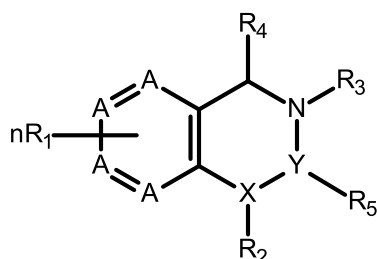


CLAIMS:

1. A compound according to formula I:



formula I

~~or an enantiomer, diastereomer, N-oxide,~~ or a pharmaceutically acceptable salt or combinations thereof, wherein:

~~each A independently represents an atom selected from C, N, S or O;~~

~~X and Y are selected from C and N atoms, wherein two of the A groups comprise nitrogen atoms, and the remaining two A groups each comprise carbon atoms; the unit X-Y represents either an N-C group, or a C=N group respectively;~~

each R₁ ~~is~~ independently ~~represents hydrogen,~~ a halogen atom, or an, optionally substituted, hydroxy, carbonyl, carboxyl, amino, amido, C₁-C₆ alkyl or C₁-C₆ alkoxy group, an, optionally substituted,

mono-, bi-, or tricyclic C₆-C₁₄ aryl group or an, optionally substituted, mono-, bi-, or tricyclic C₁-C₁₃ heterocyclic group containing from 1 to 5 heteroatoms selected from N, O or S;

R₂ is ~~absent or represents hydrogen or an,~~ optionally substituted, C₁-C₆ alkyl group, C₁-C₆ alkoxy group, ~~C₄-C₇~~-C₁₄ arylalkyl group, C₄-C₁₄ heteroarylalkyl group, C₃-C₇ cycloalkyl group, a mono-, bi- or tricyclic C₆-C₁₄ aryl group or a mono-, bi- or tricyclic C₁-C₁₃ heterocyclic group containing from 1 to 5 heteroatoms selected from N, O or S;

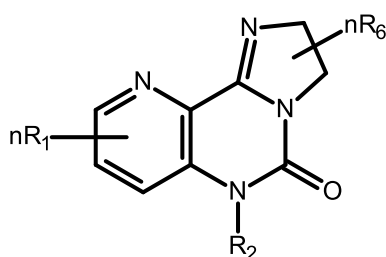
groups R₃ and R₄, ~~or alternatively groups R₃ and R₅,~~ are linked to each other to form a five- or six-membered heterocyclic ring containing from 2 to 3 heteroatoms atoms selected from N, ~~O and S,~~ optionally substituted with one or more groups nR₆, ~~with the proviso that the remainder of R₄ or R₅ not linked with group R₃ to form the heterocyclic ring is absent, or;~~

R₅ is ~~an atom independently selected from N, O or S~~ which is double-bonded directly to the X-Y containing ring;

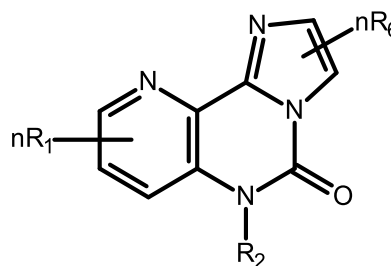
each R₆ independently represents ~~hydrogen~~, a halogen atom selected from F, Cl, Br or I; or an, optionally substituted, carbonyl, oxo, C₁-C₆ alkyl, C₁-C₆ alkoxy or C₃-C₇ cycloalkyl group, an, optionally substituted, mono-, bi- or tricyclic C₆-C₁₄ aryl group or an, optionally substituted, mono-, bi- or tricyclic C₁-C₁₃ heterocyclic group containing from 1 to 5 heteroatoms selected from N, O or S or alternatively, two R₆ groups are linked to each other to form a group of the formula -(Z)_p- wherein p is an integer of from 3 to 5 and each Z independently represents an oxygen atom or an optionally substituted methylene group, provided that no two adjacent Y moieties represent oxygen atoms; and

n is an integer independently selected from 0 to 3;

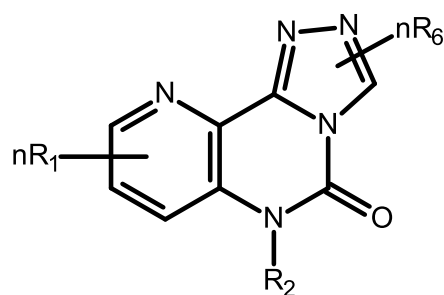
or a compound according to any one of formulae 1a to 1g:



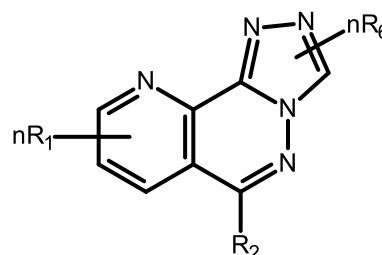
formula 1a;



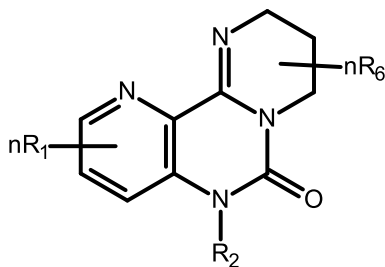
formula 1b;



