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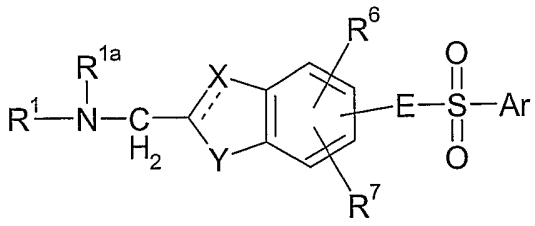
(54) Title: AMINOMETHYL SUBSTITUTED BICYCLIC AROMATIC COMPOUNDS SUITABLE FOR TREATING DISORDERS THAT RESPOND TO MODULATION OF THE DOPAMINE D_3 RECEPTOR



(I)

(57) Abstract: The present invention relates to an aminomethyl substituted bicyclic aromatic compound of the formula (I) wherein Ar is a cyclic radical selected from the group consisting of phenyl, a 5- or 6-membered C-bound heteroaromatic radical comprising as ring member 1, 2 or 3 heteroatoms which are, independently of each other, selected from O, S and N, and a phenyl ring fused to a saturated or unsaturated 5- or 6-membered carbocyclic or heterocyclic ring, where the heterocyclic ring comprises as ring members 1, 2 or 3 heteroatoms selected from N, O and S and/or 1, 2 or 3 heteroatom-containing groups each independently selected from NR^8, where R^8 is H, C_1-C_4-alkyl, fluorinated C_1-C_4-alkyl, C_1-C_4-alkylcarbonyl or fluorinated C_1-C_4-alkylcarbonyl, and where the cyclic radical Ar may carry 1, 2 or 3 substituents R^a, wherein the variable R^a has the meanings given in the claims and in the description; X is a covalent bond or N-R^2, CHR^2, CHR^2CH_2, N or C-R^2; Y is N-R^{2a}, CHR^{2a}, $CHR^{2a}CH_2$ or $CHR^{2a}CH_2CH_2$; is a single bond or a double bond; E is CH_2 or NR^3; R^1 is H, C_1-C_4-alkyl, C_3-C_4-cycloalkyl, C_3-C_4-cycloalkylmethyl, C_3-C_4-alkenyl, fluorinated C_1-C_4-alkyl, fluorinated C_3-C_4-cycloalkyl, fluorinated C_3-C_4-cycloalkylmethyl, fluorinated C_3-C_4-alkenyl, formyl or C_1-C_3-alkylcarbonyl; R^{1a} is H, C_1-C_4-alkyl, C_3-C_4-cycloalkyl, C_3-C_4-alkenyl, fluorinated C_1-C_4-alkyl, fluorinated C_3-C_4-cycloalkyl, fluorinated C_3-C_4-alkenyl, R^2 and R^{2a} each independently are H, CH_3, CH_2F, CHF_2 or CF_3 or R^{1a} and R^2 or R^{1a} and R^{2a} together are $(CH_2)_n$ with n being 1, 2 or 3; R^3 is H or C_1-C_4-alkyl; R^4 and R^5 independently of each other are H, C_1-C_4-alkyl, fluorinated C_1-C_4-alkyl or C_1-C_4-alkoxy or may form, together with N, a 4-, 5- or 6-membered saturated or unsaturated ring; R^6 and R^7 independently of each other are H or halogen; and the physiologically tolerated acid addition salts thereof. The invention also relates to the use of a compound of the formula (I) or a pharmaceutically acceptable salt thereof for preparing a pharmaceutical composition for the treatment of a medical disorder susceptible to treatment with a dopamine D3 receptor ligand.

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AMINOMETHYL SUBSTITUTED BICYCLIC AROMATIC COMPOUNDS SUITABLE FOR TREATING DISORDERS THAT RESPOND TO MODULATION OF THE DOPAMINE D_3 RECEPTOR

Background Of The Invention

The present invention relates to novel aminomethyl substituted bicyclic aromatic compounds. The compounds possess valuable therapeutic properties and are suitable, in particular, for treating diseases that respond to modulation of the dopamine D_3 receptor.

Neurons obtain their information by way of G protein-coupled receptors, inter alia. A large number of substances exert their effect by way of these receptors. One of them is dopamine. Confirmed findings exist with regard to the presence of dopamine and its physiological function as a neurotransmitter. Disorders in the dopaminergic transmitter system result in diseases of the central nervous system which include, for example, schizophrenia, depression and Parkinson's disease. These diseases, and others, are treated with drugs which interact with the dopamine receptors.

Up until 1990, two subtypes of dopamine receptor had been clearly defined pharmacologically, namely the D_1 and D_2 receptors. More recently, a third subtype was found, namely the D_3 receptor which appears to mediate some effects of antipsychotics and antiparkinsonians (J.C. Schwartz et al., The Dopamine D_3 Receptor as a Target for Antipsychotics, in Novel Antipsychotic Drugs, H.Y. Meltzer, Ed. Raven Press, New York 1992, pages 135-144; M. Dooley et al., Drugs and Aging 1998, 12, 495-514, J.N. Joyce, Pharmacology and Therapeutics 2001, 90, pp. 231-59 "The Dopamine D_3 Receptor as a Therapeutic Target for Antipsychotic and Antiparkinsonian Drugs").

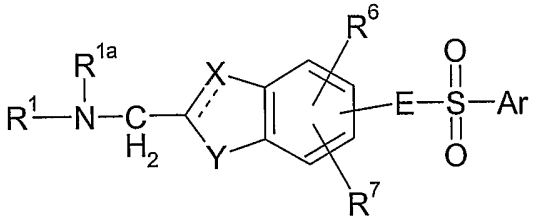
Since then, the dopamine receptors have been divided into two families. On the one hand, there is the D_2 group, consisting of D_2, D_3 and D_4 receptors, and, on the other hand, the D_1 group, consisting of D_1 and D_5 receptors. Whereas D_1 and D_2 receptors are widely distributed, D_3 receptors appear to be expressed regioselectively. Thus, these receptors are preferentially to be found in the limbic system and the projection regions of the mesolimbic dopamine system, especially in the nucleus accumbens, but also in other regions, such as the amygdala. Because of this comparatively regioselective expression, D_3 receptors are regarded as being a target having few side-effects and it is assumed that while a selective D_3 ligand would have the properties of known

antipsychotics, it would not have their dopamine D_2 receptor-mediated neurological side-effects (P. Sokoloff et al., Localization and Function of the D_3 Dopamine Receptor, Arzneim. Forsch./Drug Res. 42(1), 224 (1992); P. Sokoloff et al. Molecular Cloning and Characterization of a Novel Dopamine Receptor (D_3) as a Target for Neuroleptics, Nature, 347, 146 (1990)).

WO 95/04713, WO 96/23760 and WO 97/45403 disclose amino substituted bicyclic aromatic compounds having an affinity for the dopamine D_3 receptor. Some of these compounds possess a certain selectivity for the dopamine D_3 receptor in comparison with their affinity for the D_2 receptor. They have therefore been proposed as being suitable for treating diseases of the central nervous system. Unfortunately their affinity and selectivity towards the D_3 receptor is only moderate or their pharmacological profile are not satisfactory. Consequently there is an ongoing need to provide new compounds, which either have an high affinity and an improved selectivity. The compounds should also have good pharmacological profile, e.g. a high brain plasma ratio, a high bioavailability, good metabolic stability or a decreased inhibition of the mitochondrial respiration.

Summary Of The Invention

The invention is based on the object of providing compounds which act as highly selective dopamine D_3 receptor ligands. This object is surprisingly achieved by means of aminomethyl substituted bicyclic aromatic compounds of the formula I



(I)

wherein

Ar is a cyclic radical selected from the group consisting of phenyl, a 5- or 6-membered C-bound heteroaromatic radical comprising as ring members 1, 2 or 3 heteroatoms which are, independently of each other, selected from O, S and N, and a phenyl ring fused to a saturated or unsaturated 5- or 6-membered carbocyclic or heterocyclic ring, where the heterocyclic ring comprises as ring mem-

bers 1, 2 or 3 heteroatoms selected from N, O and S and/or 1, 2 or 3 heteroatom-containing groups each independently selected from NR^8, where R^8 is H, C_1-C_4-alkyl, fluorinated C_1-C_4-alkyl, C_1-C_4-alkylcarbonyl or fluorinated C_1-C_4-alkylcarbonyl, and where the cyclic radical Ar may carry 1, 2 or 3 substituents R^a;

R^a is halogen, C_1-C_6-alkyl, fluorinated C_1-C_6-alkyl, C_1-C_6-hydroxyalkyl, C_1-C_6-alkoxy-C_1-C_6-alkyl, C_2-C_6-alkenyl, fluorinated C_2-C_6-alkenyl, C_3-C_6-cycloalkyl, fluorinated C_3-C_6-cycloalkyl, C_1-C_6-alkoxy, C_1-C_6-hydroxyalkoxy, C_1-C_6-alkoxy-C_1-C_6-alkoxy, fluorinated C_1-C_6-alkoxy, C_1-C_6-alkylthio, fluorinated C_1-C_6-alkylthio, C_1-C_6-alkylsulfinyl, fluorinated C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, fluorinated C_1-C_6-alkylsulfonyl, CN, nitro, C_1-C_6-alkylcarbonyl, fluorinated C_1-C_6-alkylcarbonyl, C_1-C_6-alkylcarbonylamino, fluorinated C_1-C_6-alkylcarbonylamino, C_1-C_6-alkylcarbonyloxy, fluorinated C_1-C_6-alkylcarbonyloxy, C_1-C_6-alkoxycarbonyl, carboxy, NH-C(O)-NR^4R^5, NR^4R^5, NR^4R^5-C_1-C_6-alkylene, O-NR^4R^5, C(O)NR^4R^5, $SO_2NR^4R^5$, phenylsulfonyl, benzyloxy, phenyl, phenoxy, or a saturated or unsaturated 3- to 7-membered heterocyclic ring comprising as ring members 1, 2, 3 or 4 heteroatoms selected from N, O and S and/or 1, 2 or 3 heteroatom-containing groups selected from NR^9, where R^9 has one of the meanings given for R^8, SO, SO_2 and CO, and where the 5 last-mentioned radicals R^a may carry 1, 2, 3 or 4 substituents selected from hydroxy and the radicals R^a;

X is a covalent bond or N-R^2, CHR^2, CHR^2CH_2, N or C-R^2;

Y is N-R^{2a}, CHR^{2a}, $CHR^{2a}CH_2$ or $CHR^{2a}CH_2CH_2$;

---- is a single bond or a double bond;

E is CH_2 or NR^3;

R^1 is H, C_1-C_4-alkyl, C_3-C_4-cycloalkyl, C_3-C_4-cycloalkylmethyl, C_3-C_4-alkenyl, fluorinated C_1-C_4-alkyl, fluorinated C_3-C_4-cycloalkyl, fluorinated C_3-C_4-cycloalkylmethyl, fluorinated C_3-C_4-alkenyl, formyl or C_1-C_3-alkylcarbonyl;

R^{1a} is H, C_1-C_4-alkyl, C_3-C_4-cycloalkyl, C_3-C_4-alkenyl, fluorinated C_1-C_4-alkyl, fluorinated C_3-C_4-cycloalkyl, fluorinated C_3-C_4-alkenyl,

R^2 and R^{2a} each independently are H, CH_3, CH_2F, CHF_2 or CF_3 or R^{1a} and R^2 or R^{1a} and R^{2a} together are $(CH_2)_n$ with n being 1, 2 or 3;

R^3 is H or C_1-C_4-alkyl;

R^4 and R^5 independently of each other are H, C_1-C_4-alkyl, fluorinated C_1-C_4-alkyl or C_1-C_4-alkoxy or may form, together with N, a 4-, 5- or 6-membered saturated or unsaturated ring;

R^6 and R^7 independently of each other are H or halogen;

and the physiologically tolerated acid addition salts thereof.

The present invention therefore relates to aminomethyl substituted bicyclic aromatic compounds of the general formula I and to their physiologically tolerated acid addition salts.

The present invention also relates to a pharmaceutical composition which comprises at least one aminomethyl substituted bicyclic aromatic compound of the formula I and/or at least one physiologically tolerated acid addition salt of I, where appropriate together with physiologically acceptable carriers and/or auxiliary substances.

The present invention also relates to a method for treating disorders which respond to influencing by dopamine D_3 receptor antagonists or dopamine D_3 agonists, said method comprising administering an effective amount of at least one aminomethyl substituted bicyclic aromatic compound of the formula I and/or at least one physiologically tolerated acid addition salt of I to a subject in need thereof.

Detailed Description Of The Invention

The diseases which respond to the influence of dopamine D_3 receptor antagonists or agonists include, in particular, disorders and diseases of the central nervous system, in particular affective disturbances, neurotic disturbances, stress disturbances and somatoform disturbances and psychoses, especially schizophrenia and depression

and, in addition, disturbances of kidney function, in particular kidney function disturbances which are caused by diabetes mellitus (see WO 00/67847).

According to the invention, at least one compound of the general formula I having the meanings mentioned at the outset is used for treating the above mentioned indications. Provided the compounds of the formula I of a given constitution may exist in different spatial arrangements, for example if they possess one or more centers of asymmetry, polysubstituted rings or double bonds, or as different tautomers, it is also possible to use enantiomeric mixtures, in particular racemates, diastereomeric mixtures and tautomeric mixtures, preferably, however, the respective essentially pure enantiomers, diastereomers and tautomers of the compounds of formula I and/or of their salts.

It is likewise possible to use physiologically tolerated salts of the compounds of the formula I, especially acid addition salts with physiologically tolerated acids. Examples of suitable physiologically tolerated organic and inorganic acids are hydrochloric acid, hydrobromic acid, phosphoric acid, sulfuric acid, C_1-C_4-alkylsulfonic acids, such as methanesulfonic acid, aromatic sulfonic acids, such as benzenesulfonic acid and toluenesulfonic acid, oxalic acid, maleic acid, fumaric acid, lactic acid, tartaric acid, adipic acid and benzoic acid. Other utilizable acids are described in Fortschritte der Arzneimittelforschung [Advances in drug research], Volume 10, pages 224 ff., Birkhäuser Verlag, Basel and Stuttgart, 1966.

The organic moieties mentioned in the above definitions of the variables are - like the term halogen – collective terms for individual listings of the individual group members. The prefix C_n-C_m indicates in each case the possible number of carbon atoms in the group.

The term halogen denotes in each case fluorine, bromine, chlorine or iodine, in particular fluorine or chlorine.

C_1-C_4 Alkyl is a straight-chain or branched alkyl group having from 1 to 4 carbon atoms. Examples of an alkyl group are methyl, ethyl, n-propyl, iso-propyl, n-butyl, 2-butyl, iso-butyl or *tert*-butyl. C_2-C_4 Alkyl is ethyl, n-propyl, iso-propyl, n-butyl, 2-butyl, iso-butyl or *tert*-butyl. C_1-C_2 Alkyl is methyl or ethyl.

C_1-C_6 Alkyl is a straight-chain or branched alkyl group having from 1 to 6 carbon atoms. Examples include C_1-C_4 alkyl as mentioned above and also pentyl, 1-methylbutyl,

2-methylbutyl, 3-methylbutyl, 2,2-dimethylpropyl, 1-ethylpropyl, hexyl, 1,1-dimethylpropyl, 1,2-dimethylpropyl, 1-methylpentyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, 1,1-dimethylbutyl, 1,2-dimethylbutyl, 1,3-dimethylbutyl, 2,2-dimethylbutyl, 2,3-dimethylbutyl, 3,3-dimethylbutyl, 1-ethylbutyl, 2-ethylbutyl, 1,1,2-trimethylpropyl, 1,2,2-trimethylpropyl, 1-ethyl-1-methylpropyl and 1-ethyl-2-methylpropyl.

Fluorinated C_1-C_6 alkyl is a straight-chain or branched alkyl group having from 1 to 6, in particular 1 to 4 carbon atoms, wherein at least one, e.g. 1, 2, 3, 4 or all of the hydrogen atoms are replaced by a fluorine atoms such as in fluoromethyl, difluoromethyl, trifluoromethyl, (R)-1-fluoroethyl, (S)-1-fluoroethyl, 2-fluoroethyl, 1,1-difluoroethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, (R)-1-fluoropropyl, (S)-1-fluoropropyl, 2-fluoropropyl, 3-fluoropropyl, 1,1-difluoropropyl, 2,2-difluoropropyl, 3,3-difluoropropyl, 3,3,3-trifluoropropyl, (R)-2-fluoro-1-methylethyl, (S)-2-fluoro-1-methylethyl, (R)-2,2-difluoro-1-methylethyl, (S)-2,2-difluoro-1-methylethyl, (R)-1,2-difluoro-1-methylethyl, (S)-1,2-difluoro-1-methylethyl, (R)-2,2,2-trifluoro-1-methylethyl, (S)-2,2,2-trifluoro-1-methylethyl, 2-fluoro-1-(fluoromethyl)ethyl, 1-(difluoromethyl)-2,2-difluoroethyl, (R)-1-fluorobutyl, (S)-1-fluorobutyl, 2-fluorobutyl, 3-fluorobutyl, 4-fluorobutyl, 1,1-difluorobutyl, 2,2-difluorobutyl, 3,3-difluorobutyl, 4,4-difluorobutyl, 4,4,4-trifluorobutyl, etc.;

Branched C_3-C_6 alkyl is alkyl having 3 to 6 carbon atoms at least one being a secondary or tertiary carbon atom. Examples are isopropyl, tert.-butyl, 2- butyl, isobutyl, 2-pentyl, 2-hexyl, 3-methylpentyl, 1,1-dimethylbutyl, 1,2-dimethylbutyl 1-methyl-1-ethylpropyl.

C_1-C_6 Alkoxy is a straight-chain or branched alkyl group having from 1 to 6, in particular 1 to 4 carbon atoms, which is bound to the remainder of the molecule via an oxygen atom. Examples include methoxy, ethoxy, n-propoxy, isopropoxy, n-butoxy, 2-butoxy, iso-butoxy, tert.-butoxy pentyloxy, 1-methylbutoxy, 2-methylbutoxy, 3-methylbutoxy, 2,2-dimethylpropoxy, 1-ethylpropoxy, hexyloxy, 1,1-dimethylpropoxy, 1,2-dimethylpropoxy, 1-methylpentyloxy, 2-methylpentyloxy, 3-methylpentyloxy, 4-methylpentyloxy, 1,1-dimethylbutyloxy, 1,2-dimethylbutyloxy, 1,3-dimethylbutyloxy, 2,2-dimethylbutyloxy, 2,3-dimethylbutyloxy, 3,3-dimethylbutyloxy, 1-ethylbutyloxy, 2-ethylbutyloxy, 1,1,2-trimethylpropoxy, 1,2,2-trimethylpropoxy, 1-ethyl-1-methylpropoxy and 1-ethyl-2-methylpropoxy;

Fluorinated C_1-C_6 alkoxy is a straight-chain or branched alkoxy group having from 1 to 6, in particular 1 to 4 carbon atoms, wherein at least one, e.g. 1, 2, 3, 4 or all of the hydrogen atoms are replaced by a fluorine atoms such as in fluoromethoxy, difluoromethoxy, trifluoromethoxy, (R)-1-fluoroethoxy, (S)-1-fluoroethoxy, 2-fluoroethoxy, 1,1-difluoroethoxy, 2,2-difluoroethoxy, 2,2,2-trifluoroethoxy, (R)-1-fluoropropoxy, (S)-1-fluoropropoxy, 2-fluoropropoxy, 3-fluoropropoxy, 1,1-difluoropropoxy, 2,2-difluoropropoxy, 3,3-difluoropropoxy, 3,3,3-trifluoropropoxy, (R)-2-fluoro-1-methylethoxy, (S)-2-fluoro-1-methylethoxy, (R)-2,2-difluoro-1-methylethoxy, (S)-2,2-difluoro-1-methylethoxy, (R)-1,2-difluoro-1-methylethoxy, (S)-1,2-difluoro-1-methylethoxy, (R)-2,2,2-trifluoro-1-methylethoxy, (S)-2,2,2-trifluoro-1-methylethoxy, 2-fluoro-1-(fluoromethyl)ethoxy, 1-(difluoromethyl)-2,2-difluoroethoxy, (R)-1-fluorobutoxy, (S)-1-fluorobutoxy, 2-fluorobutoxy, 3-fluorobutoxy, 4-fluorobutoxy, 1,1-difluorobutoxy, 2,2-difluorobutoxy, 3,3-difluorobutoxy, 4,4-difluorobutoxy, 4,4,4-trifluorobutoxy, etc.;

C_1-C_6-Hydroxyalkyl is an alkyl radical having from 1 to 6 carbon atoms as defined above, wherein one hydrogen atom is replaced by hydroxy. Examples comprise hydroxymethyl, 2-hydroxyethyl, 1-hydroxyethyl, 3-hydroxypropyl, 2-hydroxypropyl, 1-methyl-1-hydroxyethyl and the like.

C_1-C_6-Hydroxyalkoxy is an alkoxy radical having from 1 to 6, preferably from 2 to 4 carbon atoms as defined above, wherein one hydrogen atom is replaced by hydroxy. Examples comprise 2-hydroxyethyl, 3-hydroxypropyl, 2-hydroxypropyl, 1-methyl-2-hydroxyethyl and the like.

C_1-C_6-Alkoxy-C_1-C_4-alkyl is an alkyl radical having from 1 to 4 carbon atoms as defined above, wherein one hydrogen atom is replaced by C_1-C_6 alkoxy. Examples comprise methoxymethyl, 2-methoxyethyl, 1-methoxyethyl, 3-methoxypropyl, 2-methoxypropyl, 1-methyl-1-methoxyethyl, ethoxymethyl, 2-ethoxyethyl, 1-ethoxyethyl, 3-ethoxypropyl, 2-ethoxypropyl, 1-methyl-1-ethoxyethyl and the like.

C_1-C_6-Alkoxy-C_1-C_4-alkoxy is an alkoxy radical having from 1 to 4 carbon atoms as defined above, wherein one hydrogen atom is replaced by C_1-C_6 alkoxy. Examples comprise methoxymethoxy, 2-methoxyethoxy, 1-methoxyethoxy, 3-methoxypropoxy, 2-methoxypropoxy, 1-methyl-1-methoxyethoxy, ethoxymethoxy, 2-ethoxyethoxy, 1-ethoxyethoxy, 3-ethoxypropoxy, 2-ethoxypropoxy, 1-methyl-1-ethoxyethoxy and the like.

C_1-C_6-Alkylcarbonyl is a radical of the formula R-C(O)-, wherein R is an alkyl radical having from 1 to 6 carbon atoms as defined above. Examples comprise acetyl, propionyl, n-butylryl, 2-methylpropionyl, pivalyl and the like.

C_1-C_6-Alkylcarbonylamino is a radical of the formula R-C(O)-NH-, wherein R is an alkyl radical having from 1 to 6 carbon atoms as defined above. Examples comprise acetamido, propionamido, n-butyramido, 2-methylpropionamido, 2,2-dimethylpropionamido and the like.

C_1-C_6 Alkylcarbonyloxy is a radical of the formula R-C(O)-O-, wherein R is an alkyl radical having from 1 to 6 carbon atoms as defined above. Examples comprise acetyloxy, propionyloxy, n-butyryloxy, 2-methylpropionyloxy, 2,2-dimethylpropionyloxy and the like.

C_1-C_6 Alkoxycarbonyl is a radical of the formula RO-C(O)-, wherein R is an alkyl radical having from 1 to 6 carbon atoms as defined above. Examples comprise methyloxycarbonyl, ethyloxycarbonyl, propyloxycarbonyl, isopropyloxycarbonyl and the like.

C_1-C_6 Alkylthio (also termed as C_1-C_6 alkylsulfanyl) is a radical of the formula R-S-, wherein R is an alkyl radical having from 1 to 6 carbon atoms as defined above. Examples comprise methylthio, ethylthio, propylthio, butylthio, pentylthio, 1-methylbutylthio, 2-methylbutylthio, 3-methylbutylthio, 2,2-dimethylpropylthio, 1-ethylpropylthio, hexylthio, 1,1-dimethylpropylthio, 1,2-dimethylpropylthio, 1-methylpentylthio, 2-methylpentylthio, 3-methylpentylthio, 4-methylpentylthio, 1,1-dimethylbutylthio, 1,2-dimethylbutylthio, 1,3-dimethylbutylthio, 2,2-dimethylbutylthio, 2,3-dimethylbutylthio, 3,3-dimethylbutylthio, 1-ethylbutylthio, 2-ethylbutylthio, 1,1,2-trimethylpropylthio, 1,2,2-trimethylpropylthio, 1-ethyl-1-methylpropyl and 1-ethyl-2-methylpropyl.

C_1-C_6 Alkylsulfinyl is a radical of the formula R-S(O)-, wherein R is an alkyl radical having from 1 to 6 carbon atoms as defined above. Examples comprise methylsulfinyl, ethylsulfinyl, propylsulfinyl, butylsulfinyl, pentylsulfinyl, 1-methylbutylsulfinyl, 2-methylbutylsulfinyl, 3-methylbutylsulfinyl, 2,2-dimethylpropylsulfinyl, 1-ethylpropylsulfinyl, hexylsulfinyl, 1,1-dimethylpropylsulfinyl, 1,2-dimethylpropylsulfinyl, 1-methylpentylsulfinyl, 2-methylpentylsulfinyl, 3-methylpentylsulfinyl, 4-methylpentylsulfinyl, 1,1-dimethylbutylsulfinyl, 1,2-dimethylbutylsulfinyl, 1,3-dimethylbutylsulfinyl, 2,2-dimethylbutylsulfinyl, 2,3-dimethylbutylsulfinyl, 3,3-dimethylbutylsulfinyl, 1-ethylbutylsulfinyl, 2-ethylbutylsulfinyl, 1,1,2-

trimethylpropylsulfinyl, 1,2,2-trimethylpropylsulfinyl, 1-ethyl-1-methylpropyl and 1-ethyl-2-methylpropyl.

C_1-C_6 Alkylsulfonyl is a radical of the formula R-S(O)$_2$-, wherein R is an alkyl radical having from 1 to 6 carbon atoms as defined above. Examples comprise methylsulfonyl, ethylsulfonyl, propylsulfonyl, butylsulfonyl, pentylsulfonyl, 1-methylbutylsulfonyl, 2-methylbutylsulfonyl, 3-methylbutylsulfonyl, 2,2-dimethylpropylsulfonyl, 1-ethylpropylsulfonyl, hexylsulfonyl, 1,1-dimethylpropylsulfonyl, 1,2-dimethylpropylsulfonyl, 1-methylpentylsulfonyl, 2-methylpentylsulfonyl, 3-methylpentylsulfonyl, 4-methylpentylsulfonyl, 1,1-dimethylbutylsulfonyl, 1,2-dimethylbutylsulfonyl, 1,3-dimethylbutylsulfonyl, 2,2-dimethylbutylsulfonyl, 2,3-dimethylbutylsulfonyl, 3,3-dimethylbutylsulfonyl, 1-ethylbutylsulfonyl, 2-ethylbutylsulfonyl, 1,1,2-trimethylpropylsulfonyl, 1,2,2-trimethylpropylsulfonyl, 1-ethyl-1-methylpropyl and 1-ethyl-2-methylpropyl.

Fluorinated C_1-C_6 alkylcarbonyl is a radical of the formula R-C(O)-, wherein R is a fluorinated alkyl radical having from 1 to 6 carbon atoms as defined above. Examples comprise fluoroacetyl, difluoroacetyl, trifluoroacetyl, (R)-1-fluoroethylcarbonyl, (S)-1-fluoroethylcarbonyl, 2-fluoroethylcarbonyl, 1,1-difluoroethylcarbonyl, 2,2-difluoroethylcarbonyl, 2,2,2-trifluoroethylcarbonyl, (R)-1-fluoropropylcarbonyl, (S)-1-fluoropropylcarbonyl, 2-fluoropropylcarbonyl, 3-fluoropropylcarbonyl, 1,1-difluoropropylcarbonyl, 2,2-difluoropropylcarbonyl, 3,3-difluoropropylcarbonyl, 3,3,3-trifluoropropylcarbonyl, (R)-2-fluoro-1-methylethylcarbonyl, (S)-2-fluoro-1-methylethylcarbonyl, (R)-2,2-difluoro-1-methylethylcarbonyl, (S)-2,2-difluoro-1-methylethylcarbonyl, (R)-1,2-difluoro-1-methylethylcarbonyl, (S)-1,2-difluoro-1-methylethylcarbonyl, (R)-2,2,2-trifluoro-1-methylethylcarbonyl, (S)-2,2,2-trifluoro-1-methylethylcarbonyl, 2-fluoro-1-(fluoromethyl)ethylcarbonyl, 1-(difluoromethyl)-2,2-difluoroethylcarbonyl, (R)-1-fluorobutylcarbonyl, (S)-1-fluorobutylcarbonyl, 2-fluorobutylcarbonyl, 3-fluorobutylcarbonyl, 4-fluorobutylcarbonyl, 1,1-difluorobutylcarbonyl, 2,2-difluorobutylcarbonyl, 3,3-difluorobutylcarbonyl, 4,4-difluorobutylcarbonyl, 4,4,4-trifluorobutylcarbonyl, etc..

Fluorinated C_1-C_6 alkylcarbonylamino is a radical of the formula R-C(O)-NH-, wherein R is a fluorinated alkyl radical having from 1 to 6 carbon atoms as defined above. Examples comprise fluoroacetamido, difluoroacetamido, trifluoroacetamido, (R)-1-fluoroethylcarbonylamino, (S)-1-fluoroethylcarbonylamino, 2-fluoroethylcarbonylamino, 1,1-difluoroethylcarbonylamino, 2,2-difluoroethylcarbonylamino, 2,2,2-trifluoroethyl-

carbonylamino, (R)-1-fluoropropylcarbonylamino, (S)-1-fluoropropylcarbonylamino, 2-fluoropropylcarbonylamino, 3-fluoropropylcarbonylamino, 1,1-difluoropropylcarbonylamino, 2,2-difluoropropylcarbonylamino, 3,3-difluoropropylcarbonylamino, 3,3,3-trifluoropropylcarbonylamino, (R)-2-fluoro-1-methylethylcarbonylamino, (S)-2-fluoro-1-methylethylcarbonylamino, (R)-2,2-difluoro-1-methylethylcarbonylamino, (S)-2,2-difluoro-1-methylethylcarbonylamino, (R)-1,2-difluoro-1-methylethylcarbonylamino, (S)-1,2-difluoro-1-methylethylcarbonylamino, (R)-2,2,2-trifluoro-1-methylethylcarbonylamino, (S)-2,2,2-trifluoro-1-methylethylcarbonylamino, 2-fluoro-1-(fluoromethyl)ethylcarbonylamino, 1-(difluoromethyl)-2,2-difluoroethylcarbonylamino, (R)-1-fluorobutylcarbonylamino, (S)-1-fluorobutylcarbonylamino, 2-fluorobutylcarbonylamino, 3-fluorobutylcarbonylamino, 4-fluorobutylcarbonylamino, 1,1-difluorobutylcarbonylamino, 2,2-difluorobutylcarbonylamino, 3,3-difluorobutylcarbonylamino, 4,4-difluorobutylcarbonylamino, 4,4,4-trifluorobutylcarbonylamino, etc..

Fluorinated C_1-C_6 alkylcarbonyloxy is a radical of the formula R-C(O)-O-, wherein R is a fluorinated alkyl radical having from 1 to 6 carbon atoms as defined above fluoroacetyl, difluoroacetyl, trifluoroacetyl, (R)-1-fluoroethylcarbonyloxy, (S)-1-fluoroethylcarbonyloxy, 2-fluoroethylcarbonyloxy, 1,1-difluoroethylcarbonyloxy, 2,2-difluoroethylcarbonyloxy, 2,2,2-trifluoroethylcarbonyloxy, (R)-1-fluoropropylcarbonyloxy, (S)-1-fluoropropylcarbonyloxy, 2-fluoropropylcarbonyloxy, 3-fluoropropylcarbonyloxy, 1,1-difluoropropylcarbonyloxy, 2,2-difluoropropylcarbonyloxy, 3,3-difluoropropylcarbonyloxy, 3,3,3-trifluoropropylcarbonyloxy, (R)-2-fluoro-1-methylethylcarbonyloxy, (S)-2-fluoro-1-methylethylcarbonyloxy, (R)-2,2-difluoro-1-methylethylcarbonyloxy, (S)-2,2-difluoro-1-methylethylcarbonyloxy, (R)-1,2-difluoro-1-methylethylcarbonyloxy, (S)-1,2-difluoro-1-methylethylcarbonyloxy, (R)-2,2,2-trifluoro-1-methylethylcarbonyloxy, (S)-2,2,2-trifluoro-1-methylethylcarbonyloxy, 2-fluoro-1-(fluoromethyl)ethylcarbonyloxy, 1-(difluoromethyl)-2,2-difluoroethylcarbonyloxy, (R)-1-fluorobutylcarbonyloxy, (S)-1-fluorobutylcarbonyloxy, 2-fluorobutylcarbonyloxy, 3-fluorobutylcarbonyloxy, 4-fluorobutylcarbonyloxy, 1,1-difluorobutylcarbonyloxy, 2,2-difluorobutylcarbonyloxy, 3,3-difluorobutylcarbonyloxy, 4,4-difluorobutylcarbonyloxy, 4,4,4-trifluorobutylcarbonyloxy, etc..

Fuorinated C_1-C_6 alkylthio (also termed as fluorinated C_1-C_6-alkylsulfanyl) is a radical of the formula R-S-, wherein R is a fluorinated alkyl radical having from 1 to 6 carbon atoms as defined above. Examples comprise fluoromethylthio, difluoromethylthio, trifluoromethylthio, (R)-1-fluoroethylthio, (S)-1-fluoroethylthio, 2-fluoroethylthio, 1,1-difluoroethylthio, 2,2-difluoroethylthio, 2,2,2-trifluoroethylthio, (R)-1-fluoropropylthio,

(S)-1-fluoropropylthio, 2-fluoropropylthio, 3-fluoropropylthio, 1,1-difluoropropylthio, 2,2-difluoropropylthio, 3,3-difluoropropylthio, 3,3,3-trifluoropropylthio, (R)-2-fluoro-1-methylethylthio, (S)-2-fluoro-1-methylethylthio, (R)-2,2-difluoro-1-methylethylthio, (S)-2,2-difluoro-1-methylethylthio, (R)-1,2-difluoro-1-methylethylthio, (S)-1,2-difluoro-1-methylethylthio, (R)-2,2,2-trifluoro-1-methylethylthio, (S)-2,2,2-trifluoro-1-methylethylthio, 2-fluoro-1-(fluoromethyl)ethylthio, 1-(difluoromethyl)-2,2-difluoroethylthio, (R)-1-fluorobutylthio, (S)-1-fluorobutylthio, 2-fluorobutylthio, 3-fluorobutylthio, 4-fluorobutylthio, 1,1-difluorobutylthio, 2,2-difluorobutylthio, 3,3-difluorobutylthio, 4,4-difluorobutylthio, 4,4,4-trifluorobutylthio, etc..

Fluorinated C_1-C_6 alkylsulfinyl is a radical of the formula R-S(O)-, wherein R is a fluorinated alkyl radical having from 1 to 6 carbon atoms as defined above. Examples comprise fluoromethylsulfinyl, difluoromethylsulfinyl, trifluoromethylsulfinyl, (R)-1-fluoroethylsulfinyl, (S)-1-fluoroethylsulfinyl, 2-fluoroethylsulfinyl, 1,1-difluoroethylsulfinyl, 2,2-difluoroethylsulfinyl, 2,2,2-trifluoroethylsulfinyl, (R)-1-fluoropropylsulfinyl, (S)-1-fluoropropylsulfinyl, 2-fluoropropylsulfinyl, 3-fluoropropylsulfinyl, 1,1-difluoropropylsulfinyl, 2,2-difluoropropylsulfinyl, 3,3-difluoropropylsulfinyl, 3,3,3-trifluoropropylsulfinyl, (R)-2-fluoro-1-methylethylsulfinyl, (S)-2-fluoro-1-methylethylsulfinyl, (R)-2,2-difluoro-1-methylethylsulfinyl, (S)-2,2-difluoro-1-methylethylsulfinyl, (R)-1,2-difluoro-1-methylethylsulfinyl, (S)-1,2-difluoro-1-methylethylsulfinyl, (R)-2,2,2-trifluoro-1-methylethylsulfinyl, (S)-2,2,2-trifluoro-1-methylethylsulfinyl, 2-fluoro-1-(fluoromethyl)ethylsulfinyl, 1-(difluoromethyl)-2,2-difluoroethylsulfinyl, (R)-1-fluorobutylsulfinyl, (S)-1-fluorobutylsulfinyl, 2-fluorobutylsulfinyl, 3-fluorobutylsulfinyl, 4-fluorobutylsulfinyl, 1,1-difluorobutylsulfinyl, 2,2-difluorobutylsulfinyl, 3,3-difluorobutylsulfinyl, 4,4-difluorobutylsulfinyl, 4,4,4-trifluorobutylsulfinyl, etc..

Fluorinated C_1-C_6 alkylsulfonyl is a radical of the formula R-S$(O)_2$-, wherein R is a fluorinated alkyl radical having from 1 to 6 carbon atoms as defined above. Examples comprise fluoromethylsulfonyl, difluoromethylsulfonyl, trifluoromethylsulfonyl, (R)-1-fluoroethylsulfonyl, (S)-1-fluoroethylsulfonyl, 2-fluoroethylsulfonyl, 1,1-difluoroethylsulfonyl, 2,2-difluoroethylsulfonyl, 2,2,2-trifluoroethylsulfonyl, (R)-1-fluoropropylsulfonyl, (S)-1-fluoropropylsulfonyl, 2-fluoropropylsulfonyl, 3-fluoropropylsulfonyl, 1,1-difluoropropylsulfonyl, 2,2-difluoropropylsulfonyl, 3,3-difluoropropylsulfonyl, 3,3,3-trifluoropropylsulfonyl, (R)-2-fluoro-1-methylethylsulfonyl, (S)-2-fluoro-1-methylethylsulfonyl, (R)-2,2-difluoro-1-methylethylsulfonyl, (S)-2,2-difluoro-1-methylethylsulfonyl, (R)-1,2-difluoro-1-methylethylsulfonyl, (S)-1,2-difluoro-1-

methylethylsulfonyl, (R)-2,2,2-trifluoro-1-methylethylsulfonyl, (S)-2,2,2-trifluoro-1-methylethylsulfonyl, 2-fluoro-1-(fluoromethyl)ethylsulfonyl, 1-(difluoromethyl)-2,2-difluoroethylsulfonyl, (R)-1-fluorobutylsulfonyl, (S)-1-fluorobutylsulfonyl, 2-fluorobutylsulfonyl, 3-fluorobutylsulfonyl, 4-fluorobutylsulfonyl, 1,1-difluorobutylsulfonyl, 2,2-difluorobutylsulfonyl, 3,3-difluorobutylsulfonyl, 4,4-difluorobutylsulfonyl, 4,4,4-trifluorobutylsulfonyl, etc..

C_3-C_6 Cycloalkyl is a cycloaliphatic radical having from 3 to 6 C atoms, such as cyclopropyl, cyclobutyl and cyclopentyl. The cycloalkyl radical may be unsubstituted or may carry 1, 2, 3 or 4 C_1-C_4 alkyl radicals, preferably a methyl radical. One alkyl radical is preferably located in the 1-position of the cycloalkyl radical, such as in 1-methylcyclopropyl or 1-methylcyclobutyl.

Fluorinated C_3-C_6 cycloalkyl is a cycloaliphatic radical having from 3 to 6 C atoms, such as cyclopropyl, cyclobutyl and cyclopentyl, wherein at least one, e.g. 1, 2, 3, 4 or all of the hydrogen atoms are replaced by a fluorine atoms such as in 1-fluorocyclopropyl, 2-fluorocyclopropyl, 2,2-difluorocyclopropyl, 1,2-difluorocyclopropyl, 2,3-difluorocyclopropyl, pentafluorocyclopropyl, 1-fluorocyclobutyl, 2-fluorocyclobutyl, 3-fluorocyclobutyl, 2,2-difluorocyclobutyl, 3,3-difluorocyclobutyl, 1,2-difluorocyclobutyl, 1,3-difluorocyclobutyl, 2,3-difluorocyclobutyl, 2,4-difluorocyclobutyl, or 1,2,2-trifluorocyclobutyl.

C_2-C_6-Alkenyl is a singly unsaturated hydrocarbon radical having 2, 3, 4, 5 or 6 C-atoms, e.g. vinyl, allyl (2-propen-1-yl), 1-propen-1-yl, 2-propen-2-yl, methallyl (2-methylprop-2-en-1-yl) and the like. C_3-C_4-Alkenyl is, in particular, allyl, 1-methylprop-2-en-1-yl, 2-buten-1-yl, 3-buten-1-yl, methallyl, 2-penten-1-yl, 3-penten-1-yl, 4-penten-1-yl, 1-methylbut-2-en-1-yl or 2-ethylprop-2-en-1-yl.

Fluorinated C_2-C_6-alkenyl is a singly unsaturated hydrocarbon radical having 2, 3, 4, 5 or 6 C-atoms, I, wherein at least one, e.g. 1, 2, 3, 4 or all of the hydrogen atoms are replaced by a fluorine atoms such as in 1-fluorovinyl, 2-fluorovinyl, 2,2-fluorovinyl, 3,3,3-fluoropropenyl, 1,1-difluoro-2-propenyl 1-fluoro-2-propenyl etc.

3- to 7-membered heterocyclic radicals comprise saturated heterocyclic radicals, which generally have 3-, 4-, 5-, 6- or 7 ring-forming atoms (ring members), unsaturated non-aromatic heterocyclic radicals, which generally have 5-, 6- or 7 ring forming atoms, and heteroaromatic radicals, which generally have 5-, 6- or 7 ring forming atoms. The het-

erocylcic radicals may be bound via a carbon atom (C-bound) or an nitrogen atom (N-bound). Preferred heterocyclic radicals comprise 1 nitrogen atom as ring member atom and optionally 1, 2 or 3 further heteroatoms as ring members, which are selected, independently of each other from O, S and N. Likewise preferred heterocyclic radicals comprise 1 heteroatom as ring member, which is selected from O, S and N, and optionally 1, 2 or 3 further nitrogen atoms as ring members. The heterocyclic radicals may also comprise 1 to 3 heteroatom-containing groups as ring members, like CO, SO and SO_2. Examples therefore are the below-mentioned oxo-containing heterocycles.

Examples of 3- to 7-membered, saturated heterocyclic radicals comprise 1- or 2-aziridinyl, 1-, 2- or 3-azetidinyl, 1-, 2- or 3-pyrrolidinyl, 2- or 3-oxopyrrolidinyl, 1-, 2-, 3- or 4-piperidinyl, 2-, 3- or 4-morpholinyl, 2-, 3- or 4-thiomorpholinyl, 1-oxo-thiomorpholinyl, 1,1-dioxothiomorpholinyl, 1-, 2- or 3-piperazinyl, 2-, 3- 4- or 5-oxazolidinyl, 2-, 4- or 5-oxo-oxazolidinyl, 2-, 3-, 4- or 5-isoxazolidinyl, 2-oxiranyl, 2- or 3-oxetanyl, 2- or 3-oxolanyl, 2-, 3- or 4-oxanyl, 1,3-dioxolan-2- or 4-yl and the like, which may be unsubstituted or which may carry 1, 2 or 3 of the aforementioned radicals R^a and/or hydroxy.

Unsaturated non-aromatic heterocyclic radicals are heterocyclic radicals which generally have 5-, 6- or 7 ring-forming atoms and which have 1 or 2 double bonds that do not form an aromatic π-electron system. Examples are 2,3-dihydropyrrolyl, 3,4-dihydropyrrolyl, 2,3-dihydrofuranyl, 3,4-dihydrofuranyl, 2,3-dihydrothiophenyl, 3,4-dihydrothiophenyl, 1,2-dihydropyridinyl, 2,3-Dihydropyridiynl, 3,4-dihydropyridinyl, 1,2,3,4-tetrahydropyridinyl, 2,3,4,5-tetrahydropyridinyl, and the like.

5- or 6-membered heteroaromatic radicals are heteroaromatic cyclic radicals, wherein the cyclic radical has 5 or 6 atoms which form the ring (ring members) and wherein generally 1, 2, 3 or 4 ring member atoms are selected from O, S and N, the other ring member atoms being carbon atoms. The heteroaromatic radicals may be bound via a carbon atom (C-bound) or an nitrogen atom (N-bound). Preferred heteroaromatic radicals comprise 1 nitrogen atom as ring member atom and optionally 1, 2 or 3 further heteroatoms as ring members, which are selected, independently of each other from O, S and N. Likewise preferred heteroaromatic radicals comprise 1 heteroatom as ring member, which is selected from O, S and N, and optionally 1, 2 or 3 further nitrogen atoms as ring members. Examples of 5- or 6-membered heteroaromatic radicals comprise 2-, 3-, or 4-pyridyl, 2-, 4- or 5-pyrimidinyl, pyrazinyl, 3- or 4-pyridazinyl, 2- or 3-

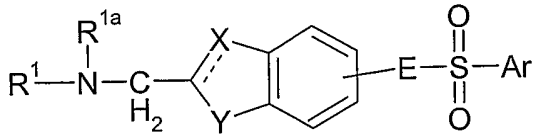
thienyl, 2- or 3-furyl, 1-, 2- or 3-pyrrolyl, 1-, 2- or 4-imidazolyl, 1-, 3- or 4-pyrazolyl, 1- or 3-[1,2,4]-triazolyl, 1- or 4-[1,2,3]-triazolyl, 1-, 2- or 5-tetrazolyl, 2-, 3- or 5-oxazolyl, 3-, 4- or 5-isoxazolyl, 2-, 3- or 5-thiazolyl, 3-, 4- or 5-isothiazolyl, 4- or 5-[1,2,3]-oxadiazolyl, [1,2,5]-oxadiazolyl (= furazanyl), 3- or 5-[1,2,4]-oxadizolyl, [1,3,4]-oxadizolyl, 4- or 5-[1,2,3]-thiadiazolyl, [1,2,5]-thiadiazolyl, 3- or 5-[1,2,4]-thiadizolyl or [1,3,4]-thiadiazolyl, which may be unsubstituted or which may carry 1, 2 or 3 of the aforementioned radicals R^a and/or hydroxy.

