-carboxylic acid (D-CPP); 4-(3-phosphono-allyl)-piperazine-2-carboxylic acid (D-CPP-ene); 4-phosphonomethyl-piperidine-2-carboxylic acid (CGS 19755); 3-(2-phosphono-acetyl)-piperidine-2-carboxylic acid (MDL 100,925); 5-phosphono-l,2,3,4-tetrahydro-isoquinoline-3-carboxylic acid (SC 48981); 5-(2-phosphono-ethyl)-l,2,3,4-tetrahydro-isoquinoline-3-carboxylic acid (PD 145950); 6-phosphonomethyl-decahydro-isoquinoline-3-carboxylic acid (LY 274614); 4-(IH-tetrazol-5-ylmethyl)-piperidine-2-carboxylic acid (LY 233053 and 235723); 6-(IH-Tetrazol-5-ylmethyl)-decahydro-isoquinoline-3-carboxylic acid (LY 233536); ketamine; phencyclidine; dextromethorphan; dextorphan; dexoxadrol; dizocilpine (MK-801); remacemide; thienylcyclohexylpiperidine (TCP); N-allylnometazocine (SKF 10,047); cyclazocine; etoxadrol; (1,2,3,4,9a-hexahydro-fluoren-4a-yl)-m-ethyl-amine (PD 137889); (l,3,4,9,10,10a-hexahydro-2H-phenanthren-4a-yl)-methyl-amine (PD 138289); PD 138558; tiletamine; kynurenic acid; 7-chloro-kynurenic acid; memantine; quinoxalinediones such as 6-cyano-7-nitroquinoxaline-2,3-dione (CNQX) and 6,7-dinitro-quinoxaline-2,3-dione (DNQX); amantadine; eliprodil; iamatrigine; riluzole; aptiganel; flupirtine; cefotel; levemopamil; l-(4-hydroxy-phenyl)-2-(4-phenylsulfanyl-piperidin-1-yl)-propan-1-one; 2-[4-(4-fluoro-benzoyl)-piperidin-1-yl]-1-naphthalen-2-yl-ethanone (E 2001); 3-(1,1-dimethyl-heptyl)-9-hydroxymethyl-6,6-dimethyl-6a,7,8,10a-tetrahydro-6H-benzo[c]chromen-1-ol (HU-211); l-{4-[1-(4-chlorophenyl)-l-methyl-ethyl]-2-methoxy-phenyl]-IH-[1,2,4]triazole-3-carboxylic acid amide (CGP 31358); acetic acid 10-hydroxy-7,9,7',9'-tetramethoxy-3,3'-
dimethyl-3,4,3',4'-tetrahydro-lH,l'H-[5,5']bi[benzo[g]isochromenyl]-4-yl ester (ES 242-1); 14-hydroxy-11-isopropyl-10-methyl-5-octyl-10,13-diaza-tricyclo[6.6.1.0^4,1-5]pentadeca-1,4,6,8(15)-tetraen-12-one; and 4,5-dioxo-4,5-dihydro-1H-benzo-[g]indole-2,7,9-tricarboxylic acid (PQQ); preferably memantine is present as component (B).

8. The combination according to one or more of claims 1 to 7, characterized in that it comprises 1 - 99% by weight of component (A) and 99 - 1% by weight of component (B), more preferably 10 - 80% by weight of component (A) and 80 - 20% by weight of component (B), in each case referring to the total weight of both components (A) and (B).

9. A medicament comprising an active substance combination according to one or more of claims 1 to 8 and optionally one or more pharmacologically acceptable adjuvants.