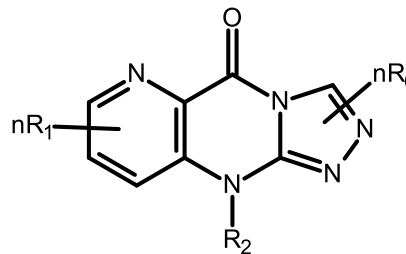
formula 1c;



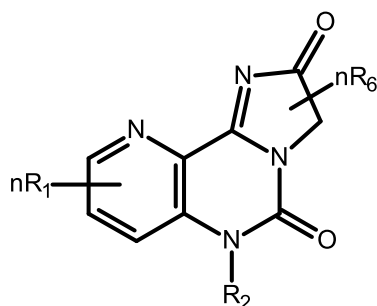
formula 1d;



[formula 1e;](#)



[formula 1f; or](#)



[formula 1g](#)

[or a pharmaceutically acceptable salt or combinations thereof, wherein:](#)

[R1-R6 are as previously defined above;](#)

[n is an integer independently selected from 0 to 3;:](#)

2. ~~A compound according to claim 1~~ wherein the optional substituents are independently selected from the group consisting of halogen atoms, C₁-C₆ alkyl, C₁-C₆ alkoxy, hydroxy, mercapto, nitro, cyano, oxo, halo(C₁-C₆)alkyl, halo(C₁-C₆)alkoxy, C₁-C₆ alkylthio, C₁-C₆ alkylsulphonyl, C₁-C₆ alkylcarbonyl, sulphamoyl, C₁-C₆ alkylsulphamoyl, di(C₁-C₆)alkylsulphamoyl, (C₁-C₆)alkoxycarbonyl and (C₁-C₆)alkylcarbonyl(C₁-C₆)alkyl groups, and from groups of the formulae -NR^{*}R^{*}, -C(=O)-NR^{*}R^{*}, -D, -O-D, -C(=O)-D, -(CH₂)_q-D, -NR^{**}-D, -C(=O)-NR^{**}-D, -NR^{**}C(=O)-D and -O-C(=O)-D wherein

each R^{*} independently represents a hydrogen atom or a C₁-C₆ alkyl, C₁-C₆ alkoxy, C₁-C₆ alkylcarbonyl, phenyl or benzyl group,

R** represents a hydrogen atom or a C₁-C₆ alkyl group, q is an integer from 1 to 6 and D represents a phenyl group or a C₁-C₈ heterocyclic group containing from 1 to 3 heteroatoms selected from N, O and S; a C₁-C₆ cycloalkyl group; [and](#)

each group D being further optionally substituted with from 1 to 3 groups independently selected from halo, hydroxy, cyano, nitro and C₁-C₆ alkyl, preferably wherein the optional substituents are selected from the groups consisting of halogen atoms and C₁-C₆ alkyl groups.

~~3. A compound according to claim 1 or claim 2, wherein group X-Y represents a N-C group, groups R₃ and R₄ are linked to each other to form a five- or six-membered heterocyclic ring containing from 2 to 3 nitrogen heteroatoms atoms, optionally substituted with one or more groups nR₆, and R₅ is a carbonyl group.~~

~~4. A compound according to claim 1 or claim 2, wherein group X-Y represents a N-C group, groups R₃ and R₅ are linked to each other to form a five-membered heterocyclic ring containing from 2 to 3 nitrogen heteroatoms atoms, optionally substituted with one or more groups nR₆, and R₄ is a carbonyl group.~~

~~5. A compound according to claim 1 or claim 2, wherein group X-Y represents a C=N group, groups R₃ and R₄ are linked to each other to form a five- or six-membered heterocyclic ring containing from 2 to 3 nitrogen heteroatoms atoms, optionally substituted with one or more groups nR₆, and R₅ is absent.~~

62. ~~A~~The compound according to ~~any preceding~~ claim 1, wherein R₁ is selected from the group comprising ~~H~~H, Br, hydroxy, carboxyl, methoxy, methoxyethylamino, 2-hydroxyethylamino, tertiarybutoxycarbonylamino, 2-hydroxyethylaminocarbonyl, an optionally substituted azetidiny, morpholinyl, oxetanyl, piperazinyl, piperidinyl, pyranly or pyrrolidinyl moiety or derivative thereof, or an optionally substituted, spiro-fused bi- or tricyclic C₁-C₁₃ heterocyclic group containing from 1 to 5 heteroatoms selected from N, O or S.

73. ~~A~~The compound according to claim 62, wherein R₁ is selected from the group comprising 2-oxa-6-azaspiro[3.3]heptan-6-yl, 3-methoxymethylazetidin-1-yl, 3-methoxypyrrolidin-1-yl, 4-acetypiperazin-1-yl, 4-aminopiperidin-1-yl, 4-hydroxypiperidin-1-yl, 4-hydroxypiperidin-1-yl-carbonyl, 4-methoxypiperidin-1-yl, 4-morpholinyl, dimethylaminopiperidin-1-yl, hydroxymethylpiperidin-1-yl, morpholin-4-ylcarbonyl, tetrahydro-2H-pyran-4-ylamino or tetrahydro-2H-pyran-4-ylaminocarbonyl.

