

pharmaceutically suitable salts of said prodrugs, tautomers or hydrates of the compounds of formula I.

The compounds of the formula I, their salts, their prodrugs, their hydrates and their tautomers effectively inhibit PDE10A even at low concentrations. They are additionally distinguished by a high selectivity in relation to the inhibition of the PDE10A vis-à-vis inhibition of other phosphodiesterase, such as PDE3 or PDE4. The compounds of the invention may additionally have one or more of the properties ii. to viii. mentioned above.

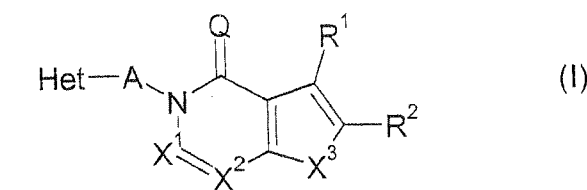
The compounds of the formula I, their salts, their prodrugs, their hydrates and their tautomers are therefore particularly suitable for treating disorders and conditions in creatures, especially human creatures, which can be treated or controlled by inhibition of phosphodiesterase type 10A.

The invention therefore also relates to the use of carboxamide compounds of the formula I, their tautomers, their hydrates and their pharmaceutically suitable salts for the manufacture of a medicament, in particular of a medicament which is suitable for the treatment of a disorder or a condition which can be treated by inhibition of phosphodiesterase type 10A.

The invention further relates to a medicament, in particular a medicament which is suitable for the treatment of a disorder or a condition which can be treated by inhibition of phosphodiesterase type 10A. The medicament comprises at least one compound of the formula I, as described herein, or a tautomer, or a hydrate or a prodrug of said compound I, or a pharmaceutically suitable salt of the compound of the formula I or a pharmaceutically suitable salt of the tautomer, the hydrate or the prodrug of compound of the formula I.

Summary of the Invention

In one aspect, there is provided a compound of formula I



wherein

Q is O or S;

X¹ is N or CH;

X² is N or C-R⁷;

X³ is O, S, -X⁴=C(R⁸)-, where C(R⁸) is bound to the carbon atom which carries R², or

-X⁵=C(R⁹)-, where X⁵ is bound to the carbon atom which carries R²;

X⁴ is N or C-R⁹;

X⁵ is N;

Het is selected from

- i. monocyclic C-bound 6-membered hetaryl having 1 or 2 nitrogen atoms as ring members, which is unsubstituted or may carry 1, 2, 3 or 4 identical or different substituents R^x,
- ii. fused bicyclic hetaryl having 1 or 2 nitrogen atoms and optionally a further heteroatom selected from O, S and N as ring members, benzothienyl or benzofuryl, where bicyclic hetaryl, benzothienyl and benzofuryl are, independently of each other, unsubstituted or may carry 1, 2, 3 or 4 identical or different substituents R^x, and
- iii. phenyl, which carries a monocyclic hetaryl radical having 1 or 2 nitrogen atoms and optionally a further heteroatom selected from O, S and N as ring members, which in addition

to monocyclic hetaryl, may carry 1, 2 or 3 identical or different substituents R^x ,

where

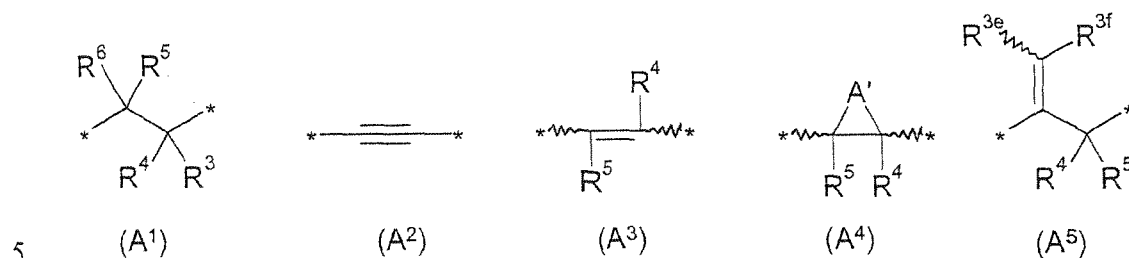
5 R^x is selected from the group consisting of H, halogen, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, C_3 - C_6 -cycloalkyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, OH, hydroxy- C_1 - C_4 -alkyl, O- C_3 - C_6 -cycloalkyl, benzyloxy, $C(O)O-(C_1-C_4-alkyl)$, $O-(C_1-C_4-alkyl)-CO_2H$, $N(R^{x1})(R^{x2})$, $C(O)N(R^{x1})(R^{x2})$, $C_1-C_4-alkyl-N(R^{x1})(R^{x2})$,
10 $-NR^{x3}-C(O)-N(R^{x1})(R^{x2})$, $NR^{x3}-C(O)O-(C_1-C_4-alkyl)$, $-N(R^{x3})-SO_2-R^{x4}$, phenyl, CN, $-SF_5$, $-OSF_5$, $-SO_2R^{x4}$, $-SR^{x4}$ and trimethylsilyl, where R^{x1} , R^{x2} , R^{x3} and R^{x4} , independently of each other are selected from the group consisting of hydrogen, C_1 - C_4 -alkyl, C_1 - C_4 -fluoroalkyl and C_3 - C_6 -cycloalkyl or R^{x1} and R^{x2} form together with the N atom to which they are attached a
15 3- to 7-membered, nitrogen heterocycle which may have 1, 2 or 3 further different or identical heteroatoms or heteroatom containing groups selected from the group of O, N, S, SO and SO_2 as ring members and which may carry 1, 2, 3, 4, 5 or 6
20 substituents selected from C_1 - C_4 -alkyl; or two radicals R^x which are bound at adjacent carbon atoms may form a fused 5- or 6-membered saturated carbocyclic radical or a fused 5- or 6-membered heterocyclic radical having
25 1, 2 or 3 heteroatoms as ring members, which are selected from O, S and N;

R^1 is a moiety Y^1-Cyc^1 ;

30 R^2 is selected from the group consisting of hydrogen, halogen, OH, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_2 - C_4 -alkenyloxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -

fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl, CN and $\text{NR}^{\text{x1}}\text{R}^{\text{x2}}$;

A represents one of the following groups A^1 , A^2 , A^3 , A^4 or A^5 :



where * indicates the points of attachment to Het and to the nitrogen atom, respectively,

10 R^3 , R^4 , R^5 , R^6 independently of each other are selected from the group consisting of hydrogen, halogen, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, C_3 - C_6 -cycloalkyl, or the radicals together with the carbon atoms to which they are bound form a saturated 3- to 6-

15 membered carbocycle or a saturated 3- to 6-membered heterocycle having 1 or 2 non-adjacent heteroatoms as ring members, where the carbocycle and the heterocycle are unsubstituted or may carry 1, 2, 3 or 4 substituents selected from fluorine and methyl or either the radicals R^3 , R^4 or the radicals R^5 , R^6 together with the carbon atom to

20 which they are bound form a saturated 3- to 6-membered carbocycle or a saturated 3- to 6-membered heterocycle having 1 or 2 non-adjacent heteroatoms as ring members, where the carbocycle and the heterocycle are unsubstituted or may carry 1, 2, 3 or 4 substituents selected from fluorine and methyl;

25 A' is a O, NR^{3a} , $\text{CR}^{3b}\text{R}^{3c}$ or linear C_2 - C_3 -alkandiyl, where one of the CH_2 -moieties of C_2 - C_3 -alkandiyl may be replaced by oxygen or NR^{3a} , and where 1, 2, 3, or 4 of the hydrogen atoms of C_2 - C_3 -alkandiyl may be replaced by a radical R^{3d} , where

R^{3a} is hydrogen or C_1 - C_4 -alkyl,

- R^{3b} , R^{3c} independently of each other are selected from the group consisting of hydrogen, halogen, C_1 - C_4 -alkyl or R^{3b} and R^{3c} together form C_2 - C_3 -alkandiyl;
- R^{3d} is selected from the group consisting of halogen and C_1 - C_4 -alkyl;
- 5 R^{3e} , R^{3f} independently of each other are selected from the group consisting of hydrogen and C_1 - C_4 -alkyl;
- 10 R^7 is selected from the group consisting of hydrogen, halogen, OH, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -alkylsulfanyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_1 - C_4 -alkylsulfanyl- C_1 - C_4 -alkoxy, C_2 - C_4 -alkenyloxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl, CN, $NR^{x1}R^{x2}$, $NR^{x1}R^{x2}$ - C_1 - C_4 -alkoxy and the moiety Y^2 -Cyc²;
- 15 R^8 is selected from the group consisting of hydrogen, halogen, OH, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_2 - C_4 -alkenyloxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl, CN and $NR^{x1}R^{x2}$;
- 20 R^9 is selected from the group consisting of hydrogen, halogen, OH, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -alkylsulfanyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_1 - C_4 -alkylsulfanyl- C_1 - C_4 -alkoxy, C_2 - C_4 -alkenyloxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl, CN, $NR^{x1}R^{x2}$, $NR^{x1}R^{x2}$ - C_1 - C_4 -alkoxy and the moiety Y^3 -Cyc³;
- 25 R^9 is selected from the group consisting of hydrogen, halogen, OH, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -alkylsulfanyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_1 - C_4 -alkylsulfanyl- C_1 - C_4 -alkoxy, C_2 - C_4 -alkenyloxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl, CN, $NR^{x1}R^{x2}$, $NR^{x1}R^{x2}$ - C_1 - C_4 -alkoxy and the moiety Y^3 -Cyc³;
- 30 R^9 is selected from the group consisting of hydrogen, halogen, OH, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -alkylsulfanyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_1 - C_4 -alkylsulfanyl- C_1 - C_4 -alkoxy, C_2 - C_4 -alkenyloxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl, CN, $NR^{x1}R^{x2}$, $NR^{x1}R^{x2}$ - C_1 - C_4 -alkoxy and the moiety Y^3 -Cyc³;

Y^1, Y^2, Y^3 independently of each other are selected from a chemical bond, CH_2 , O , $O-CH_2$, NR^y , NR^y-CH_2 , $NR^y-S(O)_2$, S , $S(O)$, $S(O)_2$, 1,2-ethandiyl, 1,2-ethendiyl or 1,2-ethyndiyl, where R^y is selected from the group consisting of hydrogen, C_1-C_4 -alkyl, C_1-C_4 -alkylcarbonyl, C_1-C_4 -alkylsulfonyl, C_1-C_4 -fluoroalkylsulfonyl;

Cyc^1, Cyc^2, Cyc^3 independently of each other are selected from the group consisting of phenyl, naphthyl, 4- to 8-membered saturated or partially unsaturated heteromonocyclic radicals, saturated or partially unsaturated 7- to 10 membered heterobicyclic radicals, 5- or 6-membered monocyclic hetaryl, and 8- to 10 membered bicyclic hetaryl, where the saturated or partially unsaturated heteromonocyclic and heterobicyclic radicals have 1, 2, 3 or 4 heteroatoms or heteroatom containing groups as ring members, which are selected from O , S , SO , SO_2 and N , and where the 5- or 6-membered monocyclic hetaryl and the 8- to 10-membered bicyclic hetaryl have 1, 2, 3 or 4 heteroatoms as ring members, which are selected from O , S and N , where phenyl, naphthyl, the saturated or partially unsaturated heteromonocyclic and heterobicyclic radicals and the mono- and bicyclic heteroaromatic radicals are unsubstituted or carry 1, 2, 3, 4 or 5 radicals R^{C1} or one radical Y^1-R^{C2} and 0, 1, 2, 3 or 4 radicals R^{C1} ; where

R^{C1} is selected from hydrogen, halogen, OH , CN , NO_2 , C_1-C_4 -alkyl, C_1-C_4 -alkoxy, C_1-C_4 -alkylsulfonyl, hydroxy- C_1-C_4 -alkyl, C_1-C_4 -alkoxy- C_1-C_4 -alkyl, C_1-C_4 -alkoxy- C_1-C_4 -alkoxy, cyano- C_1-C_4 -alkyl, C_1-C_4 -fluoroalkyl, C_1-C_4 -fluoroalkoxy, C_1-C_4 -alkylsulfonyl, $C(O)R^a$, $Z-C(O)OR^b$, $Z-C(O)NR^cR^d$, $S(O)_2NR^eR^f$ and $Z-NR^eR^f$, where

R^a is selected from the group consisting of C_1-C_4 -alkyl and C_1-C_4 -fluoroalkyl,

- R^b is selected from the group consisting of hydrogen, C_1 - C_4 -alkyl, C_2 - C_4 -alkenyl and C_1 - C_4 -fluoroalkyl,
- R^c, R^d is selected from the group consisting of hydrogen, C_1 - C_4 -alkyl, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -alkoxy and C_1 - C_4 -fluoroalkoxy,
- R^e, R^f is selected from the group consisting of hydrogen, C_1 - C_4 -alkyl, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -alkoxy and C_1 - C_4 -fluoroalkoxy,
- Z is a covalent bond or C_1 - C_4 -alkandiyl,
- or two radicals R^{C1} which are bound at adjacent carbon atoms may form a fused 5- or 6-membered carbocyclic radical or a fused 5- or 6-membered heterocyclic radical having 1, 2 or 3 heteroatoms as ring members, which are selected from O, S and N;
- or two radicals R^{C1} which are bound at the same carbon atom may form a spiro 5- or 6-membered carbocyclic radical or a spiro 5- or 6-membered heterocyclic radical having 1 or 2 heteroatoms as ring members, which are selected from O, S and N,
- or two radicals R^{C1} which are bound at the same carbon atom may form an oxygen atom,
- where the fused and the spiro radicals are unsubstituted or carry 1, 2, 3 or 4 radicals R^{C3} ;
- Y' is a chemical bond, CH_2 , O, $O-CH_2$, $S(O)_2$, $NR^{y'}$, $NR^{y'}-CH_2$ or $NR^{y'}-S(O)_2$, where $R^{y'}$ is selected from the group consisting of hydrogen, C_1 - C_4 -alkyl, C_1 - C_4 -alkylcarbonyl, C_1 - C_4 -alkylsulfonyl, C_1 - C_4 -fluoroalkylsulfonyl;
- R^{C2} is a carbocyclic or heterocyclic radical selected from the group consisting of phenyl, 3- to 7-membered saturated or partially unsaturated monocarbocyclic radicals, 3- to 7-membered

saturated or partially unsaturated heteromonocyclic radicals, having 1, 2 or 3 heteroatoms as ring members, which are selected from O, S and N, and 5- or 6-membered heteroaromatic radicals, having 1, 2 or 3 heteroatoms as ring members, which are selected from O, S and N, where the carbocyclic and the heterocyclic radical is unsubstituted or carries 1, 2, 3, 4 or 5 radicals R^{C3} ;

R^{C3} is selected from hydrogen, halogen, OH, CN, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, hydroxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, cyano- C_1 - C_4 -alkyl, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, C_2 - C_6 -alkenyl, $C(O)R^a$, benzyl, $Z-C(O)OR^b$, $Z-C(O)NR^cR^d$, $S(O)_2NR^eR^f$ and $Z-NR^eR^f$, where, Z, R^a , R^b , R^c , R^d , R^e and R^f are as defined above or two radicals R^{C3} which are bound at the same atom may form an oxygen atom;

provided that for X^3 being $X^4=C(R^8)$, one or two of the radicals R^1 , R^7 and R^9 are a moiety Y^1-Cyc^1 , Y^2-Cyc^2 or Y^3-Cyc^3 , respectively;

further provided that for X^3 being $X^5=C(R^9)$, one or two of the radicals R^1 , R^7 and R^9 are a moiety Y^1-Cyc^1 , Y^2-Cyc^2 or Y^3-Cyc^3 , respectively;

and the N-oxides, the prodrugs, the tautomers and the hydrates thereof, and the pharmaceutically acceptable salts thereof;

wherein prodrugs are derivatives of the compounds of formula I carrying an OH or NH_2 -group, where one of the hydrogen atoms of the OH or NH_2 -group is substituted by a C_1 - C_4 -alkylcarbonyl group, by benzoyl, or by an acyl group derived from an amino acid, which is linked to the oxygen or nitrogen of the OH or NH_2 -group via the carbonyl group of the amino acid; or wherein prodrugs are alkylcarbonyloxyalkyl carbonates or carbamates of compounds I carrying an OH- or NH_2 -group in which one of the hydrogen atoms of the OH- or NH_2 -group has

been replaced by a group of the formula $-C(=O)-O-CH(R^p)-O-C(=O)-R^q$ in which R^p and R^q are independently of one another C_1-C_4 -alkyl;

except for the following compounds:

- 5 6-Methyl-5-phenyl-3-[2-(2-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one,
 5-Phenyl-3-[2-(4-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one,
 5-(4-Methylphenyl)-3-[2-(2-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one,
 5-(2-Furanyl)-3-[1-methyl-2-(3-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-
 one,
- 10 5-(2-Thienyl)-3-[1-methyl-2-(3-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-
 one,
 5-(3,4-Dimethylphenyl)-3-[2-(2-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-
 one,
 5-(4-Methylphenyl)-3-[2-(4-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one,
- 15 5-Phenyl-3-[2-(2-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one, and
 5-Phenyl-3-[2-(4-oxo-5-phenylthieno[2,3-d]pyrimidin-(3H)-3-yl)ethyl]-
 thieno[2,3-d]pyrimidin-4-(3H)-one.

In one aspect, there is provided a compound, which is selected from the group consisting of

- 3,7-di(pyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 10 7-(pyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(pyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(pyridin-4-yl)-5-[2-(pyridin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3,7-di(pyridin-4-yl)-5-[2-(pyridin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(quinolin-2-yl)ethyl]-3-[4-(trifluoromethyl)phenyl]thieno[2,3-d]pyridazin-
15 4(5H)-one;
- 3-(4-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-[4-(propan-2-yl)phenyl]-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-
4(5H)-one;
- 3-(4-ethylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 20 4-{4-oxo-5-[2-(quinolin-2-yl)ethyl]-4,5-dihydrothieno[2,3-d]pyridazin-3-
yl} benzonitrile;
- 3-(4-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(4-fluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(4-ethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 25 3-[4-(dimethylamino)phenyl]-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-
4(5H)-one;
- (4-{4-oxo-5-[2-(quinolin-2-yl)ethyl]-4,5-dihydrothieno[2,3-d]pyridazin-3-
yl} phenyl)acetonitrile;
- 3-(4-hydroxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 30 3-(2-chlorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2-ethylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;

- 3-(2-fluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(2-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(2-ethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(2-hydroxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 5 5-[2-(quinolin-2-yl)ethyl]-3-[2-(trifluoromethyl)phenyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-[3-(methoxymethyl)phenyl]-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(3-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 10 3-(3-ethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-[3-(dimethylamino)phenyl]-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-[4-Oxo-5-(2-quinolin-2-yl-ethyl)-4,5-dihydro-thieno[2,3-d]pyridazin-3-yl]-benzonitrile;
 15 3-(3-fluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(3-hydroxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 N,N-dimethyl-3-{4-oxo-5-[2-(quinolin-2-yl)ethyl]-4,5-dihydrothieno[2,3-d]pyridazin-3-yl} benzamide;
 3-(3-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 20 5-[2-(quinolin-2-yl)ethyl]-3-(thiophen-2-yl)thieno[2,3-d]pyridazin-4(5H)-one;
 3-(1-methyl-1H-indol-5-yl)-5-(2-quinolin-2-yl-ethyl)-5H-thieno[2,3-d]pyridazin-4-one;
 3-(1H-indol-6-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(pyrimidin-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 25 3-(2-methoxypyridin-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(pyridin-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(4-methoxypyridin-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 30 3-(furan-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(quinolin-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(isoquinolin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;

- 3-(isoquinolin-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(1H-indol-4-yl)-5-(2-quinolin-2-yl-ethyl)-5H-thieno[2,3-d]pyridazin-4-one;
 3-(2,3-dihydrobenzofuran-5-yl)-5-(2-quinolin-2-yl-ethyl)-5H-thieno[2,3-d]pyridazin-4-one;
- 5 3-(quinolin-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(3,5-dimethyl-1,2-oxazol-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(6-methoxypyridin-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 10 3-(2,3-dihydro-1,4-benzodioxin-6-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(2-methylpyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(5-methoxypyridin-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 15 3-[6-(morpholin-4-yl)pyridin-3-yl]-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(1,3-benzodioxol-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 20 3-(quinolin-6-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(1-methyl-1H-pyrazol-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-[1-(2-methylpropyl)-1H-pyrazol-4-yl]-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 25 tert-butyl 2-{4-oxo-5-[2-(quinolin-2-yl)ethyl]-4,5-dihydrothieno[2,3-d]pyridazin-3-yl}-1H-pyrrole-1-carboxylate;
 3-(2-methoxypyrimidin-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 5-[2-(quinolin-2-yl)ethyl]-3-(2,3,4-trifluorophenyl)thieno[2,3-d]pyridazin-4(5H)-one;
- 30 3-(4-fluoro-3-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;

- 3-(4-fluoro-2-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(3-chloro-4-fluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 5 3-(2-chloro-4-fluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(3,4-dimethylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2,4-dimethylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 10 3-(2,4-difluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2,4-dimethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 15 3-(2,5-dimethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2,3-difluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(3,4-dimethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 20 3-(3,4-difluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(5-fluoro-2-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 25 3-(4-fluoro-2-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(3,5-dimethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2,5-difluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 30 3-(2,3-dimethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;

- 3-(3-fluoro-4-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2-fluoro-3-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 5 3-(3,5-difluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(3-fluoro-5-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 10 3-(2-methoxy-5-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2,5-dichlorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(naphthalen-2-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-phenyl-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 15 3-(1-benzofuran-2-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(1H-indazol-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(1-methyl-1H-pyrazol-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 20 3-(4,5-difluoro-2-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2-fluoro-4-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2-fluoro-5-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 25 3-methyl-4-{4-oxo-5-[2-(quinolin-2-yl)ethyl]-4,5-dihydrothieno[2,3-d]pyridazin-3-yl}benzonitrile;
- 5-[2-(6-fluoroquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 30 5-[2,2-difluoro-2-(quinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;

- 3-(pyridin-4-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(7-fluoroimidazo[1,2-a]pyridin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 8-(pyridin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(quinolin-2-yl)ethyl]-8-[4-(trifluoromethyl)phenyl]phthalazin-1(2H)-one;
- 8-(4-methylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-[4-(propan-2-yl)phenyl]-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(4-ethylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 4-{4-oxo-3-[2-(quinolin-2-yl)ethyl]-3,4-dihydrophthalazin-5-yl} benzonitrile;
- 8-(4-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(4-fluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- (4-{4-oxo-3-[2-(quinolin-2-yl)ethyl]-3,4-dihydrophthalazin-5-yl} phenyl)acetonitrile;
- 8-(4-hydroxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(2-chlorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(2-methylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(2-ethylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(2-fluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(2-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(3-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 3-{4-oxo-3-[2-(quinolin-2-yl)ethyl]-3,4-dihydrophthalazin-5-yl} benzonitrile;
- 8-(3-fluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(3-hydroxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- N,N-dimethyl-3-{4-oxo-3-[2-(quinolin-2-yl)ethyl]-3,4-dihydrophthalazin-5-yl} benzamide;
- 8-(3-methylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(quinolin-2-yl)ethyl]-8-(thiophen-2-yl)phthalazin-1(2H)-one;
- 8-(1-methyl-1H-indol-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(3,5-dimethyl-1H-pyrazol-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;

- 8-(1H-indol-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(1H-indol-6-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(pyrimidin-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(2-methoxypyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 5 8-(pyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(furan-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(quinolin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(1H-indol-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(2,3-dihydro-1-benzofuran-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-
 10 one;
 8-(3,4-dihydro-2H-1,5-benzodioxepin-7-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-
 1(2H)-one;
 8-(1-benzofuran-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(6-methoxypyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 15 8-(2,3-dihydro-1,4-benzodioxin-6-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-
 one;
 8-(2-methylpyridin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(5-methoxypyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(5-fluoropyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 20 8-(1,3-benzodioxol-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(1-methyl-1H-pyrazol-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-[1-(2-methylpropyl)-1H-pyrazol-4-yl]-2-[2-(quinolin-2-yl)ethyl]phthalazin-
 1(2H)-one;
 tert-butyl 2-{4-oxo-3-[2-(quinolin-2-yl)ethyl]-3,4-dihydrophthalazin-5-yl}-1H-
 25 pyrrole-1-carboxylate;
 8-(3-chloro-4-fluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(2-chloro-4-fluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(3,4-dimethylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(2,4-dimethoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 30 8-(2,5-dimethoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(2,3-difluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(3,4-dimethoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;

- 8-(3,4-difluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(5-fluoro-2-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(4-fluoro-2-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(3,5-dimethoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 5 8-(2,5-difluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(3-fluoro-4-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(2-fluoro-3-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(3,5-difluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(3-fluoro-5-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 10 8-(naphthalen-2-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-phenyl-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(1-benzofuran-2-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(1-methyl-1H-pyrazol-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(4,5-difluoro-2-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-
 15 one;
 8-(2-fluoro-4-methylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(2-fluoro-5-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyridin-3-yl)phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyridin-4-yl)phthalazin-1(2H)-one;
 20 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(3-methoxypyridin-4-yl)phthalazin-
 1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyrimidin-5-yl)phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1-methyl-1H-pyrazol-3-yl)phthalazin-
 1(2H)-one;
 25 8-(furan-3-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2-oxo-2,3-dihydro-1H-indol-6-
 yl)phthalazin-1(2H)-one;
 8-(3,4-dihydro-2H-chromen-6-yl)-2-[2-(imidazo[1,2-a]pyridin-2-
 yl)ethyl]phthalazin-1(2H)-one;
 30 8-(1,1-dioxidothiomorpholin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-
 one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(morpholin-4-yl)phthalazin-1(2H)-one;

- 8-(1,1-dioxidothiomorpholin-4-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(tetrahydro-1H-furo[3,4-c]pyrrol-5(3H)-yl)phthalazin-1(2H)-one;
- 5 8-(5,5-difluorohexahydrocyclopenta[c]pyrrol-2(1H)-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(piperazin-1-yl)phthalazin-1(2H)-one;
 8-(4,4-difluoropiperidin-1-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 10 8-[4-(chloromethyl)-4-(hydroxymethyl)piperidin-1-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(piperidin-1-yl)phthalazin-1(2H)-one;
 8-(2,3-dihydro-4H-1,4-benzoxazin-4-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 15 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[4-(trifluoromethyl)piperidin-1-yl]phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(4-methylpiperazin-1-yl)phthalazin-1(2H)-one;
- 8-(1,3-dihydro-2H-isoindol-2-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 20 8-(7-benzyl-2,7-diazaspiro[4.4]non-2-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-({[(3aR,4S,6aS)-2-benzyl-octahydrocyclopenta[c]pyrrol-4-yl]methyl}amino)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 25 tert-butyl (3R)-3-({3-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-4-oxo-3,4-dihydrophthalazin-5-yl}amino)pyrrolidine-1-carboxylate;
 8-(2,6-dimethylmorpholin-4-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1,4-oxazepan-4-yl)phthalazin-1(2H)-one;
- 30 tert-butyl 4-({3-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-4-oxo-3,4-dihydrophthalazin-5-yl}-3,6-dihydropyridine-1(2H)-carboxylate;

- 5-(pyridin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 5-(pyrimidin-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 5-(1-methyl-1H-pyrazol-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 5-(1,1-dioxidothiomorpholin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-5-(pyridin-3-yl)phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-5-(pyrimidin-5-yl)phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-5-(morpholin-4-yl)phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-5-(tetrahydro-1H-furo[3,4-c]pyrrol-5(3H)-yl)phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-4-(pyrimidin-5-yl)phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-4-(morpholin-4-yl)phthalazin-1(2H)-one;
 3-(3-methoxypyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
 3-(3-hydroxypyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
 3-(1-methyl-1H-pyrazol-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
 3-(pyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
 3-(pyrimidin-5-yl)-5-(2-quinolin-2-yl)ethylthieno[3,2-c]pyridin-4(5H)-one;
 3-(2-oxoindolin-6-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
 3-(3-hydroxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
 5-[2-(5-ethylpyridin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-one;
 5-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-one;
 3-(morpholin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
 tert-butyl-4-(4-oxo-5-(2-quinolin-2-yl)ethyl)-4,5-dihydrothieno[3,2-c]pyridin-3-yl)-5,6-dihydropyridine-1(2H) carboxylate;
 5-(2-(quinolin-2-yl)ethyl)-3-(1,2,3,6-tetrahydropyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-one;
 tert-butyl-4-(4-oxo-5-(2-quinolin-2-yl)ethyl)-4,5-dihydrothieno[3,2-c]pyridin-3-yl)-piperidine-1 carboxylate;

- 3-(piperidin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
 3-methyl-7-(pyridin-4-yl)-5-(2-(quinolin-2-yl)ethyl)thieno[3,2-c]pyridin-4(5H)-one;
- 5 3-(pyridin-4-yl)-5-[2-(5,6,7,8-tetrahydroquinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 (R)-tert-butyl 3-(3-(2-(imidazo[1,2-a]pyridin-2-yl)ethyl)-4-oxo-3,4-dihydrophthalazin-5-ylamino)pyrrolidine-1-carboxylate;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(3R)-pyrrolidin-3-ylamino]phthalazin-1(2H)-one;
- 10 5-(3-hydroxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 (E)-8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)vinyl)isoquinolin-1(2H)-one;
 anti (rac) 8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti (+)-8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti (-)-8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- 15 8-(pyridin-4-yl)-2-(2-quinolin-2-yl-ethyl)isoquinolin-1(2H)-one;
 anti (rac) 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 anti (+) 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
- 20 anti (-) 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 (E)-8-pyridin-4-yl-2-(2-quinolin-2-yl-vinyl)-2H-phthalazin-1-one;
 anti (rac) 8-pyridin-4-yl-2-(2-quinolin-2-yl-cyclopropyl)-2H-phthalazin-1-one;
 anti (+) 8-pyridin-4-yl-2-(2-quinolin-2-yl-cyclopropyl)-2H-phthalazin-1-one;
- 25 anti (-) 8-pyridin-4-yl-2-(2-quinolin-2-yl-cyclopropyl)-2H-phthalazin-1-one;
 and the N-oxides thereof, the prodrugs thereof as defined in claim 1, the tautomers thereof and the hydrates thereof, and the pharmaceutically acceptable salts thereof.