Examples of a phenyl ring fused to a saturated or unsaturated 5- or 6-membered carbocyclic or heterocyclic ring comprise indenyl, indanyl, naphthyl, 1,2- or 2,3-dihydronaphthyl, tetralin, benzofuranyl, 2,3-dihydrobenzofuranyl, benzothienyl, indolyl, indazolyl, benzimidazolyl, benzoxathiazolyl, benzoxadiazolyl, benzothiadiazolyl, benzoxazinyl, dihydrobenzoxazinyl, chinolinyl, isochinolinyl, tetrahydroisochinolinyl, chromenyl, chromanyl and the like, which may be unsubstituted or which may carry 1, 2 or 3 of the aforementioned radicals R^a. This fused system may be bonded to the remainder of the molecule (more precisely to the sulfonyl group) via carbon atoms of the phenyl moiety or via ring atoms (C- or N-atoms) of the ring fused to phenyl.

If R^6 and R^7 form together with N a 4-, 5- or 6-membered ring, examples for this type of radical comprise, apart from the above-defined 5- or 6-membered heteroaromatic radicals containig at least one N atom as ring member, the N-atom further being bound to Ar (like in pyrrol-1-yl, pyrazol-1-yl, imidazol-1-yl, [1,2,3]-triazol-1-yl and the like), azetidinyl, azetinyl, pyrrolinyl, pyrrolidinyl, pyrazolinyl, pyrazolidinyl, imidazolinyl, imidazolidinyl, oxazolinyl, oxazolidinyl, piperidinyl, piperazinyl, morpholinyl and the like.

A skilled person will appreciate that the radical -E-SO_2-Ar may be bound to any of the carbon atoms of the phenyl part of the bicyclic moiety in formula I, thereby substituting a hydrogen atom. Specifically, the radical -E-SO_2-Ar is bound to a carbon atom, which is not adjacent to a bridgehead carbon atom of the bicyclic moiety. A skilled person will further appreciate that for Y being $CHR^{2a}CH_2$ or $CHR^{2a}CH_2CH_2$ the CHR^{2a} moiety is attached to the carbon atom that carries the $CH_2NR^1R^{1a}$ radical. Similarly, for X being CHR^2CH_2 the CHR^2 moiety is attached to the carbon atom that carries the $CH_2NR^1R^{1a}$ radical. A skilled person will also appreciate that for X being N or C-R^2 the ---- indicates a double bond while for X being N-R^2, CHR^2 or CHR^2CH_2 the ---- indicates a single bond. A skilled person will also appreciate that for X being absent, i.e. a covalent bond, the carbon atom, to which CH_2-NR^1R^{1a} is bound, is linked to the benzene ring via a covalent (single) bond.

In a specific embodiment, the compounds of the invention are compounds of formula (I.1)



(I.1)

wherein

Ar is phenyl or an aromatic 5- or 6-membered C-bound heteroaromatic radical, comprising 1 nitrogen atom as ring member and 0, 1, 2 or 3 further heteroatoms, independently of each other, selected from O, S and N, as ring members, wherein Ar may carry 1, 2 or 3 radicals R^a which are, independently of each other, selected from the group consisting of halogen, C_1-C_6-alkyl, C_3-C_6-cycloalkyl, C_1-C_6-alkoxy, fluorinated C_1-C_6-alkyl, fluorinated C_3-C_6-cycloalkyl, fluorinated C_1-C_6-alkoxy, NR^4R^5, 1-aziridinyl, azetidin-1-yl, pyrrolidin-1-yl or piperidin-1-yl, wherein the last four mentioned radicals may be fluorinated, a phenyl group and an aromatic 5- or 6-membered C-bound heteroaromatic radical, comprising 1 nitrogen atom as ring member and 0, 1, 2 or 3 further heteroatoms, independently of each other, selected from O, S and N, wherein the last two mentioned radicals may carry 1, 2, 3 or 4 radicals selected from Halogen and the radicals R^a;

R^4, R^5 independently of each other are selected from H, C_1-C_2-alkyl and fluorinated C_1-C_2-alkyl;

and X, Y, ---- , E, R^1, R^{1a}, R^2, R^{2a} and R^3 are as defined above.

Preferably, Ar is phenyl or an aromatic 5- or 6-membered C-bound heteroaromatic radical, comprising 1 nitrogen atom as ring member and 0, 1, 2 or 3 further heteroatoms, independently of each other, selected from O, S and N, as ring members which may be unsubstituted or which may carry 1, 2 or 3 of the aforementioned radicals R^a and/or R^b. Amongst these heteroaromatic radicals those are preferred, which comprise 1, 2 or 3 nitrogen atoms and no further heteroatom as ring members, or 1 or 2 nitrogen atoms and 1 atom, selected from O and S, as ring members. However, thienyl and furyl are likewise preferred. Particularly preferred radicals Ar are 2- or 3-thienyl, 2-, 3- or 4-pyridyl, 2-, 4- or 5-pyrimidinyl, 2-, 3-or 5-thiazolyl, 1,2,4-triazol-3-yl, 1,2,3-triazol-4-yl, 1,3,4-thiadiazol-2-yl, in particular 2-thienyl, 2-pyrimidinyl, 5-pyrimidinyl, 2-pyridinyl and

more particularly phenyl which may be unsubstituted or which may carry 1, 2 or 3 of the aforementioned radicals R^a.

Preferred radicals Ar are phenyl, 2- or 3-thienyl, 2-, 3- or 4-pyridyl, 2-, 4- or 5-pyrimidinyl, 2-, 3-or 5-thiazolyl, 1,2,4-triazol-3-yl, 1,2,3-triazol-4-yl, 1,3,4-thiadiazol-2-yl, in particular phenyl, 2-thienyl, 2-pyrimidinyl, 5-pyrimidinyl, 2-pyridinyl and more particularly phenyl.

Preferably the aromatic radical Ar carries one radical R^a and optionally one or two further radicals R^b selected from CN, OH, methyl, fluorinated methyl, halogen, in particular fluorine or chlorine.

The aforementioned 5-membered heteroaromatic radicals Ar carry preferably one radical R^a in the 3-position (related to the position of the SO_2-radical) and optionally one or two further radicals R^b, which are preferably selected from halogen, in particular fluorine or chlorine.

Phenyl and the aforementioned 6-membered heteroaromatic radicals Ar preferably carry one radical R^a in the 4-position (related to the position of the SO_2-radical) and optionally one or two further radicals R^b, which are preferably selected from halogen, in particular fluorine or chlorine.

In one preferred embodiment of the invention Ar is phenyl that carries a radical R^a in the 4-position of the phenyl ring and optionally 1 or 2 further radicals R^b, which are preferably selected from halogen, in particular from fluorine or chlorine. More preferably, Ar is phenyl that carries a radical R^a in the 4-position of the phenyl ring and no further radical.

In another preferred embodiment of the invention Ar is 2-pyrimidinyl that carries a radical R^a in the 5-position of the pyrimidine ring and optionally 1 or 2 further radicals R^b, which are preferably selected from halogen, in particular from fluorine or chlorine.

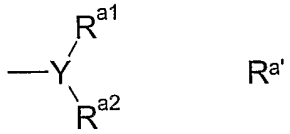
In another preferred embodiment of the invention Ar is 5-pyrimidinyl that carries a radical R^a in the 2-position of the pyrimidine ring and optionally 1 or 2 further radicals R^b, which are preferably selected from halogen, in particular from fluorine or chlorine.

In another preferred embodiment of the invention Ar is 2-thienyl that carries a radical R^a in the 3-position of the thiophene ring and optionally 1 or 2 further radicals R^b, which are preferably selected from halogen, in particular from fluorine or chlorine.

In another preferred embodiment of the invention, Ar is phenyl, which is fused to a 5-or 6-memberd heterocyclic or carbocylic ring as described above and which is unsubstituted or which may carry 1, 2 or 3 radicals R^a as given above. Preferably, this fused system is selected from indenyl, indanyl, naphthyl, tetralin, benzofuranyl, 2,3-dihydrobenzofuranyl, benzothienyl, indolyl, indazolyl, benzimidazolyl, benzoxathiazolyl, benzoxadiazolyl, benzothiadiazolyl, benzoxazinyl, dihydrobenzoxazinyl, chinolinyl, isochinolinyl, tetrahydroisochinolinyl, chromenyl, chromanyl and the like, which may be unsubstituted or which may carry 1, 2 or 3 of the aforementioned radicals R^a. Preferred substituents R^a for this fused system are selected from halogen, C_1-C_4-alkyl, fluorinated C_1-C_4-alkyl, C_1-C_4-alkoxy, fluorinated C_1-C_4-alkoxy, C_1-C_4-alkylcarbonyl and fluorinated C_1-C_4-alkylcarbonyl. More preferred substituents R^a for this fused system are selected from halogen, C_1-C_4-alkyl and fluorinated C_1-C_4-alkylcarbonyl.

In a more preferred embodiment of the invention, Ar is phenyl. Preferably, Ar is phenyl that carries a radical R^a in the 4-position of the phenyl ring and optionally 1 or 2 further radicals R^b, which are preferably selected from halogen, in particular from fluorine or chlorine. More preferably, Ar is phenyl that carries a radical R^a in the 4-position of the phenyl ring and no further radical.

In one preferred embodiment, the radical Ar carries one radical R^a, which has the formula $R^{a'}$



wherein

Y is N, CH or CF,

R^{a1} and R^{a2} are independently of each other selected from C_1-C_2-alkyl, in particular methyl, fluorinated C_1-C_2-alkyl, in particular fluoromethyl, difluoromethyl or trifluoromethyl, provided for Y being CH or CF one of the radicals R^{a1} or R^{a2} may also be hydrogen or fluorine, or

R^{a1} and R^{a2} form a radical $(CH_2)_m$ wherein 1 or 2 of the hydrogen atoms may be replaced by fluorine, hydroxy, oxo, C_1-C_2-alkyl or C_1-C_2-alkoxy, wherein one CH_2 moiety may be replaced by O, S, S=O, SO_2 or N-R^c, R^c being hydrogen or C_1-C_2-alkyl and wherein m is 2, 3, 4, 5 or 6, preferably 2, 3 or 4, in particular CH_2-CH_2, CHF-CH_2 CF_2-CH_2, CH_2-CH_2-CH_2, CHF-CH_2-CH_2, CF_2-CH_2-CH_2, CH_2-CHF-CH_2, CH_2-CF_2-CH_2.

In case R^{a1} and R^{a2} form a radical $(CH_2)_m$ it is preferred that 1 or 2 of the hydrogen atoms may be replaced by fluorine. Examples therefor are CH_2-CH_2, CHF-CH_2 CF_2-CH_2, CH_2-CH_2-CH_2, CHF-CH_2-CH_2, CF_2-CH_2-CH_2, CH_2-CHF-CH_2, and CH_2-CF_2-CH_2.

In case R^{a1} and R^{a2} are different from each other, the radical of the aforementioned formula R^a may have either (R)- or (S)-configuration with regard to the Y-moiety.

Examples for preferred radicals of the formula $R^{a'}$ comprise isopropyl, (R)-1-fluoroethyl, (S)-1-fluoroethyl, 2-fluoroethyl, 1,1-difluoroethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, (R)-1-fluoropropyl, (S)-1-fluoropropyl, (R)-2-fluoropropyl, (S)-2-fluoropropyl, 3-fluoropropyl, 1,1-difluoropropyl, 2,2-difluoropropyl, 3,3-difluoropropyl, 3,3,3-trifluoropropyl, (R)-2-fluoro-1-methylethyl, (S)-2-fluoro-1-methylethyl, (R)-2,2-difluoro-1-methylethyl, (S)-2,2-difluoro-1-methylethyl, (R)-1,2-difluoro-1-methylethyl, (S)-1,2-difluoro-1-methylethyl, (R)-2,2,2-trifluoro-1-methylethyl, (S)-2,2,2-trifluoro-1-methylethyl, 2-fluoro-1-(fluoromethyl)ethyl, 1-(difluoromethyl)-2,2-difluoroethyl, cyclopropyl, cyclobutyl, 1-fluorocyclopropyl, (R)- and (S)-2,2-difluorocyclopropyl, (R)- and (S)-2-fluorocyclopropyl.

Amongst the radicals of the formula $R^{a'}$ those are preferred which carry 1, 2, 3 or 4, in particular 1, 2 or 3 fluorine atoms.

Examples for alternatively preferred radicals of the formula $R^{a'}$ comprise 4-morpholinyl, 4-thiomorpholinyl, 4-(1,1-dioxo)thiomorpholinyl, piperazin-1-yl, 4-methylpiperazin-1-yl, azetidin-1-yl, 2-methylazetidin-1-yl, (S)-2-methylazetidin-1-yl, (R)-2-methylazetidin-1-yl, 3-fluoroazetidin-1-yl, 3-methoxyazetidin-1-yl, 3-hydroxyazetidin-1-yl, pyrrolidin-1-yl, pyrrolidin-2-yl, (S)-pyrrolidin-2-yl, (R)-pyrrolidin-2-yl, pyrrolidin-3-yl, (S)-pyrrolidin-3-yl, (R)-pyrrolidin-3-yl, 2-fluoropyrrolidin-1-yl, (S)-2-fluoropyrrolidin-1-yl, (R)-2-fluoropyrrolidin-1-yl, 3-fluoropyrrolidin-1-yl, (S)-3-fluoropyrrolidin-1-yl, (R)-3-fluoropyrrolidin-1-yl, 2,2-difluoropyrrolidin-1-yl, 3,3-difluoropyrrolidin-1-yl, 2-methylpyrrolidin-1-yl, (S)-2-methylpyrrolidin-1-yl, (R)-2-methylpyrrolidin-1-yl, 3-

methylpyrrolidin-1-yl, (S)-3-methylpyrrolidin-1-yl, (R)-3-methylpyrrolidin-1-yl, 1-methylpyrrolidin-2-yl, (S)-1-methylpyrrolidin-2-yl, (R)-1-methylpyrrolidin-2-yl, 1-methylpyrrolidin-3-yl, (S)-1-methylpyrrolidin-3-yl, (R)-1-methylpyrrolidin-3-yl, 2,2-dimethylpyrrolidin-1-yl, 3,3-dimethylpyrrolidin-1-yl, 2-trifluoromethylpyrrolidin-1-yl, (S)-2-trifluoromethylpyrrolidin-1-yl, (R)-2-trifluoromethylpyrrolidin-1-yl, 3-trifluoromethylpyrrolidin-1-yl, (S)-3-trifluoromethylpyrrolidin-1-yl, (R)-3-trifluoromethylpyrrolidin-1-yl, 2-oxopyrrolidin-1-yl, 2-oxo-oxazolidin-3-yl, piperidin-1-yl, 2-methylpiperidin-1-yl, (S)-2-methylpiperidin-1-yl and (R)-2-methylpiperidin-1-yl.

More preferably, $R^{a'}$ is selected from isopropyl and fluorinated isopropyl, like (R)-2-fluoro-1-methylethyl, (S)-2-fluoro-1-methylethyl, (R)-2,2-difluoro-1-methylethyl, (S)-2,2-difluoro-1-methylethyl, (R)-1,2-difluoro-1-methylethyl, (S)-1,2-difluoro-1-methylethyl, (R)-2,2,2-trifluoro-1-methylethyl, (S)-2,2,2-trifluoro-1-methylethyl, 2-fluoro-1-(fluoromethyl)ethyl and 1-(difluoromethyl)-2,2-difluoroethyl.

In another preferred embodiment Ar carries one radical R^a, which is selected from 5- or 6-membered heteroaromatic radicals having as ring members 1 heteroatom selected from O, S and N and which may further have 1, 2 or 3 nitrogen atoms as ring members, and wherein the 5- or 6-membered heteroaromatic radical may carry 1, 2 or 3 substituents selected from halogen, NO_2, NH_2, OH, CN, C_1-C_6-alkyl, C_3-C_6-cycloalkyl, C_1-C_6-alkoxy, fluorinated C_1-C_6-alkyl, fluorinated C_3-C_6-cycloalkyl, fluorinated C_1-C_6-alkoxy, C_1-C_6-hydroxyalkyl, C_1-C_4-alkoxy-C_2-C_4-alkyl, C_1-C_6-hydroxyalkoxy, C_1-C_4-alkoxy-C_2-C_4-alkoxy, C_1-C_6-alkylcarbonyl, C_1-C_6-alkylamino, di-C_1-C_6-alkylamino, C_1-C_6-alkylaminocarbonyl, di-C_1-C_6-alkylaminocarbonyl, fluorinated C_1-C_6-alkylcarbonyl, C_1-C_6-alkylcarbonylamino, fluorinated C_1-C_6-alkylcarbonylamino, C_1-C_6-alkylcarbonyloxy, fluorinated C_1-C_6-alkylcarbonyloxy, C_1-C_6-alkoxycarbonyl, C_1-C_6-alkylthio, fluorinated C_1-C_6-alkylthio, C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, fluorinated C_1-C_6-alkylsulfinyl and fluorinated C_1-C_6-alkylsulfonyl. Amongst these radicals R^a, preference is given to radicals selected from 2-, 3-, or 4-pyridyl, 2-, 4- or 5-pyrimidinyl, pyrazinyl, 3- or 4-pyridazinyl, 2- or 3-thienyl, 2- or 3-furyl, 1-, 2- or 3-pyrrolyl, 1-, 2- or 4-imidazolyl, 1-, 3- or 4-pyrazolyl, 1- or 3-[1,2,4]-triazolyl, 1- or 4-[1,2,3]-triazolyl, 1-, 2- or 5-tetrazolyl, 2-, 3- or 5-oxazolyl, 3-, 4- or 5-isoxazolyl, 2-, 3- or 5-thiazolyl, 3-, 4- or 5-isothiazolyl, 4- or 5-[1,2,3]-oxadiazolyl, [1,2,5]-oxadiazolyl (= furazanyl), 3- or 5-[1,2,4]-oxadizolyl, [1,3,4]-oxadizolyl, 4- or 5-[1,2,3]-thiadiazolyl, [1,2,5]-thiadiazolyl, 3- or 5-[1,2,4]-thiadizolyl or [1,3,4]-thiadiazolyl, in particular from 2- or 3-furanyl, 2- or 3-thienyl, 1-, 2- or 3-pyrrolyl, pyrazolyl, imidazolyl, oxazolyl, isoxazolyl, 1,3,4-thiadiazolyl, 1,2,4-triazolyl, 1,2,3-triazolyl and tetrazolyl, where the heteroaromatic radical may be

unsubstituted or may carry 1 to 3 substituents as given above. Preferred substituents on heteroaromatic R^a are selected from halogen, C_1-C_4-alkyl, C_1-C_4-alkoxy, fluorinated C_1-C_4-alkyl and fluorinated C_1-C_4-alkoxy.

In another preferred embodiment of the invention, Ar carries 1 radical R^a which selected from the group consisting of C_1-C_6-alkenyl, fluorinated C_1-C_6-alkenyl, C_1-C_6-hydroxyalkyl, C_1-C_6-alkoxy-C_1-C_4-alkyl, C_1-C_6-hydroxyalkoxy, C_1-C_6-alkoxy-C_1-C_4-alkoxy, COOH, $CH_2NR^4R^5$, ONR^4R^5, $NHC(O)NR^4R^5$, $C(O)NR^4R^5$, $SO_2NR^4R^5$, C_1-C_6-alkylcarbonyl, fluorinated C_2-C_6-alkylcarbonyl, C_1-C_6-alkylcarbonylamino, fluorinated C_1-C_6-alkylcarbonylamino, C_1-C_6-alkylcarbonyloxy, fluorinated C_1-C_6-alkylcarbonyloxy, C_1-C_6-alkoxycarbonyl, C_1-C_6-alkylthio, fluorinated C_1-C_6-alkylthio, C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, fluorinated C_1-C_6-alkylsulfinyl, fluorinated C_1-C_6-alkylsulfonyl, phenylsulfonyl, phenoxy, benzyloxy and a 5-or 6-membered N-bound heteroaromatic radical, wherein the four last mentioned radicals may carry 1, 2, 3 or 4 radicals selected from halogen, NO_2, NH_2, OH, CN, C_1-C_6-alkyl, C_3-C_6-cycloalkyl, C_1-C_6-alkoxy, fluorinated C_1-C_6-alkyl, fluorinated C_3-C_6-cycloalkyl, fluorinated C_1-C_6-alkoxy, C_1-C_6-hydroxyalkyl, C_1-C_4-alkoxy-C_2-C_4-alkyl, C_1-C_6-hydroxyalkoxy, C_1-C_4-alkoxy-C_2-C_4-alkoxy, C_1-C_6-alkylcarbonyl, C_1-C_6-alkylamino, di-C_1-C_6-alkylamino, C_1-C_6-alkylaminocarbonyl, di-C_1-C_6-alkylaminocarbonyl, fluorinated C_1-C_6-alkylcarbonyl, C_1-C_6-alkylcarbonylamino, fluorinated C_1-C_6-alkylcarbonylamino, C_1-C_6-alkylcarbonyloxy, fluorinated C_1-C_6-alkylcarbonyloxy, C_1-C_6-alkoxycarbonyl, C_1-C_6-alkylthio, fluorinated C_1-C_6-alkylthio, C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, fluorinated C_1-C_6-alkylsulfinyl and fluorinated C_1-C_6-alkylsulfonyl.

In another preferred embodiment, Ar carries 1 radical R^a which selected from fluorinated C_1-C_4-alkoxy, more preferably from fluorinated C_1-C_2-alkoxy and in particular from OCH_2F, $OCHF_2$ and OCF_3.

In a more preferred embodiment of the invention, Ar carries 1 radical R^a which selected from a radical of the formula $R^{a'}$, in particular isopropyl or fluorinated isopropyl like (R)-2-fluoro-1-methylethyl, (S)-2-fluoro-1-methylethyl, (R)-2,2-difluoro-1-methylethyl, (S)-2,2-difluoro-1-methylethyl, (R)-1,2-difluoro-1-methylethyl, (S)-1,2-difluoro-1-methylethyl, (R)-2,2,2-trifluoro-1-methylethyl, (S)-2,2,2-trifluoro-1-methylethyl, 2-fluoro-1-(fluoromethyl)ethyl and 1-(difluoromethyl)-2,2-difluoroethyl, and fluorinated C_1-C_4-alkoxy, in particular OCH_2F, $OCHF_2$ and OCF_3.

In a very preferred embodiment, Ar is phenyl that carries a radical R^a in the 4-position of the phenyl ring, where R^a is selected from a radical of the formula $R^{a'}$, in particular isopropyl or fluorinated isopropyl like (R)-2-fluoro-1-methylethyl, (S)-2-fluoro-1-methylethyl, (R)-2,2-difluoro-1-methylethyl, (S)-2,2-difluoro-1-methylethyl, (R)-1,2-difluoro-1-methylethyl, (S)-1,2-difluoro-1-methylethyl, (R)-2,2,2-trifluoro-1-methylethyl, (S)-2,2,2-trifluoro-1-methylethyl, 2-fluoro-1-(fluoromethyl)ethyl and 1-(difluoromethyl)-2,2-difluoroethyl, and fluorinated C_1-C_4-alkoxy, in particular OCH_2F, $OCHF_2$ and OCF_3. Particularly, Ar does not carry any radical R^b.

The radical R^1 is preferably different from hydrogen, in particular C_2-C_4-alkyl, C_3-C_4-cycloalkyl, C_3-C_4-alkenyl, fluorinated C_2-C_4-alkyl, fluorinated C_3-C_4-cycloalkyl or fluorinated C_3-C_4-alkenyl, more preferably n-propyl, fluorinated C_2-C_3-alkyl or 1-propen-3-yl (allyl), most preferably propyl or 1-propen-3-yl.

Preferably the moiety E is N-R^3, wherein R^3 is as defined above. R^3 is in particular H or methyl and most preferred H.

One preferred embodiment of the invention relates to compounds of the formula I, wherein R^{1a} is hydrogen.

Another embodiment of the invention relates to compounds of the formula I, wherein R^{1a} is C_2-C_4-alkyl, C_3-C_4-cycloalkyl, C_3-C_4-alkenyl, fluorinated C_2-C_4-alkyl, fluorinated C_3-C_4-cycloalkyl or fluorinated C_3-C_4-alkenyl, in particular n-propyl, fluorinated C_2-C_3-alkyl or 1-propen-3-yl, more particularly propyl or 1-propen-3-yl.

The radicals R^2 and R^{2a} are preferably methyl, fluorinated methyl or hydrogen, in particular hydrogen.

Together with the benzene ring, the moiety X=C(R)-Y (R is $CH_2NR^1R^{1a}$) forms a bicyclic moiety. The fused ring, which is formed by the moiety X=C(R)-Y, is preferably a 5- or 6-memberd ring.

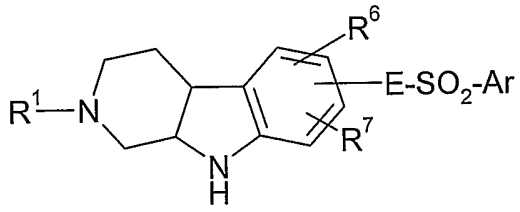
In one embodiment of the invention, the moiety X=C(R)-Y (R is $CH_2NR^1R^{1a}$) forms a fused carbocyclic moiety, i.e. neither X nor Y comprise a heteroatom as ringmember. Preferably the fused carbocyclic moiety is a 5- or 6-membered ring.

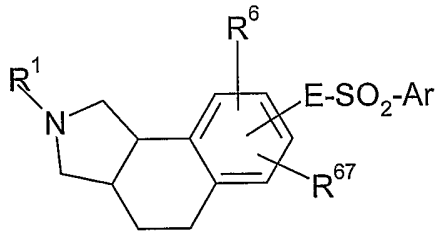
In this embodiment X is preferably CHR^2 and in particular CH_2. In this embodiment Y is preferably CHR^{2a} or $CHR^{2a}CH_2$, in particular CH_2 or CH_2CH_2. In this embodiment, X may also be absent, i.e. X depicts a single bond, which connects the CR-moiety with the carbon atom of the fused benzene ring. Y is then preferably $CHR^{2a}CH_2$ or $CHR^{2a}CH_2CH_2$, in particular CH_2CH_2 or $CH_2CH_2CH_2$.

In another embodiment of the invention, the moiety X–C(R)-Y (R is $CH_2NR^1R^{1a}$) forms a fused heterocyclic moiety, i.e. X and/or Y comprise a nitrogen atom as ring member. Preferably the fused heterocyclic moiety is a 5- or 6-membered ring.

This embodiment X relates in particular to compounds I, wherein X is CHR^2 and in particular CH_2. while Y is N-R^2, in particular NH. This embodiment also relates to compounds wherein X is N or CR^2 and in particular N or CH. while Y is N-R^2, in particular NH.

Although it is generally preferred that R^2 and R^{2a} are hydrogen, it may also be preferred that R^{1a} and R^2 or R^{1a} and R^{2a}, if present, together form a moiety $(CH_2)_n$, wherein n is as defined above and in particular 1 or 2. Thereby an additional fused ring is formed, which may be trans-fused or cis-fused. In particular, this embodiment relates to compounds of the general formula I, wherein X is CR^2, CHR^2 or CHR^2CH_2 and R^{1a} and R^2 together are $(CH_2)_n$ with n being 1, 2 or 3, more preferably 1 or 2. Amongst these compounds, those are preferred, wherein Y is NR^{2a}, CH_2 or CH_2CH_2. This embodiment also relates to compounds of the general formula I, wherein Y is CHR^{2a}, $CHR^{2a}CH_2$ or $CHR^{2a}CH_2CH_2$ and R^{1a} and R^{2a} together are $(CH_2)_n$ with n being 1, 2 or 3, more preferably 1 or 2. Amongst these compounds, those are preferred, wherein X is NR^2, CH_2 or CH_2CH_2. This embodiment also relates to compounds of the general formula I, wherein X a covalent bond and Y is $CHR^{2a}CH_2CH_2$ and R^{1a} and R^{2a} together are $(CH_2)_n$ with n being 1, 2 or 3, more preferably 1. Alternatively, this embodiment relates to compounds of the general formula I, wherein X CH_2CH_2 and Y is $CHR^{2a}$and R^{1a} and R^{2a} together are $(CH_2)_n$ with n being 1, 2 or 3, more preferably 1. Preferred examples for these tricyclic systems are compounds of the following formulae:

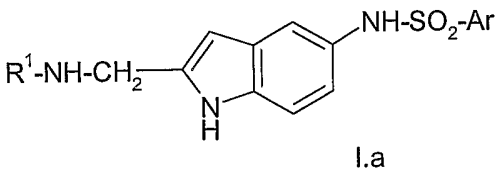




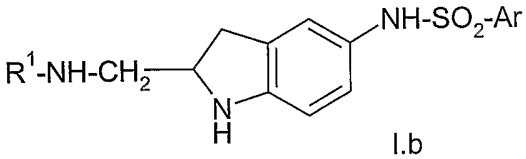
Preferably, R^4 and R^5 are independently H, C_1-C_4-alkyl or C_1-C_4-alkoxy.

Preferably, R^6 and R^7 are both hydrogen or both halogen, more preferably both hydrogen or both chlorine. In case there is no tricyclic system as described above, i.e. R^{1a} and R^{2a} or R^{1a} and R^2 do not form an alkylene bridge $(CH_2)_m$, it is preferred that R^6 and R^7 are both hydrogen.

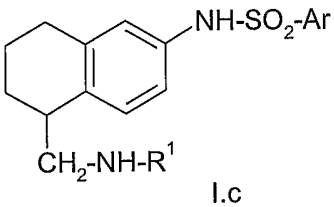
Particularly preferred compounds I are those of formulae I.a, I.b, I.c , I.d, I.e, I.f, I.g, I.h and I.i, wherein R^1 and Ar have the above-defined meanings. Preferred meanings of R^1 and Ar are as defined above.



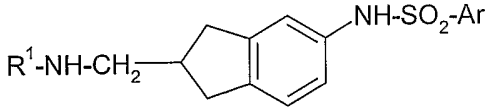
I.a



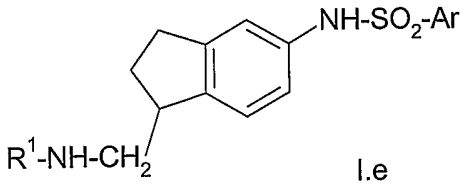
I.b



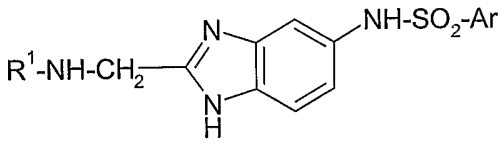
I.c



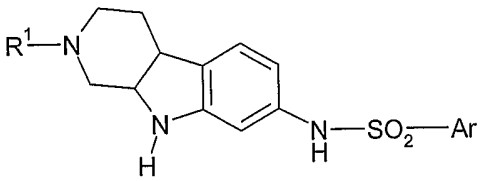
I.d



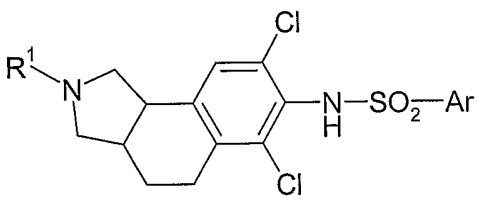
I.e



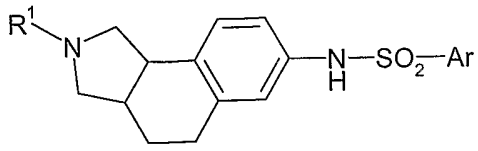
I.f



I.g



I.h



I.i

Examples of preferred compounds which are represented by the formulae I.a, I.b, I.c , I.d, I.e, I.f, I.g, I.h and I.i are the individual compounds I.a, I.b, I.c , I.d, I.e, I.f, I.g, I.h and I.i compiled above, where the variables Ar and R^1 have the meanings given in one row of table A:

Table A

No.	R^1	Ar
1.	propyl	4-methylphenyl
2.	propyl	4-ethylphenyl
3.	propyl	4-propylphenyl
4.	propyl	4-isopropylphenyl
5.	propyl	4-sec-butylphenyl
6.	propyl	4-isobutylphenyl
7.	propyl	4-(1,1-dimethylpropyl)-phenyl
8.	propyl	4-vinylphenyl
9.	propyl	4-isopropenylphenyl
10.	propyl	4-fluorophenyl
11.	propyl	4-chlorophenyl
12.	propyl	4-bromophenyl
13.	propyl	4-(fluoromethyl)phenyl
14.	propyl	3-(fluoromethyl)phenyl
15.	propyl	2-(fluoromethyl)phenyl
16.	propyl	4-(difluoromethyl)phenyl
17.	propyl	3-(difluoromethyl)phenyl
18.	propyl	2-(difluoromethyl)phenyl
19.	propyl	4-(trifluoromethyl)phenyl
20.	propyl	3-(trifluoromethyl)phenyl
21.	propyl	2-(trifluoromethyl)phenyl
22.	propyl	4-(1-fluoroethyl)-phenyl
23.	propyl	4-((S)-1-fluoroethyl)-phenyl
24.	propyl	4-((R)-1-fluoroethyl)-phenyl
25.	propyl	4-(2-fluoroethyl)-phenyl

No.	R^1	Ar
26.	propyl	4-(1,1-difluoroethyl)-phenyl
27.	propyl	4-(2,2-difluoroethyl)-phenyl
28.	propyl	4-(2,2,2-trifluoroethyl)-phenyl
29.	propyl	4-(3-fluoropropyl)-phenyl
30.	propyl	4-(2-fluoropropyl)-phenyl
31.	propyl	4-((S)-2-fluoropropyl)-phenyl
32.	propyl	4-((R)-2-fluoropropyl)-phenyl
33.	propyl	4-(3,3-difluoropropyl)-phenyl
34.	propyl	4-(3,3,3-trifluoropropyl)-phenyl
35.	propyl	4-(1-fluoro-1-methylethyl)-phenyl
36.	propyl	4-(2-fluoro-1-methylethyl)-phenyl
37.	propyl	4-((S)-2-fluoro-1-methylethyl)-phenyl
38.	propyl	4-((R)-2-fluoro-1-methylethyl)-phenyl
39.	propyl	4-(2,2-difluoro-1-methylethyl)-phenyl
40.	propyl	4-((S)-2,2-difluoro-1-methylethyl)-phenyl
41.	propyl	4-((R)-2,2-difluoro-1-methylethyl)-phenyl
42.	propyl	4-(2,2,2-trifluoro-1-methylethyl)-phenyl
43.	propyl	4-((S)-2,2,2-trifluoro-1-methylethyl)-phenyl
44.	propyl	4-((R)-2,2,2-trifluoro-1-methylethyl)-phenyl
45.	propyl	4-(2-fluoro-1-fluoromethylethyl)-phenyl
46.	propyl	4-(1-difluoromethyl-2,2-difluoroethyl)-phenyl
47.	propyl	4-(1,1-dimethyl-2-fluoroethyl)-phenyl
48.	propyl	4-methoxyphenyl
49.	propyl	4-ethoxyphenyl
50.	propyl	4-propoxyphenyl
51.	propyl	4-isopropoxyphenyl
52.	propyl	4-butoxyphenyl
53.	propyl	4-(fluoromethoxy)-phenyl
54.	propyl	4-(difluoromethoxy)-phenyl
55.	propyl	4-(trifluoromethoxy)-phenyl
56.	propyl	3-(trifluoromethoxy)-phenyl
57.	propyl	4-(2-fluoroethoxy)-phenyl
58.	propyl	4-(2,2-difluoroethoxy)-phenyl
59.	propyl	4-(2,2,2-trifluoroethoxy)-phenyl
60.	propyl	4-(1,1,2,2-tetrafluoroethoxy)-phenyl
61.	propyl	4-cyclopropylphenyl
62.	propyl	4-cyclobutylphenyl
63.	propyl	4-cyclopentylphenyl
64.	propyl	4-(2,2-difluorocyclopropyl)-phenyl
65.	propyl	3,4-difluorophenyl
66.	propyl	4-bromo-3-fluorophenyl

No.	R^1	Ar
67.	propyl	4-bromo-2-fluorophenyl
68.	propyl	4-bromo-2,5-difluorophenyl
69.	propyl	2-fluoro-4-isopropylphenyl
70.	propyl	3-fluoro-4-isopropylphenyl
71.	propyl	4-(1-hydroxy-1-methylethyl)-phenyl
72.	propyl	4-(2-hydroxy-2-methylpropyl)-phenyl
73.	propyl	4-acetylphenyl
74.	propyl	4-carboxyphenyl
75.	propyl	4-cyanophenyl
76.	propyl	4-hydroxyphenyl
77.	propyl	4-(O-benzyl)-phenyl
78.	propyl	4-(2-methoxyethoxy)-phenyl
79.	propyl	4-(CH_2-$N(CH_3)_2$)-phenyl
80.	propyl	4-(NH-CO-NH_2)-phenyl
81.	propyl	4-(methylsulfanyl)-phenyl
82.	propyl	4-(fluoromethylsulfanyl)-phenyl
83.	propyl	4-(difluoromethylsulfanyl)-phenyl
84.	propyl	4-(trifluoromethylsulfanyl)-phenyl
85.	propyl	4-(methylsulfonyl)-phenyl
86.	propyl	4-(N-methoxy-N-methyl-amino)-phenyl
87.	propyl	4-(methoxyamino)-phenyl
88.	propyl	4-(ethoxyamino)-phenyl
89.	propyl	4-(N-methylaminooxy)-phenyl
90.	propyl	4-(N,N-dimethylaminooxy)-phenyl
91.	propyl	4-(azetidin-1-yl)-phenyl
92.	propyl	4-(2-methylazetidin-1-yl)-phenyl
93.	propyl	4-((S)-2-methylazetidin-1-yl)-phenyl
94.	propyl	4-((R)-2-methylazetidin-1-yl)-phenyl
95.	propyl	4-(3-fluoroazetidin-1-yl)-phenyl
96.	propyl	4-(3-methoxyazetidin-1-yl)-phenyl
97.	propyl	4-(3-hydroxyazetidin-1-yl)-phenyl
98.	propyl	4-(pyrrolidin-1-yl)-phenyl
99.	propyl	4-(pyrrolidin-2-yl)-phenyl
100.	propyl	4-((S)-pyrrolidin-2-yl)-phenyl
101.	propyl	4-((R)-pyrrolidin-2-yl)-phenyl
102.	propyl	4-(pyrrolidin-3-yl)-phenyl
103.	propyl	4-((S)-pyrrolidin-3-yl)-phenyl
104.	propyl	4-((R)-pyrrolidin-3-yl)-phenyl
105.	propyl	4-(2-fluoropyrrolidin-1-yl)-phenyl
106.	propyl	4-((S)-2-fluoropyrrolidin-1-yl)-phenyl
107.	propyl	4-((R)-2-fluoropyrrolidin-1-yl)-phenyl

No.	R^1	Ar
108.	propyl	4-(3-fluoropyrrolidin-1-yl)-phenyl
109.	propyl	4-((S)-3-fluoropyrrolidin-1-yl)-phenyl
110.	propyl	4-((R)-3-fluoropyrrolidin-1-yl)-phenyl
111.	propyl	4-(2,2-difluoropyrrolidin-1-yl)-phenyl
112.	propyl	4-(3,3-difluoropyrrolidin-1-yl)-phenyl
113.	propyl	4-(2-methylpyrrolidin-1-yl)-phenyl
114.	propyl	4-((S)-2-methylpyrrolidin-1-yl)-phenyl
115.	propyl	4-((R)-2-methylpyrrolidin-1-yl)-phenyl
116.	propyl	4-(3-methylpyrrolidin-1-yl)-phenyl
117.	propyl	4-((S)-3-methylpyrrolidin-1-yl)-phenyl
118.	propyl	4-((R)-3-methylpyrrolidin-1-yl)-phenyl
119.	propyl	4-(1-methylpyrrolidin-2-yl)-phenyl
120.	propyl	4-((S)-1-methylpyrrolidin-2-yl)-phenyl
121.	propyl	4-((R)-1-methylpyrrolidin-2-yl)-phenyl
122.	propyl	4-(1-methylpyrrolidin-3-yl)-phenyl
123.	propyl	4-((S)-1-methylpyrrolidin-3-yl)-phenyl
124.	propyl	4-((R)-1-methylpyrrolidin-3-yl)-phenyl
125.	propyl	4-(2,2-dimethylpyrrolidin-1-yl)-phenyl
126.	propyl	4-(3,3-dimethylpyrrolidin-1-yl)-phenyl
127.	propyl	4-(2-trifluoromethylpyrrolidin-1-yl)-phenyl
128.	propyl	4-((S)-2-trifluoromethylpyrrolidin-1-yl)-phenyl
129.	propyl	4-((R)-2-trifluoromethylpyrrolidin-1-yl)-phenyl
130.	propyl	4-(3-trifluoromethylpyrrolidin-1-yl)-phenyl
131.	propyl	4-((S)-3-trifluoromethylpyrrolidin-1-yl)-phenyl
132.	propyl	4-((R)-3-trifluoromethylpyrrolidin-1-yl)-phenyl
133.	propyl	4-(2-oxopyrrolidin-1-yl)-phenyl
134.	propyl	4-(2-oxo-oxazolidin-3-yl)-phenyl
135.	propyl	4-(piperidin-1-yl)-phenyl
136.	propyl	4-(2-methylpiperidin-1-yl)-phenyl
137.	propyl	4-((S)-2-methylpiperidin-1-yl)-phenyl
138.	propyl	4-((R)-2-methylpiperidin-1-yl)-phenyl
139.	propyl	4-(piperazin-1-yl)-phenyl
140.	propyl	4-(4-methylpiperazin-1-yl)-phenyl
141.	propyl	4-(morpholin-4-yl)-phenyl
142.	propyl	4-(thiomorpholin-4-yl)-phenyl
143.	propyl	4-(1-oxo-thiomorpholin-4-yl)-phenyl
144.	propyl	4-(1,1-dioxo-thiomorpholin-4-yl)-phenyl
145.	propyl	4-(pyrrol-1-yl)-phenyl
146.	propyl	4-(pyrrol-2-yl)-phenyl
147.	propyl	4-(pyrrol-3-yl)-phenyl
148.	propyl	4-(1-methylpyrrol-2-yl)-phenyl

No.	R^1	Ar
149.	propyl	4-(1-methylpyrrol-3-yl)-phenyl
150.	propyl	4-(furan-2-yl)-phenyl
151.	propyl	4-(furan-3-yl)–phenyl
152.	propyl	4-(thiophen-2-yl)–phenyl
153.	propyl	4-(thiophen-3-yl)–phenyl
154.	propyl	4-(5-propylthien-2-yl)–phenyl
155.	propyl	4-(pyrazol-1-yl)–phenyl
156.	propyl	4-(pyrazol-3-yl)–phenyl
157.	propyl	4-(pyrazol-4-yl)–phenyl
158.	propyl	4-(1-methyl-1H-pyrazol-4-yl)-phenyl
159.	propyl	4-(1-ethyl-1H-pyrazol-4-yl)-phenyl
160.	propyl	4-(1-methyl-1H-pyrazol-5-yl)-phenyl
161.	propyl	4-(1H-imidazol-2-yl)-phenyl
162.	propyl	4-(imidazol-1-yl)-phenyl
163.	propyl	4-(1-methylimidazol-2-yl)-phenyl
164.	propyl	4-(oxazol-2-yl)-phenyl
165.	propyl	4-(oxazol-4-yl)-phenyl
166.	propyl	4-(oxazol-5-yl)-phenyl
167.	propyl	4-(isoxazol-3-yl)-phenyl
168.	propyl	4-(isoxazol-4-yl)-phenyl
169.	propyl	4-(isoxazol-5-yl)-phenyl
170.	propyl	4-([1,2,3]-triazol-1-yl)-phenyl
171.	propyl	4-([1,2,4]-triazol-1-yl)-phenyl
172.	propyl	4-([1,2,3]-triazol-2-yl)-phenyl
173.	propyl	4-(4H-[1,2,4]-triazol-3-yl)-phenyl
174.	propyl	4-([1,2,4]-triazol-4-yl)-phenyl
175.	propyl	4-(2H-[1,2,3]-triazol-4-yl)-phenyl
176.	propyl	4-(4-methyl-4H-[1,2,4]-triazol-3-yl)-phenyl
177.	propyl	4-(2-methyl-2H-[1,2,3]-triazol-4-yl)-phenyl
178.	propyl	4-([1,3,4]-oxadiazol-2-yl)-phenyl
179.	propyl	4-([1,2,4]-oxadiazol-3-yl)-phenyl
180.	propyl	4-([1,2,4]-oxadiazol-5-yl)-phenyl
181.	propyl	4-([1,2,3]-oxadiazol-4-yl)-phenyl
182.	propyl	4-([1,2,3]-oxadiazol-5-yl)-phenyl
183.	propyl	4-([1,2,3]-thiadiazol-4-yl)-phenyl
184.	propyl	4-(1H-tetrazol-5-yl)-phenyl
185.	propyl	4-(tetrazol-1-yl)-phenyl
186.	propyl	4-(2-methyl-2H-tetrazol-5-yl)-phenyl
187.	propyl	4-(1-methyl-1H-tetrazol-5-yl)-phenyl
188.	propyl	4-furazan-3-yl-phenyl
189.	propyl	4-(pyrid-2-yl)-phenyl