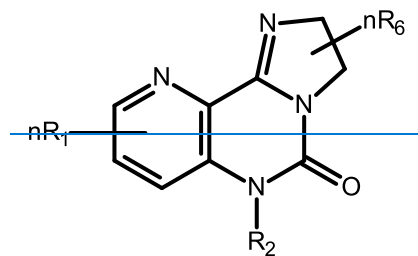
~~8. A compound according to any preceding claim, wherein R₂ is a hydrogen atom or an optionally substituted benzyl group or derivative thereof.~~

94. ~~A~~The compound according to claim 81, wherein R₂ ~~is a hydrogen atom, or~~ is selected from the group comprising 3,5-dimethoxybenzyl, 4-methoxybenzyl, 4-methylbenzyl, 4-chlorobenzyl or 4-chloro-2,6-difluorobenzyl.

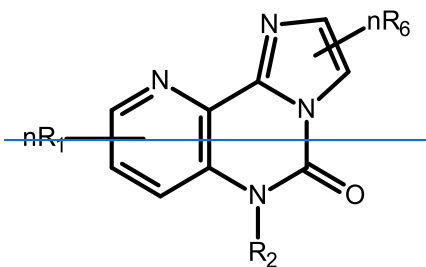
105. ~~The~~A compound according to any preceding claim, wherein R₆ is selected from the group comprising phenyl, (1-phenyl)ethyl, 1-ethyl-1H-pyrazol-3-yl, 1-ethyl-1H-pyrazol-5-yl, (tetrahydro-2H-pyran-4-yl)methyl, (tetrahydro-2H-pyran-4-yloxy)methyl, (tetrahydro-2H-pyran-4-yl)ethyl, 3,5-dimethyl-1,2-oxazol-4-yl, 2-hydroxypyridin-3-yl, 2-methylpyridin-3-yl, morpholin-4-yl-carbonyl, pyridin-3-yl-methyl, oxo, methyl, ethyl, iso-propyl, tertiary-butyl, methylpropyl, 2,2-dimethylpropyl, 3-methylbutyl, 2,2,2-trifluoroethyl, methoxymethyl, methoxyethyl, (propan-2-yloxy)methyl, tertiary-butoxymethyl, prop-1-en-2-yl, propan-2-yl-acetamide, cyclopropyl, cyclobutyl, cyclohexyl, 1-methylcyclopropyl.

116. ~~The~~A compound according to claim 1, wherein -(Zp)- represents a group selected from -O-(CH₂)₂-O-, -O-(CH₂)₃-O-, -O-(CH₂)₂-, -O-(CH₂)₃-, -CH₂-O-CH₂- or -(CH₂)₂-O-(CH₂)₂.

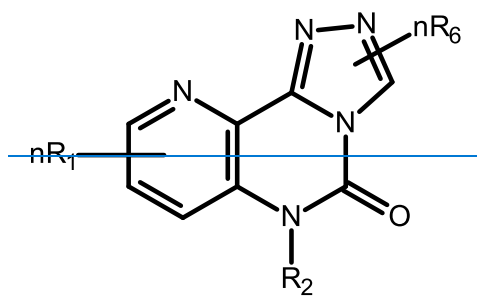
~~12. A compound according to any preceding claim, wherein the compound has a structure in accordance with one of the following formulae 1a to 1g:~~



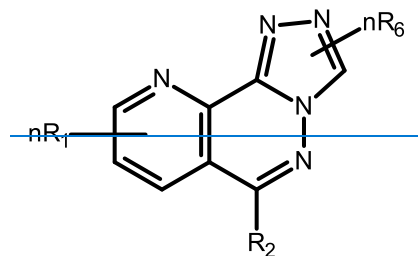
formula 1a;



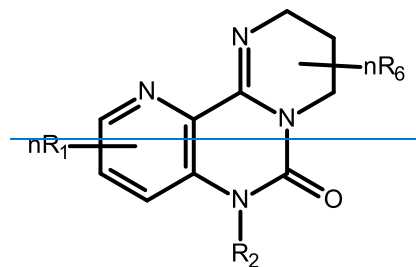
formula 1b;



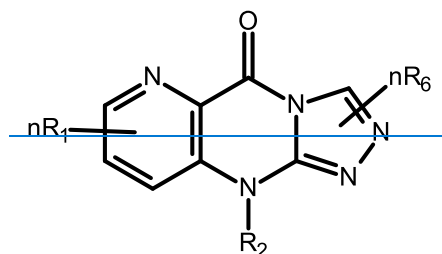
formula 1c;



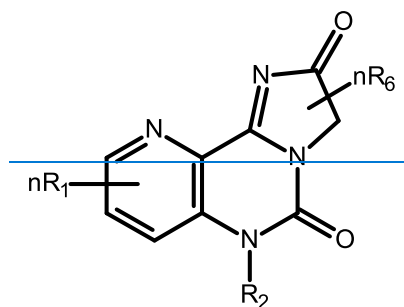
formula 1d;



