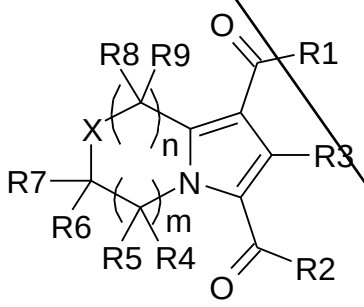
Claims

1. A compound of the formula I, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof,



I

wherein

n is selected from the series consisting of 0 and 1;

m is selected from the series consisting of 0, 1 and 2, with the proviso that m and n cannot simultaneously be 0;

X is selected from the series consisting of oxygen, sulfur and (R10)(R11)C;

one of the groups R1 and R2 is the group R20-NH- and the other of the groups R1 and R2 is the group (R30)(R31)N-;

R3 is selected from the series consisting of hydrogen, halogen and (C_1-C_4)-alkyl;

R4, R5, R6, R7, R8, R9, R10 and R11 are independently of one another selected from the series consisting of hydrogen, fluorine and (C_1-C_4)-alkyl;

R20 is selected from the series consisting of (C_5-C_7)-cycloalkyl to which a benzene ring or a Het1 ring is fused, and (R21)(R22)(R23)C-, wherein the (C_5-C_7)-cycloalkyl is unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of fluorine, (C_1-C_4)-alkyl and (C_1-C_4)-alkyl-O-, and the fused benzene ring and

Het1 ring is unsubstituted or substituted by one or more identical or different substituents R24;

R21 is selected from the series consisting of phenyl and Het1, ~~which~~ wherein phenyl and Het1 are ~~all~~ unsubstituted or substituted by one or more identical or different substituents R24;

R22 is selected from the series consisting of hydrogen, $(C_1$-$C_4)$-alkyl, $(C_3$-$C_7)$-cycloalkyl, R25-$(C_1$-$C_4)$-alkyl- and phenyl;

R23 is selected from the series consisting of hydrogen and $(C_1$-$C_4)$-alkyl;

R24 is selected from the series consisting of halogen, $(C_1$-$C_4)$-alkyl, $(C_3$-$C_7)$-cycloalkyl, HO-, $(C_1$-$C_4)$-alkyl-O-, $(C_1$-$C_4)$-alkyl-$S(O)_p$-, F_5S-, NC-, $(C_1$-$C_4)$-alkyl-O-C(O)-, -$(C_3$-$C_5)$-alkanediyl-, -O-$(C_1$-$C_4)$-alkanediyl-O- and -$(C_1$-$C_4)$-alkanediyl-O-C(O)-;

R25 is selected from the series consisting of $(C_3$-$C_7)$-cycloalkyl, $(C_1$-$C_4)$-alkyl-O- and $(C_1$-$C_4)$-alkyl-S-;

R30 is selected from the series consisting of hydrogen, $(C_1$-$C_4)$-alkyl, $(C_3$-$C_7)$-cycloalkyl-$(C_1$-$C_4)$-alkyl-, HO-$(C_1$-$C_4)$-alkyl- and $(C_1$-$C_4)$-alkyl-O-$(C_1$-$C_4)$-alkyl-;

R31 is selected from the series consisting of $(C_3$-$C_7)$-cycloalkyl, $(C_5$-$C_7)$-cycloalkyl to which a benzene ring is fused, phenyl, Het2 and (R32)(R33)(R34)C-, wherein the $(C_3$-$C_7)$-cycloalkyl and $(C_5$-$C_7)$-cycloalkyl are unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of fluorine, $(C_1$-$C_4)$-alkyl, HO- and $(C_1$-$C_4)$-alkyl-O- and the fused benzene ring is unsubstituted or substituted by one or more identical or different substituents R35;

or the groups R30 and R31, together with the nitrogen atom carrying them, form a 4-membered to 10-membered, monocyclic or bicyclic, saturated or partially unsaturated heterocycle which, in addition to the nitrogen atom carrying R30 and R31, comprises 0 or 1 further ring heteroatom selected from the series consisting of nitrogen, oxygen and sulfur, and which is unsubstituted or substituted by one or more identical or different substituents R36;

R32 is selected from the series consisting of hydrogen and $(C_1$-$C_4)$-alkyl;

R33 is selected from the series consisting of hydrogen, $(C_1$-$C_4)$-alkyl, $(C_3$-$C_7)$-cycloalkyl, R37-$(C_1$-$C_4)$-alkyl- and $(C_1$-$C_4)$-alkyl-O-C(O)-;

or R32 and R33, together with the carbon atom carrying them, form a $(C_3$-$C_7)$-cycloalkane ring which, irrespective of the group R34, is unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of fluorine and $(C_1$-$C_4)$-alkyl;

R34 is selected from the series consisting of hydrogen, $(C_1$-$C_6)$-alkyl, $(C_3$-$C_7)$-cycloalkyl, R38-$(C_3$-$C_7)$-cycloalkyl-, $(C_1$-$C_4)$-alkyl-O-C(O)-, (R39)(R40)N-C(O)-, phenyl and Het2, wherein the $(C_1$-$C_6)$-alkyl is unsubstituted or substituted by one or more identical or different substituents R41, and the phenyl is unsubstituted or substituted by one or more identical or different substituents R35;

R35 is selected from the series consisting of halogen, $(C_1$-$C_4)$-alkyl, HO-$(C_1$-$C_4)$-alkyl-, $(C_1$-$C_4)$-alkyl-O-$(C_1$-$C_4)$-alkyl-, $(C_1$-$C_4)$-alkyl-O-C(O)- $(C_1$-$C_4)$-alkyl-, NC-, HO-, $(C_1$-$C_4)$-alkyl-O-, $(C_1$-$C_4)$-alkyl-$S(O)_p$-, $(C_1$-$C_4)$-alkyl-$S(O)_2$-NH-, R42-O-C(O)-, (R43)(R44)N-C(O)- and (R45)(R46)N-$S(O)_2$-;

R36 is selected from the series consisting of fluorine, $(C_1$-$C_6)$-alkyl, $(C_2$-$C_4)$-alkenyl, $(C_2$-$C_4)$-alkynyl, $(C_3$-$C_7)$-cycloalkyl, phenyl, Het3, HO-, $(C_1$-$C_4)$-alkyl-O-, $(C_3$-$C_7)$-cycloalkyl-O-, $(C_3$-$C_7)$-cycloalkyl-(Ci-C4)-alkyl-0-, phenyl-O-, (Ci-C4)-alkyl-S(0)p-, NC- and R47-O-C(O)-, wherein the $(C_1$-$C_6)$-alkyl is unsubstituted or substituted by one or more identical or different substituents R48;

R37 is selected from the series consisting of $(C_3$-$C_7)$-cycloalkyl, $(C_1$-$C_4)$-alkyl-O- and $(C_1$-$C_4)$-alkyl-S-;

R38 is selected from the series consisting of phenyl, HO- and $(C_1$-$C_4)$-alkyl-O-;

R39, R40, R42, R47, R49, R50 and R51 are independently of one another selected from the series consisting of hydrogen and $(C_1$-$C_4)$-alkyl;

R41 is selected from the series consisting of (C_3-C_7)-cycloalkyl, phenyl, Het1, HO-, (C_1-C_4)-alkyl-O- and (C_1-C_4)-alkyl-S-;

R43, R44, R45 and R46 are independently of one another selected from the series consisting of hydrogen, (C_1-C_4)-alkyl, HO-(C_1-C_4)-alkyl- and (C_1-C_4)-alkyl-O-(C_1-C_4)-alkyl-;

R48 is selected from the series consisting of (C_3-C_7)-cycloalkyl, phenyl, Het3, HO-, (C_1-C_4)-alkyl-O-, (C_1-C_4)-alkyl-C(O)-O-, (C_1-C_4)-alkyl-S(O)$_p$-, (C_1-C_4)-alkyl-C(O)-(R49)N-, (R50)(R51)N-C(O)- and (C_1-C_4)-alkyl-O-C(O)-;

p is selected from the series consisting of 0, 1 and 2, wherein all numbers p are independent of one another;

Het1 is a 5-membered or 6-membered, monocyclic, aromatic heterocycle comprising 1 or 2 identical or different ring heteroatoms selected from the series consisting of nitrogen, oxygen and sulfur, which is bonded via a ring carbon atom and ~~which~~in the residue R41 Het1 is unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of halogen, (C_1-C_4)-alkyl, (C_3-C_7)-cycloalkyl, NC-, HO-, (C_1-C_4)-alkyl-O- and (C_1-C_4)-alkyl-S(O)$_p$-~~, unless specified otherwise~~;

Het2 is a 4-membered to 10-membered, monocyclic or bicyclic, saturated, partially unsaturated or aromatic heterocycle comprising 1, 2, 3 or 4 identical or different ring heteroatoms selected from the series consisting of nitrogen, oxygen and sulfur, which is bonded via a ring carbon atom and which is unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of halogen, (C_1-C_4)-alkyl, NC-, HO- and (C_1-C_4)-alkyl-O-;

Het3 is a 4-membered to 7-membered, monocyclic, saturated, partially unsaturated or aromatic heterocycle comprising 1, 2 or 3 identical or different ring heteroatoms selected from the series consisting of nitrogen, oxygen and sulfur, which is unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of halogen, (C_1-C_4)-alkyl, (C_3-C_7)-cycloalkyl, NC-, HO-, (C_1-C_4)-alkyl-O- and (C_1-C_4)-alkyl-S(O)$_p$-;

wherein all phenyl groups in the residues R22, R31, R36, R38, R41 and R48 are unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of halogen, (C_1-C_4)-alkyl, NC-, HO- and (C_1-C_4)-alkyl-O-~~, unless specified otherwise~~;

wherein all cycloalkyl groups in the residues R22, R24, R25, R30, R33, R34, R36, R37, R41, R48, R51, Het1 and Het3, independently of any other substituents which can be present on a cycloalkyl group, can be substituted by one or more identical or different substituents selected from the series consisting of fluorine and (C_1-C_4)-alkyl~~, unless specified otherwise~~;

wherein all alkyl groups, alkanediyl groups, alkenyl groups and alkynyl groups, independently of any other substituents which can be present on an alkyl group, can be substituted by one or more fluorine substituents.

2. A compound of the formula I as claimed in claim 1, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof, wherein

n is 1;

m is selected from the series consisting of 0 and 1 if X is sulfur or (R10)(R11)C, and m is 1 if X is oxygen;

R3 is selected from the series consisting of hydrogen, fluorine, chlorine, bromine and (Ci-C4)-alkyl;

R4, R5, R6, R7, R8, R9, R10 and R11 are independently of one another selected from the series consisting of hydrogen and (C_1-C_4)-alkyl, with the proviso that at least six of these groups are hydrogen.