10. A medicament according to claim 9, for simultaneous NMDA-receptor inhibition and 5-HT_6-receptor regulation.

11. A medicament according to claim 9 or 10 for regulation of appetite, for maintenance, increase or reduction of body weight, for prophylaxis and/or treatment of disorders related to food ingestion, preferably for prophylaxis and/or treatment of obesity, anorexia, cachexia, bulimia, diabetes, preferably type II diabetes (non-insulin-dependent diabetes mellitus), or for prophylaxis and/or treatment of gastrointestinal tract disorders, preferably of the irritable bowel syndrome, for prophylaxis and/or treatment of Metabolic Syndrome, Peripheral Nervous System Disorders, Central Nervous System Disorders, arthritis, epilepsy, anxiety, panic, depression, cognitive disorders, memory disorders, cardiovascular diseases, senile dementia processes, such as Alzheimer's, Parkinson's and/or Huntington's Disease, schizophrenia, psychosis, infantile hyperkinesia (ADHD, attention deficit / hyperactivity disorder), pain, hypertensive syndrome, inflammatory diseases, immunologic diseases or for improvement of cognition.
12. Use of the combination according to one or more of claims 1 to 8 for the manufacture of a medicament for simultaneous NMDA-receptor inhibition and 5-HT_{6}-receptor regulation.

13. Use of the combination according to one or more of claims 1 to 8, for the manufacture of a medicament for the prophylaxis and/or treatment of disorders related to food ingestion, preferably for prophylaxis and/or treatment of obesity, anorexia, cachexia, bulimia, diabetes, preferably type II diabetes (non-insulin-dependent diabetes mellitus), or for prophylaxis and/or treatment of gastrointestinal tract disorders, preferably of the irritable bowel syndrome, for prophylaxis and/or treatment of Metabolic Syndrome, Peripheral Nervous System Disorders, Central Nervous System Disorders, arthritis, epilepsy, anxiety, panic, depression, cognitive disorders, memory disorders, cardiovascular diseases, senile dementia processes, such as Alzheimer's, Parkinson's and/or Huntington's Disease, schizophrenia, psychosis, infantile hyperkinesia (ADHD, attention deficit / hyperactivity disorder), pain, hypertensive syndrome, inflammatory diseases, immunologic diseases or for improvement of cognition.

14. A pharmaceutical formulation, characterized in that it comprises an active substance combination according to one or more of claims 1 to 8 and optionally one or more pharmacologically acceptable adjuvants.

15. The pharmaceutical formulation according to claim 14, characterized in that it is present in solid pharmaceutical forms such as tablets, tablets, chewing tablets, chewing gums, dragees, capsules, suppositories, powder preparations, transdermal therapeutic systems, transmucosal therapeutic systems, or in liquid and semi-liquid pharmaceutical forms such as drops or such as juice, sirup, solution, emulsion, suspension, preferably in form of tablets, capsules, drops or solution.
16. The pharmaceutical formulation according to claim 14, characterized in that it is present in form of multiple particles, preferably microtablets, microcapsules, microspheroids, granules, crystals or pellets, optionally compacted in a tablet, filled in a capsule or suspended in a suitable liquid.

17. The pharmaceutical formulation according to one or more of claims 14 to 16, characterized in that it is for oral, intravenous, intramuscular, subcutaneous, intrathecal, epidural, buccal, sublingual, pulmonary, rectal, transdermal, nasal or intracerebroventricular application, preferably oral or intravenous.

18. The pharmaceutical formulation according to one or more of claims 14 to 16, characterized in that at least one of the components of the active substance combination (A) or (B) is present at least partially in sustained-release form.

19. The pharmaceutical formulation according to claim 18, characterized in that the medicament has at least one coating or at least one matrix comprising at least one material, which sustains active substance release.

20. The pharmaceutical formulation according to claim 19, characterized in that the sustained-release material is based on optionally modified, water-insoluble, natural, semisynthetic or synthetic polymer, or a natural wax or fat or fatty alcohol or semisynthetic or synthetic fatty acid, or on a mixture of at least two of these afore mentioned components.

21. The pharmaceutical formulation according to claim 20, characterized in that the water-insoluble polymer is based on an acrylic resin, which is preferably selected from the group of poly(meth)acrylates, poly(Ci_4)dialkylamino(Ci_4)alkyl (meth)acrylates and/or copolymers thereof or a mixture of at least two of the afore-mentioned polymers.

