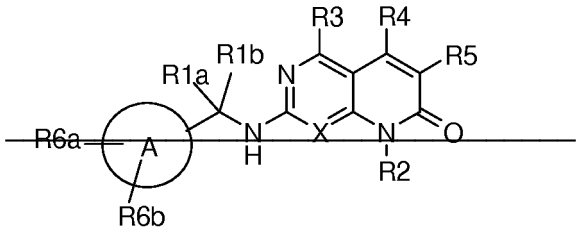
## CLAIMS

1. A compound of formula (I):




(I)

wherein:

**X** is nitrogen or -CH-

**R1a** is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

**R1b** is an optionally substituted ($C_1$-$C_6$)alkyl, or together with the atom to which they are bound, **R1a** and **R1b** may form a ($C_3$-$C_6$)cycloalkyl;

**A** is a ($C_3$-$C_6$)cycloalkyl, aryl or heteroaryl;

**R6a** and **R6b** are each independently selected from hydrogen, halogen, cyano, an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, ($C_3$-$C_6$)cycloalkyl, cycloalkyl-alkyl, ($C_2$-$C_6$)alkenyl, ($C_2$-$C_6$)alkynyl, aryl, heteroaryl, heterocyclyl, -OR7, NR7R8, -COOR7, -$SO_2$R7, -CONR7R8, -CH(R14)OR7 and -CH(R14)NR7R8;

wherein:

R14 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

R7 and R8 are each independently hydrogen or a group selected from an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, ($C_3$-$C_6$)cycloalkyl, aryl, heteroaryl, heterocyclyl, aryl-alkyl, heteroaryl-alkyl, heterocyclyl-alkyl, heterocyclyl-C(O)-alkyl, heterocyclyl-C(O)-alkenyl, heterocyclyl-C(O)-alkynyl or, together with the nitrogen atom to which they are bound, R7 and R8 form a 5- to 7-membered heteroaryl or heterocyclyl group optionally containing one additional heteroatom selected from O, S and NR9;

wherein:

R9 is hydrogen, an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, -COOR10 or -COR11;

wherein:

R10 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

R11 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, ($C_2$-$C_6$)alkenyl or ($C_2$-$C_6$)alkynyl;

**R2** is an optionally substituted group selected from straight or branched ($C_1$-$C_6$)alkyl, ($C_3$-$C_6$)cycloalkyl-($C_1$-$C_6$)alkyl, aryl-($C_1$-$C_6$)alkyl, and heterocyclyl-($C_1$-$C_6$)alkyl;

**R3** is hydrogen, chloro, cyano, $CONH_2$, $NH_2$, NR13R13a, OR12, or an optionally substituted group selected from straight or branched ($C_1$-$C_6$)alkyl, ($C_3$-$C_6$)cycloalkyl-($C_1$-$C_6$)alkyl, aryl and heteroaryl;

wherein:

R12 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

R13, R13a are each independently selected from hydrogen or optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

**R4** is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

**R5** is hydrogen, fluoro, cyano, an optionally substituted straight or branched ($C_1$-$C_6$)alkyl or -OR12,

wherein:

R12 is as described above;

or a pharmaceutically acceptable salt thereof.

**2.** A compound of formula (I), according to claim 1, or a pharmaceutically acceptable salt thereof,

wherein:

**R3** is hydrogen, chloro, cyano, $CONH_2$, $NH_2$, NR13R13a, OR12, or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

wherein:

R12 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

R13, R13a are each independently selected from hydrogen or optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

**R5** is hydrogen, fluoro or -OR12,

wherein:

R12 is as described above; and

**R1a**, **R1b**, **A**, **X**, **R6a**, **R6b**, **R2** and **R4** are as defined in claim 1.

**3.** A compound of formula (I), according to claim 2, or a pharmaceutically acceptable salt thereof,

wherein:

**R6a** and **R6b** are each independently selected from hydrogen, halogen, cyano, an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, ($C_2$-$C_6$)alkenyl, ($C_2$-$C_6$)alkynyl, aryl, heteroaryl, heterocyclyl, -OR7, NR7R8, -COOR7, -$SO_2$R7, -CONR7R8, -CH(R14)OR7 and -CH(R14)NR7R8;

wherein:

R7, R8 and R14 are as defined in claim 1;

**R5** is hydrogen or fluoro; and

**R1a**, **R1b**, **A**, **X**, **R2**, **R3** and **R4** are as defined in claim 2.

**4.** A compound of formula (I), according to claim 3, or a pharmaceutically acceptable salt thereof,

wherein:

**A** is aryl or heteroaryl;

**R3** is hydrogen, cyano, $CONH_2$, $NH_2$, NR13R13a, or an optionally substituted straight or branched ($C_1$-$C_6$) alkyl;

wherein:

R13, R13a are each independently selected from hydrogen or optionally substituted straight or branched ($C_1$-$C_6$)alkyl; and

**R1a**, **R1b**, **R6a, R6b, X, R2**, **R4** and **R5** are as defined in claim 3.

**5.** A compound (cpd) of formula (I), according to claim 1, or a pharmaceutically accepteble salt thereof, selected from the group consisting of:

methyl 4-{(1S)-1-[(8-benzyl-7-oxo-pyrido[2,3-d]pyrimidin-2-yl)amino]ethyl}benzoate (cpd 1);
methyl 4-{(1S)-1-[(8-ethyl-7-oxo-pyrido[2,3-d]pyrimidin-2-yl)amino]ethyl}benzoate (cpd 2);
methyl 4-[(1S)-1-{[8-(methoxymethyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzoate (cpd 3);
methyl 4-{(1S)-1-[(8-methyl-7-oxo-pyrido[2,3-d]pyrimidin-2-yl)amino]ethyl}benzoate (cpd 4);
methyl 4-[(1S)-1-{[8-(2-methylpropyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzoate (cpd 5);
methyl 4-[(1S)-1-{[8-(4-fluorobenzyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzoate (cpd 6);
methyl 4-[(1S)-1-{[8-(3,5-difluorobenzyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzoate (cpd 7);
methyl 4-[(1S)-1-({8-[4-fluoro-2-(trifluoromethyl)benzyl]-7-oxo-pyrido[2,3-d]pyrimidin-2-yl}amino)ethyl]benzoate (cpd 8);
methyl 4-[(1S)-1-{[7-oxo-8-(propan-2-yl)-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzoate (cpd 9);
methyl 4-[(1S)-1-({8-[(3-methyloxetan-3-yl)methyl]-7-oxo-pyrido[2,3-d]pyrimidin-2-yl}amino)ethyl]benzoate (cpd 10);
methyl 4-[(1S)-1-{[8-(2,2-dimethylpropyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzoate (cpd 11);
2-{[(1S)-1-cyclohexylethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 12);
8-ethyl-2-{[(1S)-1-(4-methoxyphenyl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 13);
2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 14);
2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(pentan-3-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 15);
8-benzyl-2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 16);
2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(2-fluoroethyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 17);
2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(2,2,2-trifluoroethyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 18);
2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(2-methylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 19);
2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(cyclopropylmethyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 20);
2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(4-methoxybenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 21);
2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(2-fluorobenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 22);
2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(3,4-difluorobenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 23);
2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-[3-(trifluoromethyl)benzyl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 24);
2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(2,4-difluorobenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 25);
2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-[4-(trifluoromethoxy)benzyl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 26);
4-{[2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-7-oxopyrido[2,3-d]pyrimidin-8(7H)-yl]methyl}benzonitrile (cpd 27);
2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(4-fluorobenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 28);
2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(3,5-difluorobenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 29);
2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(3-methoxybenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 30);
2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(2,6-difluorobenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 31);
2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-4-methyl-8-(2-methylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 32);
8-(2,2-dimethylpropyl)-2-{[(1S)-1-(4-methoxyphenyl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 33);

2-{[(1S)-1-(4-bromophenyl)ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 34);
2-{[(1S)-1-(4-bromophenyl)ethyl]amino}-8-(3-hydroxy-2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 35);
8-(2,2-dimethylpropyl)-2-{[(1S)-1-(naphthalen-2-yl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 36);
methyl 2,2-dimethyl-3-[2-{[(1S)-1-(naphthalen-2-yl)ethyl]amino}-7-oxopyrido[2,3-d]pyrimidin-8(7H)-yl]propanoate (cpd 37);
8-(3-hydroxy-2,2-dimethylpropyl)-2-{[(1S)-1-(naphthalen-2-yl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 38);
8-(2,2-dimethylpropyl)-2-{[(1R)-1-phenylethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 39);
8-(2,2-dimethylpropyl)-2-{[(1S)-1-phenylethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 40);
8-(2,2-dimethylpropyl)-2-[(2-phenylpropan-2-yl)amino]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 41);
8-(2,2-dimethylpropyl)-2-[(1-phenylcyclopropyl)amino]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 42);
8-(2,2-dimethylpropyl)-2-[(1-phenylcyclobutyl)amino]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 43);
8-(2,2-dimethylpropyl)-2-{[1-(tricyclo[3.3.1.1$^{3,7}$]dec-1-yl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 44);
8-[(3-methyloxetan-3-yl)methyl]-2-{[(1S)-1-(naphthalen-2-yl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 45);
8-(2-hydroxy-2-methylpropyl)-2-{[(1S)-1-phenylethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 46);
8-(2,2-Dimethyl-propyl)-6-fluoro-2-((S)-1-phenyl-ethylamino)-8H-pyrido[2,3-d]pyrimidin-7-one (cpd 47);
methyl 4-[(1S)-1-{[8-(2-hydroxy-2-methylpropyl)-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzoate (cpd 48);
8-(2,2-dimethylpropyl)-2-{[(1S)-1-(4-phenoxyphenyl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 49);
2-{[(1S)-1-(6-chloro-2-oxo-quinolin-3-yl)ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 50);
8-benzyl-2-{[(1S)-1-(5-chloro-1H-benzimidazol-2-yl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 51);
8-benzyl-2-({(1S)-1-[3-(4-chlorophenyl)-1,2,4-oxadiazol-5-yl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 52);
2-({(1S)-1-[3-(4-chlorophenyl)-1,2,4-oxadiazol-5-yl]ethyl}amino)-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 53);
8-(2,2-dimethylpropyl)-2-{[(1S)-1-(4-oxo-3,4-dihydroquinazolin-2-yl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 54);
2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(3-hydroxy-2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 55);
4-(4-{(S)-1-[8-(3-Hydroxy-2,2-dimethyl-propyl)-7-oxo-7,8-dihydro-pyrido[2,3-d]pyrimidin-2-ylamino]-ethyl}-benzyl)-piperazine-1-carboxylic acid tert-butyl ester (cpd 56);
2-{(S)-1-[4-(3,3-Difluoro-piperidin-1-ylmethyl)-phenyl]-ethylamino}-8-(2,2-dimethyl-propyl)-6-fluoro-8H-pyrido[2,3-d]pyrimidin-7-one (cpd 57);
2-{(S)-1-[4-(3,3-Difluoro-piperidin-1-ylmethyl)-phenyl]-ethylamino}-8-(2,2-dimethyl-propyl)-6-methoxy-8H-pyrido[2,3-d]pyrimidin-7-one (cpd 58);
4-(4-{(S)-1-[8-(2,2-Dimethyl-propyl)-7-oxo-7,8-dihydro-pyrido[2,3-d]pyrimidin-2-ylamino]-ethyl}-benzyl)-piperazine-1-carboxylic acid tert-butyl ester (cpd 59);
2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)-5-methylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 60);

8-(butan-2-yl)-2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 61);

8-[(2S)-butan-2-yl]-2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 62);

ethyl 2-[2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-7-oxopyrido[2,3-d]pyrimidin-8(7H)-yl]propanoate (cpd 63);

2-[2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-7-oxopyrido[2,3-d]pyrimidin-8(7H)-yl]propanenitrile (cpd 64);

2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 65);

8-[(1S)-1-cyclohexylethyl]-2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 66);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]-3-fluorophenyl}ethyl]amino}-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 67);

2-({(1S)-1-[3-fluoro-4-(morpholin-4-ylmethyl)phenyl]ethyl}amino)-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 68);

2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-[(2S)-3,3-dimethylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 69);

8-(2,2-dimethylpropyl)-2-{[(1S)-1-phenylpropyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 70);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(3-hydroxybenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 71);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(4-hydroxybenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 72);

4-[(1S)-1-{[8-(2,6-difluorobenzyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzoic acid (cpd 73);

4-[(1S)-1-{[8-(2-fluorobenzyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzoic acid (cpd 74);

4-[(1S)-1-{[8-(2,6-difluorobenzyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]-N-(4,4-difluorocyclohexyl)benzamide (cpd 75);

4-[(1S)-1-{[8-(2,6-difluorobenzyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]-N-(1-methylpiperidin-4-yl)benzamide (cpd 76);

8-(2,6-difluorobenzyl)-2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)carbonyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 77);

4-[(1S)-1-{[8-(2,6-difluorobenzyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]-N-(tetrahydro-2H-pyran-4-yl)benzamide (cpd 78);

N-(4,4-difluorocyclohexyl)-4-[(1S)-1-{[8-(2,2-dimethylpropyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzamide (cpd 79);

N-cyclopentyl-4-[(1S)-1-{[8-(2,2-dimethylpropyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzamide (cpd 80),

N-cyclohexyl-4-[(1S)-1-{[8-(2,2-dimethylpropyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzamide (cpd 81);