In one aspect, there is provided a compound, which is selected from the group consisting of

- 7-(pyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]furo[3,2-c]pyridin-4(5H)-one;
 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)ethyl)furo[3,2-c]pyridin-4(5H)-one;

- 5-(2-(1H-benzo[d]imidazol-2-yl)ethyl)-3-(pyridin-4-yl)furo[3,2-c]pyridin-4(5H)-one;
- 5-(2-(imidazo[1,2-a]pyridin-2-yl)ethyl)-3-(pyridin-4-yl)furo[3,2-c]pyridin-4(5H)-one;
- 5 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)ethyl)furo[3,2-c]pyridin-4(5H)-one;
4-(pyridin-4-yl)-6-(2-(quinolin-2-yl)allyl)pyrido[2,3-d]pyridazin-5(6H)-one;
syn 8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
- 10 anti 3-(pyridazin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)furo[3,2-c]pyridin-4(5H)-one;
syn 3-(pyridazin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)furo[3,2-c]pyridin-4(5H)-one;
anti 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)furo[3,2-c]pyridin-4(5H)-one;
- 15 syn 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)furo[3,2-c]pyridin-4(5H)-one;
anti 8-(oxetan-3-ylamino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(oxetan-3-ylamino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- 20 anti 8-(pyridazin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(pyridazin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-(6-fluoropyridin-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(6-fluoropyridin-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- 25 anti 8-(2-fluoropyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(2-fluoropyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- 30 anti 8-(pyridin-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(pyridin-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-(pyrimidin-5-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;

- syn 8-(pyrimidin-5-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(1-methyl-1H-pyrazol-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- 5 syn 8-(1-methyl-1H-pyrazol-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- anti 8-(3-fluoropyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- syn 8-(3-fluoropyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- 10 anti 8-(2-fluoropyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- syn 8-(2-fluoropyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- anti 8-((3S)-3-hydroxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- 15 syn 8-((3S)-3-hydroxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- anti 8-(3-methoxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- 20 syn 8-(3-methoxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- anti 8-morpholino-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- syn 8-morpholino-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- anti 1-(1-oxo-2-(2-(quinolin-2-yl)cyclopropyl)-1,2-dihydroisoquinolin-8-yl)piperidine-4-carbonitrile;
- 25 syn 1-(1-oxo-2-(2-(quinolin-2-yl)cyclopropyl)-1,2-dihydroisoquinolin-8-yl)piperidine-4-carbonitrile;
- anti 8-((3R,4R)-4-fluoro-3-hydroxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- 30 syn 8-((3R,4R)-4-fluoro-3-hydroxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- anti 8-((3S)-3-hydroxypyrrolidin-1-yl)-2-(2-(quinolin-2-

- yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-((3S)-3-hydroxypyrrolidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-((3R)-3-hydroxypyrrolidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 5 syn 8-((3R)-3-hydroxypyrrolidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(methyl(oxetan-3-yl)amino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 10 syn 8-(methyl(oxetan-3-yl)amino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(4-methoxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-(4-methoxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 15 anti 8-(4-hydroxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-(4-hydroxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 20 anti 8-(1-acetylpiperidin-4-ylamino)-2-(2-quinolin-2-cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-(1-acetylpiperidin-4-ylamino)-2-(2-quinolin-2-cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(piperidin-4-ylamino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 25 syn 8-(piperidin-4-ylamino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 2-(2-(quinolin-2-yl)cyclopropyl)-8-(tetrahydro-2H-pyran-4-yl)isoquinolin-1(2H)-one;
 30 syn 2-(2-(quinolin-2-yl)cyclopropyl)-8-(tetrahydro-2H-pyran-4-yl)isoquinolin-1(2H)-one;
 anti 2-(2-(quinolin-2-yl)cyclopropyl)-8-(2-oxa-6-azaspiro[3.4]octan-6-

- yl)isoquinolin-1(2H)-one;
 syn 2-(2-(quinolin-2-yl)cyclopropyl)-8-(2-oxa-6-azaspiro[3.4]octan-6-yl)isoquinolin-1(2H)-one;
 anti 8-(dihydro-1H-furo[3,4-c]pyrrol-5(3H,6H,6aH)-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 5 syn 8-(dihydro-1H-furo[3,4-c]pyrrol-5(3H,6H,6aH)-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(4,4-difluoropiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 10 syn 8-(4,4-difluoropiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-morpholino-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-morpholino-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(3-(difluoromethyl)pyrrolidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 15 syn 8-(3-(difluoromethyl)pyrrolidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-((1R,5S)-3-oxa-8-azabicyclo[3.2.1]octan-8-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 20 syn 8-((1R,5S)-3-oxa-8-azabicyclo[3.2.1]octan-8-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(4-methylpiperazin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-(4-methylpiperazin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 25 anti 8-(3-(fluoromethyl)pyrrolidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-(3-(fluoromethyl)pyrrolidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 30 anti 8-((1R,5S)-8-oxa-3-azabicyclo[3.2.1]octan-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-((1R,5S)-8-oxa-3-azabicyclo[3.2.1]octan-3-yl)-2-(2-(quinolin-2-

- yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(4-fluorophenyl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-(4-fluorophenyl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(furan-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 5 syn 8-(furan-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(4,5-dihydrofuran-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-(4,5-dihydrofuran-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 10 anti 8-(4-methoxyphenyl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-(4-methoxyphenyl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-morpholinoisoquinolin-1(2H)-one;
 syn 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-morpholinoisoquinolin-1(2H)-one;
 15 anti 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyridin-3-yl)isoquinolin-1(2H)-one;
 syn 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyridin-3-yl)isoquinolin-1(2H)-one;
 20 anti 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyrimidin-5-yl)isoquinolin-1(2H)-one;
 syn 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyrimidin-5-yl)isoquinolin-1(2H)-one;
 anti 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
 25 syn 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
 anti 4-fluoro-8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 30 syn 4-fluoro-8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 4-chloro-8-(pyrimidin-5-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-

- 1(2H)-one;
 syn 4-chloro-8-(pyrimidin-5-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-
 1(2H)-one;
 anti 4-(pyridin-4-yl)-6-(2-(quinolin-2-yl)cyclopropyl)pyrido[2,3-d]pyridazin-
 5(6H)-one;
 5 syn 4-(pyridin-4-yl)-6-(2-(quinolin-2-yl)cyclopropyl)pyrido[2,3-d]pyridazin-
 5(6H)-one;
 anti 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyridin-4-yl)phthalazin-1(2H)-
 one;
 10 syn 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyridin-4-yl)phthalazin-1(2H)-
 one;
 anti 7-fluoro-3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-
 c]pyridin-4(5H)-one;
 syn 7-fluoro-3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-
 15 c]pyridin-4(5H)-one;
 anti 3-(2-fluoropyridin-4-yl)-5-(2-(6-fluoroquinolin-2-yl)cyclopropyl)thieno[3,2-
 c]pyridin-4(5H)-one;
 syn 3-(2-fluoropyridin-4-yl)-5-(2-(6-fluoroquinolin-2-yl)cyclopropyl)thieno[3,2-
 c]pyridin-4(5H)-one;
 20 anti 5-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-3-(pyridin-4-yl)thieno[3,2-
 c]pyridin-4(5H)-one;
 syn 5-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-3-(pyridin-4-yl)thieno[3,2-c]pyridin-
 4(5H)-one;
 anti 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-
 25 4(5H)-one;
 syn 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-
 4(5H)-one;
 anti 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-
 4(5H)-one;
 30 syn 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-
 4(5H)-one;
 anti 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-

- 4(5H)-one;
 syn 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 anti 3-(6-fluoropyridin-3-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 5 syn 3-(6-fluoropyridin-3-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 anti 3-(2-methylpyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 10 syn 3-(2-methylpyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 anti 3-(pyridazin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 syn 3-(pyridazin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 15 anti 3-(2-fluoropyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 syn 3-(2-fluoropyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 20 anti 3-(morpholin-4-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
 syn 3-(morpholin-4-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
 anti 3-(pyridin-3-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
 25 syn 3-(pyridin-3-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
 anti 3-(pyridin-3-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
 30 syn 3-(pyridin-3-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
 anti 3-(pyrimidin-5-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[2,3-d]pyridazin-

- 4(5H)-one;
 syn 3-(pyrimidin-5-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[2,3-d]pyridazin-4(5H)-one;
 anti 3-(pyridin-4-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)cyclopropyl]thieno[2,3-d]pyridazin-4(5H)-one;
 5 syn -(pyridin-4-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)cyclopropyl]thieno[2,3-d]pyridazin-4(5H)-one;
 anti 3-(pyridin-4-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
 10 syn 3-(pyridin-4-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
 anti 3-(pyridin-4-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
 syn 3-(pyridin-4-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
 15 anti 3-(pyridin-4-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[2,3-d]pyridazin-4(5H)-one;
 syn 3-(pyridin-4-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[2,3-d]pyridazin-4(5H)-one;
 20 anti 5-(pyrimidin-5-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 syn 5-(pyrimidin-5-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 anti 5-(pyridin-4-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 syn 5-(pyridin-4-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 anti 5-(pyridin-3-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 25 syn 5-(pyridin-3-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 anti 5-(morpholin-4-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 syn 5-(morpholin-4-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 anti 4-fluoro-8-(pyrimidin-5-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 30 syn 4-fluoro-8-(pyrimidin-5-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 8-(pyridin-4-yl)-2-[2-(quinolin-2-yl)ethyl]pyrido[3,4-d]pyridazin-1(2H)-one;

- 5-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-7-(1-methyl-1H-imidazol-4-yl)-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-7-(1-methyl-1H-pyrazol-4-yl)-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 5 5-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-7-(pyridin-3-yl)-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(6-chloroquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-one;
- 5-[2-(3-methylquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-one;
- 10 5-[2-(8-fluoroquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-one;
- 5-[2-(6-fluoroquinolin-2-yl)ethyl]-3-(pyridin-3-yl)thieno[3,2-c]pyridin-4(5H)-one;
- 15 5-[2-(6-fluoroquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-one;
- 5-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-3-(pyridin-3-yl)thieno[3,2-c]pyridin-4(5H)-one;
- 3-(pyridin-4-yl)-5-[2-(quinoxalin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 20 5-[2-(1,5-naphthyridin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(1H-indazol-1-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(1-methyl-1H-pyrazol-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 25 3-(1H-pyrazol-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(1H-benzimidazol-1-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(1H-benzimidazol-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 30 5-[2-(6-chloroquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(pyridin-3-ylethynyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;

- one;
- 3-(pyridin-4-ylethynyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(3,5-dimethylpyridin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(7-fluoroquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(pyrazin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 2-[2-(1,6-naphthyridin-2-yl)ethyl]-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
- 2-[2-(8-fluoroquinolin-2-yl)ethyl]-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
- 8-(pyridin-4-yl)-2-[1-(quinolin-2-yl)propan-2-yl]isoquinolin-1(2H)-one;
- 2-[2-(3-methylquinolin-2-yl)ethyl]-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1H-pyrazol-3-yl)phthalazin-1(2H)-one;
- 8-(morpholin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1-oxa-4,9-diazaspiro[5.6]dodec-9-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2-oxa-7-azaspiro[3.5]non-7-yl)phthalazin-1(2H)-one;
- 8-[(3R)-3-hydroxypiperidin-1-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-[(3S)-3-hydroxypiperidin-1-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2-oxa-6-azaspiro[3.3]hept-6-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1,2-oxazolidin-2-yl)phthalazin-1(2H)-one;
- 8-(hexahydrocyclopenta[b][1,4]oxazin-4(4aH)-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(tetrahydrofuran-3-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(3-oxa-8-azabicyclo[3.2.1]oct-8-yl)phthalazin-1(2H)-one;

- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2-oxa-6-azaspiro[3.4]oct-6-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2,2,6,6-tetrafluoromorpholin-4-yl)phthalazin-1(2H)-one;
- 5 8-(4-hydroxypiperidin-1-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2-methylpyrimidin-5-yl)phthalazin-1(2H)-one;
- 8-(2-cyclopropylpyrimidin-5-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 10 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyridazin-4-yl)phthalazin-1(2H)-one;
- 8-(5-fluoropyridin-3-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-[2-(3-fluorophenyl)morpholin-4-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 15 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2-methoxypyrimidin-5-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[2-(trifluoromethyl)pyridin-4-yl]phthalazin-1(2H)-one;
- 20 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(8-oxa-3-azabicyclo[3.2.1]oct-3-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[2-(trifluoromethyl)morpholin-4-yl]phthalazin-1(2H)-one;
- 8-(2,2-dimethylmorpholin-4-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 25 8-[2-(4-chlorophenyl)morpholin-4-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-[2-(3,4-difluorophenyl)morpholin-4-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 30 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(piperidin-4-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(tetrahydro-2H-pyran-4-yl)phthalazin-1(2H)-one;

- 8-(2,6-diazabicyclo[3.2.1]oct-6-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-[(1S,5S)-3,6-diazabicyclo[3.2.0]hept-3-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 5 8-(furan-2-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1-methyl-1H-pyrazol-4-yl)phthalazin-1(2H)-one;
- 8-(hexahydropyrrolo[3,4-c]pyrrol-2(1H)-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 10 8-(2,7-diazaspiro[4.4]non-2-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-[(1S,4S)-2,5-diazabicyclo[2.2.1]hept-2-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(2,7-diazaspiro[3.5]non-7-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 15 8-(2,6-diazaspiro[3.5]non-6-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(piperidin-4-yl)-2-[2-(5,6,7,8-tetrahydroimidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 20 8-[2-(aminomethyl)-4-chloropyrrolidin-1-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-4,8-di(pyridin-4-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(3aR,4S,7R,7aS)-octahydro-1H-4,7-epiminoisoindol-8-yl]phthalazin-1(2H)-one;
- 25 8-[5-(4-chlorophenyl)-2,5-diazabicyclo[2.2.1]hept-2-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 4-bromo-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyridin-4-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(3aS,8aS)-octahydropyrrolo[3,4-c]azepin-2(1H)-yl]phthalazin-1(2H)-one;
- 30 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(3aS,8aR)-octahydropyrrolo[3,4-c]azepin-2(1H)-yl]phthalazin-1(2H)-one;

- tert-butyl (3aR,4S,7R,7aS)-8-{3-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-4-oxo-3,4-dihydrophthalazin-5-yl}octahydro-2H-4,7-epiminoisoindole-2-carboxylate;
 8-(hexahydro-5H-furo[2,3-c]pyrrol-5-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 5 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1,2,3,6-tetrahydropyridin-4-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(3S)-tetrahydrofuran-3-ylamino]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(3R)-tetrahydrofuran-3-ylamino]phthalazin-1(2H)-one;
- 10 8-[[5-(hydroxymethyl)-1,4-dioxan-2-yl]methoxy]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(oxetan-3-yloxy)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyridin-4-ylmethoxy)phthalazin-1(2H)-one;
- 15 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(morpholin-4-ylmethyl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyridin-3-yloxy)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(oxetan-3-ylmethyl)amino]phthalazin-1(2H)-one;
- 20 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(tetrahydro-2H-pyran-4-ylamino)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(1-methylazetidin-3-yl)amino]phthalazin-1(2H)-one;
- 25 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1,3-oxazol-2-ylamino)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[methyl(oxetan-3-yl)amino]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(piperidin-4-ylamino)phthalazin-1(2H)-one;
- 30 8-[(1-acetylpiperidin-3-yl)amino]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;

- 8-[(1-acetylpiperidin-4-yl)amino]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(tetrahydrofuran-3-ylamino)phthalazin-1(2H)-one;
- 5 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(tetrahydro-2H-pyran-3-ylamino)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(piperidin-3-ylamino)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-{methyl[(3-methyloxetan-3-yl)methyl]amino} phthalazin-1(2H)-one;
- 10 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(oxetan-3-ylamino)phthalazin-1(2H)-one;
- 8-{[(3aS,4S,6aS)-octahydrocyclopenta[c]pyrrol-4-ylmethyl]amino}-2-[2-(5,6,7,8-tetrahydroimidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 15 5-(morpholin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(1H-benzimidazol-2-yl)ethyl]-5-(pyridin-4-yl)phthalazin-1(2H)-one;
- 4-(pyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 5-(1,4-dihydropyrimidin-5-yl)-2-[2-(5,6,7,8-tetrahydroimidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one
- 20 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-5-(pyridin-4-yl)phthalazin-1(2H)-one;
- 5-(pyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-{[(3-methyloxetan-3-yl)methyl]amino}-phthalazin-1(2H)-one;
- 4-(pyridin-4-yl)-6-[2-(quinolin-2-yl)ethyl]pyrido[2,3-d]pyridazin-5(6H)-one;
- 25 4-(morpholin-4-yl)-6-[2-(quinolin-2-yl)ethyl]pyrido[2,3-d]pyridazin-5(6H)-one;
- 4-(oxetan-3-ylamino)-6-[2-(quinolin-2-yl)ethyl]pyrido[2,3-d]pyridazin-5(6H)-one;
- 2-[2-(6-methoxypyridin-2-yl)ethyl]-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
- 2-[2-(1,3-benzothiazol-2-yl)ethyl]-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
- 30 2-[2-(5-methylpyridin-2-yl)ethyl]-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
- 5-[(E)-2-(6-methoxyquinolin-2-yl)ethenyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-one;

8-(pyridin-4-yl)-2-[(E)-2-(quinazolin-2-yl)ethenyl]isoquinolin-1(2H)-one;
5-[(E)-2-(6-chloroquinolin-2-yl)ethenyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-
4(5H)-one;
5-[(E)-2-(3-methylquinolin-2-yl)ethenyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-
4(5H)-one;
8-(pyridin-4-yl)-2-[(E)-2-(quinolin-2-yl)ethenyl]isoquinolin-1(2H)-one;
5-[(E)-2-(1,3-benzothiazol-2-yl)ethenyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-
4(5H)-one;
3-(pyridin-4-yl)-5-[(E)-2-(quinolin-2-yl)ethenyl]thieno[3,2-c]pyridin-4(5H)-one;

and the enantiomers thereof, the N-oxides thereof, the prodrugs thereof as defined herein, the tautomers thereof, and the hydrates thereof, and the pharmaceutically acceptable salts thereof.

In one aspect, there is provided the compound as disclosed herein for use in therapy.

In one aspect, there is provided a pharmaceutical composition which comprises at least one compound as disclosed herein and at least one excipient.

In one aspect, there is provided the compounds as disclosed herein for use in treating a medical disorder selected from neurological and psychiatric disorders, which can be treated by inhibition of phosphodiesterase type 10A.

In one aspect, there is provided the compounds as disclosed herein for use in treating CNS disorders in a mammalian.

In one aspect, there is provided the compounds as disclosed herein for use in treating a disorder or dysfunction selected from schizophrenia in a mammalian, cognitive dysfunction associated with schizophrenia in a mammalian, bipolar disorders in a mammalian, depression in a mammalian, cognitive dysfunction associated with Alzheimer's disease in a mammalian, diet-induced obesity in a mammalian, Huntington's disease in a mammalian, anxiety and substance-related disorders in a mammalian.

Detailed Description of the Invention

The terms "compound of the formula I" and "compounds I" are used as synonyms.

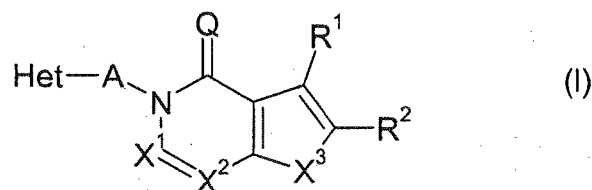
The term "prodrugs" means compounds which are metabolized in vivo to the compounds I of the invention. Typical examples of prodrugs are described in C.G. Wermuth (editor): The Practice of Medicinal Chemistry, Academic Press, San Diego, 1996, pages 671-715. These include for example phosphates, carbamates, amino acids,

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We claim:

1. Compound of formula I



wherein

Q is O or S;

X¹ is N or CH;X² is N or C-R⁷;

10 X³ is O, S, -X⁴=C(R⁸)-, where C(R⁸) is bound to the carbon atom which carries R², or

-X⁵=C(R⁹)-, where X⁵ is bound to the carbon atom which carries R²;

X⁴ is N or C-R⁹;X⁵ is N;

15

Het is selected from

- i. monocyclic C-bound 6-membered hetaryl having 1 or 2 nitrogen atoms as ring members, which is unsubstituted or may carry 1, 2, 3 or 4 identical or different substituents R^x,
- 20 ii. fused bicyclic hetaryl having 1 or 2 nitrogen atoms and optionally a further heteroatom selected from O, S and N as ring members, benzothienyl or benzofuryl, where bicyclic hetaryl, benzothienyl and benzofuryl are, independently of each other, unsubstituted or may carry 1, 2, 3 or 4 identical or different substituents R^x, and
- 25 iii. phenyl, which carries a monocyclic hetaryl radical having 1 or 2 nitrogen atoms and optionally a further heteroatom selected from O, S and N as ring members, which in addition

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to monocyclic hetaryl, may carry 1, 2 or 3 identical or different substituents R^x ,

where

R^x is selected from the group consisting of H, halogen, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, C_3 - C_6 -cycloalkyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, OH, hydroxy- C_1 - C_4 -alkyl, O- C_3 - C_6 -cycloalkyl, benzyloxy, $C(O)O$ -(C_1 - C_4 -alkyl), O-(C_1 - C_4 -alkyl)- CO_2H , $N(R^{x1})(R^{x2})$, $C(O)N(R^{x1})(R^{x2})$, C_1 - C_4 -alkyl- $N(R^{x1})(R^{x2})$, - $NR^{x3}-C(O)-N(R^{x1})(R^{x2})$, $NR^{x3}-C(O)O$ -(C_1 - C_4 -alkyl), - $N(R^{x3})-SO_2-R^{x4}$, phenyl, CN, $-SF_5$, $-OSF_5$, $-SO_2R^{x4}$, $-SR^{x4}$ and trimethylsilyl, where R^{x1} , R^{x2} , R^{x3} and R^{x4} , independently of each other are selected from the group consisting of hydrogen, C_1 - C_4 -alkyl, C_1 - C_4 -fluoroalkyl and C_3 - C_6 -cycloalkyl or R^{x1} and R^{x2} form together with the N atom to which they are attached a 3- to 7-membered, nitrogen heterocycle which may have 1, 2 or 3 further different or identical heteroatoms or heteroatom containing groups selected from the group of O, N, S, SO and SO_2 as ring members and which may carry 1, 2, 3, 4, 5 or 6 substituents selected from C_1 - C_4 -alkyl; or two radicals R^x which are bound at adjacent carbon atoms may form a fused 5- or 6-membered saturated carbocyclic radical or a fused 5- or 6-membered heterocyclic radical having 1, 2 or 3 heteroatoms as ring members, which are selected from O, S and N;

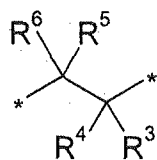
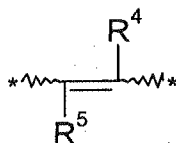
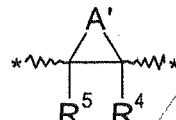
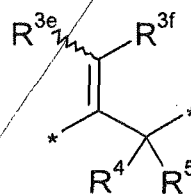
R^1 is a moiety Y^1 -Cyc¹;

R^2 is selected from the group consisting of hydrogen, halogen, OH, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_2 - C_4 -alkenyloxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -

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fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl, CN and $\text{NR}^{\text{x1}}\text{R}^{\text{x2}}$;

A represents one of the following groups A^1 , A^2 , A^3 , A^4 or A^5 :

(A¹)(A²)(A³)(A⁴)(A⁵)

where * indicates the points of attachment to Het and to the nitrogen atom, respectively,

R^3 , R^4 , R^5 , R^6 independently of each other are selected from the group consisting of hydrogen, halogen, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, C_3 - C_6 -cycloalkyl, or the radicals together with the carbon atoms to which they are bound form a saturated 3- to 6-membered carbocycle or a saturated 3- to 6-membered heterocycle having 1 or 2 non-adjacent heteroatoms as ring members, where the carbocycle and the heterocycle are unsubstituted or may carry 1, 2, 3 or 4 substituents selected from fluorine and methyl or either the radicals R^3 , R^4 or the radicals R^5 , R^6 together with the carbon atom to which they are bound form a saturated 3- to 6-membered carbocycle or a saturated 3- to 6-membered heterocycle having 1 or 2 non-adjacent heteroatoms as ring members, where the carbocycle and the heterocycle are unsubstituted or may carry 1, 2, 3 or 4 substituents selected from fluorine and methyl;

A' is a O, NR^{3a} , $\text{CR}^{3b}\text{R}^{3c}$ or linear C_2 - C_3 -alkandiyl, where one of the CH_2 -moieties of C_2 - C_3 -alkandiyl may be replaced by oxygen or NR^{3a} , and where 1, 2, 3, or 4 of the hydrogen atoms of C_2 - C_3 -alkandiyl may be replaced by a radical R^{3d} , where R^{3a} is hydrogen or C_1 - C_4 -alkyl,

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R^{3b} , R^{3c} independently of each other are selected from the group consisting of hydrogen, halogen, C_1 - C_4 -alkyl or R^{3b} and R^{3c} together form C_2 - C_3 -alkandiyl;

R^{3d} is selected from the group consisting of halogen and C_1 - C_4 -alkyl;

5

R^{3e} , R^{3f} independently of each other are selected from the group consisting of hydrogen and C_1 - C_4 -alkyl;