3. A compound of the formula I as claimed in any of claims 1 and 2, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof, wherein

n is 1;

m is 1;

X is selected from the series consisting of oxygen, sulfur and (R10)(R11)C;

one of the groups R1 and R2 is the group R20-NH- and the other of the groups R1 and R2 is the group (R30)(R31)N-;

R3, R4, R5, R6, R7, R8, R9, R10 and R11 are hydrogen;

R20 is (R21)(R22)(R23)C-;

R21 is selected from the series consisting of phenyl and Het1, ~~which~~ wherein phenyl and Het1 are ~~all~~ unsubstituted or substituted by one, two or three identical or different substituents R24;

R22 is selected from the series consisting of hydrogen, $(C_1$-$C_4)$-alkyl and cyclopropyl;

R23 is hydrogen;

R24 is selected from the series consisting of fluorine, chlorine, bromine, $(C_1$-$C_4)$-alkyl, $(C_3$-$C_7)$-cycloalkyl-, HO-, $(C_1$-$C_4)$-alkyl-O-, $(C_1$-$C_4)$-alkyl-$S(O)_p$-, F_5S-, NC- and $(C_1$-$C_4)$-alkyl-O-C(O)-;

R30 is selected from the series consisting of hydrogen, $(C_1$-$C_4)$-alkyl, cyclopropyl-$(C_1$-$C_2)$-alkyl-, HO-$(C_1$-$C_2)$-alkyl- and $(C_1$-$C_2)$-alkyl-O-$(C_1$-$C_2)$-alkyl-;

R31 is selected from the series consisting of $(C_3$-$C_6)$-cycloalkyl, $(C_5$-$C_6)$-cycloalkyl to which a benzene ring is fused, phenyl, Het2 and (R32)(R33)(R34)C-, wherein the $(C_3$-$C_6)$-cycloalkyl and $(C_5$-$C_6)$-cycloalkyl are unsubstituted or substituted by one or two identical or different substituents selected from the series consisting of fluorine, $(C_1$-$C_4)$-alkyl, HO- and $(C_1$-$C_4)$-alkyl-O- and the fused benzene ring is unsubstituted or substituted by one or two identical or different substituents R35;

or the groups R30 and R31, together with the nitrogen atom carrying them, form a 4-membered to 7-membered, monocyclic, saturated heterocycle which, in addition to the nitrogen atom carrying R30 and R31, comprises 0 or 1 further ring heteroatom selected from

the series consisting of nitrogen, oxygen and sulfur, and which is unsubstituted or substituted by one or two identical or different substituents R36;
R32 is selected from the series consisting of hydrogen and $(C_1$-$C_4)$-alkyl;

R33 is selected from the series consisting of hydrogen, $(C_1$-$C_4)$-alkyl, cyclopropyl and R37-$(C_1$-$C_2)$-alkyl-;

R34 is selected from the series consisting of hydrogen, $(C_1$-$C_6)$-alkyl, $(C_3$-$C_6)$-cycloalkyl, R38-$(C_3$-$C_6)$-cycloalkyl-, $(C_1$-$C_4)$-alkyl-O-C(O)-, (R39)(R40)N-C(O)-, phenyl and Het2, wherein the $(C_1$-$C_6)$-alkyl is unsubstituted or substituted by one or two identical or different substituents R41, and the phenyl is unsubstituted or substituted by one or more identical or different substituents R35;

R35 is selected from the series of fluorine, chlorine, bromine, $(C_1$-$C_4)$-alkyl, HO-$(C_1$-$C_4)$-alkyl-, $(C_1$-$C_4)$-alkyl-O-$(C_1$-$C_4)$-alkyl-, $(C_1$-$C_4)$-alkyl-O-C(O)- $(C_1$-$C_4)$-alkyl-, NC-, HO-, $(C_1$-$C_4)$-alkyl-O-, $(C_1$-$C_4)$-alkyl-$S(O)_p$-, $(C_1$-$C_4)$-alkyl-S(O)2-NH-, R42-O-C(O)-, (R43)(R44)N-C(O)- and (R45)(R46)N-S(O)2-;

R36 is selected from the series consisting of fluorine, $(C_1$-$C_4)$-alkyl, ethenyl, ethynyl, $(C_3$-$C_6)$-cycloalkyl, phenyl, Het3, $(C_1$-$C_4)$-alkyl-O-, $(C_3$-$C_6)$-cycloalkyl-O-, $(C_3$-$C_6)$-cycloalkyl-$(C_1$-$C_2)$-alkyl-O-, phenyl-O-, $(C_1$-$C_2)$-alkyl-$S(O)_p$-, NC- and R47-O-C(O)-, wherein the $(C_1$-$C_4)$-alkyl is unsubstituted or substituted by one or two identical or different substituents R48;

R37 is selected from the series consisting of cyclopropyl and $(C_1$-$C_2)$-alkyl-O-;

R38 is selected from the series consisting of phenyl, HO- and $(C_1$-$C_2)$-alkyl-O-;

R39, R40, R42, R47, R49, R50 and R51 are independently of one another selected from the series consisting of hydrogen and $(C_1$-$C_4)$-alkyl;

R41 is selected from the series consisting of $(C_3$-$C_6)$-cycloalkyl, phenyl, Het1, HO-, $(C_1$-$C_4)$-alkyl-O- and $(C_1$-$C_4)$-alkyl-S-;

R43, R44, R45 and R46 are independently of one another selected from the series consisting of hydrogen, $(C_1$-$C_4)$-alkyl, HO-$(C_1$-$C_4)$-alkyl- and $(C_1$-$C_4)$-alkyl-O-$(C_1$-$C_4)$-alkyl-;

R48 is selected from the series consisting of (C_3-C_6)-cycloalkyl, phenyl, Het3, HO-, (C_1-C_4)-alkyl-O-, (C_1-C_4)-alkyl-C(O)-O-, (C_1-C_4)-alkyl-S(O)$_p$-, (C_1-C_4)-alkyl-C(O)-(R49)N-, (R50)(R51)N-C(O)- and (C_1-C_4)-alkyl-O-C(O)-;

p is selected from the series consisting of 0 and 2, wherein all numbers p are independent of one another;

Het1 is a 5-membered or 6-membered, monocyclic, aromatic heterocycle comprising one ring heteroatom selected from the series consisting of nitrogen, oxygen and sulfur or one ring nitrogen atom and one further ring heteroatom selected from the series consisting of nitrogen, oxygen and sulfur, which is bonded via a ring carbon atom and ~~which~~in the residue R41 Het1 is unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of halogen, (C_1-C_4)-alkyl, (C_3-C_7)-cycloalkyl, NC-, HO-, (C_1-C_4)-alkyl-O- and (C_1-C_4)-alkyl-S(O)$_p$-~~, unless specified otherwise~~;

Het2 is a 5-membered to 10-membered, monocyclic or bicyclic, saturated, partially unsaturated or aromatic heterocycle comprising 1, 2, 3 or 4 nitrogen atoms, or 1 oxygen atom or sulfur atom, or 1 or 2 nitrogen atoms and 1 oxygen atom or sulfur atom, as ring heteroatoms, which is bonded via a ring carbon atom and which is unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of halogen, (C_1-C_4)-alkyl, NC-, HO- and (C_1-C_4)-alkyl-O-;

Het3 is a 5-membered or 6-membered, monocyclic, saturated, partially unsaturated or aromatic heterocycle comprising 1, 2 or 3 nitrogen atoms, or 1 sulfur atom or oxygen atom, or one nitrogen atom and one oxygen atom or sulfur atom, as ring heteroatoms, which is unsubstituted or substituted by one or two identical or different substituents selected from the series consisting of halogen, (C_1-C_4)-alkyl and (C_1-C_4)-alkyl-O-;

wherein all phenyl groups in the residues R31, R36, R38, R41, and R48 are unsubstituted or substituted by one, two or three identical or different substituents selected from the series consisting of fluorine, chlorine, (C_1-C_4)-alkyl and (C_1-C_2)-alkyl-O-~~, unless specified otherwise~~;

wherein all cycloalkyl groups in the residues R24, R34, R36, R41, R48, and Het1, independently of any other substituents which can be present on a cycloalkyl group, can be substituted by one or two identical or different substituents selected from the series consisting of fluorine and (C_1-C_4)-alkyl~~, unless specified otherwise~~;

wherein all alkyl groups, independently of any other substituents which can be present on an alkyl group, can be substituted by one or more fluorine substituents.

4. A compound of the formula I as claimed in any of claims 1 to 3, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof, wherein

n is 1;

m is 1;

X is selected from the series consisting of oxygen, sulfur and (R10)(R11)C;

one of the groups R1 and R2 is the group R20-NH- and the other of the groups R1 and R2 is the group (R30)(R31)N-;

R3, R4, R5, R6, R7, R8, R9, R10 and R11 are hydrogen;

R20 is (R21)(R22)(R23)C-;

R21 is selected from the series consisting of phenyl and Het1, ~~which~~ wherein phenyl and Het1 are ~~all~~ unsubstituted or substituted by one, two or three identical or different substituents R24;

R22 is selected from the series consisting of hydrogen, (C_1-C_4)-alkyl and cyclopropyl;

R23 is hydrogen;

R24 is selected from the series consisting of fluorine, chlorine, bromine, (C_1-C_4)-alkyl, (C_3-C_7)-cycloalkyl-, (C_1-C_4)-alkyl-O-, (C_1-C_4)-alkyl-S-, F_5S- and NC-;

R30 is selected from the series consisting of hydrogen and (CrC4)-alkyl;

R31 is selected from the series consisting of (C_3-C_6)-cycloalkyl, (C_5-C_6)-cycloalkyl to which a benzene ring is fused, Het2 and (R32)(R33)(R34)C-, wherein the Het2, which is bonded via

a ring carbon atom, is a 4-membered to 6-membered, monocyclic, saturated heterocycle which comprises one ring heteroatom which is an oxygen atom, or is (C_5-C_6)-cycloalkyl to which a pyridine, pyrazine or pyrimidine ring is fused, and wherein the (C_3-C_6)-cycloalkyl and all (C_5-C_6)-cycloalkyl are unsubstituted or substituted by one or two identical or different substituents selected from the series consisting of fluorine, (C_1-C_4)-alkyl and (C_1-C_4)-alkyl-O-, and wherein the fused benzene, pyridine, pyrazine and pyrimidine rings all are unsubstituted or substituted by one or two identical or different substituents selected from the series consisting of halogen, (C_1-C_4)-alkyl, NC-, HO- and (C_1-C_4)-alkyl-O-;

or the groups R30 and R31, together with the nitrogen atom carrying them, form a 5-membered to 6-membered, monocyclic, saturated heterocycle which, in addition to the nitrogen atom carrying R30 and R31, comprises 0 or 1 further ring heteroatom selected from the series consisting of nitrogen, oxygen and sulfur, and which is unsubstituted or substituted by one or two identical or different substituents R36;

R32 is selected from the series consisting of hydrogen and (C_1-C_4)-alkyl;

R33 is selected from the series consisting of hydrogen, (C_1-C_4)-alkyl and cyclopropyl;

R34 is selected from the series consisting of (C_1-C_6)-alkyl, (C_3-C_6)-cycloalkyl, (C_1-C_4)-alkyl-O-C(O)-, (R39)(R40)N-C(O)-, phenyl and Het2, wherein the (C_1-C_6)-alkyl is unsubstituted or substituted by one or two identical or different substituents R41, and wherein the phenyl is unsubstituted or substituted by one or more identical or different substituents R35, and wherein the Het2, which is bonded via a ring carbon atom, is a 5-membered to 6-membered, monocyclic, saturated, partially unsaturated or aromatic heterocycle comprising 1, 2, 3 or 4 nitrogen atoms, or 1 oxygen atom or sulfur atom, or 1 or 2 nitrogen atoms and 1 oxygen atom or sulfur atom, as ring heteroatoms, and is unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of halogen, (C_1-C_4)-alkyl, NC-, HO-and (C_1-C_4)-alkyl-O-;

R35 is selected from the series of fluorine, chlorine, bromine, (C_1-C_4)-alkyl, HO-(C_1-C_4)-alkyl-, (C_1-C_4)-alkyl-O-(C_1-C_4)-alkyl-, (C_1-C_4)-alkyl-O-C(O)- (C_1-C_4)-alkyl-, NC-, HO-, (C_1-C_4)-alkyl-O-, (C_1-C_4)-alkyl-S(O)$_p$-, (C_1-C_4)-alkyl-S(O)$_2$-NH-, R42-O-C(O)-, (R43)(R44)N-C(O)- and (R45)(R46)N-S(O)$_2$-;

R36 is selected from the series consisting of fluorine, (C_1-C_4)-alkyl, ethenyl, ethynyl, (C_3-C_6)-cycloalkyl, phenyl, Het3, (C_1-C_4)-alkyl-O-, (C_3-C_6)-cycloalkyl-O-, (C_3-C_6)-cycloalkyl-(C_1-C_2)-alkyl-O-, phenyl-O-, (C_1-C_2)-alkyl-$S(O)_p$-, NC- and R47-O-C(O)-, wherein the (C_1-C_4)-alkyl is unsubstituted or substituted by one or two identical or different substituents R48;

R39, R40, R42, R43, R44, R45, R46, R47, R49, R50 and R51 are independently of one another selected from the series consisting of hydrogen and (C_1-C_4)-alkyl;

R41 is selected from the series consisting of (C_3-C_6)-cycloalkyl, phenyl and Het1;

R48 is selected from the series consisting of (C_3-C_6)-cycloalkyl, phenyl, Het3, HO-, (C_1-C_4)-alkyl-O-, (C_1-C_4)-alkyl-C(O)-O-, (C_1-C_4)-alkyl-$S(O)_p$-, (C_1-C_4)-alkyl-C(O)-(R49)N-, (R50)(R51)N-C(O)- and (C_1-C_4)-alkyl-O-C(O)-;

p is selected from the series consisting of 0 and 2, wherein all numbers p are independent of one another;

Het1 is a 5-membered or 6-membered, monocyclic, aromatic heterocycle comprising one ring heteroatom selected from the series consisting of nitrogen, oxygen and sulfur or one ring nitrogen atom and one further ring heteroatom selected from the series consisting of nitrogen, oxygen and sulfur, which is bonded via a ring carbon atom and ~~which~~ in residue R41 Het1 is unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of halogen, (C_1-C_4)-alkyl, (C_3-C_7)-cycloalkyl, NC-, HO-, (C_1-C_4)-alkyl-O- and (C_1-C_4)-alkyl-$S(O)_p$-~~, unless specified otherwise~~;

Het3 is a 5-membered or 6-membered, monocyclic, saturated, partially unsaturated or aromatic heterocycle comprising 1, 2 or 3 nitrogen atoms, or 1 sulfur atom or oxygen atom, or 1 nitrogen atom and 1 oxygen atom or sulfur atom, as ring heteroatoms, which is unsubstituted or substituted by one or two identical or different substituents selected from the series consisting of fluorine, chlorine, NC-, (C_1-C_2)-10 alkyl and (C_1-C_2)-alkyl-O-;

wherein all phenyl groups in the residues R36, R38, R41 and R48 are unsubstituted or substituted by one, two or three identical or different substituents selected from the series consisting of fluorine, chlorine, (C_1-C_2)-alkyl and (C_1-C_2)-alkyl-O-~~, unless specified otherwise~~;

wherein all cycloalkyl groups in the residues R24, R34, R36, R41, R48, and Het1, independently of any other substituents which can be present on a cycloalkyl group, can be substituted by one or two identical or different substituents selected from the series consisting of fluorine and (C_1-C_4)-alkyl~~, unless specified otherwise~~;

wherein all alkyl groups, independently of any other substituents which can be present on an alkyl group, can be substituted by one or more fluorine substituents.