2-chloro-N-(4,4-difluorocyclohexyl)-4-(1-{[8-(2,2-dimethylpropyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl)benzamide (cpd 82);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)carbonyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 83);

N-(4,4-difluorocyclohexyl)-4-(1-{[8-(2,2-dimethylpropyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl)-2-fluorobenzamide (cpd 84);

N-(3,3-difluorocyclobutyl)-4-[(1S)-1-{[8-(2,2-dimethylpropyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzamide (cpd 85);

4-[(1S)-1-{[8-(2,2-dimethylpropyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzamide (cpd 86);

8-(2,2-dimethylpropyl)-2-{[(1S)-1-{4-[(4-hydroxypiperidin-1-yl)carbonyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 87);

2-chloro-N-(4,4-difluorocyclohexyl)-4-[(1S)-1-{[8-(2,2-dimethylpropyl)-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzamide (cpd 88);

N-(4,4-difluorocyclohexyl)-4-[(1S)-1-{[8-(2,2-dimethylpropyl)-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]-2-fluorobenzamide (cpd 89);

8-(2,2-dimethylpropyl)-2-({(1S)-1-[3-fluoro-4-(hydroxymethyl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 90);

2-({(1S)-1-[4-(hydroxymethyl)phenyl]ethyl}amino)-8-(2-methylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 91);

8-(2,6-difluorobenzyl)-2-({(1S)-1-[4-(hydroxymethyl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 92);

2-({(1S)-1-[4-(hydroxymethyl)phenyl]ethyl}amino)-8-(2-hydroxy-2-methylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 93);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]-3-fluorophenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 94);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2-methylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 95);

8-benzyl-2-[(1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl)amino]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 96);

2-[(1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl)amino]-8-(2-fluorobenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 97);

8-(2,6-difluorobenzyl)-2-[(1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl)amino]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 98);

8-(2,6-difluorobenzyl)-2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 99);

2-[(1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl)amino]-8-(2-fluoroethyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 100);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-propylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 101);

2-({(1S)-1-[4-(azepan-1-ylmethyl)phenyl]ethyl}amino)-8-propylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 102);

2-{[(1S)-1-{4-[(4-acetylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-propylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 103);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2-methylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 104);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 105);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2,2,2-trifluoroethyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 106);

8-[2,3-difluoro-2-(fluoromethyl)propyl]-2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 107);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-[3,3,3-trifluoro-2-(trifluoromethyl)propyl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 108);

8-(cyclobutylmethyl)-2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 109);

8-(2,2-dimethylpropyl)-2-({(1S)-1-[4-(morpholin-4-ylmethyl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 110);

8-(2,2-dimethylpropyl)-2-({(1S)-1-[4-(pyrrolidin-1-ylmethyl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 111);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2-methylbenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 112);

8-(cyclohexylmethyl)-2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 113);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2-methoxyethyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 114);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-[4-fluoro-2-(trifluoromethyl)benzyl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 115);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(3,3,3-trifluoro-2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 116);

2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 117);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-4-methyl-8-(2-methylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 118);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2-hydroxy-2-methylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 119);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-[2-(hydroxymethyl)-2-methylpentyl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 120);

2,2-dimethyl-3-[2-{[(1S)-1-(naphthalen-2-yl)ethyl]amino}-7-oxopyrido[2,3-d]pyrimidin-8(7H)-yl]propanoic acid (cpd 121);

2,2-dimethyl-3-[2-{[(1S)-1-(naphthalen-2-yl)ethyl]amino}-7-oxopyrido[2,3-d]pyrimidin-8(7H)-yl]propanamide (cpd 122);

N,2,2-trimethyl-3-[7-oxo-2-{[(1S)-1-phenylethyl]amino}pyrido[2,3-d]pyrimidin-8(7H)-yl]propanamide (cpd 123);

N,N,2,2-tetramethyl-3-[7-oxo-2-{[(1S)-1-phenylethyl]amino}pyrido[2,3-d]pyrimidin-8(7H)-yl]propanamide (cpd 124);

2,2-dimethyl-N-(3-methylphenyl)-3-[7-oxo-2-{[(1S)-1-phenylethyl]amino}pyrido[2,3-d]pyrimidin-8(7H)-yl]propanamide (cpd 125);

N-(2-hydroxyethyl)-2,2-dimethyl-3-[7-oxo-2-{[(1S)-1-phenylethyl]amino}pyrido[2,3-d]pyrimidin-8(7H)-yl]propanamide (cpd 126);

N-(3-hydroxypropyl)-2,2-dimethyl-3-[7-oxo-2-{[(1S)-1-phenylethyl]amino}pyrido[2,3-d]pyrimidin-8(7H)-yl]propanamide (cpd 127);

N-[3-(1-hydroxyethyl)phenyl]-2,2-dimethyl-3-[7-oxo-2-{[(1S)-1-phenylethyl]amino}pyrido[2,3-d]pyrimidin-8(7H)-yl] propanamide (cpd 128);

2,2-dimethyl-3-[2-{[(1S)-1-(naphthalen-2-yl)ethyl]amino}-7-oxopyrido[2,3-d]pyrimidin-8(7H)-yl]propanenitrile (cpd 129);

8-(2,2-dimethylpropyl)-2-({(1S)-1-[4-(1-methyl-1H-pyrazol-4-yl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 130);

8-(2,2-dimethylpropyl)-2-({(1S)-1-[4-(pyridin-4-yl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 131);

8-(2,2-dimethylpropyl)-2-({(1S)-1-[4-(2-fluoropyridin-4-yl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 132)

8-(2,2-dimethylpropyl)-2-({(1S)-1-[4-(thiophen-3-yl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 133);

4'-[(1S)-1-{[8-(2,2-dimethylpropyl)-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]biphenyl-2-carbonitrile (cpd 134);

8-(3-hydroxy-2,2-dimethylpropyl)-2-({(1S)-1-[4-(1-methyl-1H-pyrazol-4-yl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 135);

8-(3-hydroxy-2,2-dimethylpropyl)-2-({(1S)-1-[4-(thiophen-3-yl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 136);

8-(2,2-dimethylpropyl)-2-({(1S)-1-[4-(methylsulfonyl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 137);

8-(2,2-dimethylpropyl)-2-({(1S)-1-[4-(piperazin-1-ylmethyl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one dihydrochloride (cpd 138);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 139);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-(3-hydroxy-2,2-dimethylpropyl)pyrido[2,3-d ]pyrimidin-7(8H)-one (cpd 140);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]-3-fluorophenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 141);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)carbonyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 142);

2-({(1S)-1-[4-({4-[(2E)-but-2-enoyl]piperazin-1-yl}methyl)phenyl]ethyl}amino)-8-(2,2-dimethylpropyl)pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 143);

8-(2,2-dimethylpropyl)-2-{[(1S)-1-(4-{[4-(2-methylacryloyl)piperazin-1-yl]methyl}phenyl)ethyl]amino}pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 144);

8-(2,2-Dimethyl-propyl)-2-[(S)-1-(4-hydroxy-phenyl)-ethylamino]-8H-pyrido[2,3-d]pyrimidin-7-one (cpd 145);

4-(4-{(S)-1-[8-((S)-1,2-Dimethyl-propyl)-7-oxo-7,8-dihydro-pyrido[2,3-d]pyrimidin-2-ylamino]-ethyl}-phenoxy)-piperidine-1-carboxylic acid benzyl ester (cpd 146);

2-{[(1S)-1-{4-[(3,3-difluoroazetidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 147);

2-{[(1S)-1-{4-[(3,3-difluoropyrrolidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 148);

8-[(2R)-butan-2-yl]-2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 149);

2-{[(1S)-1-(4-{[(2R,6S)-2,6-dimethylmorpholin-4-yl]methyl}-3-fluorophenyl)ethyl]amino}-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 150);

2-{[(1S)-1-(4-{[(2R,6S)-2,6-dimethylmorpholin-4-yl]methyl}-2-fluorophenyl)ethyl]amino}-8-(2,2-dimethylpropyl)-pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 151);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]-2-fluorophenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 152);

8-(2,2-dimethylpropyl)-2-({(1S)-1-[2-fluoro-4-(morpholin-4-ylmethyl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 153);

4-(4-{(S)-1-[8-(2,2-Dimethyl-propyl)-7-oxo-7,8-dihydro-pyrido[2,3-d]pyrimidin-2-ylamino]-ethyl}-phenoxy)-piperidine-1-carboxylic acid tert-butyl ester (cpd 154);

8-((S)-1,2-Dimethyl-propyl)-2-{(S)-1-[4-(piperidin-4-yloxy)-phenyl]-ethylamino}-8H-pyrido[2,3-d]pyrimidin-7-one (cpd 155);

2-{(S)-1-[4-(1-Acryloyl-piperidin-4-yloxy)-phenyl]-ethylamino}-8-(2,2-dimethyl-propyl)-8H-pyrido[2,3-d]pyrimidin-7-one (cpd 156);

8-(2,2-dimethylpropyl)-2-{[(1S)-1-(4-{[4-(2-methylpropanoyl)piperazin-1-yl]methyl}phenyl)ethyl]amino}-pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 157);

2-{[(1S)-1-(4-{[4-(cyclopropylcarbonyl)piperazin-1-yl]methyl}phenyl)ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 158);

2-{(S)-1-[4-(1-Acryloyl-piperidin-4-yloxy)-phenyl]-ethylamino}-8-((S)-1,2-dimethyl-propyl)-8H-pyrido[2,3-d]pyrimidin-7-one (cpd 159);

8-((S)-1,2-Dimethyl-propyl)-2-{(S)-1-[4-(1-isobutyryl-piperidin-4-yloxy)-phenyl]-ethylamino}-8H-pyrido[2,3-d]pyrimidin-7-one (cpd 160);

2-{(S)-1-[4-(4-Acryloyl-piperazin-1-ylmethyl)-phenyl]-ethylamino}-8-((S)-1,2-dimethyl-propyl)-8H-pyrido[2,3-d]pyrimidin-7-one (cpd 161);

8-((S)-1,2-Dimethyl-propyl)-2-((S)-1-{4-[4-(2-methyl-acryloyl)-piperazin-1-ylmethyl]-phenyl}-ethylamino)-8H-pyrido[2,3-d]pyrimidin-7-one (cpd 162);

2-{[(1S)-1-(4-bromophenyl)ethyl]amino}-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 163);

2-{[(1S)-1-(4-{[(2R,6S)-2,6-dimethylmorpholin-4-yl]methyl}phenyl)ethyl]amino}-8-[(2S)-1,1,1-trifluoropropan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 164);

4'-[(1S)-1-({8-[(2S)-3-methylbutan-2-yl]-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl}amino)ethyl]biphenyl-2-carbonitrile (cpd 165);

2-({(1S)-1-[4-(2-fluoropyridin-4-yl)phenyl]ethyl}amino)-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 166);

tert-butyl 4-{4-[(1S)-1-({8-[(2S)-3-methylbutan-2-yl]-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl}amino)ethyl]phenyl}-3,6-dihydropyridine-1(2H)-carboxylate (cpd 167);

2-({(1S)-1-[4-(1-acryloyl-1,2,3,6-tetrahydropyridin-4-yl)phenyl]ethyl}amino)-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 168);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-[(2S)-1,1,1-trifluoropropan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 169);

2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 170);

8-[(1S)-1-cyclopropylethyl]-2-{[(1S)-1-(4-{[(2R,6S)-2,6-dimethylmorpholin-4-yl]methyl}-3-fluorophenyl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 171);

2-{[(1S)-1-(6-chloro-2-oxo-1,2-dihydroquinolin-3-yl)ethyl]amino}-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 172);

8-[(2S)-3-methylbutan-2-yl]-2-({(1S)-1-[4-(morpholin-4-yl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 173);

benzyl 4-{4-[(1S)-1-({8-[(2S)-3-methylbutan-2-yl]-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl}amino)ethyl]phenyl}piperazine-1-carboxylate (cpd 174);

2-({(1S)-1-[4-(4-acryloylpiperazin-1-yl)phenyl]ethyl}amino)-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 175);

8-[(2S)-3-methylbutan-2-yl]-2-({(1S)-1-[4-(piperazin-1-yl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 176);

2-({(1S)-1-[4-(4-ethylpiperazin-1-yl)phenyl]ethyl}amino)-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 177);

benzyl 4-{2-fluoro-4-[(1S)-1-({8-[(2S)-3-methylbutan-2-yl]-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl}amino)ethyl]phenyl}piperazine-1-carboxylate (cpd 178);

2-({(1S)-1-[4-(4-acryloylpiperazin-1-yl)-3-fluorophenyl]ethyl}amino)-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 179);

8-[(2S)-3-methylbutan-2-yl]-2-({(1S)-1-[6-(piperazin-1-yl)pyridin-3-yl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 180);

2-({(1S)-1-[6-(4-acryloylpiperazin-1-yl)pyridin-3-yl]ethyl}amino)-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 181);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-(2-azidoethyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 182);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]-3-fluorophenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 183);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 184);

tert-butyl 4-(4-{(1S)-1-[(8-ethyl-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl)amino]ethyl}benzyl)piperazine-1-carboxylate (cpd 185);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 186);

2-{[(1S)-1-{4-[1-(4-acryloylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 187);

8-[(2S)-3-methylbutan-2-yl]-2-{[(1S)-1-{4-[(4-methyl-3-oxopiperazin-1-yl)methyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 188);

tert-butyl 4-(4-{(1S)-1-[(8-ethyl-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl)amino]ethyl}benzoyl)piperazine-1-carboxylate (cpd 189);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)carbonyl]phenyl}ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 190);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)carbonyl]-3-fluorophenyl}ethyl]amino}-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 191);