10

R^7 is selected from the group consisting of hydrogen, halogen, OH, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -alkylsulfanyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_1 - C_4 -alkylsulfanyl- C_1 - C_4 -alkoxy, C_2 - C_4 -alkenyloxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl, CN, $NR^{x1}R^{x2}$, $NR^{x1}R^{x2}$ - C_1 - C_4 -alkoxy and the moiety Y^2 -Cyc²;

15

R^8 is selected from the group consisting of hydrogen, halogen, OH, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_2 - C_4 -alkenyloxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl, CN and $NR^{x1}R^{x2}$;

20

R^9 is selected from the group consisting of hydrogen, halogen, OH, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -alkylsulfanyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_1 - C_4 -alkylsulfanyl- C_1 - C_4 -alkoxy, C_2 - C_4 -alkenyloxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl, CN, $NR^{x1}R^{x2}$, $NR^{x1}R^{x2}$ - C_1 - C_4 -alkoxy and the moiety Y^3 -Cyc³;

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Y^1, Y^2, Y^3 independently of each other are selected from a chemical bond, CH_2 ,
O, $O-CH_2$, NR^y , NR^y-CH_2 , $NR^y-S(O)_2$, S, $S(O)$, $S(O)_2$, 1,2-ethandiyl,
1,2-ethendiyl or 1,2-ethyndiyl, where R^y is selected from the group
consisting of hydrogen, C_1 - C_4 -alkyl, C_1 - C_4 -alkylcarbonyl, C_1 - C_4 -
alkylsulfonyl, C_1 - C_4 -fluoroalkylsulfonyl;

Cyc^1, Cyc^2, Cyc^3 independently of each other are selected from the group
consisting of phenyl, naphthyl, 4- to 8-membered saturated or partially
unsaturated heteromonocyclic radicals, saturated or partially
unsaturated 7- to 10 membered heterobicyclic radicals, 5- or 6-
membered monocyclic hetaryl, and 8- to 10 membered bicyclic
hetaryl, where the saturated or partially unsaturated heteromonocyclic
and heterobicyclic radicals have 1, 2, 3 or 4 heteroatoms or
heteroatom containing groups as ring members, which are selected
from O, S, SO, SO_2 and N, and where the 5- or 6-membered
monocyclic hetaryl and the 8- to 10-membered bicyclic hetaryl have 1,
2, 3 or 4 heteroatoms as ring members, which are selected from O, S
and N,
where phenyl, naphthyl, the saturated or partially unsaturated
heteromonocyclic and heterobicyclic radicals and the mono and
bicyclic heteroaromatic radicals are unsubstituted or carry 1, 2, 3, 4 or
5 radicals R^{C1} or one radical Y^1-R^{C2} and 0, 1, 2, 3 or 4 radicals R^{C1} ;
where

R^{C1} is selected from hydrogen, halogen, OH, CN, NO_2 , C_1 - C_4 -alkyl,
 C_1 - C_4 -alkoxy, C_1 - C_4 -alkylsulfonyl, hydroxy- C_1 - C_4 -alkyl, C_1 - C_4 -
alkoxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, cyano- C_1 - C_4 -
alkyl, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, C_1 - C_4 -
alkylsulfonyl, $C(O)R^a$, $Z-C(O)OR^b$, $Z-C(O)NR^cR^d$, $S(O)_2NR^eR^f$
and $Z-NR^eR^f$, where

R^a is selected from the group consisting of C_1 - C_4 -alkyl and
 C_1 - C_4 -fluoroalkyl,

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R^b is selected from the group consisting of hydrogen, C₁-C₄-alkyl, C₂-C₄-alkenyl and C₁-C₄-fluoroalkyl,

R^c , R^d is selected from the group consisting of hydrogen, C₁-C₄-alkyl, C₁-C₄-fluoroalkyl, C₁-C₄-alkoxy and C₁-C₄-fluoroalkoxy,

R^e , R^f is selected from the group consisting of hydrogen, C₁-C₄-alkyl, C₁-C₄-fluoroalkyl, C₁-C₄-alkoxy and C₁-C₄-fluoroalkoxy,

Z is a covalent bond or C₁-C₄-alkandiyl,

or two radicals R^{C1} which are bound at adjacent carbon atoms may form a fused 5- or 6-membered carbocyclic radical or a fused 5- or 6-membered heterocyclic radical having 1, 2 or 3 heteroatoms as ring members, which are selected from O, S and N;

or two radicals R^{C1} which are bound at the same carbon atom may form a spiro 5- or 6-membered carbocyclic radical or a spiro 5- or 6-membered heterocyclic radical having 1 or 2 heteroatoms as ring members, which are selected from O, S and N,

or two radicals R^{C1} which are bound at the same carbon atom may form an oxygen atom, where the fused and the spiro radicals are unsubstituted or carry 1, 2, 3 or 4 radicals R^{C3} ;

Y' is a chemical bond, CH₂, O, O-CH₂, S(O)₂, NR^{y'}, NR^{y'}-CH₂ or NR^{y'}-S(O)₂, where R^{y'} is selected from the group consisting of hydrogen, C₁-C₄-alkyl, C₁-C₄-alkylcarbonyl, C₁-C₄-alkylsulfonyl, C₁-C₄-fluoroalkylsulfonyl;

R^{C2} is a carbocyclic or heterocyclic radical selected from the group consisting of phenyl, 3- to 7-membered saturated or partially unsaturated monocarbocyclic radicals, 3- to 7-membered

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saturated or partially unsaturated heteromonocyclic radicals, having 1, 2 or 3 heteroatoms as ring members, which are selected from O, S and N, and 5- or 6-membered heteroaromatic radicals, having 1, 2 or 3 heteroatoms as ring members, which are selected from O, S and N, where the carbocyclic and the heterocyclic radical is unsubstituted or carries 1, 2, 3, 4 or 5 radicals R^{C3} ;

R^{C3} is selected from hydrogen, halogen, OH, CN, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, hydroxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, cyano- C_1 - C_4 -alkyl, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, C_2 - C_6 -alkenyl, $C(O)R^a$, benzyl, $Z-C(O)OR^b$, $Z-C(O)NR^cR^d$, $S(O)_2NR^eR^d$ and $Z-NR^eR^f$, where, Z, R^a , R^b , R^c , R^d , R^e and R^f are as defined above or two radicals R^{C3} which are bound at the same atom may form an oxygen atom;

further provided that for X^3 being $X^4=C(R^8)$, one or two of the radicals R^1 , R^7 and R^9 are a moiety Y^1-Cyc^1 , Y^2-Cyc^2 or Y^3-Cyc^3 , respectively;

further provided that for X^3 being $X^5=C(R^9)$, one or two of the radicals R^1 , R^7 and R^9 are a moiety Y^1-Cyc^1 , Y^2-Cyc^2 or Y^3-Cyc^3 , respectively;

and the N-oxides, the prodrugs, the tautomers and the hydrates thereof, and the pharmaceutically acceptable salts thereof;

except for the following compounds:

6-Methyl-5-phenyl-3-[2-(2-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one,
5-Phenyl-3-[2-(4-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one,
5-(4-Methylphenyl)-3-[2-(2-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one,
5-(2-Furanyl)-3-[1-methyl-2-(3-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one,
5-(2-Thienyl)-3-[1-methyl-2-(3-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one,

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5-(3,4-Dimethylphenyl)-3-[2-(2-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one,

5-(4-Methylphenyl)-3-[2-(4-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one,

5-Phenyl-3-[2-(2-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one, and

5-Phenyl-3-[2-(4-oxo-5-phenylthieno[2,3-d]pyrimidin-(3H)-3-yl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one.

2. The compound as claimed in claim 1,

wherein

X^3 is O, S or $-X^4=C(R^8)-$, where $C(R^8)$ is bound to the carbon atom which carries R^2 ;

X^4 is N or $C-R^9$;

Het is selected from

- i. monocyclic C-bound 6-membered hetaryl having 1 or 2 nitrogen atoms as ring members, which is unsubstituted or may carry 1, 2, 3 or 4 identical or different substituents R^x ,
- ii. fused bicyclic hetaryl having 1 or 2 nitrogen atoms and optionally a further heteroatom selected from O, S and N as ring members, benzothienyl or benzofuryl, where bicyclic hetaryl, benzothienyl and benzofuryl are, independently of each other, unsubstituted or may carry 1, 2, 3 or 4 identical or different substituents R^x , and
- iii. phenyl, which carries a monocyclic hetaryl radical having 1 or 2 nitrogen atoms and optionally a further heteroatom selected from O, S and N as ring members, which in addition to monocyclic hetaryl, may carry 1, 2 or 3 identical or different substituents R^x ,

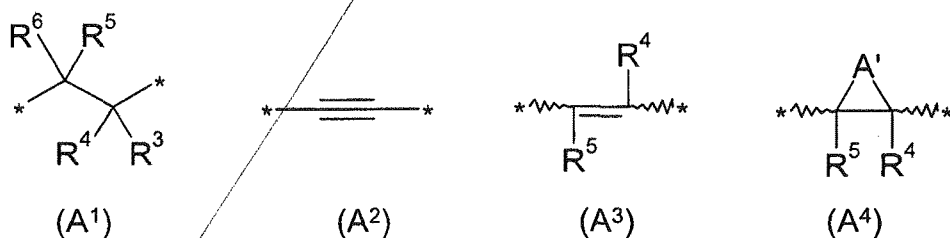
where

R^x is selected from the group consisting of H, halogen, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, C_3 - C_6 -

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cycloalkyl, C₁-C₄-alkoxy-C₁-C₄-alkoxy, C₁-C₄-alkoxy-C₁-C₄-alkyl, OH, hydroxy-C₁-C₄-alkyl, O-C₃-C₆-cycloalkyl, benzyloxy, C(O)O-(C₁-C₄-alkyl), O-(C₁-C₄-alkyl)-CO₂H, N(R^{x1})(R^{x2}), C(O)N(R^{x1})(R^{x2}), C₁-C₄-alkyl-N(R^{x1})(R^{x2}),
 5 -NR^{x3}-C(O)-N(R^{x1})(R^{x2}), NR^{x3}-C(O)O-(C₁-C₄-alkyl),
 -N(R^{x3})-SO₂-R^{x4}, phenyl, CN, -SF₅, -OSF₅, -SO₂R^{x4}, -SR^{x4} and trimethylsilyl, where R^{x1}, R^{x2}, R^{x3} and R^{x4}, independently of each other are selected from the group consisting of hydrogen, C₁-C₄-alkyl, C₁-C₄-fluoroalkyl and C₃-C₆-cycloalkyl or R^{x1} and R^{x2} form together with the N atom to which they are attached a
 10 3- to 7-membered, nitrogen heterocycle which may have 1, 2 or 3 further different or identical heteroatoms or heteroatom containing groups selected from the group of O, N, S, SO and SO₂ as ring members and which may carry 1, 2, 3, 4, 5 or 6
 15 substituents selected from C₁-C₄-alkyl;

A represents one of the following groups A¹, A², A³ or A⁴:



where * indicates the points of attachment to Het and to the nitrogen atom, respectively,

R³, R⁴, R⁵, R⁶ independently of each other are selected from the group consisting of hydrogen, halogen, C₁-C₄-alkyl, trimethylsilyl, C₁-C₄-fluoroalkyl, C₁-C₄-fluoroalkoxy, C₃-C₆-cycloalkyl, or the radicals together with the carbon atoms to which they are bound form a saturated 3- to 6-membered carbocycle or a saturated 3- to 6-membered heterocycle having 1 or 2 non-adjacent heteroatoms as ring members, where the carbocycle and the heterocycle are unsubstituted or may carry 1, 2, 3

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or 4 substituents selected from fluorine and methyl or either the radicals R^3 , R^4 or the radicals R^5 , R^6 together with the carbon atom to which they are bound form a saturated 3- to 6-membered carbocycle or a saturated 3- to 6-membered heterocycle having 1 or 2 non-adjacent heteroatoms as ring members, where the carbocycle and the heterocycle are unsubstituted or may carry 1, 2, 3 or 4 substituents selected from fluorine and methyl;

A' is a O, NR^{3a} , $CR^{3b}R^{3c}$ or linear C_2 - C_3 -alkandiyl, where one of the CH_2 -moieties of C_2 - C_3 -alkandiyl may be replaced by oxygen or NR^{3a} , and where 1, 2, 3, or 4 of the hydrogen atoms of C_2 - C_3 -alkandiyl may be replaced by a radical R^{3d} , where

R^{3a} is hydrogen or C_1 - C_4 -alkyl,

R^{3b} , R^{3c} independently of each other are selected from the group consisting of hydrogen, halogen, C_1 - C_4 -alkyl or R^{3b} and R^{3c} together form C_2 - C_3 -alkandiyl;

R^{3d} is selected from the group consisting of halogen and C_1 - C_4 -alkyl

R^8 is selected from the group consisting of hydrogen, halogen, OH, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_2 - C_4 -alkenyloxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl, CN and $NR^{x1}R^{x2}$;

R^9 is selected from the group consisting of hydrogen, halogen, OH, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -alkylsulfanyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_1 - C_4 -alkylsulfanyl- C_1 - C_4 -alkoxy, C_2 - C_4 -alkenyloxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl, CN, $NR^{x1}R^{x2}$, $NR^{x1}R^{x2}$ - C_1 - C_4 -alkoxy and the moiety Y^3 -Cyc³.

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3. The compound as claimed in claim 1 or 2, where X^3 is selected from O, S, $-X^4=C(R^8)-$, where $C(R^8)$ is bound to the carbon atom which carries R^2 .
- 5 4. The compound as claimed in any one of claims 1 to 3, where A is selected from A^1 , A^2 , A^3 and A^4 .
5. The compound as claimed in any of claims 1 to 4, where X^2 is $C-R^7$.
- 10 6. The compound as claimed in claim 5, where R^7 is hydrogen or Y^2-Cyc^2 .
7. The compound as claimed in any of claims 1 to 6, where X^1 is N.
8. The compound as claimed in claim 1 to 6, where X^1 is CH.
- 15 9. The compound as claimed in any of claims 1 to 8, where X^3 is S.
10. The compound as claimed in any of claims 1 to 8, where X^3 is O.
- 20 11. The compound as claimed in any one of claims 1 to 8, where X^3 is $C(R^9)=C(R^8)$.
12. The compound as claimed in any one of claims 1 to 8, where X^3 is $N=(CR^9)$.
13. The compound as claimed in any of claims 11 or 12, where R^9 is hydrogen or Y^3-Cyc^3 .
- 25 14. The compound as claimed in any of claims 1 to 8, where X^3 is $N=C(R^8)$.
15. The compound as claimed in any of claims 11 or 14, where R^8 is hydrogen.
- 30 16. The compound as claimed in any one of the preceding claims, where R^2 is selected from the group consisting of hydrogen, fluorine, C_1-C_4 -alkyl, C_1-C_2 -

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fluoroalkyl, C₁-C₄-alkoxy, C₁-C₂-fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, and fluorinated cyclopropyl.

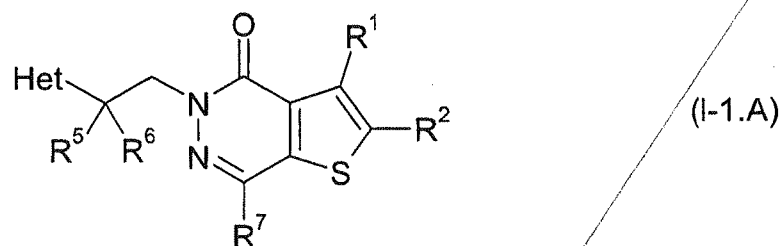
- 5
17. The compound as claimed in claim 16, where R² is hydrogen.
18. The compound as claimed in any one of the preceding claims, where A is A¹.
- 10
19. The compound as claimed in claim 18, where R³, R⁴ are selected from hydrogen and fluorine.
- 20.
20. The compound as claimed in claim 18 or 19, where R⁵ and R⁶ are, independently of each other, selected from the group consisting of hydrogen, fluorine and methyl.
- 15
21. The compound as claimed in any one of claims 1 to 17, where A is A².
22. The compound as claimed in any one of claims 1 to 17, where A is A³.
- 20
23. The compound as claimed in claim 22, where R⁴, R⁵ are selected from hydrogen and fluorine.
24. The compound as claimed in any one of claims 1 to 17, where A is A⁴.
- 25
25. The compound as claimed in claim 24, where A' is CR^{3b}R^{3c}, where R^{3b} and R^{3c} are independently of each other selected from the group consisting of hydrogen, fluorine and methyl or together form CH₂CH₂.
26. The compound as claimed in claim 25, where R^{3b} and R^{3c} are hydrogen.
- 30
27. The compound as claimed in any one of claims 1 to 17, where A is A⁵.

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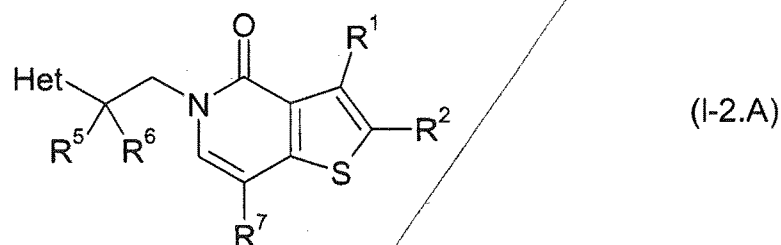
28. The compound as claimed in claim 27, where R^{3e} , R^{3f} , R^4 and R^5 are each hydrogen.
29. The compound as claimed in any one of the preceding claims, where Het is selected from the group consisting of C-bound 6-membered monocyclic hetaryl, which has 1 or 2 nitrogen atoms as ring members, benzofuryl and C-bound, fused bicyclic hetaryl, which has 1 or 2 nitrogen atoms as ring members and optionally a further heteroatom selected from O, S and N as ring member, where monocyclic hetaryl, benzofuryl and bicyclic hetaryl may be unsubstituted or may carry 1, 2, 3 or 4 substituents R^x .
30. The compound as claimed in claim 29, where Het has at least one imino-nitrogen as ring member, which is located in the position adjacent to the carbon atom which is bound to A.
31. The compound as claimed in claim 30, where Het is selected from the group consisting of 2-pyridyl, 2-pyrimidinyl, 4-pyrimidinyl, 2-pyrazinyl, 3-pyridazinyl, 2-quinolinyl, 3-isoquinolinyl, 2-quinazolinyl, 2-quinoxaliny, 1,5-naphthyridin-2-yl, 1,8-naphthyridin-2-yl, benzothiazol-1-yl, benzoxazol-1-yl, benzimidazol-2-yl, 1-methylbenzimidazol-2-yl, imidazo[1,2-a]pyridine-2-yl, thieno[3,2-b]pyridine-5-yl, imidazo-[2,1-b]-thiazol-6-yl and 1,2,4-triazolo[1,5-a]pyridine-2-yl, where the aforementioned radicals may carry 1, 2 or 3 radicals selected from fluorine, chlorine, methyl, fluoromethyl, difluoromethyl, trifluoromethyl, methoxy, fluoromethoxy, difluoromethoxy, trifluoromethoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, and fluorinated cyclopropyl.
32. The compound as claimed in any one of the preceding claims, where Y^1 , Y^2 and Y^3 , independently of each other, are selected from the group consisting of a chemical bond, O and NH.

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33. The compound as claimed in any one of the preceding claims, where Y^1 , Y^2 and Y^3 are each a chemical bond.
34. The compound as claimed in any one of the preceding claims, where Q is O.
35. The compound as claimed in any one of the preceding claims, which is of the formulae I-1.A or I-2.A



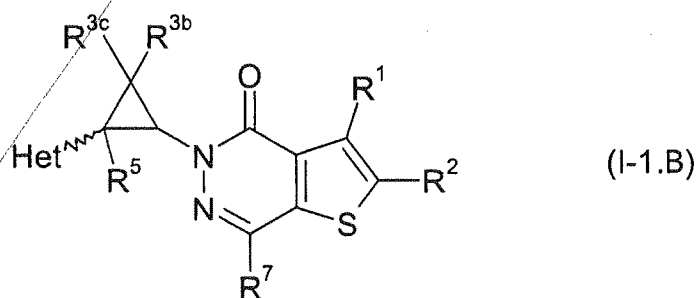
(I-1.A)



(I-2.A)

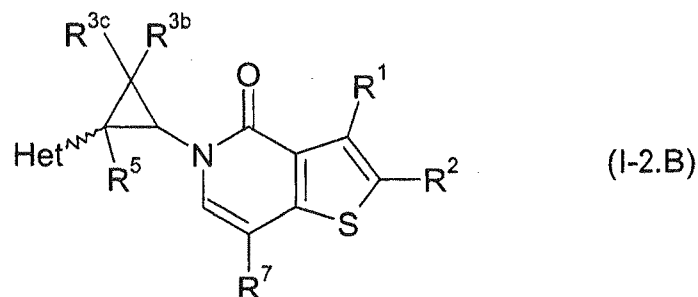
where Het, R^1 , R^2 , R^5 , R^6 and R^7 are as defined in any one of the preceding claims.

36. The compound as claimed in any one of claims 1 to 34, which is of the formulae I-1.B or I-2.B



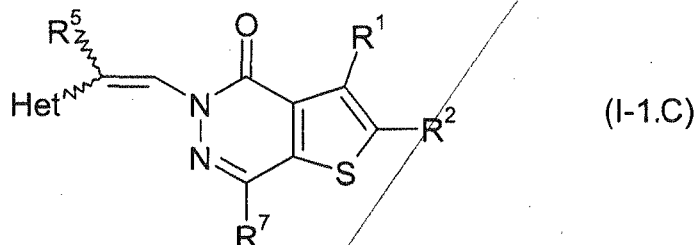
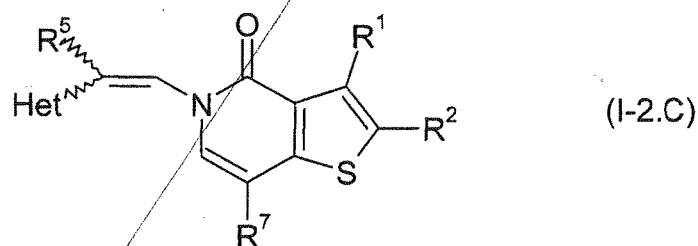
(I-1.B)

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where Het, R^1 , R^2 , R^{3b} , R^{3c} and R^7 are as defined in any one of claims 1 to 35 and R^5 is hydrogen.

- 5 37. The compound as claimed in any one of claims 1 to 34, which is of the formulae I-1.C or I-2.C



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where Het, R^1 , R^2 , R^5 , and R^7 are as defined in any one of claims 1 to 35.

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38. The compound as claimed in any of claim 35, 36 or 37, where R^1 is a radical Y^1 -Cyc¹ and R^7 is selected from the group consisting of hydrogen, fluorine, C_1 - C_4 -alkyl, C_1 - C_2 -fluoroalkyl, C_1 - C_4 -alkoxy, C_1 - C_2 -fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl and Y^2 -Cyc².

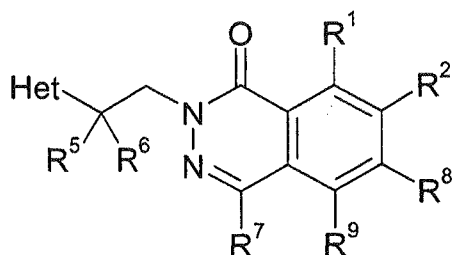
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39. The compound as claimed in any of claim 35, 36 or 37, where R^1 is selected from the group consisting of hydrogen, fluorine, C_1 - C_4 -alkyl, C_1 - C_2 -fluoroalkyl, C_1 - C_4 -

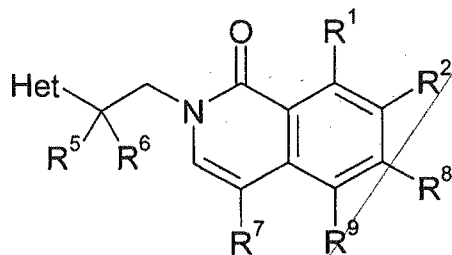
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alkoxy, C₁-C₂-fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups and fluorinated cyclopropyl and R⁷ is a moiety Y²-Cyc².

40. The compound as claimed in any one of claims 1 to 34, which is of the formulae
I-3.A or I-4.A



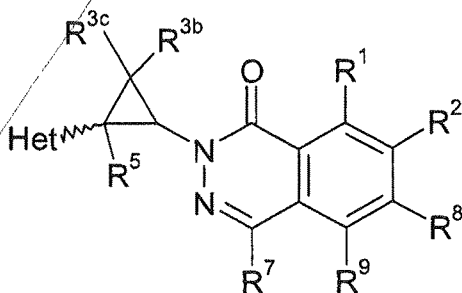
(I-3.A)



(I-4.A)

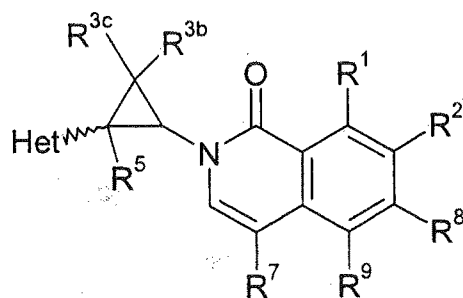
- where Het, R¹, R², R⁵, R⁶, R⁷, R⁸ and R⁹ are as defined in any one of claims 1 to 35.

41. The compound as claimed in any one of claims 1 to 34, which is of the formulae
I-3.B or I-4.B



(I-3.B)

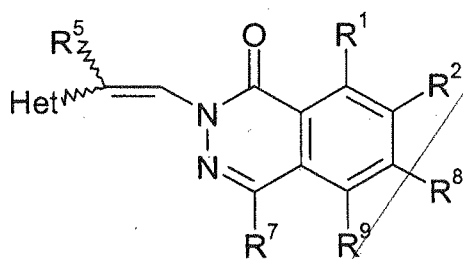
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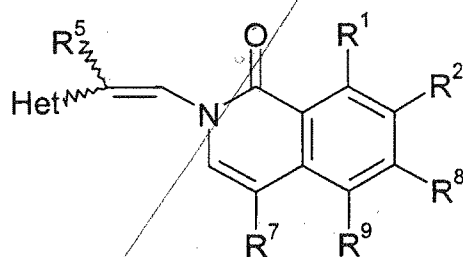
(I-4.B)

where Het, R¹, R², R^{3b}, R^{3c}, R⁷, R⁸ and R⁹ are as defined in any one of claims 1 to 35 and R⁵ is hydrogen..

- 5 42. The compound as claimed in any one of claims 1 to 34, which is of the formulae I-3.C or I-4.C



(I-3.C)



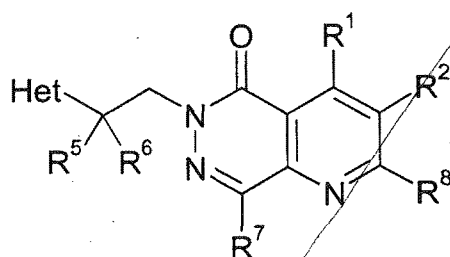
(I-4.C)

10 where Het, R¹, R², R⁵, R⁷, R⁸ and R⁹ are as defined in any one of claims 1 to 35.

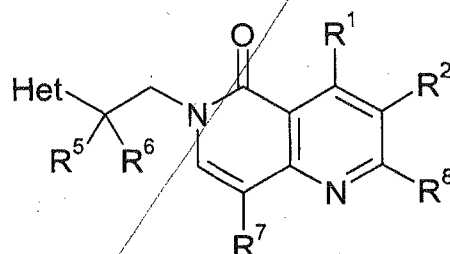
- 15 43. The compound as claimed in any one of claims 40, 41 or 42, where R¹ is a radical Y¹-Cyc¹ and R⁷ and R⁹ are selected, independently of each other, from the group consisting of hydrogen, fluorine, C₁-C₄-alkyl, C₁-C₂-fluoroalkyl, C₁-C₄-alkoxy, C₁-C₂-fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl and Y²-Cyc² or Y³-Cyc³, respectively.