No.	R^1	Ar
190.	propyl	4-(pyrid-3-yl)-phenyl
191.	propyl	4-(pyrid-4-yl)-phenyl
192.	propyl	4-(pyrimidin-2-yl)-phenyl
193.	propyl	4-(pyrimidin-4-yl)-phenyl
194.	propyl	4-(pyrimidin-5-yl)-phenyl
195.	propyl	5-isopropylthiophen-2-yl
196.	propyl	2-chlorothiophen-5-yl
197.	propyl	2,5-dichlorothiophen-4-yl
198.	propyl	2,3-dichlorothiophen-5-yl
199.	propyl	2-chloro-3-nitrothiophen-5-yl
200.	propyl	2-(phenylsulfonyl)-thiophen-5-yl
201.	propyl	2-(pyridin-2-yl)thiophen-5-yl
202.	propyl	2-(5-(trifluoromethyl)isoxazol-3-yl)-thiophen-5-yl
203.	propyl	2-(2-methylthiazol-4-yl)-thiophen-5-yl
204.	propyl	1-methyl-1H-imidazol-4-yl
205.	propyl	1,2-dimethyl-1H-imidazol-4-yl
206.	propyl	3,5-dimethylisoxazol-4-yl
207.	propyl	thiazol-2-yl
208.	propyl	4-methylthiazol-2-yl
209.	propyl	4-isopropylthiazol-2-yl
210.	propyl	4-trifluoromethylthiazol-2-yl
211.	propyl	5-methylthiazol-2-yl
212.	propyl	5-isopropylthiazol-2-yl
213.	propyl	5-trifluoromethylthiazol-2-yl
214.	propyl	2,4-dimethylthiazol-5-yl
215.	propyl	2-acetamido-4-methylthiazol-5-yl
216.	propyl	4H-[1,2,4]triazol-3-yl
217.	propyl	5-methyl-4H-[1,2,4]triazol-3-yl
218.	propyl	4-methyl-4H-[1,2,4]triazol-3-yl
219.	propyl	5-isopropyl-4H-[1,2,4]triazol-3-yl
220.	propyl	5-trifluoromethyl-4H-[1,2,4]triazol-3-yl
221.	propyl	4,5-dimethyl-4H-[1,2,4]triazol-3-yl
222.	propyl	5-isopropyl-4-methyl-4H-[1,2,4]triazol-3-yl
223.	propyl	5-trifluoromethyl-4-methyl-4H-[1,2,4]triazol-3-yl
224.	propyl	[1,3,4]thiadiazol-2-yl
225.	propyl	5-methyl-[1,3,4]thiadiazol-2-yl
226.	propyl	5-isopropyl-[1,3,4]thiadiazol-2-yl
227.	propyl	5-trifluoromethyl-[1,3,4]thiadiazol-2-yl
228.	propyl	3-bromo-2-chloropyrid-5-yl
229.	propyl	2-(4-morpholino)-pyrid-5-yl
230.	propyl	2-phenoxypyrid-5-yl

No.	R^1	Ar
231.	propyl	(2-isopropyl)-pyrimidin-5-yl
232.	propyl	(5-isopropyl)-pyrimidin-2-yl
233.	propyl	8-quinolyl
234.	propyl	5-isoquinolyl
235.	propyl	2-(trifluoroacetyl)-1,2,3,4-tetrahydroisoquinolin-7-yl
236.	propyl	5-chloro-3-methylbenzothiophen-2-yl
237.	propyl	3,4-dihydro-4-methyl-2H-benzo[b][1,4]oxazinyl
238.	propyl	benzothiazol-6-yl
239.	propyl	benzo[2,1,3]oxadiazol-4-yl
240.	propyl	5-chlorobenzo[2,1,3]oxadiazol-4-yl
241.	propyl	7-chlorobenzo[2,1,3]oxadiazol-4-yl
242.	propyl	benzo[2,1,3]thiadiazol-4-yl
243.	ethyl	4-methylphenyl
244.	ethyl	4-ethylphenyl
245.	ethyl	4-propylphenyl
246.	ethyl	4-isopropylphenyl
247.	ethyl	4-sec-butylphenyl
248.	ethyl	4-isobutylphenyl
249.	ethyl	4-(1,1-dimethylpropyl)-phenyl
250.	ethyl	4-vinylphenyl
251.	ethyl	4-isopropenylphenyl
252.	ethyl	4-fluorophenyl
253.	ethyl	4-chlorophenyl
254.	ethyl	4-bromophenyl
255.	ethyl	4-(fluoromethyl)phenyl
256.	ethyl	3-(fluoromethyl)phenyl
257.	ethyl	2-(fluoromethyl)phenyl
258.	ethyl	4-(difluoromethyl)phenyl
259.	ethyl	3-(difluoromethyl)phenyl
260.	ethyl	2-(difluoromethyl)phenyl
261.	ethyl	4-(trifluoromethyl)phenyl
262.	ethyl	3-(trifluoromethyl)phenyl
263.	ethyl	2-(trifluoromethyl)phenyl
264.	ethyl	4-(1-fluoroethyl)-phenyl
265.	ethyl	4-((S)-1-fluoroethyl)-phenyl
266.	ethyl	4-((R)-1-fluoroethyl)-phenyl
267.	ethyl	4-(2-fluoroethyl)-phenyl
268.	ethyl	4-(1,1-difluoroethyl)-phenyl
269.	ethyl	4-(2,2-difluoroethyl)-phenyl
270.	ethyl	4-(2,2,2-trifluoroethyl)-phenyl

No.	R^1	Ar
271.	ethyl	4-(3-fluoropropyl)-phenyl
272.	ethyl	4-(2-fluoropropyl)-phenyl
273.	ethyl	4-((S)-2-fluoropropyl)-phenyl
274.	ethyl	4-((R)-2-fluoropropyl)-phenyl
275.	ethyl	4-(3,3-difluoropropyl)-phenyl
276.	ethyl	4-(3,3,3-trifluoropropyl)-phenyl
277.	ethyl	4-(1-fluoro-1-methylethyl)-phenyl
278.	ethyl	4-(2-fluoro-1-methylethyl)-phenyl
279.	ethyl	4-((S)-2-fluoro-1-methylethyl)-phenyl
280.	ethyl	4-((R)-2-fluoro-1-methylethyl)-phenyl
281.	ethyl	4-(2,2-difluoro-1-methylethyl)-phenyl
282.	ethyl	4-((S)-2,2-difluoro-1-methylethyl)-phenyl
283.	ethyl	4-((R)-2,2-difluoro-1-methylethyl)-phenyl
284.	ethyl	4-(2,2,2-trifluoro-1-methylethyl)-phenyl
285.	ethyl	4-((S)-2,2,2-trifluoro-1-methylethyl)-phenyl
286.	ethyl	4-((R)-2,2,2-trifluoro-1-methylethyl)-phenyl
287.	ethyl	4-(2-fluoro-1-fluoromethylethyl)-phenyl
288.	ethyl	4-(1-difluoromethyl-2,2-difluoroethyl)-phenyl
289.	ethyl	4-(1,1-dimethyl-2-fluoroethyl)-phenyl
290.	ethyl	4-methoxyphenyl
291.	ethyl	4-ethoxyphenyl
292.	ethyl	4-propoxyphenyl
293.	ethyl	4-isopropoxyphenyl
294.	ethyl	4-butoxyphenyl
295.	ethyl	4-(fluoromethoxy)-phenyl
296.	ethyl	4-(difluoromethoxy)-phenyl
297.	ethyl	4-(trifluoromethoxy)-phenyl
298.	ethyl	3-(trifluoromethoxy)-phenyl
299.	ethyl	4-(2-fluoroethoxy)-phenyl
300.	ethyl	4-(2,2-difluoroethoxy)-phenyl
301.	ethyl	4-(2,2,2-trifluoroethoxy)-phenyl
302.	ethyl	4-(1,1,2,2-tetrafluoroethoxy)-phenyl
303.	ethyl	4-cyclopropylphenyl
304.	ethyl	4-cyclobutylphenyl
305.	ethyl	4-cyclopentylphenyl
306.	ethyl	4-(2,2-difluorocyclopropyl)-phenyl
307.	ethyl	3,4-difluorophenyl
308.	ethyl	4-bromo-3-fluorophenyl
309.	ethyl	4-bromo-2-fluorophenyl
310.	ethyl	4-bromo-2,5-difluorophenyl
311.	ethyl	2-fluoro-4-isopropylphenyl

No.	R^1	Ar
312.	ethyl	3-fluoro-4-isopropylphenyl
313.	ethyl	4-(1-hydroxy-1-methylethyl)-phenyl
314.	ethyl	4-(2-hydroxy-2-methylpropyl)-phenyl
315.	ethyl	4-acetylphenyl
316.	ethyl	4-carboxyphenyl
317.	ethyl	4-cyanophenyl
318.	ethyl	4-hydroxyphenyl
319.	ethyl	4-(O-benzyl)-phenyl
320.	ethyl	4-(2-methoxyethoxy)-phenyl
321.	ethyl	4-(CH_2-$N(CH_3)_2$)-phenyl
322.	ethyl	4-(NH-CO-NH_2)-phenyl
323.	ethyl	4-(methylsulfanyl)-phenyl
324.	ethyl	4-(fluoromethylsulfanyl)-phenyl
325.	ethyl	4-(difluoromethylsulfanyl)-phenyl
326.	ethyl	4-(trifluoromethylsulfanyl)-phenyl
327.	ethyl	4-(methylsulfonyl)-phenyl
328.	ethyl	4-(N-methoxy-N-methyl-amino)-phenyl
329.	ethyl	4-(methoxyamino)-phenyl
330.	ethyl	4-(ethoxyamino)-phenyl
331.	ethyl	4-(N-methylaminooxy)-phenyl
332.	ethyl	4-(N,N-dimethylaminooxy)-phenyl
333.	ethyl	4-(azetidin-1-yl)-phenyl
334.	ethyl	4-(2-methylazetidin-1-yl)-phenyl
335.	ethyl	4-((S)-2-methylazetidin-1-yl)-phenyl
336.	ethyl	4-((R)-2-methylazetidin-1-yl)-phenyl
337.	ethyl	4-(3-fluoroazetidin-1-yl)-phenyl
338.	ethyl	4-(3-methoxyazetidin-1-yl)-phenyl
339.	ethyl	4-(3-hydroxyazetidin-1-yl)-phenyl
340.	ethyl	4-(pyrrolidin-1-yl)-phenyl
341.	ethyl	4-(pyrrolidin-2-yl)-phenyl
342.	ethyl	4-((S)-pyrrolidin-2-yl)-phenyl
343.	ethyl	4-((R)-pyrrolidin-2-yl)-phenyl
344.	ethyl	4-(pyrrolidin-3-yl)-phenyl
345.	ethyl	4-((S)-pyrrolidin-3-yl)-phenyl
346.	ethyl	4-((R)-pyrrolidin-3-yl)-phenyl
347.	ethyl	4-(2-fluoropyrrolidin-1-yl)-phenyl
348.	ethyl	4-((S)-2-fluoropyrrolidin-1-yl)-phenyl
349.	ethyl	4-((R)-2-fluoropyrrolidin-1-yl)-phenyl
350.	ethyl	4-(3-fluoropyrrolidin-1-yl)-phenyl
351.	ethyl	4-((S)-3-fluoropyrrolidin-1-yl)-phenyl
352.	ethyl	4-((R)-3-fluoropyrrolidin-1-yl)-phenyl

No.	R^1	Ar
353.	ethyl	4-(2,2-difluoropyrrolidin-1-yl)-phenyl
354.	ethyl	4-(3,3-difluoropyrrolidin-1-yl)-phenyl
355.	ethyl	4-(2-methylpyrrolidin-1-yl)-phenyl
356.	ethyl	4-((S)-2-methylpyrrolidin-1-yl)-phenyl
357.	ethyl	4-((R)-2-methylpyrrolidin-1-yl)-phenyl
358.	ethyl	4-(3-methylpyrrolidin-1-yl)-phenyl
359.	ethyl	4-((S)-3-methylpyrrolidin-1-yl)-phenyl
360.	ethyl	4-((R)-3-methylpyrrolidin-1-yl)-phenyl
361.	ethyl	4-(1-methylpyrrolidin-2-yl)-phenyl
362.	ethyl	4-((S)-1-methylpyrrolidin-2-yl)-phenyl
363.	ethyl	4-((R)-1-methylpyrrolidin-2-yl)-phenyl
364.	ethyl	4-(1-methylpyrrolidin-3-yl)-phenyl
365.	ethyl	4-((S)-1-methylpyrrolidin-3-yl)-phenyl
366.	ethyl	4-((R)-1-methylpyrrolidin-3-yl)-phenyl
367.	ethyl	4-(2,2-dimethylpyrrolidin-1-yl)-phenyl
368.	ethyl	4-(3,3-dimethylpyrrolidin-1-yl)-phenyl
369.	ethyl	4-(2-trifluoromethylpyrrolidin-1-yl)-phenyl
370.	ethyl	4-((S)-2-trifluoromethylpyrrolidin-1-yl)-phenyl
371.	ethyl	4-((R)-2-trifluoromethylpyrrolidin-1-yl)-phenyl
372.	ethyl	4-(3-trifluoromethylpyrrolidin-1-yl)-phenyl
373.	ethyl	4-((S)-3-trifluoromethylpyrrolidin-1-yl)-phenyl
374.	ethyl	4-((R)-3-trifluoromethylpyrrolidin-1-yl)-phenyl
375.	ethyl	4-(2-oxopyrrolidin-1-yl)-phenyl
376.	ethyl	4-(2-oxo-oxazolidin-3-yl)-phenyl
377.	ethyl	4-(piperidin-1-yl)-phenyl
378.	ethyl	4-(2-methylpiperidin-1-yl)-phenyl
379.	ethyl	4-((S)-2-methylpiperidin-1-yl)-phenyl
380.	ethyl	4-((R)-2-methylpiperidin-1-yl)-phenyl
381.	ethyl	4-(piperazin-1-yl)-phenyl
382.	ethyl	4-(4-methylpiperazin-1-yl)-phenyl
383.	ethyl	4-(morpholin-4-yl)-phenyl
384.	ethyl	4-(thiomorpholin-4-yl)-phenyl
385.	ethyl	4-(1-oxo-thiomorpholin-4-yl)-phenyl
386.	ethyl	4-(1,1-dioxo-thiomorpholin-4-yl)-phenyl
387.	ethyl	4-(pyrrol-1-yl)-phenyl
388.	ethyl	4-(pyrrol-2-yl)-phenyl
389.	ethyl	4-(pyrrol-3-yl)-phenyl
390.	ethyl	4-(1-methylpyrrol-2-yl)-phenyl
391.	ethyl	4-(1-methylpyrrol-3-yl)-phenyl
392.	ethyl	4-(furan-2-yl)-phenyl
393.	ethyl	4-(furan-3-yl)–phenyl

No.	R^1	Ar
394.	ethyl	4-(thiophen-2-yl)–phenyl
395.	ethyl	4-(thiophen-3-yl)–phenyl
396.	ethyl	4-(5-propylthien-2-yl)–phenyl
397.	ethyl	4-(pyrazol-1-yl)–phenyl
398.	ethyl	4-(pyrazol-3-yl)–phenyl
399.	ethyl	4-(pyrazol-4-yl)–phenyl
400.	ethyl	4-(1-methyl-1H-pyrazol-4-yl)-phenyl
401.	ethyl	4-(1-ethyl-1H-pyrazol-4-yl)-phenyl
402.	ethyl	4-(1-methyl-1H-pyrazol-5-yl)-phenyl
403.	ethyl	4-(1H-imidazol-2-yl)-phenyl
404.	ethyl	4-(imidazol-1-yl)-phenyl
405.	ethyl	4-(1-methylimidazol-2-yl)-phenyl
406.	ethyl	4-(oxazol-2-yl)-phenyl
407.	ethyl	4-(oxazol-4-yl)-phenyl
408.	ethyl	4-(oxazol-5-yl)-phenyl
409.	ethyl	4-(isoxazol-3-yl)-phenyl
410.	ethyl	4-(isoxazol-4-yl)-phenyl
411.	ethyl	4-(isoxazol-5-yl)-phenyl
412.	ethyl	4-([1,2,3]-triazol-1-yl)-phenyl
413.	ethyl	4-([1,2,4]-triazol-1-yl)-phenyl
414.	ethyl	4-([1,2,3]-triazol-2-yl)-phenyl
415.	ethyl	4-(4H-[1,2,4]-triazol-3-yl)-phenyl
416.	ethyl	4-([1,2,4]-triazol-4-yl)-phenyl
417.	ethyl	4-(2H-[1,2,3]-triazol-4-yl)-phenyl
418.	ethyl	4-(4-methyl-4H-[1,2,4]-triazol-3-yl)-phenyl
419.	ethyl	4-(2-methyl-2H-[1,2,3]-triazol-4-yl)-phenyl
420.	ethyl	4-([1,3,4]-oxadiazol-2-yl)-phenyl
421.	ethyl	4-([1,2,4]-oxadiazol-3-yl)-phenyl
422.	ethyl	4-([1,2,4]-oxadiazol-5-yl)-phenyl
423.	ethyl	4-([1,2,3]-oxadiazol-4-yl)-phenyl
424.	ethyl	4-([1,2,3]-oxadiazol-5-yl)-phenyl
425.	ethyl	4-([1,2,3]-thiadiazol-4-yl)-phenyl
426.	ethyl	4-(1H-tetrazol-5-yl)-phenyl
427.	ethyl	4-(tetrazol-1-yl)-phenyl
428.	ethyl	4-(2-methyl-2H-tetrazol-5-yl)-phenyl
429.	ethyl	4-(1-methyl-1H-tetrazol-5-yl)-phenyl
430.	ethyl	4-furazan-3-yl-phenyl
431.	ethyl	4-(pyrid-2-yl)-phenyl
432.	ethyl	4-(pyrid-3-yl)-phenyl
433.	ethyl	4-(pyrid-4-yl)-phenyl
434.	ethyl	4-(pyrimidin-2-yl)-phenyl

No.	R^1	Ar
435.	ethyl	4-(pyrimidin-4-yl)-phenyl
436.	ethyl	4-(pyrimidin-5-yl)-phenyl
437.	ethyl	5-isopropylthiophen-2-yl
438.	ethyl	2-chlorothiophen-5-yl
439.	ethyl	2,5-dichlorothiophen-4-yl
440.	ethyl	2,3-dichlorothiophen-5-yl
441.	ethyl	2-chloro-3-nitrothiophen-5-yl
442.	ethyl	2-(phenylsulfonyl)-thiophen-5-yl
443.	ethyl	2-(pyridin-2-yl)thiophen-5-yl
444.	ethyl	2-(5-(trifluoromethyl)isoxazol-3-yl)-thiophen-5-yl
445.	ethyl	2-(2-methylthiazol-4-yl)-thiophen-5-yl
446.	ethyl	1-methyl-1H-imidazol-4-yl
447.	ethyl	1,2-dimethyl-1H-imidazol-4-yl
448.	ethyl	3,5-dimethylisoxazol-4-yl
449.	ethyl	thiazol-2-yl
450.	ethyl	4-methylthiazol-2-yl
451.	ethyl	4-isopropylthiazol-2-yl
452.	ethyl	4-trifluoromethylthiazol-2-yl
453.	ethyl	5-methylthiazol-2-yl
454.	ethyl	5-isopropylthiazol-2-yl
455.	ethyl	5-trifluoromethylthiazol-2-yl
456.	ethyl	2,4-dimethylthiazol-5-yl
457.	ethyl	2-acetamido-4-methylthiazol-5-yl
458.	ethyl	4H-[1,2,4]triazol-3-yl
459.	ethyl	5-methyl-4H-[1,2,4]triazol-3-yl
460.	ethyl	4-methyl-4H-[1,2,4]triazol-3-yl
461.	ethyl	5-isopropyl-4H-[1,2,4]triazol-3-yl
462.	ethyl	5-trifluoromethyl-4H-[1,2,4]triazol-3-yl
463.	ethyl	4,5-dimethyl-4H-[1,2,4]triazol-3-yl
464.	ethyl	5-isopropyl-4-methyl-4H-[1,2,4]triazol-3-yl
465.	ethyl	5-trifluoromethyl-4-methyl-4H-[1,2,4]triazol-3-yl
466.	ethyl	[1,3,4]thiadiazol-2-yl
467.	ethyl	5-methyl-[1,3,4]thiadiazol-2-yl
468.	ethyl	5-isopropyl-[1,3,4]thiadiazol-2-yl
469.	ethyl	5-trifluoromethyl-[1,3,4]thiadiazol-2-yl
470.	ethyl	3-bromo-2-chloropyrid-5-yl
471.	ethyl	2-(4-morpholino)-pyrid-5-yl
472.	ethyl	2-phenoxypyrid-5-yl
473.	ethyl	(2-isopropyl)-pyrimidin-5-yl
474.	ethyl	(5-isopropyl)-pyrimidin-2-yl
475.	ethyl	8-quinolyl

No.	R^1	Ar
476.	ethyl	5-isoquinolyl
477.	ethyl	2-(trifluoroacetyl)-1,2,3,4-tetrahydroisoquinolin-7-yl
478.	ethyl	5-chloro-3-methylbenzothiophen-2-yl
479.	ethyl	3,4-dihydro-4-methyl-2H-benzo[b][1,4]oxazinyl
480.	ethyl	benzothiazol-6-yl
481.	ethyl	benzo[2,1,3]oxadiazol-4-yl
482.	ethyl	5-chlorobenzo[2,1,3]oxadiazol-4-yl
483.	ethyl	7-chlorobenzo[2,1,3]oxadiazol-4-yl
484.	ethyl	benzo[2,1,3]thiadiazol-4-yl
485.	methyl	4-methylphenyl
486.	methyl	4-ethylphenyl
487.	methyl	4-propylphenyl
488.	methyl	4-isopropylphenyl
489.	methyl	4-sec-butylphenyl
490.	methyl	4-isobutylphenyl
491.	methyl	4-(1,1-dimethylpropyl)-phenyl
492.	methyl	4-vinylphenyl
493.	methyl	4-isopropenylphenyl
494.	methyl	4-fluorophenyl
495.	methyl	4-chlorophenyl
496.	methyl	4-bromophenyl
497.	methyl	4-(fluoromethyl)phenyl
498.	methyl	3-(fluoromethyl)phenyl
499.	methyl	2-(fluoromethyl)phenyl
500.	methyl	4-(difluoromethyl)phenyl
501.	methyl	3-(difluoromethyl)phenyl
502.	methyl	2-(difluoromethyl)phenyl
503.	methyl	4-(trifluoromethyl)phenyl
504.	methyl	3-(trifluoromethyl)phenyl
505.	methyl	2-(trifluoromethyl)phenyl
506.	methyl	4-(1-fluoroethyl)-phenyl
507.	methyl	4-((S)-1-fluoroethyl)-phenyl
508.	methyl	4-((R)-1-fluoroethyl)-phenyl
509.	methyl	4-(2-fluoroethyl)-phenyl
510.	methyl	4-(1,1-difluoroethyl)-phenyl
511.	methyl	4-(2,2-difluoroethyl)-phenyl
512.	methyl	4-(2,2,2-trifluoroethyl)-phenyl
513.	methyl	4-(3-fluoropropyl)-phenyl
514.	methyl	4-(2-fluoropropyl)-phenyl
515.	methyl	4-((S)-2-fluoropropyl)-phenyl

No.	R^1	Ar
516.	methyl	4-((R)-2-fluoropropyl)-phenyl
517.	methyl	4-(3,3-difluoropropyl)-phenyl
518.	methyl	4-(3,3,3-trifluoropropyl)-phenyl
519.	methyl	4-(1-fluoro-1-methylethyl)-phenyl
520.	methyl	4-(2-fluoro-1-methylethyl)-phenyl
521.	methyl	4-((S)-2-fluoro-1-methylethyl)-phenyl
522.	methyl	4-((R)-2-fluoro-1-methylethyl)-phenyl
523.	methyl	4-(2,2-difluoro-1-methylethyl)-phenyl
524.	methyl	4-((S)-2,2-difluoro-1-methylethyl)-phenyl
525.	methyl	4-((R)-2,2-difluoro-1-methylethyl)-phenyl
526.	methyl	4-(2,2,2-trifluoro-1-methylethyl)-phenyl
527.	methyl	4-((S)-2,2,2-trifluoro-1-methylethyl)-phenyl
528.	methyl	4-((R)-2,2,2-trifluoro-1-methylethyl)-phenyl
529.	methyl	4-(2-fluoro-1-fluoromethylethyl)-phenyl
530.	methyl	4-(1-difluoromethyl-2,2-difluoroethyl)-phenyl
531.	methyl	4-(1,1-dimethyl-2-fluoroethyl)-phenyl
532.	methyl	4-methoxyphenyl
533.	methyl	4-ethoxyphenyl
534.	methyl	4-propoxyphenyl
535.	methyl	4-isopropoxyphenyl
536.	methyl	4-butoxyphenyl
537.	methyl	4-(fluoromethoxy)-phenyl
538.	methyl	4-(difluoromethoxy)-phenyl
539.	methyl	4-(trifluoromethoxy)-phenyl
540.	methyl	3-(trifluoromethoxy)-phenyl
541.	methyl	4-(2-fluoroethoxy)-phenyl
542.	methyl	4-(2,2-difluoroethoxy)-phenyl
543.	methyl	4-(2,2,2-trifluoroethoxy)-phenyl
544.	methyl	4-(1,1,2,2-tetrafluoroethoxy)-phenyl
545.	methyl	4-cyclopropylphenyl
546.	methyl	4-cyclobutylphenyl
547.	methyl	4-cyclopentylphenyl
548.	methyl	4-(2,2-difluorocyclopropyl)-phenyl
549.	methyl	3,4-difluorophenyl
550.	methyl	4-bromo-3-fluorophenyl
551.	methyl	4-bromo-2-fluorophenyl
552.	methyl	4-bromo-2,5-difluorophenyl
553.	methyl	2-fluoro-4-isopropylphenyl
554.	methyl	3-fluoro-4-isopropylphenyl
555.	methyl	4-(1-hydroxy-1-methylethyl)-phenyl
556.	methyl	4-(2-hydroxy-2-methylpropyl)-phenyl

No.	R^1	Ar
557.	methyl	4-acetylphenyl
558.	methyl	4-carboxyphenyl
559.	methyl	4-cyanophenyl
560.	methyl	4-hydroxyphenyl
561.	methyl	4-(O-benzyl)-phenyl
562.	methyl	4-(2-methoxyethoxy)-phenyl
563.	methyl	4-(CH_2-$N(CH_3)_2$)-phenyl
564.	methyl	4-(NH-CO-NH_2)-phenyl
565.	methyl	4-(methylsulfanyl)-phenyl
566.	methyl	4-(fluoromethylsulfanyl)-phenyl
567.	methyl	4-(difluoromethylsulfanyl)-phenyl
568.	methyl	4-(trifluoromethylsulfanyl)-phenyl
569.	methyl	4-(methylsulfonyl)-phenyl
570.	methyl	4-(N-methoxy-N-methyl-amino)-phenyl
571.	methyl	4-(methoxyamino)-phenyl
572.	methyl	4-(ethoxyamino)-phenyl
573.	methyl	4-(N-methylaminooxy)-phenyl
574.	methyl	4-(N,N-dimethylaminooxy)-phenyl
575.	methyl	4-(azetidin-1-yl)-phenyl
576.	methyl	4-(2-methylazetidin-1-yl)-phenyl
577.	methyl	4-((S)-2-methylazetidin-1-yl)-phenyl
578.	methyl	4-((R)-2-methylazetidin-1-yl)-phenyl
579.	methyl	4-(3-fluoroazetidin-1-yl)-phenyl
580.	methyl	4-(3-methoxyazetidin-1-yl)-phenyl
581.	methyl	4-(3-hydroxyazetidin-1-yl)-phenyl
582.	methyl	4-(pyrrolidin-1-yl)-phenyl
583.	methyl	4-(pyrrolidin-2-yl)-phenyl
584.	methyl	4-((S)-pyrrolidin-2-yl)-phenyl
585.	methyl	4-((R)-pyrrolidin-2-yl)-phenyl
586.	methyl	4-(pyrrolidin-3-yl)-phenyl
587.	methyl	4-((S)-pyrrolidin-3-yl)-phenyl
588.	methyl	4-((R)-pyrrolidin-3-yl)-phenyl
589.	methyl	4-(2-fluoropyrrolidin-1-yl)-phenyl
590.	methyl	4-((S)-2-fluoropyrrolidin-1-yl)-phenyl
591.	methyl	4-((R)-2-fluoropyrrolidin-1-yl)-phenyl
592.	methyl	4-(3-fluoropyrrolidin-1-yl)-phenyl
593.	methyl	4-((S)-3-fluoropyrrolidin-1-yl)-phenyl
594.	methyl	4-((R)-3-fluoropyrrolidin-1-yl)-phenyl
595.	methyl	4-(2,2-difluoropyrrolidin-1-yl)-phenyl
596.	methyl	4-(3,3-difluoropyrrolidin-1-yl)-phenyl
597.	methyl	4-(2-methylpyrrolidin-1-yl)-phenyl

No.	R^1	Ar
598.	methyl	4-((S)-2-methylpyrrolidin-1-yl)-phenyl
599.	methyl	4-((R)-2-methylpyrrolidin-1-yl)-phenyl
600.	methyl	4-(3-methylpyrrolidin-1-yl)-phenyl
601.	methyl	4-((S)-3-methylpyrrolidin-1-yl)-phenyl
602.	methyl	4-((R)-3-methylpyrrolidin-1-yl)-phenyl
603.	methyl	4-(1-methylpyrrolidin-2-yl)-phenyl
604.	methyl	4-((S)-1-methylpyrrolidin-2-yl)-phenyl
605.	methyl	4-((R)-1-methylpyrrolidin-2-yl)-phenyl
606.	methyl	4-(1-methylpyrrolidin-3-yl)-phenyl
607.	methyl	4-((S)-1-methylpyrrolidin-3-yl)-phenyl
608.	methyl	4-((R)-1-methylpyrrolidin-3-yl)-phenyl
609.	methyl	4-(2,2-dimethylpyrrolidin-1-yl)-phenyl
610.	methyl	4-(3,3-dimethylpyrrolidin-1-yl)-phenyl
611.	methyl	4-(2-trifluoromethylpyrrolidin-1-yl)-phenyl
612.	methyl	4-((S)-2-trifluoromethylpyrrolidin-1-yl)-phenyl
613.	methyl	4-((R)-2-trifluoromethylpyrrolidin-1-yl)-phenyl
614.	methyl	4-(3-trifluoromethylpyrrolidin-1-yl)-phenyl
615.	methyl	4-((S)-3-trifluoromethylpyrrolidin-1-yl)-phenyl
616.	methyl	4-((R)-3-trifluoromethylpyrrolidin-1-yl)-phenyl
617.	methyl	4-(2-oxopyrrolidin-1-yl)-phenyl
618.	methyl	4-(2-oxo-oxazolidin-3-yl)-phenyl
619.	methyl	4-(piperidin-1-yl)-phenyl
620.	methyl	4-(2-methylpiperidin-1-yl)-phenyl
621.	methyl	4-((S)-2-methylpiperidin-1-yl)-phenyl
622.	methyl	4-((R)-2-methylpiperidin-1-yl)-phenyl
623.	methyl	4-(piperazin-1-yl)-phenyl
624.	methyl	4-(4-methylpiperazin-1-yl)-phenyl
625.	methyl	4-(morpholin-4-yl)-phenyl
626.	methyl	4-(thiomorpholin-4-yl)-phenyl
627.	methyl	4-(1-oxo-thiomorpholin-4-yl)-phenyl
628.	methyl	4-(1,1-dioxo-thiomorpholin-4-yl)-phenyl
629.	methyl	4-(pyrrol-1-yl)-phenyl
630.	methyl	4-(pyrrol-2-yl)-phenyl
631.	methyl	4-(pyrrol-3-yl)-phenyl
632.	methyl	4-(1-methylpyrrol-2-yl)-phenyl
633.	methyl	4-(1-methylpyrrol-3-yl)-phenyl
634.	methyl	4-(furan-2-yl)-phenyl
635.	methyl	4-(furan-3-yl)–phenyl
636.	methyl	4-(thiophen-2-yl)–phenyl
637.	methyl	4-(thiophen-3-yl)–phenyl
638.	methyl	4-(5-propylthien-2-yl)–phenyl

No.	R^1	Ar
639.	methyl	4-(pyrazol-1-yl)–phenyl
640.	methyl	4-(pyrazol-3-yl)–phenyl
641.	methyl	4-(pyrazol-4-yl)–phenyl
642.	methyl	4-(1-methyl-1H-pyrazol-4-yl)-phenyl
643.	methyl	4-(1-ethyl-1H-pyrazol-4-yl)-phenyl
644.	methyl	4-(1-methyl-1H-pyrazol-5-yl)-phenyl
645.	methyl	4-(1H-imidazol-2-yl)-phenyl
646.	methyl	4-(imidazol-1-yl)-phenyl
647.	methyl	4-(1-methylimidazol-2-yl)-phenyl
648.	methyl	4-(oxazol-2-yl)-phenyl
649.	methyl	4-(oxazol-4-yl)-phenyl
650.	methyl	4-(oxazol-5-yl)-phenyl
651.	methyl	4-(isoxazol-3-yl)-phenyl
652.	methyl	4-(isoxazol-4-yl)-phenyl
653.	methyl	4-(isoxazol-5-yl)-phenyl
654.	methyl	4-([1,2,3]-triazol-1-yl)-phenyl
655.	methyl	4-([1,2,4]-triazol-1-yl)-phenyl
656.	methyl	4-([1,2,3]-triazol-2-yl)-phenyl
657.	methyl	4-(4H-[1,2,4]-triazol-3-yl)-phenyl
658.	methyl	4-([1,2,4]-triazol-4-yl)-phenyl
659.	methyl	4-(2H-[1,2,3]-triazol-4-yl)-phenyl
660.	methyl	4-(4-methyl-4H-[1,2,4]-triazol-3-yl)-phenyl
661.	methyl	4-(2-methyl-2H-[1,2,3]-triazol-4-yl)-phenyl
662.	methyl	4-([1,3,4]-oxadiazol-2-yl)-phenyl
663.	methyl	4-([1,2,4]-oxadiazol-3-yl)-phenyl
664.	methyl	4-([1,2,4]-oxadiazol-5-yl)-phenyl
665.	methyl	4-([1,2,3]-oxadiazol-4-yl)-phenyl
666.	methyl	4-([1,2,3]-oxadiazol-5-yl)-phenyl
667.	methyl	4-([1,2,3]-thiadiazol-4-yl)-phenyl
668.	methyl	4-(1H-tetrazol-5-yl)-phenyl
669.	methyl	4-(tetrazol-1-yl)-phenyl
670.	methyl	4-(2-methyl-2H-tetrazol-5-yl)-phenyl
671.	methyl	4-(1-methyl-1H-tetrazol-5-yl)-phenyl
672.	methyl	4-furazan-3-yl-phenyl
673.	methyl	4-(pyrid-2-yl)-phenyl
674.	methyl	4-(pyrid-3-yl)-phenyl
675.	methyl	4-(pyrid-4-yl)-phenyl
676.	methyl	4-(pyrimidin-2-yl)-phenyl
677.	methyl	4-(pyrimidin-4-yl)-phenyl
678.	methyl	4-(pyrimidin-5-yl)-phenyl
679.	methyl	5-isopropylthiophen-2-yl

No.	R^1	Ar
680.	methyl	2-chlorothiophen-5-yl
681.	methyl	2,5-dichlorothiophen-4-yl
682.	methyl	2,3-dichlorothiophen-5-yl
683.	methyl	2-chloro-3-nitrothiophen-5-yl
684.	methyl	2-(phenylsulfonyl)-thiophen-5-yl
685.	methyl	2-(pyridin-2-yl)thiophen-5-yl
686.	methyl	2-(5-(trifluoromethyl)isoxazol-3-yl)-thiophen-5-yl
687.	methyl	2-(2-methylthiazol-4-yl)-thiophen-5-yl
688.	methyl	1-methyl-1H-imidazol-4-yl
689.	methyl	1,2-dimethyl-1H-imidazol-4-yl
690.	methyl	3,5-dimethylisoxazol-4-yl
691.	methyl	thiazol-2-yl
692.	methyl	4-methylthiazol-2-yl
693.	methyl	4-isopropylthiazol-2-yl
694.	methyl	4-trifluoromethylthiazol-2-yl
695.	methyl	5-methylthiazol-2-yl
696.	methyl	5-isopropylthiazol-2-yl
697.	methyl	5-trifluoromethylthiazol-2-yl
698.	methyl	2,4-dimethylthiazol-5-yl
699.	methyl	2-acetamido-4-methylthiazol-5-yl
700.	methyl	4H-[1,2,4]triazol-3-yl
701.	methyl	5-methyl-4H-[1,2,4]triazol-3-yl
702.	methyl	4-methyl-4H-[1,2,4]triazol-3-yl
703.	methyl	5-isopropyl-4H-[1,2,4]triazol-3-yl
704.	methyl	5-trifluoromethyl-4H-[1,2,4]triazol-3-yl
705.	methyl	4,5-dimethyl-4H-[1,2,4]triazol-3-yl
706.	methyl	5-isopropyl-4-methyl-4H-[1,2,4]triazol-3-yl
707.	methyl	5-trifluoromethyl-4-methyl-4H-[1,2,4]triazol-3-yl
708.	methyl	[1,3,4]thiadiazol-2-yl
709.	methyl	5-methyl-[1,3,4]thiadiazol-2-yl
710.	methyl	5-isopropyl-[1,3,4]thiadiazol-2-yl
711.	methyl	5-trifluoromethyl-[1,3,4]thiadiazol-2-yl
712.	methyl	3-bromo-2-chloropyrid-5-yl
713.	methyl	2-(4-morpholino)-pyrid-5-yl
714.	methyl	2-phenoxypyrid-5-yl
715.	methyl	(2-isopropyl)-pyrimidin-5-yl
716.	methyl	(5-isopropyl)-pyrimidin-2-yl
717.	methyl	8-quinolyl
718.	methyl	5-isoquinolyl
719.	methyl	2-(trifluoroacetyl)-1,2,3,4-tetrahydroisoquinolin-7-yl

No.	R^1	Ar
720.	methyl	5-chloro-3-methylbenzothiophen-2-yl
721.	methyl	3,4-dihydro-4-methyl-2H-benzo[b][1,4]oxazinyl
722.	methyl	benzothiazol-6-yl
723.	methyl	benzo[2,1,3]oxadiazol-4-yl
724.	methyl	5-chlorobenzo[2,1,3]oxadiazol-4-yl
725.	methyl	7-chlorobenzo[2,1,3]oxadiazol-4-yl
726.	methyl	benzo[2,1,3]thiadiazol-4-yl
727.	H	4-methylphenyl
728.	H	4-ethylphenyl
729.	H	4-propylphenyl
730.	H	4-isopropylphenyl
731.	H	4-sec-butylphenyl
732.	H	4-isobutylphenyl
733.	H	4-(1,1-dimethylpropyl)-phenyl
734.	H	4-vinylphenyl
735.	H	4-isopropenylphenyl
736.	H	4-fluorophenyl
737.	H	4-chlorophenyl
738.	H	4-bromophenyl
739.	H	4-(fluoromethyl)phenyl
740.	H	3-(fluoromethyl)phenyl
741.	H	2-(fluoromethyl)phenyl
742.	H	4-(difluoromethyl)phenyl
743.	H	3-(difluoromethyl)phenyl
744.	H	2-(difluoromethyl)phenyl
745.	H	4-(trifluoromethyl)phenyl
746.	H	3-(trifluoromethyl)phenyl
747.	H	2-(trifluoromethyl)phenyl
748.	H	4-(1-fluoroethyl)-phenyl
749.	H	4-((S)-1-fluoroethyl)-phenyl
750.	H	4-((R)-1-fluoroethyl)-phenyl
751.	H	4-(2-fluoroethyl)-phenyl
752.	H	4-(1,1-difluoroethyl)-phenyl
753.	H	4-(2,2-difluoroethyl)-phenyl
754.	H	4-(2,2,2-trifluoroethyl)-phenyl
755.	H	4-(3-fluoropropyl)-phenyl
756.	H	4-(2-fluoropropyl)-phenyl
757.	H	4-((S)-2-fluoropropyl)-phenyl
758.	H	4-((R)-2-fluoropropyl)-phenyl
759.	H	4-(3,3-difluoropropyl)-phenyl
760.	H	4-(3,3,3-trifluoropropyl)-phenyl

No.	R^1	Ar
761.	H	4-(1-fluoro-1-methylethyl)-phenyl
762.	H	4-(2-fluoro-1-methylethyl)-phenyl
763.	H	4-((S)-2-fluoro-1-methylethyl)-phenyl
764.	H	4-((R)-2-fluoro-1-methylethyl)-phenyl
765.	H	4-(2,2-difluoro-1-methylethyl)-phenyl
766.	H	4-((S)-2,2-difluoro-1-methylethyl)-phenyl
767.	H	4-((R)-2,2-difluoro-1-methylethyl)-phenyl
768.	H	4-(2,2,2-trifluoro-1-methylethyl)-phenyl
769.	H	4-((S)-2,2,2-trifluoro-1-methylethyl)-phenyl
770.	H	4-((R)-2,2,2-trifluoro-1-methylethyl)-phenyl
771.	H	4-(2-fluoro-1-fluoromethylethyl)-phenyl
772.	H	4-(1-difluoromethyl-2,2-difluoroethyl)-phenyl
773.	H	4-(1,1-dimethyl-2-fluoroethyl)-phenyl
774.	H	4-methoxyphenyl
775.	H	4-ethoxyphenyl
776.	H	4-propoxyphenyl
777.	H	4-isopropoxyphenyl
778.	H	4-butoxyphenyl
779.	H	4-(fluoromethoxy)-phenyl
780.	H	4-(difluoromethoxy)-phenyl
781.	H	4-(trifluoromethoxy)-phenyl
782.	H	3-(trifluoromethoxy)-phenyl
783.	H	4-(2-fluoroethoxy)-phenyl
784.	H	4-(2,2-difluoroethoxy)-phenyl
785.	H	4-(2,2,2-trifluoroethoxy)-phenyl
786.	H	4-(1,1,2,2-tetrafluoroethoxy)-phenyl
787.	H	4-cyclopropylphenyl
788.	H	4-cyclobutylphenyl
789.	H	4-cyclopentylphenyl
790.	H	4-(2,2-difluorocyclopropyl)-phenyl
791.	H	3,4-difluorophenyl
792.	H	4-bromo-3-fluorophenyl
793.	H	4-bromo-2-fluorophenyl
794.	H	4-bromo-2,5-difluorophenyl
795.	H	2-fluoro-4-isopropylphenyl
796.	H	3-fluoro-4-isopropylphenyl
797.	H	4-(1-hydroxy-1-methylethyl)-phenyl
798.	H	4-(2-hydroxy-2-methylpropyl)-phenyl
799.	H	4-acetylphenyl
800.	H	4-carboxyphenyl
801.	H	4-cyanophenyl

No.	R^1	Ar
802.	H	4-hydroxyphenyl
803.	H	4-(O-benzyl)-phenyl
804.	H	4-(2-methoxyethoxy)-phenyl
805.	H	4-(CH_2-N(CH_3)$_2$)-phenyl
806.	H	4-(NH-CO-NH_2)-phenyl
807.	H	4-(methylsulfanyl)-phenyl
808.	H	4-(fluoromethylsulfanyl)-phenyl
809.	H	4-(difluoromethylsulfanyl)-phenyl
810.	H	4-(trifluoromethylsulfanyl)-phenyl
811.	H	4-(methylsulfonyl)-phenyl
812.	H	4-(N-methoxy-N-methyl-amino)-phenyl
813.	H	4-(methoxyamino)-phenyl
814.	H	4-(ethoxyamino)-phenyl
815.	H	4-(N-methylaminooxy)-phenyl
816.	H	4-(N,N-dimethylaminooxy)-phenyl
817.	H	4-(azetidin-1-yl)-phenyl
818.	H	4-(2-methylazetidin-1-yl)-phenyl
819.	H	4-((S)-2-methylazetidin-1-yl)-phenyl
820.	H	4-((R)-2-methylazetidin-1-yl)-phenyl
821.	H	4-(3-fluoroazetidin-1-yl)-phenyl
822.	H	4-(3-methoxyazetidin-1-yl)-phenyl
823.	H	4-(3-hydroxyazetidin-1-yl)-phenyl
824.	H	4-(pyrrolidin-1-yl)-phenyl
825.	H	4-(pyrrolidin-2-yl)-phenyl
826.	H	4-((S)-pyrrolidin-2-yl)-phenyl
827.	H	4-((R)-pyrrolidin-2-yl)-phenyl
828.	H	4-(pyrrolidin-3-yl)-phenyl
829.	H	4-((S)-pyrrolidin-3-yl)-phenyl
830.	H	4-((R)-pyrrolidin-3-yl)-phenyl
831.	H	4-(2-fluoropyrrolidin-1-yl)-phenyl
832.	H	4-((S)-2-fluoropyrrolidin-1-yl)-phenyl
833.	H	4-((R)-2-fluoropyrrolidin-1-yl)-phenyl
834.	H	4-(3-fluoropyrrolidin-1-yl)-phenyl
835.	H	4-((S)-3-fluoropyrrolidin-1-yl)-phenyl
836.	H	4-((R)-3-fluoropyrrolidin-1-yl)-phenyl
837.	H	4-(2,2-difluoropyrrolidin-1-yl)-phenyl
838.	H	4-(3,3-difluoropyrrolidin-1-yl)-phenyl
839.	H	4-(2-methylpyrrolidin-1-yl)-phenyl
840.	H	4-((S)-2-methylpyrrolidin-1-yl)-phenyl
841.	H	4-((R)-2-methylpyrrolidin-1-yl)-phenyl
842.	H	4-(3-methylpyrrolidin-1-yl)-phenyl

No.	R^1	Ar
843.	H	4-((S)-3-methylpyrrolidin-1-yl)-phenyl
844.	H	4-((R)-3-methylpyrrolidin-1-yl)-phenyl
845.	H	4-(1-methylpyrrolidin-2-yl)-phenyl
846.	H	4-((S)-1-methylpyrrolidin-2-yl)-phenyl
847.	H	4-((R)-1-methylpyrrolidin-2-yl)-phenyl
848.	H	4-(1-methylpyrrolidin-3-yl)-phenyl
849.	H	4-((S)-1-methylpyrrolidin-3-yl)-phenyl
850.	H	4-((R)-1-methylpyrrolidin-3-yl)-phenyl
851.	H	4-(2,2-dimethylpyrrolidin-1-yl)-phenyl
852.	H	4-(3,3-dimethylpyrrolidin-1-yl)-phenyl
853.	H	4-(2-trifluoromethylpyrrolidin-1-yl)-phenyl
854.	H	4-((S)-2-trifluoromethylpyrrolidin-1-yl)-phenyl
855.	H	4-((R)-2-trifluoromethylpyrrolidin-1-yl)-phenyl
856.	H	4-(3-trifluoromethylpyrrolidin-1-yl)-phenyl
857.	H	4-((S)-3-trifluoromethylpyrrolidin-1-yl)-phenyl
858.	H	4-((R)-3-trifluoromethylpyrrolidin-1-yl)-phenyl
859.	H	4-(2-oxopyrrolidin-1-yl)-phenyl
860.	H	4-(2-oxo-oxazolidin-3-yl)-phenyl
861.	H	4-(piperidin-1-yl)-phenyl
862.	H	4-(2-methylpiperidin-1-yl)-phenyl
863.	H	4-((S)-2-methylpiperidin-1-yl)-phenyl
864.	H	4-((R)-2-methylpiperidin-1-yl)-phenyl
865.	H	4-(piperazin-1-yl)-phenyl
866.	H	4-(4-methylpiperazin-1-yl)-phenyl
867.	H	4-(morpholin-4-yl)-phenyl
868.	H	4-(thiomorpholin-4-yl)-phenyl
869.	H	4-(1-oxo-thiomorpholin-4-yl)-phenyl
870.	H	4-(1,1-dioxo-thiomorpholin-4-yl)-phenyl
871.	H	4-(pyrrol-1-yl)-phenyl
872.	H	4-(pyrrol-2-yl)-phenyl
873.	H	4-(pyrrol-3-yl)-phenyl
874.	H	4-(1-methylpyrrol-2-yl)-phenyl
875.	H	4-(1-methylpyrrol-3-yl)-phenyl
876.	H	4-(furan-2-yl)-phenyl
877.	H	4-(furan-3-yl)–phenyl
878.	H	4-(thiophen-2-yl)–phenyl
879.	H	4-(thiophen-3-yl)–phenyl
880.	H	4-(5-propylthien-2-yl)–phenyl
881.	H	4-(pyrazol-1-yl)–phenyl
882.	H	4-(pyrazol-3-yl)–phenyl
883.	H	4-(pyrazol-4-yl)–phenyl