N-(1-acryloylpiperidin-4-yl)-2-fluoro-4-[(1S)-1-{[7-oxo-8-(propan-2-yl)-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzamide (cpd192);

tert-butyl 6-[(1S)-1-({8-[(2S)-3-methylbutan-2-yl]-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl}amino)ethyl]-3',6'-dihydro-3,4'-bipyridine-1'(2'H)-carboxylate (cps 193);

2-{[(1S)-1-(1'-acryloyl-1',2',3',6'-tetrahydro-3,4'-bipyridin-6-yl)ethyl]amino}-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 194);

2-({(1S)-1-[1'-(cyclopropylcarbonyl)-1',2',3',6'-tetrahydro-3,4'-bipyridin-6-yl]ethyl}amino)-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 195);

8-[(2S)-3-methylbutan-2-yl]-2-({(1S)-1-[2'-(trifluoromethyl)-3,4'-bipyridin-6-yl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 196);

2-{[(1S)-1-(2'-fluoro-3,4'-bipyridin-6-yl)ethyl]amino}-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 197);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-[(2S)-1-fluoropropan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 198);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-[(2S)-1-hydroxypropan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 199);

tert-butyl 4-{4-[(1S)-1-{[4-cyano-8-(2,2-dimethylpropyl)-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzyl}piperazine-1-carboxylate (cpd 200);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)-4-ethoxypyrido[2,3-d]pyrimidin-7(8H)-one (cpd 201);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)-4-(methylamino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 202);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-4-(dimethylamino)-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 203);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-7-oxo-8-(propan-2-yl)-7,8-dihydropyrido[2,3-d]pyrimidine-4-carbonitrile (cpd 204);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-4-[(2,4-dimethoxybenzyl)amino]-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 205);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-4-amino-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 206);

2-{[(1S)-1-(4-{[(2R)-4-acryloyl-2-methylpiperazin-1-yl]methyl}phenyl)ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 207);

2-{[(1S)-1-(4-{[(3R)-4-acryloyl-3-methylpiperazin-1-yl]methyl}phenyl)ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 208);

2-{[(1S)-1-(4-{[(2R)-4-acryloyl-2-(propan-2-yl)piperazin-1-yl]methyl}phenyl)ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 209);

2-{[(1S)-1-(4-{[(2S)-4-acryloyl-2-methylpiperazin-1-yl]methyl}phenyl)ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 210);

2-{[(1S)-1-(4-{[(3S)-4-acryloyl-3-methylpiperazin-1-yl]methyl}phenyl)ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 211);

2-{[(1S)-1-(4-{[(2S)-4-acryloyl-2-(propan-2-yl)piperazin-1-yl]methyl}phenyl)ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 212);

2-{[(1S)-1-{6-[(4-acryloylpiperazin-1-yl)methyl]pyridin-3-yl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 213);

2-{[(1S)-1-{4-[1-(4-acryloylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 214);

2-{[(1S)-1-{4-[1-(4-acryloylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-8-methylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 215);

2-{[(1S)-1-{4-[1-(4-acryloylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-8-(2,6-difluorobenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 216);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-(4-ethynyl-2-fluorobenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 217);

2-{[(1S)-1-{4-[1-(4-acryloylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-8-cyclopropylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 218);

2-{[(1S)-1-{4-[1-(4-acryloylpiperazin-1-yl)-2-cyclopropylethyl]phenyl}ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 219);

2-{[(1S)-1-{4-[1-(4-acryloylpiperazin-1-yl)-2-cyclopropylethyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 220);

2-{[(1S)-1-(4-{1-[4-(2-methylacryloyl)piperazin-1-yl]propyl}phenyl)ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 221);

2-({(1S)-1-[4-(1-{4-[(2E)-but-2-enoyl]piperazin-1-yl}propyl)phenyl]ethyl}amino)-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 222);

2-{[(1S)-1-(4-{[(3R)-1-acryloylpyrrolidin-3-yl]oxy}phenyl)ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 223);

2-{[(1S)-1-(4-{[(3S)-1-acryloylpyrrolidin-3-yl]oxy}phenyl)ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 224);

phenyl 4-[(1S)-1-{4-[(1S)-1-{[7-oxo-8-(propan-2-yl)-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]phenyl} propyl] piperazine-1-carboxylate (cpd 225);

phenyl 4-[(1R)-1-{4-[(1S)-1-{[7-oxo-8-(propan-2-yl)-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]phenyl}propyl] piperazine-1-carboxylate (cpd 226);

2-{[(1S)-1-{4-[(1S)-1-(4-acryloylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 227);

2-{[(1S)-1-{4-[(1R)-1-(4-acryloylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 228);

2-{[(1R)-1-{4-[(1R)-1-(4-acryloylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 229);

2-{[(1S)-1-{4-[(1S)-1-(4-acryloylpiperazin-1-yl)-2-cyclopropylethyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 230);

2-{[(1S)-1-{4-[(1R)-1-(4-acryloylpiperazin-1-yl)-2-cyclopropylethyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 231);

4-{4-[(S)-1-(1-Ethyl-2-oxo-1,2-dihydro-[1,6]naphthyridin-7-ylamino)-ethyl]-benzyl}-piperazine-1-carboxylic acid tert-butyl ester (cpd 232);

4-(1-{4-[(S)-1-(1-Ethyl-2-oxo-1,2-dihydro-[1,6]naphthyridin-7-ylamino)-ethyl]-phenyl}-propyl)-piperazine-1-carboxylic acid tert-butyl ester (cpd 233);

4-((S)-1-{4-[(S)-1-(1-Ethyl-2-oxo-1,2-dihydro-[1,6]naphthyridin-7-ylamino)-ethyl]-phenyl}-propyl)-piperazine-1-carboxylic acid phenyl ester (cpd 234);

7-{(S)-1-[4-(3,3-Difluoro-piperidin-1-ylmethyl)-phenyl]-ethylamino}-1-(2,2-dimethyl-propyl)-1H-[1,6]naphthyridin-2-one (cpd 235);

7-{(S)-1-[4-(4-Acryloyl-piperazin-1-ylmethyl)-phenyl]-ethylamino}-1-ethyl-1H-[1,6]naphthyridin-2-one (cpd 236);

7-((S)-1-{4-[1-(4-Acryloyl-piperazin-1-yl)-propyl]-phenyl}-ethylamino)-1-ethyl-1H-[1,6]naphthyridin-2-one (cpd 237);

7-((S)-1-{4-[(S)-1-(4-Acryloyl-piperazin-1-yl)-propyl]-phenyl}-ethylamino)-1-ethyl-1H-[1,6]naphthyridin-2-one (cpd 238);

7-{[(1S)-1-{4-[(1S)-1-(4-acryloylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-1-(propan-2-yl)-1,6-naphthyridin-2(1H)-one (cpd 239);

2-{[(1S)-1-{4-[1-(4-propanoylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 240);

1-acryloyl-4-{4-[(1S)-1-{[7-oxo-8-(propan-2-yl)-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]phenyl}piperidine-4-carbonitrile (cpd 241);

2-{[(1S)-1-(4-{(1S)-1-[4-(3-chloropropanoyl)piperazin-1-yl]-2-cyclopropylethyl}phenyl)ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 242);

2-{[(1S)-1-(4-{(1R)-1-[4-(3-hydroxypropanoyl)piperazin-1-yl]propyl}phenyl)ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 243);

2-[(1-{4-[1-(4-acryloylpiperazin-1-yl)-2-cyclopropylethyl]phenyl}cyclopropyl)amino]-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 244);

2-[(1-{4-[(1R)-1-(4-acryloylpiperazin-1-yl)-2-cyclopropylethyl]phenyl}cyclopropyl)amino]-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 245);

2-[(1-{4-[(1S)-1-(4-acryloylpiperazin-1-yl)-2-cyclopropylethyl]phenyl}cyclopropyl)amino]-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 246);

2-[(1-{4-[1-(4-acryloylpiperazin-1-yl)propyl]phenyl}cyclopropyl)amino]-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 247);

2-[(1-{4-[(1R)-1-(4-acryloylpiperazin-1-yl)propyl]phenyl}cyclopropyl)amino]-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 248);

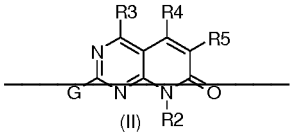
2-[(1-{4-[(1S)-1-(4-acryloylpiperazin-1-yl)propyl]phenyl}cyclopropyl)amino]-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 249);

2-{[(1S)-1-{4-[(2E)-pent-2-en-3-yl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 250); and

7-{[(1S)-1-{4-[(1S)-1-(4-acryloylpiperazin-1-yl)-2-cyclopropylethyl]phenyl}ethyl]amino}-1-(propan-2-yl)-1,6-naphthyridin-2(1H)-one (cpd 251).

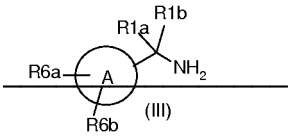
**6.** A process for the preparation of a compound of formula(I) or a pharmaceutical acceptable salt thereof, as defined in claim 1, said process comprises the following steps:

**Step 1a)** reacting a compound of formula (II):



(II)

wherein G is chloro, $MeS(O)_2$-, or MeS(O)-; R2 is an optionally substituted group selected from straight or branched $(C_1-C_6)$alkyl, $(C_3-C_6)$cycloalkyl-$(C_1-C_6)$alkyl, aryl-$(C_1-C_6)$alkyl, and heterocyclyl-$(C_1-C_6)$alkyl; X is nitrogen or -CH-, R3 is hydrogen, chloro, cyano, $CONH_2$, $NH_2$, NR13R13a, OR12, or an optionally substituted group selected from straight or branched $(C_1-C_6)$alkyl, $(C_3-C_6)$cycloalkyl-$(C_1-C_6)$alkyl, aryl and heteroaryl; R4 is hydrogen or an optionally substituted straight or branched $(C_1-C_6)$alkyl; R5 is hydrogen, fluoro, cyano, an optionally substituted straight or branched $(C_1-C_6)$alkyl or OR12, wherein R12 is an optionally substituted straight or branched $(C_1-C_6)$alkyl and R13, R13a are each independently selected from hydrogen or optionally substituted straight or branched $(C_1-C_6)$alkyl; with a compound of formula (III):



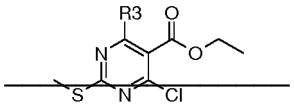
(III)

wherein R1a is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl; R1b is an optionally substituted ($C_1$-$C_6$)alkyl, or together with the atom to which they are bound, R1a and R1b may form a ($C_3$-$C_6$)cycloalkyl; A is a ($C_3$-$C_6$) cycloalkyl, aryl or heteroaryl; R6a and R6b are each independently selected from hydrogen, halogen, cyano, an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, ($C_3$-$C_6$)cycloalkyl, cycloalkyl-alkyl, ($C_2$-$C_6$)alkenyl, ($C_2$-$C_6$)alkynyl, aryl, heteroaryl, heterocyclyl, -OR7, NR7R8, -COOR7, -$SO_2$R7, -CONR7R8 -CH(R14)OR7, and -CH(R14)NR7R8 wherein R14 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl and R7 and R8 are each independently hydrogen or a group selected from an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, ($C_3$-$C_6$)cycloalkyl, aryl, heteroaryl, heterocyclyl, aryl-alkyl, heteroaryl-alkyl, heterocyclyl-alkyl, heterocyclyl-C(O)-alkyl, heterocyclyl-C(O)-alkenyl, heterocyclyl-C(O)-alkynyl or, together with the nitrogen atom to which they are bound, R7 and R8 form a 5- to 7-membered heteroaryl or heterocyclyl group optionally containing one additional heteroatom selected from O, S and NR9; wherein R9 is hydrogen, an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, -COOR10 or -COR11; wherein R10 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl; R11 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, ($C_2$-$C_6$)alkenyl or ($C_2$-$C_6$)alkynyl;

to yield a compound of general formula (I);

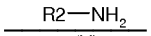
the compound of formula (II) wherein G is $MeS(O)_2$- or MeS(O)- can be prepared according to the following steps:

**Step 2a**) substituting the chlorine of an intermediate compound of formula (IV):



(IV)

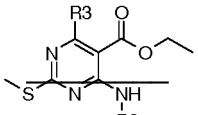
wherein R3 is hydrogen, or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, with an amine intermediate compound of formula (V):



(V)

wherein R2 is as defined above;

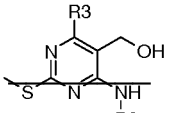
**Step 2b)** reacting a compound of formula (VI):



(VI)

wherein R2 and R3 are as defined above, with a reducing agent;

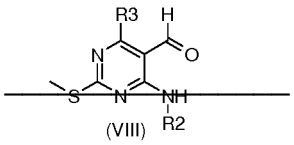
**Step 2c)** reacting the resultant compound of formula (VII):



(VII)

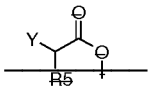
wherein R2 and R3 are as defined above, with an appropriate oxydant reagent;

**Step 2d)** reacting the resultant compound of formula (VIII):



(VIII)

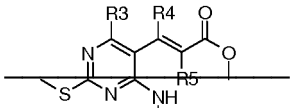
wherein R2 and R3 are as defined above, with an compound of formula (IX):