~~formula 1e;~~



~~formula 1f; or~~



~~formula 1g.~~

~~wherein groups R₁, R₂, R₆ and n are as defined in claim 1.~~

137. TheA compound according to claim 1, the compound being selected from the group consisting of:

6-(4-methoxybenzyl)-8-(morpholin-4-yl)-3-(propan-2-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(3,5-dimethoxybenzyl)-3-methyl-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(3,5-dimethoxybenzyl)-2-methyl-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(3,5-dimethoxybenzyl)-8-(morpholin-4-yl)-2-(propan-2-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(3,5-dimethoxybenzyl)-2-ethyl-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(3,5-dimethoxybenzyl)-3-ethyl-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(3,5-dimethoxybenzyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(3,5-dimethoxybenzyl)-2,3-dimethyl-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(3,5-dimethoxybenzyl)-8-(morpholin-4-yl)-3-(propan-2-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-2-cyclopropyl-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-2-(methoxymethyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-3-cyclopropyl-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-3-(methoxymethyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-8-(morpholin-4-yl)-2-(propan-2-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-8-(2-oxa-6-azaspiro[3.3]heptan-6-yl)-2-(propan-2-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-8-(4-methoxypiperidin-1-yl)-2-(propan-2-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-8-[3-(methoxymethyl)azetidin-1-yl]-2-(propan-2-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-methoxybenzyl)-8-(morpholin-4-yl)-2-(propan-2-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-methoxybenzyl)-8-(2-oxa-6-azaspiro[3.3]heptan-6-yl)-2-(propan-2-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

8-[4-(hydroxymethyl)piperidin-1-yl]-6-(4-methoxybenzyl)-2-(propan-2-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

8-[4-(dimethylamino)piperidin-1-yl]-6-(4-methoxybenzyl)-2-(propan-2-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(3,5-dimethoxybenzyl)-2-(2-methylpropyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

2-cyclohexyl-6-(4-methoxybenzyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

3-cyclohexyl-6-(4-methoxybenzyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-2-cyclohexyl-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-3-cyclohexyl-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

2-ethyl-6-(4-methoxybenzyl)-8-[(3r)-3-methoxypyrrolidin-1-yl]-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-methoxybenzyl)-8-(morpholin-4-yl)-2-phenyl-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-methoxybenzyl)-8-(morpholin-4-yl)-3-phenyl-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-2-(2-methylpropyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-3-(2-methylpropyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

2-tert-butyl-6-(4-methoxybenzyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

2-cyclobutyl-6-(4-methoxybenzyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

2-(2,2-dimethylpropyl)-6-(4-methoxybenzyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(3,5-dimethoxybenzyl)-3-(2-methylpropyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-8-(morpholin-4-yl)-2-phenyl-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-methoxybenzyl)-2-(2-methylpropyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-methoxybenzyl)-3-(2-methylpropyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

2-ethyl-6-(4-methoxybenzyl)-8-[3-(methoxymethyl)azetidin-1-yl]-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-8-(morpholin-4-yl)-2',3',5',6'-tetrahydrospiro[imidazo[1,2-c]pyrido[2,3-e]pyrimidine-2,4'-pyran]-5(6H)-one;

6-(4-chlorobenzyl)-8-(morpholin-4-yl)-2,2',3',5',6,6'-hexahydro-5h-spiro[imidazo[1,2-c]pyrido[2,3-e]pyrimidine-3,4'-pyran]-5-one;

8-(4-aminopiperidin-1-yl)-6-(3,5-dimethoxybenzyl)-2-(propan-2-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

2-cyclohexyl-6-(3,5-dimethoxybenzyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

3-cyclohexyl-6-(3,5-dimethoxybenzyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-8-(morpholin-4-yl)-3-phenyl-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(3,5-dimethoxybenzyl)-8-(morpholin-4-yl)-2-phenyl-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(3,5-dimethoxybenzyl)-8-(morpholin-4-yl)-3-phenyl-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-8-hydroxy-2-(propan-2-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(3,5-dimethoxybenzyl)-2-(propan-2-yl)-8-(tetrahydro-2H-pyran-4-ylamino)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-2-ethyl-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-8-(4-hydroxypiperidin-1-yl)-2-(propan-2-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

2-ethyl-6-(4-methoxybenzyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

3-ethyl-6-(4-methoxybenzyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-8-(morpholin-4-yl)-2-(morpholin-4-ylcarbonyl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-8-(morpholin-4-yl)-3-(morpholin-4-ylcarbonyl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-methoxybenzyl)-8-(morpholin-4-yl)-2-(2,2,2-trifluoroethyl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

2-(tert-butoxymethyl)-6-(4-methoxybenzyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(3,5-dimethoxybenzyl)-5-oxo-2-(propan-2-yl)-n-(tetrahydro-2H-pyran-4-yl)-2,3,5,6-tetrahydroimidazo[1,2-c]pyrido[2,3-e]pyrimidine-8-carboxamide;

6-(3,5-dimethoxybenzyl)-5-oxo-2-(propan-2-yl)-2,3,5,6-tetrahydroimidazo[1,2-c]pyrido[2,3-e]pyrimidine-8-carboxylic acid;