No.	R^1	Ar
884.	H	4-(1-methyl-1H-pyrazol-4-yl)-phenyl
885.	H	4-(1-ethyl-1H-pyrazol-4-yl)-phenyl
886.	H	4-(1-methyl-1H-pyrazol-5-yl)-phenyl
887.	H	4-(1H-imidazol-2-yl)-phenyl
888.	H	4-(imidazol-1-yl)-phenyl
889.	H	4-(1-methylimidazol-2-yl)-phenyl
890.	H	4-(oxazol-2-yl)-phenyl
891.	H	4-(oxazol-4-yl)-phenyl
892.	H	4-(oxazol-5-yl)-phenyl
893.	H	4-(isoxazol-3-yl)-phenyl
894.	H	4-(isoxazol-4-yl)-phenyl
895.	H	4-(isoxazol-5-yl)-phenyl
896.	H	4-([1,2,3]-triazol-1-yl)-phenyl
897.	H	4-([1,2,4]-triazol-1-yl)-phenyl
898.	H	4-([1,2,3]-triazol-2-yl)-phenyl
899.	H	4-(4H-[1,2,4]-triazol-3-yl)-phenyl
900.	H	4-([1,2,4]-triazol-4-yl)-phenyl
901.	H	4-(2H-[1,2,3]-triazol-4-yl)-phenyl
902.	H	4-(4-methyl-4H-[1,2,4]-triazol-3-yl)-phenyl
903.	H	4-(2-methyl-2H-[1,2,3]-triazol-4-yl)-phenyl
904.	H	4-([1,3,4]-oxadiazol-2-yl)-phenyl
905.	H	4-([1,2,4]-oxadiazol-3-yl)-phenyl
906.	H	4-([1,2,4]-oxadiazol-5-yl)-phenyl
907.	H	4-([1,2,3]-oxadiazol-4-yl)-phenyl
908.	H	4-([1,2,3]-oxadiazol-5-yl)-phenyl
909.	H	4-([1,2,3]-thiadiazol-4-yl)-phenyl
910.	H	4-(1H-tetrazol-5-yl)-phenyl
911.	H	4-(tetrazol-1-yl)-phenyl
912.	H	4-(2-methyl-2H-tetrazol-5-yl)-phenyl
913.	H	4-(1-methyl-1H-tetrazol-5-yl)-phenyl
914.	H	4-furazan-3-yl-phenyl
915.	H	4-(pyrid-2-yl)-phenyl
916.	H	4-(pyrid-3-yl)-phenyl
917.	H	4-(pyrid-4-yl)-phenyl
918.	H	4-(pyrimidin-2-yl)-phenyl
919.	H	4-(pyrimidin-4-yl)-phenyl
920.	H	4-(pyrimidin-5-yl)-phenyl
921.	H	5-isopropylthiophen-2-yl
922.	H	2-chlorothiophen-5-yl
923.	H	2,5-dichlorothiophen-4-yl
924.	H	2,3-dichlorothiophen-5-yl

No.	R^1	Ar
925.	H	2-chloro-3-nitrothiophen-5-yl
926.	H	2-(phenylsulfonyl)-thiophen-5-yl
927.	H	2-(pyridin-2-yl)thiophen-5-yl
928.	H	2-(5-(trifluoromethyl)isoxazol-3-yl)-thiophen-5-yl
929.	H	2-(2-methylthiazol-4-yl)-thiophen-5-yl
930.	H	1-methyl-1H-imidazol-4-yl
931.	H	1,2-dimethyl-1H-imidazol-4-yl
932.	H	3,5-dimethylisoxazol-4-yl
933.	H	thiazol-2-yl
934.	H	4-methylthiazol-2-yl
935.	H	4-isopropylthiazol-2-yl
936.	H	4-trifluoromethylthiazol-2-yl
937.	H	5-methylthiazol-2-yl
938.	H	5-isopropylthiazol-2-yl
939.	H	5-trifluoromethylthiazol-2-yl
940.	H	2,4-dimethylthiazol-5-yl
941.	H	2-acetamido-4-methylthiazol-5-yl
942.	H	4H-[1,2,4]triazol-3-yl
943.	H	5-methyl-4H-[1,2,4]triazol-3-yl
944.	H	4-methyl-4H-[1,2,4]triazol-3-yl
945.	H	5-isopropyl-4H-[1,2,4]triazol-3-yl
946.	H	5-trifluoromethyl-4H-[1,2,4]triazol-3-yl
947.	H	4,5-dimethyl-4H-[1,2,4]triazol-3-yl
948.	H	5-isopropyl-4-methyl-4H-[1,2,4]triazol-3-yl
949.	H	5-trifluoromethyl-4-methyl-4H-[1,2,4]triazol-3-yl
950.	H	[1,3,4]thiadiazol-2-yl
951.	H	5-methyl-[1,3,4]thiadiazol-2-yl
952.	H	5-isopropyl-[1,3,4]thiadiazol-2-yl
953.	H	5-trifluoromethyl-[1,3,4]thiadiazol-2-yl
954.	H	3-bromo-2-chloropyrid-5-yl
955.	H	2-(4-morpholino)-pyrid-5-yl
956.	H	2-phenoxypyrid-5-yl
957.	H	(2-isopropyl)-pyrimidin-5-yl
958.	H	(5-isopropyl)-pyrimidin-2-yl
959.	H	8-quinolyl
960.	H	5-isoquinolyl
961.	H	2-(trifluoroacetyl)-1,2,3,4-tetrahydroisoquinolin-7-yl
962.	H	5-chloro-3-methylbenzothiophen-2-yl
963.	H	3,4-dihydro-4-methyl-2H-benzo[b][1,4]oxazinyl
964.	H	benzothiazol-6-yl

No.	R^1	Ar
965.	H	benzo[2,1,3]oxadiazol-4-yl
966.	H	5-chlorobenzo[2,1,3]oxadiazol-4-yl
967.	H	7-chlorobenzo[2,1,3]oxadiazol-4-yl
968.	H	benzo[2,1,3]thiadiazol-4-yl
969.	3-fluoropropyl	4-methylphenyl
970.	3-fluoropropyl	4-ethylphenyl
971.	3-fluoropropyl	4-propylphenyl
972.	3-fluoropropyl	4-isopropylphenyl
973.	3-fluoropropyl	4-sec-butylphenyl
974.	3-fluoropropyl	4-isobutylphenyl
975.	3-fluoropropyl	4-(1,1-dimethylpropyl)-phenyl
976.	3-fluoropropyl	4-vinylphenyl
977.	3-fluoropropyl	4-isopropenylphenyl
978.	3-fluoropropyl	4-fluorophenyl
979.	3-fluoropropyl	4-chlorophenyl
980.	3-fluoropropyl	4-bromophenyl
981.	3-fluoropropyl	4-(fluoromethyl)phenyl
982.	3-fluoropropyl	3-(fluoromethyl)phenyl
983.	3-fluoropropyl	2-(fluoromethyl)phenyl
984.	3-fluoropropyl	4-(difluoromethyl)phenyl
985.	3-fluoropropyl	3-(difluoromethyl)phenyl
986.	3-fluoropropyl	2-(difluoromethyl)phenyl
987.	3-fluoropropyl	4-(trifluoromethyl)phenyl
988.	3-fluoropropyl	3-(trifluoromethyl)phenyl
989.	3-fluoropropyl	2-(trifluoromethyl)phenyl
990.	3-fluoropropyl	4-(1-fluoroethyl)-phenyl
991.	3-fluoropropyl	4-((S)-1-fluoroethyl)-phenyl
992.	3-fluoropropyl	4-((R)-1-fluoroethyl)-phenyl
993.	3-fluoropropyl	4-(2-fluoroethyl)-phenyl
994.	3-fluoropropyl	4-(1,1-difluoroethyl)-phenyl
995.	3-fluoropropyl	4-(2,2-difluoroethyl)-phenyl
996.	3-fluoropropyl	4-(2,2,2-trifluoroethyl)-phenyl
997.	3-fluoropropyl	4-(3-fluoropropyl)-phenyl
998.	3-fluoropropyl	4-(2-fluoropropyl)-phenyl
999.	3-fluoropropyl	4-((S)-2-fluoropropyl)-phenyl
1000.	3-fluoropropyl	4-((R)-2-fluoropropyl)-phenyl
1001.	3-fluoropropyl	4-(3,3-difluoropropyl)-phenyl
1002.	3-fluoropropyl	4-(3,3,3-trifluoropropyl)-phenyl
1003.	3-fluoropropyl	4-(1-fluoro-1-methylethyl)-phenyl
1004.	3-fluoropropyl	4-(2-fluoro-1-methylethyl)-phenyl
1005.	3-fluoropropyl	4-((S)-2-fluoro-1-methylethyl)-phenyl

No.	R^1	Ar
1006.	3-fluoropropyl	4-((R)-2-fluoro-1-methylethyl)-phenyl
1007.	3-fluoropropyl	4-(2,2-difluoro-1-methylethyl)-phenyl
1008.	3-fluoropropyl	4-((S)-2,2-difluoro-1-methylethyl)-phenyl
1009.	3-fluoropropyl	4-((R)-2,2-difluoro-1-methylethyl)-phenyl
1010.	3-fluoropropyl	4-(2,2,2-trifluoro-1-methylethyl)-phenyl
1011.	3-fluoropropyl	4-((S)-2,2,2-trifluoro-1-methylethyl)-phenyl
1012.	3-fluoropropyl	4-((R)-2,2,2-trifluoro-1-methylethyl)-phenyl
1013.	3-fluoropropyl	4-(2-fluoro-1-fluoromethylethyl)-phenyl
1014.	3-fluoropropyl	4-(1-difluoromethyl-2,2-difluoroethyl)-phenyl
1015.	3-fluoropropyl	4-(1,1-dimethyl-2-fluoroethyl)-phenyl
1016.	3-fluoropropyl	4-methoxyphenyl
1017.	3-fluoropropyl	4-ethoxyphenyl
1018.	3-fluoropropyl	4-propoxyphenyl
1019.	3-fluoropropyl	4-isopropoxyphenyl
1020.	3-fluoropropyl	4-butoxyphenyl
1021.	3-fluoropropyl	4-(fluoromethoxy)-phenyl
1022.	3-fluoropropyl	4-(difluoromethoxy)-phenyl
1023.	3-fluoropropyl	4-(trifluoromethoxy)-phenyl
1024.	3-fluoropropyl	3-(trifluoromethoxy)-phenyl
1025.	3-fluoropropyl	4-(2-fluoroethoxy)-phenyl
1026.	3-fluoropropyl	4-(2,2-difluoroethoxy)-phenyl
1027.	3-fluoropropyl	4-(2,2,2-trifluoroethoxy)-phenyl
1028.	3-fluoropropyl	4-(1,1,2,2-tetrafluoroethoxy)-phenyl
1029.	3-fluoropropyl	4-cyclopropylphenyl
1030.	3-fluoropropyl	4-cyclobutylphenyl
1031.	3-fluoropropyl	4-cyclopentylphenyl
1032.	3-fluoropropyl	4-(2,2-difluorocyclopropyl)-phenyl
1033.	3-fluoropropyl	3,4-difluorophenyl
1034.	3-fluoropropyl	4-bromo-3-fluorophenyl
1035.	3-fluoropropyl	4-bromo-2-fluorophenyl
1036.	3-fluoropropyl	4-bromo-2,5-difluorophenyl
1037.	3-fluoropropyl	2-fluoro-4-isopropylphenyl
1038.	3-fluoropropyl	3-fluoro-4-isopropylphenyl
1039.	3-fluoropropyl	4-(1-hydroxy-1-methylethyl)-phenyl
1040.	3-fluoropropyl	4-(2-hydroxy-2-methylpropyl)-phenyl
1041.	3-fluoropropyl	4-acetylphenyl
1042.	3-fluoropropyl	4-carboxyphenyl
1043.	3-fluoropropyl	4-cyanophenyl
1044.	3-fluoropropyl	4-hydroxyphenyl
1045.	3-fluoropropyl	4-(O-benzyl)-phenyl
1046.	3-fluoropropyl	4-(2-methoxyethoxy)-phenyl

No.	R^1	Ar
1047.	3-fluoropropyl	4-(CH_2-N(CH_3)$_2$)-phenyl
1048.	3-fluoropropyl	4-(NH-CO-NH_2)-phenyl
1049.	3-fluoropropyl	4-(methylsulfanyl)-phenyl
1050.	3-fluoropropyl	4-(fluoromethylsulfanyl)-phenyl
1051.	3-fluoropropyl	4-(difluoromethylsulfanyl)-phenyl
1052.	3-fluoropropyl	4-(trifluoromethylsulfanyl)-phenyl
1053.	3-fluoropropyl	4-(methylsulfonyl)-phenyl
1054.	3-fluoropropyl	4-(N-methoxy-N-methyl-amino)-phenyl
1055.	3-fluoropropyl	4-(methoxyamino)-phenyl
1056.	3-fluoropropyl	4-(ethoxyamino)-phenyl
1057.	3-fluoropropyl	4-(N-methylaminooxy)-phenyl
1058.	3-fluoropropyl	4-(N,N-dimethylaminooxy)-phenyl
1059.	3-fluoropropyl	4-(azetidin-1-yl)-phenyl
1060.	3-fluoropropyl	4-(2-methylazetidin-1-yl)-phenyl
1061.	3-fluoropropyl	4-((S)-2-methylazetidin-1-yl)-phenyl
1062.	3-fluoropropyl	4-((R)-2-methylazetidin-1-yl)-phenyl
1063.	3-fluoropropyl	4-(3-fluoroazetidin-1-yl)-phenyl
1064.	3-fluoropropyl	4-(3-methoxyazetidin-1-yl)-phenyl
1065.	3-fluoropropyl	4-(3-hydroxyazetidin-1-yl)-phenyl
1066.	3-fluoropropyl	4-(pyrrolidin-1-yl)-phenyl
1067.	3-fluoropropyl	4-(pyrrolidin-2-yl)-phenyl
1068.	3-fluoropropyl	4-((S)-pyrrolidin-2-yl)-phenyl
1069.	3-fluoropropyl	4-((R)-pyrrolidin-2-yl)-phenyl
1070.	3-fluoropropyl	4-(pyrrolidin-3-yl)-phenyl
1071.	3-fluoropropyl	4-((S)-pyrrolidin-3-yl)-phenyl
1072.	3-fluoropropyl	4-((R)-pyrrolidin-3-yl)-phenyl
1073.	3-fluoropropyl	4-(2-fluoropyrrolidin-1-yl)-phenyl
1074.	3-fluoropropyl	4-((S)-2-fluoropyrrolidin-1-yl)-phenyl
1075.	3-fluoropropyl	4-((R)-2-fluoropyrrolidin-1-yl)-phenyl
1076.	3-fluoropropyl	4-(3-fluoropyrrolidin-1-yl)-phenyl
1077.	3-fluoropropyl	4-((S)-3-fluoropyrrolidin-1-yl)-phenyl
1078.	3-fluoropropyl	4-((R)-3-fluoropyrrolidin-1-yl)-phenyl
1079.	3-fluoropropyl	4-(2,2-difluoropyrrolidin-1-yl)-phenyl
1080.	3-fluoropropyl	4-(3,3-difluoropyrrolidin-1-yl)-phenyl
1081.	3-fluoropropyl	4-(2-methylpyrrolidin-1-yl)-phenyl
1082.	3-fluoropropyl	4-((S)-2-methylpyrrolidin-1-yl)-phenyl
1083.	3-fluoropropyl	4-((R)-2-methylpyrrolidin-1-yl)-phenyl
1084.	3-fluoropropyl	4-(3-methylpyrrolidin-1-yl)-phenyl
1085.	3-fluoropropyl	4-((S)-3-methylpyrrolidin-1-yl)-phenyl
1086.	3-fluoropropyl	4-((R)-3-methylpyrrolidin-1-yl)-phenyl
1087.	3-fluoropropyl	4-(1-methylpyrrolidin-2-yl)-phenyl

No.	R^1	Ar
1088.	3-fluoropropyl	4-((S)-1-methylpyrrolidin-2-yl)-phenyl
1089.	3-fluoropropyl	4-((R)-1-methylpyrrolidin-2-yl)-phenyl
1090.	3-fluoropropyl	4-(1-methylpyrrolidin-3-yl)-phenyl
1091.	3-fluoropropyl	4-((S)-1-methylpyrrolidin-3-yl)-phenyl
1092.	3-fluoropropyl	4-((R)-1-methylpyrrolidin-3-yl)-phenyl
1093.	3-fluoropropyl	4-(2,2-dimethylpyrrolidin-1-yl)-phenyl
1094.	3-fluoropropyl	4-(3,3-dimethylpyrrolidin-1-yl)-phenyl
1095.	3-fluoropropyl	4-(2-trifluoromethylpyrrolidin-1-yl)-phenyl
1096.	3-fluoropropyl	4-((S)-2-trifluoromethylpyrrolidin-1-yl)-phenyl
1097.	3-fluoropropyl	4-((R)-2-trifluoromethylpyrrolidin-1-yl)-phenyl
1098.	3-fluoropropyl	4-(3-trifluoromethylpyrrolidin-1-yl)-phenyl
1099.	3-fluoropropyl	4-((S)-3-trifluoromethylpyrrolidin-1-yl)-phenyl
1100.	3-fluoropropyl	4-((R)-3-trifluoromethylpyrrolidin-1-yl)-phenyl
1101.	3-fluoropropyl	4-(2-oxopyrrolidin-1-yl)-phenyl
1102.	3-fluoropropyl	4-(2-oxo-oxazolidin-3-yl)-phenyl
1103.	3-fluoropropyl	4-(piperidin-1-yl)-phenyl
1104.	3-fluoropropyl	4-(2-methylpiperidin-1-yl)-phenyl
1105.	3-fluoropropyl	4-((S)-2-methylpiperidin-1-yl)-phenyl
1106.	3-fluoropropyl	4-((R)-2-methylpiperidin-1-yl)-phenyl
1107.	3-fluoropropyl	4-(piperazin-1-yl)-phenyl
1108.	3-fluoropropyl	4-(4-methylpiperazin-1-yl)-phenyl
1109.	3-fluoropropyl	4-(morpholin-4-yl)-phenyl
1110.	3-fluoropropyl	4-(thiomorpholin-4-yl)-phenyl
1111.	3-fluoropropyl	4-(1-oxo-thiomorpholin-4-yl)-phenyl
1112.	3-fluoropropyl	4-(1,1-dioxo-thiomorpholin-4-yl)-phenyl
1113.	3-fluoropropyl	4-(pyrrol-1-yl)-phenyl
1114.	3-fluoropropyl	4-(pyrrol-2-yl)-phenyl
1115.	3-fluoropropyl	4-(pyrrol-3-yl)-phenyl
1116.	3-fluoropropyl	4-(1-methylpyrrol-2-yl)-phenyl
1117.	3-fluoropropyl	4-(1-methylpyrrol-3-yl)-phenyl
1118.	3-fluoropropyl	4-(furan-2-yl)-phenyl
1119.	3-fluoropropyl	4-(furan-3-yl)–phenyl
1120.	3-fluoropropyl	4-(thiophen-2-yl)–phenyl
1121.	3-fluoropropyl	4-(thiophen-3-yl)–phenyl
1122.	3-fluoropropyl	4-(5-propylthien-2-yl)–phenyl
1123.	3-fluoropropyl	4-(pyrazol-1-yl)–phenyl
1124.	3-fluoropropyl	4-(pyrazol-3-yl)–phenyl
1125.	3-fluoropropyl	4-(pyrazol-4-yl)–phenyl
1126.	3-fluoropropyl	4-(1-methyl-1H-pyrazol-4-yl)-phenyl
1127.	3-fluoropropyl	4-(1-ethyl-1H-pyrazol-4-yl)-phenyl
1128.	3-fluoropropyl	4-(1-methyl-1H-pyrazol-5-yl)-phenyl

No.	R^1	Ar
1129.	3-fluoropropyl	4-(1H-imidazol-2-yl)-phenyl
1130.	3-fluoropropyl	4-(imidazol-1-yl)-phenyl
1131.	3-fluoropropyl	4-(1-methylimidazol-2-yl)-phenyl
1132.	3-fluoropropyl	4-(oxazol-2-yl)-phenyl
1133.	3-fluoropropyl	4-(oxazol-4-yl)-phenyl
1134.	3-fluoropropyl	4-(oxazol-5-yl)-phenyl
1135.	3-fluoropropyl	4-(isoxazol-3-yl)-phenyl
1136.	3-fluoropropyl	4-(isoxazol-4-yl)-phenyl
1137.	3-fluoropropyl	4-(isoxazol-5-yl)-phenyl
1138.	3-fluoropropyl	4-([1,2,3]-triazol-1-yl)-phenyl
1139.	3-fluoropropyl	4-([1,2,4]-triazol-1-yl)-phenyl
1140.	3-fluoropropyl	4-([1,2,3]-triazol-2-yl)-phenyl
1141.	3-fluoropropyl	4-(4H-[1,2,4]-triazol-3-yl)-phenyl
1142.	3-fluoropropyl	4-([1,2,4]-triazol-4-yl)-phenyl
1143.	3-fluoropropyl	4-(2H-[1,2,3]-triazol-4-yl)-phenyl
1144.	3-fluoropropyl	4-(4-methyl-4H-[1,2,4]-triazol-3-yl)-phenyl
1145.	3-fluoropropyl	4-(2-methyl-2H-[1,2,3]-triazol-4-yl)-phenyl
1146.	3-fluoropropyl	4-([1,3,4]-oxadiazol-2-yl)-phenyl
1147.	3-fluoropropyl	4-([1,2,4]-oxadiazol-3-yl)-phenyl
1148.	3-fluoropropyl	4-([1,2,4]-oxadiazol-5-yl)-phenyl
1149.	3-fluoropropyl	4-([1,2,3]-oxadiazol-4-yl)-phenyl
1150.	3-fluoropropyl	4-([1,2,3]-oxadiazol-5-yl)-phenyl
1151.	3-fluoropropyl	4-([1,2,3]-thiadiazol-4-yl)-phenyl
1152.	3-fluoropropyl	4-(1H-tetrazol-5-yl)-phenyl
1153.	3-fluoropropyl	4-(tetrazol-1-yl)-phenyl
1154.	3-fluoropropyl	4-(2-methyl-2H-tetrazol-5-yl)-phenyl
1155.	3-fluoropropyl	4-(1-methyl-1H-tetrazol-5-yl)-phenyl
1156.	3-fluoropropyl	4-furazan-3-yl-phenyl
1157.	3-fluoropropyl	4-(pyrid-2-yl)-phenyl
1158.	3-fluoropropyl	4-(pyrid-3-yl)-phenyl
1159.	3-fluoropropyl	4-(pyrid-4-yl)-phenyl
1160.	3-fluoropropyl	4-(pyrimidin-2-yl)-phenyl
1161.	3-fluoropropyl	4-(pyrimidin-4-yl)-phenyl
1162.	3-fluoropropyl	4-(pyrimidin-5-yl)-phenyl
1163.	3-fluoropropyl	5-isopropylthiophen-2-yl
1164.	3-fluoropropyl	2-chlorothiophen-5-yl
1165.	3-fluoropropyl	2,5-dichlorothiophen-4-yl
1166.	3-fluoropropyl	2,3-dichlorothiophen-5-yl
1167.	3-fluoropropyl	2-chloro-3-nitrothiophen-5-yl
1168.	3-fluoropropyl	2-(phenylsulfonyl)-thiophen-5-yl
1169.	3-fluoropropyl	2-(pyridin-2-yl)thiophen-5-yl

No.	R^1	Ar
1170.	3-fluoropropyl	2-(5-(trifluoromethyl)isoxazol-3-yl)-thiophen-5-yl
1171.	3-fluoropropyl	2-(2-methylthiazol-4-yl)-thiophen-5-yl
1172.	3-fluoropropyl	1-methyl-1H-imidazol-4-yl
1173.	3-fluoropropyl	1,2-dimethyl-1H-imidazol-4-yl
1174.	3-fluoropropyl	3,5-dimethylisoxazol-4-yl
1175.	3-fluoropropyl	thiazol-2-yl
1176.	3-fluoropropyl	4-methylthiazol-2-yl
1177.	3-fluoropropyl	4-isopropylthiazol-2-yl
1178.	3-fluoropropyl	4-trifluoromethylthiazol-2-yl
1179.	3-fluoropropyl	5-methylthiazol-2-yl
1180.	3-fluoropropyl	5-isopropylthiazol-2-yl
1181.	3-fluoropropyl	5-trifluoromethylthiazol-2-yl
1182.	3-fluoropropyl	2,4-dimethylthiazol-5-yl
1183.	3-fluoropropyl	2-acetamido-4-methylthiazol-5-yl
1184.	3-fluoropropyl	4H-[1,2,4]triazol-3-yl
1185.	3-fluoropropyl	5-methyl-4H-[1,2,4]triazol-3-yl
1186.	3-fluoropropyl	4-methyl-4H-[1,2,4]triazol-3-yl
1187.	3-fluoropropyl	5-isopropyl-4H-[1,2,4]triazol-3-yl
1188.	3-fluoropropyl	5-trifluoromethyl-4H-[1,2,4]triazol-3-yl
1189.	3-fluoropropyl	4,5-dimethyl-4H-[1,2,4]triazol-3-yl
1190.	3-fluoropropyl	5-isopropyl-4-methyl-4H-[1,2,4]triazol-3-yl
1191.	3-fluoropropyl	5-trifluoromethyl-4-methyl-4H-[1,2,4]triazol-3-yl
1192.	3-fluoropropyl	[1,3,4]thiadiazol-2-yl
1193.	3-fluoropropyl	5-methyl-[1,3,4]thiadiazol-2-yl
1194.	3-fluoropropyl	5-isopropyl-[1,3,4]thiadiazol-2-yl
1195.	3-fluoropropyl	5-trifluoromethyl-[1,3,4]thiadiazol-2-yl
1196.	3-fluoropropyl	3-bromo-2-chloropyrid-5-yl
1197.	3-fluoropropyl	2-(4-morpholino)-pyrid-5-yl
1198.	3-fluoropropyl	2-phenoxypyrid-5-yl
1199.	3-fluoropropyl	(2-isopropyl)-pyrimidin-5-yl
1200.	3-fluoropropyl	(5-isopropyl)-pyrimidin-2-yl
1201.	3-fluoropropyl	8-quinolyl
1202.	3-fluoropropyl	5-isoquinolyl
1203.	3-fluoropropyl	2-(trifluoroacetyl)-1,2,3,4-tetrahydroisoquinolin-7-yl
1204.	3-fluoropropyl	5-chloro-3-methylbenzothiophen-2-yl
1205.	3-fluoropropyl	3,4-dihydro-4-methyl-2H-benzo[b][1,4]oxazinyl
1206.	3-fluoropropyl	benzothiazol-6-yl
1207.	3-fluoropropyl	benzo[2,1,3]oxadiazol-4-yl
1208.	3-fluoropropyl	5-chlorobenzo[2,1,3]oxadiazol-4-yl
1209.	3-fluoropropyl	7-chlorobenzo[2,1,3]oxadiazol-4-yl

No.	R^1	Ar
1210.	3-fluoropropyl	benzo[2,1,3]thiadiazol-4-yl
1211.	2-fluoroethyl	4-methylphenyl
1212.	2-fluoroethyl	4-ethylphenyl
1213.	2-fluoroethyl	4-propylphenyl
1214.	2-fluoroethyl	4-isopropylphenyl
1215.	2-fluoroethyl	4-sec-butylphenyl
1216.	2-fluoroethyl	4-isobutylphenyl
1217.	2-fluoroethyl	4-(1,1-dimethylpropyl)-phenyl
1218.	2-fluoroethyl	4-vinylphenyl
1219.	2-fluoroethyl	4-isopropenylphenyl
1220.	2-fluoroethyl	4-fluorophenyl
1221.	2-fluoroethyl	4-chlorophenyl
1222.	2-fluoroethyl	4-bromophenyl
1223.	2-fluoroethyl	4-(fluoromethyl)phenyl
1224.	2-fluoroethyl	3-(fluoromethyl)phenyl
1225.	2-fluoroethyl	2-(fluoromethyl)phenyl
1226.	2-fluoroethyl	4-(difluoromethyl)phenyl
1227.	2-fluoroethyl	3-(difluoromethyl)phenyl
1228.	2-fluoroethyl	2-(difluoromethyl)phenyl
1229.	2-fluoroethyl	4-(trifluoromethyl)phenyl
1230.	2-fluoroethyl	3-(trifluoromethyl)phenyl
1231.	2-fluoroethyl	2-(trifluoromethyl)phenyl
1232.	2-fluoroethyl	4-(1-fluoroethyl)-phenyl
1233.	2-fluoroethyl	4-((S)-1-fluoroethyl)-phenyl
1234.	2-fluoroethyl	4-((R)-1-fluoroethyl)-phenyl
1235.	2-fluoroethyl	4-(2-fluoroethyl)-phenyl
1236.	2-fluoroethyl	4-(1,1-difluoroethyl)-phenyl
1237.	2-fluoroethyl	4-(2,2-difluoroethyl)-phenyl
1238.	2-fluoroethyl	4-(2,2,2-trifluoroethyl)-phenyl
1239.	2-fluoroethyl	4-(3-fluoropropyl)-phenyl
1240.	2-fluoroethyl	4-(2-fluoropropyl)-phenyl
1241.	2-fluoroethyl	4-((S)-2-fluoropropyl)-phenyl
1242.	2-fluoroethyl	4-((R)-2-fluoropropyl)-phenyl
1243.	2-fluoroethyl	4-(3,3-difluoropropyl)-phenyl
1244.	2-fluoroethyl	4-(3,3,3-trifluoropropyl)-phenyl
1245.	2-fluoroethyl	4-(1-fluoro-1-methylethyl)-phenyl
1246.	2-fluoroethyl	4-(2-fluoro-1-methylethyl)-phenyl
1247.	2-fluoroethyl	4-((S)-2-fluoro-1-methylethyl)-phenyl
1248.	2-fluoroethyl	4-((R)-2-fluoro-1-methylethyl)-phenyl
1249.	2-fluoroethyl	4-(2,2-difluoro-1-methylethyl)-phenyl
1250.	2-fluoroethyl	4-((S)-2,2-difluoro-1-methylethyl)-phenyl

No.	R^1	Ar
1251.	2-fluoroethyl	4-((R)-2,2-difluoro-1-methylethyl)-phenyl
1252.	2-fluoroethyl	4-(2,2,2-trifluoro-1-methylethyl)-phenyl
1253.	2-fluoroethyl	4-((S)-2,2,2-trifluoro-1-methylethyl)-phenyl
1254.	2-fluoroethyl	4-((R)-2,2,2-trifluoro-1-methylethyl)-phenyl
1255.	2-fluoroethyl	4-(2-fluoro-1-fluoromethylethyl)-phenyl
1256.	2-fluoroethyl	4-(1-difluoromethyl-2,2-difluoroethyl)-phenyl
1257.	2-fluoroethyl	4-(1,1-dimethyl-2-fluoroethyl)-phenyl
1258.	2-fluoroethyl	4-methoxyphenyl
1259.	2-fluoroethyl	4-ethoxyphenyl
1260.	2-fluoroethyl	4-propoxyphenyl
1261.	2-fluoroethyl	4-isopropoxyphenyl
1262.	2-fluoroethyl	4-butoxyphenyl
1263.	2-fluoroethyl	4-(fluoromethoxy)-phenyl
1264.	2-fluoroethyl	4-(difluoromethoxy)-phenyl
1265.	2-fluoroethyl	4-(trifluoromethoxy)-phenyl
1266.	2-fluoroethyl	3-(trifluoromethoxy)-phenyl
1267.	2-fluoroethyl	4-(2-fluoroethoxy)-phenyl
1268.	2-fluoroethyl	4-(2,2-difluoroethoxy)-phenyl
1269.	2-fluoroethyl	4-(2,2,2-trifluoroethoxy)-phenyl
1270.	2-fluoroethyl	4-(1,1,2,2-tetrafluoroethoxy)-phenyl
1271.	2-fluoroethyl	4-cyclopropylphenyl
1272.	2-fluoroethyl	4-cyclobutylphenyl
1273.	2-fluoroethyl	4-cyclopentylphenyl
1274.	2-fluoroethyl	4-(2,2-difluorocyclopropyl)-phenyl
1275.	2-fluoroethyl	3,4-difluorophenyl
1276.	2-fluoroethyl	4-bromo-3-fluorophenyl
1277.	2-fluoroethyl	4-bromo-2-fluorophenyl
1278.	2-fluoroethyl	4-bromo-2,5-difluorophenyl
1279.	2-fluoroethyl	2-fluoro-4-isopropylphenyl
1280.	2-fluoroethyl	3-fluoro-4-isopropylphenyl
1281.	2-fluoroethyl	4-(1-hydroxy-1-methylethyl)-phenyl
1282.	2-fluoroethyl	4-(2-hydroxy-2-methylpropyl)-phenyl
1283.	2-fluoroethyl	4-acetylphenyl
1284.	2-fluoroethyl	4-carboxyphenyl
1285.	2-fluoroethyl	4-cyanophenyl
1286.	2-fluoroethyl	4-hydroxyphenyl
1287.	2-fluoroethyl	4-(O-benzyl)-phenyl
1288.	2-fluoroethyl	4-(2-methoxyethoxy)-phenyl
1289.	2-fluoroethyl	4-(CH_2-$N(CH_3)_2$)-phenyl
1290.	2-fluoroethyl	4-(NH-CO-NH_2)-phenyl
1291.	2-fluoroethyl	4-(methylsulfanyl)-phenyl

No.	R^1	Ar
1292.	2-fluoroethyl	4-(fluoromethylsulfanyl)-phenyl
1293.	2-fluoroethyl	4-(difluoromethylsulfanyl)-phenyl
1294.	2-fluoroethyl	4-(trifluoromethylsulfanyl)-phenyl
1295.	2-fluoroethyl	4-(methylsulfonyl)-phenyl
1296.	2-fluoroethyl	4-(N-methoxy-N-methyl-amino)-phenyl
1297.	2-fluoroethyl	4-(methoxyamino)-phenyl
1298.	2-fluoroethyl	4-(ethoxyamino)-phenyl
1299.	2-fluoroethyl	4-(N-methylaminooxy)-phenyl
1300.	2-fluoroethyl	4-(N,N-dimethylaminooxy)-phenyl
1301.	2-fluoroethyl	4-(azetidin-1-yl)-phenyl
1302.	2-fluoroethyl	4-(2-methylazetidin-1-yl)-phenyl
1303.	2-fluoroethyl	4-((S)-2-methylazetidin-1-yl)-phenyl
1304.	2-fluoroethyl	4-((R)-2-methylazetidin-1-yl)-phenyl
1305.	2-fluoroethyl	4-(3-fluoroazetidin-1-yl)-phenyl
1306.	2-fluoroethyl	4-(3-methoxyazetidin-1-yl)-phenyl
1307.	2-fluoroethyl	4-(3-hydroxyazetidin-1-yl)-phenyl
1308.	2-fluoroethyl	4-(pyrrolidin-1-yl)-phenyl
1309.	2-fluoroethyl	4-(pyrrolidin-2-yl)-phenyl
1310.	2-fluoroethyl	4-((S)-pyrrolidin-2-yl)-phenyl
1311.	2-fluoroethyl	4-((R)-pyrrolidin-2-yl)-phenyl
1312.	2-fluoroethyl	4-(pyrrolidin-3-yl)-phenyl
1313.	2-fluoroethyl	4-((S)-pyrrolidin-3-yl)-phenyl
1314.	2-fluoroethyl	4-((R)-pyrrolidin-3-yl)-phenyl
1315.	2-fluoroethyl	4-(2-fluoropyrrolidin-1-yl)-phenyl
1316.	2-fluoroethyl	4-((S)-2-fluoropyrrolidin-1-yl)-phenyl
1317.	2-fluoroethyl	4-((R)-2-fluoropyrrolidin-1-yl)-phenyl
1318.	2-fluoroethyl	4-(3-fluoropyrrolidin-1-yl)-phenyl
1319.	2-fluoroethyl	4-((S)-3-fluoropyrrolidin-1-yl)-phenyl
1320.	2-fluoroethyl	4-((R)-3-fluoropyrrolidin-1-yl)-phenyl
1321.	2-fluoroethyl	4-(2,2-difluoropyrrolidin-1-yl)-phenyl
1322.	2-fluoroethyl	4-(3,3-difluoropyrrolidin-1-yl)-phenyl
1323.	2-fluoroethyl	4-(2-methylpyrrolidin-1-yl)-phenyl
1324.	2-fluoroethyl	4-((S)-2-methylpyrrolidin-1-yl)-phenyl
1325.	2-fluoroethyl	4-((R)-2-methylpyrrolidin-1-yl)-phenyl
1326.	2-fluoroethyl	4-(3-methylpyrrolidin-1-yl)-phenyl
1327.	2-fluoroethyl	4-((S)-3-methylpyrrolidin-1-yl)-phenyl
1328.	2-fluoroethyl	4-((R)-3-methylpyrrolidin-1-yl)-phenyl
1329.	2-fluoroethyl	4-(1-methylpyrrolidin-2-yl)-phenyl
1330.	2-fluoroethyl	4-((S)-1-methylpyrrolidin-2-yl)-phenyl
1331.	2-fluoroethyl	4-((R)-1-methylpyrrolidin-2-yl)-phenyl
1332.	2-fluoroethyl	4-(1-methylpyrrolidin-3-yl)-phenyl

No.	R^1	Ar
1333.	2-fluoroethyl	4-((S)-1-methylpyrrolidin-3-yl)-phenyl
1334.	2-fluoroethyl	4-((R)-1-methylpyrrolidin-3-yl)-phenyl
1335.	2-fluoroethyl	4-(2,2-dimethylpyrrolidin-1-yl)-phenyl
1336.	2-fluoroethyl	4-(3,3-dimethylpyrrolidin-1-yl)-phenyl
1337.	2-fluoroethyl	4-(2-trifluoromethylpyrrolidin-1-yl)-phenyl
1338.	2-fluoroethyl	4-((S)-2-trifluoromethylpyrrolidin-1-yl)-phenyl
1339.	2-fluoroethyl	4-((R)-2-trifluoromethylpyrrolidin-1-yl)-phenyl
1340.	2-fluoroethyl	4-(3-trifluoromethylpyrrolidin-1-yl)-phenyl
1341.	2-fluoroethyl	4-((S)-3-trifluoromethylpyrrolidin-1-yl)-phenyl
1342.	2-fluoroethyl	4-((R)-3-trifluoromethylpyrrolidin-1-yl)-phenyl
1343.	2-fluoroethyl	4-(2-oxopyrrolidin-1-yl)-phenyl
1344.	2-fluoroethyl	4-(2-oxo-oxazolidin-3-yl)-phenyl
1345.	2-fluoroethyl	4-(piperidin-1-yl)-phenyl
1346.	2-fluoroethyl	4-(2-methylpiperidin-1-yl)-phenyl
1347.	2-fluoroethyl	4-((S)-2-methylpiperidin-1-yl)-phenyl
1348.	2-fluoroethyl	4-((R)-2-methylpiperidin-1-yl)-phenyl
1349.	2-fluoroethyl	4-(piperazin-1-yl)-phenyl
1350.	2-fluoroethyl	4-(4-methylpiperazin-1-yl)-phenyl
1351.	2-fluoroethyl	4-(morpholin-4-yl)-phenyl
1352.	2-fluoroethyl	4-(thiomorpholin-4-yl)-phenyl
1353.	2-fluoroethyl	4-(1-oxo-thiomorpholin-4-yl)-phenyl
1354.	2-fluoroethyl	4-(1,1-dioxo-thiomorpholin-4-yl)-phenyl
1355.	2-fluoroethyl	4-(pyrrol-1-yl)-phenyl
1356.	2-fluoroethyl	4-(pyrrol-2-yl)-phenyl
1357.	2-fluoroethyl	4-(pyrrol-3-yl)-phenyl
1358.	2-fluoroethyl	4-(1-methylpyrrol-2-yl)-phenyl
1359.	2-fluoroethyl	4-(1-methylpyrrol-3-yl)-phenyl
1360.	2-fluoroethyl	4-(furan-2-yl)-phenyl
1361.	2-fluoroethyl	4-(furan-3-yl)–phenyl
1362.	2-fluoroethyl	4-(thiophen-2-yl)–phenyl
1363.	2-fluoroethyl	4-(thiophen-3-yl)–phenyl
1364.	2-fluoroethyl	4-(5-propylthien-2-yl)–phenyl
1365.	2-fluoroethyl	4-(pyrazol-1-yl)–phenyl
1366.	2-fluoroethyl	4-(pyrazol-3-yl)–phenyl
1367.	2-fluoroethyl	4-(pyrazol-4-yl)–phenyl
1368.	2-fluoroethyl	4-(1-methyl-1H-pyrazol-4-yl)-phenyl
1369.	2-fluoroethyl	4-(1-ethyl-1H-pyrazol-4-yl)-phenyl
1370.	2-fluoroethyl	4-(1-methyl-1H-pyrazol-5-yl)-phenyl
1371.	2-fluoroethyl	4-(1H-imidazol-2-yl)-phenyl
1372.	2-fluoroethyl	4-(imidazol-1-yl)-phenyl
1373.	2-fluoroethyl	4-(1-methylimidazol-2-yl)-phenyl

No.	R^1	Ar
1374.	2-fluoroethyl	4-(oxazol-2-yl)-phenyl
1375.	2-fluoroethyl	4-(oxazol-4-yl)-phenyl
1376.	2-fluoroethyl	4-(oxazol-5-yl)-phenyl
1377.	2-fluoroethyl	4-(isoxazol-3-yl)-phenyl
1378.	2-fluoroethyl	4-(isoxazol-4-yl)-phenyl
1379.	2-fluoroethyl	4-(isoxazol-5-yl)-phenyl
1380.	2-fluoroethyl	4-([1,2,3]-triazol-1-yl)-phenyl
1381.	2-fluoroethyl	4-([1,2,4]-triazol-1-yl)-phenyl
1382.	2-fluoroethyl	4-([1,2,3]-triazol-2-yl)-phenyl
1383.	2-fluoroethyl	4-(4H-[1,2,4]-triazol-3-yl)-phenyl
1384.	2-fluoroethyl	4-([1,2,4]-triazol-4-yl)-phenyl
1385.	2-fluoroethyl	4-(2H-[1,2,3]-triazol-4-yl)-phenyl
1386.	2-fluoroethyl	4-(4-methyl-4H-[1,2,4]-triazol-3-yl)-phenyl
1387.	2-fluoroethyl	4-(2-methyl-2H-[1,2,3]-triazol-4-yl)-phenyl
1388.	2-fluoroethyl	4-([1,3,4]-oxadiazol-2-yl)-phenyl
1389.	2-fluoroethyl	4-([1,2,4]-oxadiazol-3-yl)-phenyl
1390.	2-fluoroethyl	4-([1,2,4]-oxadiazol-5-yl)-phenyl
1391.	2-fluoroethyl	4-([1,2,3]-oxadiazol-4-yl)-phenyl
1392.	2-fluoroethyl	4-([1,2,3]-oxadiazol-5-yl)-phenyl
1393.	2-fluoroethyl	4-([1,2,3]-thiadiazol-4-yl)-phenyl
1394.	2-fluoroethyl	4-(1H-tetrazol-5-yl)-phenyl
1395.	2-fluoroethyl	4-(tetrazol-1-yl)-phenyl
1396.	2-fluoroethyl	4-(2-methyl-2H-tetrazol-5-yl)-phenyl
1397.	2-fluoroethyl	4-(1-methyl-1H-tetrazol-5-yl)-phenyl
1398.	2-fluoroethyl	4-furazan-3-yl-phenyl
1399.	2-fluoroethyl	4-(pyrid-2-yl)-phenyl
1400.	2-fluoroethyl	4-(pyrid-3-yl)-phenyl
1401.	2-fluoroethyl	4-(pyrid-4-yl)-phenyl
1402.	2-fluoroethyl	4-(pyrimidin-2-yl)-phenyl
1403.	2-fluoroethyl	4-(pyrimidin-4-yl)-phenyl
1404.	2-fluoroethyl	4-(pyrimidin-5-yl)-phenyl
1405.	2-fluoroethyl	5-isopropylthiophen-2-yl
1406.	2-fluoroethyl	2-chlorothiophen-5-yl
1407.	2-fluoroethyl	2,5-dichlorothiophen-4-yl
1408.	2-fluoroethyl	2,3-dichlorothiophen-5-yl
1409.	2-fluoroethyl	2-chloro-3-nitrothiophen-5-yl
1410.	2-fluoroethyl	2-(phenylsulfonyl)-thiophen-5-yl
1411.	2-fluoroethyl	2-(pyridin-2-yl)thiophen-5-yl
1412.	2-fluoroethyl	2-(5-(trifluoromethyl)isoxazol-3-yl)-thiophen-5-yl
1413.	2-fluoroethyl	2-(2-methylthiazol-4-yl)-thiophen-5-yl
1414.	2-fluoroethyl	1-methyl-1H-imidazol-4-yl