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44. The compound as claimed in any one of claims 40, 41 or 42, where R^1 is selected from the group consisting of hydrogen, fluorine, C_1 - C_4 -alkyl, C_1 - C_2 -fluoroalkyl, C_1 - C_4 -alkoxy, C_1 - C_2 -fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups and fluorinated cyclopropyl and R^7 and R^9 are selected, independently of each other, from the group consisting of hydrogen, fluorine, C_1 - C_4 -alkyl, C_1 - C_2 -fluoroalkyl, C_1 - C_4 -alkoxy, C_1 - C_2 -fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl and Y^2 -Cyc² or Y^3 -Cyc³, respectively, provided that either R^7 is Y^2 -Cyc² or R^9 is Y^3 -Cyc³.
45. The compound as claimed in any one of claims 1 to 34, which is of the formulae I-5.A or I-6.A



(I-5.A)

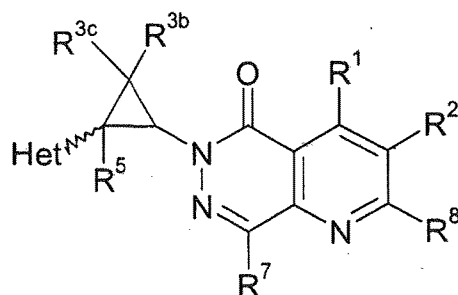


(I-6.A)

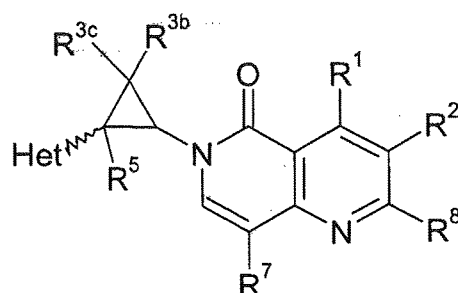
where Het, R^1 , R^2 , R^5 , R^6 , R^7 and R^8 are as defined in any one of claims 1 to 34.

46. The compound as claimed in any one of claims 1 to 34, which is of the formulae I-5.B or I-6.B

254



(I-5.B)

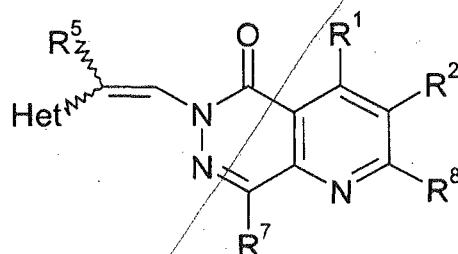


(I-6.B)

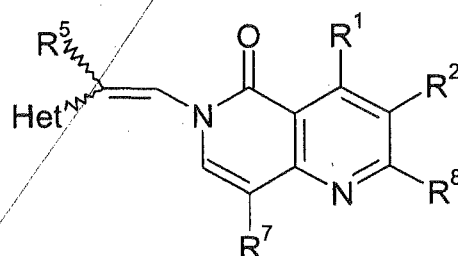
where Het, R^1 , R^2 , R^{3b} , R^{3c} , R^7 and R^8 are as defined in any one of claims 1 to 34 and R^5 is hydrogen.

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47. The compound as claimed in any one of claims 1 to 34, which is of the formulae I-5.C or I-6.C



(I-5.C)



(I-6.C)

10

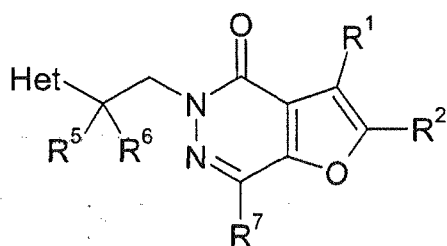
where Het, R^1 , R^2 , R^5 , R^7 and R^8 are as defined in any one of claims 1 to 34.

48. The compound as claimed in any one of claims 45, 46 or 47, where R^1 is a radical Y^1 -Cyc¹ and R^7 is selected from the group consisting of hydrogen, fluorine, C_1 - C_4 -alkyl, C_1 - C_2 -fluoroalkyl, C_1 - C_4 -alkoxy, C_1 - C_2 -fluoroalkoxy, cyclopropyl,

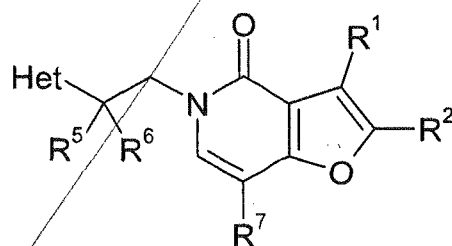
optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl and Y²-Cyc².

49. The compound as claimed in any one of claims 45, 46 or 47, where R¹ is selected from the group consisting of hydrogen, fluorine, C₁-C₄-alkyl, C₁-C₂-fluoroalkyl, C₁-C₄-alkoxy, C₁-C₂-fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups and fluorinated cyclopropyl and R⁷ is Y²-Cyc².

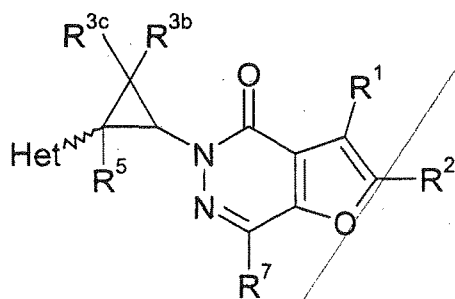
50. The compound as claimed in any one of claims 1 to 34, which is of the formulae I-7.A, I-8.A, I-7.B, I-8.B, I-7.C, I-8.C,



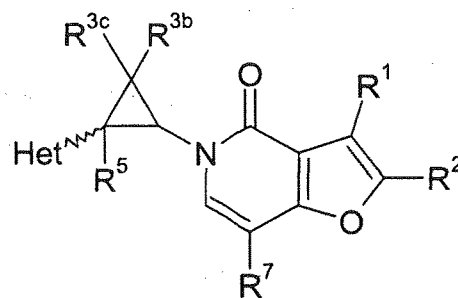
(I-7.A)



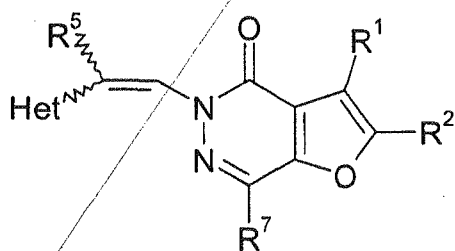
(I-8.A)



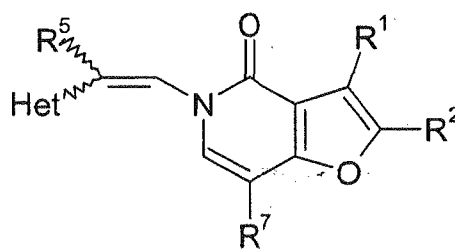
(I-7.B)



(I-8.B)



(I-7.C)



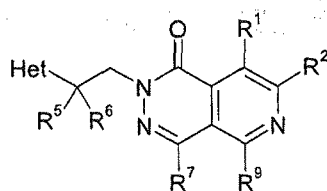
(I-8.C)

where Het, R¹, R², R^{3b}, R^{3c}, R⁵, R⁶, R⁷ and R⁸ are as defined in any one of claims

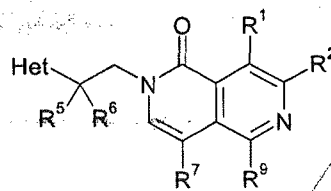
1 to 35.

51. The compound as claimed in claim 50, where R^1 is a radical $Y^1\text{-Cyc}^1$ and R^7 is selected from the group consisting of hydrogen, fluorine, $C_1\text{-}C_4\text{-alkyl}$, $C_1\text{-}C_2\text{-fluoroalkyl}$, $C_1\text{-}C_4\text{-alkoxy}$, $C_1\text{-}C_2\text{-fluoroalkoxy}$, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl and $Y^2\text{-Cyc}^2$.

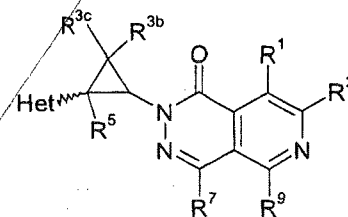
52. The compound as claimed in any one of claims 1 to 34, which is of formulae



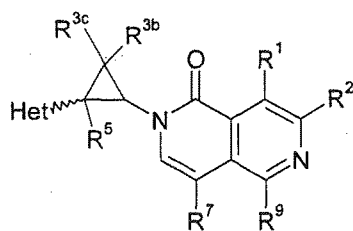
(I-9.A)



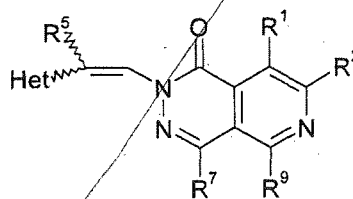
(I-10.A)



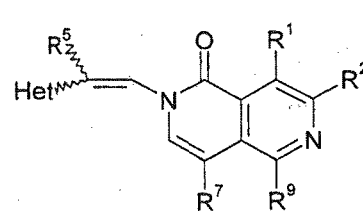
(I-9.B)



(I-10.B)



(I-9.C)



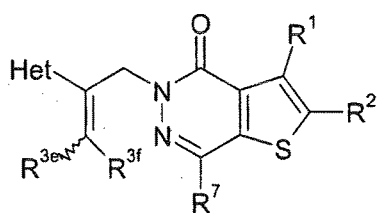
(I-10.C)

where Het, R^1 , R^2 , R^{3b} , R^{3c} , R^5 , R^6 , R^7 , and R^9 are as defined in any one of claims 1 to 34.

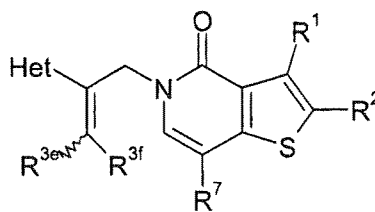
53. The compound as claimed in claim 52, where R^1 is a radical $Y^1\text{-Cyc}^1$ and R^7 and R^9 are selected, independently of each other, from the group consisting of hydrogen, fluorine, $C_1\text{-}C_4\text{-alkyl}$, $C_1\text{-}C_2\text{-fluoroalkyl}$, $C_1\text{-}C_4\text{-alkoxy}$, $C_1\text{-}C_2\text{-fluoroalkoxy}$, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl and $Y^2\text{-Cyc}^2$ or $Y^3\text{-Cyc}^3$, respectively.

54. The compound as claimed in any one of claims 1 to 34, which is of the formulae I-1.D, I-2.D, I-3.D, I-4.D, I-5.D, I-6.D, I-7.D, I-8.D, I-9.D, I-10.D

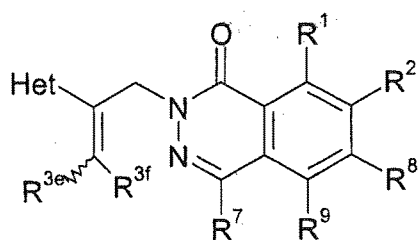
5



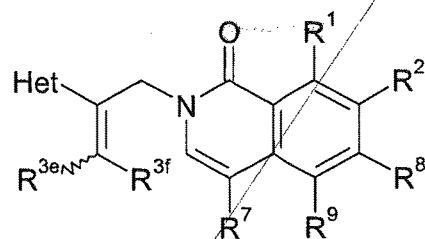
(I-1.D)



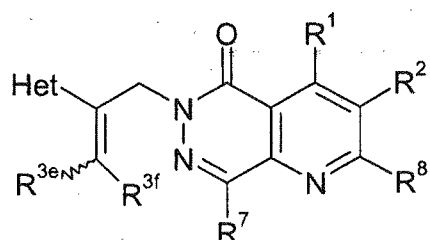
(1-2.D)



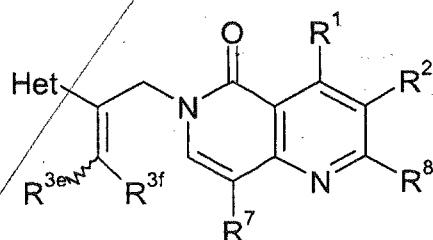
(I-3.D)



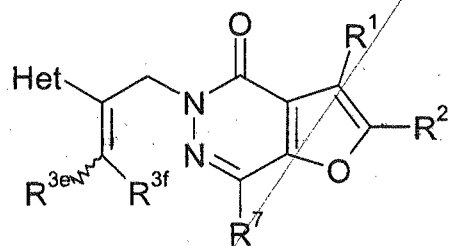
(1-4.D)



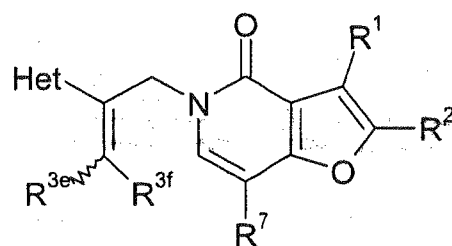
(1-5.D)



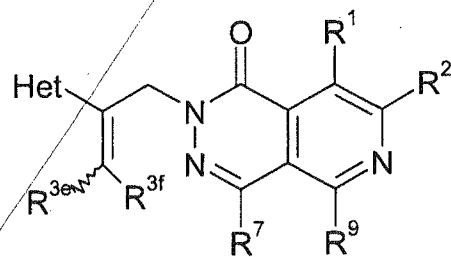
(I-6.D)



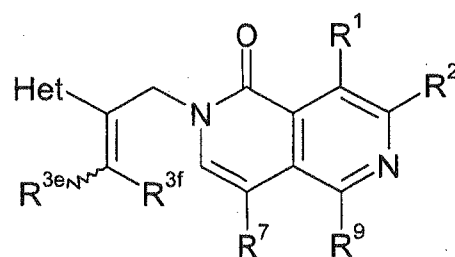
(1-7.D)



(1-8.D)



(1-9.D)



(I-10.D)

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where Het, R¹, R², R^{3e}, R^{3f}, R⁷, R⁸ and R⁹ are as defined in any one of claims 1 to 34.

55. The compound as claimed in claim 54, where R¹ is a radical Y¹-Cyc¹ and R⁷ is selected from the group consisting of hydrogen, fluorine, C₁-C₄-alkyl, C₁-C₂-fluoroalkyl, C₁-C₄-alkoxy, C₁-C₂-fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl and Y²-Cyc².
56. The compound as claimed in any one of claims 35 to 55, where R^{3b}, R^{3c}, R⁵, R⁶, if present, are hydrogen.
57. The compound as claimed in any one of the preceding claims, where Cyc¹ is selected from the group consisting of saturated 4-, 5-, 6-, 7- or 8-membered heteromonocycles and saturated 7-, 8-, 9- or 10-membered heterobicycles, where the heteromonocycles and the heterobicycles have one nitrogen or oxygen atom as ring member and may have one further heteroatom or heteroatom group as ring member, which is selected from the group consisting of O, S, S(=O), S(=O)₂ and N, where the saturated heteromonocycle and the saturated heterobicycle are unsubstituted or carry 1, 2, 3, 4 or 5 radicals R^{C1} or one radical Y'-R^{C2} and 0, 1, 2, 3 or 4 radicals R^{C1}, where R^{C1}, R^{C2} and Y' are as defined in claim 1.
58. The compound as claimed in any one of the preceding claims, where Y¹-Cyc¹, is selected from the group consisting of 1-piperidinyl, 4,4-difluoro-1-piperidinyl, 4-piperidinyl, 1-methyl-4-piperidinyl, 1-piperazinyl, 4-methyl-1-piperazinyl, morpholin-4-yl, azepane-1-yl, 1,4-oxazepan-4-yl, hexahydrofuro[3,4-c]pyrrol-5-yl, 2,5-diazabicyclo[2.2.1]heptan-2-yl, 3,8-diazabicyclo[3.2.1]octan-8-yl, thiomorpholin-4-yl, 1-oxothiomorpholin-4-yl, N-(oxetan-3-yl)amino, 1,1-dioxothiomorpholin-4-yl and oxetan-3-ylamino.
59. The compound as claimed in any one of claims 1 to 56, where Cyc¹ is selected from the group consisting of phenyl, 5- or 6 membered monocyclic hetaryl, and 9- or 10 membered bicyclic hetaryl, where hetaryl has one heteroatom, selected from

O, S and N as ring member and optionally one or two further nitrogen atoms as ring members, where phenyl and the hetaryl radical are unsubstituted or either carry, independently of each other, 1, 2, 3, 4 or 5 radicals R^{C1} .

- 5 60. The compound as claimed in claim 59, where Y^1 is a chemical bond and Cyc^1 is selected from the group consisting of phenyl, 5- or 6-membered monocyclic hetaryl selected from the group consisting of pyridyl, pyrimidinyl, furyl, thienyl, pyrrolyl, imidazolyl, pyrazolyl, oxazolyl and thiazolyl, 9- or 10-membered bicyclic hetaryl selected from the group consisting of indolyl, quinolinyl, 10 isoquinolinyl, quinazolinyl, benzimidazolyl, benzotriazolyl, benzopyrazolyl and benzofuryl, where phenyl and hetaryl are unsubstituted or carry 1, 2 or 3 radicals R^{C1} which are selected from the group consisting of fluorine, chlorine, CN, methyl, difluoromethyl, trifluoromethyl, methoxy and NH_2 , or, if Cyc^1 is phenyl, two radicals R^{C1} which are bound to adjacent carbon atoms, together with the 15 phenyl ring to which they are bound, form a bicyclic heterocyclic radical, which is selected from 2,3-dihydrobenzofuran-5-yl, 2,3-dihydrobenzofuran-6-yl, 1,3-dihydroindol-2-on-5-yl, 1,3-dihydroindol-2-on-6-yl, benzo-1,3-dioxolan-5-yl, benzo-1,3-dioxolan-6-yl, benzo-1,4-dioxan-5-yl, benzo-1,4-dioxan-6-yl, benzo-1,5-dioxepan-6-yl and benzo-1,4-dioxepan-7-yl.
- 20 61. The compound as claimed in any one of the preceding claims, where Cyc^2 and Cyc^3 , independently of each other, are selected from the group consisting of saturated 4-, 5-, 6-, 7- or 8-membered heteromonocycles and saturated 7-, 8-, 9- or 10-membered heterobicycles, where the heteromonocycles and the heterobicycles 25 have one nitrogen or oxygen atom as ring member and may have one further heteroatom or heteroatom group as ring member, which is selected from the group consisting of O, S, $S(=O)$, $S(=O)_2$ and N, where the saturated heteromonocycle and the saturated heterobicycle are unsubstituted or carry 1, 2, 3, 4 or 5 radicals R^{C1} or one radical $Y'-R^{C2}$ and 0, 1, 2, 3 or 4 radicals R^{C1} , where R^{C1} , R^{C2} and Y' 30 are as defined in claim 1.

62. The compound as claimed in claim 60, where Y²-Cyc² and Y³-Cyc³, independently of each other, are selected from the group consisting of phenyl, 5- or 6-membered monocyclic hetaryl selected from the group consisting of pyridyl, pyrimidinyl, furyl, thienyl, pyrrolyl, imidazolyl, pyrazolyl, oxazolyl and thiazolyl, 9- or 10-membered bicyclic hetaryl selected from the group consisting of indolyl, quinolinyl, isoquinolinyl, quinazolinyl, benzimidazolyl, benzotriazolyl, benzopyrazolyl and benzofuryl, where phenyl and hetaryl are unsubstituted or carry 1, 2 or 3 radicals R^{C1} which are selected from the group consisting of fluorine, chlorine, CN, methyl, difluoromethyl, trifluoromethyl, methoxy and NH₂, or, if Cyc² or Cyc³ are phenyl, two radicals R^{C1} which are bound to adjacent carbon atoms, together with the phenyl ring to which they are bound, form a bicyclic heterocyclic radical, which is selected from 2,3-dihydrobenzofuran-5-yl, 2,3-dihydrobenzofuran-6-yl, 1,3-dihydroindol-2-on-5-yl, 1,3-dihydroindol-2-on-6-yl, benzo-1,3-dioxolan-5-yl, benzo-1,3-dioxolan-6-yl, benzo-1,4-dioxan-5-yl, benzo-1,4-dioxan-6-yl, benzo-1,5-dioxepan-6-yl and benzo-1,4-dioxepan-7-yl.
63. A compound, which is selected from the group consisting of
- 3,7-di(pyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 7-(pyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(pyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(pyridin-4-yl)-5-[2-(pyridin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3,7-di(pyridin-4-yl)-5-[2-(pyridin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(quinolin-2-yl)ethyl]-3-[4-(trifluoromethyl)phenyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(4-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-[4-(propan-2-yl)phenyl]-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(4-ethylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 4-{4-oxo-5-[2-(quinolin-2-yl)ethyl]-4,5-dihydrothieno[2,3-d]pyridazin-3-yl} benzonitrile;
- 3-(4-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;

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- 3-(4-fluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(4-ethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-[4-(dimethylamino)phenyl]-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
5 (4-{4-oxo-5-[2-(quinolin-2-yl)ethyl]-4,5-dihydrothieno[2,3-d]pyridazin-3-yl} phenyl)acetonitrile;
3-(4-hydroxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(2-chlorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(2-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
10 3-(2-ethylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(2-fluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(2-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(2-ethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(2-hydroxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
15 5-[2-(quinolin-2-yl)ethyl]-3-[2-(trifluoromethyl)phenyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-[3-(methoxymethyl)phenyl]-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(3-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
20 3-(3-ethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-[3-(dimethylamino)phenyl]-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-[4-Oxo-5-(2-quinolin-2-yl-ethyl)-4,5-dihydro-thieno[2,3-d]pyridazin-3-yl]-benzonitrile;
25 3-(3-fluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(3-hydroxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
N,N-dimethyl-3-{4-oxo-5-[2-(quinolin-2-yl)ethyl]-4,5-dihydrothieno[2,3-d]pyridazin-3-yl} benzamide;
3-(3-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
30 5-[2-(quinolin-2-yl)ethyl]-3-(thiophen-2-yl)thieno[2,3-d]pyridazin-4(5H)-one;
3-(1-methyl-1H-indol-5-yl)-5-(2-quinolin-2-yl-ethyl)-5H-thieno[2,3-d]pyridazin-4-one;

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- 3-(1H-indol-6-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(pyrimidin-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(2-methoxypyridin-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
5 3-(pyridin-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(4-methoxypyridin-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(furan-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(quinolin-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
10 3-(isoquinolin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(isoquinolin-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(1H-indol-4-yl)-5-(2-quinolin-2-yl-ethyl)-5H-thieno[2,3-d]pyridazin-4-one;
3-(2,3-dihydrobenzofuran-5-yl)-5-(2-quinolin-2-yl-ethyl)-5H-thieno[2,3-d]pyridazin-4-one;
15 3-(quinolin-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(3,5-dimethyl-1,2-oxazol-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(6-methoxypyridin-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
20 3-(2,3-dihydro-1,4-benzodioxin-6-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(2-methylpyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(5-methoxypyridin-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
25 3-[6-(morpholin-4-yl)pyridin-3-yl]-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(1,3-benzodioxol-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
30 3-(quinolin-6-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
3-(1-methyl-1H-pyrazol-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;

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- 3-[1-(2-methylpropyl)-1H-pyrazol-4-yl]-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- tert-butyl 2-{4-oxo-5-[2-(quinolin-2-yl)ethyl]-4,5-dihydrothieno[2,3-d]pyridazin-3-yl}-1H-pyrrole-1-carboxylate;
- 5 3-(2-methoxypyrimidin-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(quinolin-2-yl)ethyl]-3-(2,3,4-trifluorophenyl)thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(4-fluoro-3-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 10 3-(4-fluoro-2-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(3-chloro-4-fluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 15 3-(2-chloro-4-fluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(3,4-dimethylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2,4-dimethylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 20 3-(2,4-difluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2,4-dimethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 25 3-(2,5-dimethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2,3-difluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(3,4-dimethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 30 3-(3,4-difluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;

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- 3-(5-fluoro-2-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(4-fluoro-2-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 5 3-(3,5-dimethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2,5-difluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2,3-dimethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 10 3-(3-fluoro-4-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2-fluoro-3-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 15 3-(3,5-difluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(3-fluoro-5-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2-methoxy-5-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 20 3-(2,5-dichlorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(naphthalen-2-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-phenyl-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 25 3-(1-benzofuran-2-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(1H-indazol-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(1-methyl-1H-pyrazol-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 30 3-(4,5-difluoro-2-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;

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- 3-(2-fluoro-4-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2-fluoro-5-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 5 3-methyl-4-{4-oxo-5-[2-(quinolin-2-yl)ethyl]-4,5-dihydrothieno[2,3-d]pyridazin-3-yl} benzonitrile;
- 5-[2-(6-fluoroquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2,2-difluoro-2-(quinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 10 3-(pyridin-4-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 15 5-[2-(7-fluoroimidazo[1,2-a]pyridin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 8-(pyridin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(quinolin-2-yl)ethyl]-8-[4-(trifluoromethyl)phenyl]phthalazin-1(2H)-one;
- 8-(4-methylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 20 8-[4-(propan-2-yl)phenyl]-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(4-ethylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 4-{4-oxo-3-[2-(quinolin-2-yl)ethyl]-3,4-dihydrophthalazin-5-yl} benzonitrile;
- 8-(4-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(4-fluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 25 (4-{4-oxo-3-[2-(quinolin-2-yl)ethyl]-3,4-dihydrophthalazin-5-yl} phenyl)acetonitrile;
- 8-(4-hydroxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(2-chlorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(2-methylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 30 8-(2-ethylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(2-fluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(2-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;

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- 8-(3-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
3-{4-oxo-3-[2-(quinolin-2-yl)ethyl]-3,4-dihydrophthalazin-5-yl} benzonitrile;
8-(3-fluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(3-hydroxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
5 N,N-dimethyl-3-{4-oxo-3-[2-(quinolin-2-yl)ethyl]-3,4-dihydrophthalazin-5-yl} benzamide;
8-(3-methylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
2-[2-(quinolin-2-yl)ethyl]-8-(thiophen-2-yl)phthalazin-1(2H)-one;
8-(1-methyl-1H-indol-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
10 8-(3,5-dimethyl-1H-pyrazol-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(1H-indol-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(1H-indol-6-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(pyrimidin-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(2-methoxypyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
15 8-(pyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(furan-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(quinolin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(1H-indol-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(2,3-dihydro-1-benzofuran-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-
20 one;
8-(3,4-dihydro-2H-1,5-benzodioxepin-7-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(1-benzofuran-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(6-methoxypyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
25 8-(2,3-dihydro-1,4-benzodioxin-6-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(2-methylpyridin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(5-methoxypyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(5-fluoropyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
30 8-(1,3-benzodioxol-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(1-methyl-1H-pyrazol-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;

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- 8-[1-(2-methylpropyl)-1H-pyrazol-4-yl]-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
tert-butyl 2-{4-oxo-3-[2-(quinolin-2-yl)ethyl]-3,4-dihydropthalazin-5-yl}-1H-pyrrole-1-carboxylate;
- 5 8-(3-chloro-4-fluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(2-chloro-4-fluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(3,4-dimethylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(2,4-dimethoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(2,5-dimethoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 10 8-(2,3-difluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(3,4-dimethoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(3,4-difluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(5-fluoro-2-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(4-fluoro-2-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 15 8-(3,5-dimethoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(2,5-difluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(3-fluoro-4-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(2-fluoro-3-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(3,5-difluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 20 8-(3-fluoro-5-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(naphthalen-2-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-phenyl-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(1-benzofuran-2-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(1-methyl-1H-pyrazol-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 25 8-(4,5-difluoro-2-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(2-fluoro-4-methylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(2-fluoro-5-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyridin-3-yl)phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyridin-4-yl)phthalazin-1(2H)-one;
- 30 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(3-methoxypyridin-4-yl)phthalazin-1(2H)-one;