6-(3,5-dimethoxybenzyl)-8-(morpholin-4-ylcarbonyl)-2-(propan-2-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-2-(cyclohexylmethyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-2-(3-methylbutyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-3-(3-methylbutyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-chlorobenzyl)-3-(2-methylpropyl)-8-(morpholin-4-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidine-2,5(3H,6H)-dione;

6-(4-methoxybenzyl)-2-(2-methoxyethyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

6-(4-methoxybenzyl)-3-(2-methoxyethyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

3-(tert-butoxymethyl)-6-(4-methoxybenzyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;

3-tert-butyl-6-(4-chlorobenzyl)-8-(morpholin-4-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidine-2,5(3H,6H)-dione;

3-tert-butyl-6-(4-methoxybenzyl)-8-(morpholin-4-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidine-2,5(3H,6H)-dione;

6-(3,5-dimethoxybenzyl)-2,3-dimethyl-8-{[(oxetan-3-yl)methyl]amino}imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

~~2-(2-methylpropyl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;~~

6-(4-methylbenzyl)-2-(2-methylpropyl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(4-chlorobenzyl)-2-(2-methylpropyl)-8-(2-oxa-6-azaspiro[3.3]heptan-6-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(3,5-dimethoxybenzyl)-2-(2-methylpropyl)-8-(morpholin-4-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(4-chloro-2,6-difluorobenzyl)-2-(2-methylpropyl)-8-(morpholin-4-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(3,5-dimethoxybenzyl)-2-ethyl-3-methyl-8-{[(oxetan-3-yl)methyl]amino}imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(3,5-dimethoxybenzyl)-3-ethyl-2-methyl-8-{[(oxetan-3-yl)methyl]amino}imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(4-methoxybenzyl)-2-(2-methylpropyl)-8-(morpholin-4-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(3,5-dimethoxybenzyl)-3-methyl-8-(morpholin-4-yl)-2-(propan-2-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(3,5-dimethoxybenzyl)-8-[4-(hydroxyacetyl)piperazin-1-yl]-2-(2-methylpropyl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(3,5-dimethoxybenzyl)-2,3-dimethyl-8-(2-oxa-6-azaspiro[3.3]heptan-6-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(3,5-dimethoxybenzyl)-2,3-dimethyl-8-(morpholin-4-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(3,5-dimethoxybenzyl)-3-methyl-8-[(oxetan-3-ylmethyl)amino]-2-(propan-2-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

8-(4-acetylpiperazin-1-yl)-6-(3,5-dimethoxybenzyl)-3-methyl-2-(propan-2-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(3,5-dimethoxybenzyl)-8-(4-methoxypiperidin-1-yl)-2,3-dimethylimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

5-(3,5-dimethoxybenzyl)-8,9-dimethyl-3-(morpholin-4-yl)imidazo[1,2-c]pteridin-6(5h)-one;

6-(3,5-dimethoxybenzyl)-8-(4-methoxypiperidin-1-yl)-3-methyl-2-(propan-2-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(3,5-dimethoxybenzyl)-8-[3-(methoxymethyl)azetidin-1-yl]-3-methyl-2-(propan-2-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(4-methoxybenzyl)-3-methyl-8-(morpholin-4-yl)-2-(propan-2-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(4-chlorobenzyl)-3-methyl-8-(morpholin-4-yl)-2-(propan-2-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(4-chlorobenzyl)-3-methyl-8-(2-oxa-6-azaspiro[3.3]heptan-6-yl)-2-(propan-2-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(4-methoxybenzyl)-8-[3-(methoxymethyl)azetidin-1-yl]-3-methyl-2-(propan-2-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(4-methoxybenzyl)-3-methyl-8-(2-oxa-6-azaspiro[3.3]heptan-6-yl)-2-(propan-2-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(4-chlorobenzyl)-8-[(4-hydroxypiperidin-1-yl)carbonyl]-3-methyl-2-(propan-2-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(6H)-one;

6-(4-chlorobenzyl)-n-(2-hydroxyethyl)-3-methyl-5-oxo-2-(propan-2-yl)-5,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidine-8-carboxamide;

3-tert-butyl-6-(4-methoxybenzyl)-8-(morpholin-4-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

6-(4-methoxybenzyl)-8-(morpholin-4-yl)-3-(propan-2-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

6-(4-methoxybenzyl)-8-(morpholin-4-yl)-3-[(tetrahydro-2H-pyran-4-yloxy)methyl]pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

6-(4-chlorobenzyl)-8-(morpholin-4-yl)-3-(propan-2-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

6-(4-chlorobenzyl)-8-(morpholin-4-yl)-3-(pyridin-3-ylmethyl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

6-(3,5-dimethoxybenzyl)-3-methyl-8-(morpholin-4-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

6-(4-chlorobenzyl)-3-(1-methylcyclopropyl)-8-(morpholin-4-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

2-[6-(4-chlorobenzyl)-8-(morpholin-4-yl)-5-oxo-5,6-dihydropyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-3-yl]-n-(propan-2-yl)acetamide;