No.	R^1	Ar
1415.	2-fluoroethyl	1,2-dimethyl-1H-imidazol-4-yl
1416.	2-fluoroethyl	3,5-dimethylisoxazol-4-yl
1417.	2-fluoroethyl	thiazol-2-yl
1418.	2-fluoroethyl	4-methylthiazol-2-yl
1419.	2-fluoroethyl	4-isopropylthiazol-2-yl
1420.	2-fluoroethyl	4-trifluoromethylthiazol-2-yl
1421.	2-fluoroethyl	5-methylthiazol-2-yl
1422.	2-fluoroethyl	5-isopropylthiazol-2-yl
1423.	2-fluoroethyl	5-trifluoromethylthiazol-2-yl
1424.	2-fluoroethyl	2,4-dimethylthiazol-5-yl
1425.	2-fluoroethyl	2-acetamido-4-methylthiazol-5-yl
1426.	2-fluoroethyl	4H-[1,2,4]triazol-3-yl
1427.	2-fluoroethyl	5-methyl-4H-[1,2,4]triazol-3-yl
1428.	2-fluoroethyl	4-methyl-4H-[1,2,4]triazol-3-yl
1429.	2-fluoroethyl	5-isopropyl-4H-[1,2,4]triazol-3-yl
1430.	2-fluoroethyl	5-trifluoromethyl-4H-[1,2,4]triazol-3-yl
1431.	2-fluoroethyl	4,5-dimethyl-4H-[1,2,4]triazol-3-yl
1432.	2-fluoroethyl	5-isopropyl-4-methyl-4H-[1,2,4]triazol-3-yl
1433.	2-fluoroethyl	5-trifluoromethyl-4-methyl-4H-[1,2,4]triazol-3-yl
1434.	2-fluoroethyl	[1,3,4]thiadiazol-2-yl
1435.	2-fluoroethyl	5-methyl-[1,3,4]thiadiazol-2-yl
1436.	2-fluoroethyl	5-isopropyl-[1,3,4]thiadiazol-2-yl
1437.	2-fluoroethyl	5-trifluoromethyl-[1,3,4]thiadiazol-2-yl
1438.	2-fluoroethyl	3-bromo-2-chloropyrid-5-yl
1439.	2-fluoroethyl	2-(4-morpholino)-pyrid-5-yl
1440.	2-fluoroethyl	2-phenoxypyrid-5-yl
1441.	2-fluoroethyl	(2-isopropyl)-pyrimidin-5-yl
1442.	2-fluoroethyl	(5-isopropyl)-pyrimidin-2-yl
1443.	2-fluoroethyl	8-quinolyl
1444.	2-fluoroethyl	5-isoquinolyl
1445.	2-fluoroethyl	2-(trifluoroacetyl)-1,2,3,4-tetrahydroisoquinolin-7-yl
1446.	2-fluoroethyl	5-chloro-3-methylbenzothiophen-2-yl
1447.	2-fluoroethyl	3,4-dihydro-4-methyl-2H-benzo[b][1,4]oxazinyl
1448.	2-fluoroethyl	benzothiazol-6-yl
1449.	2-fluoroethyl	benzo[2,1,3]oxadiazol-4-yl
1450.	2-fluoroethyl	5-chlorobenzo[2,1,3]oxadiazol-4-yl
1451.	2-fluoroethyl	7-chlorobenzo[2,1,3]oxadiazol-4-yl
1452.	2-fluoroethyl	benzo[2,1,3]thiadiazol-4-yl
1453.	cyclopropylmethyl	4-methylphenyl
1454.	cyclopropylmethyl	4-ethylphenyl

No.	R^1	Ar
1455.	cyclopropylmethyl	4-propylphenyl
1456.	cyclopropylmethyl	4-isopropylphenyl
1457.	cyclopropylmethyl	4-sec-butylphenyl
1458.	cyclopropylmethyl	4-isobutylphenyl
1459.	cyclopropylmethyl	4-(1,1-dimethylpropyl)-phenyl
1460.	cyclopropylmethyl	4-vinylphenyl
1461.	cyclopropylmethyl	4-isopropenylphenyl
1462.	cyclopropylmethyl	4-fluorophenyl
1463.	cyclopropylmethyl	4-chlorophenyl
1464.	cyclopropylmethyl	4-bromophenyl
1465.	cyclopropylmethyl	4-(fluoromethyl)phenyl
1466.	cyclopropylmethyl	3-(fluoromethyl)phenyl
1467.	cyclopropylmethyl	2-(fluoromethyl)phenyl
1468.	cyclopropylmethyl	4-(difluoromethyl)phenyl
1469.	cyclopropylmethyl	3-(difluoromethyl)phenyl
1470.	cyclopropylmethyl	2-(difluoromethyl)phenyl
1471.	cyclopropylmethyl	4-(trifluoromethyl)phenyl
1472.	cyclopropylmethyl	3-(trifluoromethyl)phenyl
1473.	cyclopropylmethyl	2-(trifluoromethyl)phenyl
1474.	cyclopropylmethyl	4-(1-fluoroethyl)-phenyl
1475.	cyclopropylmethyl	4-((S)-1-fluoroethyl)-phenyl
1476.	cyclopropylmethyl	4-((R)-1-fluoroethyl)-phenyl
1477.	cyclopropylmethyl	4-(2-fluoroethyl)-phenyl
1478.	cyclopropylmethyl	4-(1,1-difluoroethyl)-phenyl
1479.	cyclopropylmethyl	4-(2,2-difluoroethyl)-phenyl
1480.	cyclopropylmethyl	4-(2,2,2-trifluoroethyl)-phenyl
1481.	cyclopropylmethyl	4-(3-fluoropropyl)-phenyl
1482.	cyclopropylmethyl	4-(2-fluoropropyl)-phenyl
1483.	cyclopropylmethyl	4-((S)-2-fluoropropyl)-phenyl
1484.	cyclopropylmethyl	4-((R)-2-fluoropropyl)-phenyl
1485.	cyclopropylmethyl	4-(3,3-difluoropropyl)-phenyl
1486.	cyclopropylmethyl	4-(3,3,3-trifluoropropyl)-phenyl
1487.	cyclopropylmethyl	4-(1-fluoro-1-methylethyl)-phenyl
1488.	cyclopropylmethyl	4-(2-fluoro-1-methylethyl)-phenyl
1489.	cyclopropylmethyl	4-((S)-2-fluoro-1-methylethyl)-phenyl
1490.	cyclopropylmethyl	4-((R)-2-fluoro-1-methylethyl)-phenyl
1491.	cyclopropylmethyl	4-(2,2-difluoro-1-methylethyl)-phenyl
1492.	cyclopropylmethyl	4-((S)-2,2-difluoro-1-methylethyl)-phenyl
1493.	cyclopropylmethyl	4-((R)-2,2-difluoro-1-methylethyl)-phenyl
1494.	cyclopropylmethyl	4-(2,2,2-trifluoro-1-methylethyl)-phenyl
1495.	cyclopropylmethyl	4-((S)-2,2,2-trifluoro-1-methylethyl)-phenyl

No.	R^1	Ar
1496.	cyclopropylmethyl	4-((R)-2,2,2-trifluoro-1-methylethyl)-phenyl
1497.	cyclopropylmethyl	4-(2-fluoro-1-fluoromethylethyl)-phenyl
1498.	cyclopropylmethyl	4-(1-difluoromethyl-2,2-difluoroethyl)-phenyl
1499.	cyclopropylmethyl	4-(1,1-dimethyl-2-fluoroethyl)-phenyl
1500.	cyclopropylmethyl	4-methoxyphenyl
1501.	cyclopropylmethyl	4-ethoxyphenyl
1502.	cyclopropylmethyl	4-propoxyphenyl
1503.	cyclopropylmethyl	4-isopropoxyphenyl
1504.	cyclopropylmethyl	4-butoxyphenyl
1505.	cyclopropylmethyl	4-(fluoromethoxy)-phenyl
1506.	cyclopropylmethyl	4-(difluoromethoxy)-phenyl
1507.	cyclopropylmethyl	4-(trifluoromethoxy)-phenyl
1508.	cyclopropylmethyl	3-(trifluoromethoxy)-phenyl
1509.	cyclopropylmethyl	4-(2-fluoroethoxy)-phenyl
1510.	cyclopropylmethyl	4-(2,2-difluoroethoxy)-phenyl
1511.	cyclopropylmethyl	4-(2,2,2-trifluoroethoxy)-phenyl
1512.	cyclopropylmethyl	4-(1,1,2,2-tetrafluoroethoxy)-phenyl
1513.	cyclopropylmethyl	4-cyclopropylphenyl
1514.	cyclopropylmethyl	4-cyclobutylphenyl
1515.	cyclopropylmethyl	4-cyclopentylphenyl
1516.	cyclopropylmethyl	4-(2,2-difluorocyclopropyl)-phenyl
1517.	cyclopropylmethyl	3,4-difluorophenyl
1518.	cyclopropylmethyl	4-bromo-3-fluorophenyl
1519.	cyclopropylmethyl	4-bromo-2-fluorophenyl
1520.	cyclopropylmethyl	4-bromo-2,5-difluorophenyl
1521.	cyclopropylmethyl	2-fluoro-4-isopropylphenyl
1522.	cyclopropylmethyl	3-fluoro-4-isopropylphenyl
1523.	cyclopropylmethyl	4-(1-hydroxy-1-methylethyl)-phenyl
1524.	cyclopropylmethyl	4-(2-hydroxy-2-methylpropyl)-phenyl
1525.	cyclopropylmethyl	4-acetylphenyl
1526.	cyclopropylmethyl	4-carboxyphenyl
1527.	cyclopropylmethyl	4-cyanophenyl
1528.	cyclopropylmethyl	4-hydroxyphenyl
1529.	cyclopropylmethyl	4-(O-benzyl)-phenyl
1530.	cyclopropylmethyl	4-(2-methoxyethoxy)-phenyl
1531.	cyclopropylmethyl	4-(CH_2-$N(CH_3)_2$)-phenyl
1532.	cyclopropylmethyl	4-(NH-CO-NH_2)-phenyl
1533.	cyclopropylmethyl	4-(methylsulfanyl)-phenyl
1534.	cyclopropylmethyl	4-(fluoromethylsulfanyl)-phenyl
1535.	cyclopropylmethyl	4-(difluoromethylsulfanyl)-phenyl
1536.	cyclopropylmethyl	4-(trifluoromethylsulfanyl)-phenyl

No.	R^1	Ar
1537.	cyclopropylmethyl	4-(methylsulfonyl)-phenyl
1538.	cyclopropylmethyl	4-(N-methoxy-N-methyl-amino)-phenyl
1539.	cyclopropylmethyl	4-(methoxyamino)-phenyl
1540.	cyclopropylmethyl	4-(ethoxyamino)-phenyl
1541.	cyclopropylmethyl	4-(N-methylaminooxy)-phenyl
1542.	cyclopropylmethyl	4-(N,N-dimethylaminooxy)-phenyl
1543.	cyclopropylmethyl	4-(azetidin-1-yl)-phenyl
1544.	cyclopropylmethyl	4-(2-methylazetidin-1-yl)-phenyl
1545.	cyclopropylmethyl	4-((S)-2-methylazetidin-1-yl)-phenyl
1546.	cyclopropylmethyl	4-((R)-2-methylazetidin-1-yl)-phenyl
1547.	cyclopropylmethyl	4-(3-fluoroazetidin-1-yl)-phenyl
1548.	cyclopropylmethyl	4-(3-methoxyazetidin-1-yl)-phenyl
1549.	cyclopropylmethyl	4-(3-hydroxyazetidin-1-yl)-phenyl
1550.	cyclopropylmethyl	4-(pyrrolidin-1-yl)-phenyl
1551.	cyclopropylmethyl	4-(pyrrolidin-2-yl)-phenyl
1552.	cyclopropylmethyl	4-((S)-pyrrolidin-2-yl)-phenyl
1553.	cyclopropylmethyl	4-((R)-pyrrolidin-2-yl)-phenyl
1554.	cyclopropylmethyl	4-(pyrrolidin-3-yl)-phenyl
1555.	cyclopropylmethyl	4-((S)-pyrrolidin-3-yl)-phenyl
1556.	cyclopropylmethyl	4-((R)-pyrrolidin-3-yl)-phenyl
1557.	cyclopropylmethyl	4-(2-fluoropyrrolidin-1-yl)-phenyl
1558.	cyclopropylmethyl	4-((S)-2-fluoropyrrolidin-1-yl)-phenyl
1559.	cyclopropylmethyl	4-((R)-2-fluoropyrrolidin-1-yl)-phenyl
1560.	cyclopropylmethyl	4-(3-fluoropyrrolidin-1-yl)-phenyl
1561.	cyclopropylmethyl	4-((S)-3-fluoropyrrolidin-1-yl)-phenyl
1562.	cyclopropylmethyl	4-((R)-3-fluoropyrrolidin-1-yl)-phenyl
1563.	cyclopropylmethyl	4-(2,2-difluoropyrrolidin-1-yl)-phenyl
1564.	cyclopropylmethyl	4-(3,3-difluoropyrrolidin-1-yl)-phenyl
1565.	cyclopropylmethyl	4-(2-methylpyrrolidin-1-yl)-phenyl
1566.	cyclopropylmethyl	4-((S)-2-methylpyrrolidin-1-yl)-phenyl
1567.	cyclopropylmethyl	4-((R)-2-methylpyrrolidin-1-yl)-phenyl
1568.	cyclopropylmethyl	4-(3-methylpyrrolidin-1-yl)-phenyl
1569.	cyclopropylmethyl	4-((S)-3-methylpyrrolidin-1-yl)-phenyl
1570.	cyclopropylmethyl	4-((R)-3-methylpyrrolidin-1-yl)-phenyl
1571.	cyclopropylmethyl	4-(1-methylpyrrolidin-2-yl)-phenyl
1572.	cyclopropylmethyl	4-((S)-1-methylpyrrolidin-2-yl)-phenyl
1573.	cyclopropylmethyl	4-((R)-1-methylpyrrolidin-2-yl)-phenyl
1574.	cyclopropylmethyl	4-(1-methylpyrrolidin-3-yl)-phenyl
1575.	cyclopropylmethyl	4-((S)-1-methylpyrrolidin-3-yl)-phenyl
1576.	cyclopropylmethyl	4-((R)-1-methylpyrrolidin-3-yl)-phenyl
1577.	cyclopropylmethyl	4-(2,2-dimethylpyrrolidin-1-yl)-phenyl

No.	R^1	Ar
1578.	cyclopropylmethyl	4-(3,3-dimethylpyrrolidin-1-yl)-phenyl
1579.	cyclopropylmethyl	4-(2-trifluoromethylpyrrolidin-1-yl)-phenyl
1580.	cyclopropylmethyl	4-((S)-2-trifluoromethylpyrrolidin-1-yl)-phenyl
1581.	cyclopropylmethyl	4-((R)-2-trifluoromethylpyrrolidin-1-yl)-phenyl
1582.	cyclopropylmethyl	4-(3-trifluoromethylpyrrolidin-1-yl)-phenyl
1583.	cyclopropylmethyl	4-((S)-3-trifluoromethylpyrrolidin-1-yl)-phenyl
1584.	cyclopropylmethyl	4-((R)-3-trifluoromethylpyrrolidin-1-yl)-phenyl
1585.	cyclopropylmethyl	4-(2-oxopyrrolidin-1-yl)-phenyl
1586.	cyclopropylmethyl	4-(2-oxo-oxazolidin-3-yl)-phenyl
1587.	cyclopropylmethyl	4-(piperidin-1-yl)-phenyl
1588.	cyclopropylmethyl	4-(2-methylpiperidin-1-yl)-phenyl
1589.	cyclopropylmethyl	4-((S)-2-methylpiperidin-1-yl)-phenyl
1590.	cyclopropylmethyl	4-((R)-2-methylpiperidin-1-yl)-phenyl
1591.	cyclopropylmethyl	4-(piperazin-1-yl)-phenyl
1592.	cyclopropylmethyl	4-(4-methylpiperazin-1-yl)-phenyl
1593.	cyclopropylmethyl	4-(morpholin-4-yl)-phenyl
1594.	cyclopropylmethyl	4-(thiomorpholin-4-yl)-phenyl
1595.	cyclopropylmethyl	4-(1-oxo-thiomorpholin-4-yl)-phenyl
1596.	cyclopropylmethyl	4-(1,1-dioxo-thiomorpholin-4-yl)-phenyl
1597.	cyclopropylmethyl	4-(pyrrol-1-yl)-phenyl
1598.	cyclopropylmethyl	4-(pyrrol-2-yl)-phenyl
1599.	cyclopropylmethyl	4-(pyrrol-3-yl)-phenyl
1600.	cyclopropylmethyl	4-(1-methylpyrrol-2-yl)-phenyl
1601.	cyclopropylmethyl	4-(1-methylpyrrol-3-yl)-phenyl
1602.	cyclopropylmethyl	4-(furan-2-yl)-phenyl
1603.	cyclopropylmethyl	4-(furan-3-yl)–phenyl
1604.	cyclopropylmethyl	4-(thiophen-2-yl)–phenyl
1605.	cyclopropylmethyl	4-(thiophen-3-yl)–phenyl
1606.	cyclopropylmethyl	4-(5-propylthien-2-yl)–phenyl
1607.	cyclopropylmethyl	4-(pyrazol-1-yl)–phenyl
1608.	cyclopropylmethyl	4-(pyrazol-3-yl)–phenyl
1609.	cyclopropylmethyl	4-(pyrazol-4-yl)–phenyl
1610.	cyclopropylmethyl	4-(1-methyl-1H-pyrazol-4-yl)-phenyl
1611.	cyclopropylmethyl	4-(1-ethyl-1H-pyrazol-4-yl)-phenyl
1612.	cyclopropylmethyl	4-(1-methyl-1H-pyrazol-5-yl)-phenyl
1613.	cyclopropylmethyl	4-(1H-imidazol-2-yl)-phenyl
1614.	cyclopropylmethyl	4-(imidazol-1-yl)-phenyl
1615.	cyclopropylmethyl	4-(1-methylimidazol-2-yl)-phenyl
1616.	cyclopropylmethyl	4-(oxazol-2-yl)-phenyl
1617.	cyclopropylmethyl	4-(oxazol-4-yl)-phenyl
1618.	cyclopropylmethyl	4-(oxazol-5-yl)-phenyl

No.	R^1	Ar
1619.	cyclopropylmethyl	4-(isoxazol-3-yl)-phenyl
1620.	cyclopropylmethyl	4-(isoxazol-4-yl)-phenyl
1621.	cyclopropylmethyl	4-(isoxazol-5-yl)-phenyl
1622.	cyclopropylmethyl	4-([1,2,3]-triazol-1-yl)-phenyl
1623.	cyclopropylmethyl	4-([1,2,4]-triazol-1-yl)-phenyl
1624.	cyclopropylmethyl	4-([1,2,3]-triazol-2-yl)-phenyl
1625.	cyclopropylmethyl	4-(4H-[1,2,4]-triazol-3-yl)-phenyl
1626.	cyclopropylmethyl	4-([1,2,4]-triazol-4-yl)-phenyl
1627.	cyclopropylmethyl	4-(2H-[1,2,3]-triazol-4-yl)-phenyl
1628.	cyclopropylmethyl	4-(4-methyl-4H-[1,2,4]-triazol-3-yl)-phenyl
1629.	cyclopropylmethyl	4-(2-methyl-2H-[1,2,3]-triazol-4-yl)-phenyl
1630.	cyclopropylmethyl	4-([1,3,4]-oxadiazol-2-yl)-phenyl
1631.	cyclopropylmethyl	4-([1,2,4]-oxadiazol-3-yl)-phenyl
1632.	cyclopropylmethyl	4-([1,2,4]-oxadiazol-5-yl)-phenyl
1633.	cyclopropylmethyl	4-([1,2,3]-oxadiazol-4-yl)-phenyl
1634.	cyclopropylmethyl	4-([1,2,3]-oxadiazol-5-yl)-phenyl
1635.	cyclopropylmethyl	4-([1,2,3]-thiadiazol-4-yl)-phenyl
1636.	cyclopropylmethyl	4-(1H-tetrazol-5-yl)-phenyl
1637.	cyclopropylmethyl	4-(tetrazol-1-yl)-phenyl
1638.	cyclopropylmethyl	4-(2-methyl-2H-tetrazol-5-yl)-phenyl
1639.	cyclopropylmethyl	4-(1-methyl-1H-tetrazol-5-yl)-phenyl
1640.	cyclopropylmethyl	4-furazan-3-yl-phenyl
1641.	cyclopropylmethyl	4-(pyrid-2-yl)-phenyl
1642.	cyclopropylmethyl	4-(pyrid-3-yl)-phenyl
1643.	cyclopropylmethyl	4-(pyrid-4-yl)-phenyl
1644.	cyclopropylmethyl	4-(pyrimidin-2-yl)-phenyl
1645.	cyclopropylmethyl	4-(pyrimidin-4-yl)-phenyl
1646.	cyclopropylmethyl	4-(pyrimidin-5-yl)-phenyl
1647.	cyclopropylmethyl	5-isopropylthiophen-2-yl
1648.	cyclopropylmethyl	2-chlorothiophen-5-yl
1649.	cyclopropylmethyl	2,5-dichlorothiophen-4-yl
1650.	cyclopropylmethyl	2,3-dichlorothiophen-5-yl
1651.	cyclopropylmethyl	2-chloro-3-nitrothiophen-5-yl
1652.	cyclopropylmethyl	2-(phenylsulfonyl)-thiophen-5-yl
1653.	cyclopropylmethyl	2-(pyridin-2-yl)thiophen-5-yl
1654.	cyclopropylmethyl	2-(5-(trifluoromethyl)isoxazol-3-yl)-thiophen-5-yl
1655.	cyclopropylmethyl	2-(2-methylthiazol-4-yl)-thiophen-5-yl
1656.	cyclopropylmethyl	1-methyl-1H-imidazol-4-yl
1657.	cyclopropylmethyl	1,2-dimethyl-1H-imidazol-4-yl
1658.	cyclopropylmethyl	3,5-dimethylisoxazol-4-yl
1659.	cyclopropylmethyl	thiazol-2-yl

No.	R^1	Ar
1660.	cyclopropylmethyl	4-methylthiazol-2-yl
1661.	cyclopropylmethyl	4-isopropylthiazol-2-yl
1662.	cyclopropylmethyl	4-trifluoromethylthiazol-2-yl
1663.	cyclopropylmethyl	5-methylthiazol-2-yl
1664.	cyclopropylmethyl	5-isopropylthiazol-2-yl
1665.	cyclopropylmethyl	5-trifluoromethylthiazol-2-yl
1666.	cyclopropylmethyl	2,4-dimethylthiazol-5-yl
1667.	cyclopropylmethyl	2-acetamido-4-methylthiazol-5-yl
1668.	cyclopropylmethyl	4H-[1,2,4]triazol-3-yl
1669.	cyclopropylmethyl	5-methyl-4H-[1,2,4]triazol-3-yl
1670.	cyclopropylmethyl	4-methyl-4H-[1,2,4]triazol-3-yl
1671.	cyclopropylmethyl	5-isopropyl-4H-[1,2,4]triazol-3-yl
1672.	cyclopropylmethyl	5-trifluoromethyl-4H-[1,2,4]triazol-3-yl
1673.	cyclopropylmethyl	4,5-dimethyl-4H-[1,2,4]triazol-3-yl
1674.	cyclopropylmethyl	5-isopropyl-4-methyl-4H-[1,2,4]triazol-3-yl
1675.	cyclopropylmethyl	5-trifluoromethyl-4-methyl-4H-[1,2,4]triazol-3-yl
1676.	cyclopropylmethyl	[1,3,4]thiadiazol-2-yl
1677.	cyclopropylmethyl	5-methyl-[1,3,4]thiadiazol-2-yl
1678.	cyclopropylmethyl	5-isopropyl-[1,3,4]thiadiazol-2-yl
1679.	cyclopropylmethyl	5-trifluoromethyl-[1,3,4]thiadiazol-2-yl
1680.	cyclopropylmethyl	3-bromo-2-chloropyrid-5-yl
1681.	cyclopropylmethyl	2-(4-morpholino)-pyrid-5-yl
1682.	cyclopropylmethyl	2-phenoxypyrid-5-yl
1683.	cyclopropylmethyl	(2-isopropyl)-pyrimidin-5-yl
1684.	cyclopropylmethyl	(5-isopropyl)-pyrimidin-2-yl
1685.	cyclopropylmethyl	8-quinolyl
1686.	cyclopropylmethyl	5-isoquinolyl
1687.	cyclopropylmethyl	2-(trifluoroacetyl)-1,2,3,4-tetrahydroisoquinolin-7-yl
1688.	cyclopropylmethyl	5-chloro-3-methylbenzothiophen-2-yl
1689.	cyclopropylmethyl	3,4-dihydro-4-methyl-2H-benzo[b][1,4]oxazinyl
1690.	cyclopropylmethyl	benzothiazol-6-yl
1691.	cyclopropylmethyl	benzo[2,1,3]oxadiazol-4-yl
1692.	cyclopropylmethyl	5-chlorobenzo[2,1,3]oxadiazol-4-yl
1693.	cyclopropylmethyl	7-chlorobenzo[2,1,3]oxadiazol-4-yl
1694.	cyclopropylmethyl	benzo[2,1,3]thiadiazol-4-yl
1695.	allyl	4-methylphenyl
1696.	allyl	4-ethylphenyl
1697.	allyl	4-propylphenyl
1698.	allyl	4-isopropylphenyl
1699.	allyl	4-sec-butylphenyl

No.	R^1	Ar
1700.	allyl	4-isobutylphenyl
1701.	allyl	4-(1,1-dimethylpropyl)-phenyl
1702.	allyl	4-vinylphenyl
1703.	allyl	4-isopropenylphenyl
1704.	allyl	4-fluorophenyl
1705.	allyl	4-chlorophenyl
1706.	allyl	4-bromophenyl
1707.	allyl	4-(fluoromethyl)phenyl
1708.	allyl	3-(fluoromethyl)phenyl
1709.	allyl	2-(fluoromethyl)phenyl
1710.	allyl	4-(difluoromethyl)phenyl
1711.	allyl	3-(difluoromethyl)phenyl
1712.	allyl	2-(difluoromethyl)phenyl
1713.	allyl	4-(trifluoromethyl)phenyl
1714.	allyl	3-(trifluoromethyl)phenyl
1715.	allyl	2-(trifluoromethyl)phenyl
1716.	allyl	4-(1-fluoroethyl)-phenyl
1717.	allyl	4-((S)-1-fluoroethyl)-phenyl
1718.	allyl	4-((R)-1-fluoroethyl)-phenyl
1719.	allyl	4-(2-fluoroethyl)-phenyl
1720.	allyl	4-(1,1-difluoroethyl)-phenyl
1721.	allyl	4-(2,2-difluoroethyl)-phenyl
1722.	allyl	4-(2,2,2-trifluoroethyl)-phenyl
1723.	allyl	4-(3-fluoropropyl)-phenyl
1724.	allyl	4-(2-fluoropropyl)-phenyl
1725.	allyl	4-((S)-2-fluoropropyl)-phenyl
1726.	allyl	4-((R)-2-fluoropropyl)-phenyl
1727.	allyl	4-(3,3-difluoropropyl)-phenyl
1728.	allyl	4-(3,3,3-trifluoropropyl)-phenyl
1729.	allyl	4-(1-fluoro-1-methylethyl)-phenyl
1730.	allyl	4-(2-fluoro-1-methylethyl)-phenyl
1731.	allyl	4-((S)-2-fluoro-1-methylethyl)-phenyl
1732.	allyl	4-((R)-2-fluoro-1-methylethyl)-phenyl
1733.	allyl	4-(2,2-difluoro-1-methylethyl)-phenyl
1734.	allyl	4-((S)-2,2-difluoro-1-methylethyl)-phenyl
1735.	allyl	4-((R)-2,2-difluoro-1-methylethyl)-phenyl
1736.	allyl	4-(2,2,2-trifluoro-1-methylethyl)-phenyl
1737.	allyl	4-((S)-2,2,2-trifluoro-1-methylethyl)-phenyl
1738.	allyl	4-((R)-2,2,2-trifluoro-1-methylethyl)-phenyl
1739.	allyl	4-(2-fluoro-1-fluoromethylethyl)-phenyl
1740.	allyl	4-(1-difluoromethyl-2,2-difluoroethyl)-phenyl

No.	R^1	Ar
1741.	allyl	4-(1,1-dimethyl-2-fluoroethyl)-phenyl
1742.	allyl	4-methoxyphenyl
1743.	allyl	4-ethoxyphenyl
1744.	allyl	4-propoxyphenyl
1745.	allyl	4-isopropoxyphenyl
1746.	allyl	4-butoxyphenyl
1747.	allyl	4-(fluoromethoxy)-phenyl
1748.	allyl	4-(difluoromethoxy)-phenyl
1749.	allyl	4-(trifluoromethoxy)-phenyl
1750.	allyl	3-(trifluoromethoxy)-phenyl
1751.	allyl	4-(2-fluoroethoxy)-phenyl
1752.	allyl	4-(2,2-difluoroethoxy)-phenyl
1753.	allyl	4-(2,2,2-trifluoroethoxy)-phenyl
1754.	allyl	4-(1,1,2,2-tetrafluoroethoxy)-phenyl
1755.	allyl	4-cyclopropylphenyl
1756.	allyl	4-cyclobutylphenyl
1757.	allyl	4-cyclopentylphenyl
1758.	allyl	4-(2,2-difluorocyclopropyl)-phenyl
1759.	allyl	3,4-difluorophenyl
1760.	allyl	4-bromo-3-fluorophenyl
1761.	allyl	4-bromo-2-fluorophenyl
1762.	allyl	4-bromo-2,5-difluorophenyl
1763.	allyl	2-fluoro-4-isopropylphenyl
1764.	allyl	3-fluoro-4-isopropylphenyl
1765.	allyl	4-(1-hydroxy-1-methylethyl)-phenyl
1766.	allyl	4-(2-hydroxy-2-methylpropyl)-phenyl
1767.	allyl	4-acetylphenyl
1768.	allyl	4-carboxyphenyl
1769.	allyl	4-cyanophenyl
1770.	allyl	4-hydroxyphenyl
1771.	allyl	4-(O-benzyl)-phenyl
1772.	allyl	4-(2-methoxyethoxy)-phenyl
1773.	allyl	4-(CH_2-$N(CH_3)_2$)-phenyl
1774.	allyl	4-(NH-CO-NH_2)-phenyl
1775.	allyl	4-(methylsulfanyl)-phenyl
1776.	allyl	4-(fluoromethylsulfanyl)-phenyl
1777.	allyl	4-(difluoromethylsulfanyl)-phenyl
1778.	allyl	4-(trifluoromethylsulfanyl)-phenyl
1779.	allyl	4-(methylsulfonyl)-phenyl
1780.	allyl	4-(N-methoxy-N-methyl-amino)-phenyl
1781.	allyl	4-(methoxyamino)-phenyl

No.	R^1	Ar
1782.	allyl	4-(ethoxyamino)-phenyl
1783.	allyl	4-(N-methylaminooxy)-phenyl
1784.	allyl	4-(N,N-dimethylaminooxy)-phenyl
1785.	allyl	4-(azetidin-1-yl)-phenyl
1786.	allyl	4-(2-methylazetidin-1-yl)-phenyl
1787.	allyl	4-((S)-2-methylazetidin-1-yl)-phenyl
1788.	allyl	4-((R)-2-methylazetidin-1-yl)-phenyl
1789.	allyl	4-(3-fluoroazetidin-1-yl)-phenyl
1790.	allyl	4-(3-methoxyazetidin-1-yl)-phenyl
1791.	allyl	4-(3-hydroxyazetidin-1-yl)-phenyl
1792.	allyl	4-(pyrrolidin-1-yl)-phenyl
1793.	allyl	4-(pyrrolidin-2-yl)-phenyl
1794.	allyl	4-((S)-pyrrolidin-2-yl)-phenyl
1795.	allyl	4-((R)-pyrrolidin-2-yl)-phenyl
1796.	allyl	4-(pyrrolidin-3-yl)-phenyl
1797.	allyl	4-((S)-pyrrolidin-3-yl)-phenyl
1798.	allyl	4-((R)-pyrrolidin-3-yl)-phenyl
1799.	allyl	4-(2-fluoropyrrolidin-1-yl)-phenyl
1800.	allyl	4-((S)-2-fluoropyrrolidin-1-yl)-phenyl
1801.	allyl	4-((R)-2-fluoropyrrolidin-1-yl)-phenyl
1802.	allyl	4-(3-fluoropyrrolidin-1-yl)-phenyl
1803.	allyl	4-((S)-3-fluoropyrrolidin-1-yl)-phenyl
1804.	allyl	4-((R)-3-fluoropyrrolidin-1-yl)-phenyl
1805.	allyl	4-(2,2-difluoropyrrolidin-1-yl)-phenyl
1806.	allyl	4-(3,3-difluoropyrrolidin-1-yl)-phenyl
1807.	allyl	4-(2-methylpyrrolidin-1-yl)-phenyl
1808.	allyl	4-((S)-2-methylpyrrolidin-1-yl)-phenyl
1809.	allyl	4-((R)-2-methylpyrrolidin-1-yl)-phenyl
1810.	allyl	4-(3-methylpyrrolidin-1-yl)-phenyl
1811.	allyl	4-((S)-3-methylpyrrolidin-1-yl)-phenyl
1812.	allyl	4-((R)-3-methylpyrrolidin-1-yl)-phenyl
1813.	allyl	4-(1-methylpyrrolidin-2-yl)-phenyl
1814.	allyl	4-((S)-1-methylpyrrolidin-2-yl)-phenyl
1815.	allyl	4-((R)-1-methylpyrrolidin-2-yl)-phenyl
1816.	allyl	4-(1-methylpyrrolidin-3-yl)-phenyl
1817.	allyl	4-((S)-1-methylpyrrolidin-3-yl)-phenyl
1818.	allyl	4-((R)-1-methylpyrrolidin-3-yl)-phenyl
1819.	allyl	4-(2,2-dimethylpyrrolidin-1-yl)-phenyl
1820.	allyl	4-(3,3-dimethylpyrrolidin-1-yl)-phenyl
1821.	allyl	4-(2-trifluoromethylpyrrolidin-1-yl)-phenyl
1822.	allyl	4-((S)-2-trifluoromethylpyrrolidin-1-yl)-phenyl

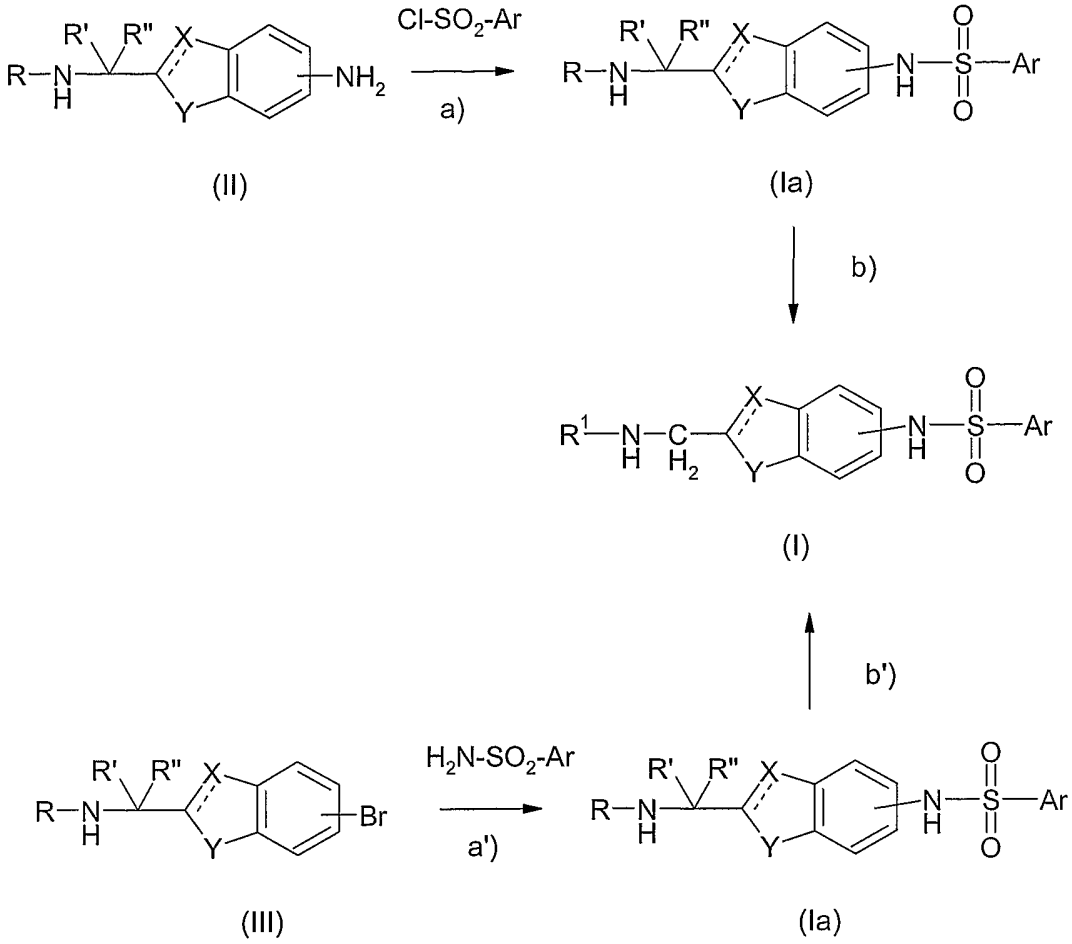
No.	R^1	Ar
1823.	allyl	4-((R)-2-trifluoromethylpyrrolidin-1-yl)-phenyl
1824.	allyl	4-(3-trifluoromethylpyrrolidin-1-yl)-phenyl
1825.	allyl	4-((S)-3-trifluoromethylpyrrolidin-1-yl)-phenyl
1826.	allyl	4-((R)-3-trifluoromethylpyrrolidin-1-yl)-phenyl
1827.	allyl	4-(2-oxopyrrolidin-1-yl)-phenyl
1828.	allyl	4-(2-oxo-oxazolidin-3-yl)-phenyl
1829.	allyl	4-(piperidin-1-yl)-phenyl
1830.	allyl	4-(2-methylpiperidin-1-yl)-phenyl
1831.	allyl	4-((S)-2-methylpiperidin-1-yl)-phenyl
1832.	allyl	4-((R)-2-methylpiperidin-1-yl)-phenyl
1833.	allyl	4-(piperazin-1-yl)-phenyl
1834.	allyl	4-(4-methylpiperazin-1-yl)-phenyl
1835.	allyl	4-(morpholin-4-yl)-phenyl
1836.	allyl	4-(thiomorpholin-4-yl)-phenyl
1837.	allyl	4-(1-oxo-thiomorpholin-4-yl)-phenyl
1838.	allyl	4-(1,1-dioxo-thiomorpholin-4-yl)-phenyl
1839.	allyl	4-(pyrrol-1-yl)-phenyl
1840.	allyl	4-(pyrrol-2-yl)-phenyl
1841.	allyl	4-(pyrrol-3-yl)-phenyl
1842.	allyl	4-(1-methylpyrrol-2-yl)-phenyl
1843.	allyl	4-(1-methylpyrrol-3-yl)-phenyl
1844.	allyl	4-(furan-2-yl)-phenyl
1845.	allyl	4-(furan-3-yl)–phenyl
1846.	allyl	4-(thiophen-2-yl)–phenyl
1847.	allyl	4-(thiophen-3-yl)–phenyl
1848.	allyl	4-(5-propylthien-2-yl)–phenyl
1849.	allyl	4-(pyrazol-1-yl)–phenyl
1850.	allyl	4-(pyrazol-3-yl)–phenyl
1851.	allyl	4-(pyrazol-4-yl)–phenyl
1852.	allyl	4-(1-methyl-1H-pyrazol-4-yl)-phenyl
1853.	allyl	4-(1-ethyl-1H-pyrazol-4-yl)-phenyl
1854.	allyl	4-(1-methyl-1H-pyrazol-5-yl)-phenyl
1855.	allyl	4-(1H-imidazol-2-yl)-phenyl
1856.	allyl	4-(imidazol-1-yl)-phenyl
1857.	allyl	4-(1-methylimidazol-2-yl)-phenyl
1858.	allyl	4-(oxazol-2-yl)-phenyl
1859.	allyl	4-(oxazol-4-yl)-phenyl
1860.	allyl	4-(oxazol-5-yl)-phenyl
1861.	allyl	4-(isoxazol-3-yl)-phenyl
1862.	allyl	4-(isoxazol-4-yl)-phenyl
1863.	allyl	4-(isoxazol-5-yl)-phenyl

No.	R^1	Ar
1864.	allyl	4-([1,2,3]-triazol-1-yl)-phenyl
1865.	allyl	4-([1,2,4]-triazol-1-yl)-phenyl
1866.	allyl	4-([1,2,3]-triazol-2-yl)-phenyl
1867.	allyl	4-(4H-[1,2,4]-triazol-3-yl)-phenyl
1868.	allyl	4-([1,2,4]-triazol-4-yl)-phenyl
1869.	allyl	4-(2H-[1,2,3]-triazol-4-yl)-phenyl
1870.	allyl	4-(4-methyl-4H-[1,2,4]-triazol-3-yl)-phenyl
1871.	allyl	4-(2-methyl-2H-[1,2,3]-triazol-4-yl)-phenyl
1872.	allyl	4-([1,3,4]-oxadiazol-2-yl)-phenyl
1873.	allyl	4-([1,2,4]-oxadiazol-3-yl)-phenyl
1874.	allyl	4-([1,2,4]-oxadiazol-5-yl)-phenyl
1875.	allyl	4-([1,2,3]-oxadiazol-4-yl)-phenyl
1876.	allyl	4-([1,2,3]-oxadiazol-5-yl)-phenyl
1877.	allyl	4-([1,2,3]-thiadiazol-4-yl)-phenyl
1878.	allyl	4-(1H-tetrazol-5-yl)-phenyl
1879.	allyl	4-(tetrazol-1-yl)-phenyl
1880.	allyl	4-(2-methyl-2H-tetrazol-5-yl)-phenyl
1881.	allyl	4-(1-methyl-1H-tetrazol-5-yl)-phenyl
1882.	allyl	4-furazan-3-yl-phenyl
1883.	allyl	4-(pyrid-2-yl)-phenyl
1884.	allyl	4-(pyrid-3-yl)-phenyl
1885.	allyl	4-(pyrid-4-yl)-phenyl
1886.	allyl	4-(pyrimidin-2-yl)-phenyl
1887.	allyl	4-(pyrimidin-4-yl)-phenyl
1888.	allyl	4-(pyrimidin-5-yl)-phenyl
1889.	allyl	5-isopropylthiophen-2-yl
1890.	allyl	2-chlorothiophen-5-yl
1891.	allyl	2,5-dichlorothiophen-4-yl
1892.	allyl	2,3-dichlorothiophen-5-yl
1893.	allyl	2-chloro-3-nitrothiophen-5-yl
1894.	allyl	2-(phenylsulfonyl)-thiophen-5-yl
1895.	allyl	2-(pyridin-2-yl)thiophen-5-yl
1896.	allyl	2-(5-(trifluoromethyl)isoxazol-3-yl)-thiophen-5-yl
1897.	allyl	2-(2-methylthiazol-4-yl)-thiophen-5-yl
1898.	allyl	1-methyl-1H-imidazol-4-yl
1899.	allyl	1,2-dimethyl-1H-imidazol-4-yl
1900.	allyl	3,5-dimethylisoxazol-4-yl
1901.	allyl	thiazol-2-yl
1902.	allyl	4-methylthiazol-2-yl
1903.	allyl	4-isopropylthiazol-2-yl
1904.	allyl	4-trifluoromethylthiazol-2-yl

No.	R^1	Ar
1905.	allyl	5-methylthiazol-2-yl
1906.	allyl	5-isopropylthiazol-2-yl
1907.	allyl	5-trifluoromethylthiazol-2-yl
1908.	allyl	2,4-dimethylthiazol-5-yl
1909.	allyl	2-acetamido-4-methylthiazol-5-yl
1910.	allyl	4H-[1,2,4]triazol-3-yl
1911.	allyl	5-methyl-4H-[1,2,4]triazol-3-yl
1912.	allyl	4-methyl-4H-[1,2,4]triazol-3-yl
1913.	allyl	5-isopropyl-4H-[1,2,4]triazol-3-yl
1914.	allyl	5-trifluoromethyl-4H-[1,2,4]triazol-3-yl
1915.	allyl	4,5-dimethyl-4H-[1,2,4]triazol-3-yl
1916.	allyl	5-isopropyl-4-methyl-4H-[1,2,4]triazol-3-yl
1917.	allyl	5-trifluoromethyl-4-methyl-4H-[1,2,4]triazol-3-yl
1918.	allyl	[1,3,4]thiadiazol-2-yl
1919.	allyl	5-methyl-[1,3,4]thiadiazol-2-yl
1920.	allyl	5-isopropyl-[1,3,4]thiadiazol-2-yl
1921.	allyl	5-trifluoromethyl-[1,3,4]thiadiazol-2-yl
1922.	allyl	3-bromo-2-chloropyrid-5-yl
1923.	allyl	2-(4-morpholino)-pyrid-5-yl
1924.	allyl	2-phenoxypyrid-5-yl
1925.	allyl	(2-isopropyl)-pyrimidin-5-yl
1926.	allyl	(5-isopropyl)-pyrimidin-2-yl
1927.	allyl	8-quinolyl
1928.	allyl	5-isoquinolyl
1929.	allyl	2-(trifluoroacetyl)-1,2,3,4-tetrahydroisoquinolin-7-yl
1930.	allyl	5-chloro-3-methylbenzothiophen-2-yl
1931.	allyl	3,4-dihydro-4-methyl-2H-benzo[b][1,4]oxazinyl
1932.	allyl	benzothiazol-6-yl
1933.	allyl	benzo[2,1,3]oxadiazol-4-yl
1934.	allyl	5-chlorobenzo[2,1,3]oxadiazol-4-yl
1935.	allyl	7-chlorobenzo[2,1,3]oxadiazol-4-yl
1936.	allyl	benzo[2,1,3]thiadiazol-4-yl
1937.	allyl	6-chloroimidazo[2,1-b]thiazolyl

The compounds of the formula I where E is NH and R^{1a} is hydrogen can be prepared by analogy to methods which are well known in the art, e.g. from the international patent applications cited in the introductory part. A preferred method for the preparation of compounds I is outlined in scheme 1:

Scheme 1



In scheme 1, R^1, X, Y and Ar have the meanings as given above. R' and R" are both hydrogen or together with the carbon atom form a carbonyl group. R has one of the meanings given for R^1 or may be an amino-protecting group PG such as benzyl or tert.-butoxycarbonyl. Other suitable amino-protecting groups are disclosed, for example, in P. Kocienski, Protecting Groups, Thieme-Verlag, Stuttgart 2000, Chapter 6.