5. A compound of the formula I as claimed in any of claims 1 to 4, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof, wherein

n is 1;

m is 1;

X is selected from the series consisting of oxygen and (R10)(R11)C;

one of the groups R1 and R2 is the group R20-NH- and the other of the groups R1 and R2 is the group (R30)(R31)N-;

R3, R4, R5, R6, R7, R8, R9, R10 and R11 are hydrogen;

R20 is (R21)(R22)(R23)C-;

R21 is selected from the series consisting of phenyl and Het1, wherein Het1 is selected from the series consisting of pyridinyl, pyrimidinyl, pyrazinyl, pyridazinyl, pyrazolyl, imidazolyl, thiazolyl, isothiazolyl, oxazolyl, isoxazolyl, pyrrolyl, furanyl and thiophenyl, which are all bonded via a ring carbon atom, and wherein the phenyl and Het1 are all unsubstituted or substituted by one, two or three identical or different substituents selected from the series consisting of fluorine, chlorine, cyano, (C_1-C_4)-alkyl and (C_1-C_4)-alkyl-O-, wherein the alkyl groups can be substituted by one or more fluorine substituents;

R22 is hydrogen, (C_1-C_4)-alkyl or cyclopropyl;

R23 is hydrogen;

R30 is hydrogen or (C_1-C_4)-alkyl;

R31 is (R32)(R33)(R34)C-;

or the groups R30 and R31, together with the nitrogen atom carrying them, form a pyrrolidine ring which is unsubstituted or substituted by one or two identical or different substituents R36, wherein one of the substituents R36 is selected from the series consisting of fluorine, cyano, (C_1-C_4)-alkyl, cyclopropyl, (C_1-C_4)-alkyl-O-, phenyl, Het3 and (C_1-C_4)-alkyl-O-C(O)-, and a second of the substituents R36, if present, is selected from the series consisting of fluorine and (C_1-C_4)-alkyl, and wherein the (C_1-C_4)-alkyl groups representing R36 are independently of one another unsubstituted or substituted by one or two identical or different substituents R48, and wherein the alkyl groups can independently of one another be substituted by one or more fluorine substituents, and wherein the phenyl is unsubstituted or substituted by one, two or three identical or different substituents selected from the series consisting of fluorine, chlorine, (C_1-C_2)-alkyl, (C_1-C_2)-alkyl-O- and trifluoromethyl, and wherein the Het3 is selected from the series consisting of pyridinyl, pyrimidinyl, pyrazinyl, oxazolyl, isoxazolyl, thiophenyl and thiazolyl, which are all unsubstituted or substituted by one or two identical or different substituents selected from the series consisting of fluorine, chlorine, cyano, (C_1-C_2)-alkyl, (C_1-C_4)-alkyl-O- and trifluoromethyl;

R32 is hydrogen;

R33 is selected from the series consisting of hydrogen, (C_1-C_4)-alkyl and cyclopropyl;

R34 is selected from the series consisting of (C_1-C_4)-alkyl-O-C(O)-, cyclopropyl, phenyl and Het2, wherein Het2 is selected from the series consisting of pyridinyl, pyrimidinyl, pyrazinyl, pyridazinyl, pyrazolyl, imidazolyl, thiazolyl, isothiazolyl, oxazolyl, isoxazolyl, pyrrolyl, furanyl and thiophenyl, which are all bonded via a ring carbon atom, and wherein the phenyl and Het2 groups are unsubstituted or substituted by one or two identical or different substituents selected from the series consisting of fluorine, chlorine, cyano, (C_1-C_4)-alkyl- and (C_1-C_4)-alkyl-O-, wherein the alkyl groups can be substituted by one or more fluorine substituents;

R48 is selected from the series consisting of cyclopropyl, (C_1-C_4)-alkyl-O-, (C_1-C_4)-alkyl-C(O)-O- and (C_1-C_4)-alkyl-O-C(O)-.

6. A compound of the formula I as claimed in any of claims 1 to 5, in any of its

stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a 30 pharmaceutically acceptable salt thereof, wherein

n is 1;

m is 1;

X is oxygen;

one of the groups R1 and R2 is the group R20-NH- and the other of the groups R1 and R2 is the group (R30)(R31)N-;

R3, R4, R5, R6, R7, R8 and R9 are hydrogen;

R20 is (R21)(R22)(R23)C-;

R21 is selected from the series consisting of phenyl and Het1, wherein Het1 is selected from the series consisting of pyridinyl, pyrimidinyl, thiazolyl and thiophenyl, which are all bonded via a ring carbon atom, and wherein Het1 is unsubstituted or substituted by one or two identical or different substituents one substituent of which is selected from the series consisting of fluorine, chlorine, cyano, methyl, trifluoromethyl and methoxy and a second substituent is selected from the series consisting of fluorine, chlorine, methyl and trifluoromethyl, and wherein phenyl is unsubstituted or substituted by one, two or three identical or different substituents one substituent of which is selected from the series consisting of fluorine, chlorine, cyano, methyl, trifluoromethyl and methoxy, and a second and third substituent are selected from the series consisting of fluorine, chlorine, methyl and trifluoromethyl;

R22 is selected from the series consisting of methyl, ethyl, n-propyl, isopropyl and cyclopropyl;

R23 is hydrogen;

the groups R30 and R31, together with the nitrogen atom carrying them, form a pyrrolidine ring which is unsubstituted or substituted in ring position 2 by one substituent R36 selected from the series consisting of methyl, ethyl, isopropyl, cyclopropyl, (C_1-C_4)-alkyl-O-C(O)-, (C_1-C_4)-alkyl-O-C(O)-CH_2- and trifluoromethyl; or

or R30 is hydrogen; and
R31 is (R32)(R33)(R34)C-; and
R34 is selected from the series consisting of phenyl and Het2, wherein Het2 is selected from the series consisting of pyridinyl, pyrimidinyl, pyrazinyl, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl and thiophenyl, which are bonded via a ring carbon atom, and wherein phenyl and Het2 are unsubstituted or substituted by one or two identical or different substituents selected from the series consisting of fluorine, chlorine, cyano, methyl, trifluoromethyl and methoxy; or

R30 is selected from the series consisting of hydrogen, methyl and ethyl; and
R31 is (R32)(R33)(R34)C-; and
R34 is (C_1-C_4)-alkyl-0-C(0)-.

R32 is hydrogen;

R33 is selected from the series consisting of hydrogen, methyl, ethyl, n-propyl and isopropyl.

7. A compound of the formula I as claimed in any of claims 1 to 6, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof, wherein

n is 1;

m is 1;

X is oxygen;

one of the groups R1 and R2 is the group R20-NH- and the other of the groups R1 and R2 is the group (R30)(R31)N-;

R3, R4, R5, R6, R7, R8 and R9 are hydrogen;

R20 is (R21)(R22)(R23)C-;

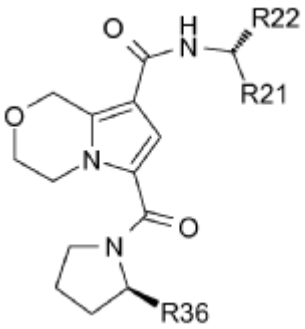
R21 is selected from the series consisting of phenyl and Het1, wherein Het1 is selected from the series consisting of pyridinyl, pyrimidinyl, thiazolyl and thiophenyl, which are all bonded via a ring carbon atom, and wherein Het1 is substituted by one or two identical or different substituents one substituent of which is selected from the series consisting of fluorine, chlorine, cyano, trifluoromethyl and methoxy and a second substituent is selected from the series consisting of fluorine, chlorine, methyl and trifluoromethyl, and wherein phenyl is unsubstituted or substituted by one, two or three identical or different substituents one substituent of which is selected from the series consisting of fluorine, chlorine, cyano, trifluoromethyl and methoxy and a second substituent is selected from the series consisting of fluorine, chlorine, methyl and trifluoromethyl and a third substituent is fluorine;

R22 is selected from the series consisting of methyl, ethyl, n-propyl and isopropyl;

R23 is hydrogen;

the groups R30 and R31, together with the nitrogen atom carrying them, form a pyrrolidine ring which is unsubstituted or substituted in ring position 2 by one substituent R36 selected from the series consisting of methyl, ethyl, isopropyl, cyclopropyl and trifluoromethyl.

8. A compound of the formula Ig as claimed in any of claims 1 to 7, or a pharmaceutically acceptable salt thereof,



Ig

wherein

R21 is selected from the series consisting of phenyl and Het1, wherein Het1 is selected from the series consisting of pyridinyl, pyrimidinyl, thiazolyl and thiophenyl, which are bonded via a ring carbon atom, and Het1 is substituted by one or two identical or different substituents one substituent of which is selected from the series consisting of fluorine, chlorine, cyano, trifluoromethyl and methoxy and a second substituent is selected from the series consisting of fluorine, chlorine, methyl and trifluoromethyl, and phenyl is unsubstituted or substituted by one, two or three identical or different substituents one substituent of which is selected from the series consisting of fluorine, chlorine, cyano, trifluoromethyl and methoxy and a second substituent is selected from the series consisting of fluorine, chlorine, methyl and trifluoromethyl and a third substituent is fluorine;

R22 is selected from the series consisting of methyl, ethyl, n-propyl and isopropyl;

R36 is selected from the series consisting of methyl, ethyl, isopropyl, cyclopropyl and trifluoromethyl.

9. A compound of the formula I as claimed in any of claims 1 to 6, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof, wherein

n is 1;

m is 1;

X is oxygen;

one of the groups R1 and R2 is the group R20-NH- and the other of the groups R1 and R2 is the group (R30)(R31)N-;

R3, R4, R5, R6, R7, R8 and R9 are hydrogen; R20 is (R21)(R22)(R23)C-;

R21 is selected from the series consisting of phenyl and Het1, wherein Het1 is selected from the series consisting of pyridinyl, pyrimidinyl, thiazolyl and thiophenyl, which are bonded via a ring carbon atom, and wherein Het1 is substituted by one or two identical or different substituents one substituent of which is selected from the series consisting of fluorine, chlorine, cyano, trifluoromethyl and methoxy and a second substituent is selected from the

series consisting of fluorine, chlorine, methyl and trifluoromethyl, and wherein phenyl is unsubstituted or substituted by one, two or three identical or different substituents one substituent of which is selected from the series consisting of fluorine, chlorine, cyano, trifluoromethyl and methoxy and a second substituent is selected from the series consisting of fluorine, chlorine, methyl and trifluoromethyl and a third substituent is fluorine;

R22 is selected from the series consisting of methyl, ethyl, n-propyl and isopropyl;

R23 is hydrogen;

R30 is hydrogen;

R31 is (R32)(R33)(R34)C-;

R32 is hydrogen;

R33 is selected from the series consisting of hydrogen, methyl, ethyl, n-propyl and isopropyl;

R34 is selected from the series consisting of phenyl and Het2, wherein Het2 is selected from the series consisting of pyridinyl, pyrimidinyl, pyrazinyl, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl and thiophenyl, which are bonded via a ring carbon atom, and wherein the phenyl and Het2 are unsubstituted or substituted by one or two identical or different substituents selected from the series consisting of fluorine, chlorine, cyano, methyl, trifluoromethyl and methoxy.