6-(4-methoxybenzyl)-3-(2-methylpropyl)-8-(morpholin-4-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

6-(4-chlorobenzyl)-3-[(2-hydroxypyridin-3-yl)methyl]-8-(morpholin-4-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

6-(4-chlorobenzyl)-3-[(2-methylpyridin-3-yl)methyl]-8-(morpholin-4-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

6-(4-chlorobenzyl)-3-(1-ethyl-1h-pyrazol-5-yl)-8-(morpholin-4-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

6-(4-chlorobenzyl)-3-(2-methylpropyl)-8-(morpholin-4-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

6-(4-chlorobenzyl)-3-(1-ethyl-1h-pyrazol-3-yl)-8-(morpholin-4-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

6-(4-chlorobenzyl)-3-(3,5-dimethyl-1,2-oxazol-4-yl)-8-(morpholin-4-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

3-tert-butyl-6-(4-chlorobenzyl)-8-(morpholin-4-yl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

8-bromo-3-tert-butyl-6-(4-chlorobenzyl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

n-(2-methoxyethyl)-3-methyl-6-(4-methylbenzyl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazin-8-amine;

3-methyl-6-(4-methylbenzyl)-n-(oxetan-3-ylmethyl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazin-8-amine;

6-(4-methylbenzyl)-8-(morpholin-4-yl)-3-(propan-2-yl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

6-(3,5-dimethoxybenzyl)-3-(2-methylpropyl)-8-(morpholin-4-yl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

6-(4-methylbenzyl)-8-(morpholin-4-yl)-3-(tetrahydro-2H-pyran-4-ylmethyl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

6-(3,5-dimethoxybenzyl)-n-(2-methoxyethyl)-3-(2-methylpropyl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazin-8-amine;

6-(3,5-dimethoxybenzyl)-8-(morpholin-4-yl)-3-[(propan-2-yloxy)methyl]pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

6-(3,5-dimethoxybenzyl)-8-(morpholin-4-yl)-3-(prop-1-en-2-yl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

6-(3,5-dimethoxybenzyl)-8-[3-(methoxymethyl)azetidin-1-yl]-3-(2-methylpropyl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

6-(4-methoxybenzyl)-8-(morpholin-4-yl)-3-(propan-2-yl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

3-tert-butyl-6-(4-methoxybenzyl)-8-(morpholin-4-yl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

6-(4-methoxybenzyl)-8-[3-(methoxymethyl)azetidin-1-yl]-3-(2-methylpropyl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

6-(4-methoxybenzyl)-8-(morpholin-4-yl)-3-(tetrahydro-2H-pyran-4-ylmethyl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

6-(4-chlorobenzyl)-8-(morpholin-4-yl)-3-(tetrahydro-2H-pyran-4-ylmethyl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

6-(4-chlorobenzyl)-8-(morpholin-4-yl)-3-(propan-2-yl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

6-(4-chlorobenzyl)-8-[3-(methoxymethyl)azetidin-1-yl]-3-(2-methylpropyl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

6-(4-chlorobenzyl)-8-(2-oxa-6-azaspiro[3.3]heptan-6-yl)-3-(tetrahydro-2H-pyran-4-ylmethyl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

6-(4-methoxybenzyl)-8-(2-oxa-6-azaspiro[3.3]heptan-6-yl)-3-(tetrahydro-2H-pyran-4-ylmethyl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

(4-chlorophenyl){8-(morpholin-4-yl)-3-[2-(tetrahydro-2H-pyran-4-yl)ethyl]pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazin-6-yl}methanone;

6-(4-chlorobenzyl)-8-(morpholin-4-yl)-3-[1-(tetrahydro-2H-pyran-4-yl)ethyl]pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

6-(4-chlorobenzyl)-3-(2-methylpropyl)-8-(morpholin-4-yl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

(4-methoxyphenyl)[8-(morpholin-4-yl)-3-(tetrahydro-2H-pyran-4-ylmethyl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazin-6-yl]methanone;

(4-chlorophenyl){8-(morpholin-4-yl)-3-[2-(tetrahydro-2H-pyran-4-yl)ethyl]pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazin-6-yl}methanol;

3-(cyclohexylmethyl)-6-(4-methylbenzyl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

3-(cyclohexylmethyl)-6-(4-methylbenzyl)-8-(morpholin-4-yl)pyrido[2,3-d][1,2,4]triazolo[4,3-b]pyridazine;

tert-butyl n-[1-[5-tert-butyl-8-(4-chlorobenzyl)-3,4,6,7,13-pentazatricyclo[7.4.0.0^{2,6}]trideca-1(9),2,4,7,10,12-hexaen-11-yl]-4-piperidyl]carbamate;

1-[5-tert-butyl-8-(4-chlorobenzyl)-3,4,6,7,13-pentazatricyclo[7.4.0.0^{2,6}]trideca-1(9),2,4,7,10,12-hexaen-11-yl]piperidin-4-amine;

1-[5-tert-butyl-8-(4-chlorobenzyl)-3,4,6,7,13-pentazatricyclo[7.4.0.0^{2,6}]trideca-1(9),2,4,7,10,12-hexaen-11-yl]piperidin-4-ol;