22. The pharmaceutical formulation according to claim 20, characterized in that the water-insoluble polymers are cellulose derivatives, preferably alkyl cellulose and even more preferably ethyl cellulose, or cellulose esters.
23. The pharmaceutical formulation according to claim 20, characterized in that the wax is carnauba wax, beeswax, glycerol monostearate, glycerol monobehenate, glycerol ditripalmitostearate, microcrystalline wax or a mixture of at least two of these components.

24. The pharmaceutical formulation according to one or more of claims 20 to 23, characterized in that polymers have been used in combination with one or more plasticizers.

25. The pharmaceutical formulation according to one or more of claims 18 to 24, characterized in that besides the sustained-release form, at least one of the active substance components (A) or (B) is present in a non-sustained-release form.

26. A method for simultaneous NMDA-receptor inhibition and 5-HT6-receptor regulation, said method comprises administering to a patient in need of such a treatment a therapeutically effective amount of a combination according to one or more of claims 1 to 8.

27. A method for the treatment and/or prophylaxis of disorders related to food ingestion, preferably for prophylaxis and/or treatment of obesity, anorexia, cachexia, bulimia, diabetes, preferably type II diabetes (non-insulin-dependent diabetes mellitus), or for prophylaxis and/or treatment of gastrointestinal tract disorders, preferably of the irritable bowel syndrome, for prophylaxis and/or treatment of Metabolic Syndrome, Peripheral Nervous System Disorders, Central Nervous System Disorders, arthritis, epilepsy, anxiety, panic, depression, cognitive disorders, memory disorders, cardiovascular diseases, senile dementia processes, such as Alzheimer's, Parkinson's and/or Huntington's Disease, schizophrenia, psychosis, infantile hyperkinesia (ADHD, attention deficit / hyperactivity disorder), pain, hypertensive syndrome, inflammatory diseases, immunologic diseases or for improvement of cognition, said method comprises administering to a patient in need of such a treatment a
therapeutically effective amount of a combination according to one or more of claims 1 to 8.
FIGURE 1

Discrimination Ratio

Veh  5mg  10mg  15mg  20mg

Memantine

Treatment (mg/kg i.p.)
FIGURE 2

![Graph showing exploration time in seconds for different treatments.](image-url)

- **Familiar**
- **Novel**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Exploration Time (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veh</td>
<td>10</td>
</tr>
<tr>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>compound 841</td>
<td>10</td>
</tr>
<tr>
<td>Memantine</td>
<td>8</td>
</tr>
<tr>
<td>compound 841 + Memantine</td>
<td>15</td>
</tr>
</tbody>
</table>

Treatment (mg/kg i.p.)
<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>&quot;S. 28.05 The 5-HT6 receptor: memories are made of this&quot; EUROPEAN NEUROPSYCHOPHARMACOLOGY, ELSEVIER SCIENCE PUBLISHERS BV, AMSTERDAM, NL, vol. 15, 2005, page S357, XP005556554 ISSN: 0924-977X abstract</td>
<td>1-27</td>
</tr>
</tbody>
</table>

Further documents are listed in the continuation of Box C

See patent family annex

Date of the actual completion of the international search: 2 January 2008

Date of mailing of the international search report: 15/01/2008

Name and mailing address of the ISA:
European Patent Office, P B 5818 Patentlaan 2 NL-2280 HV Rijswijk
Tel (+31-70) 340-2040, Tx 31 651 epo ni.
Fax (+31-70) 340-3616

Authorized officer: Herrera, Suzanne
<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>WO 03/042175 A (ESTEVE LABOR DR [ES]) 22 May 2003 (2003-05-22) claims _____</td>
<td>1-27</td>
</tr>
<tr>
<td>Y</td>
<td>WO 2006/069807 A (ESTEVE LABOR DR [ES]; ASCHENBRENNER ANDREA [DE]; KRAUS JUERGEN [DE]; T) 6 July 2006 (2006-07-06) abstract; claims _____</td>
<td>1-27</td>
</tr>
<tr>
<td>Y</td>
<td>WO 03/084952 A (ESTEVE LAB DR ESTEVE S A [ES]) 16 October 2003 (2003-10-16) abstract; claims _____</td>
<td>1-27</td>
</tr>
</tbody>
</table>
Continuation of Box II.I