In step a) of scheme 1, compound II is reacted with an arylsulfonylchloride Cl-SO_2-Ar, preferably in the presence of a base, according to standard procedures in the art. The reaction depicted in scheme 1 step a) takes place under the reaction conditions which are customary for preparing arylsulfonamide compounds or arylsulfonic esters, respectively, and which are described, for example, in J. March, Advanced Organic Chemistry, 3rd edition, John Wiley & Sons, New York, 1985 p 444 and the literature cited therein, European J. Org. Chem. 2002 (13), pp. 2094-2108, Tetrahedron 2001, 57 (27)

pp. 5885-5895, Bioorganic and Medicinal Chemistry Letters, 2000, 10(8), pp. 835-838 and Synthesis 2000 (1), pp. 103-108. The reaction customarily takes place in an inert solvent, for example in an ether, such as diethyl ether, diisopropyl ether, methyl tert-butyl ether or tetrahydrofuran, a halohydrocarbon, such as dichloromethane, an aliphatic or cycloaliphatic hydrocarbon, such as pentane, hexane or cyclohexane, or an aromatic hydrocarbon, such as toluene, xylene, cumene and the like, or in a mixture of the abovementioned solvents. The reaction of II with Cl-SO_2-Ar is customarily carried out in the presence of an auxiliary base. Suitable bases are inorganic bases, such as sodium carbonate or potassium carbonate, or sodium hydrogen carbonate or potassium hydrogen carbonate, and organic bases, for example trialkylamines, such as triethylamine, or pyridine compounds, such as pyridine, lutidine and the like. The latter compounds can at the same time serve as solvents. The auxiliary base is customarily employed in at least equimolar quantities, based on the amine compound II.

The obtained compound Ia, corresponds to compound I, if R' and R" are both hydrogen and R is R^1. If R' and R" represent a carbonyl group, this group will be reduced in step b) of scheme 1 by analogy to known methods, e.g. by reduction with borane, borane-dimethylsulfide or by a complex hydride such as lithium aliuminiumhydride.

If R is an amino protecting group PG, this group can be cleaved by standard methods to obtain the primary amine (see P. Kocienski, Protecting Groups, loc. cit.). This primary amine can be reacted in the sense of an alkylation, with a compound R^1-X. In this compound, R^1 is C_1-C_4-alkyl, C_3-C_4-cycloalkyl, C_3-C_4-alkenyl, fluorinated C_1-C_4-alkyl, fluorinated C_3-C_4-cycloalkyl, fluorinated C_3-C_4-alkenyl, and X is a nucleophilically displaceable leaving group, e.g. halogen, trifluoroacetate, alkylsulfonate, arylsulfonate, alkyl sulfate and the like. The reaction conditions which are required for the alkylation have been adequately disclosed, e.g. in Bioorganic and Medicinal Chemistry Lett. 2002, 12(7), pp. 2443-2446 and also 2002, 12(5), pp. 1917-1919.

In case R^1 in formula I is hydrogen, compound I or Ia can also be reacted with an acyl halide to obtain a compound of the formula I wherein R^1 is C_1-C_3-alkylcarbonyl. The carbonyl group in these compounds can be reduced with diborane to obtain compounds of the general formula I, wherein R^1 is C_2-C_4-alkyl. The carbonyl group can also be reacted with a fluorinating agent to obtain a compound I wherein R^1 is 1,1-difluoroalkyl. Acylation and reduction can be achieved by standard methods, which are discussed in J. March, Advanced Organic Chemistry, 3rd ed. J. Wiley & Sons, New York 1985, p.370 and 373 (acylation) and p. 1099 f. and in the literature cited in this

publication (with regard to acylation, see also Synth. Commun. 1986, 16, p. 267, and with regard to reduction, see also J. Heterocycl. Chem. 1979, 16, p. 1525).

The introduction of C_2-C_4-alkyl or fluorinated C_2-C_4-alkyl as a radical R^1 into a compound of formula I, wherein both R^1 and R^{1a} are hydrogen, can also be achieved, in the sense of a reductive amination, by reacting I [$R^1 = R^{1a} = H$] with a suitable ketone or aldehyde in the presence of a reducing agent, e.g. in the presence of a borohydride such as sodium borohydride, sodium cyanoborohydride or sodium triacetoxyborohydride. The skilled person is familiar with the reaction conditions which are required for a reductive amination, e.g. from Bioorganic and Medicinal Chemistry Lett. 2002, 12(5), pp. 795-798 and 12(7) pp. 1269-1273.

A skilled person will appreciate, that a compound I, wherein R^1 is alkenyl can be converted into a compound wherein R^1 is alkyl or fluorinated alkyl by hydrogenation or by addition of hydrogen fluoride or by fluorination with suitable fluorinating agents such as XeF_2 or CoF_3.

A skilled person will further appreciate, that a radical R^3, which is different from hydrogen, can be introduced in either compound I of scheme I or at an earlier stage of the synthesis by a conventional alkylation.

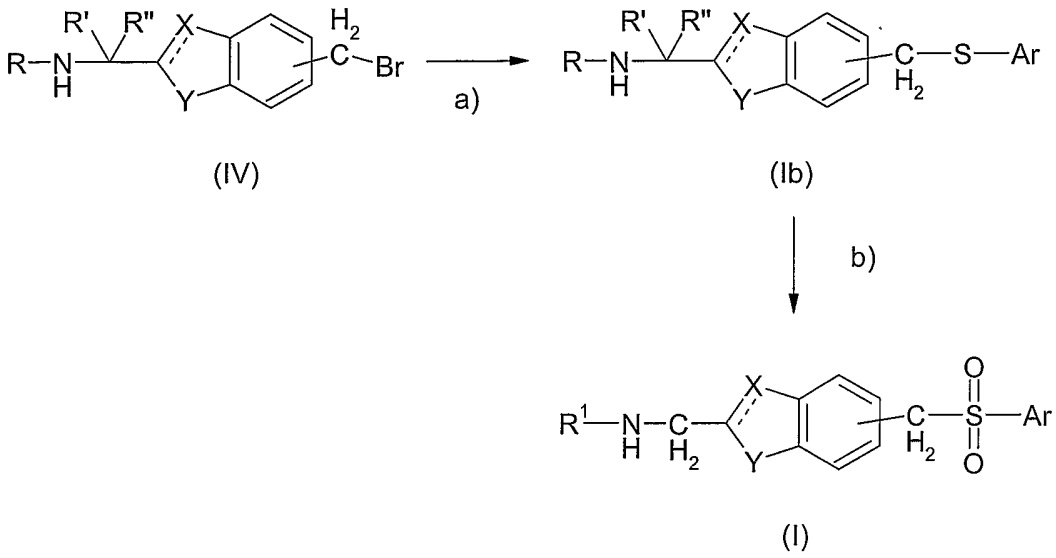
In step a') of scheme 1, a bromine compound III is reacted with an arylsulfonylamide Ar-SO_2-NH_2 in the presence of a palladium(0) compound such as tris(dibenylideneacetone)dipalladium(0) in the presence of a tri(substituted)phosphine, e.g. a triarylphosphine such as triphenylphosphine or tritolylphosphine, tri(cyclo)alkylphosphine such as tris-n-butylphosphine, tris(tert.-butyl)phosphine or tris(cyclohexyl)phosphine, preferably in the presence of a base such as sodium hydride according to the method described in J. Org. Chem., 68 (2993) pp 8274-8276, and outlined below. Thereby a compound Ia is obtained which can be reacted further as described above.

A skilled person will also appreciate, that the methods outlined in scheme 1, can also be applied in the synthesis of compounds I, wherein R^{1a} and R^2 or R^{1a} and R^{2a} together are $(CH_2)_n$ with n being 1, 2 or 3.

The compounds of the formula I where E is CH_2 and R^{1a} is hydrogen can be prepared by analogy to methods which are well known in the art, e.g. from the international pat-

ent applications cited in the introductory part. A preferred method for the preparation of compounds I is outlined in scheme 2:

Scheme 2:

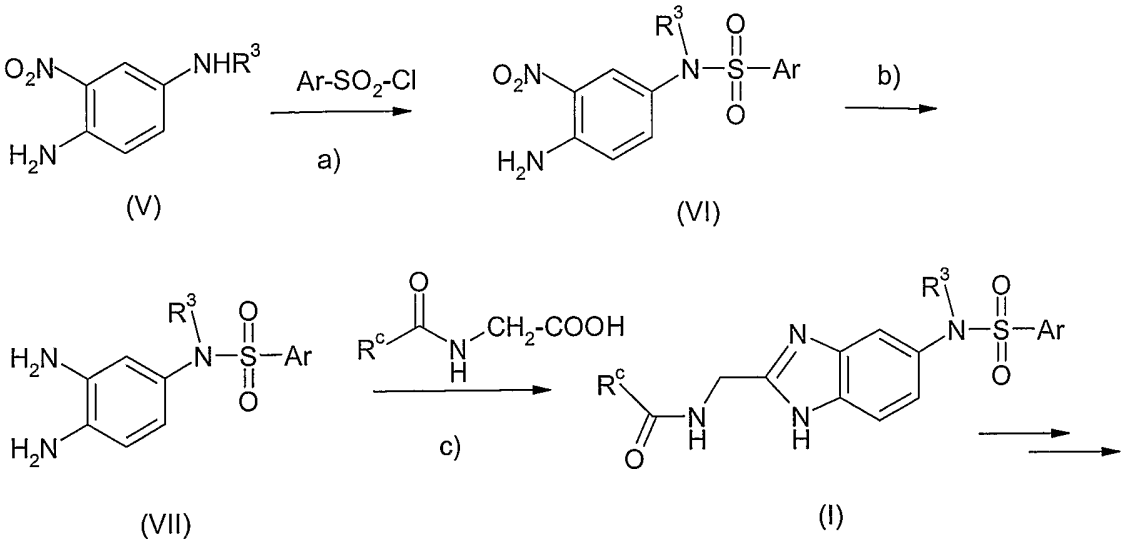


In scheme 2, R, R', R", R^1, Ar, X and Y have the meanings given above. According to scheme 2, compound IV is reacted in step a) with a mercapto compound HS-Ar in the presence of a base, such as sodium hydride or sodium alkoxide or with an alkali metal salt thereof thereby yielding thioether compound Ib. The thioether moiety in compound is oxidized to a sulfone moiety, e.g. by oxone (step b). If R is a protective group, R can be cleaved, thereby obtaining compound I, wherein R^{1a} is H. A skilled person understands that I can be further transformed as outlined for scheme 1.

A skilled person will also appreciate, that the methods outlined in scheme 2, can also be applied in the synthesis of compounds I, wherein R^{1a} and R^2 or R^{1a} and R^{2a} together are $(CH_2)_n$ with n being 1, 2 or 3.

Compounds of the formula I, wherein E is NR^3, X is N and Y is NH can also be prepared by the reaction sequence shown in scheme 3.

Scheme 3:



In scheme 3, R^3 and Ar have the meanings given above. R^c is C_1-C_3-alkyl or fluorinated C_1-C_3-alkyl.

Step a) of scheme 3 can be performed according to the method described for step a) of scheme 1.

In step b), the nitro group in VI is reduced to the NH_2 group in VII. The reaction conditions which are required for step b) correspond to the customary conditions for reducing aromatic nitro groups which have been described extensively in the literature (see, for example, J. March, Advanced Organic Chemistry, 3rd ed., J. Wiley & Sons, New-York, 1985, p. 1183 and the literature cited in this reference). The reduction is achieved, for example, by reacting the nitro compound VI with a metal such as iron, zinc or tin under acidic reaction conditions, i.e. using nascent hydrogen, or using a complex hydride such as lithium aluminum hydride or sodium borohydride, preferably in the presence of transition metal compounds of nickel or cobalt such as $NiCl_2(P(phenyl)_3)_2$, or $CoCl_2$,(see Ono et al. Chem. Ind. (London), 1983 p.480), or using $NaBH_2S_3$ (see Lalancette et al. Can. J. Chem. 49, 1971, p. 2990), with it being possible to carry out these reductions, depending on the given reagent, in substance or in a solvent or diluent. Alternatively, the reduction of VI to VII can be carried out with hydrogen in the presence of a transition metal catalyst, e.g. using hydrogen in the presence of catalysts based on platinum, palladium, nickel, ruthenium or rhodium. The catalysts can contain the transition metal in elemental form or in the form of a complex compound, of a salt or of an oxide of the transition metal, with it being possible, for the pur-

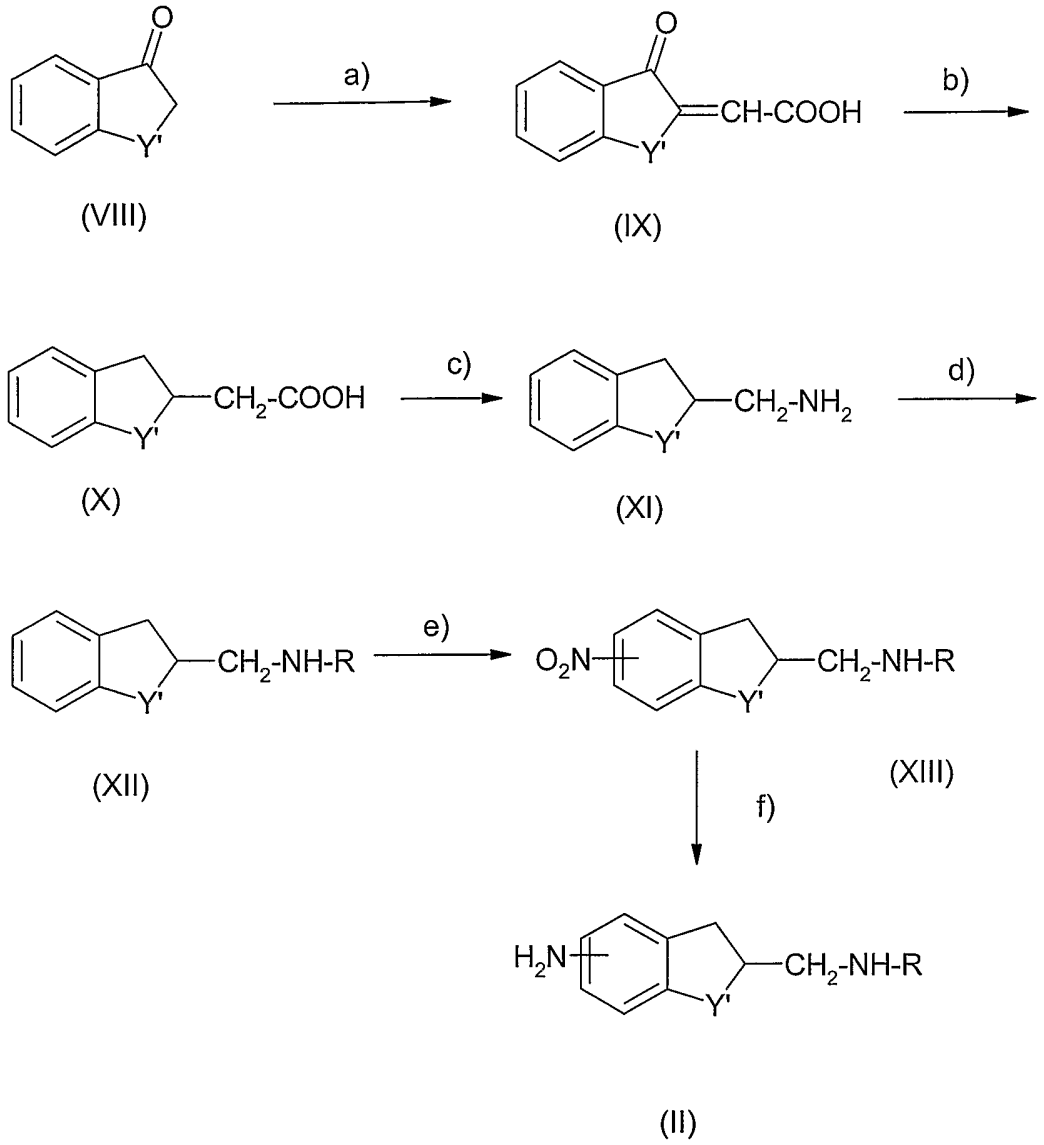
pose of modifying the activity, to use customary coligands, e.g. organic phosphine compounds, such as triphenylphosphine, tricyclohexylphosphine or tri-n-butylphosphine or phosphites. The catalyst is customarily employed in quantities of from 0.001 to 1 mol per mol of compound VI, calculated as catalyst metal. In a preferred variant, the reduction is effected using tin(II) chloride in analogy with the methods described in Bioorganic and Medicinal Chemistry Letters, 2002, 12(15), pp. 1917-1919 and J. Med. Chem. 2002, 45(21), pp. 4679-4688. The reaction of VI with tin(II) chloride is preferably carried out in an inert organic solvent, preferably an alcohol such as methanol, ethanol, isopropanol or butanol.

In step c) compound VII is reacted with an acylated derivative of glycine in the presence of a carbodiimide such as N'-(3-dimethylamino)propyl-N'-ethylcarbodiimid and optionally an organic buffer such as hydroxy-7-azabenzotriazole/tertiary amine such as diisopropylethylamine. Thereby a compound I is obtained, wherein R^1 is C_1-C_3-alkylcarbonyl or fluorinated C_1-C_3-alkylcarbonyl. The carbonyl group in these compounds can be reduced to a CH_2-moiety either with diborane, borane-dimethylsulfide or lithium aluminium hydride to obtain compounds of the general formula I, wherein R is CH_2-(optionally fluorinated C_1-C_3-alkyl) (see e.g. see also J. Heterocycl. Chem. 1979, 16, p. 1525). The carbonyl group can also be reacted with a fluorinating agent to obtain a compound I wherein R^1 is 1,1-difluoroalkyl. The optionally fluorinated C_1-C_3-alkylcarbony group can also be cleaved.

Compounds of the formula II, III, IV and V are known in the art. They can also be prepared by standard methods, e.g. by a nitration/reduction sequence (compounds II), by bromination of the aromatic core (compounds III) or by side chain bromination or by hydroxymethylation followed by OH/bromine exchange (compounds IV). Each of these methods may apply suitable protecting groups.

Compounds of the formula II, wherein X=C(R)-Y form a saturated carbocycle can be obtained by the reaction sequences shown in the following schemes 4 and 5:

Scheme 4:

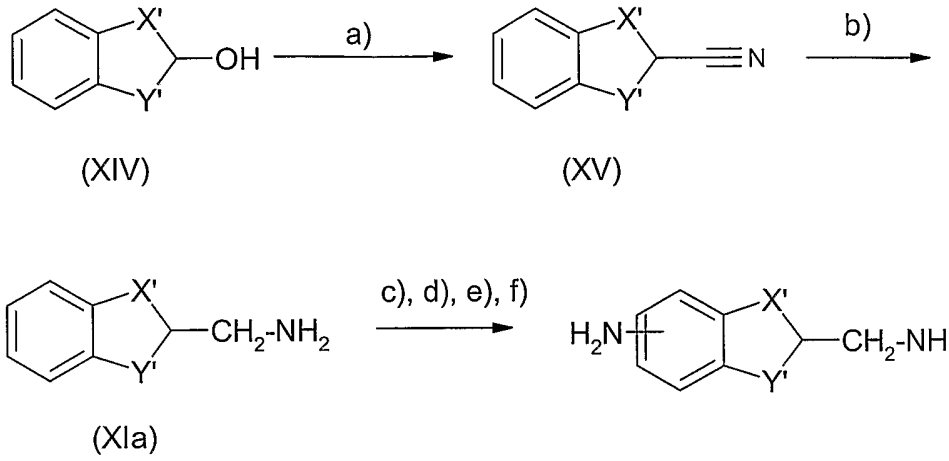


In scheme 4 Y' is CH_2 or CH_2CH_2. R is C_1-C_3-alkylcarbonyl or an amino-protecting group PG.

In step a) a one-pot reaction involving the addition of glycolic acid to ketone VIII, with subsequent dehydration in the presence of an acid such as sulphuric acid (*J. Org. Chem.* **1994**, 37, 2071-2078), generates the requisite α,β-unsaturated ketone IX. Concomittant catalytic hydrogenation of the double bond and reduction of the keto-group in IX can be performed using a catalyst such as Pd-C (step b, *J. Org. Chem.* **1994**, 37, 2071-2078). Conversion of the carboxylic acid X to the primary amine may XI be accomplished by reaction of DPPA in benzyl alcohol followed by catalytic hydrogenation

using a catalyst such as Pd-C (step c, *Bioorg. Med. Chem. Lett.*, **1999**, 9(3), 401-406). In step d, the amine XI is acylated or protected as outlined for scheme 1. Subsequent nitration (step e) and reduction of the nitro group (as outlined for scheme 2) yields the desired amine II.

Scheme 5:

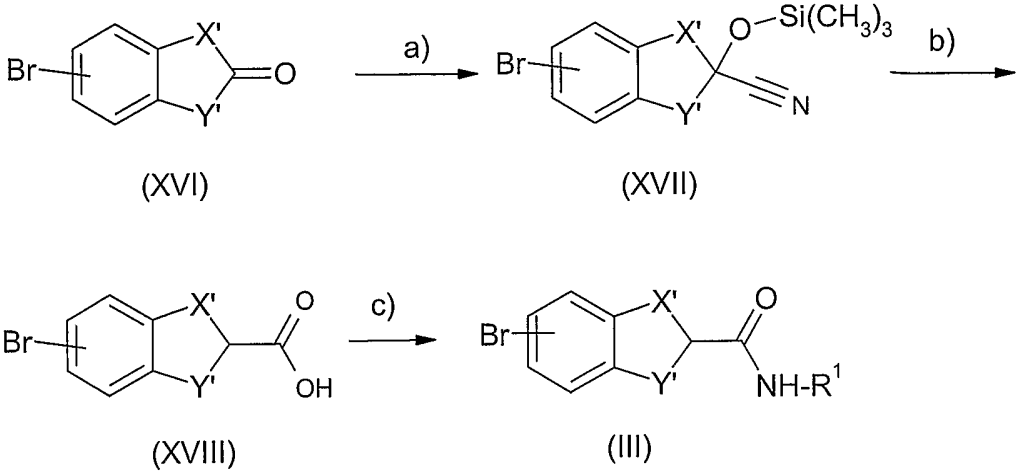


In scheme 5 X' is absent, CH_2 or CH_2CH_2, Y' is CH_2, CH_2CH_2 or $CH_2CH_2CH_2$. R is C_1-C_3-alkylcarbonyl or an amino-protecting group PG.

According to scheme 5, compound XIV is converted into the mesylate by reacting XIV with mesylchloride in the presence of a tertiary amine such as diisopropylethylamine and optionally a catalyst such as dimethylaminophenol. The mesylate of XIV is then reacted with a cyanide such as tetraethylammonium cyanide to obtain the nitrile compound XV. The nitrile XV is then hydrogenated by suitable means, e.g. by a complex hydride such as lithium aluminiumhydride, thereby yielding the primary amine XIa, which can be converted into the amine II by analogy to scheme 4.

Compounds of the formula III, wherein X=C(R)-Y form a saturated carbocycle can be obtained by the reaction sequences shown in the following scheme 6.

Scheme 6:

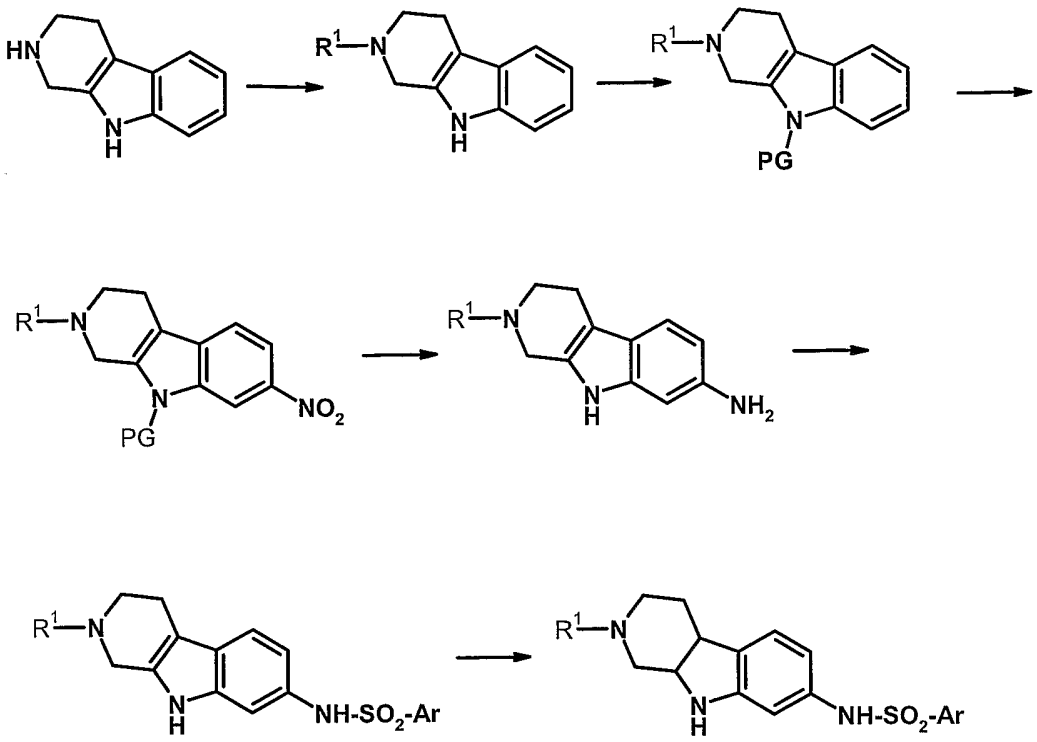


In scheme 6 X' is absent, i.e. a single bond, or CH_2 or CH_2CH_2, Y' is CH_2, CH_2CH_2 or $CH_2CH_2CH_2$. R^1 has the meanings as given above.

In step a) of scheme 6, the ketone XVI is reacted with trimethylsilylcyanide in the presence of a weak Lewis acid such as zinc iodide, whereby compound XVII is obtained. Compound XVII is then reacted with stannous(II) chloride in methanolic HCl, whereby the acid XVIII is obtained. The acid is then reacted with an amine R^1-NH_2 to obtain compound III.

A further approach to compounds I, wherein E is NH is schown in scheme 7.

Scheme 7:



In scheme 7, R^1 is different from hydrogen. PG is a protective group, e.g. an acetyl group.

Starting from commercially available tryptoline (2,3,4,9-tetrahydro-1H-beta-carboline), a radical R^1 is introduced either by alkylation or acylation as outlined for scheme 1. After protection of the indoline nitrogen, a nitration is performed according to Synthetic Communications (2003), 33, 3707-3716. The separation of the obtained isomers can be achieved by flash chromatography. Nitration and reduction to the amine can also be achieved according to the method described in Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1991), 11, 1729-1734 and in Taiwan Yixuehui Zazki (1960), 59, 550-555. The amine is then reacted with Ar-SO_2-Cl as described for scheme 1 and the obtained compound can be hydrgenated.

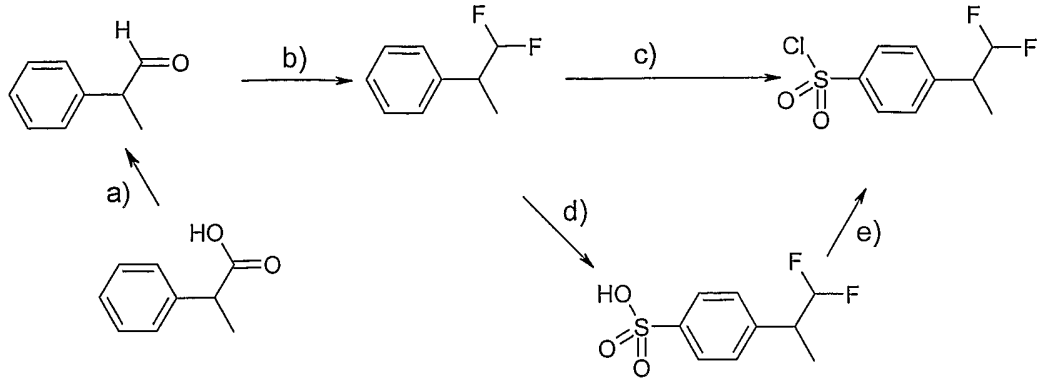
If not indicated otherwise, the above-described reactions are generally carried out in a solvent at temperatures between room temperature and the boiling temperature of the solvent employed. Alternatively, the activation energy which is required for the reaction can be introduced into the reaction mixture using microwaves, something which has proved to be of value, in particular, in the case of the reactions catalyzed by transition

metals (with regard to reactions using microwaves, see Tetrahedron 2001, 57, p. 9199 ff. p. 9225 ff. and also, in a general manner, "Microwaves in Organic Synthesis", André Loupy (Ed.), Wiley-VCH 2002).

The sulfonylchlorides Cl-SO_2-Ar are either commercially available or can be prepared according to standard synthetic methods. Sulfonylchlorides containing a fluorinated radical R^a may be prepared by different synthetic routes, e.g. by reacting suitable hydroxy or oxo precursor (e.g. a compound Cl-SO_2-Ar, carrying a hydroxy or oxo substituted radical) with fluorinating reagents like DAST (diethylaminosulfurtrifluoride), morpholine-DAST, deoxo-fluor (bis(2-methoxyethyl)aminosulfur trifluoride), Ishikawa's reagent (N,N-diethyl-(1,1,2,3,3,3-hexafluoropropyl)amine; Journal of Fluorine Chemistry, 1989, 43, 371-377). More conventionally, the hydroxy group of an aromatic compound which carries a hydroxy substituted radical but not a chlorosulfonyl group, is transformed into a leaving group which is then replaced by a fluoride ion (J. Org. Chem., 1994, 59, 2898-22901; Tetrahedron Letters, 1998, 7305-6; J. Org. Chem., 1998, 63, 9587-9589, Synthesis, 1987, 920-21)). Subsequent direct chlorosulfonylation with chlorosulfonic acid (Heterocycles, 2001, 55, 9, 1789-1803; J. Org. Chem., 2000, 65, 1399-1406) or a two step process preparing first the sulfonic acid derivatives which are then transformed to the sulfonylchlorides with e.g. chlorosulfonic acid, phosphorous pentachloride (Eur. J. Med. Chem., 2002, 36, 809-828) and the like, yields the desired sulfonylchloride (Tetrahedron Letters, 1991, 33,50 7787-7788)). Sulfonylchlorides may also be prepared by diazotization of suitable amine precursor Ar-NH_2 with sodium nitrite under acidic conditions and reaction with sulfur dioxide in acetic acid (scheme (iii); J. Org. Chem., 1960, 25, 1824-26;); by oxidation of suitable heteroaryl-thiols HS-Ar or heteroaryl-benzyl-thioethers C_6H_5-CH_2-S-Ar with chlorine (Synthesis, 1998, 36-38; J. Am. Chem. Soc., 1950, 74, 4890-92;) directly to the corresponding sulfonyl chlorides. The further are known in the art or may be prepared by standard methods. E.g. mercapto-pyrimidines or pyrimidinyl-benzylthioether precursors can be prepared according to literature (Chemische Berichte, 1960, 1208-11; Chemische Berichte, 1960, 95, 230-235; Collection Czechoslow. Chem. Comm., 1959, 24, 1667-1671; Austr. J. Chem., 1966, 19, 2321-30; Chemiker-Zeitung, 101, 6, 1977, 305-7; Tetrahedron, 2002, 58, 887-890; Synthesis, 1983, 641-645.

In the following schemes 8 to 10 several routes are shown which are suitable to prepare benzenesulfonyl chlorides carrying a fluorinated propyl radical.

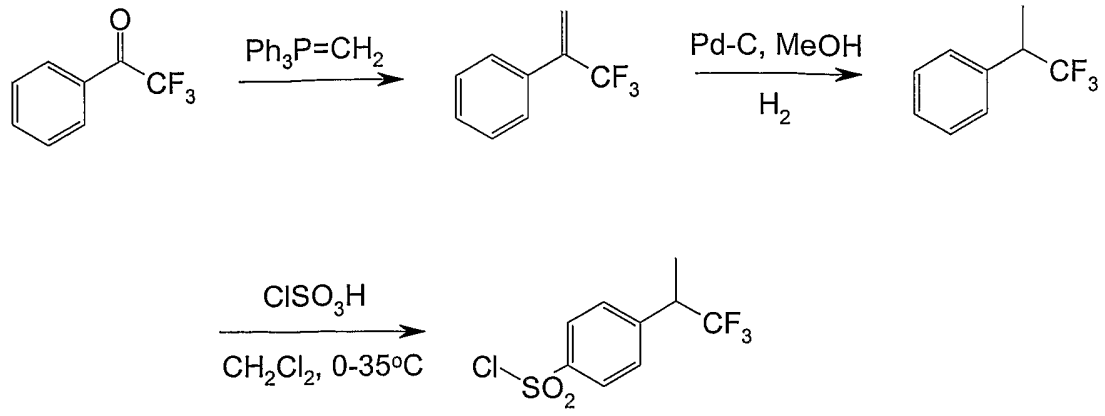
Scheme 8:



The 4-(1,1-difluoropropan-2-yl)benzene-1-sulfonyl chloride intermediate can be prepared from the commercially available 2-phenylpropanoic acid. In the first step a) the 2-phenylpropanic acid is converted to the alkyl ester by esterification with an alcohol (e.g. methanol or ethanol) under acid catalysis (e.g. HCl , SO_2Cl_2). The ester can be reduced to the corresponding 2-phenyl propanal by a reducing agent such as DIBAL (diisobutylaluminium hydride). The aldehyde is converted to the 1,1-difluoro-2-propyl derivative by reaction with a suitable fluorinating reagent like DAST (diethylaminosulfurtrifluoride), morpholine-DAST, deoxo-fluor (bis(2-methoxyethyl)aminosulfur trifluoride), Ishikawa's reagent (N,N-diethyl-(1,1,2,3,3,3-hexafluoropropyl)amine; Journal of Fluorine Chemistry, 1989, 43, 371-377) (step b). The thus obtained 1,1-difluoro-2-phenylpropane can be converted into 4-(1,1-difluoro-2-propyl)benzenesulfonyl chloride by either direct chlorosulfonylation with chlorosulfonic acid (Heterocycles, 2001, 55, 9, 1789-1803; J. Org. Chem., 2000, 65, 1399-1406) (step c) or by a two step process preparing first the sulfonic acid derivatives (step d) which are then transformed to the sulfonylchlorides (step e) by reaction with e.g. chlorosulfonic acid, phosphorous pentachloride (Eur. J. Med. Chem., 2002, 36, 809-828); through diazotisation of suitable amine precursors with sodium nitrite under acidic conditions and reaction with sulfur dioxide in acetic acid (J. Org. Chem., 1960, 25, 1824-26); oxidation of suitable heteroaryl-thiols or heteroaryl-benzyl-thioethers with chlorine (Synthesis, 1998, 36-38; J. Am. Chem. Soc., 1950, 74, 4890-92) directly to the corresponding sulfonyl chlorides.

The synthesis shown in scheme 8 can also be performed using (R)-2-phenylpropanic acid and (S)-2-phenylpropanic acid respectively to give the corresponding chiral 4-(1,1-difluoropropan-2-yl)benzene-1-sulfonyl chlorides.

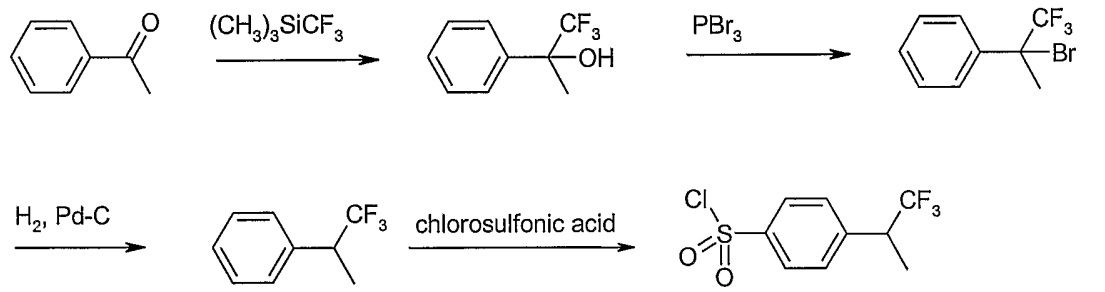
Scheme 9:



4-(1,1,1-Trifluoropropan-2-yl)benzene-1-sulfonyl chloride intermediate can be prepared from the commercially available 2,2,2-trifluoro-1-phenylethanone by a synthetic route shown in scheme 9. The ketone can be converted to the 3,3,3-trifluoro-2-phenylpropene by a Wittig reaction with a suitable ylide such as methylene-triphenylphosphane (prepared by reaction of methyltriphenylphosphonium halide and a suitable base such as lithium diisopropylamide or potassium tert-butoxide) or according to a Horner-Emmons reaction by reacting the ketone with a suitable phosphonate such as diethyl methylphosphonate and a suitable suitable base such as lithium diisopropylamide or potassium tert-butoxide. The thus obtained 3,3,3-trifluoro-2-phenylpropene can then be reduced to the saturated alkane by catalytic hydrogenation (eg Pd-C) followed by conversion to the sulfonyl chloride by the methods described in scheme 8.

The synthesis of scheme 9 can also be performed using a chiral catalyst for the alkene hydrogenation to allow the preparation of the corresponding chiral 4-(1,1,1-triifluoropropan-2-yl)benzene-1-sulfonyl chlorides.

Scheme 10:



The 4-(1,1,1-trifluoropropan-2-yl)benzene-1-sulfonyl chloride can be also prepared from the commercially available 1-phenyl-ethanone by a four step procedure as shown in scheme 10. The ketone can be converted to the trifluoromethyl hydroxyl intermediate by reaction with trimethyl-trifluoromethyl-silane (Journal of Organic Chemistry, 2000, 65, 8848-8856; Journal of Fluorine Chemistry, 2003, 122, 243-246) which can then be converted to the trifluoromethyl bromide (Journal of the American Chemical Society, 1987, 109, 2435-4). Dehalogenation by catalytic hydrogenation (eg Pd-C) can then be followed by conversion to the sulfonyl chloride by the methods discussed above.

Examples of solvents which can be used are ethers, such as diethyl ether, diisopropyl ether, methyl *tert*-butyl ether or tetrahydrofuran, aprotic polar solvent, such as dimethylformamide, dimethyl sulfoxide, dimethoxyethane, and acetonitrile, aromatic hydrocarbons, such as toluene and xylene, ketones, such as acetone or methyl ethyl ketone, halohydrocarbons, such as dichloromethane, trichloromethane and dichloroethane, esters, such as ethyl acetate and methyl butyrate, carboxylic acids, such as acetic acid or propionic acid, and alcohols, such as methanol, ethanol, n-propanol, isopropanol, n-butanol, isobutanol, 2-butanol and tert.-butanol.

If desired, it is possible for a base to be present in order to neutralize protons which are released in the reactions. Suitable bases include inorganic bases, such as sodium carbonate, potassium carbonate, sodium hydrogen carbonate or potassium hydrogen carbonate, and, in addition, alkoxides, such as sodium methoxide or sodium ethoxide, alkali metal hydrides, such as sodium hydride, and also organometallic compounds, such as butyllithium compounds or alkylmagnesium compounds, or organic nitrogen bases, such as triethylamine or pyridine. The latter compounds can at the same time serve as solvents.

The crude product is isolated in a customary manner, for example by filtering, distilling off the solvent or extracting from the reaction mixture, etc. The resulting compounds can be purified in a customary manner, for example by means of recrystallizing from a solvent, by means of chromatography or by means of converting into an acid addition salt.

The acid addition salts are prepared in a customary manner by mixing the free base with a corresponding acid, where appropriate in solution in an organic solvent, for example a lower alcohol, such as methanol, ethanol or propanol, an ether, such as

methyl *tert*-butyl ether or diisopropyl ether, a ketone, such as acetone or methyl ethyl ketone, or an ester, such as ethyl acetate.

The compounds according to the invention of the formula I are surprisingly highly selective dopamine D_3 receptor ligands which, because of their low affinity for other receptors such as D_1 receptors, D_4 receptors, α1-adrenergic and/or α2-adrenergic receptors, muscarinergic receptors, histamine receptors, opiate receptors and, in particular, dopamine D_2 receptors, give rise to fewer side-effects than do the classic neuroleptics, which are D_2 receptor antagonists. A compound of the invention can be a dopamine D_3 receptor agonist, including partial agonistic activity, or a dopamine D_3 receptor antagonist, including partial antagonistic activity.

The high affinity of the compounds according to the invention for D_3 receptors is reflected in very low in-vitro receptor binding constants ($K_i(D_3)$ values) of as a rule less than 50 nM (nmol/l), preferably of less than 10 nM and, in particular of less than 5 nM. The displacement of [^{125}I]-iodosulpride can, for example, be used in receptor binding studies for determining binding affinities for D_3 receptors.

The selectivity of the compounds according to the invention, i.e. the ratio $K_i(D_2)/K_i(D_3)$ of the receptor binding constants, is as a rule at least 50, preferably at least 100, even better at least 150. The displacement of [^{3}H]SCH23390, [^{125}I] iodosulpride or [^{125}I] spiperone can be used, for example, for carrying out receptor binding studies on D_1, D_2 and D_4 receptors.

Because of their binding profile, the compounds can be used for treating diseases which respond to dopamine D_3 receptor ligands (or which are susceptible to treatment with a dopamine D_3 receptor ligand, respectively), i.e. they are effective for treating those medical disorders or diseases in which exerting an influence on (modulating) the dopamine D_3 receptors leads to an improvement in the clinical picture or to the disease being cured. Examples of these diseases are disorders or diseases of the central nervous system.

Disorders or diseases of the central nervous system are understood as meaning disorders which affect the spinal chord and, in particular, the brain. Within the meaning of the invention, the term "disorder" denotes disturbances and/or anomalies which are as a rule regarded as being pathological conditions or functions and which can manifest

themselves in the form of particular signs, symptoms and/or malfunctions. While the treatment according to the invention can be directed toward individual disorders, i.e. anomalies or pathological conditions, it is also possible for several anomalies, which may be causatively linked to each other, to be combined into patterns, i.e. syndromes, which can be treated in accordance with the invention.

The disorders which can be treated in accordance with the invention are, in particular, psychiatric and neurological disturbances. These disturbances include, in particular, organic disturbances, including symptomatic disturbances, such as psychoses of the acute exogenous reaction type or attendant psychoses of organic or exogenous cause, e.g., in association with metabolic disturbances, infections and endocrinopathogies; endogenous psychoses, such as schizophrenia and schizotype and delusional disturbances; affective disturbances, such as depressions, mania and/or manic-depressive conditions; and also mixed forms of the above-described disturbances; neurotic and somatoform disturbances and also disturbances in association with stress; dissociative disturbances, e.g. loss of consciousness, clouding of consciousness, double consciousness and personality disturbances; disturbances in attention and waking/sleeping behavior, such as behavioral disturbances and emotional disturbances whose onset lies in childhood and youth, e.g. hyperactivity in children, intellectual deficits, in particular attention disturbances (attention deficit disorders), memory disturbances and cognitive disturbances, e.g. impaired learning and memory (impaired cognitive function), dementia, narcolepsy and sleep disturbances, e.g. restless legs syndrome; development disturbances; anxiety states, delirium; sexlife disturbances, e.g. impotence in men; eating disturbances, e.g. anorexia or bulimia; addiction; and other unspecified psychiatric disturbances.

The disorders which can be treated in accordance with the invention also include Parkinson's disease and epilepsy and, in particular, the affective disturbances connected thereto.

The addiction diseases include psychic disorders and behavioral disturbances which are caused by the abuse of psychotropic substances, such as pharmaceuticals or narcotics, and also other addiction diseases, such as addiction to gaming (impulse control disorders not elsewhere classified). Examples of addictive substances are: opioids (e.g. morphine, heroin and codeine), cocaine; nicotine; alcohol; substances which interact with the GABA chloride channel complex, sedatives, hypnotics and tranquilizers, for example benzodiazepines; LSD; cannabinoids; psychomotor stimulants, such as

3,4-methylenedioxy-N-methylamphetamine (ecstasy); amphetamine and amphetamine-like substances such as methylphenidate and other stimulants including caffeine. Addictive substances which come particularly into consideration are opioids, cocaine, amphetamine or amphetamine-like substances, nicotine and alcohol.

With regard to the treatment of addiction diseases, particular preference is given to those compounds according to the invention of the formula I which themselves do not possess any psychotropic effect. This can also be observed in a test using rats, which, after having been administered compounds which can be used in accordance with the invention, reduce their self administration of psychotropic substances, for example cocaine.

According to another aspect of the present invention, the compounds according to the invention are suitable for treating disorders whose causes can at least partially be attributed to an anomalous activity of dopamine D_3 receptors.

According to another aspect of the present invention, the treatment is directed, in particular, toward those disorders which can be influenced, within the sense of an expedient medicinal treatment, by the binding of preferably exogeneously administered binding partners (ligands) to dopamine D_3 receptors.

The diseases which can be treated with the compounds according to the invention are frequently characterized by progressive development, i.e. the above-described conditions change over the course of time; as a rule, the severity increases and conditions may possibly merge into each other or other conditions may appear in addition to those which already exist.

The compounds according to the invention can be used to treat a large number of signs, symptoms and/or malfunctions which are connected with the disorders of the central nervous system and, in particular, the abovementioned conditions. These signs, symptoms and/or malfunctions include, for example, a disturbed relationship to reality, lack of insight and ability to meet customary social norms or the demands made by life, changes in temperament, changes in individual drives, such as hunger, sleep, thirst, etc., and in mood, disturbances in the ability to observe and combine, changes in personality, in particular emotional lability, hallucinations, ego-disturbances, distractedness, ambivalence, autism, depersonalization and false perceptions, delusional ideas, chanting speech, lack of synkinesia, short-step gait, flexed posture of trunk and limbs,

tremor, poverty of facial expression, monotonous speech, depressions, apathy, impeded spontaneity and decisiveness, impoverished association ability, anxiety, nervous agitation, stammering, social phobia, panic disturbances, withdrawal symptoms in association with dependency, maniform syndromes, states of excitation and confusion, dysphoria, dyskinetic syndromes and tic disorders, e.g. Huntington's chorea and Gilles-de-la-Tourette's syndrome, vertigo syndromes, e.g. peripheral positional, rotational and oscillatory vertigo, melancholia, hysteria, hypochondria and the like.