(IX)

wherein Y is a suitable leaving group for Wittig or Horner-Wadsworth-Emmons reaction (or HWE reaction) such as triphenylphosphorane or diethylphosphonate, and R5 is is hydrogen or fluoro, or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

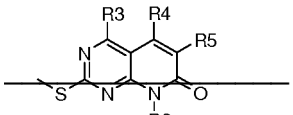
**Step 2e)** cyclize an intermediate compound of formula (X):



(X)

wherein R2, R3, R4 and R5 are as defined above under basic conditions, to obtained the intermediate compound of formula (XI);

**Step 2f)** mixing the resultant intermediate compound of formula (XI):

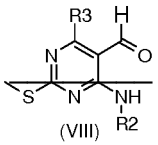


(XI)

wherein R2, R3, R4 and R5 are as defined above, with a oxydant reagent, to give a compound of formula (II) wherein G is $MeS(O)_2$-, or MeS(O)- and R2, R3, R4 and R5 are as defined above;

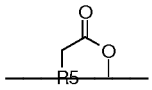
alternatively compounds of formula (XI) can be prepared according to the following steps:

**Step 3a)** reacting a compound of formula (VIII):



(VIII)

wherein R2, is as defined above, and R3 is hydrogen, chloro or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl; with an compound of formula (IXa):

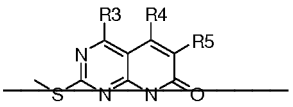


(IXa)

wherein R5 is hydrogen or OR12, wherein R12 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, to yield a compound of formula (XI) wherein R2, R3 and R4 are as defined above and R5 is hydrogen or OR12 wherein R12 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

or

**Step 3a')** alkylating the intermediate compound of formula (XII):

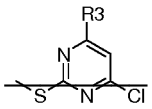



(XII)

wherein, R3 and R4 are as defined above and R5 is hydrogen, fluoro, cyano, an optionally substituted straight or branched ($C_1$-$C_6$)alkyl or OR12, wherein R12 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, with an alkylating agent of formula R2-X (XIII), wherein wherein X is bromine, iodine, -OMs –OTs or hydroxy and R2 is as defined above, to give a compound of formula (XI) wherein R2, R3, R5 and R5 are as defined above;

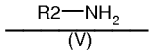
or

**Step 3a''**) reacting a compound of formula (XIV):




(XIV)

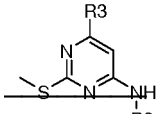
wherein R3 is as defined above, with a compound of formula (V):




(V)

wherein R2 is as defined above;

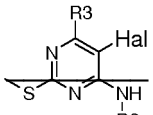
**Step3b)** reacting the resultant intermediate compound of formula (XV):




(XV)

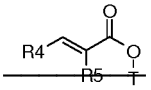
wherein R3 and R2 are as defined above, with a halogenation reagent;

**Step 3c**) reacting the intermediate compound of formula (XVI):




(XVI)

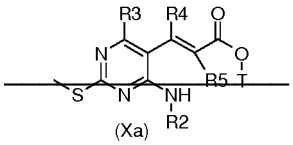
with a compound of formula (XVIIa):




(XVIIa)

wherein R4 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, R5 is hydrogen and T is a straight or branched ($C_1$-$C_6$)alkyl;

**Step 3d)** cyclize an intermediate compound of formula (Xa):

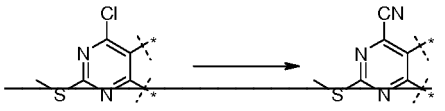



(Xa)

wherein R2, R3, R4, R5 and T are as defined above under basic conditions, so to obtain the intermediate compound of formula (XI), wherein R4 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, R5 is hydrogen and R2 and R3 are as defined above;

if desired, converting a first compound of formula (XI) into a second compound of formula (XI) by operating according to any one of the following synthetic conditions:

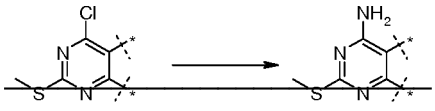
**conv. A)** converting a compound of formula (XI):



(XI) (XI)

wherein R3 is chloro, into a compound of formula (XI) wherein R3 is CN, by reacting with a source of cyanide, following the condition known in the art for palladium-catalyzed cyanation of aryl halides;

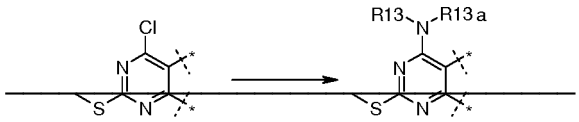
**conv. B)** converting a compound of formula (XI):



(XI) (XI)

wherein R3 is chloro, into a compound of formula (XI) wherein R3 is $NH_2$, by reacting with amonia;

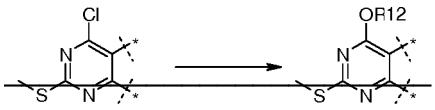
**conv. C)** converting a compound of formula (XI):



(XI) (XI)

wherein R3 is chloro, into a compound of formula (XI) wherein R3 is NR13R13a, by reacting with an amine NR13R13a wherein R13 and R13a are each independently selected from hydrogen or optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

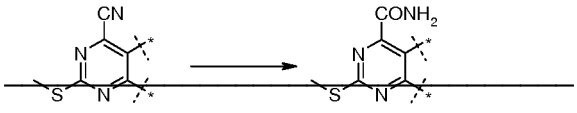
**conv. D)** converting a compound of formula (XI):



(XI) (XI)

wherein R3 is chloro, into a compound of formula (XI) wherein R3 is OR12, by reacting with an alcohol R12-OH wherein R12 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

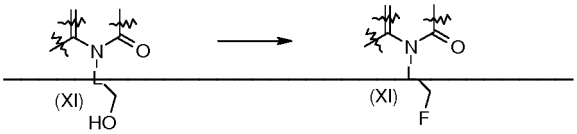
**conv. E)** converting a compound of formula (XI):



(XI) (XI)

wherein R3 is cyano, into a compound of formula (XI) wherein R3 is $CONH_2$, by hydrolysis with a suitable agent;

**conv. F)** converting a compound of formula (XI):

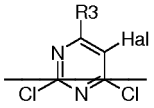


(XI) (XI)

wherein R2 is a group of formula L-$CH_2OH$, into a compound of formula (XI), wherein R2 is a group of formula L-$CH_2F$ wherein L is an optionally substituted group selected straight or branched ($C_1$-$C_6$)alkyl, ($C_3$-$C_6$)cycloalkyl-($C_1$-$C_6$)alkyl, aryl-($C_1$-$C_6$)alkyl, and heterocyclyl-($C_1$-$C_6$)alkyl, by reacting with a fluorination agent;

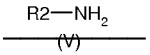
the compound of formula (II) wherein G is chloro and X is nitrogen or -CH-, can be prepared according to the following steps:

**Step 4a**) reacting a compound of formula (XVIII):



(XVIII)

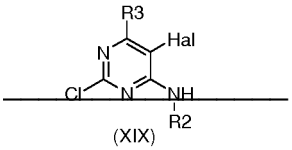
wherein R3 is is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, and Hal is preferably bromo or iodo, with an intermediate compound of formula (V):



(V)

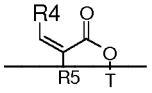
wherein R2 is as defined above;

**Step 4b)** mixing the obtained intermediate compound of formula (XIX):



(XIX)

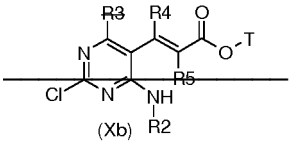
wherein R2, R3 and Hal are as defined above, with a reagent of formula (XVIIb):



(XVIIb)

wherein R4 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$) alkyl, R5 and T are hydrogen;

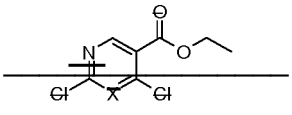
**Step 4c)** cyclize an intermediate compound of formula (Xb):



(Xb)

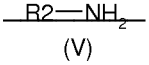
wherein R2, R3, R4, R5 and T are as defined above, with addition of acetic anhydride, to obtain the intermediate compound of formula (II) wherein G is chloro, R4 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$) alkyl, R5 is hydrogen and R2 and R3 are as diefined above;

**Step 4d**) substituting the chlorine of an intermediate compound of formula (IVa):



(IVa)

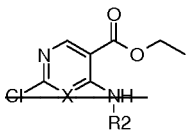
wherein X is N, or -CH, with an amine intermediate compound of formula (V):



(V)

wherein R2 is as defined above;

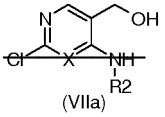
**Step 4e)** reacting a compound of formula (VIa):



(VIa)

wherein X is N, or -CH and R2 is as defined above, with a reducing agent;

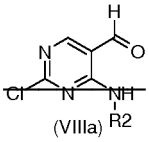
**Step 4f)** reacting the resultant compound of formula (VIIa):



(VIIa)

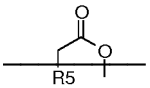
wherein X is N, or -CH and R2 is as defined above, with an appropriate oxydant reagent;

**Step 4g)** reacting a compound of formula (VIIIa):



(VIIIa)

wherein R2 is as defined above, with an compound of formula (IXa):

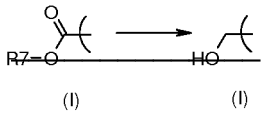


(IXa)

wherein R5 is hydrogen or OR12, wherein R12 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, to yield a compound of formula (II) wherein G is chloro and X is nitrogen or -CH-, R2 is as defined above, R3 and R4 are hydrogen and R5 is hydrogen or OR12 wherein R12 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

a first compound of general formula (I) can be conveniently converted into a second compound of general formula (I) by operating according to any one of the following synthetic conditions:

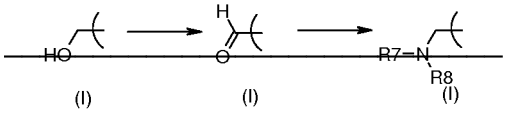
**conv. 1)** converting a compound of formula (I):



(I) (I)

wherein R6a is a group of formula -COOR7, R7 is an optionally substituted straight or branched ($C_1$-$C_6$) alkyl, into a compound of formula (I) wherein R6a is a group of formula $-CH_2OH$, by reacting with a suitable reducing reagent;

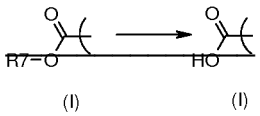
**conv. 2)** converting a compound of formula (I):



(I) (I) (I)

wherein R6a is a group of formula $-CH_2OH$, into a compound of formula (I) wherein R6a is a group -CH(R14)NR7R8 wherein R14 is hydrogen, by first converting the group $-CH_2OH$ into the corresponding aldehyde -CHO then, reacting the resulting derivative with a compound of formula R7R8NH (XX), wherein R6 and R7 are as defined above, under reductive amination conditions in the presence of a suitable reducing agents;

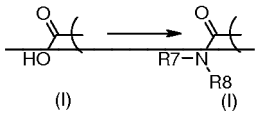
**conv. 3)** converting a compound of formula (I):



(I) (I)

wherein R6a is a group of formula –COOR7, wherein R7 is an optionally substituted straight or branched ($C_1$-$C_6$) alkyl, into a compound of formula (I), wherein R6a is a group of formula –COOH under acidic or basic conditions;

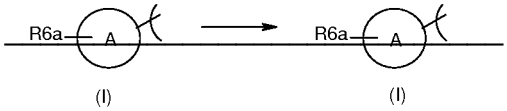
**conv. 4)** converting a compound of the formula (I):




(I) (I)

wherein R6a is a group of formula –COOH, into a compound of formula (I), wherein R6a is a group of formula a group –CONR7R8, wherein R7 and R8 are as defined above by reaction with a compound of formula R7R8NH (XX), in the presence of suitable amide coupling agents;

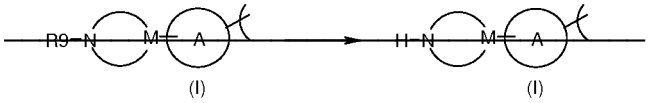
**conv. 5)** converting a compound of formula (I):




(I) (I)

wherein A is aryl or heteroaryl and R6a is chloro, bromo or iodo, into a compound of formula (I), wherein R6a is an optionally substituted group selected from ($C_1$-$C_6$)alkyl, ($C_2$-$C_6$)alkenyl, ($C_2$-$C_6$)alkynyl, ($C_3$-$C_7$)cycloalkyl, heterocyclyl, aryl, heteroaryl, by reaction with a reagent of formula R6aQ (XXI), wherein R6a is as defined above and Q is a group selected from boronic acid, boronic ester, and –Sn[($C_1$-$C_6$)alkyl]$_3$, under Pd-based catalyzed cross-coupling conditions;

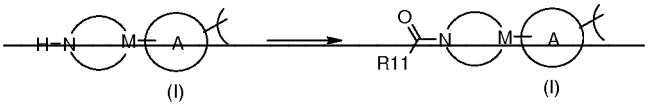
**conv. 6)** converting a compound of formula (I):




(I) (I)

wherein R6a is a linker group M of formula –CH(R14)NR7R8 or –CONR7R8 or NR7R8 wherein R14 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, R7 and R8 together with the nitrogen atom to which they are bound, may form a 5 to 7 membered heterocyclyl group optionally containing one additional group such as N-R9, wherein R9 is a suitable protecting group, into a compound of formula (I), wherein A is as defined above and R9 is hydrogen, under basic or acid hydrogenation conditions;