9,9-dimethyl-5-(4-methylbenzyl)-3-[(oxetan-3-yl)methyl]amino}-5,8,9,10-tetrahydro-6H-pyrido[2,3-e]pyrimido[1,2-c]pyrimidin-6-one;

~~3-bromo-9,9-dimethyl-5,8,9,10-tetrahydro-6H-pyrido[2,3-e]pyrimido[1,2-c]pyrimidin-6-one;~~

5-(4-chlorobenzyl)-3-[(2-hydroxyethyl)amino]-9,9-dimethyl-5,8,9,10-tetrahydro-6H-pyrido[2,3-e]pyrimido[1,2-c]pyrimidin-6-one;

5-(3,5-dimethoxybenzyl)-3-[(2-hydroxyethyl)amino]-9,9-dimethyl-5,8,9,10-tetrahydro-6H-pyrido[2,3-e]pyrimido[1,2-c]pyrimidin-6-one;

5-(3,5-dimethoxybenzyl)-9-methyl-3-(morpholin-4-yl)-5,8,9,10-tetrahydro-6H-pyrido[2,3-e]pyrimido[1,2-c]pyrimidin-6-one;

3-bromo-5-(3,5-dimethoxybenzyl)-9,9-dimethyl-5,8,9,10-tetrahydro-6H-pyrido[2,3-e]pyrimido[1,2-c]pyrimidin-6-one;

5-(3,5-dimethoxybenzyl)-9,9-dimethyl-3-(morpholin-4-yl)-5,8,9,10-tetrahydro-6H-pyrido[2,3-e]pyrimido[1,2-c]pyrimidin-6-one;

3-bromo-5-(4-chlorobenzyl)-9,9-dimethyl-5,8,9,10-tetrahydro-6H-pyrido[2,3-e]pyrimido[1,2-c]pyrimidin-6-one;

5-(4-chlorobenzyl)-3-[3-(methoxymethyl)azetidin-1-yl]-9,9-dimethyl-5,8,9,10-tetrahydro-6H-pyrido[2,3-e]pyrimido[1,2-c]pyrimidin-6-one;

5-(3,5-dimethoxybenzyl)-10-ethyl-3-(morpholin-4-yl)-5,8,9,10-tetrahydro-6H-pyrido[2,3-e]pyrimido[1,2-c]pyrimidin-6-one;

5-(3,5-dimethoxybenzyl)-8-ethyl-3-(morpholin-4-yl)-5,8,9,10-tetrahydro-6H-pyrido[2,3-e]pyrimido[1,2-c]pyrimidin-6-one;

10-ethyl-5-(4-methoxybenzyl)-3-(morpholin-4-yl)-5,8,9,10-tetrahydro-6H-pyrido[2,3-e]pyrimido[1,2-c]pyrimidin-6-one;

8-ethyl-5-(4-methoxybenzyl)-3-(morpholin-4-yl)-5,8,9,10-tetrahydro-6H-pyrido[2,3-e]pyrimido[1,2-c]pyrimidin-6-one;
 5-(4-chlorobenzyl)-10-ethyl-3-(morpholin-4-yl)-5,8,9,10-tetrahydro-6H-pyrido[2,3-e]pyrimido[1,2-c]pyrimidin-6-one;
 5-(4-chlorobenzyl)-8-ethyl-3-(morpholin-4-yl)-5,8,9,10-tetrahydro-6H-pyrido[2,3-e]pyrimido[1,2-c]pyrimidin-6-one;
 6-(4-methoxybenzyl)-2-(2-methylpropyl)-8-(morpholin-4-yl)pyrido[2,3-e][1,2,4]triazolo[1,5-c]pyrimidin-5(6H)-one;
 2-tert-butyl-6-(4-methoxybenzyl)-8-(morpholin-4-yl)pyrido[2,3-e][1,2,4]triazolo[1,5-c]pyrimidin-5(6H)-one;
 6-(4-chlorobenzyl)-9-methoxy-3-(tetrahydro-2H-pyran-4-ylmethyl)pyrimido[4,5-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;
 6-(4-chlorobenzyl)-8-morpholino-2-(2,2,2-trifluoroethyl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;
 6-(4-chlorobenzyl)-8-morpholino-3-(2,2,2-trifluoroethyl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;
 6-(3,5-dimethoxybenzyl)-2,2-dimethyl-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;
 6-(4-chlorobenzyl)-8-(morpholin-4-yl)-3-(propan-2-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one;
 6-(4-chlorobenzyl)-8-(morpholin-4-yl)-3-(propan-2-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidine-2,5(3H,6H)-dione;
 6-(4-methoxybenzyl)-8-(morpholin-4-yl)-3-(propan-2-yl)imidazo[1,2-c]pyrido[2,3-e]pyrimidine-2,5(3H,6H)-dione;
 3-tert-butyl-8-(diethylamino)-6-(4-methoxybenzyl)imidazo[1,2-c]pyrido[2,3-e]pyrimidine-2,5(3H,6H)-dione;
 6-(4-chlorobenzyl)-9-methoxy-3-(1-methylcyclopropyl)pyrimido[4,5-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;
 3-tert-butyl-9-methoxy-6-(4-methoxybenzyl)pyrimido[4,5-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