10. A compound of the formula I as claimed in any of claims 1 to 5, or a pharmaceutically acceptable salt thereof, wherein the compound is selected from the series consisting of 6-(pyrrolidine-1 -carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1 -c][1,4]oxazine-8-carboxylic acid ((R)-1 -phenyl-propyl)-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(2-chloro-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid ((R)-1-phenyl-propyl)-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(2,4-difluoro-phenyl)-propyl]-amide,

6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(6-cyano-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(6-trifluoromethyl-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(4-cyano-2,6-difluoro-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(4-cyano-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(4-trifluoromethyl-phenyl)-propyl]-amide,
6-((S)-2-ethyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(6-trifluoromethyl-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(3-fluoro-4-trifluoromethyl-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(6-trifluoromethyl-pyridin-3-yl)-butyl]-amide,
6-((R)-2-trifluoromethyl-pyrrolidine-1 -carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(6-trifluoromethyl-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(3-chloro-4-cyano-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(5-trifluoromethyl-thiazol-2-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(5-chloro-6-methoxy-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(2-chloro-6-trifluoromethyl-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(5-trifluoromethyl-thiophen-2-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(3-chloro-4-trifluoromethyl-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(5-fluoro-6-trifluoromethyl-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(3,4-dichloro-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(2,6-difluoro-4-trifluoromethyl-phenyl)-propyl]-amide,

6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(6-methoxy-5-trifluoromethyl-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(3-chloro-4-fluoro-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(3-chloro-4-methoxy-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(5-chloro-6-cyano-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(2-fluoro-4-trifluoromethyl-phenyl)-propyl]-amide,
6-((S)-2-ethyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid ((R)-1-phenyl-propyl)-amide,
3-((S)-2-methyl-pyrrolidine-1 -carbonyl)-5,6,7,8-tetrahydro-indolizine-1 -carboxylic acid[(R)-1 -(6-cyano-pyridin-3-yl)-propyl]-amide,
3-((S)-2-methyl-pyrrolidine-1 -carbonyl)-5,6,7,8-tetrahydro-indolizine-1 -carboxylic acid[(R)-1-(6-trifluoromethyl-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-2-methyl-1 -(6-trifluoromethyl-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(4-chloro-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(4-fluoro-3-trifluoromethyl-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(3,5-dichloro-pyridin-4-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(2-chloro-5-fluoro-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(2,6-difluoro-phenyl)-propyl]-amide,
6-(pyrrolidine-1 -carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1 -c][1,4]oxazine-8-carboxylic acid [(R)-1 -(2,4-difluoro-phenyl)-propyl]-amide, and
6-(pyrrolidine-1 -carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1 -c][1,4]oxazine-8-carboxylic acid [(R)-1-(2-chloro-4-fluoro-phenyl)-propyl]-amide.

11. A compound of the formula I as claimed in any of claims 1 to 5, or a pharmaceutically acceptable salt thereof, wherein the compound is selected from the series consisting of

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid bis-[((R)-1-phenyl-propyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid bis-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide},

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(6-methoxy-pyridin-3-yl)-propyl]-amide} 8-[((R)-1 -phenyl-propyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 8-[((R)-1-phenyl-propyl)-amide] 6-[(pyrazin-2-ylmethyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(S)-1-(2-methoxy-pyrimidin-5-yl)-propyl]-annide} 8-[((R)-1-phenyl-propyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(6-cyano-pyridin-3-yl)-propyl]-amide} 8-[((R)-1 -phenyl-propyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1 -(5-methoxy-pyrazin-2-yl)-propyl]-amide} 8-[((R)-1 -phenyl-propyl)-amide],

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 8-[((R)-1-phenyl-propyl)-amide] 6-[(1 -pyrazin-2-yl-ethyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-2-methyl-propyl]-amide} 8-[(1 -pyrimidin-2-yl-ethyl)-amide],

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-[(1-isoxazol-3-yl-ethyl)-amide] 8-[((R)-1-phenyl-propyl)-amide], 3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 8-[((R)-1-phenyl-propyl)-amide] 6-[((S)-1 -pyrazin-2-yl-propyl)-amide], 3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 8-[((R)-1-phenyl-propyl)-amide] 6-[((S)-1 -pyrazin-2-yl-ethyl)-amide],

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(2,4-difluoro-phenyl)-propyl]-amide} 8-[((R)-1 -pyrazin-2-yl-ethyl)-amide],

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 8-{[(R)-1-(2-chloro-4-fluoro-phenyl)-propyl]-amide} 6-[(1-pyrimidin-2-yl-ethyl)-amide],

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 8-{[(R)-1-(2-chloro-phenyl)-propyl]-amide} 6-[(1-pyrimidin-2-yl-ethyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-2-methyl-propyl]-amide} 8-[((S)-1-pyrimidin-2-yl-ethyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-[((S)-1-pyrimidin-2-yl-ethyl)-amide],

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1 -(2,4-difluoro-phenyl)-propyl]-amide} 8-[((S)-1 -pyrazin-2-yl-ethyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-[((R)-1 -pyrimidin-2-yl-ethyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-[((R)-1 -pyrimidin-2-yl-propyl)-amide],

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 8-[((R)-1-phenyl-propyl)-amide] 6-{[(R)-1-(6-trifluoromethyl-pyridin-3-yl)-propyl]-amide},

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-{[(R)-1-(5-trifluoromethyl-pyrimidin-2-yl)-propyl]-amide},

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-{[(R)-1-(4-trifluoromethyl-phenyl)-propyl]-amide},

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-{[(R)-1-(6-trifluoromethyl-pyridin-3-yl)-propyl]-amide},

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-{[(R)-1-(5-trifluoromethyl-pyridin-2-yl)-propyl]-amide},

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 8-[((R)-1-pyrimidin-2-yl-propyl)-amide] 6-{[(R)-1-(4-trifluoromethyl-phenyl)-propyl]-amide},

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-[((R)-1-phenyl-propyl)-amide] 8-{[(R)-1-(6-trifluoromethyl-pyridin-3-yl)-propyl]-amide},

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-[((S)-1-pyrimidin-2-yl-propyl)-amide],

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-dicyclopropylmethyl-amide 8-[((R)-1-phenyl-propyl)-amide],

5,6,7,8-tetrahydro-indolizine-1,3-dicarboxylic acid 3-[((S)-1-phenyl-propyl)-amide] 1-[((R)-1 -phenyl-propyl)-amide],

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(6-methoxy-pyridin-2-yl)-propyl]-amide} 8-[((R)-1-phenyl-propyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-[((R)-1-phenyl-propyl)-amide],

5,6,7,8-tetrahydro-indolizine-1,3-dicarboxylic acid 3-[((S)-1-cyclopropyl-ethyl)-amide]1-[((R)-1 -phenyl-propyl)-amide],

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]thiazine-6,8-dicarboxylic acid 8-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 6-[((R)-1 -phenyl-propyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-{[(R)-1-(5-methoxy-pyrazin-2-yl)-propyl]-amide},

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-(S)-indan-1-ylamide 8-[((R)-1-phenyl-propyl)-amide],
5,6,7,8-tetrahydro-indolizine-1,3-dicarboxylic acid 3-[((R)-cyclopropyl-phenyl-methyl)-amide] 1-[((R)-1-phenyl-propyl)-amide],
3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-[((R)-1-phenyl-ethyl)-amide],
5,6,7,8-tetrahydro-indolizine-1,3-dicarboxylic acid bis-[((R)-1-phenyl-propyl)-amide],
5,6,7,8-tetrahydro-indolizine-1,3-dicarboxylic acid 3-{[(S)-1-(4-fluoro-phenyl)-ethyl]-amide} 1-[((R)-1-phenyl-propyl)-amide],
3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(S)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-[((R)-1 -phenyl-propyl)-amide],
5,6,7,8-tetrahydro-indolizine-1,3-dicarboxylic acid 3-[((R)-1-cyclopropyl-ethyl)-amide] 1 -[((R)-1 -phenyl-propyl)-amide],
5,6,7,8-tetrahydro-indolizine-1,3-dicarboxylic acid 3-[(4-fluoro-benzyl)-methyl-amide] 1 -[((R)-1 -phenyl-propyl)-amide],
3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 8-{[(R)-1-(2-chloro-phenyl)-propyl]-amide} 6-cyclopropylmethyl-amide, and
5,6,7,8-tetrahydro-indolizine-1,3-dicarboxylic acid 3-[((R)-1-phenyl-propyl)-amide] 1-[(thiazol-2-ylmethyl)-amide].

12. A compound of the formula I as claimed in any of claims 1 to 6, or a pharmaceutically acceptable salt thereof, wherein the compound is selected from the series consisting of
{[8-((R)-1-phenyl-propylcarbamoyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6-carbonyl]-amino}-acetic acid ethyl ester,
(R)-1-[8-((R)-1-phenyl-propylcarbamoyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6-carbonyl]-pyrrolidine-2-carboxylic acid isopropyl ester,
((R)-1 -{6-[(R)-1 -(4-fluoro-phenyl)-ethylcarbamoyl]-3,4-dihydro-1 H-pyrrolo[2,1 -c][1,4]oxazine-8-carbonyl}-pyrrolidin-2-yl)-acetic acid ethyl ester,
(R)-1-[8-((R)-1-phenyl-propylcarbamoyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6-carbonyl]-pyrrolidine-2-carboxylic acid ethyl ester,
(S)-2-{[8-((R)-1 -phenyl-propylcarbamoyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6-carbonyl]-amino}-propionic acid isopropyl ester,
{methyl-[8-((R)-1 -phenyl-propylcarbamoyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6-carbonyl]-amino}-acetic acid isopropyl ester,
{methyl-[8-((R)-1 -phenyl-propylcarbamoyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-

6-carbonyl]-amino}-acetic acid ethyl ester,
(S)-2-{methyl-[8-((R)-1 -phenyl-propylcarbamoyl)-3,4-dihydro-1 H-pyrrolo[2,1 -c][1,4]oxazine-6-carbonyl]-amino}-propionic acid ethyl ester,
(S)-2-{methyl-[8-((R)-1 -phenyl-propylcarbamoyl)-3,4-dihydro-1 H-pyrrolo[2,1 -c][1,4]oxazine-6-carbonyl]-amino}-propionic acid isopropyl ester,
{(R)-1-[8-((R)-1-phenyl-propylcarbamoyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6-carbonyl]-pyrrolidin-2-yl}-acetic acid ethyl ester,
{(R)-1-[8-((R)-1-phenyl-propylcarbamoyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6-carbonyl]-pyrrolidin-2-yl}-acetic acid isopropyl ester, and
(R)-1-{6-[(R)-1-(4-fluoro-phenyl)-2-methyl-propylcarbamoyl]-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carbonyl}-pyrrolidine-2-carboxylic acid methyl ester.

13. A pharmaceutical composition, comprising a compound of the formula I, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof, according to any of claims 1 to 12, and a pharmaceutically acceptable carrier.

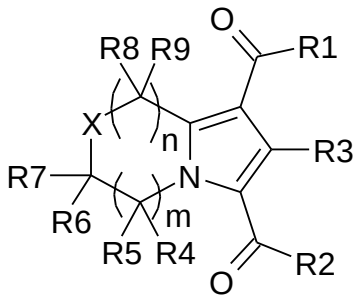
14. A compound of the formula I, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof, according to any of claims 1 to 12 for the treatment of TASK-1 channel-mediated diseases.

15. A compound of the formula I, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof, according to any of claims 1 to 12, for use in the treatment of arrhythmias, atrial arrhythmias, atrial tachyarrhythmias, atrial fibrillation, atrial flutter, stroke, respiratory disorders, sleep-related respiratory disorders, sleep apnea, central sleep apnea, obstructive sleep apnea, upper airway resistance syndrome, Cheyne-Stokes respiration, snoring, disrupted central respiratory drive, sudden child death, postoperative hypoxia, postoperative apnea, muscle-related respiratory disorders, respiratory disorders after long-term mechanical ventilation, respiratory disorders during adaptation in high mountains, chronic lung disorders with hypoxia or hypercapnia, chronic obstructive pulmonary disease, obesity hypoventilation syndrome, disturbed motor function, dysphagia, sialorrhea, dysarthria, facial paresis, hypomimia, Parkinson's disease, amyotrophic lateral sclerosis, dementia, neuromuscular diseases, inflammatory disorders, inflammatory disorders of the central nervous system, immunomodulatory disorders, immunomodulatory disorders of the central nervous system,

autoimmune diseases or multiple sclerosis, or as a respiratory stimulant for the treatment of respiratory depression, a respiratory stimulant for the treatment of respiratory depression associated with anesthesia or procedural sedations or caused by opioids, or for weaning from long-term mechanical ventilation.