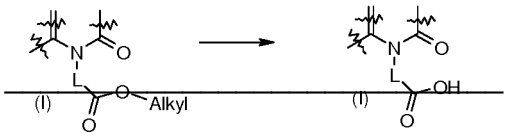
**conv. 7)** converting a compound of formula (I):




(I) (I)

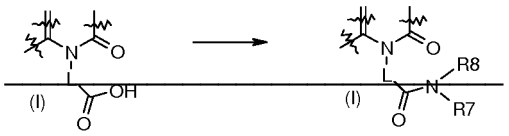
wherein R6a is a linker group M of formula –CH(R14)NR7R8, or –CONR7R8 or NR7R8 wherein R14 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, R7 and R8 together with the nitrogen atom to which they are bound, may form a 5 to 7 membered heterocyclyl group optionally containing one additional group such as N-R9, wherein R9 is hydrogen, into a compound of formula (I) wherein A, is as defined above and R9 is –COR11, wherein R11 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, ($C_2$-$C_6$) alkenyl or ($C_2$-$C_6$) alkynyl, by reaction with a reagent of formula R11COW (XXII), wherein R11 is as defined above and W is OH or Cl;

**conv. 8)** converting a compound of formula (I):



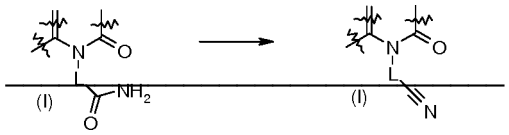
wherein R2 is a group of formula L-COOAlkyl wherein L is an optionally substituted group selected straight or branched $(C_1-C_6)$alkyl, $(C_3-C_6)$cycloalkyl-$(C_1-C_6)$alkyl, aryl-$(C_1-C_6)$alkyl, and heterocyclyl-$(C_1-C_6)$alkyl, into a compound of formula (I) wherein R2 is a group of formula L-COOH, wherein L is as defined above; under acidic or basic conditions;

**conv. 9)** converting a compound of formula (I):



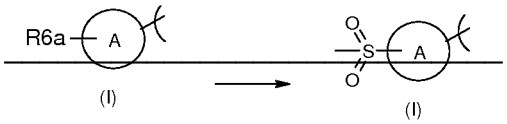
wherein R2 is a group of formula L-COOH, wherein L is as defined above, into a compound of formula (I), wherein R2 is a group of formula L-CONR7R8, wherein L, R7 and R8 are as defined above, by reaction with a compound of formula R7R8NH (XX), in the presence of a amide coupling agents;

**conv. 10)** converting a compound of formula (I):



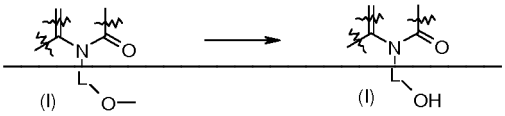
wherein R2 is a group of formula L-$CONH_2$ wherein L is as defined above, into a compound of formula (I), wherein R2 is a group of formula L-CN, wherein L is as defined above, by reaction with a dehydration agent;

**conv. 11)** converting a compound of formula (I):



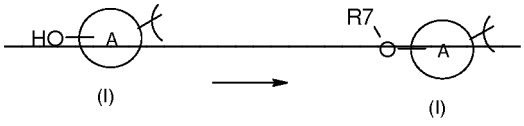
wherein A is aryl or heteroaryl and R6a is chloro, bromo or iodo, into a compound of formula (I), wherein R6a is methylsulphonyl group, under cross-coupling reaction conditions;

**conv. 12)** converting a compound of formula (I):



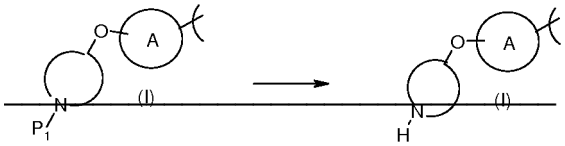
wherein L is a group selected from aryl-$(C_1-C_6)$alkyl, and heterocyclyl-$(C_1-C_6)$-alkyl, into a compound of formula (I) wherein L is defined above, under strong Lewis acid conditions;

**conv. 13)** converting a compound of formula (I):



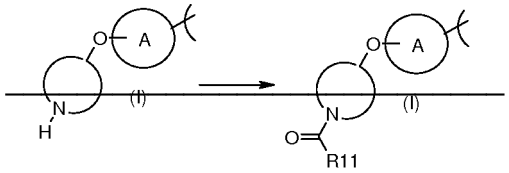
wherein R6a is a phenolic group, into a compound of formula (I) wherein R6a is a group OR7 wherein R7 is as defined above, by reaction with a reagent of formula R7-X (XXIII), wherein R7 is as defined above and X is hydroxy, bromine, iodine, -OMs or -OTs;

**conv. 14)** converting a compound of formula (I):



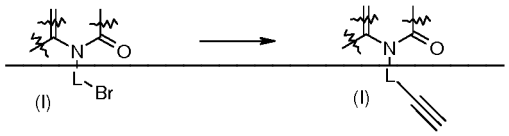
wherein A is as defined above and R6a is a group –OR7 wherein R7 is heterocyclyl group and P1 is a suitable protecting group, into a compound of formula (I), wherein A is as defined above and R7 is heterocyclyl, operating, e.g., under basic or acid hydrogenation;

**conv. 15)** converting a compound of formula (I):



wherein A is as defined above and R6a is a group -OR7 wherein R7 is a heterocyclyl group, into a compound of formula (I), wherein A and R11 are as defined above, by reaction with a reagent of formula R11COW, (XXII) wherein R11 is as defined above and W is OH or Cl.

**conv. 16)** converting a compound of formula (I):



wherein L is a group selected from aryl($C_1$-$C_6$)alkyl, and heterocyclyl-($C_1$-$C_6$)-alkyl, into a compound of formula (I) wherein L is defined above, under Sonogashira reaction;

**7.** A compound of formula (I) or a pharmaceutically acceptable salt thereof, as defined in claim 1, for use in a method of treating a desease caused by and/or associated with increased 2-hydroxyglutarate level, which comprises administering to a mammal, preferably a human, in need thereof, an effective amount of a compound of formula (I) as defined in claim 1.

**8.** A compound of formula (I) or a pharmaceutically acceptable salt thereof, as defined in claim 1, for use in a method of treating diseases caused by and/or associated with mutated IDH enzymes, which comprises administering to a mammal, preferably a human, in need thereof, an effective amount of compound of formula (I) as defined in claim 1.

**9.** A compound of formula (I) or a pharmaceutically acceptable salt thereof, as defined in claim 1, for use in a method of treating diseases caused by and/or associated with IDH wt over-functions, which comprises administering to a mammal, preferably a human, in need thereof, an effective amount of compound of formula (I) as defined in claim 1.

**10.** A compound for use according to any of the claims 7 to 9, wherein the disease is selected from the group consisting of cancer, cell proliferative disorders and immune-related disorders.

**11.** A compound for use according to claims 10 wherein the disease is cancer.

**12.** A compound for use according to claim 11, wherein the cancer is selected from the group consisting of: carcinomas, such as bladder, breast, kidney, liver, colon, lung, including small cell lung cancer, esophagus, gall-bladder, ovary, pancreas, stomach, cervix, prostate, and skin, including squamous cell carcinoma; hematopoietic tumors of lymphoid lineage including leukemia, acute lymphocitic leukemia, acute lymphoblastic leukemia, B-cell lymphoma, angioimmunoblastic T-cell lymphoma, Hodgkin's lymphoma, non-Hodgkin's lymphoma, hairy cell lymphoma and Burkitt's lymphoma; hematopoietic tumors of myeloid lineage, including acute and chronic myelogenous leukemias, myelodysplastic syndrome and promyelocytic leukemia; tumors of mesenchymal origin, including fibrosarcoma and rhabdomyosarcoma; tumors of the central and peripheral nervous system, including glioma, glioblastoma, glioblastoma multiforme, astrocytoma, oligodendroglioma, paraglioma, neuroblastoma, and schwannomas; and other tumors, including melanoma, seminoma, teratocarcinoma, osteosarcoma, xeroderma pigmentosum, keratoxanthoma, thyroid cancers, such as papillary thyroid carcinoma and medullary thyroid carcinoma, Kaposi's sarcoma, chondrosarcoma, and cholangiocarcinoma.

**13.** A compound of formula (I) or a pharmaceutically acceptable salt thereof, as defined in claim 1, for use as a medicament.

**14.** A method of treating a disease caused by and/or associated with increased 2-hydroxyglutarate level, which comprises administering to a mammal, preferably a human, in need thereof, an effective amount of a compound of formula (I) as defined in claim 1.

**15.** A method of treating a disease caused by and/or associated with mutated IDH enzymes, which comprises administering to a mammal, preferably a human, in need thereof, an effective amount of compound of formula (I) as defined in claim 1.

**16.** A method of treating a disease caused by and/or associated with IDH wt over-functions, which comprises administering to a mammal, preferably a human, in need thereof, an effective amount of compound of formula (I) as defined in claim 1.

**17.** The method, according to any of the claims 14 to 16, wherein the disease is selected from the group consisting of cancer, cell proliferative disordes and immune-related disorders.

**18.** The method, according to claim 17, wherein the disease is cancer.

**19.** The method according to claim 18, wherein the cancer is selected from the group consisting of: carcinomas, such as bladder, breast, kidney, liver, colon, lung, including small cell lung cancer, esophagus, gall-bladder, ovary, pancreas, stomach, cervix, prostate, and skin, including squamous cell carcinoma; hematopoietic tumors of lymphoid lineage including leukemia, acute lymphocitic leukemia, acute lymphoblastic leukemia, B-cell lymphoma, angioimmunoblastic T-cell lymphoma, Hodgkin's lymphoma, non-Hodgkin's lymphoma, hairy cell lymphoma and Burkitt's lymphoma; hematopoietic tumors of myeloid lineage, including acute and chronic myelogenous leukemias, myelodysplastic syndrome and promyelocytic leukemia; tumors of mesenchymal origin, including fibrosarcoma and rhabdomyosarcoma; tumors of the central and peripheral nervous system, including glioma, glioblastoma, glioblastoma multiforme, astrocytoma, oligodendroglioma, paraglioma, neuroblastoma, and schwannomas; and other tumors, including melanoma, seminoma, teratocarcinoma, osteosarcoma, xeroderma pigmentosum, keratoxanthoma, thyroid cancers, such as papillary thyroid carcinoma and medullary thyroid carcinoma, Kaposi's sarcoma, chondrosarcoma, and cholangiocarcinoma.

**20.** A pharmaceutical composition comprising a compound of formula (I) or a pharmaceutically acceptable salt thereof, as defined in claim 1, in association with a pharmaceutically acceptable excipient, carrier or diluent.

**21.** A pharmaceutical composition according to claim 20 further comprising one or more chemotherapeutic agents.

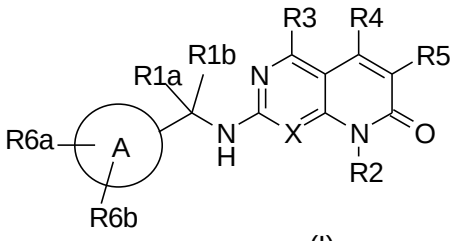
**22.** A product or kit comprising a compound of formula (I) or a pharmaceutically acceptable salt thereof, as defined in claim 1, and one or more chemotherapeutic agents, as a combined preparation for simultaneous, separate or sequential use in anticancer therapy.

**23.** Use of a compound of formula (I) or a pharmaceutically acceptable salt thereof, as defined in claim 1, in the manufacture of a medicament with anticancer activity.

**24.** The method according to anyone of claims 14 to 16 in combination with radiation therapy or with a chemotherapy regimen.

**CLAIMS**

**1.** A compound of formula (I):




(I)

wherein:

**X** is nitrogen or -CH-

**R1a** is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

**R1b** is an optionally substituted ($C_1$-$C_6$)alkyl, or together with the atom to which they are bound, **R1a** and **R1b** may form a ($C_3$-$C_6$)cycloalkyl;

**A** is a ($C_3$-$C_6$)cycloalkyl, aryl or heteroaryl;

**R6a** and **R6b** are each independently selected from hydrogen, halogen, cyano, an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, ($C_3$-$C_6$)cycloalkyl, cycloalkyl-alkyl, ($C_2$-$C_6$)alkenyl, ($C_2$-$C_6$)alkynyl, aryl, heteroaryl, heterocyclyl, -OR7, NR7R8, -COOR7, -$SO_2$R7, -CONR7R8, -CH(R14)OR7 and -CH(R14)NR7R8;

wherein:

R14 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

R7 and R8 are each independently hydrogen or a group selected from an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, ($C_3$-$C_6$)cycloalkyl, aryl, heteroaryl, heterocyclyl, aryl-alkyl, heteroaryl-alkyl, heterocyclyl-alkyl, heterocyclyl-C(O)-alkyl, heterocyclyl-C(O)-alkenyl, heterocyclyl-C(O)-alkynyl or, together with the nitrogen atom to which they are bound, R7 and R8 form a 5- to 7-membered heteroaryl or heterocyclyl group optionally containing one additional heteroatom selected from O, S and NR9;

wherein:

R9 is hydrogen, an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, -COOR10 or -COR11;

wherein:

R10 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

R11 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, ($C_2$-$C_6$)alkenyl or ($C_2$-$C_6$)alkynyl;

**R2** is an optionally substituted group selected from straight or branched ($C_1$-$C_6$)alkyl, ($C_3$-$C_6$)cycloalkyl-($C_1$-$C_6$)alkyl, aryl-($C_1$-$C_6$)alkyl, and heterocyclyl-($C_1$-$C_6$)alkyl;

**R3** is hydrogen, chloro, cyano, $CONH_2$, $NH_2$, NR13R13a, OR12, or an optionally substituted group selected from straight or branched ($C_1$-$C_6$)alkyl, ($C_3$-$C_6$)cycloalkyl-($C_1$-$C_6$)alkyl, aryl and heteroaryl;

wherein:

R12 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

R13, R13a are each independently selected from hydrogen or optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

**R4** is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

**R5** is hydrogen, fluoro, cyano, an optionally substituted straight or branched ($C_1$-$C_6$)alkyl or -OR12,

wherein:

R12 is as described above;

or a pharmaceutically acceptable salt thereof.