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- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyrimidin-5-yl)phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1-methyl-1H-pyrazol-3-yl)phthalazin-
1(2H)-one;
8-(furan-3-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
5 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2-oxo-2,3-dihydro-1H-indol-6-
yl)phthalazin-1(2H)-one;
8-(3,4-dihydro-2H-chromen-6-yl)-2-[2-(imidazo[1,2-a]pyridin-2-
yl)ethyl]phthalazin-1(2H)-one;
8-(1,1-dioxidothiomorpholin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-
10 one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(morpholin-4-yl)phthalazin-1(2H)-one;
8-(1,1-dioxidothiomorpholin-4-yl)-2-[2-(imidazo[1,2-a]pyridin-2-
yl)ethyl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(tetrahydro-1H-furo[3,4-c]pyrrol-
15 5(3H)-yl)phthalazin-1(2H)-one;
8-(5,5-difluorohexahydrocyclopenta[c]pyrrol-2(1H)-yl)-2-[2-(imidazo[1,2-
a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(piperazin-1-yl)phthalazin-1(2H)-one;
8-(4,4-difluoropiperidin-1-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-
20 1(2H)-one;
8-[4-(chloromethyl)-4-(hydroxymethyl)piperidin-1-yl]-2-[2-(imidazo[1,2-
a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(piperidin-1-yl)phthalazin-1(2H)-one;
8-(2,3-dihydro-4H-1,4-benzoxazin-4-yl)-2-[2-(imidazo[1,2-a]pyridin-2-
25 yl)ethyl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[4-(trifluoromethyl)piperidin-1-
yl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(4-methylpiperazin-1-yl)phthalazin-
1(2H)-one;
30 8-(1,3-dihydro-2H-isoindol-2-yl)-2-[2-(imidazo[1,2-a]pyridin-2-
yl)ethyl]phthalazin-1(2H)-one;

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- 8-(7-benzyl-2,7-diazaspiro[4.4]non-2-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-({[(3aR,4S,6aS)-2-benzyl-2,7-diazaspiro[4.4]non-2-yl]methyl}amino)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 5 tert-butyl (3R)-3-({3-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-4-oxo-3,4-dihydrophthalazin-5-yl}amino)pyrrolidine-1-carboxylate;
- 8-(2,6-dimethylmorpholin-4-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1,4-oxazepan-4-yl)phthalazin-1(2H)-one;
- 10 tert-butyl 4-{3-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-4-oxo-3,4-dihydrophthalazin-5-yl}-3,6-dihydropyridine-1(2H)-carboxylate;
- 5-(pyridin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 5-(pyrimidin-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 15 5-(1-methyl-1H-pyrazol-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 5-(1,1-dioxidothiomorpholin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-5-(pyridin-3-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-5-(pyrimidin-5-yl)phthalazin-1(2H)-one;
- 20 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-5-(morpholin-4-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-5-(tetrahydro-1H-furo[3,4-c]pyrrol-5(3H)-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-4-(pyrimidin-5-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-4-(morpholin-4-yl)phthalazin-1(2H)-one;
- 25 3-(3-methoxypyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
- 3-(3-hydroxypyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
- 3-(1-methyl-1H-pyrazol-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
- 30 3-(pyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
- 3-(pyrimidin-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;

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- 3-(2-oxoindolin-6-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
3-(3-hydroxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
5-[2-(5-ethylpyridin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-one;
5-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-
4(5H)-one;
3-(morpholin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
tert-butyl-4-(4-oxo-5-(2-quinolin-2-yl)ethyl)-4,5-dihydrothieno[3,2-c]pyridin-3-
yl)-5,6-dihydropyridine-1(2H) carboxylate;
5-(2-(quinolin-2-yl)ethyl)-3-(1,2,3,6-tetrahydropyridin-4-yl)thieno[3,2-c]pyridin-
4(5H)-one;
tert-butyl-4-(4-oxo-5-(2-quinolin-2-yl)ethyl)-4,5-dihydrothieno[3,2-c]pyridin-3-
yl)-piperidine-1 carboxylate;
3-(piperidin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
3-methyl-7-(pyridin-4-yl)-5-(2-(quinolin-2-yl)ethyl)thieno[3,2-c]pyridin-4(5H)-
one;
3-(pyridin-4-yl)-5-[2-(5,6,7,8-tetrahydroquinolin-2-yl)ethyl]thieno[2,3-
d]pyridazin-4(5H)-one;
(R)-tert-butyl 3-(3-(2-(imidazo[1,2-a]pyridin-2-yl)ethyl)-4-oxo-3,4-
dihydrophthalazin-5-ylamino)pyrrolidine-1-carboxylate;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(3R)-pyrrolidin-3-ylamino]phthalazin-
1(2H)-one;
5-(3-hydroxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
(E)-8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)vinyl)isoquinolin-1(2H)-one;
anti (rac) 8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti (+)-8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti (-)-8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
8-(pyridin-4-yl)-2-(2-quinolin-2-yl-ethyl)isoquinolin-1(2H)-one;
anti (rac) 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-
4(5H)-one;
anti (+) 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-
4(5H)-one;

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anti (-) 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;

(E)-8-pyridin-4-yl-2-(2-quinolin-2-yl-vinyl)-2H-phthalazin-1-one;

anti (rac) 8-pyridin-4-yl-2-(2-quinolin-2-yl-cyclopropyl)-2H-phthalazin-1-one;

5 anti (+) 8-pyridin-4-yl-2-(2-quinolin-2-yl-cyclopropyl)-2H-phthalazin-1-one;

anti (-) 8-pyridin-4-yl-2-(2-quinolin-2-yl-cyclopropyl)-2H-phthalazin-1-one;

and the N-oxides, the prodrugs, the tautomers and the hydrates thereof, and the pharmaceutically acceptable salts thereof.

10 64. A compound, which is selected from the group consisting of

7-(pyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]furo[3,2-c]pyridin-4(5H)-one;

3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)ethyl)furo[3,2-c]pyridin-4(5H)-one;

5-(2-(1H-benzo[d]imidazol-2-yl)ethyl)-3-(pyridin-4-yl)furo[3,2-c]pyridin-4(5H)-one;

15 5-(2-(imidazo[1,2-a]pyridin-2-yl)ethyl)-3-(pyridin-4-yl)furo[3,2-c]pyridin-4(5H)-one;

3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)ethyl)furo[3,2-c]pyridin-4(5H)-one;

4-(pyridin-4-yl)-6-(2-(quinolin-2-yl)allyl)pyrido[2,3-d]pyridazin-5(6H)-one;

syn 8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;

20 syn 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;

anti 3-(pyridazin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)furo[3,2-c]pyridin-4(5H)-one;

syn 3-(pyridazin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)furo[3,2-c]pyridin-4(5H)-one;

25 anti 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)furo[3,2-c]pyridin-4(5H)-one;

syn 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)furo[3,2-c]pyridin-4(5H)-one;

30 anti 8-(oxetan-3-ylamino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;

syn 8-(oxetan-3-ylamino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;

anti 8-(pyridazin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;

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- syn 8-(pyridazin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-(6-fluoropyridin-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(6-fluoropyridin-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
5 anti 8-(2-fluoropyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(2-fluoropyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
10 anti 8-(pyridin-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(pyridin-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-(pyrimidin-5-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(pyrimidin-5-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-(1-methyl-1H-pyrazol-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
15 syn 8-(1-methyl-1H-pyrazol-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-(3-fluoropyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
20 syn 8-(3-fluoropyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-(2-fluoropyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(2-fluoropyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
25 anti 8-((3S)-3-hydroxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-((3S)-3-hydroxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
30 anti 8-(3-methoxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(3-methoxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-

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- 1(2H)-one;
anti 8-morpholino-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-morpholino-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 1-(1-oxo-2-(2-(quinolin-2-yl)cyclopropyl)-1,2-dihydroisoquinolin-8-
5-yl)piperidine-4-carbonitrile;
syn 1-(1-oxo-2-(2-(quinolin-2-yl)cyclopropyl)-1,2-dihydroisoquinolin-8-
yl)piperidine-4-carbonitrile;
anti 8-((3R,4R)-4-fluoro-3-hydroxypiperidin-1-yl)-2-(2-(quinolin-2-
yl)cyclopropyl)isoquinolin-1(2H)-one;
10 syn 8-((3R,4R)-4-fluoro-3-hydroxypiperidin-1-yl)-2-(2-(quinolin-2-
yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-((3S)-3-hydroxypyrrolidin-1-yl)-2-(2-(quinolin-2-
yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-((3S)-3-hydroxypyrrolidin-1-yl)-2-(2-(quinolin-2-
15-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-((3R)-3-hydroxypyrrolidin-1-yl)-2-(2-(quinolin-2-
yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-((3R)-3-hydroxypyrrolidin-1-yl)-2-(2-(quinolin-2-
yl)cyclopropyl)isoquinolin-1(2H)-one;
20 anti 8-(methyl(oxetan-3-yl)amino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-
1(2H)-one;
syn 8-(methyl(oxetan-3-yl)amino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-
1(2H)-one;
anti 8-(4-methoxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-
25-1(2H)-one;
syn 8-(4-methoxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-
1(2H)-one;
anti 8-(4-hydroxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-
1(2H)-one;
30 syn 8-(4-hydroxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-
1(2H)-one;
anti 8-(1-acetylpiperidin-4-ylamino)-2-(2-quinolin-2-cyclopropyl)isoquinolin-

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- 1(2H)-one;
syn 8-(1-acetylpiperidin-4-ylamino)-2-(2-quinolin-2-cyclopropyl)isoquinolin-1(2H)-one;
anti 8-(piperidin-4-ylamino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
5 one;
syn 8-(piperidin-4-ylamino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 2-(2-(quinolin-2-yl)cyclopropyl)-8-(tetrahydro-2H-pyran-4-yl)isoquinolin-1(2H)-one;
10 syn 2-(2-(quinolin-2-yl)cyclopropyl)-8-(tetrahydro-2H-pyran-4-yl)isoquinolin-1(2H)-one;
anti 2-(2-(quinolin-2-yl)cyclopropyl)-8-(2-oxa-6-azaspiro[3.4]octan-6-yl)isoquinolin-1(2H)-one;
syn 2-(2-(quinolin-2-yl)cyclopropyl)-8-(2-oxa-6-azaspiro[3.4]octan-6-yl)isoquinolin-1(2H)-one;
15 anti 8-(dihydro-1H-furo[3,4-c]pyrrol-5(3H,6H,6aH)-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(dihydro-1H-furo[3,4-c]pyrrol-5(3H,6H,6aH)-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
20 anti 8-(4,4-difluoropiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(4,4-difluoropiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-morpholino-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
25 syn 8-morpholino-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-(3-(difluoromethyl)pyrrolidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(3-(difluoromethyl)pyrrolidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
30 anti 8-((1R,5S)-3-oxa-8-azabicyclo[3.2.1]octan-8-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-((1R,5S)-3-oxa-8-azabicyclo[3.2.1]octan-8-yl)-2-(2-(quinolin-2-yl)cyclo-

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- propyl)isoquinolin-1(2H)-one;
anti 8-(4-methylpiperazin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(4-methylpiperazin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
5 anti 8-(3-(fluoromethyl)pyrrolidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(3-(fluoromethyl)pyrrolidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
10 anti 8-((1R,5S)-8-oxa-3-azabicyclo[3.2.1]octan-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-((1R,5S)-8-oxa-3-azabicyclo[3.2.1]octan-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-(4-fluorophenyl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
15 syn 8-(4-fluorophenyl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-(furan-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(furan-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-(4,5-dihydrofuran-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
20 syn 8-(4,5-dihydrofuran-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-(4-methoxyphenyl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(4-methoxyphenyl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-morpholinoisoquinolin-1(2H)-one;
25 syn 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-morpholinoisoquinolin-1(2H)-one;
anti 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyridin-3-yl)isoquinolin-1(2H)-one;
30 syn 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyridin-3-yl)isoquinolin-1(2H)-one;
anti 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyrimidin-5-yl)isoquinolin-

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- 1(2H)-one;
syn 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyrimidin-5-yl)isoquinolin-1(2H)-one;
anti 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
5 syn 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
anti 4-fluoro-8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
10 syn 4-fluoro-8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 4-chloro-8-(pyrimidin-5-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
15 syn 4-chloro-8-(pyrimidin-5-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 4-(pyridin-4-yl)-6-(2-(quinolin-2-yl)cyclopropyl)pyrido[2,3-d]pyridazin-5(6H)-one;
syn 4-(pyridin-4-yl)-6-(2-(quinolin-2-yl)cyclopropyl)pyrido[2,3-d]pyridazin-5(6H)-one;
20 anti 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyridin-4-yl)phthalazin-1(2H)-one;
syn 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyridin-4-yl)phthalazin-1(2H)-one;
anti 7-fluoro-3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
25 syn 7-fluoro-3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
anti 3-(2-fluoropyridin-4-yl)-5-(2-(6-fluoroquinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
30 syn 3-(2-fluoropyridin-4-yl)-5-(2-(6-fluoroquinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
anti 5-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-3-(pyridin-4-yl)thieno[3,2-

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- c]pyridin-4(5H)-one;
syn 5-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-one;
anti 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
5 syn 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
anti 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
10 syn 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
anti 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
15 syn 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
anti 3-(6-fluoropyridin-3-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
syn 3-(6-fluoropyridin-3-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
20 anti 3-(2-methylpyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
syn 3-(2-methylpyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
anti 3-(pyridazin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
25 syn 3-(pyridazin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
anti 3-(2-fluoropyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
30 syn 3-(2-fluoropyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
anti 3-(morpholin-4-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[3,2-c]pyridin-

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- 4(5H)-one;
syn 3-(morpholin-4-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
anti 3-(pyridin-3-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
syn 3-(pyridin-3-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
anti 3-(pyridin-3-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
syn 3-(pyridin-3-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
anti 3-(pyrimidin-5-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[2,3-d]pyridazin-4(5H)-one;
syn 3-(pyrimidin-5-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[2,3-d]pyridazin-4(5H)-one;
anti 3-(pyridin-4-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)cyclopropyl]thieno[2,3-d]pyridazin-4(5H)-one;
syn -(pyridin-4-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)cyclopropyl]thieno[2,3-d]pyridazin-4(5H)-one;
anti 3-(pyridin-4-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
syn 3-(pyridin-4-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
anti 3-(pyridin-4-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
syn 3-(pyridin-4-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
anti 3-(pyridin-4-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[2,3-d]pyridazin-4(5H)-one;
syn 3-(pyridin-4-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[2,3-d]pyridazin-4(5H)-one;
anti 5-(pyrimidin-5-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;

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- syn 5-(pyrimidin-5-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
anti 5-(pyridin-4-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
syn 5-(pyridin-4-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
anti 5-(pyridin-3-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
5 syn 5-(pyridin-3-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
anti 5-(morpholin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
syn 5-(morpholin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
anti 4-fluoro-8-(pyrimidin-5-yl)-2-(2-(quinolin-2-yl)cyclopropyl]isoquinolin-
1(2H)-one;
10 syn 4-fluoro-8-(pyrimidin-5-yl)-2-(2-(quinolin-2-yl)cyclopropyl]isoquinolin-
1(2H)-one;
8-(pyridin-4-yl)-2-[2-(quinolin-2-yl)ethyl]pyrido[3,4-d]pyridazin-1(2H)-one;
5-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-7-(1-methyl-1H-imidazol-4-yl)-3-
(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
15 5-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-7-(1-methyl-1H-pyrazol-4-yl)-3-(pyridin-
4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
5-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-7-(pyridin-3-yl)-3-(pyridin-4-
yl)thieno[2,3-d]pyridazin-4(5H)-one;
5-[2-(6-chloroquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-
20 one;
5-[2-(3-methylquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-
one;
5-[2-(8-fluoroquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-
one;
25 5-[2-(6-fluoroquinolin-2-yl)ethyl]-3-(pyridin-3-yl)thieno[3,2-c]pyridin-4(5H)-
one;
5-[2-(6-fluoroquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-
one;
5-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-3-(pyridin-3-yl)thieno[3,2-c]pyridin-
30 4(5H)-one;
3-(pyridin-4-yl)-5-[2-(quinoxalin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
5-[2-(1,5-naphthyridin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-

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- one;
- 5-[2-(1H-indazol-1-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(1-methyl-1H-pyrazol-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 5 3-(1H-pyrazol-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(1H-benzimidazol-1-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(1H-benzimidazol-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 10 5-[2-(6-chloroquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(pyridin-3-ylethynyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(pyridin-4-ylethynyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 15 5-[2-(3,5-dimethylpyridin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(7-fluoroquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 20 5-[2-(pyrazin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 2-[2-(1,6-naphthyridin-2-yl)ethyl]-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
- 2-[2-(8-fluoroquinolin-2-yl)ethyl]-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
- 8-(pyridin-4-yl)-2-[1-(quinolin-2-yl)propan-2-yl]isoquinolin-1(2H)-one;
- 2-[2-(3-methylquinolin-2-yl)ethyl]-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
- 25 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1H-pyrazol-3-yl)phthalazin-1(2H)-one;
- 8-(morpholin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1-oxa-4,9-diazaspiro[5.6]dodec-9-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2-oxa-7-azaspiro[3.5]non-7-yl)phthalazin-1(2H)-one;
- 30 8-[(3R)-3-hydroxypiperidin-1-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;

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- 8-[(3S)-3-hydroxypiperidin-1-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2-oxa-6-azaspiro[3.3]hept-6-yl)phthalazin-1(2H)-one;
5 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1,2-oxazolidin-2-yl)phthalazin-1(2H)-one;
8-(hexahydrocyclopenta[b][1,4]oxazin-4(4aH)-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(tetrahydrofuran-3-yl)phthalazin-1(2H)-one;
10 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(3-oxa-8-azabicyclo[3.2.1]oct-8-yl)phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2-oxa-6-azaspiro[3.4]oct-6-yl)phthalazin-1(2H)-one;
15 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2,2,6,6-tetrafluoromorpholin-4-yl)phthalazin-1(2H)-one;
8-(4-hydroxypiperidin-1-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2-methylpyrimidin-5-yl)phthalazin-1(2H)-one;
20 8-(2-cyclopropylpyrimidin-5-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyridazin-4-yl)phthalazin-1(2H)-one;
8-(5-fluoropyridin-3-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
25 8-[2-(3-fluorophenyl)morpholin-4-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2-methoxypyrimidin-5-yl)phthalazin-1(2H)-one;
30 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[2-(trifluoromethyl)pyridin-4-yl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(8-oxa-3-azabicyclo[3.2.1]oct-3-

- yl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[2-(trifluoromethyl)morpholin-4-yl]phthalazin-1(2H)-one;
8-(2,2-dimethylmorpholin-4-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
5 8-[2-(4-chlorophenyl)morpholin-4-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
8-[2-(3,4-difluorophenyl)morpholin-4-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
10 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(piperidin-4-yl)phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(tetrahydro-2H-pyran-4-yl)phthalazin-1(2H)-one;
8-(2,6-diazabicyclo[3.2.1]oct-6-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
15 8-[(1S,5S)-3,6-diazabicyclo[3.2.0]hept-3-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(furan-2-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1-methyl-1H-pyrazol-4-yl)phthalazin-1(2H)-one;
20 8-(hexahydropyrrolo[3,4-c]pyrrol-2(1H)-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(2,7-diazaspiro[4.4]non-2-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
8-[(1S,4S)-2,5-diazabicyclo[2.2.1]hept-2-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
25 8-(2,7-diazaspiro[3.5]non-7-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
8-(2,6-diazaspiro[3.5]non-6-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
30 8-(piperidin-4-yl)-2-[2-(5,6,7,8-tetrahydroimidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
8-[2-(aminomethyl)-4-chloropyrrolidin-1-yl]-2-[2-(imidazo[1,2-a]pyridin-2-

- yl)ethyl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-4,8-di(pyridin-4-yl)phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(3aR,4S,7R,7aS)-octahydro-1H-4,7-
epiminoisoindol-8-yl]phthalazin-1(2H)-one;
5 8-[5-(4-chlorophenyl)-2,5-diazabicyclo[2.2.1]hept-2-yl]-2-[2-(imidazo[1,2-
a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
4-bromo-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyridin-4-yl)phthalazin-
1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(3aS,8aS)-octahydropyrrolo[3,4-
10 c]azepin-2(1H)-yl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(3aS,8aR)-octahydropyrrolo[3,4-
c]azepin-2(1H)-yl]phthalazin-1(2H)-one;
tert-butyl (3aR,4S,7R,7aS)-8-{3-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-4-oxo-3,4-
dihydrophthalazin-5-yl}octahydro-2H-4,7-epiminoisoindole-2-carboxylate;
15 8-(hexahydro-5H-furo[2,3-c]pyrrol-5-yl)-2-[2-(imidazo[1,2-a]pyridin-2-
yl)ethyl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1,2,3,6-tetrahydropyridin-4-
yl)phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(3S)-tetrahydrofuran-3-
20 ylamino]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(3R)-tetrahydrofuran-3-
ylamino]phthalazin-1(2H)-one;
8-{[5-(hydroxymethyl)-1,4-dioxan-2-yl]methoxy}-2-[2-(imidazo[1,2-a]pyridin-2-
yl)ethyl]phthalazin-1(2H)-one;
25 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(oxetan-3-yloxy)phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyridin-4-ylmethoxy)phthalazin-
1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(morpholin-4-ylmethyl)phthalazin-
1(2H)-one;
30 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyridin-3-yloxy)phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(oxetan-3-ylmethyl)amino]phthalazin-
1(2H)-one;

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- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(tetrahydro-2H-pyran-4-ylamino)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(1-methylazetidin-3-yl)amino]phthalazin-1(2H)-one;
- 5 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1,3-oxazol-2-ylamino)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[methyl(oxetan-3-yl)amino]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(piperidin-4-ylamino)phthalazin-1(2H)-one;
- 10 8-[(1-acetylpiperidin-3-yl)amino]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-[(1-acetylpiperidin-4-yl)amino]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 15 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(tetrahydrofuran-3-ylamino)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(tetrahydro-2H-pyran-3-ylamino)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(piperidin-3-ylamino)phthalazin-1(2H)-one;
- 20 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-{methyl[(3-methyloxetan-3-yl)methyl]amino}phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(oxetan-3-ylamino)phthalazin-1(2H)-one;
- 25 8-{[(3aS,4S,6aS)-octahydrocyclopenta[c]pyrrol-4-ylmethyl]amino}-2-[2-(5,6,7,8-tetrahydroimidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 5-(morpholin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(1H-benzimidazol-2-yl)ethyl]-5-(pyridin-4-yl)phthalazin-1(2H)-one;
- 4-(pyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 30 5-(1,4-dihydropyrimidin-5-yl)-2-[2-(5,6,7,8-tetrahydroimidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-5-(pyridin-4-yl)phthalazin-1(2H)-one;

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- 5-(pyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[[3-methyloxetan-3-yl)methyl]amino}-
phthalazin-1(2H)-one;
4-(pyridin-4-yl)-6-[2-(quinolin-2-yl)ethyl]pyrido[2,3-d]pyridazin-5(6H)-one;
5 4-(morpholin-4-yl)-6-[2-(quinolin-2-yl)ethyl]pyrido[2,3-d]pyridazin-5(6H)-one;
4-(oxetan-3-ylamino)-6-[2-(quinolin-2-yl)ethyl]pyrido[2,3-d]pyridazin-5(6H)-
one;
2-[2-(6-methoxypyridin-2-yl)ethyl]-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
2-[2-(1,3-benzothiazol-2-yl)ethyl]-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
10 2-[2-(5-methylpyridin-2-yl)ethyl]-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
5-[(E)-2-(6-methoxyquinolin-2-yl)ethenyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-
4(5H)-one;
8-(pyridin-4-yl)-2-[(E)-2-(quinazolin-2-yl)ethenyl]isoquinolin-1(2H)-one;
5-[(E)-2-(6-chloroquinolin-2-yl)ethenyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-
15 4(5H)-one;
5-[(E)-2-(3-methylquinolin-2-yl)ethenyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-
4(5H)-one;
8-(pyridin-4-yl)-2-[(E)-2-(quinolin-2-yl)ethenyl]isoquinolin-1(2H)-one;
5-[(E)-2-(1,3-benzothiazol-2-yl)ethenyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-
20 4(5H)-one;
3-(pyridin-4-yl)-5-[(E)-2-(quinolin-2-yl)ethenyl]thieno[3,2-c]pyridin-4(5H)-one;

and the enantiomers, the N-oxides, the prodrugs, the tautomers and the hydrates thereof, and the pharmaceutically acceptable salts thereof.

25

65. The compound as claimed in any one of the preceding claims for use in therapy.
66. Pharmaceutical composition which comprises at least one compound as claimed in any one of claims 1 to 64 and at least one excipient.

30

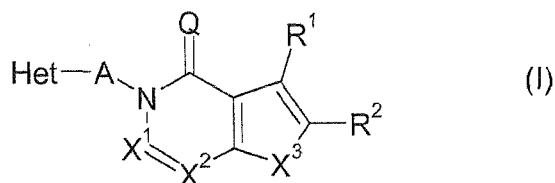
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67. The compounds according to any of claims 1 to 64 for treating a medical disorder, selected from neurological and psychiatric disorders which can be treated by inhibition of phosphodiesterase type 10A.
- 5 68. The compounds according to any of claims 1 to 64 for treating CNS disorders in a mammalian.
69. The compounds according to any of claims 1 to 64 for treating schizophrenia in a mammalian.
- 10 70. The compounds according to any of claims 1 to 64 for treating cognitive dysfunction associated with schizophrenia in a mammalian.
- 15 71. The compounds according to any of claims 1 to 64 for treating bipolar disorders in a mammalian.
72. The compounds according to any of claims 1 to 64 for treating depression in a mammalian.
- 20 73. The compounds according to any of claims 1 to 64 for treating cognitive dysfunction associated with Alzheimer's disease in a mammalian.
74. The compounds according to any of claims 1 to 64 for treating diet-induced obesity in a mammalian.
- 25 75. The compounds according to any of claims 1 to 64 for treating Huntington's disease in a mammalian.
- 30 76. The compounds according to any of claims 1 to 64 for treating anxiety in a mammalian.

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77. A method for treating a medical disorder, selected from neurological and psychiatric disorders which can be treated by inhibition of phosphodiesterase type 10A, said method comprising administering an effective amount of at least one compound as claimed in any of claims 1 to 64 to a subject in need thereof.