Claims

1. A compound of the formula I, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof,



I

wherein

n is selected from the series consisting of 0 and 1;

m is selected from the series consisting of 0, 1 and 2, with the proviso that m and n cannot simultaneously be 0;

X is selected from the series consisting of oxygen, sulfur and (R10)(R11)C;

one of the groups R1 and R2 is the group R20-NH- and the other of the groups R1 and R2 is the group (R30)(R31)N-;

R3 is selected from the series consisting of hydrogen, halogen and (C_1-C_4)-alkyl;

R4, R5, R6, R7, R8, R9, R10 and R11 are independently of one another selected from the series consisting of hydrogen, fluorine and (C_1-C_4)-alkyl;

R20 is selected from the series consisting of (C_5-C_7)-cycloalkyl to which a benzene ring or a Het1 ring is fused, and (R21)(R22)(R23)C-, wherein the (C_5-C_7)-cycloalkyl is unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of fluorine, (C_1-C_4)-alkyl and (C_1-C_4)-alkyl-O-, and the fused benzene ring and

Het1 ring is unsubstituted or substituted by one or more identical or different substituents R24;

R21 is selected from the series consisting of phenyl and Het1, wherein phenyl and Het1 are unsubstituted or substituted by one or more identical or different substituents R24;

R22 is selected from the series consisting of hydrogen, $(C_1\text{-}C_4)$-alkyl, $(C_3\text{-}C_7)$-cycloalkyl, R25-$(C_1\text{-}C_4)$-alkyl- and phenyl;

R23 is selected from the series consisting of hydrogen and $(C_1\text{-}C_4)$-alkyl;

R24 is selected from the series consisting of halogen, $(C_1\text{-}C_4)$-alkyl, $(C_3\text{-}C_7)$-cycloalkyl, HO-, $(C_1\text{-}C_4)$-alkyl-O-, $(C_1\text{-}C_4)$-alkyl-$S(O)_p$-, F_5S-, NC-, $(C_1\text{-}C_4)$-alkyl-O-C(O)-, -$(C_3\text{-}C_5)$-alkanediyl-, -O-$(C_1\text{-}C_4)$-alkanediyl-O- and -$(C_1\text{-}C_4)$-alkanediyl-O-C(O)-;

R25 is selected from the series consisting of $(C_3\text{-}C_7)$-cycloalkyl, $(C_1\text{-}C_4)$-alkyl-O- and $(C_1\text{-}C_4)$-alkyl-S-;

R30 is selected from the series consisting of hydrogen, $(C_1\text{-}C_4)$-alkyl, $(C_3\text{-}C_7)$-cycloalkyl-$(C_1\text{-}C_4)$-alkyl-, HO-$(C_1\text{-}C_4)$-alkyl- and $(C_1\text{-}C_4)$-alkyl-O-$(C_1\text{-}C_4)$-alkyl-;

R31 is selected from the series consisting of $(C_3\text{-}C_7)$-cycloalkyl, $(C_5\text{-}C_7)$-cycloalkyl to which a benzene ring is fused, phenyl, Het2 and (R32)(R33)(R34)C-, wherein the $(C_3\text{-}C_7)$-cycloalkyl and $(C_5\text{-}C_7)$-cycloalkyl are unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of fluorine, $(C_1\text{-}C_4)$-alkyl, HO- and $(C_1\text{-}C_4)$-alkyl-O- and the fused benzene ring is unsubstituted or substituted by one or more identical or different substituents R35;

or the groups R30 and R31, together with the nitrogen atom carrying them, form a 4-membered to 10-membered, monocyclic or bicyclic, saturated or partially unsaturated heterocycle which, in addition to the nitrogen atom carrying R30 and R31, comprises 0 or 1 further ring heteroatom selected from the series consisting of nitrogen, oxygen and sulfur, and which is unsubstituted or substituted by one or more identical or different substituents R36;

R32 is selected from the series consisting of hydrogen and $(C_1\text{-}C_4)$-alkyl;

R33 is selected from the series consisting of hydrogen, (C_1-C_4)-alkyl, (C_3-C_7)-cycloalkyl, R37-(C_1-C_4)-alkyl- and (C_1-C_4)-alkyl-O-C(O)-;

or R32 and R33, together with the carbon atom carrying them, form a (C_3-C_7)-cycloalkane ring which, irrespective of the group R34, is unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of fluorine and (C_1-C_4)-alkyl;

R34 is selected from the series consisting of hydrogen, (C_1-C_6)-alkyl, (C_3-C_7)-cycloalkyl, R38-(C_3-C_7)-cycloalkyl-, (C_1-C_4)-alkyl-O-C(O)-, (R39)(R40)N-C(O)-, phenyl and Het2, wherein the (C_1-C_6)-alkyl is unsubstituted or substituted by one or more identical or different substituents R41, and the phenyl is unsubstituted or substituted by one or more identical or different substituents R35;

R35 is selected from the series consisting of halogen, (C_1-C_4)-alkyl, HO-(C_1-C_4)-alkyl-, (C_1-C_4)-alkyl-O-(C_1-C_4)-alkyl-, (C_1-C_4)-alkyl-O-C(O)- (C_1-C_4)-alkyl-, NC-, HO-, (C_1-C_4)-alkyl-O-, (C_1-C_4)-alkyl-S(O)$_p$-, (C_1-C_4)-alkyl-S(O)$_2$-NH-, R42-O-C(O)-, (R43)(R44)N-C(O)- and (R45)(R46)N-S(O)$_2$-;

R36 is selected from the series consisting of fluorine, (C_1-C_6)-alkyl, (C_2-C_4)-alkenyl, (C_2-C_4)-alkynyl, (C_3-C_7)-cycloalkyl, phenyl, Het3, HO-, (C_1-C_4)-alkyl-O-, (C_3-C_7)-cycloalkyl-O-, (C_3-C_7)-cycloalkyl-(Ci-C4)-alkyl-0-, phenyl-O-, (Ci-C4)-alkyl-S(0)p-, NC- and R47-O-C(O)-, wherein the (C_1-C_6)-alkyl is unsubstituted or substituted by one or more identical or different substituents R48;

R37 is selected from the series consisting of (C_3-C_7)-cycloalkyl, (C_1-C_4)-alkyl-O- and (C_1-C_4)-alkyl-S-;

R38 is selected from the series consisting of phenyl, HO- and (C_1-C_4)-alkyl-O-;

R39, R40, R42, R47, R49, R50 and R51 are independently of one another selected from the series consisting of hydrogen and (C_1-C_4)-alkyl;

R41 is selected from the series consisting of (C_3-C_7)-cycloalkyl, phenyl, Het1, HO-, (C_1-C_4)-alkyl-O- and (C_1-C_4)-alkyl-S-;

R43, R44, R45 and R46 are independently of one another selected from the series consisting of hydrogen, $(C_1$-$C_4)$-alkyl, HO-$(C_1$-$C_4)$-alkyl- and $(C_1$-$C_4)$-alkyl-O-$(C_1$-$C_4)$-alkyl-;

R48 is selected from the series consisting of $(C_3$-$C_7)$-cycloalkyl, phenyl, Het3, HO-, $(C_1$-$C_4)$-alkyl-O-, $(C_1$-$C_4)$-alkyl-C(O)-O-, $(C_1$-$C_4)$-alkyl-$S(O)_p$-, $(C_1$-$C_4)$-alkyl-C(O)-(R49)N-, (R50)(R51)N-C(O)- and $(C_1$-$C_4)$-alkyl-O-C(O)-;

p is selected from the series consisting of 0, 1 and 2, wherein all numbers p are independent of one another;

Het1 is a 5-membered or 6-membered, monocyclic, aromatic heterocycle comprising 1 or 2 identical or different ring heteroatoms selected from the series consisting of nitrogen, oxygen and sulfur, which is bonded via a ring carbon atom and in the residue R41 Het1 is unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of halogen, $(C_1$-$C_4)$-alkyl, $(C_3$-$C_7)$-cycloalkyl, NC-, HO-, $(C_1$-$C_4)$-alkyl-O- and $(C_1$-$C_4)$-alkyl-$S(O)_p$-;

Het2 is a 4-membered to 10-membered, monocyclic or bicyclic, saturated, partially unsaturated or aromatic heterocycle comprising 1, 2, 3 or 4 identical or different ring heteroatoms selected from the series consisting of nitrogen, oxygen and sulfur, which is bonded via a ring carbon atom and which is unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of halogen, $(C_1$-$C_4)$-alkyl, NC-, HO- and $(C_1$-$C_4)$-alkyl-O-;

Het3 is a 4-membered to 7-membered, monocyclic, saturated, partially unsaturated or aromatic heterocycle comprising 1, 2 or 3 identical or different ring heteroatoms selected from the series consisting of nitrogen, oxygen and sulfur, which is unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of halogen, $(C_1$-$C_4)$-alkyl, $(C_3$-$C_7)$-cycloalkyl, NC-, HO-, $(C_1$-$C_4)$-alkyl-O- and $(C_1$-$C_4)$-alkyl-$S(O)_p$-;

wherein all phenyl groups in the residues R22, R31, R36, R38, R41 and R48 are unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of halogen, $(C_1$-$C_4)$-alkyl, NC-, HO- and $(C_1$-$C_4)$-alkyl-O-;

wherein all cycloalkyl groups in the residues R22, R24, R25, R30, R33, R34, R36, R37, R41, R48, R51, Het1 and Het3, independently of any other substituents which can be present on a cycloalkyl group, can be substituted by one or more identical or different substituents selected from the series consisting of fluorine and (C_1-C_4)-alkyl;

wherein all alkyl groups, alkanediyl groups, alkenyl groups and alkynyl groups, independently of any other substituents which can be present on an alkyl group, can be substituted by one or more fluorine substituents.

2. A compound of the formula I as claimed in claim 1, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof, wherein

n is 1;

m is selected from the series consisting of 0 and 1 if X is sulfur or (R10)(R11)C, and m is 1 if X is oxygen;

R3 is selected from the series consisting of hydrogen, fluorine, chlorine, bromine and (Ci-C4)-alkyl;

R4, R5, R6, R7, R8, R9, R10 and R11 are independently of one another selected from the series consisting of hydrogen and (C_1-C_4)-alkyl, with the proviso that at least six of these groups are hydrogen.

3. A compound of the formula I as claimed in any of claims 1 and 2, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof, wherein

n is 1;

m is 1;

X is selected from the series consisting of oxygen, sulfur and (R10)(R11)C;

one of the groups R1 and R2 is the group R20-NH- and the other of the groups R1 and R2 is the group (R30)(R31)N-;

R3, R4, R5, R6, R7, R8, R9, R10 and R11 are hydrogen;

R20 is (R21)(R22)(R23)C-;

R21 is selected from the series consisting of phenyl and Het1, wherein phenyl and Het1 are unsubstituted or substituted by one, two or three identical or different substituents R24;

R22 is selected from the series consisting of hydrogen, (C_1-C_4)-alkyl and cyclopropyl;

R23 is hydrogen;

R24 is selected from the series consisting of fluorine, chlorine, bromine, (C_1-C_4)-alkyl, (C_3-C_7)-cycloalkyl-, HO-, (C_1-C_4)-alkyl-O-, (C_1-C_4)-alkyl-$S(O)_p$-, F_5S-, NC- and (C_1-C_4)-alkyl-O-C(O)-;

R30 is selected from the series consisting of hydrogen, (C_1-C_4)-alkyl, cyclopropyl-(C_1-C_2)-alkyl-, HO-(C_1-C_2)-alkyl- and (C_1-C_2)-alkyl-O-(C_1-C_2)-alkyl-;

R31 is selected from the series consisting of (C_3-C_6)-cycloalkyl, (C_5-C_6)-cycloalkyl to which a benzene ring is fused, phenyl, Het2 and (R32)(R33)(R34)C-, wherein the (C_3-C_6)-cycloalkyl and (C_5-C_6)-cycloalkyl are unsubstituted or substituted by one or two identical or different substituents selected from the series consisting of fluorine, (C_1-C_4)-alkyl, HO- and (C_1-C_4)-alkyl-O- and the fused benzene ring is unsubstituted or substituted by one or two identical or different substituents R35;

or the groups R30 and R31, together with the nitrogen atom carrying them, form a 4-membered to 7-membered, monocyclic, saturated heterocycle which, in addition to the nitrogen atom carrying R30 and R31, comprises 0 or 1 further ring heteroatom selected from the series consisting of nitrogen, oxygen and sulfur, and which is unsubstituted or substituted by one or two identical or different substituents R36;