**2.** A compound of formula (I), according to claim 1, or a pharmaceutically acceptable salt thereof, wherein:

**R3** is hydrogen, chloro, cyano, $CONH_2$, $NH_2$, NR13R13a, OR12, or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

wherein:

R12 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

R13, R13a are each independently selected from hydrogen or optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

**R5** is hydrogen, fluoro or -OR12,

wherein:

R12 is as described above; and

**R1a**, **R1b**, **A**, **X**, **R6a**, **R6b**, **R2** and **R4** are as defined in claim 1.

**3.** A compound of formula (I), according to claim 2, or a pharmaceutically acceptable salt thereof, wherein:

**R6a** and **R6b** are each independently selected from hydrogen, halogen, cyano, an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, ($C_2$-$C_6$)alkenyl, ($C_2$-$C_6$)alkynyl, aryl, heteroaryl, heterocyclyl, -OR7, NR7R8, -COOR7, -$SO_2$R7, -CONR7R8, -CH(R14)OR7 and -CH(R14)NR7R8;

wherein:

R7, R8 and R14 are as defined in claim 1;

**R5** is hydrogen or fluoro; and

**R1a**, **R1b**, **A, X**, **R2**, **R3** and **R4** are as defined in claim 2.

**4.** A compound of formula (I), according to claim 3, or a pharmaceutically acceptable salt thereof, wherein:

**A** is aryl or heteroaryl;

**R3** is hydrogen, cyano, $CONH_2$, $NH_2$, NR13R13a, or an optionally substituted straight or branched ($C_1$-$C_6$) alkyl;

wherein:

R13, R13a are each independently selected from hydrogen or optionally substituted straight or branched ($C_1$-$C_6$)alkyl; and

**R1a**, **R1b**, **R6a, R6b, X, R2**, **R4** and **R5** are as defined in claim 3.

**5.** A compound (cpd) of formula (I), according to claim 1, or a pharmaceutically accepteble salt thereof, selected from the group consisting of:

methyl 4-{(1S)-1-[(8-benzyl-7-oxo-pyrido[2,3-d]pyrimidin-2-yl)amino]ethyl}benzoate (cpd 1);

methyl 4-{(1S)-1-[(8-ethyl-7-oxo-pyrido[2,3-d]pyrimidin-2-yl)amino]ethyl}benzoate (cpd 2);

methyl 4-[(1S)-1-{[8-(methoxymethyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzoate (cpd 3);

methyl 4-{(1S)-1-[(8-methyl-7-oxo-pyrido[2,3-d]pyrimidin-2-yl)amino]ethyl}benzoate (cpd 4);

methyl 4-[(1S)-1-{[8-(2-methylpropyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzoate (cpd 5);

methyl 4-[(1S)-1-{[8-(4-fluorobenzyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzoate (cpd 6);

methyl 4-[(1S)-1-{[8-(3,5-difluorobenzyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzoate (cpd 7);

methyl 4-[(1S)-1-({8-[4-fluoro-2-(trifluoromethyl)benzyl]-7-oxo-pyrido[2,3-d]pyrimidin-2-yl}amino)ethyl]benzoate (cpd 8);

methyl 4-[(1S)-1-{[7-oxo-8-(propan-2-yl)-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzoate (cpd 9);

methyl 4-[(1S)-1-({8-[(3-methyloxetan-3-yl)methyl]-7-oxo-pyrido[2,3-d]pyrimidin-2-yl}amino)ethyl]benzoate (cpd 10);

methyl 4-[(1S)-1-{[8-(2,2-dimethylpropyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzoate (cpd 11);

2-{[(1S)-1-cyclohexylethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 12);

8-ethyl-2-{[(1S)-1-(4-methoxyphenyl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 13);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 14);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(pentan-3-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 15);

8-benzyl-2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 16);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(2-fluoroethyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 17);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(2,2,2-trifluoroethyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 18);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(2-methylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 19);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(cyclopropylmethyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 20);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(4-methoxybenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 21);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(2-fluorobenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 22);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(3,4-difluorobenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 23);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-[3-(trifluoromethyl)benzyl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 24);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(2,4-difluorobenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 25);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-[4-(trifluoromethoxy)benzyl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 26);

4-{[2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-7-oxopyrido[2,3-d]pyrimidin-8(7H)-yl]methyl}benzonitrile (cpd 27);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(4-fluorobenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 28);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(3,5-difluorobenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 29);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(3-methoxybenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 30);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(2,6-difluorobenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 31);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-4-methyl-8-(2-methylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 32);

8-(2,2-dimethylpropyl)-2-{[(1S)-1-(4-methoxyphenyl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 33);

2-{[(1S)-1-(4-bromophenyl)ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 34);
2-{[(1S)-1-(4-bromophenyl)ethyl]amino}-8-(3-hydroxy-2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 35);
8-(2,2-dimethylpropyl)-2-{[(1S)-1-(naphthalen-2-yl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 36);
methyl 2,2-dimethyl-3-[2-{[(1S)-1-(naphthalen-2-yl)ethyl]amino}-7-oxopyrido[2,3-d]pyrimidin-8(7H)-yl]propanoate (cpd 37);
8-(3-hydroxy-2,2-dimethylpropyl)-2-{[(1S)-1-(naphthalen-2-yl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 38);
8-(2,2-dimethylpropyl)-2-{[(1R)-1-phenylethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 39);
8-(2,2-dimethylpropyl)-2-{[(1S)-1-phenylethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 40);
8-(2,2-dimethylpropyl)-2-[(2-phenylpropan-2-yl)amino]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 41);
8-(2,2-dimethylpropyl)-2-[(1-phenylcyclopropyl)amino]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 42);
8-(2,2-dimethylpropyl)-2-[(1-phenylcyclobutyl)amino]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 43);
8-(2,2-dimethylpropyl)-2-{[1-(tricyclo[3.3.1.1$^{3,7}$]dec-1-yl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 44);
8-[(3-methyloxetan-3-yl)methyl]-2-{[(1S)-1-(naphthalen-2-yl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 45);
8-(2-hydroxy-2-methylpropyl)-2-{[(1S)-1-phenylethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 46);
8-(2,2-Dimethyl-propyl)-6-fluoro-2-((S)-1-phenyl-ethylamino)-8H-pyrido[2,3-d]pyrimidin-7-one (cpd 47);
methyl 4-[(1S)-1-{[8-(2-hydroxy-2-methylpropyl)-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzoate (cpd 48);
8-(2,2-dimethylpropyl)-2-{[(1S)-1-(4-phenoxyphenyl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 49);
2-{[(1S)-1-(6-chloro-2-oxo-quinolin-3-yl)ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 50);
8-benzyl-2-{[(1S)-1-(5-chloro-1H-benzimidazol-2-yl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 51);
8-benzyl-2-({(1S)-1-[3-(4-chlorophenyl)-1,2,4-oxadiazol-5-yl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 52);
2-({(1S)-1-[3-(4-chlorophenyl)-1,2,4-oxadiazol-5-yl]ethyl}amino)-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 53);
8-(2,2-dimethylpropyl)-2-{[(1S)-1-(4-oxo-3,4-dihydroquinazolin-2-yl)ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 54);
2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(3-hydroxy-2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 55);
4-(4-{(S)-1-[8-(3-Hydroxy-2,2-dimethyl-propyl)-7-oxo-7,8-dihydro-pyrido[2,3-d]pyrimidin-2-ylamino]-ethyl}-benzyl)-piperazine-1-carboxylic acid tert-butyl ester (cpd 56);
2-{(S)-1-[4-(3,3-Difluoro-piperidin-1-ylmethyl)-phenyl]-ethylamino}-8-(2,2-dimethyl-propyl)-6-fluoro-8H-pyrido[2,3-d]pyrimidin-7-one (cpd 57);
2-{(S)-1-[4-(3,3-Difluoro-piperidin-1-ylmethyl)-phenyl]-ethylamino}-8-(2,2-dimethyl-propyl)-6-methoxy-8H-pyrido[2,3-d]pyrimidin-7-one (cpd 58);
4-(4-{(S)-1-[8-(2,2-Dimethyl-propyl)-7-oxo-7,8-dihydro-pyrido[2,3-d]pyrimidin-2-ylamino]-ethyl}-benzyl)-piperazine-1-carboxylic acid tert-butyl ester (cpd 59);
2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)-5-methylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 60);

8-(butan-2-yl)-2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 61);

8-[(2S)-butan-2-yl]-2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 62);

ethyl 2-[2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-7-oxopyrido[2,3-d]pyrimidin-8(7H)-yl] propanoate (cpd 63);

2-[2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-7-oxopyrido[2,3-d]pyrimidin-8(7H)-yl] propanenitrile (cpd 64);

2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 65);

8-[(1S)-1-cyclohexylethyl]-2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 66);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]-3-fluorophenyl}ethyl]amino}-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 67);

2-({(1S)-1-[3-fluoro-4-(morpholin-4-ylmethyl)phenyl]ethyl}amino)-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7 (8H)-one (cpd 68);

2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-[(2S)-3,3-dimethylbutan-2-yl]pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 69);

8-(2,2-dimethylpropyl)-2-{[(1S)-1-phenylpropyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 70);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(3-hydroxybenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 71);

2-{[(1S)-1-(4-chlorophenyl)ethyl]amino}-8-(4-hydroxybenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 72);

4-[(1S)-1-{[8-(2,6-difluorobenzyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzoic acid (cpd 73);

4-[(1S)-1-{[8-(2-fluorobenzyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzoic acid (cpd 74);

4-[(1S)-1-{[8-(2,6-difluorobenzyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]-N-(4,4-difluorocyclohexyl)benzamide (cpd 75);

4-[(1S)-1-{[8-(2,6-difluorobenzyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]-N-(1-methylpiperidin-4-yl)benzamide (cpd 76);

8-(2,6-difluorobenzyl)-2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)carbonyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7 (8H)-one (cpd 77);

4-[(1S)-1-{[8-(2,6-difluorobenzyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]-N-(tetrahydro-2H-pyran-4-yl) benzamide (cpd 78);

N-(4,4-difluorocyclohexyl)-4-[(1S)-1-{[8-(2,2-dimethylpropyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzamide (cpd 79);

N-cyclopentyl-4-[(1S)-1-{[8-(2,2-dimethylpropyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzamide (cpd 80),

N-cyclohexyl-4-[(1S)-1-{[8-(2,2-dimethylpropyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzamide (cpd 81);

2-chloro-N-(4,4-difluorocyclohexyl)-4-(1-{[8-(2,2-dimethylpropyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino} ethyl) benzamide (cpd 82);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)carbonyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 83);

N-(4,4-difluorocyclohexyl)-4-(1-{[8-(2,2-dimethylpropyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl)-2-fluorobenzamide (cpd 84);

N-(3,3-difluorocyclobutyl)-4-[(1S)-1-{[8-(2,2-dimethylpropyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzamide (cpd 85);

4-[(1S)-1-{[8-(2,2-dimethylpropyl)-7-oxo-pyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzamide (cpd 86);

8-(2,2-dimethylpropyl)-2-{[(1S)-1-{4-[(4-hydroxypiperidin-1-yl)carbonyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 87);

2-chloro-N-(4,4-difluorocyclohexyl)-4-[(1S)-1-{[8-(2,2-dimethylpropyl)-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]benzamide (cpd 88);

N-(4,4-difluorocyclohexyl)-4-[(1S)-1-{[8-(2,2-dimethylpropyl)-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]-2-fluorobenzamide (cpd 89);

8-(2,2-dimethylpropyl)-2-({(1S)-1-[3-fluoro-4-(hydroxymethyl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 90);

2-({(1S)-1-[4-(hydroxymethyl)phenyl]ethyl}amino)-8-(2-methylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 91);

8-(2,6-difluorobenzyl)-2-({(1S)-1-[4-(hydroxymethyl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 92);

2-({(1S)-1-[4-(hydroxymethyl)phenyl]ethyl}amino)-8-(2-hydroxy-2-methylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 93);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]-3-fluorophenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 94);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2-methylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 95);

8-benzyl-2-[(1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl)amino]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 96);

2-[(1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl)amino]-8-(2-fluorobenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 97);

8-(2,6-difluorobenzyl)-2-[(1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl)amino]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 98);

8-(2,6-difluorobenzyl)-2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 99);

2-[(1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl)amino]-8-(2-fluoroethyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 100);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-propylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 101);

2-({(1S)-1-[4-(azepan-1-ylmethyl)phenyl]ethyl}amino)-8-propylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 102);

2-{[(1S)-1-{4-[(4-acetylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-propylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 103);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2-methylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 104);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 105);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2,2,2-trifluoroethyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 106);