1. Compound of formula I



5

wherein

Q is O or S;

X¹ is N or CH;

X² is N or C-R⁷;

10 X³ is O, S, -X⁴=C(R⁸)-, where C(R⁸) is bound to the carbon atom which carries R², or

-X⁵=C(R⁹)-, where X⁵ is bound to the carbon atom which carries R²;

X⁴ is N or C-R⁹;

X⁵ is N;

15

Het is selected from

- i. monocyclic C-bound 6-membered hetaryl having 1 or 2 nitrogen atoms as ring members, which is unsubstituted or may carry 1, 2, 3 or 4 identical or different substituents R^x,
- 20 ii. fused bicyclic hetaryl having 1 or 2 nitrogen atoms and optionally a further heteroatom selected from O, S and N as ring members, benzothienyl or benzofuryl, where bicyclic hetaryl, benzothienyl and benzofuryl are, independently of each other, unsubstituted or may carry 1, 2, 3 or 4 identical or
- 25 iii. phenyl, which carries a monocyclic hetaryl radical having 1 or 2 nitrogen atoms and optionally a further heteroatom selected from O, S and N as ring members, which in addition

to monocyclic hetaryl, may carry 1, 2 or 3 identical or different substituents R^x ,

where

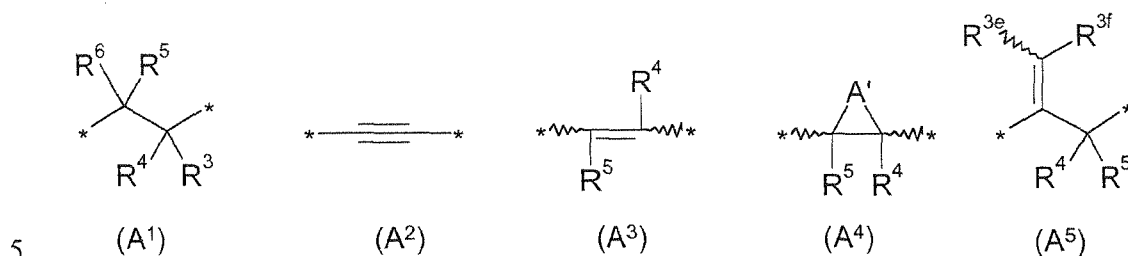
5 R^x is selected from the group consisting of H, halogen, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, C_3 - C_6 -cycloalkyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, OH, hydroxy- C_1 - C_4 -alkyl, O- C_3 - C_6 -cycloalkyl, benzyloxy, C(O)O-(C_1 - C_4 -alkyl), O-(C_1 - C_4 -alkyl)-CO₂H, N(R^{x1})(R^{x2}), C(O)N(R^{x1})(R^{x2}), C_1 - C_4 -alkyl-N(R^{x1})(R^{x2}),
10 -NR^{x3}-C(O)-N(R^{x1})(R^{x2}), NR^{x3}-C(O)O-(C_1 - C_4 -alkyl), -N(R^{x3})-SO₂-R^{x4}, phenyl, CN, -SF₅, -OSF₅, -SO₂R^{x4}, -SR^{x4} and trimethylsilyl, where R^{x1} , R^{x2} , R^{x3} and R^{x4} , independently of each other are selected from the group consisting of hydrogen, C_1 - C_4 -alkyl, C_1 - C_4 -fluoroalkyl and C_3 - C_6 -cycloalkyl or R^{x1} and R^{x2} form together with the N atom to which they are attached a
15 3- to 7-membered, nitrogen heterocycle which may have 1, 2 or 3 further different or identical heteroatoms or heteroatom containing groups selected from the group of O, N, S, SO and SO₂ as ring members and which may carry 1, 2, 3, 4, 5 or 6
20 substituents selected from C_1 - C_4 -alkyl; or two radicals R^x which are bound at adjacent carbon atoms may form a fused 5- or 6-membered saturated carbocyclic radical or a fused 5- or 6-membered heterocyclic radical having 1, 2 or 3 heteroatoms as ring members, which are selected from
25 O, S and N;

R^1 is a moiety Y¹-Cyc¹;

30 R^2 is selected from the group consisting of hydrogen, halogen, OH, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_2 - C_4 -alkenyloxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -

fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl, CN and $\text{NR}^{\text{x1}}\text{R}^{\text{x2}}$;

A represents one of the following groups A^1 , A^2 , A^3 , A^4 or A^5 :



where * indicates the points of attachment to Het and to the nitrogen atom, respectively,

10 R^3 , R^4 , R^5 , R^6 independently of each other are selected from the group consisting of hydrogen, halogen, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, C_3 - C_6 -cycloalkyl, or the radicals together with the carbon atoms to which they are bound form a saturated 3- to 6-

15 membered carbocycle or a saturated 3- to 6-membered heterocycle having 1 or 2 non-adjacent heteroatoms as ring members, where the carbocycle and the heterocycle are unsubstituted or may carry 1, 2, 3 or 4 substituents selected from fluorine and methyl or either the radicals R^3 , R^4 or the radicals R^5 , R^6 together with the carbon atom to which they are bound form a saturated 3- to 6-membered carbocycle

20 or a saturated 3- to 6-membered heterocycle having 1 or 2 non-adjacent heteroatoms as ring members, where the carbocycle and the heterocycle are unsubstituted or may carry 1, 2, 3 or 4 substituents selected from fluorine and methyl;

25 A^1 is a O, NR^{3a} , $\text{CR}^{3b}\text{R}^{3c}$ or linear C_2 - C_3 -alkandiyl, where one of the CH_2 -moieties of C_2 - C_3 -alkandiyl may be replaced by oxygen or NR^{3a} , and where 1, 2, 3, or 4 of the hydrogen atoms of C_2 - C_3 -alkandiyl may be replaced by a radical R^{3d} , where R^{3a} is hydrogen or C_1 - C_4 -alkyl,

- R^{3b} , R^{3c} independently of each other are selected from the group consisting of hydrogen, halogen, C_1 - C_4 -alkyl or R^{3b} and R^{3c} together form C_2 - C_3 -alkandiyl;
- R^{3d} is selected from the group consisting of halogen and C_1 - C_4 -alkyl;
- R^{3e} , R^{3f} independently of each other are selected from the group consisting of hydrogen and C_1 - C_4 -alkyl;
- R^7 is selected from the group consisting of hydrogen, halogen, OH, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -alkylsulfanyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_1 - C_4 -alkylsulfanyl- C_1 - C_4 -alkoxy, C_2 - C_4 -alkenyloxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl, CN, $NR^{x1}R^{x2}$, $NR^{x1}R^{x2}$ - C_1 - C_4 -alkoxy and the moiety Y^2 -Cyc²;
- R^8 is selected from the group consisting of hydrogen, halogen, OH, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_2 - C_4 -alkenyloxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl, CN and $NR^{x1}R^{x2}$;
- R^9 is selected from the group consisting of hydrogen, halogen, OH, C_1 - C_4 -alkyl, trimethylsilyl, C_1 - C_4 -alkylsulfanyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_1 - C_4 -alkylsulfanyl- C_1 - C_4 -alkoxy, C_2 - C_4 -alkenyloxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl, CN, $NR^{x1}R^{x2}$, $NR^{x1}R^{x2}$ - C_1 - C_4 -alkoxy and the moiety Y^3 -Cyc³;

Y^1, Y^2, Y^3 independently of each other are selected from a chemical bond, CH_2 ,
 O, $O-CH_2$, NR^y , NR^y-CH_2 , $NR^y-S(O)_2$, S, $S(O)$, $S(O)_2$, 1,2-ethandiyl,
 1,2-ethendiyl or 1,2-ethyndiyl, where R^y is selected from the group
 consisting of hydrogen, C_1-C_4 -alkyl, C_1-C_4 -alkylcarbonyl, C_1-C_4 -
 alkylsulfonyl, C_1-C_4 -fluoroalkylsulfonyl;

Cyc^1, Cyc^2, Cyc^3 independently of each other are selected from the group
 consisting of phenyl, naphthyl, 4- to 8-membered saturated or partially
 unsaturated heteromonocyclic radicals, saturated or partially
 unsaturated 7- to 10 membered heterobicyclic radicals, 5- or 6-
 membered monocyclic hetaryl, and 8- to 10 membered bicyclic
 hetaryl, where the saturated or partially unsaturated heteromonocyclic
 and heterobicyclic radicals have 1, 2, 3 or 4 heteroatoms or
 heteroatom containing groups as ring members, which are selected
 from O, S, SO, SO_2 and N, and where the 5- or 6-membered
 monocyclic hetaryl and the 8- to 10-membered bicyclic hetaryl have 1,
 2, 3 or 4 heteroatoms as ring members, which are selected from O, S
 and N,
 where phenyl, naphthyl, the saturated or partially unsaturated
 heteromonocyclic and heterobicyclic radicals and the mono- and
 bicyclic heteroaromatic radicals are unsubstituted or carry 1, 2, 3, 4 or
 5 radicals R^{C1} or one radical Y^1-R^{C2} and 0, 1, 2, 3 or 4 radicals R^{C1} ;
 where

R^{C1} is selected from hydrogen, halogen, OH, CN, NO_2 , C_1-C_4 -alkyl,
 C_1-C_4 -alkoxy, C_1-C_4 -alkylsulfanyl, hydroxy- C_1-C_4 -alkyl, C_1-C_4 -
 alkoxy- C_1-C_4 -alkyl, C_1-C_4 -alkoxy- C_1-C_4 -alkoxy, cyano- C_1-C_4 -
 alkyl, C_1-C_4 -fluoroalkyl, C_1-C_4 -fluoroalkoxy, C_1-C_4 -
 alkylsulfonyl, $C(O)R^a$, $Z-C(O)OR^b$, $Z-C(O)NR^cR^d$, $S(O)_2NR^cR^d$
 and $Z-NR^eR^f$, where

R^a is selected from the group consisting of C_1-C_4 -alkyl and
 C_1-C_4 -fluoroalkyl,

- R^b is selected from the group consisting of hydrogen, C₁-C₄-alkyl, C₂-C₄-alkenyl and C₁-C₄-fluoroalkyl,
- R^c , R^d is selected from the group consisting of hydrogen, C₁-C₄-alkyl, C₁-C₄-fluoroalkyl, C₁-C₄-alkoxy and C₁-C₄-fluoroalkoxy,
- R^e , R^f is selected from the group consisting of hydrogen, C₁-C₄-alkyl, C₁-C₄-fluoroalkyl, C₁-C₄-alkoxy and C₁-C₄-fluoroalkoxy,
- Z is a covalent bond or C₁-C₄-alkandiyl,
- or two radicals R^{C1} which are bound at adjacent carbon atoms may form a fused 5- or 6-membered carbocyclic radical or a fused 5- or 6-membered heterocyclic radical having 1, 2 or 3 heteroatoms as ring members, which are selected from O, S and N;
- or two radicals R^{C1} which are bound at the same carbon atom may form a spiro 5- or 6-membered carbocyclic radical or a spiro 5- or 6-membered heterocyclic radical having 1 or 2 heteroatoms as ring members, which are selected from O, S and N,
- or two radicals R^{C1} which are bound at the same carbon atom may form an oxygen atom,
- where the fused and the spiro radicals are unsubstituted or carry 1, 2, 3 or 4 radicals R^{C3} ;
- Y' is a chemical bond, CH₂, O, O-CH₂, S(O)₂, NR^{y'}, NR^{y'}-CH₂ or NR^{y'}-S(O)₂, where R^{y'} is selected from the group consisting of hydrogen, C₁-C₄-alkyl, C₁-C₄-alkylcarbonyl, C₁-C₄-alkylsulfonyl, C₁-C₄-fluoroalkylsulfonyl;
- R^{C2} is a carbocyclic or heterocyclic radical selected from the group consisting of phenyl, 3- to 7-membered saturated or partially unsaturated monocarbocyclic radicals, 3- to 7-membered

saturated or partially unsaturated heteromonocyclic radicals, having 1, 2 or 3 heteroatoms as ring members, which are selected from O, S and N, and 5- or 6-membered heteroaromatic radicals, having 1, 2 or 3 heteroatoms as ring members, which are selected from O, S and N, where the carbocyclic and the heterocyclic radical is unsubstituted or carries 1, 2, 3, 4 or 5 radicals R^{C3} ;

R^{C3} is selected from hydrogen, halogen, OH, CN, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, hydroxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, cyano- C_1 - C_4 -alkyl, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, C_2 - C_6 -alkenyl, $C(O)R^a$, benzyl, $Z-C(O)OR^b$, $Z-C(O)NR^cR^d$, $S(O)_2NR^eR^d$ and $Z-NR^eR^f$, where, Z, R^a , R^b , R^c , R^d , R^e and R^f are as defined above or two radicals R^{C3} which are bound at the same atom may form an oxygen atom;

provided that for X^3 being $X^4=C(R^8)$, one or two of the radicals R^1 , R^7 and R^9 are a moiety Y^1-Cyc^1 , Y^2-Cyc^2 or Y^3-Cyc^3 , respectively;

further provided that for X^3 being $X^5=C(R^9)$, one or two of the radicals R^1 , R^7 and R^9 are a moiety Y^1-Cyc^1 , Y^2-Cyc^2 or Y^3-Cyc^3 , respectively;

and the N-oxides, the prodrugs, the tautomers and the hydrates thereof, and the pharmaceutically acceptable salts thereof;

wherein prodrugs are derivatives of the compounds of formula I carrying an OH or NH_2 -group, where one of the hydrogen atoms of the OH or NH_2 -group is substituted by a C_1 - C_4 -alkylcarbonyl group, by benzoyl, or by an acyl group derived from an amino acid, which is linked to the oxygen or nitrogen of the OH or NH_2 -group via the carbonyl group of the amino acid; or wherein prodrugs are alkylcarbonyloxyalkyl carbonates or carbamates of compounds I carrying an OH- or NH_2 -group in which one of the hydrogen atoms of the OH- or NH_2 -group has

been replaced by a group of the formula $-C(=O)-O-CHR^p-O-C(=O)-R^q$ in which R^p and R^q are independently of one another C_1 - C_4 -alkyl;

except for the following compounds:

- 5 6-Methyl-5-phenyl-3-[2-(2-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one,
- 5-Phenyl-3-[2-(4-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one,
- 5-(4-Methylphenyl)-3-[2-(2-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one,
- 5-(2-Furanyl)-3-[1-methyl-2-(3-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one,
- 10 5-(2-Thienyl)-3-[1-methyl-2-(3-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one,
- 5-(3,4-Dimethylphenyl)-3-[2-(2-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one,
- 5-(4-Methylphenyl)-3-[2-(4-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one,
- 15 5-Phenyl-3-[2-(2-pyridinyl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one, and
- 5-Phenyl-3-[2-(4-oxo-5-phenylthieno[2,3-d]pyrimidin-(3H)-3-yl)ethyl]-thieno[2,3-d]pyrimidin-4-(3H)-one.

2. The compound as claimed in claim 1,

20

wherein

X^3 is O, S or $-X^4=C(R^8)-$, where $C(R^8)$ is bound to the carbon atom which carries R^2 ;

X^4 is N or $C-R^9$;

25

Het is selected from

- i. monocyclic C-bound 6-membered hetaryl having 1 or 2 nitrogen atoms as ring members, which is unsubstituted or may carry 1, 2, 3 or 4 identical or different substituents R^x ,
- 30 ii. fused bicyclic hetaryl having 1 or 2 nitrogen atoms and optionally a further heteroatom selected from O, S and N as ring members, benzothienyl or benzofuryl, where bicyclic

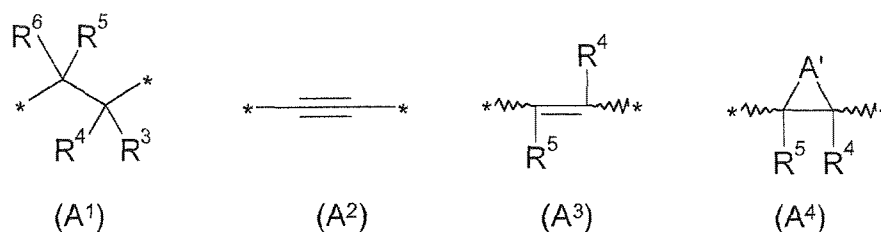
hetaryl, benzothienyl and benzofuryl are, independently of each other, unsubstituted or may carry 1, 2, 3 or 4 identical or different substituents R^x , and

- iii. phenyl, which carries a monocyclic hetaryl radical having 1 or 2 nitrogen atoms and optionally a further heteroatom selected from O, S and N as ring members, which in addition to monocyclic hetaryl, may carry 1, 2 or 3 identical or different substituents R^x ,

where

- R^x is selected from the group consisting of H, halogen, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -fluoroalkyl, C_1 - C_4 -fluoroalkoxy, C_3 - C_6 -cycloalkyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, OH, hydroxy- C_1 - C_4 -alkyl, O- C_3 - C_6 -cycloalkyl, benzyloxy, $C(O)O-(C_1-C_4-alkyl)$, $O-(C_1-C_4-alkyl)-CO_2H$, $N(R^{x1})(R^{x2})$, $C(O)N(R^{x1})(R^{x2})$, C_1 - C_4 -alkyl- $N(R^{x1})(R^{x2})$, $-NR^{x3}-C(O)-N(R^{x1})(R^{x2})$, $NR^{x3}-C(O)O-(C_1-C_4-alkyl)$, $-N(R^{x3})-SO_2-R^{x4}$, phenyl, CN, $-SF_5$, $-OSF_5$, $-SO_2R^{x4}$, $-SR^{x4}$ and trimethylsilyl, where R^{x1} , R^{x2} , R^{x3} and R^{x4} , independently of each other are selected from the group consisting of hydrogen, C_1 - C_4 -alkyl, C_1 - C_4 -fluoroalkyl and C_3 - C_6 -cycloalkyl or R^{x1} and R^{x2} form together with the N atom to which they are attached a 3- to 7-membered, nitrogen heterocycle which may have 1, 2 or 3 further different or identical heteroatoms or heteroatom containing groups selected from the group of O, N, S, SO and SO_2 as ring members and which may carry 1, 2, 3, 4, 5 or 6 substituents selected from C_1 - C_4 -alkyl;

A represents one of the following groups A^1 , A^2 , A^3 or A^4 :



where * indicates the points of attachment to Het and to the nitrogen atom, respectively,

- 5 R³, R⁴, R⁵, R⁶ independently of each other are selected from the group consisting of hydrogen, halogen, C₁-C₄-alkyl, trimethylsilyl, C₁-C₄-fluoroalkyl, C₁-C₄-fluoroalkoxy, C₃-C₆-cycloalkyl, or the radicals together with the carbon atoms to which they are bound form a saturated 3- to 6-membered carbocycle or a saturated 3- to 6-membered heterocycle having 1 or 2 non-adjacent heteroatoms as ring members, where the carbocycle and the heterocycle are unsubstituted or may carry 1, 2, 3 or 4 substituents selected from fluorine and methyl or either the radicals R³, R⁴ or the radicals R⁵, R⁶ together with the carbon atom to which they are bound form a saturated 3- to 6-membered carbocycle or a saturated 3- to 6-membered heterocycle having 1 or 2 non-adjacent heteroatoms as ring members, where the carbocycle and the heterocycle are unsubstituted or may carry 1, 2, 3 or 4 substituents selected from fluorine and methyl;
- 10
- 15
- 20 A' is a O, NR^{3a}, CR^{3b}R^{3c} or linear C₂-C₃-alkandiyl, where one of the CH₂-moieties of C₂-C₃-alkandiyl may be replaced by oxygen or NR^{3a}, and where 1, 2, 3, or 4 of the hydrogen atoms of C₂-C₃-alkandiyl may be replaced by a radical R^{3d}, where
- 25 R^{3a} is hydrogen or C₁-C₄-alkyl,
- R^{3b}, R^{3c} independently of each other are selected from the group consisting of hydrogen, halogen, C₁-C₄-alkyl or R^{3b} and R^{3c} together form C₂-C₃-alkandiyl;
- R^{3d} is selected from the group consisting of halogen and C₁-C₄-alkyl;

- R^8 is selected from the group consisting of hydrogen, halogen, OH, C₁-C₄-alkyl, trimethylsilyl, C₁-C₄-alkoxy-C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄-alkoxy-C₁-C₄-alkoxy, C₂-C₄-alkenyloxy, C₁-C₄-fluoroalkyl, C₁-C₄-fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl, CN and $NR^{x1}R^{x2}$;
- R^9 is selected from the group consisting of hydrogen, halogen, OH, C₁-C₄-alkyl, trimethylsilyl, C₁-C₄-alkylsulfanyl, C₁-C₄-alkoxy-C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄-alkoxy-C₁-C₄-alkoxy, C₁-C₄-alkylsulfanyl-C₁-C₄-alkoxy, C₂-C₄-alkenyloxy, C₁-C₄-fluoroalkyl, C₁-C₄-fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, fluorinated cyclopropyl, CN, $NR^{x1}R^{x2}$, $NR^{x1}R^{x2}$ -C₁-C₄-alkoxy and the moiety Y^3 -Cyc³.
3. The compound as claimed in claim 1 or 2, which has at least one of the following features:
- A is selected from A¹, A², A³ and A⁴;
- X¹ is N or CH;
- X² is C-R⁷, where R⁷ is hydrogen or Y²-Cyc²;
- X³ is selected from O, S, -X⁴=C(R⁸)-, where C(R⁸) is bound to the carbon atom which carries R²;
- Y¹, Y² and Y³, independently of each other, are selected from the group consisting of a chemical bond, O and NH;
- Cyc¹ is selected from the group consisting of saturated 4-, 5-, 6-, 7- or 8-membered heteromonocycles and saturated 7-, 8-, 9- or 10-membered heterobicycles, where the heteromonocycles and the heterobicycles have one nitrogen or oxygen atom as ring member and may have one further heteroatom or heteroatom group as ring member, which is selected from the group consisting of O, S, S(=O), S(=O)₂ and N, where the saturated heteromonocycle and the saturated heterobicycle are unsubstituted or carry

1, 2, 3, 4 or 5 radicals R^{C1} or one radical $Y'-R^{C2}$ and 0, 1, 2, 3 or 4 radicals R^{C1} , or

Cyc¹ is selected from the group consisting of phenyl, 5- or 6 membered monocyclic hetaryl, and 9- or 10 membered bicyclic hetaryl, where hetaryl has one heteroatom, selected from O, S and N as ring member and optionally one or two further nitrogen atoms as ring members, where phenyl and the hetaryl radical are unsubstituted or either carry, independently of each other, 1, 2, 3, 4 or 5 radicals R^{C1} ;

Cyc² and Cyc³, independently of each other, are selected from the group consisting of saturated 4-, 5-, 6-, 7- or 8-membered heteromonocycles and saturated 7-, 8-, 9- or 10-membered heterobicycles, where the heteromonocycles and the heterobicycles have one nitrogen or oxygen atom as ring member and may have one further heteroatom or heteroatom group as ring member, which is selected from the group consisting of O, S, S(=O), S(=O)₂ and N, where the saturated heteromonocycle and the saturated heterobicycle are unsubstituted or carry 1, 2, 3, 4 or 5 radicals R^{C1} or one radical $Y'-R^{C2}$ and 0, 1, 2, 3 or 4 radicals R^{C1} ;

Q is O;

R² is selected from the group consisting of hydrogen, fluorine, C₁-C₄-alkyl, C₁-C₂-fluoroalkyl, C₁-C₄-alkoxy, C₁-C₂-fluoroalkoxy, cyclopropyl, optionally substituted by 1, 2 or 3 methyl groups, and fluorinated cyclopropyl;

Het is selected from the group consisting of C-bound 6-membered monocyclic hetaryl, which has 1 or 2 nitrogen atoms as ring members, benzofuryl and C-bound, fused bicyclic hetaryl, which has 1 or 2 nitrogen atoms as ring members and optionally a further heteroatom selected from O, S and N as ring member;

where monocyclic hetaryl, benzofuryl and bicyclic hetaryl may be unsubstituted or may carry 1, 2, 3 or 4 substituents R^x ;

and, if A is A¹

R³, R⁴ are selected from hydrogen and fluorine;

R⁵ and R⁶ are, independently of each other, selected from the group consisting of hydrogen, fluorine and methyl;

and, if A is A³, R⁴, R⁵ are selected from hydrogen and fluorine.

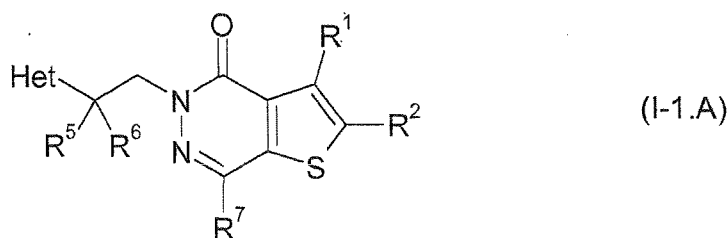
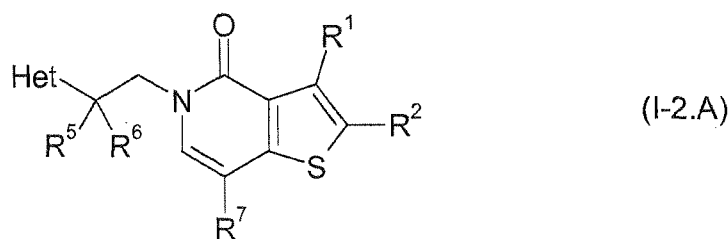
and, if A is A⁴,

A' is CR^{3b}R^{3c}, where R^{3b} and R^{3c} are independently of each other selected from the group consisting of hydrogen, fluorine and methyl or together form CH₂CH₂.

4. The compound as claimed in any one of claims 1 to 3, where X³ is S.
5. The compound as claimed in any one of claims 1 to 3, where X³ is O.
- 10 6. The compound as claimed in any one of claims 1 to 3, where X³ is N=C(R⁸), C(R⁹)=C(R⁸) or N=(CR⁹), where R⁸ is hydrogen and R⁹ is hydrogen or Y³-Cyc³.
7. The compound as claimed in any of claims 1 to 6, where R² is hydrogen.
- 15 8. The compound as claimed in any one of the preceding claims, where A is A¹.
9. The compound as claimed in any one of claims 1 to 7, where A is A².
- 20 10. The compound as claimed in any one of claims 1 to 7, where A is A³.
11. The compound as claimed in any one of claims 1 to 7, where A is A⁴.
12. The compound as claimed in claim 11, where A is A⁴, with A' being CR^{3b}R^{3c} and where R^{3b} and R^{3c} are hydrogen.
- 25 13. The compound as claimed in any one of claims 1 to 7, where A is A⁵, where R^{3e}, R^{3f}, R⁴ and R⁵ are each hydrogen.
- 30 14. The compound as claimed in claim 3, where Het has at least one imino-nitrogen as ring member, which is located in the position adjacent to the carbon atom

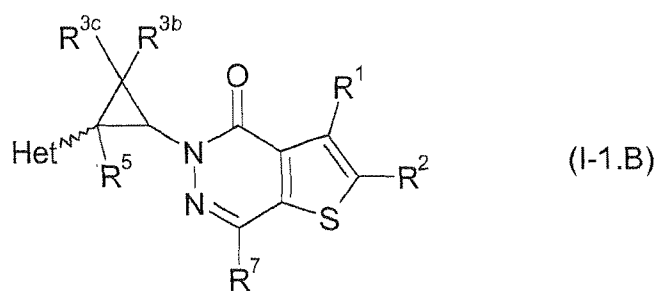
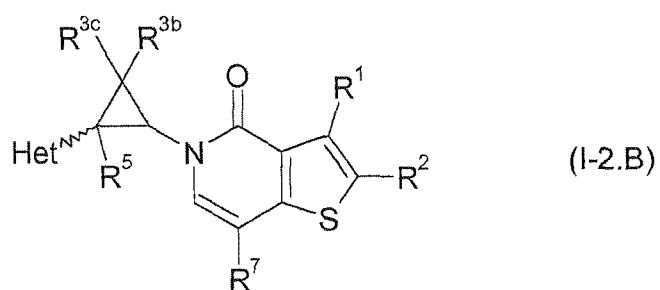
which is bound to A.

15. The compound as claimed in claim 14, where Het is selected from the group consisting of 2-pyridyl, 2-pyrimidinyl, 4-pyrimidinyl, 2-pyrazinyl, 3-pyridazinyl, 2-quinolinyl, 3-isoquinolinyl, 2-quinazolinyl, 2-quinoxaliny, 1,5-naphthyridin-2-yl, 1,8-naphthyridin-2-yl, benzothiazol-1-yl, benzoxazol-1-yl, benzimidazol-2-yl, 1-methylbenzimidazol-2-yl, imidazo[1,2-a]pyridine-2-yl, thieno[3,2-b]pyridine-5-yl, imidazo-[2,1-b]-thiazol-6-yl and 1,2,4-triazolo[1,5-a]pyridine-2-yl, where the
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 25
16. The compound as claimed in any one of the preceding claims, where Y^1 , Y^2 and Y^3 are each a chemical bond.
17. The compound as claimed in any one of the preceding claims, which is of the formulae I-1.A or I-2.A



where Het, R^1 , R^2 , R^5 , R^6 and R^7 are as defined in any one of the preceding claims.

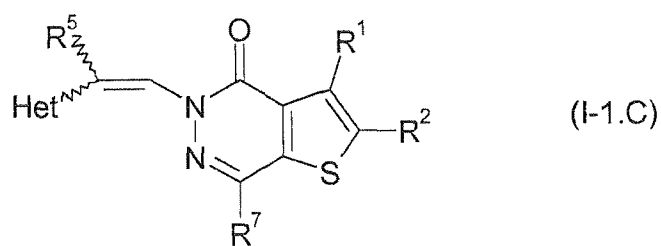
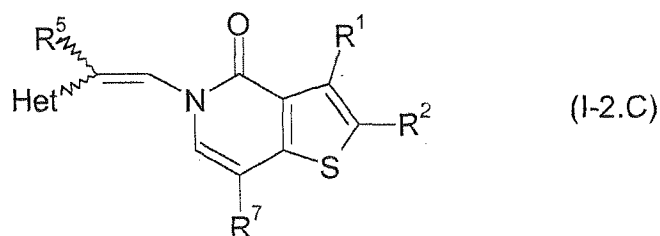
18. The compound as claimed in any one of claims 1 to 16, which is of the formulae I-1.B or I-2.B



5 where Het, R¹, R², R^{3b}, R^{3c} and R⁷ are as defined in any one of claims 1 to 16 and R⁵ is hydrogen.