R32 is selected from the series consisting of hydrogen and (C_1-C_4)-alkyl;

R33 is selected from the series consisting of hydrogen, (C_1-C_4)-alkyl, cyclopropyl and

R37-(C_1-C_2)-alkyl-;

R34 is selected from the series consisting of hydrogen, (C_1-C_6)-alkyl, (C_3-C_6)-cycloalkyl, R38-(C_3-C_6)-cycloalkyl-, (C_1-C_4)-alkyl-O-C(O)-, (R39)(R40)N-C(O)-, phenyl and Het2, wherein the (C_1-C_6)-alkyl is unsubstituted or substituted by one or two identical or different substituents R41, and the phenyl is unsubstituted or substituted by one or more identical or different substituents R35;

R35 is selected from the series of fluorine, chlorine, bromine, (C_1-C_4)-alkyl, HO-(C_1-C_4)-alkyl-, (C_1-C_4)-alkyl-O-(C_1-C_4)-alkyl-, (C_1-C_4)-alkyl-O-C(O)- (C_1-C_4)-alkyl-, NC-, HO-, (C_1-C_4)-alkyl-O-, (C_1-C_4)-alkyl-S(O)$_p$-, (C_1-C_4)-alkyl-S(O)2-NH-, R42-O-C(O)-, (R43)(R44)N-C(O)- and (R45)(R46)N-S(O)2-;

R36 is selected from the series consisting of fluorine, (C_1-C_4)-alkyl, ethenyl, ethynyl, (C_3-C_6)-cycloalkyl, phenyl, Het3, (C_1-C_4)-alkyl-O-, (C_3-C_6)-cycloalkyl-O-, (C_3-C_6)-cycloalkyl-(C_1-C_2)-alkyl-O-, phenyl-O-, (C_1-C_2)-alkyl-S(O)$_p$-, NC- and R47-O-C(O)-, wherein the (C_1-C_4)-alkyl is unsubstituted or substituted by one or two identical or different substituents R48;

R37 is selected from the series consisting of cyclopropyl and (C_1-C_2)-alkyl-O-;

R38 is selected from the series consisting of phenyl, HO- and (C_1-C_2)-alkyl-O-;

R39, R40, R42, R47, R49, R50 and R51 are independently of one another selected from the series consisting of hydrogen and (C_1-C_4)-alkyl;

R41 is selected from the series consisting of (C_3-C_6)-cycloalkyl, phenyl, Het1, HO-, (C_1-C_4)-alkyl-O- and (C_1-C_4)-alkyl-S-;

R43, R44, R45 and R46 are independently of one another selected from the series consisting of hydrogen, (C_1-C_4)-alkyl, HO-(C_1-C_4)-alkyl- and (C_1-C_4)-alkyl-O-(C_1-C_4)-alkyl-;

R48 is selected from the series consisting of (C_3-C_6)-cycloalkyl, phenyl, Het3, HO-, (C_1-C_4)-alkyl-O-, (C_1-C_4)-alkyl-C(O)-O-, (C_1-C_4)-alkyl-S(O)$_p$-, (C_1-C_4)-alkyl-C(O)-(R49)N-, (R50)(R51)N-C(O)- and (C_1-C_4)-alkyl-O-C(O)-;

p is selected from the series consisting of 0 and 2, wherein all numbers p are independent of one another;

Het1 is a 5-membered or 6-membered, monocyclic, aromatic heterocycle comprising one ring heteroatom selected from the series consisting of nitrogen, oxygen and sulfur or one ring nitrogen atom and one further ring heteroatom selected from the series consisting of nitrogen, oxygen and sulfur, which is bonded via a ring carbon atom and in the residue R41 Het1 is unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of halogen, $(C_1\text{-}C_4)$-alkyl, $(C_3\text{-}C_7)$-cycloalkyl, NC-, HO-, $(C_1\text{-}C_4)$-alkyl-O- and $(C_1\text{-}C_4)$-alkyl-$S(O)_p$-;

Het2 is a 5-membered to 10-membered, monocyclic or bicyclic, saturated, partially unsaturated or aromatic heterocycle comprising 1, 2, 3 or 4 nitrogen atoms, or 1 oxygen atom or sulfur atom, or 1 or 2 nitrogen atoms and 1 oxygen atom or sulfur atom, as ring heteroatoms, which is bonded via a ring carbon atom and which is unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of halogen, $(C_1\text{-}C_4)$-alkyl, NC-, HO- and $(C_1\text{-}C_4)$-alkyl-O-;

Het3 is a 5-membered or 6-membered, monocyclic, saturated, partially unsaturated or aromatic heterocycle comprising 1, 2 or 3 nitrogen atoms, or 1 sulfur atom or oxygen atom, or one nitrogen atom and one oxygen atom or sulfur atom, as ring heteroatoms, which is unsubstituted or substituted by one or two identical or different substituents selected from the series consisting of halogen, $(C_1\text{-}C_4)$-alkyl and $(C_1\text{-}C_4)$-alkyl-O-;

wherein all phenyl groups in the residues R31, R36, R38, R41, and R48 are unsubstituted or substituted by one, two or three identical or different substituents selected from the series consisting of fluorine, chlorine, $(C_1\text{-}C_4)$-alkyl and $(C_1\text{-}C_2)$-alkyl-O-;

wherein all cycloalkyl groups in the residues R24, R34, R36, R41, R48, and Het1, independently of any other substituents which can be present on a cycloalkyl group, can be substituted by one or two identical or different substituents selected from the series consisting of fluorine and $(C_1\text{-}C_4)$-alkyl;

wherein all alkyl groups, independently of any other substituents which can be present on an alkyl group, can be substituted by one or more fluorine substituents.

4. A compound of the formula I as claimed in any of claims 1 to 3, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof, wherein

n is 1;

m is 1;

X is selected from the series consisting of oxygen, sulfur and (R10)(R11)C;

one of the groups R1 and R2 is the group R20-NH- and the other of the groups R1 and R2 is the group (R30)(R31)N-;

R3, R4, R5, R6, R7, R8, R9, R10 and R11 are hydrogen;

R20 is (R21)(R22)(R23)C-;

R21 is selected from the series consisting of phenyl and Het1, wherein phenyl and Het1 are unsubstituted or substituted by one, two or three identical or different substituents R24;

R22 is selected from the series consisting of hydrogen, (C_1-C_4)-alkyl and cyclopropyl;

R23 is hydrogen;

R24 is selected from the series consisting of fluorine, chlorine, bromine, (C_1-C_4)-alkyl, (C_3-C_7)-cycloalkyl-, (C_1-C_4)-alkyl-O-, (C_1-C_4)-alkyl-S-, F_5S- and NC-;

R30 is selected from the series consisting of hydrogen and (CrC4)-alkyl;

R31 is selected from the series consisting of (C_3-C_6)-cycloalkyl, (C_5-C_6)-cycloalkyl to which a benzene ring is fused, Het2 and (R32)(R33)(R34)C-, wherein the Het2, which is bonded via a ring carbon atom, is a 4-membered to 6-membered, monocyclic, saturated heterocycle which comprises one ring heteroatom which is an oxygen atom, or is (C_5-C_6)-cycloalkyl to which a pyridine, pyrazine or pyrimidine ring is fused, and wherein the (C_3-C_6)-cycloalkyl and all (C_5-C_6)-cycloalkyl are unsubstituted or substituted by one or two identical or different substituents selected from the series consisting of fluorine, (C_1-C_4)-alkyl and (C_1-C_4)-alkyl-O-

, and wherein the fused benzene, pyridine, pyrazine and pyrimidine rings all are unsubstituted or substituted by one or two identical or different substituents selected from the series consisting of halogen, $(C_1$-$C_4)$-alkyl, NC-, HO- and $(C_1$-$C_4)$-alkyl-O-;

or the groups R30 and R31, together with the nitrogen atom carrying them, form a 5-membered to 6-membered, monocyclic, saturated heterocycle which, in addition to the nitrogen atom carrying R30 and R31, comprises 0 or 1 further ring heteroatom selected from the series consisting of nitrogen, oxygen and sulfur, and which is unsubstituted or substituted by one or two identical or different substituents R36;

R32 is selected from the series consisting of hydrogen and $(C_1$-$C_4)$-alkyl;

R33 is selected from the series consisting of hydrogen, $(C_1$-$C_4)$-alkyl and cyclopropyl;

R34 is selected from the series consisting of $(C_1$-$C_6)$-alkyl, $(C_3$-$C_6)$-cycloalkyl, $(C_1$-$C_4)$-alkyl-O-C(O)-, (R39)(R40)N-C(O)-, phenyl and Het2, wherein the $(C_1$-$C_6)$-alkyl is unsubstituted or substituted by one or two identical or different substituents R41, and wherein the phenyl is unsubstituted or substituted by one or more identical or different substituents R35, and wherein the Het2, which is bonded via a ring carbon atom, is a 5-membered to 6-membered, monocyclic, saturated, partially unsaturated or aromatic heterocycle comprising 1, 2, 3 or 4 nitrogen atoms, or 1 oxygen atom or sulfur atom, or 1 or 2 nitrogen atoms and 1 oxygen atom or sulfur atom, as ring heteroatoms, and is unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of halogen, $(C_1$-$C_4)$-alkyl, NC-, HO-and $(C_1$-$C_4)$-alkyl-O-;

R35 is selected from the series of fluorine, chlorine, bromine, $(C_1$-$C_4)$-alkyl, HO-$(C_1$-$C_4)$-alkyl-, $(C_1$-$C_4)$-alkyl-O-$(C_1$-$C_4)$-alkyl-, $(C_1$-$C_4)$-alkyl-O-C(O)- $(C_1$-$C_4)$-alkyl-, NC-, HO-, $(C_1$-$C_4)$-alkyl-O-, $(C_1$-$C_4)$-alkyl-$S(O)_p$-, $(C_1$-$C_4)$-alkyl-$S(O)_2$-NH-, R42-O-C(O)-, (R43)(R44)N-C(O)- and (R45)(R46)N-$S(O)_2$-;

R36 is selected from the series consisting of fluorine, $(C_1$-$C_4)$-alkyl, ethenyl, ethynyl, $(C_3$-$C_6)$-cycloalkyl, phenyl, Het3, $(C_1$-$C_4)$-alkyl-O-, $(C_3$-$C_6)$-cycloalkyl-O-, $(C_3$-$C_6)$-cycloalkyl-$(C_1$-$C_2)$-alkyl-O-, phenyl-O-, $(C_1$-$C_2)$-alkyl-$S(O)_p$-, NC- and R47-O-C(O)-, wherein the $(C_1$-$C_4)$-alkyl is unsubstituted or substituted by one or two identical or different substituents R48;

R39, R40, R42, R43, R44, R45, R46, R47, R49, R50 and R51 are independently of one another selected from the series consisting of hydrogen and (C_1-C_4)-alkyl;

R41 is selected from the series consisting of (C_3-C_6)-cycloalkyl, phenyl and Het1;

R48 is selected from the series consisting of (C_3-C_6)-cycloalkyl, phenyl, Het3, HO-, (C_1-C_4)-alkyl-O-, (C_1-C_4)-alkyl-C(O)-O-, (C_1-C_4)-alkyl-S(O)$_p$-, (C_1-C_4)-alkyl-C(O)-(R49)N-, (R50)(R51)N-C(O)- and (C_1-C_4)-alkyl-O-C(O)-;

p is selected from the series consisting of 0 and 2, wherein all numbers p are independent of one another;

Het1 is a 5-membered or 6-membered, monocyclic, aromatic heterocycle comprising one ring heteroatom selected from the series consisting of nitrogen, oxygen and sulfur or one ring nitrogen atom and one further ring heteroatom selected from the series consisting of nitrogen, oxygen and sulfur, which is bonded via a ring carbon atom and in residue R41 Het1 is unsubstituted or substituted by one or more identical or different substituents selected from the series consisting of halogen, (C_1-C_4)-alkyl, (C_3-C_7)-cycloalkyl, NC-, HO-, (C_1-C_4)-alkyl-O- and (C_1-C_4)-alkyl-S(O)$_p$-;

Het3 is a 5-membered or 6-membered, monocyclic, saturated, partially unsaturated or aromatic heterocycle comprising 1, 2 or 3 nitrogen atoms, or 1 sulfur atom or oxygen atom, or 1 nitrogen atom and 1 oxygen atom or sulfur atom, as ring heteroatoms, which is unsubstituted or substituted by one or two identical or different substituents selected from the series consisting of fluorine, chlorine, NC-, (C_1-C_2)-10 alkyl and (C_1-C_2)-alkyl-O-;

wherein all phenyl groups in the residues R36, R38, R41 and R48 are unsubstituted or substituted by one, two or three identical or different substituents selected from the series consisting of fluorine, chlorine, (C_1-C_2)-alkyl and (C_1-C_2)-alkyl-O-;

wherein all cycloalkyl groups in the residues R24, R34, R36, R41, R48, and Het1, independently of any other substituents which can be present on a cycloalkyl group, can be substituted by one or two identical or different substituents selected from the series consisting of fluorine and (C_1-C_4)-alkyl;

wherein all alkyl groups, independently of any other substituents which can be present on an alkyl group, can be substituted by one or more fluorine substituents.