Although claims 26-27 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

———

Continuation of Box II.I

Claims Nos.: —

Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy
This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. **X** Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
   
   see FURTHER INFORMATION sheet PCT/ISA/210

2. **J** Claims Nos.: because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. **□** Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

This International Searching Authority found multiple inventions in this international application, as follows:

1. **□** As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. **□** As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. **□** As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. **□** No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.
<table>
<thead>
<tr>
<th>Patent document cited in search report</th>
<th>Publication date</th>
<th>Patent family member(s)</th>
<th>Publication date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>BR 0214243 A</td>
<td>21-12-2004</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CA 2466965 AI</td>
<td>22-05-2003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CN 1599718 A</td>
<td>23-03-2005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DE 60209779 T2</td>
<td>16-11-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DK 1445252 T3</td>
<td>19-06-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EP 1445252 AI</td>
<td>11-08-2004</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ES 2259387 T3</td>
<td>01-10-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ES 2187300 AI</td>
<td>16-05-2003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ES 2249129 AI</td>
<td>16-03-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HK 1070053 AI</td>
<td>28-07-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HR 20040429 A2</td>
<td>30-06-2005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HU 0402317 A2</td>
<td>28-02-2005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IS 7263 A</td>
<td>13-05-2004</td>
</tr>
<tr>
<td></td>
<td></td>
<td>JP 2005513016 T</td>
<td>12-05-2005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MA 27093 A</td>
<td>20-12-2004</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MX PA04004601 A</td>
<td>13-08-2004</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NZ 533136 A</td>
<td>27-01-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PT 1445252 T</td>
<td>31-07-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RU 2293082 C2</td>
<td>10-02-2007</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TW 275585 B</td>
<td>11-03-2007</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UA 78252 C2</td>
<td>15-03-2007</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US 2003191124 AI</td>
<td>09-10-2003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>YU 41104 A</td>
<td>27-10-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ZA 200404073 A</td>
<td>31-05-2006</td>
</tr>
<tr>
<td>WO 2006069807</td>
<td>06-07-2006</td>
<td>CA 2592832 AI</td>
<td>06-07-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EP 1695971 AI</td>
<td>30-08-2006</td>
</tr>
<tr>
<td>EP 1676841</td>
<td>05-07-2006</td>
<td>CA 2592858 AI</td>
<td>06-07-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WO 2006069809 AI</td>
<td>06-07-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AT 316966 T</td>
<td>15-02-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AU 2003216934 AI</td>
<td>20-10-2003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AU 2003222804 AI</td>
<td>20-10-2003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BR 0309083 A</td>
<td>19-04-2005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CA 2481701 AI</td>
<td>16-10-2003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CN 1659164 A</td>
<td>24-08-2005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DE 60303440 T2</td>
<td>26-10-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DK 1500654 T3</td>
<td>06-06-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EP 1500654 AI</td>
<td>26-01-2005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EP 1497285 AI</td>
<td>19-01-2005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WD 03084939 AI</td>
<td>16-10-2003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ES 2258219 T3</td>
<td>16-08-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ES 2193875 AI</td>
<td>01-11-2003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HR 20040919 A2</td>
<td>30-04-2005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IS 7491 A</td>
<td>06-10-2004</td>
</tr>
<tr>
<td></td>
<td></td>
<td>JP 2005529866 T</td>
<td>06-10-2005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MA 27692 A</td>
<td>02-01-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MX PA04009889 A</td>
<td>16-08-2005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NZ 536167 A</td>
<td>30-06-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PT 1500654 T</td>
<td>30-06-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UA 79460 C2</td>
<td>25-06-2007</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US 2006128701 AI</td>
<td>15-06-2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US 2004058920 AI</td>
<td>25-03-2004</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US 2004067941 AI</td>
<td>08-04-2004</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ZA 200408275 A</td>
<td>26-04-2006</td>
</tr>
</tbody>
</table>