3-tert-butyl-6-(4-chlorobenzyl)-9-methoxypyrimido[4,5-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

9-methoxy-6-(4-methoxybenzyl)-3-(1-methylcyclopropyl)pyrimido[4,5-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

9-methoxy-6-(4-methoxybenzyl)-3-(tetrahydro-2H-pyran-4-ylmethyl)pyrimido[4,5-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

6-(4-chlorobenzyl)-8-(4-hydroxypiperidin-1-yl)-3-(propan-2-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

~~6-(4-chlorobenzyl)-2-(1-methylcyclopropyl)-8-(morpholin-4-yl)pyrido[2,3-e][1,2,4]triazolo[1,5-c]pyrimidin-5(6H)-one;~~

3-tert-butyl-6-[(5-chloropyridin-2-yl)methyl]-8-(morpholin-4-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

6-(4-methoxybenzyl)-3-(1-methylcyclopropyl)-8-(morpholin-4-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

~~2-tert-butyl-8-(4-hydroxypiperidin-1-yl)-6-(4-methoxybenzyl)pyrido[2,3-e][1,2,4]triazolo[1,5-c]pyrimidin-5(6H)-one;~~

8-amino-3-tert-butyl-6-(4-methoxybenzyl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

3-tert-butyl-8-(4-hydroxypiperidin-1-yl)-6-(4-methoxybenzyl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

9-tert-butyl-5-(4-chlorobenzyl)-3-(morpholin-4-yl)[1,2,4]triazolo[1',5':1,6]pyrimido[5,4-c]pyridazin-6(5h)-one;

8-(4-aminopiperidin-1-yl)-3-tert-butyl-6-(4-chlorobenzyl)[1,2,4]triazolo[4',3':1,6]pyrimido[5,4-c]pyridazin-5(6H)-one;

3-tert-butyl-6-(4-methoxybenzyl)-8-(morpholin-4-yl)[1,2,4]triazolo[4',3':1,6]pyrimido[5,4-c]pyridazin-5(6H)-one;

3-tert-butyl-6-(4-chlorobenzyl)-8-(piperazin-1-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

~~2-tert-butyl-6-(4-chlorobenzyl)-8-(piperazin-1-yl)pyrido[2,3-e][1,2,4]triazolo[1,5-c]pyrimidin-5(6H)-one;~~

3-(tert-butyl)-6-(4-chlorobenzyl)-8-(3-methoxypyrrolidin-1-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

3-tert-butyl-6-(4-chlorobenzyl)-8-(tetrahydro-2H-pyran-4-ylamino)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

3-tert-butyl-6-[(5-methylthiophen-2-yl)methyl]-8-(morpholin-4-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

6-(4-chlorobenzyl)-8-(morpholin-4-yl)-3-(tetrahydro-2H-pyran-4-ylmethyl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

8-(4-acetylpiperazin-1-yl)-6-(4-chlorobenzyl)-3-(propan-2-yl)pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

6-(4-chlorobenzyl)-8-(morpholin-4-yl)-3-[(tetrahydro-2H-pyran-4-yloxy)methyl]pyrido[2,3-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;

~~3-tert-butyl-6-(4-methoxybenzyl)-8-(morpholin-4-yl)pyrido[3,4-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;~~

~~6-(4-methoxybenzyl)-3-(1-methylcyclopropyl)-8-(morpholin-4-yl)pyrido[3,4-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;~~

3-tert-butyl-6-(4-chlorobenzyl)-8-(morpholin-4-yl)[1,2,4]triazolo[4',3':1,6]pyrimido[5,4-c]pyridazin-5(6H)-one;

~~3-tert-butyl-6-(4-chlorobenzyl)-8-(morpholin-4-yl)pyrido[3,4-e][1,2,4]triazolo[4,3-c]pyrimidin-5(6H)-one;~~

6-(3,5-dimethoxybenzyl)-2-(2,2-dimethylpropyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one; and

6-(3,5-dimethoxybenzyl)-3-(2,2-dimethylpropyl)-8-(morpholin-4-yl)-2,6-dihydroimidazo[1,2-c]pyrido[2,3-e]pyrimidin-5(3H)-one.

148. A pharmaceutical composition comprising a compound according to any one of claims 1 to **127** and a pharmaceutically acceptable carrier or diluent.

15. ~~A compound for use in the treatment or prevention of pain, chronic pain and cancer pain, addiction and tolerance to analgesic, respiratory disorders and dysfunctions selected from~~

asthma, coughs, COPD and refractory chronic cough, genitourinary diseases selected from overactive bladder, urinary incontinence, bladder pain syndrome, dysuria and endometriosis, cardiovascular disorders selected from irritable bowel syndrome (IBS) and Burning Mouth Syndrome (BMS) relating to migraines and itches, visceral organ diseases and disorders characterized by the involvement of P_2X_3 and $P_2X_{2/3}$ comprising administering to a subject in need of treatment an effective amount of a pharmaceutical composition according to claim 14.