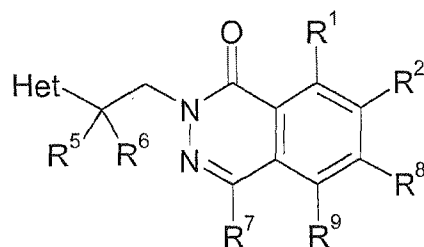
19. The compound as claimed in any one of claims 1 to 16, which is of the formulae I-1.C or I-2.C

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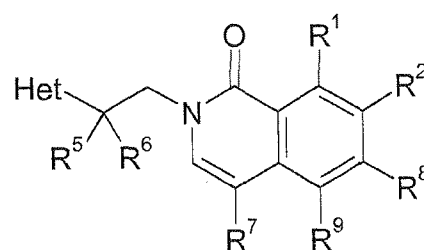
15 where Het, R¹, R², R⁵, and R⁷ are as defined in any one of claims 1 to 16.

20. The compound as claimed in any one of claims 1 to 16, which is of the formulae I-3.A or I-4.A



(I-3.A)

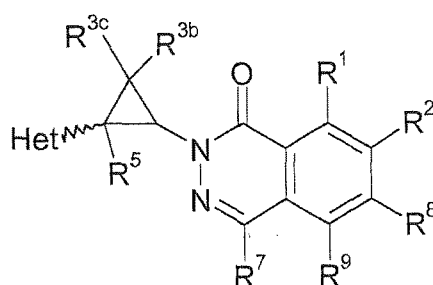
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(I-4.A)

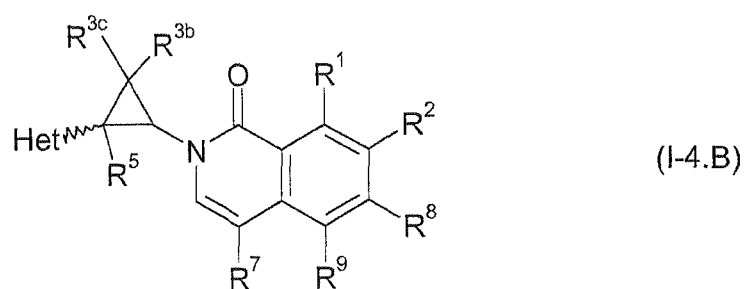
where Het, R¹, R², R⁵, R⁶, R⁷, R⁸ and R⁹ are as defined in any one of claims 1 to 16.

- 10 21. The compound as claimed in any one of claims 1 to 16, which is of the formulae I-3.B or I-4.B



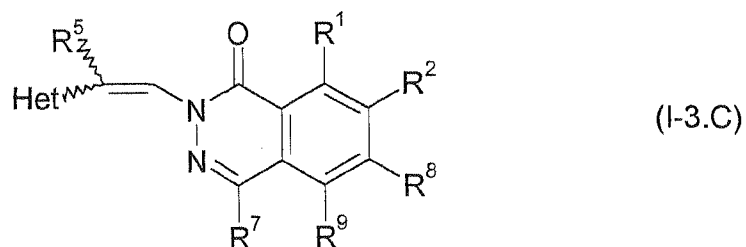
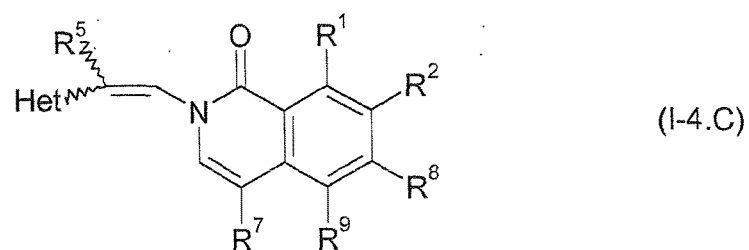
(I-3.B)

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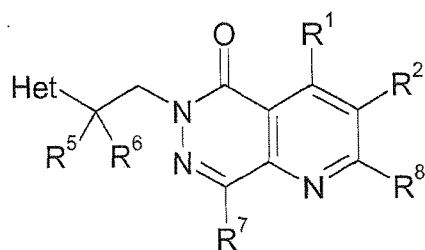
where Het, R¹, R², R^{3b}, R^{3c}, R⁷, R⁸ and R⁹ are as defined in any one of claims 1 to 16 and R⁵ is hydrogen.

22. The compound as claimed in any one of claims 1 to 16, which is of the formulae I-3.C or I-4.C

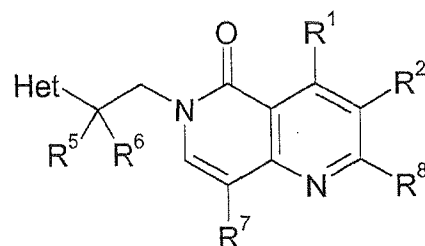


where Het, R¹, R², R⁵, R⁷, R⁸ and R⁹ are as defined in any one of claims 1 to 16.

23. The compound as claimed in any one of claims 1 to 16, which is of the formulae I-5.A or I-6.A



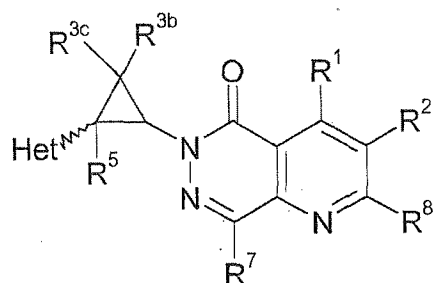
(I-5.A)



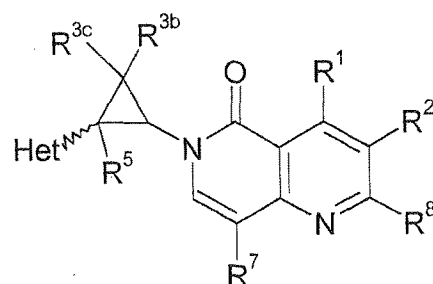
(I-6.A)

where Het, R^1 , R^2 , R^5 , R^6 , R^7 and R^8 are as defined in any one of claims 1 to 16.

24. The compound as claimed in any one of claims 1 to 16, which is of the formulae I-5.B or I-6.B



(I-5.B)

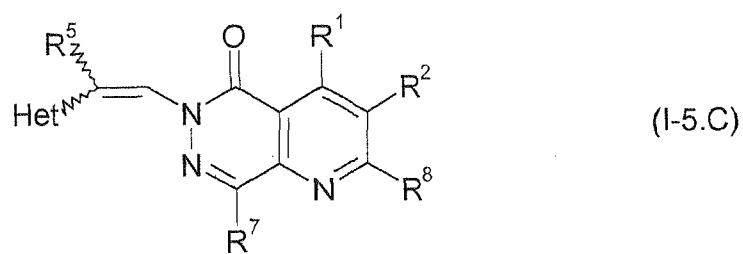
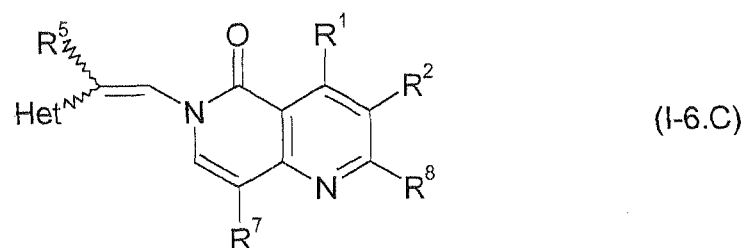


(I-6.B)

where Het, R^1 , R^2 , R^{3b} , R^{3c} , R^7 and R^8 are as defined in any one of claims 1 to 16 and R^5 is hydrogen.

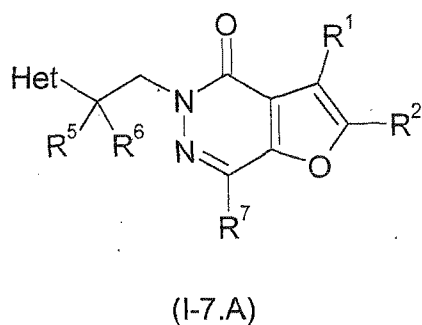
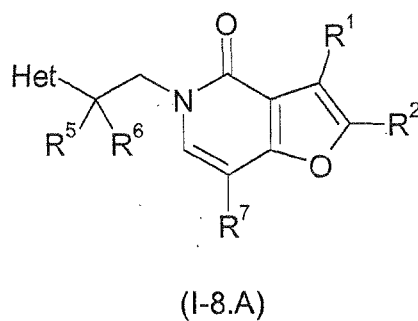
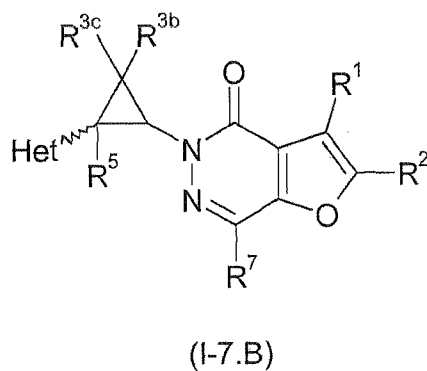
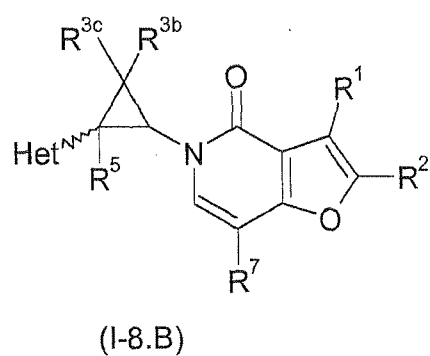
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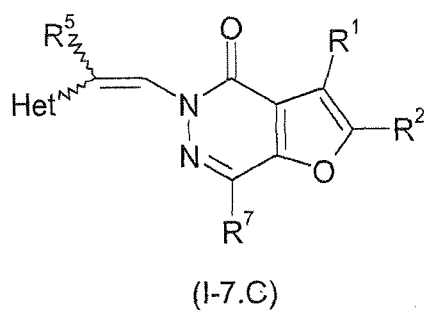
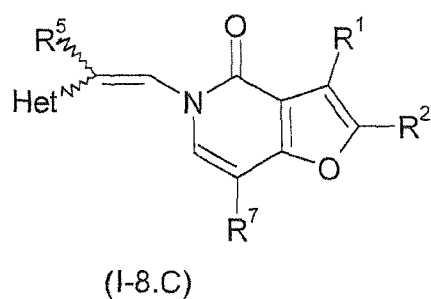
25. The compound as claimed in any one of claims 1 to 16, which is of the formulae I-5.C or I-6.C



where Het, R¹, R², R⁵, R⁷ and R⁸ are as defined in any one of claims 1 to 16.

- 5 26. The compound as claimed in any one of claims 1 to 16, which is of the formulae I-7.A, I-8.A, I-7.B, I-8.B, I-7.C, I-8.C,

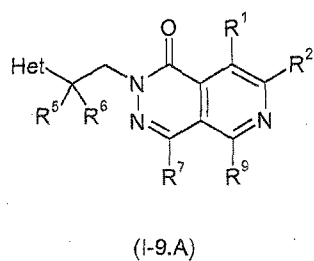
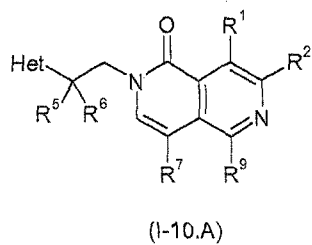
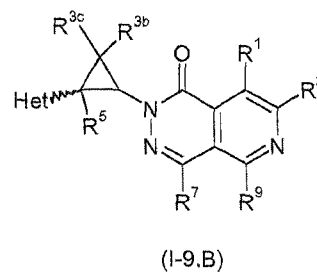
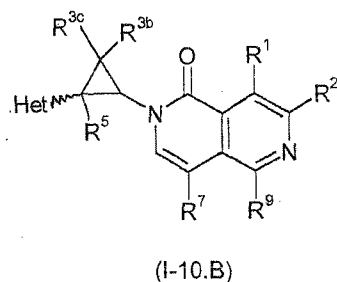
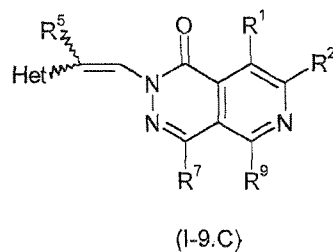
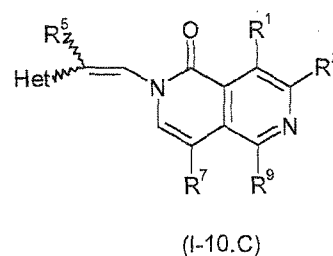




where Het, R^1 , R^2 , R^{3b} , R^{3c} , R^5 , R^6 , R^7 and R^8 are as defined in any one of claims 1 to 16.

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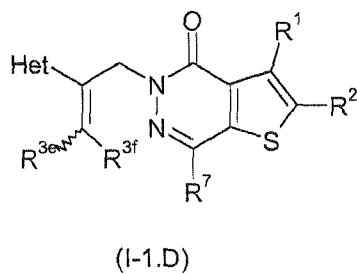
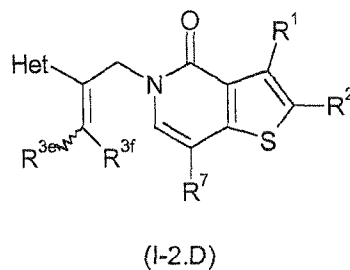
27. The compound as claimed in any one of claims 1 to 16, which is of formulae

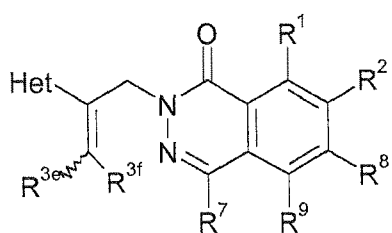


where Het, R^1 , R^2 , R^{3b} , R^{3c} , R^5 , R^6 , R^7 , and R^9 are as defined in any one of claims 1 to 16.

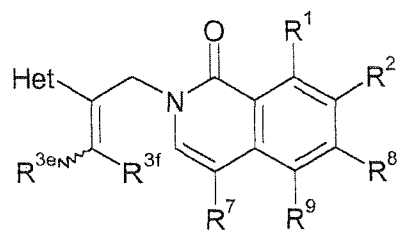
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28. The compound as claimed in any one of claims 1 to 16, which is of the formulae I-1.D, I-2.D, I-3.D, I-4.D, I-5.D, I-6.D, I-7.D, I-8.D, I-9.D, I-10.D

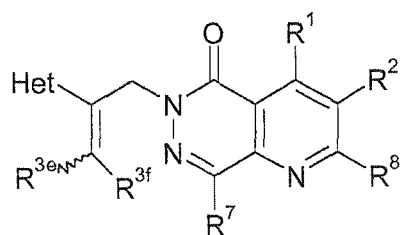




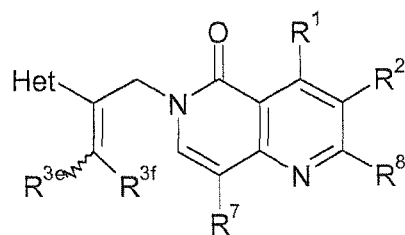
(I-3.D)



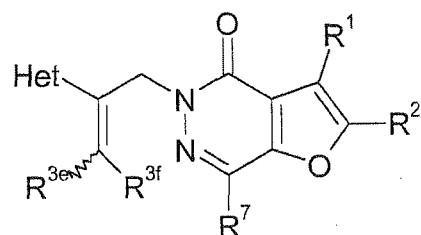
(I-4.D)



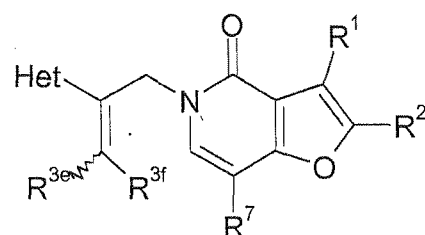
(I-5.D)



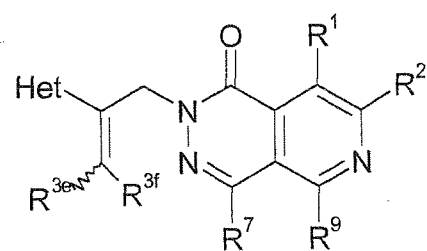
(I-6.D)



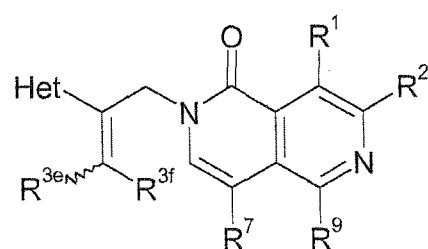
(I-7.D)



(I-8.D)



(I-9.D)



(I-10.D)

where Het, R¹, R², R^{3e}, R^{3f}, R⁷, R⁸ and R⁹ are as defined in any one of claims 1 to 16.

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29. The compound as claimed in any one of the preceding claims, where Y¹-Cyc¹, is selected from the group consisting of 1-piperidinyl, 4,4-difluoro-1-piperidinyl, 4-piperidinyl, 1-methyl-4-piperidinyl, 1-piperazinyl, 4-methyl-1-piperazinyl,

morpholin-4-yl, azepane-1-yl, 1,4-oxazepan-4-yl, hexahydrofuro[3,4-c]pyrrol-5-yl, 2,5-diazabicyclo[2.2.1]heptan-2-yl, 3,8-diazabicyclo[3.2.1]octan-8-yl, thiomorpholin-4-yl, 1-oxothiomorpholin-4-yl, N-(oxetan-3-yl)amino, 1,1-dioxothiomorpholin-4-yl and oxetan-3-ylamino.

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30. The compound as claimed in any of claims 1 to 28, where Y^1 is a chemical bond and Cyc^1 is selected from the group consisting of phenyl, 5- or 6-membered monocyclic hetaryl selected from the group consisting of pyridyl, pyrimidinyl, furyl, thienyl, pyrrolyl, imidazolyl, pyrazolyl, oxazolyl and thiazolyl, 9- or 10-membered bicyclic hetaryl selected from the group consisting of indolyl, quinolinyl, isoquinolinyl, quinazolinyl, benzimidazolyl, benzotriazolyl, benzopyrazolyl and benzofuryl, where phenyl and hetaryl are unsubstituted or carry 1, 2 or 3 radicals R^{C1} which are selected from the group consisting of fluorine, chlorine, CN, methyl, difluoromethyl, trifluoromethyl, methoxy and NH_2 , or, if Cyc^1 is phenyl, two radicals R^{C1} which are bound to adjacent carbon atoms, together with the phenyl ring to which they are bound, form a bicyclic heterocyclic radical, which is selected from 2,3-dihydrobenzofuran-5-yl, 2,3-dihydrobenzofuran-6-yl, 1,3-dihydroindol-2-on-5-yl, 1,3-dihydroindol-2-on-6-yl, benzo-1,3-dioxolan-5-yl, benzo-1,3-dioxolan-6-yl, benzo-1,4-dioxan-5-yl, benzo-1,4-dioxan-6-yl, benzo-1,5-dioxepan-6-yl and benzo-1,4-dioxepan-7-yl.

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31. The compound as claimed in any of the preceding claims, where Y^2-Cyc^2 and Y^3-Cyc^3 , independently of each other, are selected from the group consisting of phenyl, 5- or 6-membered monocyclic hetaryl selected from the group consisting of pyridyl, pyrimidinyl, furyl, thienyl, pyrrolyl, imidazolyl, pyrazolyl, oxazolyl and thiazolyl, 9- or 10-membered bicyclic hetaryl selected from the group consisting of indolyl, quinolinyl, isoquinolinyl, quinazolinyl, benzimidazolyl, benzotriazolyl, benzopyrazolyl and benzofuryl, where phenyl and hetaryl are unsubstituted or carry 1, 2 or 3 radicals R^{C1} which are selected from the group consisting of fluorine, chlorine, CN, methyl, difluoromethyl, trifluoromethyl, methoxy and NH_2 , or, if Cyc^2 or Cyc^3 are phenyl, two radicals R^{C1} which are bound to adjacent carbon atoms, together with the phenyl ring to which they are

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bound, form a bicyclic heterocyclic radical, which is selected from 2,3-dihydrobenzofuran-5-yl, 2,3-dihydrobenzofuran-6-yl, 1,3-dihydroindol-2-on-5-yl, 1,3-dihydroindol-2-on-6-yl, benzo-1,3-dioxolan-5-yl, benzo-1,3-dioxolan-6-yl, benzo-1,4-dioxan-5-yl, benzo-1,4-dioxan-6-yl, benzo-1,5-dioxepan-6-yl and benzo-1,4-dioxepan-7-yl.

32. A compound, which is selected from the group consisting of

- 3,7-di(pyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 7-(pyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(pyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(pyridin-4-yl)-5-[2-(pyridin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3,7-di(pyridin-4-yl)-5-[2-(pyridin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(quinolin-2-yl)ethyl]-3-[4-(trifluoromethyl)phenyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(4-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-[4-(propan-2-yl)phenyl]-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(4-ethylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 4-{4-oxo-5-[2-(quinolin-2-yl)ethyl]-4,5-dihydrothieno[2,3-d]pyridazin-3-yl} benzonitrile;
- 3-(4-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(4-fluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(4-ethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-[4-(dimethylamino)phenyl]-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 4-{4-oxo-5-[2-(quinolin-2-yl)ethyl]-4,5-dihydrothieno[2,3-d]pyridazin-3-yl} phenyl)acetonitrile;
- 3-(4-hydroxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2-chlorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2-ethylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;

- 3-(2-fluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(2-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(2-ethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(2-hydroxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 5 5-[2-(quinolin-2-yl)ethyl]-3-[2-(trifluoromethyl)phenyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-[3-(methoxymethyl)phenyl]-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(3-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 10 3-(3-ethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-[3-(dimethylamino)phenyl]-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-[4-Oxo-5-(2-quinolin-2-yl-ethyl)-4,5-dihydro-thieno[2,3-d]pyridazin-3-yl]-benzonitrile;
 15 3-(3-fluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(3-hydroxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 N,N-dimethyl-3-{4-oxo-5-[2-(quinolin-2-yl)ethyl]-4,5-dihydrothieno[2,3-d]pyridazin-3-yl} benzamide;
 3-(3-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 20 5-[2-(quinolin-2-yl)ethyl]-3-(thiophen-2-yl)thieno[2,3-d]pyridazin-4(5H)-one;
 3-(1-methyl-1H-indol-5-yl)-5-(2-quinolin-2-yl-ethyl)-5H-thieno[2,3-d]pyridazin-4-one;
 3-(1H-indol-6-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(pyrimidin-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 25 3-(2-methoxypyridin-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(pyridin-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(4-methoxypyridin-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 30 3-(furan-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(quinolin-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(isoquinolin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;

- 3-(isoquinolin-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(1H-indol-4-yl)-5-(2-quinolin-2-yl-ethyl)-5H-thieno[2,3-d]pyridazin-4-one;
 3-(2,3-dihydrobenzofuran-5-yl)-5-(2-quinolin-2-yl-ethyl)-5H-thieno[2,3-d]pyridazin-4-one;
- 5 3-(quinolin-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(3,5-dimethyl-1,2-oxazol-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(6-methoxypyridin-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 10 3-(2,3-dihydro-1,4-benzodioxin-6-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(2-methylpyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(5-methoxypyridin-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 15 3-[6-(morpholin-4-yl)pyridin-3-yl]-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(1,3-benzodioxol-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 20 3-(quinolin-6-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-(1-methyl-1H-pyrazol-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 3-[1-(2-methylpropyl)-1H-pyrazol-4-yl]-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 25 tert-butyl 2-{4-oxo-5-[2-(quinolin-2-yl)ethyl]-4,5-dihydrothieno[2,3-d]pyridazin-3-yl}-1H-pyrrole-1-carboxylate;
 3-(2-methoxypyrimidin-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 30 5-[2-(quinolin-2-yl)ethyl]-3-(2,3,4-trifluorophenyl)thieno[2,3-d]pyridazin-4(5H)-one;
 3-(4-fluoro-3-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;

- 3-(4-fluoro-2-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(3-chloro-4-fluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 5 3-(2-chloro-4-fluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(3,4-dimethylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2,4-dimethylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 10 3-(2,4-difluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2,4-dimethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 15 3-(2,5-dimethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2,3-difluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(3,4-dimethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 20 3-(3,4-difluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(5-fluoro-2-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 25 3-(4-fluoro-2-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(3,5-dimethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2,5-difluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 30 3-(2,3-dimethoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;

- 3-(3-fluoro-4-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2-fluoro-3-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 5 3-(3,5-difluorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(3-fluoro-5-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 10 3-(2-methoxy-5-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2,5-dichlorophenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(naphthalen-2-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-phenyl-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 15 3-(1-benzofuran-2-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(1H-indazol-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(1-methyl-1H-pyrazol-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 20 3-(4,5-difluoro-2-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2-fluoro-4-methylphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(2-fluoro-5-methoxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 25 3-methyl-4-{4-oxo-5-[2-(quinolin-2-yl)ethyl]-4,5-dihydrothieno[2,3-d]pyridazin-3-yl}benzonitrile;
- 5-[2-(6-fluoroquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 30 5-[2,2-difluoro-2-(quinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;

- 3-(pyridin-4-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 5 5-[2-(7-fluoroimidazo[1,2-a]pyridin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 8-(pyridin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(quinolin-2-yl)ethyl]-8-[4-(trifluoromethyl)phenyl]phthalazin-1(2H)-one;
- 8-(4-methylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 10 8-[4-(propan-2-yl)phenyl]-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(4-ethylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 4-{4-oxo-3-[2-(quinolin-2-yl)ethyl]-3,4-dihydrophtalazin-5-yl} benzonitrile;
- 8-(4-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(4-fluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 15 (4-{4-oxo-3-[2-(quinolin-2-yl)ethyl]-3,4-dihydrophtalazin-5-yl}phenyl)acetonitrile;
- 8-(4-hydroxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(2-chlorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(2-methylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 20 8-(2-ethylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(2-fluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(2-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(3-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 3-{4-oxo-3-[2-(quinolin-2-yl)ethyl]-3,4-dihydrophtalazin-5-yl} benzonitrile;
- 25 8-(3-fluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(3-hydroxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- N,N-dimethyl-3-{4-oxo-3-[2-(quinolin-2-yl)ethyl]-3,4-dihydrophtalazin-5-yl} benzamide;
- 8-(3-methylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 30 2-[2-(quinolin-2-yl)ethyl]-8-(thiophen-2-yl)phthalazin-1(2H)-one;
- 8-(1-methyl-1H-indol-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(3,5-dimethyl-1H-pyrazol-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;

- 8-(1H-indol-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(1H-indol-6-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(pyrimidin-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(2-methoxypyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 5 8-(pyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(furan-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(quinolin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(1H-indol-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(2,3-dihydro-1-benzofuran-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-
 10 one;
 8-(3,4-dihydro-2H-1,5-benzodioxepin-7-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-
 1(2H)-one;
 8-(1-benzofuran-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(6-methoxypyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 15 8-(2,3-dihydro-1,4-benzodioxin-6-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-
 one;
 8-(2-methylpyridin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(5-methoxypyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(5-fluoropyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 20 8-(1,3-benzodioxol-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(1-methyl-1H-pyrazol-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-[1-(2-methylpropyl)-1H-pyrazol-4-yl]-2-[2-(quinolin-2-yl)ethyl]phthalazin-
 1(2H)-one;
 tert-butyl 2-{4-oxo-3-[2-(quinolin-2-yl)ethyl]-3,4-dihydrophthalazin-5-yl}-1H-
 25 pyrrole-1-carboxylate;
 8-(3-chloro-4-fluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(2-chloro-4-fluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(3,4-dimethylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(2,4-dimethoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 30 8-(2,5-dimethoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(2,3-difluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(3,4-dimethoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;