8-[2,3-difluoro-2-(fluoromethyl)propyl]-2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 107);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-[3,3,3-trifluoro-2-(trifluoromethyl)propyl] pyrido [ 2,3-d]pyrimidin-7(8H)-one (cpd 108);

8-(cyclobutylmethyl)-2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 109);

8-(2,2-dimethylpropyl)-2-({(1S)-1-[4-(morpholin-4-ylmethyl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 110);

8-(2,2-dimethylpropyl)-2-({(1S)-1-[4-(pyrrolidin-1-ylmethyl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 111);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2-methylbenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 112);

8-(cyclohexylmethyl)-2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 113);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2-methoxyethyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 114);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-[4-fluoro-2-(trifluoromethyl)benzyl]pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 115);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(3,3,3-trifluoro-2,2-dimethylpropyl)pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 116);

2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 117);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-4-methyl-8-(2-methylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 118);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2-hydroxy-2-methylpropyl)pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 119);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-[2-(hydroxymethyl)-2-methylpentyl]pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 120);

2,2-dimethyl-3-[2-{[(1S)-1-(naphthalen-2-yl)ethyl]amino}-7-oxopyrido[2,3-d]pyrimidin-8(7H)-yl]propanoic acid (cpd 121);

2,2-dimethyl-3-[2-{[(1S)-1-(naphthalen-2-yl)ethyl]amino}-7-oxopyrido[2,3-d]pyrimidin-8(7H)-yl]propanamide (cpd 122);

N,2,2-trimethyl-3-[7-oxo-2-{[(1S)-1-phenylethyl]amino}pyrido[2,3-d]pyrimidin-8(7H)-yl]propanamide (cpd 123);

N,N,2,2-tetramethyl-3-[7-oxo-2-{[(1S)-1-phenylethyl]amino}pyrido[2,3-d]pyrimidin-8(7H)-yl]propanamide (cpd 124);

2,2-dimethyl-N-(3-methylphenyl)-3-[7-oxo-2-{[(1S)-1-phenylethyl]amino}pyrido[2,3-d]pyrimidin-8(7H)-yl]propanamide (cpd 125);

N-(2-hydroxyethyl)-2,2-dimethyl-3-[7-oxo-2-{[(1S)-1-phenylethyl]amino}pyrido[2,3-d]pyrimidin-8(7H)-yl]propanamide (cpd 126);

N-(3-hydroxypropyl)-2,2-dimethyl-3-[7-oxo-2-{[(1S)-1-phenylethyl]amino}pyrido[2,3-d]pyrimidin-8(7H)-yl]propanamide (cpd 127);

N-[3-(1-hydroxyethyl)phenyl]-2,2-dimethyl-3-[7-oxo-2-{[(1S)-1-phenylethyl]amino}pyrido[2,3-d]pyrimidin-8(7H)-yl] propanamide (cpd 128);

2,2-dimethyl-3-[2-{[(1S)-1-(naphthalen-2-yl)ethyl]amino}-7-oxopyrido[2,3-d]pyrimidin-8(7H)-yl]propanenitrile (cpd 129);

8-(2,2-dimethylpropyl)-2-({(1S)-1-[4-(1-methyl-1H-pyrazol-4-yl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 130);

8-(2,2-dimethylpropyl)-2-({(1S)-1-[4-(pyridin-4-yl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 131);

8-(2,2-dimethylpropyl)-2-({(1S)-1-[4-(2-fluoropyridin-4-yl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 132)

8-(2,2-dimethylpropyl)-2-({(1S)-1-[4-(thiophen-3-yl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 133);

4'-[(1S)-1-{[8-(2,2-dimethylpropyl)-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]biphenyl-2-carbonitrile (cpd 134);

8-(3-hydroxy-2,2-dimethylpropyl)-2-({(1S)-1-[4-(1-methyl-1H-pyrazol-4-yl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 135);

8-(3-hydroxy-2,2-dimethylpropyl)-2-({(1S)-1-[4-(thiophen-3-yl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 136);

8-(2,2-dimethylpropyl)-2-({(1S)-1-[4-(methylsulfonyl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 137);

8-(2,2-dimethylpropyl)-2-({(1S)-1-[4-(piperazin-1-ylmethyl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one dihydrochloride (cpd 138);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 139);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-(3-hydroxy-2,2-dimethylpropyl)pyrido[2,3-d ] pyrimidin-7(8H)-one (cpd 140);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]-3-fluorophenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 141);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)carbonyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 142);

2-({(1S)-1-[4-({4-[(2E)-but-2-enoyl]piperazin-1-yl}methyl)phenyl]ethyl}amino)-8-(2,2-dimethylpropyl)pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 143);

8-(2,2-dimethylpropyl)-2-{[(1S)-1-(4-{[4-(2-methylacryloyl)piperazin-1-yl]methyl}phenyl)ethyl]amino} pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 144);

8-(2,2-Dimethyl-propyl)-2-[(S)-1-(4-hydroxy-phenyl)-ethylamino]-8H-pyrido[2,3-d]pyrimidin-7-one (cpd 145);

4-(4-{(S)-1-[8-((S)-1,2-Dimethyl-propyl)-7-oxo-7,8-dihydro-pyrido[2,3-d]pyrimidin-2-ylamino]-ethyl}-phenoxy)-piperidine-1-carboxylic acid benzyl ester (cpd 146);

2-{[(1S)-1-{4-[(3,3-difluoroazetidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 147);

2-{[(1S)-1-{4-[(3,3-difluoropyrrolidin-1-yl)methyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d]pyrimidin-7(8H) -one (cpd 148);

8-[(2R)-butan-2-yl]-2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 149);

2-{[(1S)-1-(4-{[(2R,6S)-2,6-dimethylmorpholin-4-yl]methyl}-3-fluorophenyl)ethyl]amino}-8-[(2S)-3-methylbutan-2-yl] pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 150);

2-{[(1S)-1-(4-{[(2R,6S)-2,6-dimethylmorpholin-4-yl]methyl}-2-fluorophenyl)ethyl]amino}-8-(2,2-dimethylpropyl) pyrido [2,3-d]pyrimidin-7(8H)-one (cpd 151);

2-{[(1S)-1-{4-[(4,4-difluoropiperidin-1-yl)methyl]-2-fluorophenyl}ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 152);

8-(2,2-dimethylpropyl)-2-({(1S)-1-[2-fluoro-4-(morpholin-4-ylmethyl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 153);

4-(4-{(S)-1-[8-(2,2-Dimethyl-propyl)-7-oxo-7,8-dihydro-pyrido[2,3-d]pyrimidin-2-ylamino]-ethyl}-phenoxy)-piperidine-1-carboxylic acid tert-butyl ester (cpd 154);

8-((S)-1,2-Dimethyl-propyl)-2-{(S)-1-[4-(piperidin-4-yloxy)-phenyl]-ethylamino}-8H-pyrido[2,3-d]pyrimidin-7-one (cpd 155);

2-{(S)-1-[4-(1-Acryloyl-piperidin-4-yloxy)-phenyl]-ethylamino}-8-(2,2-dimethyl-propyl)-8H-pyrido[2,3-d]pyrimidin-7-one (cpd 156);

8-(2,2-dimethylpropyl)-2-{[(1S)-1-(4-{[4-(2-methylpropanoyl)piperazin-1-yl]methyl}phenyl)ethyl]amino} pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 157);

2-{[(1S)-1-(4-{[4-(cyclopropylcarbonyl)piperazin-1-yl]methyl}phenyl)ethyl]amino}-8-(2,2-dimethylpropyl)pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 158);

2-{(S)-1-[4-(1-Acryloyl-piperidin-4-yloxy)-phenyl]-ethylamino}-8-((S)-1,2-dimethyl-propyl)-8H-pyrido[2,3-d]pyrimidin-7-one (cpd 159);

8-((S)-1,2-Dimethyl-propyl)-2-{(S)-1-[4-(1-isobutyryl-piperidin-4-yloxy)-phenyl]-ethylamino}-8H-pyrido[2,3-d]pyrimidin-7-one (cpd 160);

2-{(S)-1-[4-(4-Acryloyl-piperazin-1-ylmethyl)-phenyl]-ethylamino}-8-((S)-1,2-dimethyl-propyl)-8H-pyrido[2,3-d] pyrimidin-7-one (cpd 161);

8-((S)-1,2-Dimethyl-propyl)-2-((S)-1-{4-[4-(2-methyl-acryloyl)-piperazin-1-ylmethyl]-phenyl}-ethylamino)-8H-pyrido [2,3-d]pyrimidin-7-one (cpd 162);

2-{[(1S)-1-(4-bromophenyl)ethyl]amino}-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 163);

2-{[(1S)-1-(4-{[(2R,6S)-2,6-dimethylmorpholin-4-yl]methyl}phenyl)ethyl]amino}-8-[(2S)-1,1,1-trifluoropropan-2-yl] pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 164);

4'-[(1S)-1-({8-[(2S)-3-methylbutan-2-yl]-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl}amino)ethyl]biphenyl-2-carbonitrile (cpd 165);

2-({(1S)-1-[4-(2-fluoropyridin-4-yl)phenyl]ethyl}amino)-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 166);

tert-butyl 4-{4-[(1S)-1-({8-[(2S)-3-methylbutan-2-yl]-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl}amino)ethyl]phenyl}-3,6-dihydropyridine-1(2H)-carboxylate (cpd 167);

2-({(1S)-1-[4-(1-acryloyl-1,2,3,6-tetrahydropyridin-4-yl)phenyl]ethyl}amino)-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 168);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-[(2S)-1,1,1-trifluoropropan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 169);

2-{[(1S)-1-{4-[(3,3-difluoropiperidin-1-yl)methyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 170);

8-[(1S)-1-cyclopropylethyl]-2-{[(1S)-1-(4-{[(2R,6S)-2,6-dimethylmorpholin-4-yl]methyl}-3-fluorophenyl)ethyl] amino}pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 171);

2-{[(1S)-1-(6-chloro-2-oxo-1,2-dihydroquinolin-3-yl)ethyl]amino}-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 172);

8-[(2S)-3-methylbutan-2-yl]-2-({(1S)-1-[4-(morpholin-4-yl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 173);

benzyl 4-{4-[(1S)-1-({8-[(2S)-3-methylbutan-2-yl]-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl}amino)ethyl]phenyl}piperazine-1-carboxylate (cpd 174);

2-({(1S)-1-[4-(4-acryloylpiperazin-1-yl)phenyl]ethyl}amino)-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 175);

8-[(2S)-3-methylbutan-2-yl]-2-({(1S)-1-[4-(piperazin-1-yl)phenyl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 176);

2-({(1S)-1-[4-(4-ethylpiperazin-1-yl)phenyl]ethyl}amino)-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 177);

benzyl 4-{2-fluoro-4-[(1S)-1-({8-[(2S)-3-methylbutan-2-yl]-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl}amino)ethyl]phenyl}piperazine-1-carboxylate (cpd 178);

2-({(1S)-1-[4-(4-acryloylpiperazin-1-yl)-3-fluorophenyl]ethyl}amino)-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 179);

8-[(2S)-3-methylbutan-2-yl]-2-({(1S)-1-[6-(piperazin-1-yl)pyridin-3-yl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 180);

2-({(1S)-1-[6-(4-acryloylpiperazin-1-yl)pyridin-3-yl]ethyl}amino)-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 181);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-(2-azidoethyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 182);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]-3-fluorophenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 183);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 184);

tert-butyl 4-(4-{(1S)-1-[(8-ethyl-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl)amino]ethyl}benzyl)piperazine-1-carboxylate (cpd 185);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 186);

2-{[(1S)-1-{4-[1-(4-acryloylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 187);

8-[(2S)-3-methylbutan-2-yl]-2-{[(1S)-1-{4-[(4-methyl-3-oxopiperazin-1-yl)methyl]phenyl}ethyl]amino}pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 188);

tert-butyl 4-(4-{(1S)-1-[(8-ethyl-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl)amino]ethyl}benzoyl)piperazine-1-carboxylate (cpd 189);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)carbonyl]phenyl}ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 190);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)carbonyl]-3-fluorophenyl}ethyl]amino}-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 191);

N-(1-acryloylpiperidin-4-yl)-2-fluoro-4-[(1S)-1-{[7-oxo-8-(propan-2-yl)-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl] amino} ethyl]benzamide (cpd192);

tert-butyl 6-[(1S)-1-({8-[(2S)-3-methylbutan-2-yl]-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl}amino)ethyl]-3',6'-dihydro-3,4'-bipyridine-1'(2'H)-carboxylate (cps 193);

2-{[(1S)-1-(1'-acryloyl-1',2',3',6'-tetrahydro-3,4'-bipyridin-6-yl)ethyl]amino}-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 194);

2-({(1S)-1-[1'-(cyclopropylcarbonyl)-1',2',3',6'-tetrahydro-3,4'-bipyridin-6-yl]ethyl}amino)-8-[(2S)-3-methylbutan-2-yl] pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 195);

8-[(2S)-3-methylbutan-2-yl]-2-({(1S)-1-[2'-(trifluoromethyl)-3,4'-bipyridin-6-yl]ethyl}amino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 196);