5. A compound of the formula I as claimed in any of claims 1 to 4, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof, wherein

n is 1;

m is 1;

X is selected from the series consisting of oxygen and (R10)(R11)C;

one of the groups R1 and R2 is the group R20-NH- and the other of the groups R1 and R2 is the group (R30)(R31)N-;

R3, R4, R5, R6, R7, R8, R9, R10 and R11 are hydrogen;

R20 is (R21)(R22)(R23)C-;

R21 is selected from the series consisting of phenyl and Het1, wherein Het1 is selected from the series consisting of pyridinyl, pyrimidinyl, pyrazinyl, pyridazinyl, pyrazolyl, imidazolyl, thiazolyl, isothiazolyl, oxazolyl, isoxazolyl, pyrrolyl, furanyl and thiophenyl, which are all bonded via a ring carbon atom, and wherein the phenyl and Het1 are all unsubstituted or substituted by one, two or three identical or different substituents selected from the series consisting of fluorine, chlorine, cyano, (C_1-C_4)-alkyl and (C_1-C_4)-alkyl-O-, wherein the alkyl groups can be substituted by one or more fluorine substituents;

R22 is hydrogen, (C_1-C_4)-alkyl or cyclopropyl;

R23 is hydrogen;

R30 is hydrogen or (C_1-C_4)-alkyl;

R31 is (R32)(R33)(R34)C-;

or the groups R30 and R31, together with the nitrogen atom carrying them, form a pyrrolidine ring which is unsubstituted or substituted by one or two identical or different substituents R36, wherein one of the substituents R36 is selected from the series consisting of fluorine, cyano, (C_1-C_4)-alkyl, cyclopropyl, (C_1-C_4)-alkyl-O-, phenyl, Het3 and (C_1-C_4)-alkyl-O-C(O)-, and a second of the substituents R36, if present, is selected from the series consisting of fluorine and (C_1-C_4)-alkyl, and wherein the (C_1-C_4)-alkyl groups representing R36 are independently of one another unsubstituted or substituted by one or two identical or different substituents R48, and wherein the alkyl groups can independently of one another be substituted by one or more fluorine substituents, and wherein the phenyl is unsubstituted or substituted by one, two or three identical or different substituents selected from the series consisting of fluorine, chlorine, (C_1-C_2)-alkyl, (C_1-C_2)-alkyl-O- and trifluoromethyl, and wherein the Het3 is selected from the series consisting of pyridinyl, pyrimidinyl, pyrazinyl, oxazolyl, isoxazolyl, thiophenyl and thiazolyl, which are all unsubstituted or substituted by one or two identical or different substituents selected from the series consisting of fluorine, chlorine, cyano, (C_1-C_2)-alkyl, (C_1-C_4)-alkyl-O- and rifluoromethyl;

R32 is hydrogen;

R33 is selected from the series consisting of hydrogen, (C_1-C_4)-alkyl and cyclopropyl;

R34 is selected from the series consisting of (C_1-C_4)-alkyl-O-C(O)-, cyclopropyl, phenyl and Het2, wherein Het2 is selected from the series consisting of pyridinyl, pyrimidinyl, pyrazinyl, pyridazinyl, pyrazolyl, imidazolyl, thiazolyl, isothiazolyl, oxazolyl, isoxazolyl, pyrrolyl, furanyl and thiophenyl, which are all bonded via a ring carbon atom, and wherein the phenyl and Het2 groups are unsubstituted or substituted by one or two identical or different substituents selected from the series consisting of fluorine, chlorine, cyano, (C_1-C_4)-alkyl- and (C_1-C_4)-alkyl-O-, wherein the alkyl groups can be substituted by one or more fluorine substituents;

R48 is selected from the series consisting of cyclopropyl, (C_1-C_4)-alkyl-O-, (C_1-C_4)-alkyl-C(O)-O- and (C_1-C_4)-alkyl-O-C(O)-.

6. A compound of the formula I as claimed in any of claims 1 to 5, in any of its

stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a 30 pharmaceutically acceptable salt thereof, wherein

n is 1;

m is 1;

X is oxygen;

one of the groups R1 and R2 is the group R20-NH- and the other of the groups R1 and R2 is the group (R30)(R31)N-;

R3, R4, R5, R6, R7, R8 and R9 are hydrogen;

R20 is (R21)(R22)(R23)C-;

R21 is selected from the series consisting of phenyl and Het1, wherein Het1 is selected from the series consisting of pyridinyl, pyrimidinyl, thiazolyl and thiophenyl, which are all bonded via a ring carbon atom, and wherein Het1 is unsubstituted or substituted by one or two identical or different substituents one substituent of which is selected from the series consisting of fluorine, chlorine, cyano, methyl, trifluoromethyl and methoxy and a second substituent is selected from the series consisting of fluorine, chlorine, methyl and trifluoromethyl, and wherein phenyl is unsubstituted or substituted by one, two or three identical or different substituents one substituent of which is selected from the series consisting of fluorine, chlorine, cyano, methyl, trifluoromethyl and methoxy, and a second and third substituent are selected from the series consisting of fluorine, chlorine, methyl and trifluoromethyl;

R22 is selected from the series consisting of methyl, ethyl, n-propyl, isopropyl and cyclopropyl;

R23 is hydrogen;

the groups R30 and R31, together with the nitrogen atom carrying them, form a pyrrolidine ring which is unsubstituted or substituted in ring position 2 by one substituent R36 selected from the series consisting of methyl, ethyl, isopropyl, cyclopropyl, (C_1-C_4)-alkyl-O-C(O)-, (C_1-C_4)-alkyl-O-C(O)-CH_2- and trifluoromethyl; or

or R30 is hydrogen; and

R31 is (R32)(R33)(R34)C-; and
R34 is selected from the series consisting of phenyl and Het2, wherein Het2 is selected from the series consisting of pyridinyl, pyrimidinyl, pyrazinyl, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl and thiophenyl, which are bonded via a ring carbon atom, and wherein phenyl and Het2 are unsubstituted or substituted by one or two identical or different substituents selected from the series consisting of fluorine, chlorine, cyano, methyl, trifluoromethyl and methoxy; or

R30 is selected from the series consisting of hydrogen, methyl and ethyl; and
R31 is (R32)(R33)(R34)C-; and
R34 is (C_1-C_4)-alkyl-0-C(0)-.

R32 is hydrogen;

R33 is selected from the series consisting of hydrogen, methyl, ethyl, n-propyl and isopropyl.

7. A compound of the formula I as claimed in any of claims 1 to 6, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof, wherein

n is 1;

m is 1;

X is oxygen;

one of the groups R1 and R2 is the group R20-NH- and the other of the groups R1 and R2 is the group (R30)(R31)N-;

R3, R4, R5, R6, R7, R8 and R9 are hydrogen;

R20 is (R21)(R22)(R23)C-;

R21 is selected from the series consisting of phenyl and Het1, wherein Het1 is selected from the series consisting of pyridinyl, pyrimidinyl, thiazolyl and thiophenyl, which are all bonded

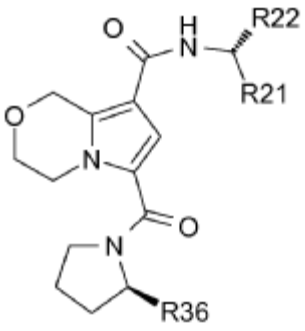
via a ring carbon atom, and wherein Het1 is substituted by one or two identical or different substituents one substituent of which is selected from the series consisting of fluorine, chlorine, cyano, trifluoromethyl and methoxy and a second substituent is selected from the series consisting of fluorine, chlorine, methyl and trifluoromethyl, and wherein phenyl is unsubstituted or substituted by one, two or three identical or different substituents one substituent of which is selected from the series consisting of fluorine, chlorine, cyano, trifluoromethyl and methoxy and a second substituent is selected from the series consisting of fluorine, chlorine, methyl and trifluoromethyl and a third substituent is fluorine;

R22 is selected from the series consisting of methyl, ethyl, n-propyl and isopropyl;

R23 is hydrogen;

the groups R30 and R31, together with the nitrogen atom carrying them, form a pyrrolidine ring which is unsubstituted or substituted in ring position 2 by one substituent R36 selected from the series consisting of methyl, ethyl, isopropyl, cyclopropyl and trifluoromethyl.

8. A compound of the formula Ig as claimed in any of claims 1 to 7, or a pharmaceutically acceptable salt thereof,



Ig

wherein

R21 is selected from the series consisting of phenyl and Het1, wherein Het1 is selected from the series consisting of pyridinyl, pyrimidinyl, thiazolyl and thiophenyl, which are bonded via a ring carbon atom, and Het1 is substituted by one or two identical or different substituents one substituent of which is selected from the series consisting of fluorine, chlorine, cyano, trifluoromethyl and methoxy and a second substituent is selected from the series consisting of fluorine, chlorine, methyl and trifluoromethyl, and phenyl is unsubstituted or substituted by

one, two or three identical or different substituents one substituent of which is selected from the series consisting of fluorine, chlorine, cyano, trifluoromethyl and methoxy and a second substituent is selected from the series consisting of fluorine, chlorine, methyl and trifluoromethyl and a third substituent is fluorine;

R22 is selected from the series consisting of methyl, ethyl, n-propyl and isopropyl;

R36 is selected from the series consisting of methyl, ethyl, isopropyl, cyclopropyl and trifluoromethyl.

9. A compound of the formula I as claimed in any of claims 1 to 6, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof, wherein

n is 1;

m is 1;

X is oxygen;

one of the groups R1 and R2 is the group R20-NH- and the other of the groups R1 and R2 is the group (R30)(R31)N-;

R3, R4, R5, R6, R7, R8 and R9 are hydrogen; R20 is (R21)(R22)(R23)C-;

R21 is selected from the series consisting of phenyl and Het1, wherein Het1 is selected from the series consisting of pyridinyl, pyrimidinyl, thiazolyl and thiophenyl, which are bonded via a ring carbon atom, and wherein Het1 is substituted by one or two identical or different substituents one substituent of which is selected from the series consisting of fluorine, chlorine, cyano, trifluoromethyl and methoxy and a second substituent is selected from the series consisting of fluorine, chlorine, methyl and trifluoromethyl, and wherein phenyl is unsubstituted or substituted by one, two or three identical or different substituents one substituent of which is selected from the series consisting of fluorine, chlorine, cyano, trifluoromethyl and methoxy and a second substituent is selected from the series consisting of fluorine, chlorine, methyl and trifluoromethyl and a third substituent is fluorine;

R22 is selected from the series consisting of methyl, ethyl, n-propyl and isopropyl;

R23 is hydrogen;

R30 is hydrogen;

R31 is (R32)(R33)(R34)C-;

R32 is hydrogen;

R33 is selected from the series consisting of hydrogen, methyl, ethyl, n-propyl and isopropyl;

R34 is selected from the series consisting of phenyl and Het2, wherein Het2 is selected from the series consisting of pyridinyl, pyrimidinyl, pyrazinyl, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl and thiophenyl, which are bonded via a ring carbon atom, and wherein the phenyl and Het2 are unsubstituted or substituted by one or two identical or different substituents selected from the series consisting of fluorine, chlorine, cyano, methyl, trifluoromethyl and methoxy.