- 8-(3,4-difluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(5-fluoro-2-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(4-fluoro-2-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(3,5-dimethoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 5 8-(2,5-difluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(3-fluoro-4-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(2-fluoro-3-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(3,5-difluorophenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(3-fluoro-5-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 10 8-(naphthalen-2-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-phenyl-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(1-benzofuran-2-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(1-methyl-1H-pyrazol-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(4,5-difluoro-2-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-
 15 one;
 8-(2-fluoro-4-methylphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-(2-fluoro-5-methoxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyridin-3-yl)phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyridin-4-yl)phthalazin-1(2H)-one;
 20 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(3-methoxypyridin-4-yl)phthalazin-
 1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyrimidin-5-yl)phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1-methyl-1H-pyrazol-3-yl)phthalazin-
 1(2H)-one;
 25 8-(furan-3-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2-oxo-2,3-dihydro-1H-indol-6-
 yl)phthalazin-1(2H)-one;
 8-(3,4-dihydro-2H-chromen-6-yl)-2-[2-(imidazo[1,2-a]pyridin-2-
 yl)ethyl]phthalazin-1(2H)-one;
 30 8-(1,1-dioxidothiomorpholin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-
 one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(morpholin-4-yl)phthalazin-1(2H)-one;

- 8-(1,1-dioxidothiomorpholin-4-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(tetrahydro-1H-furo[3,4-c]pyrrol-5(3H)-yl)phthalazin-1(2H)-one;
- 5 8-(5,5-difluorohexahydrocyclopenta[c]pyrrol-2(1H)-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(piperazin-1-yl)phthalazin-1(2H)-one;
 8-(4,4-difluoropiperidin-1-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 10 8-[4-(chloromethyl)-4-(hydroxymethyl)piperidin-1-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(piperidin-1-yl)phthalazin-1(2H)-one;
 8-(2,3-dihydro-4H-1,4-benzoxazin-4-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 15 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[4-(trifluoromethyl)piperidin-1-yl]phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(4-methylpiperazin-1-yl)phthalazin-1(2H)-one;
 8-(1,3-dihydro-2H-isoindol-2-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 20 8-(7-benzyl-2,7-diazaspiro[4.4]non-2-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-({[(3aR,4S,6aS)-2-benzyl-octahydrocyclopenta[c]pyrrol-4-yl]methyl} amino)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 25 tert-butyl (3R)-3-({3-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-4-oxo-3,4-dihydrophthalazin-5-yl} amino)pyrrolidine-1-carboxylate;
 8-(2,6-dimethylmorpholin-4-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1,4-oxazepan-4-yl)phthalazin-1(2H)-one;
- 30 tert-butyl 4-{3-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-4-oxo-3,4-dihydrophthalazin-5-yl}-3,6-dihydropyridine-1(2H)-carboxylate;

- 5-(pyridin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 5-(pyrimidin-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 5-(1-methyl-1H-pyrazol-5-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 5-(1,1-dioxidothiomorpholin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-
 5 one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-5-(pyridin-3-yl)phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-5-(pyrimidin-5-yl)phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-5-(morpholin-4-yl)phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-5-(tetrahydro-1H-furo[3,4-c]pyrrol-
 10 5(3H)-yl)phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-4-(pyrimidin-5-yl)phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-4-(morpholin-4-yl)phthalazin-1(2H)-one;
 3-(3-methoxypyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-
 one;
 15 3-(3-hydroxypyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-
 one;
 3-(1-methyl-1H-pyrazol-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-
 4(5H)-one;
 3-(pyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
 20 3-(pyrimidin-5-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
 3-(2-oxoindolin-6-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
 3-(3-hydroxyphenyl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
 5-[2-(5-ethylpyridin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-one;
 5-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-
 25 4(5H)-one;
 3-(morpholin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
 tert-butyl-4-(4-oxo-5-(2-quinolin-2-yl)ethyl)-4,5-dihydrothieno[3,2-c]pyridin-3-
 yl)-5,6-dihydropyridine-1(2H) carboxylate;
 5-(2-(quinolin-2-yl)ethyl)-3-(1,2,3,6-tetrahydropyridin-4-yl)thieno[3,2-c]pyridin-
 30 4(5H)-one;
 tert-butyl-4-(4-oxo-5-(2-quinolin-2-yl)ethyl)-4,5-dihydrothieno[3,2-c]pyridin-3-
 yl)-piperidine-1 carboxylate;

- 3-(piperidin-4-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[3,2-c]pyridin-4(5H)-one;
 3-methyl-7-(pyridin-4-yl)-5-(2-(quinolin-2-yl)ethyl)thieno[3,2-c]pyridin-4(5H)-one;
 3-(pyridin-4-yl)-5-[2-(5,6,7,8-tetrahydroquinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 5 (R)-tert-butyl 3-(3-(2-(imidazo[1,2-a]pyridin-2-yl)ethyl)-4-oxo-3,4-dihydrophthalazin-5-ylamino)pyrrolidine-1-carboxylate;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(3R)-pyrrolidin-3-ylamino]phthalazin-1(2H)-one;
 10 5-(3-hydroxyphenyl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 (E)-8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)vinyl)isoquinolin-1(2H)-one;
 anti (rac) 8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti (+)-8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti (-)-8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 15 8-(pyridin-4-yl)-2-(2-quinolin-2-yl-ethyl)isoquinolin-1(2H)-one;
 anti (rac) 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 anti (+) 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 20 anti (-) 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 (E)-8-pyridin-4-yl-2-(2-quinolin-2-yl-vinyl)-2H-phthalazin-1-one;
 anti (rac) 8-pyridin-4-yl-2-(2-quinolin-2-yl-cyclopropyl)-2H-phthalazin-1-one;
 anti (+) 8-pyridin-4-yl-2-(2-quinolin-2-yl-cyclopropyl)-2H-phthalazin-1-one;
 25 anti (-) 8-pyridin-4-yl-2-(2-quinolin-2-yl-cyclopropyl)-2H-phthalazin-1-one;
 and the N-oxides thereof, the prodrugs thereof as defined in claim 1, the tautomers thereof and the hydrates thereof, and the pharmaceutically acceptable salts thereof.
- 30 33. A compound, which is selected from the group consisting of
 7-(pyridin-4-yl)-5-[2-(quinolin-2-yl)ethyl]furo[3,2-c]pyridin-4(5H)-one;
 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)ethyl)furo[3,2-c]pyridin-4(5H)-one;

- 5-(2-(1H-benzo[d]imidazol-2-yl)ethyl)-3-(pyridin-4-yl)furo[3,2-c]pyridin-4(5H)-one;
- 5-(2-(imidazo[1,2-a]pyridin-2-yl)ethyl)-3-(pyridin-4-yl)furo[3,2-c]pyridin-4(5H)-one;
- 5 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)ethyl)furo[3,2-c]pyridin-4(5H)-one;
- 4-(pyridin-4-yl)-6-(2-(quinolin-2-yl)allyl)pyrido[2,3-d]pyridazin-5(6H)-one;
- syn 8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- syn 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
- 10 anti 3-(pyridazin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)furo[3,2-c]pyridin-4(5H)-one;
- syn 3-(pyridazin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)furo[3,2-c]pyridin-4(5H)-one;
- anti 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)furo[3,2-c]pyridin-4(5H)-one;
- 15 syn 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)furo[3,2-c]pyridin-4(5H)-one;
- anti 8-(oxetan-3-ylamino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- syn 8-(oxetan-3-ylamino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- 20 anti 8-(pyridazin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- syn 8-(pyridazin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- anti 8-(6-fluoropyridin-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- syn 8-(6-fluoropyridin-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- 25 anti 8-(2-fluoropyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- syn 8-(2-fluoropyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- 30 anti 8-(pyridin-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- syn 8-(pyridin-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- anti 8-(pyrimidin-5-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;

- syn 8-(pyrimidin-5-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-(1-methyl-1H-pyrazol-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- 5 syn 8-(1-methyl-1H-pyrazol-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-(3-fluoropyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- syn 8-(3-fluoropyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- 10 anti 8-(2-fluoropyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-(2-fluoropyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- anti 8-((3S)-3-hydroxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- 15 syn 8-((3S)-3-hydroxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-(3-methoxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- 20 syn 8-(3-methoxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-morpholino-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
syn 8-morpholino-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- anti 1-(1-oxo-2-(2-(quinolin-2-yl)cyclopropyl)-1,2-dihydroisoquinolin-8-yl)piperidine-4-carbonitrile;
- 25 syn 1-(1-oxo-2-(2-(quinolin-2-yl)cyclopropyl)-1,2-dihydroisoquinolin-8-yl)piperidine-4-carbonitrile;
anti 8-((3R,4R)-4-fluoro-3-hydroxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
- 30 syn 8-((3R,4R)-4-fluoro-3-hydroxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
anti 8-((3S)-3-hydroxypyrrolidin-1-yl)-2-(2-(quinolin-2-

- yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-((3S)-3-hydroxypyrrolidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-((3R)-3-hydroxypyrrolidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 5 syn 8-((3R)-3-hydroxypyrrolidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(methyl(oxetan-3-yl)amino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 10 syn 8-(methyl(oxetan-3-yl)amino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(4-methoxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-(4-methoxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 15 anti 8-(4-hydroxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-(4-hydroxypiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 20 anti 8-(1-acetylpiperidin-4-ylamino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-(1-acetylpiperidin-4-ylamino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(piperidin-4-ylamino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 25 one;
 syn 8-(piperidin-4-ylamino)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 2-(2-(quinolin-2-yl)cyclopropyl)-8-(tetrahydro-2H-pyran-4-yl)isoquinolin-1(2H)-one;
 30 syn 2-(2-(quinolin-2-yl)cyclopropyl)-8-(tetrahydro-2H-pyran-4-yl)isoquinolin-1(2H)-one;
 anti 2-(2-(quinolin-2-yl)cyclopropyl)-8-(2-oxa-6-azaspiro[3.4]octan-6-

- yl)isoquinolin-1(2H)-one;
 syn 2-(2-(quinolin-2-yl)cyclopropyl)-8-(2-oxa-6-azaspiro[3.4]octan-6-yl)isoquinolin-1(2H)-one;
 anti 8-(dihydro-1H-furo[3,4-c]pyrrol-5(3H,6H,6aH)-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 5 syn 8-(dihydro-1H-furo[3,4-c]pyrrol-5(3H,6H,6aH)-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(4,4-difluoropiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 10 syn 8-(4,4-difluoropiperidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-morpholino-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-morpholino-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(3-(difluoromethyl)pyrrolidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 15 syn 8-(3-(difluoromethyl)pyrrolidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-((1R,5S)-3-oxa-8-azabicyclo[3.2.1]octan-8-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 20 syn 8-((1R,5S)-3-oxa-8-azabicyclo[3.2.1]octan-8-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(4-methylpiperazin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-(4-methylpiperazin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 25 anti 8-(3-(fluoromethyl)pyrrolidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-(3-(fluoromethyl)pyrrolidin-1-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 30 anti 8-((1R,5S)-8-oxa-3-azabicyclo[3.2.1]octan-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-((1R,5S)-8-oxa-3-azabicyclo[3.2.1]octan-3-yl)-2-(2-(quinolin-2-

- yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(4-fluorophenyl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-(4-fluorophenyl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(furan-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 5 syn 8-(furan-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 8-(4,5-dihydrofuran-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-(4,5-dihydrofuran-3-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 10 anti 8-(4-methoxyphenyl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 syn 8-(4-methoxyphenyl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-morpholinoisoquinolin-1(2H)-one;
 syn 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-morpholinoisoquinolin-1(2H)-one;
 15 anti 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyridin-3-yl)isoquinolin-1(2H)-one;
 syn 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyridin-3-yl)isoquinolin-1(2H)-one;
 20 anti 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyrimidin-5-yl)isoquinolin-1(2H)-one;
 syn 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyrimidin-5-yl)isoquinolin-1(2H)-one;
 anti 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
 25 syn 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
 anti 4-fluoro-8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 30 syn 4-fluoro-8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one;
 anti 4-chloro-8-(pyrimidin-5-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-

- 1(2H)-one;
 syn 4-chloro-8-(pyrimidin-5-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-
 1(2H)-one;
 anti 4-(pyridin-4-yl)-6-(2-(quinolin-2-yl)cyclopropyl)pyrido[2,3-d]pyridazin-
 5(6H)-one;
 5 syn 4-(pyridin-4-yl)-6-(2-(quinolin-2-yl)cyclopropyl)pyrido[2,3-d]pyridazin-
 5(6H)-one;
 anti 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyridin-4-yl)phthalazin-1(2H)-
 one;
 10 syn 2-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-8-(pyridin-4-yl)phthalazin-1(2H)-
 one;
 anti 7-fluoro-3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-
 c]pyridin-4(5H)-one;
 syn 7-fluoro-3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-
 15 c]pyridin-4(5H)-one;
 anti 3-(2-fluoropyridin-4-yl)-5-(2-(6-fluoroquinolin-2-yl)cyclopropyl)thieno[3,2-
 c]pyridin-4(5H)-one;
 syn 3-(2-fluoropyridin-4-yl)-5-(2-(6-fluoroquinolin-2-yl)cyclopropyl)thieno[3,2-
 c]pyridin-4(5H)-one;
 20 anti 5-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-3-(pyridin-4-yl)thieno[3,2-
 c]pyridin-4(5H)-one;
 syn 5-(2-(6-fluoroquinolin-2-yl)cyclopropyl)-3-(pyridin-4-yl)thieno[3,2-c]pyridin-
 4(5H)-one;
 anti 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-
 4(5H)-one;
 25 syn 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-
 4(5H)-one;
 anti 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-
 4(5H)-one;
 30 syn 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-
 4(5H)-one;
 anti 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-

- 4(5H)-one;
 syn 3-(pyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
- 5 anti 3-(6-fluoropyridin-3-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 syn 3-(6-fluoropyridin-3-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 anti 3-(2-methylpyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
- 10 syn 3-(2-methylpyrimidin-5-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 anti 3-(pyridazin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 syn 3-(pyridazin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
- 15 anti 3-(2-fluoropyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
 syn 3-(2-fluoropyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)thieno[3,2-c]pyridin-4(5H)-one;
- 20 anti 3-(morpholin-4-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
 syn 3-(morpholin-4-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
- 25 anti 3-(pyridin-3-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
 syn 3-(pyridin-3-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
 anti 3-(pyridin-3-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
- 30 syn 3-(pyridin-3-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
 anti 3-(pyrimidin-5-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[2,3-d]pyridazin-

- 4(5H)-one;
 syn 3-(pyrimidin-5-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[2,3-d]pyridazin-4(5H)-one;
 anti 3-(pyridin-4-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)cyclopropyl]thieno[2,3-d]pyridazin-4(5H)-one;
 5 syn -(pyridin-4-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)cyclopropyl]thieno[2,3-d]pyridazin-4(5H)-one;
 anti 3-(pyridin-4-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
 10 syn 3-(pyridin-4-yl)-5-[2-(thieno[3,2-b]pyridin-5-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
 anti 3-(pyridin-4-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
 syn 3-(pyridin-4-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[3,2-c]pyridin-4(5H)-one;
 15 anti 3-(pyridin-4-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[2,3-d]pyridazin-4(5H)-one;
 syn 3-(pyridin-4-yl)-5-[2-(quinolin-2-yl)cyclopropyl]thieno[2,3-d]pyridazin-4(5H)-one;
 20 anti 5-(pyrimidin-5-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 syn 5-(pyrimidin-5-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 anti 5-(pyridin-4-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 syn 5-(pyridin-4-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 anti 5-(pyridin-3-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 25 syn 5-(pyridin-3-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 anti 5-(morpholin-4-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 syn 5-(morpholin-4-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 anti 4-fluoro-8-(pyrimidin-5-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 30 syn 4-fluoro-8-(pyrimidin-5-yl)-2-[2-(quinolin-2-yl)cyclopropyl]isoquinolin-1(2H)-one;
 8-(pyridin-4-yl)-2-[2-(quinolin-2-yl)ethyl]pyrido[3,4-d]pyridazin-1(2H)-one;

- 5-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-7-(1-methyl-1H-imidazol-4-yl)-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-7-(1-methyl-1H-pyrazol-4-yl)-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 5 5-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-7-(pyridin-3-yl)-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(6-chloroquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-one;
- 5-[2-(3-methylquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-one;
- 10 5-[2-(8-fluoroquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-one;
- 5-[2-(6-fluoroquinolin-2-yl)ethyl]-3-(pyridin-3-yl)thieno[3,2-c]pyridin-4(5H)-one;
- 15 5-[2-(6-fluoroquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-one;
- 5-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-3-(pyridin-3-yl)thieno[3,2-c]pyridin-4(5H)-one;
- 3-(pyridin-4-yl)-5-[2-(quinoxalin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 20 5-[2-(1,5-naphthyridin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(1H-indazol-1-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(1-methyl-1H-pyrazol-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 25 3-(1H-pyrazol-3-yl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(1H-benzimidazol-1-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 5-[2-(1H-benzimidazol-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 30 5-[2-(6-chloroquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
- 3-(pyridin-3-ylethynyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;

- one;
 3-(pyridin-4-ylethynyl)-5-[2-(quinolin-2-yl)ethyl]thieno[2,3-d]pyridazin-4(5H)-one;
 5-[2-(3,5-dimethylpyridin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
 5-[2-(7-fluoroquinolin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
 5-[2-(pyrazin-2-yl)ethyl]-3-(pyridin-4-yl)thieno[2,3-d]pyridazin-4(5H)-one;
 2-[2-(1,6-naphthyridin-2-yl)ethyl]-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
 2-[2-(8-fluoroquinolin-2-yl)ethyl]-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
 8-(pyridin-4-yl)-2-[1-(quinolin-2-yl)propan-2-yl]isoquinolin-1(2H)-one;
 2-[2-(3-methylquinolin-2-yl)ethyl]-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1H-pyrazol-3-yl)phthalazin-1(2H)-one;
 8-(morpholin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1-oxa-4,9-diazaspiro[5.6]dodec-9-yl)phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2-oxa-7-azaspiro[3.5]non-7-yl)phthalazin-1(2H)-one;
 8-[(3R)-3-hydroxypiperidin-1-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
 8-[(3S)-3-hydroxypiperidin-1-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2-oxa-6-azaspiro[3.3]hept-6-yl)phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1,2-oxazolidin-2-yl)phthalazin-1(2H)-one;
 8-(hexahydrocyclopenta[b][1,4]oxazin-4(4aH)-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(tetrahydrofuran-3-yl)phthalazin-1(2H)-one;
 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(3-oxa-8-azabicyclo[3.2.1]oct-8-yl)phthalazin-1(2H)-one;

- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2-oxa-6-azaspiro[3.4]oct-6-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2,2,6,6-tetrafluoromorpholin-4-yl)phthalazin-1(2H)-one;
- 5 8-(4-hydroxypiperidin-1-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2-methylpyrimidin-5-yl)phthalazin-1(2H)-one;
- 8-(2-cyclopropylpyrimidin-5-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 10 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyridazin-4-yl)phthalazin-1(2H)-one;
- 8-(5-fluoropyridin-3-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-[2-(3-fluorophenyl)morpholin-4-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 15 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(2-methoxypyrimidin-5-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[2-(trifluoromethyl)pyridin-4-yl]phthalazin-1(2H)-one;
- 20 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(8-oxa-3-azabicyclo[3.2.1]oct-3-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[2-(trifluoromethyl)morpholin-4-yl]phthalazin-1(2H)-one;
- 8-(2,2-dimethylmorpholin-4-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 25 8-[2-(4-chlorophenyl)morpholin-4-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-[2-(3,4-difluorophenyl)morpholin-4-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 30 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(piperidin-4-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(tetrahydro-2H-pyran-4-yl)phthalazin-1(2H)-one;

- 8-(2,6-diazabicyclo[3.2.1]oct-6-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-[(1S,5S)-3,6-diazabicyclo[3.2.0]hept-3-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 5 8-(furan-2-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1-methyl-1H-pyrazol-4-yl)phthalazin-1(2H)-one;
- 8-(hexahydropyrrolo[3,4-c]pyrrol-2(1H)-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 10 8-(2,7-diazaspiro[4.4]non-2-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-[(1S,4S)-2,5-diazabicyclo[2.2.1]hept-2-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(2,7-diazaspiro[3.5]non-7-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 15 8-(2,6-diazaspiro[3.5]non-6-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 8-(piperidin-4-yl)-2-[2-(5,6,7,8-tetrahydroimidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 20 8-[2-(aminomethyl)-4-chloropyrrolidin-1-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-4,8-di(pyridin-4-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(3aR,4S,7R,7aS)-octahydro-1H-4,7-epiminoisoindol-8-yl]phthalazin-1(2H)-one;
- 25 8-[5-(4-chlorophenyl)-2,5-diazabicyclo[2.2.1]hept-2-yl]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 4-bromo-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyridin-4-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(3aS,8aS)-octahydropyrrolo[3,4-c]azepin-2(1H)-yl]phthalazin-1(2H)-one;
- 30 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(3aS,8aR)-octahydropyrrolo[3,4-c]azepin-2(1H)-yl]phthalazin-1(2H)-one;

- tert-butyl (3aR,4S,7R,7aS)-8-{3-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-4-oxo-3,4-dihydrophthalazin-5-yl}octahydro-2H-4,7-epiminoisoindole-2-carboxylate;
 8-(hexahydro-5H-furo[2,3-c]pyrrol-5-yl)-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 5 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1,2,3,6-tetrahydropyridin-4-yl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(3S)-tetrahydrofuran-3-ylamino]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(3R)-tetrahydrofuran-3-ylamino]phthalazin-1(2H)-one;
- 10 8-{[5-(hydroxymethyl)-1,4-dioxan-2-yl]methoxy}-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(oxetan-3-yloxy)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyridin-4-ylmethoxy)phthalazin-1(2H)-one;
- 15 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(morpholin-4-ylmethyl)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(pyridin-3-yloxy)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(oxetan-3-ylmethyl)amino]phthalazin-1(2H)-one;
- 20 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(tetrahydro-2H-pyran-4-ylamino)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[(1-methylazetidin-3-yl)amino]phthalazin-1(2H)-one;
- 25 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(1,3-oxazol-2-ylamino)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[methyl(oxetan-3-yl)amino]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(piperidin-4-ylamino)phthalazin-1(2H)-one;
- 30 8-[(1-acetylpiperidin-3-yl)amino]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;

- 8-[(1-acetylpiperidin-4-yl)amino]-2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(tetrahydrofuran-3-ylamino)phthalazin-1(2H)-one;
- 5 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(tetrahydro-2H-pyran-3-ylamino)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(piperidin-3-ylamino)phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-{methyl[(3-methyloxetan-3-yl)methyl]amino} phthalazin-1(2H)-one;
- 10 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-(oxetan-3-ylamino)phthalazin-1(2H)-one;
- 8-[[3aS,4S,6aS)-octahydrocyclopenta[c]pyrrol-4-ylmethyl]amino}-2-[2-(5,6,7,8-tetrahydroimidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one;
- 15 5-(morpholin-4-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(1H-benzimidazol-2-yl)ethyl]-5-(pyridin-4-yl)phthalazin-1(2H)-one;
- 4-(pyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 5-(1,4-dihydropyrimidin-5-yl)-2-[2-(5,6,7,8-tetrahydroimidazo[1,2-a]pyridin-2-yl)ethyl]phthalazin-1(2H)-one
- 20 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-5-(pyridin-4-yl)phthalazin-1(2H)-one;
- 5-(pyridin-3-yl)-2-[2-(quinolin-2-yl)ethyl]phthalazin-1(2H)-one;
- 2-[2-(imidazo[1,2-a]pyridin-2-yl)ethyl]-8-[[3-methyloxetan-3-yl)methyl]amino}-phthalazin-1(2H)-one;
- 4-(pyridin-4-yl)-6-[2-(quinolin-2-yl)ethyl]pyrido[2,3-d]pyridazin-5(6H)-one;
- 25 4-(morpholin-4-yl)-6-[2-(quinolin-2-yl)ethyl]pyrido[2,3-d]pyridazin-5(6H)-one;
- 4-(oxetan-3-ylamino)-6-[2-(quinolin-2-yl)ethyl]pyrido[2,3-d]pyridazin-5(6H)-one;
- 2-[2-(6-methoxypyridin-2-yl)ethyl]-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
- 2-[2-(1,3-benzothiazol-2-yl)ethyl]-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
- 30 2-[2-(5-methylpyridin-2-yl)ethyl]-8-(pyridin-4-yl)isoquinolin-1(2H)-one;
- 5-[(E)-2-(6-methoxyquinolin-2-yl)ethenyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-4(5H)-one;

8-(pyridin-4-yl)-2-[(E)-2-(quinazolin-2-yl)ethenyl]isoquinolin-1(2H)-one;
 5-[(E)-2-(6-chloroquinolin-2-yl)ethenyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-
 4(5H)-one;
 5-[(E)-2-(3-methylquinolin-2-yl)ethenyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-
 4(5H)-one;
 8-(pyridin-4-yl)-2-[(E)-2-(quinolin-2-yl)ethenyl]isoquinolin-1(2H)-one;
 5-[(E)-2-(1,3-benzothiazol-2-yl)ethenyl]-3-(pyridin-4-yl)thieno[3,2-c]pyridin-
 4(5H)-one;
 3-(pyridin-4-yl)-5-[(E)-2-(quinolin-2-yl)ethenyl]thieno[3,2-c]pyridin-4(5H)-one;

and the enantiomers thereof, the N-oxides thereof, the prodrugs thereof as defined
 in claim 1, the tautomers thereof, and the hydrates thereof, and the
 pharmaceutically acceptable salts thereof.

- 15 34. The compound as claimed in claim 1 being anti (rac) 8-(pyridin-4-yl)-2-(2-(quinolin-2-yl)cyclopropyl)isoquinolin-1(2H)-one, or an enantiomer thereof, or a N-oxide thereof, or a tautomer thereof or a hydrate thereof, or a pharmaceutically acceptable salt thereof.
- 20 35. The compound as claimed in claim 1 being anti 3-(pyridazin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)furo[3,2-c]pyridin-4(5H)-one, or an enantiomer thereof, or a N-oxide thereof, or a tautomer thereof or a hydrate thereof, or a pharmaceutically acceptable salt thereof.
- 25 36. The compound as claimed in claim 1 being anti 3-(pyridin-4-yl)-5-(2-(quinolin-2-yl)cyclopropyl)furo[3,2-c]pyridin-4(5H)-one, or an enantiomer thereof, or a N-oxide thereof, or a tautomer thereof or a hydrate thereof, or a pharmaceutically acceptable salt thereof
- 30 37. The compound as claimed in any one of the preceding claims for use in therapy.

38. Pharmaceutical composition which comprises at least one compound as claimed in any one of claims 1 to 36 and at least one excipient.
- 5 39. The compounds according to any of claims 1 to 36 for use in treating a medical disorder selected from neurological and psychiatric disorders, which can be treated by inhibition of phosphodiesterase type 10A.
- 10 40. The compounds according to any of claims 1 to 36 for use in treating CNS disorders in a mammalian.
- 15 41. The compounds according to any of claims 1 to 36 for use in treating a disorder or dysfunction selected from schizophrenia in a mammalian, cognitive dysfunction associated with schizophrenia in a mammalian, bipolar disorders in a mammalian, depression in a mammalian, cognitive dysfunction associated with Alzheimer's disease in a mammalian, diet-induced obesity in a mammalian, Huntington's disease in a mammalian, anxiety and substance-related disorders in a mammalian.