Within the meaning of the invention, a treatment also includes a preventive treatment (prophylaxis), in particular as relapse prophylaxis or phase prophylaxis, as well as the treatment of acute or chronic signs, symptoms and/or malfunctions. The treatment can be orientated symptomatically, for example as the suppression of symptoms. It can be effected over a short period, be orientated over the medium term or can be a long-term treatment, for example within the context of a maintenance therapy.

Therefore the compounds according to the invention are preferentially suitable for treating diseases of the central nervous system, in particular for treating affective disorders; neurotic disturbances, stress disturbances and somatoform disturbances and psychoses, and, in particular, for treating schizophrenia and depression. Because of their high selectivity with regard to the D_3 receptor, the compounds I according to the invention are also suitable for treating disturbances of kidney function, in particular disturbances of kidney function which are caused by diabetes mellitus (see WO 00/67847) and, especially, diabetic nephropathy.

Within the context of the treatment, the use according to the invention of the described compounds involves a method. In this method, an effective quantity of one or more compounds, as a rule formulated in accordance with pharmaceutical and veterinary practice, is administered to the individual to be treated, preferably a mammal, in particular a human being, productive animal or domestic animal. Whether such a treatment is indicated, and in which form it is to take place, depends on the individual case and is subject to medical assessment (diagnosis) which takes into consideration signs, symptoms and/or malfunctions which are present, the risks of developing particular signs, symptoms and/or malfunctions, and other factors.

As a rule, the treatment is effected by means of single or repeated daily administration, where appropriate together, or alternating, with other active compounds or active compound-containing preparations such that a daily dose of preferably from about 0.1 to

1000 mg/kg of bodyweight, in the case of oral administration, or of from about 0.1 to 100 mg/kg of bodyweight, in the case of parenteral administration, is supplied to an individual to be treated.

The invention also relates to the production of pharmaceutical compositions for treating an individual, preferably a mammal, in particular a human being, productive animal or domestic animal. Thus, the ligands are customarily administered in the form of pharmaceutical compositions which comprise a pharmaceutically acceptable excipient together with at least one compound according to the invention and, where appropriate, other active compounds. These compositions can, for example, be administered orally, rectally, transdermally, subcutaneously, intravenously, intramuscularly or intranasally.

Examples of suitable pharmaceutical formulations are solid medicinal forms, such as powders, granules, tablets, in particular film tablets, lozenges, sachets, cachets, sugar-coated tablets, capsules, such as hard gelatin capsules and soft gelatin capsules, suppositories or vaginal medicinal forms, semisolid medicinal forms, such as ointments, creams, hydrogels, pastes or plasters, and also liquid medicinal forms, such as solutions, emulsions, in particular oil-in-water emulsions, suspensions, for example lotions, injection preparations and infusion preparations, and eyedrops and eardrops. Implanted release devices can also be used for administering inhibitors according to the invention. In addition, it is also possible to use liposomes or microspheres.

When producing the compositions, the compounds according to the invention are optionally mixed or diluted with one or more excipients. Excipients can be solid, semisolid or liquid materials which serve as vehicles, carriers or medium for the active compound.

Suitable excipients are listed in the specialist medicinal monographs. In addition, the formulations can comprise pharmaceutically acceptable carriers or customary auxiliary substances, such as glidants; wetting agents; emulsifying and suspending agents; preservatives; antioxidants; antiirritants; chelating agents; coating auxiliaries; emulsion stabilizers; film formers; gel formers; odor masking agents; taste corrigents; resin; hydrocolloids; solvents; solubilizers; neutralizing agents; diffusion accelerators; pigments; quaternary ammonium compounds; refatting and overfatting agents; raw materials for ointments, creams or oils; silicone derivatives; spreading auxiliaries; stabilizers; sterilants; suppository bases; tablet auxiliaries, such as binders, fillers, glidants, disintegrants or coatings; propellants; drying agents; opacifiers; thickeners; waxes; plasticiz-

ers and white mineral oils. A formulation in this regard is based on specialist knowledge as described, for example, in Fiedler, H.P., Lexikon der Hilfsstoffe für Pharmazie, Kosmetik und angrenzende Gebiete [Encyclopedia of auxiliary substances for pharmacy, cosmetics and related fields], 4th edition, Aulendorf: ECV-Editio-Kantor-Verlag, 1996.

The following examples serve to explain the invention without limiting it.

The compounds were either characterized via proton-NMR in d_6-dimethylsulfoxid or d-chloroform, if not stated otherwise, on a 400 MHz or 500 MHz NMR instrument (Bruker AVANCE), or by mass spectrometry, generally recorded via HPLC-MS in a fast gradient on C18-material (electrospray-ionisation (ESI) mode), or melting point.

The magnetic nuclear resonance spectral properties (NMR) refer to the chemical shifts (δ) expressed in parts per million (ppm). The relative area of the shifts in the ^{1}H NMR spectrum corresponds to the number of hydrogen atoms for a particular functional type in the molecule. The nature of the shift, as regards multiplicity, is indicated as singlet (s), broad singlet (s. br.), doublet (d), broad doublet (d br.), triplet (t), broad triplet (t br.), quartet (q), quintet (quint.) and multiplet (m).

Preparation Examples

I. Preparation of intermediates

a. Synthesis of sulfonyl chlorides

a.1 4-((S)-2-Fluoro-1-methyl-ethyl)-benzenesulfonyl chloride

a.1.1 Toluene-4-sulfonic acid (S)-2-phenyl-propyl ester

To a solution of 20 g of (S)-(-)-2-phenyl-1-propanol in 240 ml of dichloromethane was added in portions 28 g of p-toluenesulfonyl chloride (146.8 mmol). After stirring for 18 h at room temperature, the organic phase was washed with 100 ml of water, dried over magnesium sulfate, filtered, and the solvent evaporated under reduced pressure to yield 43 g of the title compound.

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 7.65 (d, 2H), 7.15-7.3 (m, 5H), 7.1 (d, 2H), 4.0-4.1 (m, 2H), 3.1 (m, 1H), 2.4 (s, 3H), 1.3 (d, 3H).

a.1.2 ((S)-2-Fluoro-1-methyl-ethyl)-benzene

9.62 g of toluene-4-sulfonic acid (S)-2-phenyl-propyl ester (33.13 mmol) were dissolved in 80 ml of polyethylenglycol 400. 9.62 g of potassium fluoride (165.6 mmol) were added and the reaction mixture was stirred at 50°C for 3 days and another 2 days at 55-70°C. The reaction was treated with 150 ml of saturated aqueous sodium chloride solution, extracted three times with diethyl ether, and the combined organic layers were dried over magnesium sulfate, filtered, and the solvent was evaporated under reduced pressure. The crude product was purified via silica gel chromatography using cyclohexyane/ethyl acetate 15% as eluent. 2.85 g of the desired product were isolated, containing ~ 25% of the elimination side product.

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm]7.2-7.4 (m, 5H), 4.3-4.6 (several m, 2H), 3.15 (m, 1H).1.3 (m, 3H).

a.1.3 4-((S)-2-Fluoro-1-methyl-ethyl)-benzenesulfonyl chloride

3.5 g of ((S)-2-fluoro-1-methyl-ethyl)-benzene (25.32 mmol) were dissolved in 80 ml of dichloromethane. At 0-5°C, 11.81 g of chlorosulfonic acid (101.31 mmol), dissolved in 20 ml of dichloromethane, were added dropwise. The reaction mixture was stirred for 30 min at room temperature and 2 h at 30°C. The solvent was evaporated. 150 ml of diethyl ether were added to the residue, washed once with 150 ml of water, and the organic layer was dried over magnesium sulfate, filtered, and the solvent evaporated under reduced pressure. The crude product was purified via silica gel chromatography with n-heptane-dichloromethane (6:4) as eluent to give 1.5 g of the title compound.

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 8.0 (d, 2H), 7.5 (d, 2H), 4.5 (dd, 2H), 3.25 (m, 1H), 1.4 (d, 3H).

a.2 4-((R)-2-Fluoro-1-methyl-ethyl)-benzenesulfonyl chloride

a.2.1 Toluene-4-sulfonic acid (R)-2-phenyl-propyl ester

Following the procedure analogous to that used for the synthesis of toluene-4-sulfonic acid (S)-2-phenyl-propyl ester, but using (R)-2-phenyl-1-propanol, the title compound was prepared

a.2.2 ((R)-2-Fluoro-1-methyl-ethyl)-benzene

The title compound was prepared as described above for the synthesis of ((S)-2-fluoro-1-methyl-ethyl)-benzene, but using toluene-4-sulfonic acid (R)-2-phenyl-propyl ester instead of toluene-4-sulfonic acid (S)-2-phenyl-propyl ester.

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 7.2-7.4 (m, 5H), 4.3-4.6 (several m, 2H), 3.15 (m, 1H).1.3 (m, 3H).

a.2.3 4-((R)-2-Fluoro-1-methyl-ethyl)-benzenesulfonyl chloride

1.3 g of ((R)-2-fluoro-1-methyl-ethyl)-benzene (9.4 mmol) were dissolved in 50 ml of dichloromethane. At 0-5°C, 1.1 g of chlorosulfonic acid (9.4 mmol), dissolved in 10 ml of dichloromethane, were added dropwise. The reaction mixture was stirred for 20 min at 0-5°C and then added to a solution of 2.15 g of phosphorous pentachloride dissolved in 40 ml of dichloromethane. The reaction mixture was stirred for 30 min at 0-5°C and 1 h at room temperature. The solvent was evaporated, 100 ml of diethyl ether were added, the mixture was washed once with 150 ml of water, and the organic layer dried over magnesium sulfate, filtered, and the solvent evaporated under reduced pressure. The crude product was purified via silica gel chromatography with n-heptane-dichloromethane (1:1) as eluent to give 0.261 g of the title compound.

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 8.0 (d, 2H), 7.5 (d, 2H), 4.5 (dd, 2H), 3.25 (m, 1H), 1.4 (d, 3H).

a.3 4-(2-Fluoro-1-methyl-ethyl)-benzenesulfonyl chloride

Following the procedures analogous to that used for the preparation of 4-((S)-2-fluoro-1-methyl-ethyl)-benzenesulfonyl chloride, but starting with 2-phenyl-1-propanol in step a.3.1, the title compound was prepared.

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 8.0 (d, 2H), 7.5 (d, 2H), 4.5 (dd, 2H), 3.25 (m, 1H), 1.4 (d, 3H).

a.4 4-(2-Fluoro-1-fluoromethyl-ethyl)-benzenesulfonyl chloride

a.4.1 (2-Fluoro-1-fluoromethyl-ethyl)-benzene

4 g of 3-phenylglutaric acid (19.21 mmol) were suspended in 350 ml of dichloromethane. At room temperature, 6.5 g of xenon difluoride (38.42 mmol) were added and the reaction mixture was stirred at room temperature for 18 h. The organic phase was washed once with 975 ml of 6% aqueous sodium hydrogencarbonate, dried over magnesium sulfate, filtered, and the solvent evaporated. The remaining residue was distilled at a bath temperature of 123°C at 21 mm to yield 0.78 g of the title compound that contained ~ 50% of 4-(2-Fluoro-1-methyl-ethyl)-benzene.

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 7.2-7.4 (m, 5H), 4.6-4.8 (dd, 4H), 3.3 (m, 1H).

a.4.2 4-(2-Fluoro-1-fluoromethyl-ethyl)-benzenesulfonyl chloride

Following the procedures analogous to that used for the preparation of 4-((S)-2-fluoro-1-methyl-ethyl)-benzenesulfonyl chloride, but using 5 equivalents. of chlorosulfonic acid, 0,12 g of the title compound were obtained.

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 8.05 (d, 2H), 7.55 (d, 2H), 4.75 (dd, 4H), 3.4 (m, 1H).

a.5 4-(3,3,3-Trifluoropropyl)-benzenesulfonyl chloride

2.9 g were obtained from commercially available (3,3,3-trifluoropropyl)-benzene following the procedure used for the synthesis of 4-((S)-2-fluoro-1-methyl-ethyl)-benzenesulfonyl chloride described above.

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 8.0 (d, 2H), 7.45 (d, 2H), 3.0 (t, 2H), 2.45 (m, 2H).

a.6 4-(2,2,2-Trifluoroethyl)-benzenesulfonyl chloride

The product was obtained from commercially available (2,2,2-trifluoroethyl)-benzene following the procedure as described in J. Org. Chem., 1960, 25, 1824-26.

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 8.05 (d, 2H), 7.55 (d, 2H), 3.5 (q, 2H).

a.7 4-(3-Fluoropropyl)-benzenesulfonyl chloride

a.7.1 (3-Fluoropropyl)-benzene

15.6 g of diethylaminosulfurtrifluoride (DAST, 96.91 mmol) were dissolved in 18 ml of dichloromethane. At 0-5°C, 12 g of 3-phenyl-1-propanol (88.1 mmol) dissolved in 30 ml of dichloromethane, were added dropwise. The reaction mixture was stirred for 18 h, and, after addition of 30 ml of dichloromethane, poured onto 100 ml of ice water. The organic layer was separated, dried over magnesium sulfate, filtered, and the solvent evaporated. The crude product was purified by distillation at a bath temperature of 106°C at 20 mm to yield 7.4 g of the title compound.

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 7.1-7.3 (m, 5H), 4.4 (dt, 2H), 2.7 (m, 2H).2.0 (m, 2H).

a.7.2 4-(3-Fluoropropyl)-benzenesulfonyl chloride

4.1 g of (3-fluoro-propyl)-benzene (29.67 mmol) were dissolved in 40 ml of dichloromethane. At 0-5°C, 6.91 g of chlorosulfonic acid (59.34 mmol), dissolved in 10 ml of dichloromethane, were added dropwise. The reaction mixture was stirred for 45 min at 0-5°C and then added to a solution of 6.8 g of phosphorous pentachloride (32.63 mmol) dissolved in 50 ml of dichloromethane. The reaction mixture was stirred for 1 h at 5-10°C. The solvent was evaporated, 150 ml of diethyl ether added, washed once with 150 ml of ice water, and the organic layer dried over magnesium sulfate, filtered, and the solvent evaporated under reduced pressure. The crude product was purified via silica gel chromatography with n-heptane-dichloromethane (11:9) as eluent to give 5.5 g of the title compound.

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 7.95 (d, 2H), 7.45 (d, 2H), 4.5 (dt, 2H), 2.9 (t, 2H), 2.05 (m, 2H).

a.8 4-(2,2-Difluoro-cyclopropyl)-benzenesulfonyl chloride

2.07 g of were obtained from commercially available (2,2-difluorocyclopropyl)-benzene following the procedure used for the synthesis of (3-fluoropropyl)-benzenesulfonyl chloride with the exception that only 1.1 equivalents of phosphorous pentachloride were used.

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 8.0 (d, 2H), 7.45 (d, 2H), 2.85 (m, 1H), 2.0 (m, 1H), 1.75 (m, 1H).

a.9 3-Bromo-4-trifluoromethoxy-benzenesulfonyl chloride

2.0 g of 1-bromo-2-(trifluoro-methoxy)benzene (8.3 mmol) were dissolved in 30 ml of dichloromethane. At 0-5°C, 1.06 g of chlorosulfonic acid (9.13 mmol), dissolved in 3 ml of dichloromethane, were added dropwise. The reaction mixture was stirred for 30 min at room temperature. Additional 5.5 equivalents of chlorosulfonic in dichloromethane were added to drive the reaction to completion. Standard work-up was followed and silica gel chromatography with n-heptane-dichloromethane (6:4) as eluent gave 2.19 g of the title compound.

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 8.3 (d, 1H), 8.05 (dd, 1H), 7.5 (dd, 1H).

a.10 4-(2-Fluoroethyl)-benzenesulfonyl chloride

a.10.1 (2-Fluoroethyl)-benzene

6.8 g of the title compound were obtained from commercially available 2-phenyl-ethanol following the procedure used for the synthesis of (3-fluoropropyl)-benzene.

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 7.1-7.3 (m, 5H), 4.6 (m, 1H), 4.45 (m, 1H), 2.95 (m, 1H), 2.9 (m, 1H).

a.10.2 4-(2-Fluoroethyl)-benzenesulfonyl chloride

3.55 g were obtained following the procedure used for the synthesis of 4-((R)-2-fluoro-1-methyl-ethyl)-benzenesulfonyl chloride.

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 8.0 (d, 2H), 7.5 (d, 2H), 4.7 (dt, 2H), 3.05-3.2 (dt, 2H).

a.11 5-Propylthiophene-2-sulfonyl chloride

Following the procedures analogous to that used for the preparation of (3-fluoro-propyl)-benzenesulfonyl chloride , but using only 1 equivalent of phosphorous pentachloride, the title compound was prepared.

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 7.7 (d, 1H), 6.85 (d, 1H), 2.9 (t, 2H), 1.75 (m, 2H), 1.0 (t, 3H).

a.12 4-(1-Methyl-1H-pyrazol-4-yl)-benzenesulfonyl chloride

a.12.1 1-Methyl-4-phenyl-1H-pyrazole

1 g of 2-phenylmalonaldehyde (6.75 mmol) were dissolved in 25 ml of ethanol. 0.36 ml of N-methyl-hydrazine (6.75 mmol) were added, the reaction mixture was stirred under reflux for 4 h, the solvent evaporated under reduced pressure to yield 1.09 g of the product.

ESI-MS: 159.1 [M+H]+

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 7.75 (s, 1H), 7.6 (s, 1H), 7.45 (d, 2H), 7.35 (t, 2H), 7.2 (t, 1H), 3.9 (s, 3H)

a.12.2 4-(1-Methyl-1H-pyrazol-4-yl)-benzenesulfonyl chloride

0.5 g of 1-methyl-4-phenyl-1H-pyrazole (3.16 mmol) were dissolved in 20ml of dichloromethane. At 0°C, 0.232 ml of chlorosulfonic acid were added and the reaction mixture was stirred for 1 h under ice cooling. Additional 0.7 ml of chlorosulfonic acid were added, the mixture was stirred at 0°C for 30 minutes and then 90 minutes at 50°C. The two phases were separated and the lower layer put on ice, extracted twice with diethyl ether, dried over magnesium sulfate, filtered, and the solvent evaporated under reduced pressure to yield 0.496 g of the product.

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 8.0 (d, 2H), 7.85 (s, 1H), 7.75 (s, 1H), 7.65 (d, 2H), 4.0 (s, 3H).

a.13 4-(1,1,1-Trifluoropropan-2-yl)benzenesulfonyl chloride and
2-(1,1,1-trifluoropropan-2-yl)benzenesulfonyl chloride

Prepared on a 14 g scale following the procedure outlined in Scheme 7. 2-(1,1,1-Trifluoropropan-2-yl)benzenesulfonyl chloride is a by-product of the reaction.

4-(1,1,1-Trifluoropropan-2-yl)benzenesulfonyl chloride:
MS (ESI) m/z: 273.1 $[M+H]^+$
^{1}H-NMR (DMSO-d_6): δ [ppm] 7.62 (d, 2H), 7.33 (d, 2H), 3.81 (m, 1H), 1.42 (d, 3H).

2-(1,1,1-Trifluoropropan-2-yl)benzenesulfonyl chloride:
MS (ESI) m/z: 273.1 $[M+H]^+$

a.14 4-(1,1-Difluoropropan-2-yl)benzenesulfonyl chloride and
2-(1,1-Difluoropropan-2-yl)benzene-1-sulfonyl chloride

Prepared on an 11 g scale following the procedure outlined in Scheme 6. 2-(1,1-Difluoropropan-2-yl)benzene-1-sulfonyl chloride is a by-product of the reaction.

4-(1,1-Difluoropropan-2-yl)benzenesulfonyl chloride:
MS (ESI) m/z: 255.0 $[M+H]^+$
^{1}H-NMR (DMSO-d_6): δ [ppm] 8.03 (d, 2H), 7.55 (d, 2H), 5.88 (dt, 1H), 3.34 (m, 1H), 1.47 (d, 3H).
^{13}C-NMR (DMSO-d_6): δ [ppm] 146.43, 143.54, 129.77, 127.28, 117.06 (t), 43.76, 13.78.

2-(1,1-difluoropropan-2-yl)benzene-1-sulfonyl chloride:
Isolated by chromatography on 110 mg scale.
MS (ESI) m/z: 255.0 $[M+H]^+$
^{1}H-NMR (DMSO-d_6): δ [ppm] 8.15 (d, 1H), 7.77 (t, 1H), 7.70 (d, 1H), 7.54 (t, 1H), 5.99 (dt, 1H), 4.43 (m, 1H), 1.51 (d, 3H).

^{13}C-NMR (DMSO-d_6): δ [ppm] 143.45, 138.63, 135.53, 130.93, 129.04, 128.17, 116.61 (t), 38.38, 13.68.

II. Preparation of compounds I

EXAMPLE 1

4-Isopropyl-N-(2-propylaminomethyl-1H-indol-5-yl)-benzenesulfonamide

1.1 5-Nitro-1H-indole-2-carboxylic acid

To a solution of ethyl-5-nitro-1H-indole-2-carboxylate (22.7 g, 96.83 mg) in ethanol (EtOH) (150 ml) sodium hydroxide (11.62 g, 290.5 mmol) was added. The mixture was stirred at room temperature for 16 h. During this time a brown solid formed. After evaporation of the solvent under reduced pressure the residue was suspended in water and HCl was added. The color of the precipitate changed from brown to yellow. After filtration the residue was washed with water and dried in a vacuum oven at 50°C to give the product as a brown powder (19.53 g, 98%).

1.2 5-Nitro-1H-indole-2-carboxylic acid propylamide

To a solution of 5-nitro-1H-indole-2-carboxylic acid (6.95 g, 33.7 mmol) in N,N-dimethylformamide (DMF)/pyridine (1/1, 150 ml) N,N'-carbonyl-diimidazole (5.47 g, 33.71 mmol) was added. The mixture was stirred at 80°C for 1 h. At 0°C propylamine (9.96 g, 168.56 mmol) was added. The mixture was stirred at 0°C for 1 h and then at room temperature for 16 h. The solution was diluted with water (2 l). After addidtion of sodium chloride the product precipitated. After filtration the residue was washed with water and pentane, and dried in a vacuum oven at 50°C to give the product as a yellow powder.

MS (ESI) m/z: 248.05 $[M+H]^+$

1.3 5-Amino-1H-indole-2-carboxylic acid propylamide

To a solution of 5-nitro-1H-indole-2-carboxylic acid propylamide (2.94 g, 11.9 mmol) in EtOH (150 ml) a suspension of palladium on charcoal (10%, 1 g) in EtOH was added. The mixture was hydrogenated at atmospheric pressure. After filtration and removal of the solvents in vacuo the product was obtained as a yellow powder (2.46 mg, 95%).

MS (ESI) m/z: 218.15 $[M+H]^+$

1.4 5-(4-Isopropyl-benzenesulfonylamino)-1H-indole-2-carboxylic acid propylamide

To a solution of 5-amino-1H-indole-2-carboxylic acid propylamide (500 mg, 2.3 mmol) in pyridine (20 ml) 4-isopropyl-benzenesulfonyl chloride (500 mg, 2.3 mmol) was added. The mixture was stirred at room temperature for 16 h. After evaporation of the solvent the residue was partitioned between ethyl acetate and saturated aqueous $NaHCO_3$. The organic layer was separated, washed with saturated aqueous $NaHCO_3$ and dried over $MgSO_4$. The flitered solution was evaporated to give the product as a yellow powder (910mg, 98.8%).
MS (ESI) m/z: 400.01 $[M+H]^+$

1.5 4-Isopropyl-N-(2-propylaminomethyl-1H-indol-5-yl)-benzenesulfonamide

To a suspension of lithium aluminiumhydride (590 mg, 15.54 mmol) in tetrahydrofuran (THF) (40 ml, dried over Al_2O_3) at –5 to 0°C a solution of 5-(4-isopropyl-benzenesulfonylamino)-1H-indole-2-carboxylic acid propylamide (1.03 g, 2.59 mmol) in THF (10 ml) was added. After complete addition the mixture was allowed to warm to room temperature and was heated to reflux for 3 h. At 0°C THF and then water were added. The mixture was dried with Na_2SO_4. The filtered solution was evaporated and the residue was purified by column chromatography (toluene:THF:methanol, 4:1:1 + 2.5% triethylamine) to give the product as a yellow powder (240 mg, 24%).
MS (ESI) m/z: 386.1 $[M+H]^+$
^{1}H-NMR (DMSO-d_6): δ [ppm] 10.95 (bs, 1H), 7.60 (d, 2H), 7.35 (d, 2H), 7.07-7.20 (m, 2H), 6.75-6.79 (m, 1H), 6.18 (s, 1H), 3.79 (s, 2H), 2.85-2.96 (m, 1H), 2.40-2.55 (m, 2H), 1.39-1.49 (m, 2H), 1.10-1.20 (m, 6H), 0.85 (t, 3H).

EXAMPLE 2

4-Isopropyl-N-(2-propylaminomethyl-2,3-dihydro-1H-indol-5-yl)-benzenesulfonamide x HCl

To 4-isopropyl-N-(2-propylaminomethyl-1H-indol-5-yl)-benzenesulfonamide (110 mg, 0.27 mmol) trifluoroacetic acid (TFA) (5 ml) was added at 0°C followed by adding sodium borohydride pellets (50 mg, 1.36 mmol). The temperature during addition was kept below 10°C. After complete addition the mixture was stirred for 2 h at 0°C. The

mixture carefully was added to an ice cold saturated aqueous solution of $NaHCO_3$.The aqueous layer was extracted three times with dichloromethane. The combined organic layers were dried over $MgSO_4$, filtered and the solvent evaporated under reduced pressure. To a solution of the residue in ethyl acetate/diethyl ether a solution of HCl in diethyl ether (1M) was added. The resulting precipitate was collected and dried in vacuo at 30°C to give the product as purple crystals (60 mg, 51%).

MS (ESI) m/z: 388.15 $[M+H]^+$

^{1}H-NMR (DMSO-d_6): δ [ppm] 9.61 (bs, 1H), 8.85 (bs, 2H), 7.60 (d, 2H), 7.48 (d, 2H), 6.80 (s, 1H), 6.65 (d, 1H), 6.40 (d, 1H), 4.03-4.15 (m, 1H), 2.80-3.10 (m, 6H), 2.65-2.75 (m, 1H), 1.60-1.70 (m, 2H), 1.15-1.20 (m, 6H), 0.90 (t, 3H).

EXAMPLE 3

N-(2-Propylaminomethyl-1H-indol-5-yl)-4-trifluoromethoxy-benzenesulfonamide x ½ fumaric acid

3.1 5-(4-Trifluoromethoxy-benzenesulfonylamino)-1H-indole-2-carboxylic acid propylamide

To a solution of 5-amino-1H-indole-2-carboxylic acid propylamide (500 mg, 2.3 mmol) in pyridine (20 ml) 4-trifluoromethoxy-benzenesulfonyl chloride (600 mg, 2.3 mmol) was added. The mixture was stirred at room temperature for 16 h. After evaporation of the solvent the residue was partitioned between ethyl acetate and saturated aqueous. The organic layer was separated, washed with saturated aqueous $NaHCO_3$ and dried over $MgSO_4$. The filtered solution was evaporated to give the product as a yellow powder (1.01 g, 99%).

MS (ESI) m/z: 442.0 $[M+H]^+$

3.2 N-(2-Propylaminomethyl-indol-5-yl)-4-trifluoromethoxy-benzenesulfonamide x ½ fumaric acid

To a suspension of lithium aluminiumhydride (500 mg, 13.18 mmol) in THF (40 ml, dried over Al_2O_3) at –5 - 0°C a solution of 5-(4-trifluoromethoxy-benzenesulfonylamino)-1H-indole-2-carboxylic acid propylamide (970 mg, 2.20 mmol) in THF (10 ml) was added. After complete addition the mixture was allowed to warm to room temperature and was heated to reflux for 3 h. At 0°C THF and then water were added. The mixture was dried with Na_2SO_4. The filtered solution was evaporated in vacuo and the residue

was purified by column chromatography (toluene:THF:methanol, 4:1:1, + 2.5% triethylamine). To a solution of the obtained oil in isopropanol fumaric acid (254 mg, 2.19 mmol) was added. The precipitate was recrystallized from ethanol to give the product as a yellow powder (220 mg, 18%).

MS (ESI) m/z: 428.0 $[M+H]^+$

^{1}H-NMR (DMSO-d_6): δ [ppm] 7.78 (d, 2H), 7.47 (d, 2H), 7.10-7.20 (m, 2H), 6.70-6.80 (m, 1H), 6.55 (s, 1H), 6.23 (s, 1H), 3.89 (s, 2H), 2.53-2.60 (m, 2H), 1.45-1.55 (m, 2H), 0.86 (t, 3H).

EXAMPLE 4

N-(2-Propylaminomethyl-2,3-dihydro-1H-indol-5-yl)-4-trifluoromethoxy-benzenesulfonamide x HCl

A solution of 5-(4-trifluoromethoxy-benzenesulfonylamino)-1H-indole-2-carboxylic acid propylamide (960 mg, 2.18 mmol) in THF (25 ml) was heated to reflux and a solution of borane-dimethylsulfide complex (2M in THF, 19.6 mmol) was added. The mixture was heated to reflux for 10 h. At room temperature the mixture was adjusted to pH = 1 by adding a solution of HCl in ethanol and stirred for 15 min. After evaporation of the solvents the residue was partitioned between ethyl acetate and HCl (2M). To the separated aqueous layer aqueous ammonia was added (pH = 9). After extraction with dicholormethane the organic layer was dried over $MgSO_4$ and evaporated. To a solution of the residue in diethyl ether HCl in diethyl ether (1M) was added. The resulting precipitate was collected, washed with diethyl ether and dried in vacuo at 30°C to give the product as a yellow powder (160 mg, 16%).

MS (ESI) m/z: 430.15 $[M+H]^+$

^{1}H-NMR (DMSO-d_6): δ [ppm] 9.90 (s, 1H), 9.05 (bs, 2H), 7.62 (d, 2H), 7.55 (d, 2H), 6.81 (s, 1H), 6.68 (d, 1H), 6.49 (d, 1H), 4.10-4.20 (m, 1H), 2.70-3.15 (m, 6H), 1.60-1.70 (m, 2H), 0.91 (t, 3H).

EXAMPLE 5

4-Isopropyl-N-(5-propylaminomethyl-5,6,7,8-tetrahydro-naphthalen-2-yl)-benzenesulfonamide x HCl

5.1 5-Aminomethyl-5,6,7,8-tetrahydro-naphthalen-2-ylamine x 2 HCl

5-Aminomethyl-5,6,7,8-tetrahydro-naphthalen-2-ylamine x 2 HCl was synthesized according to a synthetic protocol described in EP325963 starting from commercially available N-(5-oxo-5,6,7,8-tetrahydro-naphthalen-2-yl)-acetamide.

5.2 N-(6-Amino-1,2,3,4-tetrahydro-naphthalen-1-ylmethyl)-propionamide

A solution of 5-aminomethyl-5,6,7,8-tetrahydro-naphthalen-2-ylamine x 2 HCl (500 mg, 2.01 mmol) in water (90 ml) was adjusted to pH = 11.25 by adding aqueous NaOH (0.5M). Then propionic acid anhydride (290 mg, 2.21 mmol) was added slowly while maintaining the pH in a range from 11.2 to 11.3 by simultaneously adding aqueous NaOH (0.5M). After complete addition the mixture was adjusted to pH = 2.5 with aqueous HCl (1N) and evaporated under reduced pressure. The residue was dissolved in water, and washed twice with ethyl acetate. After addition of aqueous ammonia the aqueous layer was extracted three times with dichloromethane. The combined dichloromethane layers were dried over $MgSO_4$, and evaporated under reduced pressure to give the product as a yellow resin (320 mg, 68%).
MS (ESI) m/z: 233.15 $[M+H]^+$

5.3 N-[6-(4-Isopropyl-benzenesulfonylamino)-1,2,3,4-tetrahydro-naphthalen-1-ylmethyl]-propionamide

To a solution of N-(6-amino-1,2,3,4-tetrahydro-naphthalen-1-ylmethyl)-propionamide (290 mg, 1.26 mmol) in pyridine (10 ml) at 0°C 4-isopropyl-benzenesulfonyl chloride (280 mg, 1.26 mmol) was added. The mixture was stirred at 0°C for 1h and 16 h at room temperature. After evaporation under reduced pressure the obtained residue was partitioned between ethyl acetate and saturated aqueous $NaHCO_3$. The organic layer was washed twice with saturated aqueous $NaHCO_3$, dried over $MgSO_4$, filtered and the solvent evaporated under reduced pressure to give the product as a brown resin (530 mg, 100%).
MS (ESI) m/z: 415.15 $[M+H]^+$

5.4 4-Isopropyl-N-(5-propylaminomethyl-5,6,7,8-tetrahydro-naphthalen-2-yl)-benzenesulfonamide x HCl

To a solution of N-[6-(4-isopropyl-benzenesulfonylamino)-1,2,3,4-tetrahydro-naphthalen-1-ylmethyl]-propionamide (510 mg, 1.23 mmol) in THF (20 ml) borane-

dimethylsulfide complex (2M in THF, 3.06 mmol) was added. The mixture was heated to reflux for 2h. At room temperature HCl in ethanol (2M) was added and the mixture was stirred for 30 min. After evaporation under reduced pressure the residue was triturated with diethyl ether. After filtration the residue was washed with diethyl ether and dried in vacuo to give the product as yellow crystals (490 mg, 92%).

MS (ESI) m/z: 401.15 $[M+H]^+$

^{1}H-NMR (DMSO-d_6): δ [ppm] 10.21 (s, 1H), 8.80 (bs, 1H), 8.60 (bs, 1H), 7.71 (d, 2H), 7.45 (d, 2H), 7.15 (d, 1H), 6.93 (d, 1H), 6.82 (s, 1H), 2.80-3.20 (m, 6H), 2.52-2.61 (m, 2H), 1.55-1.90 (m, 6H), 1.15-1.29 (m, 6H), 0.90 (t, 3H).

EXAMPLE 6

4-Isopropyl-N-(2-propylaminomethyl-1H-benzoimidazol-5-yl)-benzenesulfonamide

6.1 N-(4-Amino-3-nitro-phenyl)-4-isopropyl-benzenesulfonamide

To a mixture of 2-nitro-benzene-1,4-diamine (10g, 65.30 mmol) and N,N-dimethylaniline (8.7 g, 71.83 mmol) in acetonitrile (310 ml) at 0°C 4-isopropyl-benzenesulfonylchloride (13.85 g, 63.34 mmol) was added over a period of 1 h. The mixture was stirred at 0°C for 1h and for 16 h at room temperature. After concentrating the mixture in vacuo the obtained oil was triturated with water. The precipitate was collected, washed with ethanol and dried in vacuo to give the product as a yellow powder (11.76 g, 54%).

6.2 N-(3,4-Diamino-phenyl)-4-isopropyl-benzenesulfonamide x HCl

A mixture of N-(4-amino-3-nitro-phenyl)-4-isopropyl-benzenesulfonamide (5 g, 14.91 mmol) and palladium on charcoal (10%, 500 mg) in ethanol (100 ml) was hydrogenated at atmospheric pressure. After filtration the mixture was concentrated in vacuo. The brown oil was dissolved in dichloromethane and a solution of HCl in isopropanol was added. The precipitate was collected and dried in vacuo to give the product as a brown powder (4.9 g, 87%).

6.3 N-[5-(4-Isopropyl-benzenesulfonylamino)-1H-benzoimidazol-2-ylmethyl]-propionamide

To a solution of N-(3,4-diamino-phenyl)-4-isopropyl-benzenesulfonamide x HCl (500 mg, 1.32 mmol) in DMF (20 ml) at 0°C was added propionylamino-acetic acid (170 mg, 1.32 mmol) and 1-hydroxy-7-azabenzotriazole (HOAt) (220 mg, 1.59 mmol). After stirring the mixture at 0°C for 15 min EDC (N-ethyl-N'-(3-dimethylaminopropyl)-carbodiimide) (300 mg, 1.45 mmol) was added. DIPEA (diisopropylethylamine) (0.92 ml, 5.29 mmol) was added after stirring another 15 min at 0°C. The mixture was stirred at room temperature for 16 h, and then concentrated under reduced pressure. The residue was partitioned between ethyl acetate and saturated aqueous $NaHCO_3$ and the organic layer was dried over $MgSO_4$, filtered, and the solvent evaporated under reduced pressure. A solution of the obtained oil in acetic acid was heated to 70°C for 6h. After evaporation of the solvent in vacuo the residue was purified by column chromatography to give the product as a yellow oil (320 mg, 61%).

6.4 4-Isopropyl-N-(2-propylaminomethyl-1H-benzoimidazol-5-yl)-benzenesulfonamide

To a suspension of lithium aluminiumhydride (180 mg, 4.79 mmol) in THF (5 ml, dried over Al_2O_3) at –5 - 0°C a solution of N-[5-(4-isopropyl-benzenesulfonylamino)-1H-benzoimidazol-2-ylmethyl]-propionamide (320 mg, 0.80 mmol) in THF (5 ml) was added. After complete addition the mixture was allowed to warm to room temperature and was heated to reflux for 2 h. At 0°C THF and then water were added. The mixture was dried with Na_2SO_4. The filtered solution was evaporated in vacuo and the residue was purified by preparative HPLC (water/5% acetonitrile/0.1% acetic acid) to give the product as a yellow oil (10 mg, 3%).

MS (ESI) m/z: 387.25 $[M+H]^+$

^{1}H-NMR ($CDCl_3$): δ [ppm] 7.62 (d, 2H), 7.55-7.65 (m, 2H), 7.75 (s, 1H), 7.46 (d, 2H), 7.61 (d, 1H), 4.08 (s, 2H), 2.85-2.91 (m, 1H), 2.62-2.70 (m, 2H), 1.48-1.56 (m, 2H), 1.18-1.22 (m, 6H), 0.91 (t, 3H).

EXAMPLE 7

4-Isopropyl-N-(2-propylaminomethyl-indan-5-yl)-benzenesulfonamide

7.1 Methanesulfonic acid indan-2-yl ester

2-Indanol (20.00g, 149.5 mmol) and diisopropylethylamine (21.2 g, 164 mmol) was stirred in dichloromethane (300 mL) at 0°C. Methanesulfonyl chloride (18.78 g, 164

mmol) and dimethylaminopyridine (1.80 g) were added simultaneously and stirring continued at room temperature for 18 h. Solution was evaporated, partitioned between ethyl acetate and water, and the organic phase separated. This was washed with $NaHCO_3$ (sat) and with citric acid solution (5%) and dried over $MgSO_4$. The filtered solution was concentrated and the resultant solid recrystallized from isopropanol-EtOH (3:1) to give off-white crystals (24.6 g, 78%).

MS (ESI) m/z: 230.1 $[M+H]^+$

^{1}H-NMR (DMSO-d_6): δ [ppm] 7.28 (m, 2H), 7.18 (m, 2H), 5.46 (m, 1H), 3.34 (m, 2H), 3.15 (m, 2H).

^{13}C-NMR (DMSO-d_6): δ [ppm] 139.5 (s), 126.8 (d), 124.5 (d), 82.7 (d), 37.6 (t).

7.2 Indan-2-carbonitrile

A mixture of methanesulfonic acid indan-2-yl ester (18.65 g, 87.9 mmol) and tetraethylammonium cyanide (15.10 g) in acetonitrile (180 mL) was heated to 55°C for 5 hours, cooled and concentrated. The residue was partitioned between ethyl acetate and water, and the organic phase separated. This was dried over $MgSO_4$ and the filtered solution was concentrated and then separated by column chromatography (dichloromethane:ethyl acetate, 6:1 – 1:1) to give the product as a red solid (6.51 g, 52%).

MS (ESI) m/z: 144.1 $[M+H]^+$

^{1}H-NMR (DMSO-d_6): δ [ppm] 7.28 (m, 2H), 7.18 (m, 2H), 3.52 (m, 1H), 3.31 (m, 2H), 3.17 (m, 2H).

7.3 Indan-2-yl-methylamine

The indan-2-carbonitrile (1.60 g, 11.2 mmol) was dissolved in diethyl ether (50 mL) and $LiAlH_4$ (0.43 g, 11.3 mmol) added in portions at 0°C and the solution stirred for a further 3 h at 5°C. The reaction was quenched by the sequential addition of water, NaOH solution (10%) and water. The organic phase was separated, dried ($MgSO_4$), filtered and concentrated to give the title compound as a light brown oil (1.30 g, 79%).

MS (ESI) m/z: 148.1 $[M+H]^+$

^{1}H-NMR (DMSO-d_6): δ [ppm] 7.18 (m, 2H), 7.06 (m, 2H), 3.35 (m, 1H), 2.90 (m, 2H), 2.52 (m, 3H), 2.35 (m, 1H), 1.40 (br s, 1H).

7.4 N-Indan-2-ylmethyl-propionamide

A solution of indan-2-yl-methylamine (5.55 g, 37.7 mmol) and triethylamine (5.67 g, 56.0 mmol) in 100 mL THF was stirred at 5°C and propionic anhydride (5.15 g, 39.6 mmol) added dropwise. After the mixture was stirred for 18 h at room temperature, the solvent was removed and ethyl acetate / water were added. The organic layer was washed with water and dried over $MgSO_4$. The filtrate was concentrated to give a brown oil (8.79 g, 97%).
MS (ESI) m/z: 204.1 $[M+H]^+$

7.5 N-(5-Nitro-indan-2-ylmethyl)-propionamide

N-Indan-2-ylmethyl-propionamide (4.00 g, 19.7 mmol) was dissolved in nitromethane (60 mL) and added to a mixture of concentrated H_2SO_4 (19 mL), concentrated nitric acid (1.4 mL) and water (3.2 mL) cooled to 5°C. After stirring for 45 min, the reaction solution was poured into water, extracted with ethyl acetate and the organic phase separated and dried over $MgSO_4$. The filtered solution was concentrated to give a brown oil (4.67 g, 96%).
MS (ESI) m/z: 249.1 $[M+H]^+$

7.6 N-(5-Amino-indan-2-ylmethyl)-propionamide

The mixture of nitro compounds (4.67 g, 18.8 mmol) was dissolved in methanol (MeOH)(250 mL) and tin chloride (12.7 g, 56.3 mmol) added. The solution was heated to reflux for 3 h and then a second portion of tin chloride was added and reflux continued for a further 3 h. The solution was concentrated and the residue was partitioned between ethyl acetate and NaOH (2M), and the organic phase separated and dried over $MgSO_4$. The filtered solution was concentrated and the residue separated by preparative HPLC (20-90% MeOH) to give the 2 amino isomers. The product was obtained as a yellow oil (0.97 g, 24 %).
MS (ESI) m/z: 219.1 $[M+H]^+$
^{1}H-NMR (DMSO-d_6): δ [ppm] 7.75 (m, 1H), 6.76 (d, 2H), 6.37 (s, 1H), 6.31 (d, 1H), 3.08 (m, 2H), 2.42 (m, 2H), 2.07 (m, 2H), 0.97 (t, 3H).

7.7 N-[5-(4-Isopropyl-benzenesulfonylamino)-indan-2-ylmethyl]-propionamide

N-(5-Amino-indan-2-ylmethyl)-propionamide (0.93 g, 4.26 mmol) was dissolved in pyridine-dichloromethane (1:2, 60 mL) and cooled to 5°C. 4-Isopropylbenzenesulfonyl chloride (0.98 g, 4.48 mmol) was added and the solution stirred at 5°C for 3 h. Solution was evaporated, partitioned between ethyl acetate and water, and the organic phase separated and dried over $MgSO_4$. The filtered solution was concentrated to give the product as a brown oil (1.69 g, 99%).
MS (ESI) m/z: 401.1 $[M+H]^+$

7.8 4-Isopropyl-N-(2-propylaminomethyl-indan-5-yl)-benzenesulfonamide

N-[5-(4-Isopropyl-benzenesulfonylamino)-indan-2-ylmethyl]-propionamide (0.50 g, 1.25 mmol) was dissolved in 10 mL of THF and 4.2 mL (43.9 mmol) of a borane-THF complex was introduced dropwise. The resulting mixture was stirred at reflux for 1 h. The solution was cooled, 5 mL of 2 N HCl was added slowly, and the mixture was stirred at reflux for 2 h. The cooled solution was quenched with water, then NaOH (2N) and extracted with ethyl acetate. The organic phase was dried over $MgSO_4$, filtered, and the filtrate was evaporated in vacuo to give product as a white solid which was further purified by column chromatography using (dichloromethane-MeOH, 7-12%) to give an oil. The oil was dissolved in ethyl acetate and HCl (4M, dioxane) was added to give the product as a white solid (40 mg, 7%).
MS (ESI) m/z: 387.2 $[M+H]^+$
^{1}H-NMR (DMSO-d_6): δ [ppm] 7.69 (d, 2H), 7.40 (d, 2H), 7.03 (d, 1H), 6.94 (s, 1H), 6.84 (d, 1H), 2.90 (m, 3H), 2.81 (d, 2H), 2.70-2.55 (m, 5H), 1.55 (m, 2H), 0.85 (t, 3H).
^{13}C-NMR (DMSO-d_6): δ [ppm] 153.4 (s), 143.2 (s), 137.9 (s), 137.3 (s), 136.1 (s), 127.1 (d), 126.7 (d), 124.7 (d) 118.4 (d), 116.5 (d), 51.9 (t), 49.6 (t), 37.4 (d), 36.0 (t), 33.2 (d), 23.3 (q), 20.0 (t), 11.2 (q).

EXAMPLE 8

4-Isopropyl-N-(2-propylaminomethyl-indan-4-yl)-benzenesulfonamide

8.1 N-(4-Nitro-indan-2-ylmethyl)-propionamide

The title compound was prepared in an analogous manner as described above.
MS (ESI) m/z: 249.1 $[M+H]^+$

8.2 N-(4-Amino-indan-2-ylmethyl)-propionamide

The title compound was prepared in an analogous manner as described above. (0.55 g, 14%).

MS (ESI) m/z: 219.1 $[M+H]^+$

^{1}H-NMR (DMSO-d_6): δ [ppm] 7.82 (s, 1H), 6.85 (t, 1H), 6.37 (m, 2H), 4.72 (br s, 2H), 3.08 (m, 2H), 2.85 (m, 1H), 2.75 (m, 1H), 2.52 (m, 2H), 2.32 (m, 1H), 2.08 (m, 2H), 1.00 (t, 3H).