10. A compound of the formula I as claimed in any of claims 1 to 5, or a pharmaceutically acceptable salt thereof, wherein the compound is selected from the series consisting of
6-(pyrrolidine-1 -carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1 -c][1,4]oxazine-8-carboxylic acid ((R)-1 -phenyl-propyl)-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(2-chloro-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid ((R)-1-phenyl-propyl)-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(2,4-difluoro-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(6-cyano-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(6-trifluoromethyl-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(4-cyano-2,6-difluoro-phenyl)-propyl]-amide,

6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(4-cyano-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(4-trifluoromethyl-phenyl)-propyl]-amide,
6-((S)-2-ethyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(6-trifluoromethyl-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(3-fluoro-4-trifluoromethyl-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(6-trifluoromethyl-pyridin-3-yl)-butyl]-amide,
6-((R)-2-trifluoromethyl-pyrrolidine-1 -carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(6-trifluoromethyl-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(3-chloro-4-cyano-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(5-trifluoromethyl-thiazol-2-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(5-chloro-6-methoxy-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(2-chloro-6-trifluoromethyl-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(5-trifluoromethyl-thiophen-2-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(3-chloro-4-trifluoromethyl-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(5-fluoro-6-trifluoromethyl-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(3,4-dichloro-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(2,6-difluoro-4-trifluoromethyl-phenyl)-propyl]-amide,

6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(6-methoxy-5-trifluoromethyl-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(3-chloro-4-fluoro-phenyl)-propyl]-amide,

6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(3-chloro-4-methoxy-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(5-chloro-6-cyano-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(2-fluoro-4-trifluoromethyl-phenyl)-propyl]-amide,
6-((S)-2-ethyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid ((R)-1-phenyl-propyl)-amide,
3-((S)-2-methyl-pyrrolidine-1 -carbonyl)-5,6,7,8-tetrahydro-indolizine-1 -carboxylic acid[(R)-1 -(6-cyano-pyridin-3-yl)-propyl]-amide,
3-((S)-2-methyl-pyrrolidine-1 -carbonyl)-5,6,7,8-tetrahydro-indolizine-1 -carboxylic acid[(R)-1-(6-trifluoromethyl-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-2-methyl-1 -(6-trifluoromethyl-pyridin-3-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(4-chloro-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(4-fluoro-3-trifluoromethyl-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(3,5-dichloro-pyridin-4-yl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1 -(2-chloro-5-fluoro-phenyl)-propyl]-amide,
6-((S)-2-methyl-pyrrolidine-1-carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carboxylic acid [(R)-1-(2,6-difluoro-phenyl)-propyl]-amide,
6-(pyrrolidine-1 -carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1 -c][1,4]oxazine-8-carboxylic acid [(R)-1 -(2,4-difluoro-phenyl)-propyl]-amide, and
6-(pyrrolidine-1 -carbonyl)-3,4-dihydro-1 H-pyrrolo[2,1 -c][1,4]oxazine-8-carboxylic acid [(R)-1-(2-chloro-4-fluoro-phenyl)-propyl]-amide.

11. A compound of the formula I as claimed in any of claims 1 to 5, or a pharmaceutically acceptable salt thereof, wherein the compound is selected from the series consisting of

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid bis-[((R)-1-phenyl-propyl)-amide],
3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid bis-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide},

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(6-methoxy-pyridin-3-yl)-propyl]-amide} 8-[((R)-1 -phenyl-propyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 8-[((R)-1-phenyl-propyl)-amide] 6-[(pyrazin-2-ylmethyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(S)-1-(2-methoxy-pyrimidin-5-yl)-propyl]-annide} 8-[((R)-1-phenyl-propyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(6-cyano-pyridin-3-yl)-propyl]-amide} 8-[((R)-1 -phenyl-propyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1 -(5-methoxy-pyrazin-2-yl)-propyl]-amide} 8-[((R)-1 -phenyl-propyl)-amide],

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 8-[((R)-1-phenyl-propyl)-amide] 6-[(1 -pyrazin-2-yl-ethyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-2-methyl-propyl]-amide} 8-[(1 -pyrimidin-2-yl-ethyl)-amide],

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-[(1-isoxazol-3-yl-ethyl)-amide] 8-[((R)-1-phenyl-propyl)-amide], 3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 8-[((R)-1-phenyl-propyl)-amide] 6-[((S)-1 -pyrazin-2-yl-propyl)-amide], 3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 8-[((R)-1-phenyl-propyl)-amide] 6-[((S)-1 -pyrazin-2-yl-ethyl)-amide],

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(2,4-difluoro-phenyl)-propyl]-amide} 8-[((R)-1 -pyrazin-2-yl-ethyl)-amide],

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 8-{[(R)-1-(2-chloro-4-fluoro-phenyl)-propyl]-amide} 6-[(1-pyrimidin-2-yl-ethyl)-amide],

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 8-{[(R)-1-(2-chloro-phenyl)-propyl]-amide} 6-[(1-pyrimidin-2-yl-ethyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-2-methyl-propyl]-amide} 8-[((S)-1-pyrimidin-2-yl-ethyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-[((S)-1-pyrimidin-2-yl-ethyl)-amide],

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1 -(2,4-difluoro-phenyl)-propyl]-amide} 8-[((S)-1 -pyrazin-2-yl-ethyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-[((R)-1 -pyrimidin-2-yl-ethyl)-amide],

3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-[((R)-1 -pyrimidin-2-yl-propyl)-amide],

3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 8-[((R)-1-phenyl-propyl)-amide] 6-{[(R)-1-(6-trifluoromethyl-pyridin-3-yl)-propyl]-amide},
3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-{[(R)-1-(5-trifluoromethyl-pyrimidin-2-yl)-propyl]-amide},
3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-{[(R)-1-(4-trifluoromethyl-phenyl)-propyl]-amide},
3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-{[(R)-1-(6-trifluoromethyl-pyridin-3-yl)-propyl]-amide},
3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-{[(R)-1-(5-trifluoromethyl-pyridin-2-yl)-propyl]-amide},
3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 8-[((R)-1-pyrimidin-2-yl-propyl)-amide] 6-{[(R)-1-(4-trifluoromethyl-phenyl)-propyl]-amide},
3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-[((R)-1-phenyl-propyl)-amide] 8-{[(R)-1-(6-trifluoromethyl-pyridin-3-yl)-propyl]-amide},
3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-[((S)-1-pyrimidin-2-yl-propyl)-amide],
3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-dicyclopropylmethyl-amide 8-[((R)-1-phenyl-propyl)-amide],
5,6,7,8-tetrahydro-indolizine-1,3-dicarboxylic acid 3-[((S)-1-phenyl-propyl)-amide] 1-[((R)-1 -phenyl-propyl)-amide],
3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(6-methoxy-pyridin-2-yl)-propyl]-amide} 8-[((R)-1-phenyl-propyl)-amide],
3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-[((R)-1-phenyl-propyl)-amide],
5,6,7,8-tetrahydro-indolizine-1,3-dicarboxylic acid 3-[((S)-1-cyclopropyl-ethyl)-amide]1-[((R)-1-phenyl-propyl)-amide],
3,4-dihydro-1H-pyrrolo[2,1-c][1,4]thiazine-6,8-dicarboxylic acid 8-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 6-[((R)-1 -phenyl-propyl)-amide],
3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-{[(R)-1-(5-methoxy-pyrazin-2-yl)-propyl]-amide},
3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-(S)-indan-1-ylamide 8-[((R)-1-phenyl-propyl)-amide],
5,6,7,8-tetrahydro-indolizine-1,3-dicarboxylic acid 3-[((R)-cyclopropyl-phenyl-methyl)-amide] 1-[((R)-1-phenyl-propyl)-amide],
3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(R)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-[((R)-1-phenyl-ethyl)-amide],

5,6,7,8-tetrahydro-indolizine-1,3-dicarboxylic acid bis-[((R)-1-phenyl-propyl)-amide],
5,6,7,8-tetrahydro-indolizine-1,3-dicarboxylic acid 3-{[(S)-1-(4-fluoro-phenyl)-ethyl]-amide} 1-[((R)-1-phenyl-propyl)-amide],
3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 6-{[(S)-1-(4-fluoro-phenyl)-ethyl]-amide} 8-[((R)-1 -phenyl-propyl)-amide],
5,6,7,8-tetrahydro-indolizine-1,3-dicarboxylic acid 3-[((R)-1-cyclopropyl-ethyl)-amide] 1 -[((R)-1 -phenyl-propyl)-amide],
5,6,7,8-tetrahydro-indolizine-1,3-dicarboxylic acid 3-[(4-fluoro-benzyl)-methyl-amide] 1 -[((R)-1 -phenyl-propyl)-amide],
3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6,8-dicarboxylic acid 8-{[(R)-1-(2-chloro-phenyl)-propyl]-amide} 6-cyclopropylmethyl-amide, and
5,6,7,8-tetrahydro-indolizine-1,3-dicarboxylic acid 3-[((R)-1-phenyl-propyl)-amide] 1-[(thiazol-2-ylmethyl)-amide].

12. A compound of the formula I as claimed in any of claims 1 to 6, or a pharmaceutically acceptable salt thereof, wherein the compound is selected from the series consisting of
{[8-((R)-1-phenyl-propylcarbamoyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6-carbonyl]-amino}-acetic acid ethyl ester,
(R)-1-[8-((R)-1-phenyl-propylcarbamoyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6-carbonyl]-pyrrolidine-2-carboxylic acid isopropyl ester,
((R)-1 -{6-[(R)-1 -(4-fluoro-phenyl)-ethylcarbamoyl]-3,4-dihydro-1 H-pyrrolo[2,1 -c][1,4]oxazine-8-carbonyl}-pyrrolidin-2-yl)-acetic acid ethyl ester,
(R)-1-[8-((R)-1-phenyl-propylcarbamoyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6-carbonyl]-pyrrolidine-2-carboxylic acid ethyl ester,
(S)-2-{[8-((R)-1 -phenyl-propylcarbamoyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6-carbonyl]-amino}-propionic acid isopropyl ester,
{methyl-[8-((R)-1 -phenyl-propylcarbamoyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6-carbonyl]-amino}-acetic acid isopropyl ester,
{methyl-[8-((R)-1 -phenyl-propylcarbamoyl)-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-6-carbonyl]-amino}-acetic acid ethyl ester,
(S)-2-{methyl-[8-((R)-1 -phenyl-propylcarbamoyl)-3,4-dihydro-1 H-pyrrolo[2,1 -c][1,4]oxazine-6-carbonyl]-amino}-propionic acid ethyl ester,
(S)-2-{methyl-[8-((R)-1 -phenyl-propylcarbamoyl)-3,4-dihydro-1 H-pyrrolo[2,1 -c][1,4]oxazine-6-carbonyl]-amino}-propionic acid isopropyl ester,
{(R)-1-[8-((R)-1-phenyl-propylcarbamoyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6-carbonyl]-pyrrolidin-2-yl}-acetic acid ethyl ester,

{(R)-1-[8-((R)-1-phenyl-propylcarbamoyl)-3,4-dihydro-1H-pyrrolo[2,1-c][1,4]oxazine-6-carbonyl]-pyrrolidin-2-yl}-acetic acid isopropyl ester, and
(R)-1-{6-[(R)-1-(4-fluoro-phenyl)-2-methyl-propylcarbamoyl]-3,4-dihydro-1 H-pyrrolo[2,1-c][1,4]oxazine-8-carbonyl}-pyrrolidine-2-carboxylic acid methyl ester.

13. A pharmaceutical composition, comprising a compound of the formula I, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof, according to any of claims 1 to 12, and a pharmaceutically acceptable carrier.

14. A compound of the formula I, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof, according to any of claims 1 to 12 for the treatment of TASK-1 channel-mediated diseases.

15. A compound of the formula I, in any of its stereoisomeric forms or a mixture of stereoisomeric forms in any ratio, or a pharmaceutically acceptable salt thereof, according to any of claims 1 to 12, for use in the treatment of arrhythmias, atrial arrhythmias, atrial tachyarrhythmias, atrial fibrillation, atrial flutter, stroke, respiratory disorders, sleep-related respiratory disorders, sleep apnea, central sleep apnea, obstructive sleep apnea, upper airway resistance syndrome, Cheyne-Stokes respiration, snoring, disrupted central respiratory drive, sudden child death, postoperative hypoxia, postoperative apnea, muscle-related respiratory disorders, respiratory disorders after long-term mechanical ventilation, respiratory disorders during adaptation in high mountains, chronic lung disorders with hypoxia or hypercapnia, chronic obstructive pulmonary disease, obesity hypoventilation syndrome, disturbed motor function, dysphagia, sialorrhea, dysarthria, facial paresis, hypomimia, Parkinson's disease, amyotrophic lateral sclerosis, dementia, neuromuscular diseases, inflammatory disorders, inflammatory disorders of the central nervous system, immunomodulatory disorders, immunomodulatory disorders of the central nervous system, autoimmune diseases or multiple sclerosis, or as a respiratory stimulant for the treatment of respiratory depression, a respiratory stimulant for the treatment of respiratory depression associated with anesthesia or procedural sedations or caused by opioids, or for weaning from long-term mechanical ventilation.