8.3 N-[4-(4-Isopropyl-benzenesulfonylamino)-indan-2-ylmethyl]-propionamide

N-(4-Amino-indan-2-ylmethyl)-propionamide (0.51 g, 2.34 mmol) was dissolved in pyridine-dichloromethane (1:2, 30 mL) and cooled to 5°C. 4-Isopropylbenzenesulfonyl chloride (0.54 g, 2.47 mmol) was added and the solution stirred at 5°C for 3 h. Solution was evaporated, partitioned between ethyl acetate and water, and the organic phase separated and dried over $MgSO_4$. The filtered solution was concentrated to give the product as a brown oil (0.95 g, 100%).

MS (ESI) m/z: 401.1 $[M+H]^+$

8.4 4-Isopropyl-N-(2-propylaminomethyl-indan-4-yl)-benzenesulfonamide

N-[4-(4-Isopropyl-benzenesulfonylamino)-indan-2-ylmethyl]-propionamide (0.30 g, 0.75 mmol) was dissolved in 10 mL of THF and 2.5 mL (26.1 mmol) of a borane-THF complex was introduced dropwise. The resulting mixture was stirred at reflux for 1 h. The solution was cooled, 3 mL of 2 N HCl was added slowly, and the mixture was stirred at reflux for 2 h. The cooled solution was quenched with water, then NaOH (2N) and extracted with ethyl acetate. The organic phase was dried over $MgSO_4$, filtered, and the filtrate was evaporated in vacuo to give product as a white solid which was further purified by column chromatography using (dichloromethane-MeOH, 7-12%) to give an oil. The oil was dissolved in ethyl acetate and HCl (4M, dioxane) was added to give the product as a white solid (140 mg, 43%).

MS (ESI) m/z: 387.1 $[M+H]^+$

^{1}H-NMR (DMSO-d_6): δ [ppm] 7.68 (d, 2H), 7.26 (d, 2H), 6.93 (d, 1H), 6.88 (s, 1H), 6.73 (d, 1H), 2.98 (m, 3H), 2.74 (m, 4H), 2.60 (m, 2H), 1.22 (d, 6H), 0.89 (t, 3H).

EXAMPLE 9

4-Isopropyl-N-(2-allylaminomethyl-indan-4-yl)-benzenesulfonamide

9.1 4-Isopropyl-N-(2-aminomethyl-indan-4-yl)-benzenesulfonamide

N-[4-(4-Isopropyl-benzenesulfonylamino)-indan-2-ylmethyl]-propionamide (1.00 g, 2.50 mmol, synthesized as described in Example 8) was dissolved in 25 mL of n-butanol and 10 mL of concentrated (6N) hydrochloric acid was added. The resulting mixture was stirred at reflux for 5 h. The solution was cooled, added to water and extracted with ethyl acetate. The aqueous solution was treated with NaOH (2N) and extracted with ethyl acetate. The organic phase was dried over $MgSO_4$, filtered, and the filtrate was evaporated in vacuo to give product as a white solid which was further purified by column chromatography using (dichloromethane-MeOH, 5-50%) to give a yellow oil (160 mg, 18%).

MS (ESI) m/z: 345.5 $[M+H]^+$

9.2 4-Isopropyl-N-(2-allylaminomethyl-indan-4-yl)-benzenesulfonamide

4-Isopropyl-N-(2-aminomethyl-indan-4-yl)-benzenesulfonamide (80 mg, 0.23 mmol), allyl bromide (30 mg, 0.23 mmol) and triethylamine (20 mg, 0.23 mmol) were dissolved in 2 mL of DMF and stirred at room temperature for 18 h. The solution was concentrated, water added and extracted with ethyl acetate. The organic phase was dried over $MgSO_4$, filtered, and the filtrate was evaporated in vacuo to give a residue which was purified by column chromatography using (dichloromethane-MeOH, 0-5%) to give a yellow oil (10 mg, 6%).

MS (ESI) m/z: 385.1 $[M+H]^+$

^{1}H-NMR (DMSO-d_6): δ [ppm] 7.69 (d, 2H), 7.25 (d, 2H), 6.93 (d, 1H), 6.88 (s, 1H), 6.73 (d, 1H), 5.92 (m, 1H), 5.20 (m, 2H), 3.36 (d, 2H), 2.96 (m, 3H), 2.74 (m, 2H), 2.60 (m, 2H), 1.55 (m, 2H), 1.25 (d, 6H).

EXAMPLE 10

4-Isopropyl-N-(1-propylaminomethyl-indan-5-yl)-benzenesulfonamide

10.1 N-(5-Bromo-indan-1-ylmethyl)-propionamide

A solution of (5-bromo-indan-1-yl)-methylamine (240 mg, 0.91 mmol) and triethylamine (363 mg, 3.60 mmol) in THF (5 mL) was stirred at 5°C and propionic anhydride (125 mg, 0.96 mmol) added dropwise. After the mixture was stirred for 18 h at room tem-

perature, the solvent was removed and ethyl acetate / water were added. The organic layer was washed with water and dried over $MgSO_4$. The filtrate was concentrated to give a white solid (250 mg, 97%).
MS (ESI) m/z: 401.1 $[M+H]^+$

10.2 N-[5-(4-Isopropyl-benzenesulfonylamino)-indan-1-ylmethyl]-propionamide

N-(5-Bromo-indan-1-ylmethyl)-propionamide (280 mg, 0.99 mmol) was dissolved in THF (5 mL) and tris(dibenzylideneacetone)dipalladium (45 mg, 0.05 mmol) and tri-t-butylphosphine (10 mg, 0.05 mmol) added under N_2 atmosphere. A solution of 4-isopropylbenzenesulfonyl chloride (198 mg, 0.99 mmol) and NaH (52 mg, 50% in oil) was added and the solution stirred at 150°C for 1.5 h in a microwave.

Solution was evaporated, partitioned between ethyl acetate and water, and the organic phase separated and dried over $MgSO_4$. The filtered solution was concentrated and separated by preparative HPLC (20-95% MeOH) to give the 2 isomeric amino products and a mixed fraction (92 mg, 22%). The product was obtained as a colorless oil (21 mg, 5%).

10.3 4-Isopropyl-N-(1-propylaminomethyl-indan-5-yl)-benzenesulfonamide

The borane reduction was carried out by the aforementioned procedure. The final product was obtained as a white solid.
MS (ESI) m/z: 387.4 $[M+H]^+$
^{1}H-NMR (DMSO-d_6): δ [ppm] 7.69 (d, 2H), 7.26 (d, 2H), 7.07 (d, 1H), 6.98 (s, 1H), 6.80 (d, 1H), 3.30 (m, 1H), 2.90 (m, 2H), 2.88-2.65 (m, 2H), 2.65 (m, 4H), 2.28 (m, 1H), 1.81 (m, 1H), 1.55 (m, 2H), 1.25 (d, 6H), 0.88 (t, 3H).

EXAMPLE 11

4-Isopropyl-N-(2-propyl-2,3,4,9-tetrahydro-1H-beta-carboline-7-yl)-benzenesulfonamide x 0.3 Acetate

11.1 2-Propyl-2,3,4,9-tetrahydro-1H-beta-carboline

2,3,4,9-Tetrahydro-1H-beta-carbolin (2.5 g, 14.5 mmol) and propionaldehyde (1.06 ml, 14.5 mmol) were dissolved in THF (100 ml). Acetic acid (1.25 ml, 21.8 mmol) and so-

dium trisacetoxyborohydride (4.615 g, 21.8 mmol) were sequentially added to the reaction mixture and stirred for 1 h at room temperature. The reaction mixture was concentrated and the residue was dissolved in H_2O (10 ml) and ethyl acetate (50 ml). The pH was adjusted to 9 by adding NaOH (2M). The organic phase was separated, dried over magnesium sulfate, filtered, and evaporated to dryness to yield the title product (2.84 g, 91 %).

ESI-MS: 215.1 $[M+H]^+$

11.2 1-(2-Propyl-1,2,3,4-tetrahydro-beta-carbolin-9-yl)-ethanone

To 2-propyl-2,3,4,9-tetrahydro-1H-beta-carboline (1.46 g, 6.81 mmol) in N,N-dimethylformamide (80 ml) was added sodiumhydride (50% in oil) (392 mg, 8.17 mmol). After 15 minutes, acetyl chloride (0.58 ml, 8.17 mmol) was added to the reaction mixtrure and stirring continued at room temperature overnight. The solvent was removed in vacuo. The residue was diluted with water (50 ml) and extracted three times with ethyl acetate. The combined organic phases were dried over magnesium sulfate, filtered, and evaporated to dryness to yield 2.4 g of crude product. The crude product was purified with silica gel chromatography with cyclohexane/ethyl acetate (80:20) as eluent to give the title product (1.15 g, 66 % yield).

ESI-MS: 257.1 $[M+H]^+$

11.3 1-(7-Nitro-2-propyl-1,2,3,4-tetrahydro-beta-carbolin-9-yl)-ethanone

To 1-(2-propyl-1,2,3,4-tetrahydro-beta-carbolin-9-yl)-ethanone (1.05 g, 4.1 mmol) in conc. H_2SO_4 was added KNO_3 (435 mg, 4.3 mmol) in small portions at 0°C. The reaction mixture was allowed to warm up to room temperature and stirred for an additional 30 minutes. The reaction mixture was poured onto 250 ml of ice and extracted once with ethyl acetate. The aqueous phase was made alkaline and extracted twice with ethyl acetate. The combined organic phases were dried over magnesium sulfate, filtered, and evaporated to dryness to yield 1.2 g of crude product (70 % purity).

ESI-MS: 303.1 $[M+H]^+$

11.4 2-Propyl-2,3,4,9-tetrahydro-1H-beta-carbolin-7-ylamine

To 1-(7-nitro-2-propyl-1,2,3,4-tetrahydro-beta-carbolin-9-yl)-ethanone (1.2 g, 2.79 mmol, 70 % purity) in methanol (50 ml) was added tin dichloride (5.03 g, 22.3 mmol)

and the reaction mixture was refluxed for 3 h. The solvent was removed, the residue treated with 1 N aqueous sodium hydroxide and ethyl acetate, filtered through celite, the phases separated and the aqueous phase extracted twice with ethyl acetate. The combined organic phases were dried over magnesium sulfate, filtered, and evaporated to dryness to yield 700 mg of crude product. The crude product was purified with silica gel chromatography with ethyl acetate/methanol (95:5) as eluent to give the desired product (300 mg, 45 % yield).

ESI-MS: 230.1 $[M+H]^+$

^{1}H-NMR ($CDCl_3$, 400 MHz): δ [ppm] 7.3 (d, 1H), 6.6 (s, 1H), 6.5 (d, 1H), 3.6 (m, 2H), 2.8 (m, 2H), 2.7 (m, 2H), 2.5 (m, 2H), 1.6 (m, 2H), 0.9 (m, 3H).

11.5 4-Isopropyl-N-(2-propyl-2,3,4,9-tetrahydro-1H-beta-carbolin-7-yl)-benzenesulfonamide x 0.3 Acetate

2-Propyl-2,3,4,9-tetrahydro-1H-beta-carbolin-7-ylamine (100 mg, 0.41 mmol) and 4-isopropyl-phenyl-sulfonyl chloride (91 mg, 0.41 mmol) were dissolved in tetrahydrofuran (15 ml). Triethylamine (0.17 ml, 1.24 mmol) was added and the reaction mixture stirred over night at room temperature. The solvent was evaporated under reduced pressure, the residue treated with H_20 and extracted twice with ethyl acetate (50 ml). The organic layer was dried over magnesium sulfate, filtered, and the solvent evaporated under reduced pressure to give the crude product. The crude product was purified via preparative HPLC (DeltaPak, 40 mm diameter) with acetonitrile/water/0.01% acetic acid as eluent to give the desired product (40 mg, 22 % yield).

ESI-MS: 412.1 $[M+H]^+$

^{1}H-NMR (DMSO-d_6, 400 MHz): δ [ppm] 10.6 (bs, 1H), 9.8 (bs, 1H), 7.6 (d, 2H), 7.4 (d, 2H), 7.2 (d, 1H), 7.1 (s, 1H), 6.7 (dd, 1H), 3.5 (bs, 2 H), 2.9 (sept, 6H), 2.7 (m, 2H), 2.6 (m, 2H), 2.5 (m, 2H), 1.9 (bs, 1H), 1.5 (m, 2H), 1.2 (d, 6H), 0.9 (t, 3H).

^{13}C-NMR (DMSO-d_6, 100 MHz): δ [ppm] 172.1 (s), 153.1 (s), 137.3 (s), 135.8 (s), 130.8 (s), 126.9 (d), 126.8 (d), 124.0 (s), 117.4 (d), 113.4 (d), 106.4 (s), 104.1 (d), 59.0 (t), 50.7 (t), 49.9 (t), 33.2 (d), 23.4 (q), 21.0 (t), 19.9 (t), 11.7 (q).

EXAMPLE 12

4-Isopropyl-N-(2-propyl-2,3,4,4a,9,9a-hexahydro-1H-beta-carbolin-7-yl)-benzenesulfonamide

To 4-isopropyl-N-(2-propyl-2,3,4,9-tetrahydro-1H-beta-carbolin-7-yl)-benzenesulfonamide (25 mg, 0.05 mmol) in trifluoro-acetic acid (5 ml) was added sodium cyanoborohydride (15 mg, 0.24 mmol). After 15 min of stirring at room temperature the reaction mixture was made alkaline and extracted twice with ethyl acetate. The combined organic phases were dried over magnesium sulfate, filtered, and evaporated to dryness to yield the crude product. Trifluoroacetic acid was added and the product lyophilised (6.4 mg, 24 % yield).

ESI-MS: 414.1 $[M+H]^+$

EXAMPLE 13

N-(6,8-Dichloro-2-propyl-2,3,3a,4,5,9b-hexahydro-1H-benzo[e]isoindol-7-yl)-4-isopropyl-benzenesulfonamide, hydrochloride

13.1 6,8-Dichloro-2-propyl-2,3,3a,4,5,9b-hexahydro-1H-benzo[e]isoindol-7-yl-amine

6,8-Dichloro-2,3,3a,4,5,9b-hexahydro-1H-benzo[e]isoindol-7-ylamine (275 mg, 1.07 mmol) and propionaldehyde (81 µl, 1.12 mmol) were dissolved in tetrahydrofuran (25 ml). Acetic acid (90 µl, 1.6 mmol) and sodium trisacetoxyborohydride (340 mg, 1.6 mmol) were sequentially added to the reaction mixture and stirred for 1 hour at room temperature. The reaction mixture was concentrated and the residue was dissolved in a 1 M NaOH solution (20 ml) and ethyl acetate (20 ml). The aqueous phase was extracted once more with ethyl acetate. The combined organic phases were dried over magnesium sulfate, filtered, and evaporated to dryness to yield the pure product (295 mg, 92 %).

ESI-MS: 299.05 $[M+H]^+$

^{1}H-NMR (DMSO-d_6, 400 MHz): δ [ppm] 7.05 (s, 1H), 5.2 (s, 2H), 3.25 (m, 1H), 3.1 (m, 1H), 3.0 (m, 1H), 2.65 (m, 1H), 2.6 (m, 1H), 2.45 (m, 1H), 2.3 (m, 2H), 2.15 (m, 1H), 2.05 (m, 1H), 1.65 (m, 1H), 1.5 (m, 1H), 1.45 (m, 2H), 0.85 (m, 1H).

13.2 N-(6,8-Dichloro-2-propyl-2,3,3a,4,5,9b-hexahydro-1H-benzo[e]isoindol-7-yl)-4-isopropyl-benzenesulfonamide, hydrochloride

6,8-Dichloro-2-propyl-2,3,3a,4,5,9b-hexahydro-1H-benzo[e]isoindol-7-yl-amine (100 mg, 0.33 mmol) and polystyrene-bound DMAP (4-(N,N-dimethylamino)pyridine) (loading 1.06 mmol/g, 32 mg) were treated with tetrahydrofuran (10 ml). Subsequently isopropylphenylsulfonyl chloride (73 mg, 0.33 mmol) was added and stirred for 5 hours at 150 °C in the microwave (CEM). Another portion of isopropylphenylsulfonyl chloride

and polystyrene-bound DMAP was added and stirring continued for 7 hours at 160 °C in the microwave. The solvent was evaporated under reduced pressure, the residue treated with water (30 ml) and twice extracted with ethyl acetate (2 x 30 ml). The organic layer was dried over magnesium sulfate, filtered, and the solvent evaporated under reduced pressure to give an oil (470 mg). The crude product was purified via HPLC chromatography. Fractions containing the product were combined and the solvent evaporated. The residue was converted into the hydrochloride salt (4 mg, 2 %).
ESI-MS: 481.15/483.15 $[M+H]^+$
^{1}H-NMR (DMSO-d_6, 400 MHz): δ [ppm] 10.4 (bs, 1H), 9.95 (s, 1H), 7.7 (d, 2H), 7.45 (m, 3H), 4.1 (m, 0.5H), 3.85 (m, 0.5H), 3.7 (m, 0.5H), 3.55 (m, 0.5H), 3.45 (m, 1H), 3.1 (m, 2H), 3.0 (sept, 1H), 2.95-2.55 (m, 5H), 1.85 (m, 1H), 1.65 (m, 3H), 1.2 (d, 6H), 0.9 (t, 3H).

EXAMPLE 14

4-Isopropyl-N-(2-propyl-2,3,3a,4,5,9b-hexahydro-1H-benzo[e]isoindol-7-yl)-benzenesulfonamide, hydrochloride

14.1 2-Propyl-2,3,3a,4,5,9b-hexahydro-1H-benzo[e]isoindol-7-yl-amine

A mixture of 6,8-dichloro-2-propyl-2,3,3a,4,5,9b-hexahydro-1H-benzo[e]isoindol-7-yl-amine (800 mg, 2.67 mmol) and 20 % palladiumhydroxide on carbon in methanol (50 ml) was hydrogenated over night at room temperature. The catalyst was filtered, and the solvent was removed under vaccum to yield the crude product. The residue was dissolved in ethyl acetate and 1 M NaOH solution. The aqueous phase was once more extracted with ethyl acetate. The combined organic layers were dried over magnesium sulfate, filtered, and the solvent evaporated under reduced pressure to give the pure product (530 mg, 86 %).
ESI-MS: 231.15 $[M+H]^+$

14.2 4-Isopropyl-N-(2-propyl-2,3,3a,4,5,9b-hexahydro-1H-benzo[e]isoindol-7-yl)-benzenesulfonamide, hydrochloride

2-Propyl-2,3,3a,4,5,9b-hexahydro-1H-benzo[e]isoindol-7-yl-amine (40 mg, 0.17 mmol) and 4-isopropylphenylsulfonyl chloride (38 mg, 0.17 mmol) were dissolved in tetrahydrofuran (20 ml). Triethylamine (70 µl, 0.52 mmol) was added and the reaction mixture stirred over night at room temperature. The solvent was evaporated under reduced pressure, the residue treated with water (30 ml) and ethyl acetate (30 ml). The aqueous

phase was once more extracted with ethyl acetate and the combined organic phases were dried over magnesium sulfate, filtered, and the solvent evaporated under reduced pressure to give the crude product (120 mg). The crude product was purified via silica gel chromatography with cyclohexane/ethyl acetate (gradient 0 – 100 %). Fractions containing the product were combined and the solvent evaporated to yield the pure product which was converted into its hydrochoride salt (15 mg, 18 %).

ESI-MS: 413.2 $[M+H]^+$

^{1}H-NMR (DMSO-d_6, 400 MHz): δ [ppm] 10.4 (bs, 1H), 10.2 (s, 1H), 7.7 (d, 2H), 7.45 (d, 2H), 7.05 (d, 1H), 6.95 (d, 1H), 6.9 (m, 2H), 3.9 (m, 1H), 3.4 (m, 2H), 3.05 (m, 2H), 2.95 (sept, 1H), 2.8 (m, 1H), 2.6 (m, 4H), 1.65 (m, 4H), 1.2 (d, 6H), 0.9 (t, 3H).

EXAMPLE 15

N-(2-Propyl-2,3,3a,4,5,9b-hexahydro-1H-benzo[e]isoindol-7-yl)-4-(2,2,2-trifluoro-1-methyl-ethyl)-benzenesulfonamide, hydrochloride

Following a procedure analogous to that described in example 14 the title compound was obtained.

ESI-MS: 467.25 $[M+H]^+$

^{1}H-NMR (DMSO-d_6, 400 MHz): δ [ppm] 10.7 (bs, 1H), 10.3 (m, 1H), 7.8 (d, 2H), 7.6 (d, 2H), 7.05 (m, 1H), 6.95 (d, 1H), 6.9 (m, 1H), 3.9 (m, 2H), 3.4 (m, 2H), 3.05 (m, 2H), 2.8 (m, 1H), 2.6 (m, 4H), 1.7 (m, 4H), 1.45 (m, 3H), 0.9 (m, 3H).

EXAMPLE 16

N-(2-Propyl-2,3,3a,4,5,9b-hexahydro-1H-benzo[e]isoindol-7-yl)-4-trifluoromethoxy-benzenesulfonamide, hydrochloride

Following a procedure analogous to that described in example 14 the title compound was obtained.

ESI-MS: 455.15 $[M+H]^+$

^{1}H-NMR (DMSO-d_6, 400 MHz): δ [ppm] 10.4 (s, 1H), 10.3 (bs, 1H), 7.9 (d, 2H), 7.6 (d, 2H), 7.05 (d, 1H), 6.9 (m, 3H), 3.9 (m, 1H), 3.45 (m, 2H), 3.05 (m, 2H), 2.85 (m, 1H), 2.6 (m, 4H), 1.65 (m, 4H), 0.9 (m, 3H).

EXAMPLE 17

4-Difluoromethoxy-N-(2-propyl-2,3,3a,4,5,9b-hexahydro-1H-benzo[e]isoindol-7-yl)-benzenesulfonamide, hydrochloride

Following a procedure analogous to that described in example 14 the title compound was obtained.

ESI-MS: 437.15 $[M+H]^+$

^{1}H-NMR (DMSO-d_6, 400 MHz): δ [ppm] 10.65 (bs, 1H), 10.3 (s, 1H), 7.85 (d, 2H), 7.4 (t, J = 70 Hz, 1H), 7.35 (d, 2H), 7.05 (d, 1H), 6.95 (m, 3H), 3.85 (m, 1H), 3.45 (m, 2H), 3.05 (m, 2H), 2.8 (m, 1H), 2.6 (m, 4H), 1.7 (m, 4H), 0.9 (m, 3H).

III. Examples of galenic administration forms

A) Tablets

Tablets of the following composition are pressed on a tablet press in the customary manner:

40 mg of substance from Example 8
120 mg of corn starch
13.5 mg of gelatin
45 mg of lactose
2.25 mg of Aerosil® (chemically pure silicic acid in submicroscopically fine dispersion)
6.75 mg of potato starch (as a 6% paste)

B) Sugar-coated tablets

20 mg of substance from Example 8
60 mg of core composition
70 mg of saccharification composition

The core composition consists of 9 parts of corn starch, 3 parts of lactose and 1 part of 60:40 vinylpyrrolidone/vinyl acetate copolymer. The saccharification composition consists of 5 parts of cane sugar, 2 parts of corn starch, 2 parts of calcium carbonate and 1 part of talc. The sugar-coated tablets which had been prepared in this way are subsequently provided with a gastric juice-resistant coating.

IV. Biological investigations

Receptor binding studies:

The substance to be tested was either dissolved in methanol/Chremophor® (BASF-AG) or in dimethyl sulfoxide and then diluted with water to the desired concentration.

Dopamine D_3 receptor:

The assay mixture (0.250 ml) was composed of membranes derived from ~ 10^6 HEK-293 cells possessing stably expressed human dopamine D_3 receptors, 0.1 nM [^{125}I]-iodosulpride and incubation buffer (total binding) or, in addition, test substance (inhibition curve) or 1µM spiperone (nonspecific binding). Each assay mixture was run in triplicate.

The incubation buffer contained 50 mM tris, 120 mM NaCl, 5 mM KCl, 2 mM $CaCl_2$, 2 mM $MgCl_2$ and 0.1% bovine serum albumin, 10 µM quinolone and 0.1% ascorbic acid (prepared fresh daily). The buffer was adjusted to pH 7.4 with HCl.

Dopamine D_{2L} receptor:

The assay mixture (1 ml) was composed of membranes from ~ 10^6 HEK-293 cells possessing stably expressed human dopamine D_{2L} receptors (long isoform) and 0.01 nM [^{125}I] iodospiperone and incubation buffer (total binding) or, in addition, test substance (inhibition curve) or 1µM haloperidol (nonspecific binding). Each assay mixture was run in triplicate.

The incubation buffer contained 50 mM tris, 120 mM NaCl, 5 mM KCl, 2 mM $CaCl_2$, 2 mM $MgCl_2$ and 0.1% bovine serum albumin. The buffer was adjusted to pH 7.4 with HCl.

Measurement and analysis:

After having been incubated at 25°C for 60 minutes, the assay mixtures were filtered through a Whatman GF/B glass fiber filter under vacuum using a cell collecting device. The filters were transferred to scintillation viols using a filter transfer system. After 4 ml of Ultima Gold® (Packard) have been added, the samples were shaken for one hour and the radioactivity was then counted in a Beta-Counter (Packard, Tricarb 2000 or 2200CA). The cpm values were converted into dpm using a standard quench series and the program belonging to the instrument.

The inhibition curves were analyzed by means of iterative nonlinear regression analysis using the Statistical Analysis System (SAS) which is similar to the "LIGAND" program described by Munson and Rodbard.

The results of the receptor binding studies are expressed as receptor binding constants $K_i(D_2)$ and $K_i(D_3)$, respectively, as herein before described, and given in table 1.

In these tests, the compounds according to the invention exhibit very good affinities for the D_3 receptor (< 10 nM, frequently < 5 nM) and bind selectively to the D_3 receptor.

The results of the binding tests are given in table 1.

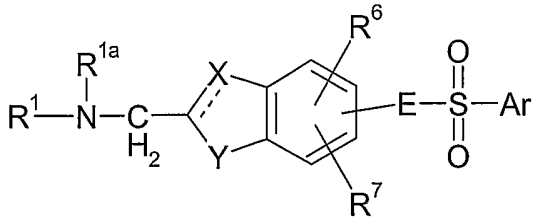
Table 1:

Example	K_i(D3)* [nM]	K_i(D2)* [nM]	K_i(D2)*/ K_i(D3)*
1	5.8	225	39
2	9.4	517	55
3	55	55	23
4	63.4	7,640	120
5	1.72	119	69
7	7.4	398	54
9	4.3	232	54
10	1.32	58.6	45
12	5.3	137	26
13	10.1		5
14	0.5		28
15	1.8		36
16	3.6		66
17	3.3		19

* Receptor binding constants obtained according to the assays described herein before

We claim:

1. An aminomethyl substituted bicyclic aromatic compound of the formula I



(I)

wherein

Ar is a cyclic radical selected from the group consisting of phenyl, a 5- or 6-membered C-bound heteroaromatic radical comprising as ring members 1, 2 or 3 heteroatoms which are, independently of each other, selected from O, S and N, and a phenyl ring fused to a saturated or unsaturated 5- or 6-membered carbocyclic or heterocyclic ring, where the heterocyclic ring comprises as ring members 1, 2 or 3 heteroatoms selected from N, O and S and/or 1, 2 or 3 heteroatom-containing groups each independently selected from NR^8, where R^8 is H, C_1-C_4-alkyl, fluorinated C_1-C_4-alkyl, C_1-C_4-alkylcarbonyl or fluorinated C_1-C_4-alkylcarbonyl, and where the cyclic radical Ar may carry 1, 2 or 3 substituents R^a;

R^a is halogen, C_1-C_6-alkyl, fluorinated C_1-C_6-alkyl, C_1-C_6-hydroxyalkyl, C_1-C_6-alkoxy-C_1-C_6-alkyl, C_2-C_6-alkenyl, fluorinated C_2-C_6-alkenyl, C_3-C_6-cycloalkyl, fluorinated C_3-C_6-cycloalkyl, C_1-C_6-alkoxy, C_1-C_6-hydroxyalkoxy, C_1-C_6-alkoxy-C_1-C_6-alkoxy, fluorinated C_1-C_6-alkoxy, C_1-C_6-alkylthio, fluorinated C_1-C_6-alkylthio, C_1-C_6-alkylsulfinyl, fluorinated C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, fluorinated C_1-C_6-alkylsulfonyl, CN, nitro, C_1-C_6-alkylcarbonyl, fluorinated C_1-C_6-alkylcarbonyl, C_1-C_6-alkylcarbonylamino, fluorinated C_1-C_6-alkylcarbonylamino, C_1-C_6-alkylcarbonyloxy, fluorinated C_1-C_6-alkylcarbonyloxy, C_1-C_6-alkoxycarbonyl, carboxy, NH-C(O)-NR^4R^5, NR^4R^5, NR^4R^5-C_1-C_6-alkylene, O-NR^4R^5, C(O)NR^4R^5, $SO_2NR^4R^5$, phenylsulfonyl, benzyloxy, phenyl, phenoxy, or a saturated or unsaturated 3- to 7-membered heterocyclic ring comprising as ring members 1, 2, 3 or 4 heteroatoms selected from N, O and S and/or 1, 2 or 3 heteroatom-containing groups selected from NR^9, where R^9 has one of the meanings given for R^8, SO, SO_2 and CO, and where the 5 last-mentioned radicals R^a may carry 1, 2, 3 or 4 substituents selected from hydroxy and the radicals R^a;

X is a covalent bond or N-R^2, CHR^2, CHR^2CH_2, N or C-R^2;

Y is N-R^{2a}, CHR^{2a}, $CHR^{2a}CH_2$ or $CHR^{2a}CH_2CH_2$;

---- is a single bond or a double bond;

E is CH_2 or NR^3;

R^1 is H, C_1-C_4-alkyl, C_3-C_4-cycloalkyl, C_3-C_4-cycloalkylmethyl, C_3-C_4-alkenyl, fluorinated C_1-C_4-alkyl, fluorinated C_3-C_4-cycloalkyl, fluorinated C_3-C_4-cycloalkylmethyl, fluorinated C_3-C_4-alkenyl, formyl or C_1-C_3-alkylcarbonyl;

R^{1a} is H, C_1-C_4-alkyl, C_3-C_4-cycloalkyl, C_3-C_4-alkenyl, fluorinated C_1-C_4-alkyl, fluorinated C_3-C_4-cycloalkyl, fluorinated C_3-C_4-alkenyl,

R^2 and R^{2a} each independently are H, CH_3, CH_2F, CHF_2 or CF_3 or R^{1a} and R^2 or R^{1a} and R^{2a} together are $(CH_2)_n$ with n being 1, 2 or 3;

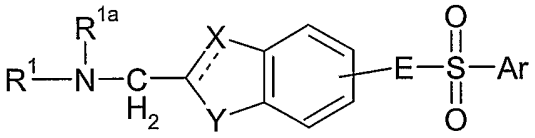
R^3 is H or C_1-C_4-alkyl;

R^4 and R^5 independently of each other are H, C_1-C_4-alkyl, fluorinated C_1-C_4-alkyl or C_1-C_4-alkoxy or may form, together with N, a 4-, 5- or 6-membered saturated or unsaturated ring;

R^6 and R^7 independently of each other are H or halogen;

and the physiologically tolerated acid addition salts thereof.

2. The compound as claimed in claim 1, of the formula I.1



(I.1)

wherein

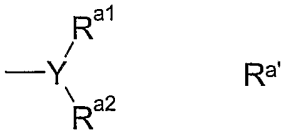
Ar is phenyl or an aromatic 5- or 6-membered C-bound heteroaromatic radical, comprising 1 nitrogen atom as ring member and 0, 1, 2 or 3 further heteroatoms, independently of each other, selected from O, S and N, as ring members, wherein Ar may carry 1, 2 or 3 radicals R^a which are, independently of each other, selected from the group consisting of halogen, C_1-C_6-alkyl, C_3-C_6-cycloalkyl, C_1-C_6-alkoxy, fluorinated C_1-C_6-alkyl, fluorinated C_3-C_6-cycloalkyl, fluorinated C_1-C_6-alkoxy, NR^4R^5, 1-aziridinyl, azetidin-1-yl, pyrrolidin-1-yl or piperidin-1-yl, wherein the last four mentioned radicals may be fluorinated, a phenyl group and an aromatic 5- or 6-membered C-bound heteroaromatic radical, comprising 1

nitrogen atom as ring member and 0, 1, 2 or 3 further heteroatoms, independently of each other, selected from O, S and N, wherein the last two mentioned radicals may carry 1, 2, 3 or 4 radicals selected from Halogen and the radicals R^a;

R^4 and R^5, independently of each other, are selected from H, C_1-C_2-alkyl and fluorinated C_1-C_2-alkyl; and

X, Y, ---- , E, R^1, R^{1a}, R^2, R^{2a} and R^3 are as defined in claim 1

3. The compound as claimed in any of the preceding claims, wherein Ar carries one radical R^a of the formula $R^{a'}$



$R^{a'}$

wherein

Y is N, CH or CF,

R^{a1} and R^{a2} are independently of each other selected from C_1-C_2-alkyl, fluorinated C_1-C_2-alkyl, provided for Y being CH or CF one of the radicals R^{a1} or R^{a2} may also be hydrogen or fluorine, or

R^{a1} and R^{a2} together form a radical $(CH_2)_m$ wherein 1 or 2 of the hydrogen atoms may be replaced by fluorine, hydroxy, oxo, C_1-C_2-alkyl or C_1-C_2-alkoxy, wherein one CH_2 moiety may be replaced by O, S, S=O, SO_2 or N-R^c, R^c being hydrogen or C_1-C_2-alkyl and wherein m is 2, 3, 4, 5 or 6;

4. The compound as claimed in claim 3, wherein the radical $R^{a'}$ is selected from isopropyl, (R)-1-fluoroethyl, (S)-1-fluoroethyl, 2-fluoroethyl, 1,1-difluoroethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, (R)-1-fluoropropyl, (S)-1-fluoropropyl, (R)-2-fluoropropyl, (S)-2-fluoropropyl, 3-fluoropropyl, 1,1-difluoropropyl, 2,2-difluoropropyl, 3,3-difluoropropyl, 3,3,3-trifluoropropyl, (R)-2-fluoro-1-methylethyl, (S)-2-fluoro-1-methylethyl, (R)-2,2-difluoro-1-methylethyl, (S)-2,2-difluoro-1-methylethyl, (R)-1,2-difluoro-1-methylethyl, (S)-1,2-difluoro-1-methylethyl, (R)-2,2,2-trifluoro-1-methylethyl, (S)-2,2,2-trifluoro-1-methylethyl, 2-fluoro-1-(fluoromethyl)ethyl, 1-(difluoromethyl)-2,2-difluoroethyl, cyclopropyl, cyclobutyl, 1-fluorocyclopropyl, (R)- and (S)-2,2-difluorocyclopropyl, (R)- and (S)-2-fluorocyclopropyl.

5. The compound as claimed in claim 3, wherein the radical $R^{a'}$ is selected from 4-morpholinyl, 4-thiomorpholinyl, 4-(1,1-dioxo)thiomorpholinyl, piperazin-1-yl, 4-methylpiperazin-1-yl, azetidin-1-yl, 2-methylazetidin-1-yl, (S)-2-methylazetidin-1-yl, (R)-2-methylazetidin-1-yl, 3-fluoroazetidin-1-yl, 3-methoxyazetidin-1-yl, 3-hydroxyazetidin-1-yl, pyrrolidin-1-yl, pyrrolidin-2-yl, (S)-pyrrolidin-2-yl, (R)-pyrrolidin-2-yl, pyrrolidin-3-yl, (S)-

pyrrolidin-3-yl, (R)-pyrrolidin-3-yl, 2-fluoropyrrolidin-1-yl, (S)-2-fluoropyrrolidin-1-yl, (R)-2-fluoropyrrolidin-1-yl, 3-fluoropyrrolidin-1-yl, (S)-3-fluoropyrrolidin-1-yl, (R)-3-fluoropyrrolidin-1-yl, 2,2-difluoropyrrolidin-1-yl, 3,3-difluoropyrrolidin-1-yl, 2-methylpyrrolidin-1-yl, (S)-2-methylpyrrolidin-1-yl, (R)-2-methylpyrrolidin-1-yl, 3-methylpyrrolidin-1-yl, (S)-3-methylpyrrolidin-1-yl, (R)-3-methylpyrrolidin-1-yl, 1-methylpyrrolidin-2-yl, (S)-1-methylpyrrolidin-2-yl, (R)-1-methylpyrrolidin-2-yl, 1-methylpyrrolidin-3-yl, (S)-1-methylpyrrolidin-3-yl, (R)-1-methylpyrrolidin-3-yl, 2,2-dimethylpyrrolidin-1-yl, 3,3-dimethylpyrrolidin-1-yl, 2-trifluoromethylpyrrolidin-1-yl, (S)-2-trifluoromethylpyrrolidin-1-yl, (R)-2-trifluoromethylpyrrolidin-1-yl, 3-trifluoromethylpyrrolidin-1-yl, (S)-3-trifluoromethylpyrrolidin-1-yl, (R)-3-trifluoromethylpyrrolidin-1-yl, 2-oxopyrrolidin-1-yl, 2-oxo-oxazolidin-3-yl, piperidin-1-yl, 2-methylpiperidin-1-yl, (S)-2-methylpiperidin-1-yl and (R)-2-methylpiperidin-1-yl.

6. The compound as claimed in any of the claims 3 to 5, wherein the radical $R^{a'}$ carries 1, 2, 3 or 4 fluorine atoms.

7. The compound as claimed in any of the claims 1 or 2, where R^a is selected from OCH_2F, $OCHF_2$ and OCF_3.

8. The compound as claimed in claim 1, wherein Ar carries one radical R^a, which is selected from 5- or 6-membered heteroaromatic radicals having as ring members 1 heteroatom selected from O, S and N and which may further have 1, 2 or 3 nitrogen atoms as ring members, and wherein the 5- or 6-membered heteroaromatic radical may carry 1, 2 or 3 substituents selected from halogen, NO_2, NH_2, OH, CN, C_1-C_6-alkyl, C_3-C_6-cycloalkyl, C_1-C_6-alkoxy, fluorinated C_1-C_6-alkyl, fluorinated C_3-C_6-cycloalkyl, fluorinated C_1-C_6-alkoxy, C_1-C_6-hydroxyalkyl, C_1-C_4-alkoxy-C_2-C_4-alkyl, C_1-C_6-hydroxyalkoxy, C_1-C_4-alkoxy-C_2-C_4-alkoxy, C_1-C_6-alkylcarbonyl, C_1-C_6-alkylamino, di-C_1-C_6-alkylamino, C_1-C_6-alkylaminocarbonyl, di-C_1-C_6-alkylaminocarbonyl, fluorinated C_1-C_6-alkylcarbonyl, C_1-C_6-alkylcarbonylamino, fluorinated C_1-C_6-alkylcarbonylamino, C_1-C_6-alkylcarbonyloxy, fluorinated C_1-C_6-alkylcarbonyloxy, C_1-C_6-alkoxycarbonyl, C_1-C_6-alkylthio, fluorinated C_1-C_6-alkylthio, C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, fluorinated C_1-C_6-alkylsulfinyl and fluorinated C_1-C_6-alkylsulfonyl.

9. The compound as claimed in claim 8, wherein Ar carries one heteroaromatic radical R^a, which is selected from furanyl, thienyl, pyrrolyl, pyrazolyl, imidazolyl, oxazolyl, isoxazolyl, 1,3,4-thiadiazolyl, 1,2,4-triazolyl, 1,2,3-triazolyl and tetrazolyl, where the heteroaromatic radical may be unsubstituted or may carry 1 to 3 substituents selected from halogen, C_1-C_4-alkyl, C_1-C_4-alkoxy, fluorinated C_1-C_4-alkyl and fluorinated C_1-C_4-alkoxy.

10. The compound as claimed in any of the preceding claims, wherein Ar is phenyl.

11. The compound as claimed in any of the preceding claims, wherein Ar is phenyl that carries a radical R^a in the 4-position of the phenyl ring.

12. The compounds as claimed in any of claims 1 to 11, wherein E is NR^3.

13. The compounds as claimed in any of claims 1 to 11, wherein E is CH_2.

14. The compound as claimed in any of claims 1 to 13, wherein X is CH_2 and Y is CH_2 or CH_2CH_2.

15. The compound as claimed in any of claims 1 to 13, wherein Y is NH and X is CH or N.

16. The compound as claimed in any of claims 1 to 13, wherein Y is CH_2CH_2 or $CH_2CH_2CH_2$ and X is a covalent bond.

17. The compound as claimed in any of claims 1 to 13, wherein X is NH and Y is CH_2.

18. The compound as claimed in any of the preceding claims, wherein R^1 is C_2-C_4-alkyl, C_3-C_4-cycloalkyl, C_3-C_4-cycloalkylmethyl, C_3-C_4-alkenyl, fluorinated C_2-C_4-alkyl, fluorinated C_3-C_4-cycloalkyl or fluorinated C_3-C_4-alkenyl.

19. The compound as claimed in any of claims 1 to 18, wherein R^{1a} is hydrogen.

20. The compound as claimed in any of claims 1 to 18, wherein R^{1a} is C_2-C_4-alkyl, C_3-C_4-cycloalkyl, C_3-C_4-alkenyl, fluorinated C_2-C_4-alkyl, fluorinated C_3-C_4-cycloalkyl or fluorinated C_3-C_4-alkenyl.

21. The compound as claimed in any of claims 1 to 18, wherein X is CHR^2 or CHR^2CH_2 and R^{1a} and R^2 together are $(CH_2)_n$ with n being 1, 2 or 3.

22. The compound as claimed in any of claims 1 to 18, wherein Y is CHR^{2a}, $CHR^{2a}CH_2$ or $CHR^{2a}CH_2CH_2$ and R^{1a} and R^{2a} together are $(CH_2)_n$ with n being 1, 2 or 3.

23. The compound as claimed in any of claims 1 to 18, wherein X is a covalent bond, Y is $CHR^{2a}CH_2CH_2$ and R^{1a} and R^{2a} together are (CH_2).

24. A pharmaceutical composition comprising at least one compound as claimed in any of the preceding claims, optionally together with at least one physiologically acceptable carrier or auxiliary substance.

25. A method for treating a medical disorder susceptible to treatment with a dopamine D3 receptor ligand, said method comprising administering an effective amount of at least one compound as claimed in any of claims 1 to 24 to a subject in need thereof.

26. The method as claimed in claim 25, wherein the medical disorder is a disease of the central nervous system.

27. The use of a compound as claimed in any of claims 1 to 24 for preparing a pharmaceutical composition for the treatment of a medical disorder susceptible to treatment with a dopamine D3 receptor ligand.

28. The use as claimed in claim 27, wherein the medical disorder is a disease of the central nervous system.

INTERNATIONAL SEARCH REPORT

PCT/EP2005/011093

A. CLASSIFICATION OF SUBJECT MATTER

C07C317/34 C07D209/14 C07D209/62 C07D235/14 A61K31/136
A61P25/00 A61K31/145 A61K31/403 A61K31/407 A61K31/4174

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

C07C C07D A61P A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	TETRAHEDRON, vol. 57, no. 6, 2001, pages 1041-1048, XP004316535 Synthesis of 5-(sulfamoylmethyl)indoles Compounds 11a-b (Scheme 2)	1,2,13, 18-20,24
A	WO 97/45403 A (PHARMACIA & UPJOHN COMPANY; HAADSMA-SVENSSON, SUSANNE, R; CLEEK, KERRY) 4 December 1997 (1997-12-04) cited in the application Compounds 11-15, 20-21 (page 50), claim 32	1,24,25, 27
A	WO 96/23760 A (PHARMACIA & UPJOHN COMPANY; ROMERO, ARTHUR, G; LEIBY, JEFFREY, A) 8 August 1996 (1996-08-08) cited in the application Compounds 24-39 (page 27), claim 7	1,24,25, 27

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
23 December 2005	05/01/2006

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Menchaca, R

INTERNATIONAL SEARCH REPORT

PCT/EP2005/011093

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	"Novel 6-substituted 2-aminotetralins with potent and selective affinity for the dopamine D3 receptor" BIOORGANIC & MEDICINAL CHEMISTRY LETTERS, vol. 6, no. 4, 1996, pages 403-408, XP002355729 abstract	1,24,25, 27

INTERNATIONAL SEARCH REPORT

PCT/EP2005/011093

Box II ***Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)***

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:

Although claims 25-26 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.

2. [ ] 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).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

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 fee, this Authority did not invite payment of any additional fee.

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.

[ ] No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

PCT/EP2005/011093

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9745403 A	04-12-1997	AT 247639 T	15-09-2003
		AU 720414 B2	01-06-2000
		AU 3060197 A	05-01-1998
		CA 2255612 A1	04-12-1997
		CN 1217711 A	26-05-1999
		CZ 9803701 A3	12-05-1999
		DE 69724259 D1	25-09-2003
		DE 69724259 T2	09-06-2004
		DK 923542 T3	17-11-2003
		EP 0923542 A1	23-06-1999
		ES 2205227 T3	01-05-2004
		FI 982572 A	27-11-1998
		HK 1019326 A1	29-04-2005
		JP 2000511529 T	05-09-2000
		KR 2000016147 A	25-03-2000
		NO 985599 A	30-11-1998
		NZ 332538 A	23-02-2001
		PL 330207 A1	26-04-1999
		PT 923542 T	31-12-2003
		RU 2185372 C2	20-07-2002
		SK 148898 A3	13-03-2000
WO 9623760 A	08-08-1996	AT 202072 T	15-06-2001
		AU 707091 B2	01-07-1999
		AU 4693096 A	21-08-1996
		CA 2208600 A1	08-08-1996
		CN 1172469 A	04-02-1998
		CZ 9702313 A3	18-03-1998
		DE 69613349 D1	19-07-2001
		DE 69613349 T2	31-10-2001
		DK 807101 T3	10-09-2001
		EP 0807101 A1	19-11-1997
		ES 2159017 T3	16-09-2001
		FI 973176 A	31-07-1997
		GR 3036517 T3	31-12-2001
		HK 1008897 A1	10-06-2005
		HU 9702241 A2	28-07-1998
		JP 10513180 T	15-12-1998
		NO 973532 A	01-10-1997
		NZ 301492 A	28-01-1999
		PL 321634 A1	08-12-1997
		PT 807101 T	28-12-2001
		RU 2161601 C2	10-01-2001
		US 5936000 A	10-08-1999