2-{[(1S)-1-(2'-fluoro-3,4'-bipyridin-6-yl)ethyl]amino}-8-[(2S)-3-methylbutan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 197);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-[(2S)-1-fluoropropan-2-yl]pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 198);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-[(2S)-1-hydroxypropan-2-yl]pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 199);

tert-butyl 4-{4-[(1S)-1-{[4-cyano-8-(2,2-dimethylpropyl)-7-oxo-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl] amino} ethyl] benzyl}piperazine-1-carboxylate (cpd 200);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)-4-ethoxypyrido[2,3-d] pyrimidin-7(8H)-one (cpd 201);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-(2,2-dimethylpropyl)-4-(methylamino)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 202);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-4-(dimethylamino)-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 203);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-7-oxo-8-(propan-2-yl)-7,8-dihydropyrido[2,3-d]pyrimidine-4-carbonitrile (cpd 204);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-4-[(2,4-dimethoxybenzyl)amino]-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 205);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-4-amino-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 206);

2-{[(1S)-1-(4-{[(2R)-4-acryloyl-2-methylpiperazin-1-yl]methyl}phenyl)ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 207);

2-{[(1S)-1-(4-{[(3R)-4-acryloyl-3-methylpiperazin-1-yl]methyl}phenyl)ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 208);

2-{[(1S)-1-(4-{[(2R)-4-acryloyl-2-(propan-2-yl)piperazin-1-yl]methyl}phenyl)ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 209);

2-{[(1S)-1-(4-{[(2S)-4-acryloyl-2-methylpiperazin-1-yl]methyl}phenyl)ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 210);

2-{[(1S)-1-(4-{[(3S)-4-acryloyl-3-methylpiperazin-1-yl]methyl}phenyl)ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 211);

2-{[(1S)-1-(4-{[(2S)-4-acryloyl-2-(propan-2-yl)piperazin-1-yl]methyl}phenyl)ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 212);

2-{[(1S)-1-{6-[(4-acryloylpiperazin-1-yl)methyl]pyridin-3-yl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 213);

2-{[(1S)-1-{4-[1-(4-acryloylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 214);

2-{[(1S)-1-{4-[1-(4-acryloylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-8-methylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 215);

2-{[(1S)-1-{4-[1-(4-acryloylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-8-(2,6-difluorobenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 216);

2-{[(1S)-1-{4-[(4-acryloylpiperazin-1-yl)methyl]phenyl}ethyl]amino}-8-(4-ethynyl-2-fluorobenzyl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 217);

2-{[(1S)-1-{4-[1-(4-acryloylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-8-cyclopropylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 218);

2-{[(1S)-1-{4-[1-(4-acryloylpiperazin-1-yl)-2-cyclopropylethyl]phenyl}ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 219);

2-{[(1S)-1-{4-[1-(4-acryloylpiperazin-1-yl)-2-cyclopropylethyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 220);

2-{[(1S)-1-(4-{1-[4-(2-methylacryloyl)piperazin-1-yl]propyl}phenyl)ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 221);

2-({(1S)-1-[4-(1-{4-[(2E)-but-2-enoyl]piperazin-1-yl}propyl)phenyl]ethyl}amino)-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 222);

2-{[(1S)-1-(4-{[(3R)-1-acryloylpyrrolidin-3-yl]oxy}phenyl)ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 223);

2-{[(1S)-1-(4-{[(3S)-1-acryloylpyrrolidin-3-yl]oxy}phenyl)ethyl]amino}-8-ethylpyrido[2,3-d]pyrimidin-7(8H)-one (cpd 224);

phenyl 4-[(1S)-1-{4-[(1S)-1-{[7-oxo-8-(propan-2-yl)-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]phenyl} propyl] piperazine-1-carboxylate (cpd 225);

phenyl 4-[(1R)-1-{4-[(1S)-1-{[7-oxo-8-(propan-2-yl)-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]phenyl}propyl] piperazine-1-carboxylate (cpd 226);

2-{[(1S)-1-{4-[(1S)-1-(4-acryloylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 227);

2-{[(1S)-1-{4-[(1R)-1-(4-acryloylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 228);

2-{[(1R)-1-{4-[(1R)-1-(4-acryloylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 229);

2-{[(1S)-1-{4-[(1S)-1-(4-acryloylpiperazin-1-yl)-2-cyclopropylethyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 230);

2-{[(1S)-1-{4-[(1R)-1-(4-acryloylpiperazin-1-yl)-2-cyclopropylethyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 231);

4-{4-[(S)-1-(1-Ethyl-2-oxo-1,2-dihydro-[1,6]naphthyridin-7-ylamino)-ethyl]-benzyl}-piperazine-1-carboxylic acid tert-butyl ester (cpd 232);

4-(1-{4-[(S)-1-(1-Ethyl-2-oxo-1,2-dihydro-[1,6]naphthyridin-7-ylamino)-ethyl]-phenyl}-propyl)-piperazine-1-carboxylic acid tert-butyl ester (cpd 233);

4-((S)-1-{4-[(S)-1-(1-Ethyl-2-oxo-1,2-dihydro-[1,6]naphthyridin-7-ylamino)-ethyl]-phenyl}-propyl)-piperazine-1-carboxylic acid phenyl ester (cpd 234);

7-{(S)-1-[4-(3,3-Difluoro-piperidin-1-ylmethyl)-phenyl]-ethylamino}-1-(2,2-dimethyl-propyl)-1H-[1,6]naphthyridin-2-one (cpd 235);

7-{(S)-1-[4-(4-Acryloyl-piperazin-1-ylmethyl)-phenyl]-ethylamino}-1-ethyl-1H-[1,6]naphthyridin-2-one (cpd 236);

7-((S)-1-{4-[1-(4-Acryloyl-piperazin-1-yl)-propyl]-phenyl}-ethylamino)-1-ethyl-1H-[1,6]naphthyridin-2-one (cpd 237);

7-((S)-1-{4-[(S)-1-(4-Acryloyl-piperazin-1-yl)-propyl]-phenyl}-ethylamino)-1-ethyl-1H-[1,6]naphthyridin-2-one (cpd 238);

7-{[(1S)-1-{4-[(1S)-1-(4-acryloylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-1-(propan-2-yl)-1,6-naphthyridin-2(1H)-one (cpd 239);

2-{[(1S)-1-{4-[1-(4-propanoylpiperazin-1-yl)propyl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 240);

1-acryloyl-4-{4-[(1S)-1-{[7-oxo-8-(propan-2-yl)-7,8-dihydropyrido[2,3-d]pyrimidin-2-yl]amino}ethyl]phenyl}piperidine-4-carbonitrile (cpd 241);

2-{[(1S)-1-(4-{(1S)-1-[4-(3-chloropropanoyl)piperazin-1-yl]-2-cyclopropylethyl}phenyl)ethyl]amino}-8-(propan-2-yl) pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 242);

2-{[(1S)-1-(4-{(1R)-1-[4-(3-hydroxypropanoyl)piperazin-1-yl]propyl}phenyl)ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 243);

2-[(1-{4-[1-(4-acryloylpiperazin-1-yl)-2-cyclopropylethyl]phenyl}cyclopropyl)amino]-8-(propan-2-yl)pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 244);

2-[(1-{4-[(1R)-1-(4-acryloylpiperazin-1-yl)-2-cyclopropylethyl]phenyl}cyclopropyl)amino]-8-(propan-2-yl)pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 245);

2-[(1-{4-[(1S)-1-(4-acryloylpiperazin-1-yl)-2-cyclopropylethyl]phenyl}cyclopropyl)amino]-8-(propan-2-yl)pyrido[2,3-d] pyrimidin-7(8H)-one (cpd 246);

2-[(1-{4-[1-(4-acryloylpiperazin-1-yl)propyl]phenyl}cyclopropyl)amino]-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 247);

2-[(1-{4-[(1R)-1-(4-acryloylpiperazin-1-yl)propyl]phenyl}cyclopropyl)amino]-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 248);

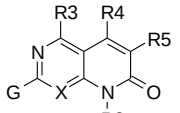
2-[(1-{4-[(1S)-1-(4-acryloylpiperazin-1-yl)propyl]phenyl}cyclopropyl)amino]-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 249);

2-{[(1S)-1-{4-[(2E)-pent-2-en-3-yl]phenyl}ethyl]amino}-8-(propan-2-yl)pyrido[2,3-d]pyrimidin-7(8H)-one (cpd 250); and

7-{[(1S)-1-{4-[(1S)-1-(4-acryloylpiperazin-1-yl)-2-cyclopropylethyl]phenyl}ethyl]amino}-1-(propan-2-yl)-1,6-naphthyridin-2(1H)-one (cpd 251).

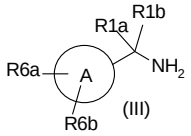
**6.** A process for the preparation of a compound of formula (I) or a pharmaceutical acceptable salt thereof, as defined in claim 1, said process comprises the following steps:

**Step 1a)** reacting a compound of formula (II):




(II)

wherein G is chloro, $MeS(O)_2$-, or MeS(O)-; R2 is an optionally substituted group selected from straight or branched $(C_1$-$C_6)$alkyl, $(C_3$-$C_6)$cycloalkyl-$(C_1$-$C_6)$alkyl, aryl-$(C_1$-$C_6)$alkyl, and heterocyclyl-$(C_1$-$C_6)$alkyl; X is nitrogen or -CH-, R3 is hydrogen, chloro, cyano, $CONH_2$, $NH_2$, NR13R13a, OR12, or an optionally substituted group selected from straight or branched $(C_1$-$C_6)$alkyl, $(C_3$-$C_6)$cycloalkyl-$(C_1$-$C_6)$alkyl, aryl and heteroaryl; R4 is hydrogen or an optionally substituted straight or branched $(C_1$-$C_6)$alkyl; R5 is hydrogen, fluoro, cyano, an optionally substituted straight or branched $(C_1$-$C_6)$alkyl or OR12, wherein R12 is an optionally substituted straight or branched $(C_1$-$C_6)$alkyl and R13, R13a are each independently selected from hydrogen or optionally substituted straight or branched $(C_1$-$C_6)$alkyl; with a compound of formula (III):



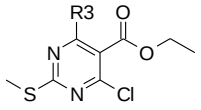

(III)

wherein R1a is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl; R1b is an optionally substituted ($C_1$-$C_6$)alkyl, or together with the atom to which they are bound, R1a and R1b may form a ($C_3$-$C_6$)cycloalkyl; A is a ($C_3$-$C_6$) cycloalkyl, aryl or heteroaryl; R6a and R6b are each independently selected from hydrogen, halogen, cyano, an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, ($C_3$-$C_6$)cycloalkyl, cycloalkyl-alkyl, ($C_2$-$C_6$)alkenyl, ($C_2$-$C_6$)alkynyl, aryl, heteroaryl, heterocyclyl, -OR7, NR7R8, -COOR7, -$SO_2$R7, -CONR7R8 -CH(R14)OR7, and -CH(R14)NR7R8 wherein R14 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl and R7 and R8 are each independently hydrogen or a group selected from an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, ($C_3$-$C_6$)cycloalkyl, aryl, heteroaryl, heterocyclyl, aryl-alkyl, heteroaryl-alkyl, heterocyclyl-alkyl, heterocyclyl-C(O)-alkyl, heterocyclyl-C(O)-alkenyl, heterocyclyl-C(O)-alkynyl or, together with the nitrogen atom to which they are bound, R7 and R8 form a 5- to 7-membered heteroaryl or heterocyclyl group optionally containing one additional heteroatom selected from O, S and NR9; wherein R9 is hydrogen, an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, -COOR10 or -COR11; wherein R10 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl; R11 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, ($C_2$-$C_6$)alkenyl or ($C_2$-$C_6$)alkynyl;

to yield a compound of general formula (I);

the compound of formula (II) wherein G is $MeS(O)_2$- or MeS(O)- can be prepared according to the following steps:

**Step 2a**) substituting the chlorine of an intermediate compound of formula (IV):



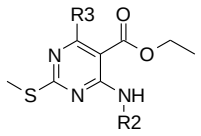
(IV)

wherein R3 is hydrogen, or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, with an amine intermediate compound of formula (V):

(V)

wherein R2 is as defined above;

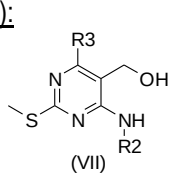
**Step 2b)** reacting a compound of formula (VI):



(VI)

wherein R2 and R3 are as defined above, with a reducing agent;

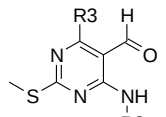
**Step 2c)** reacting the resultant compound of formula (VII):



(VII)

wherein R2 and R3 are as defined above, with an appropriate oxydant reagent;

**Step 2d)** reacting the resultant compound of formula (VIII):



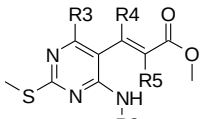
(VIII)

wherein R2 and R3 are as defined above, with an compound of formula (IX):

(IX)

wherein Y is a suitable leaving group for Wittig or Horner–Wadsworth–Emmons reaction (or HWE reaction) such as triphenylphosphorane or diethylphosphonate, and R5 is hydrogen or fluoro, or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

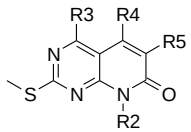
**Step 2e)** cyclize an intermediate compound of formula (X):



(X)

wherein R2, R3, R4 and R5 are as defined above under basic conditions, to obtained the intermediate compound of formula (XI);

**Step 2f)** mixing the resultant intermediate compound of formula (XI):

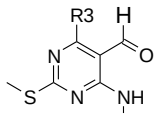


(XI)

wherein R2, R3, R4 and R5 are as defined above, with a oxydant reagent, to give a compound of formula (II) wherein G is $MeS(O)_2$-, or MeS(O)- and R2, R3, R4 and R5 are as as defined above;

alternatively compounds of formula (XI) can be prepared according to the following steps:

**Step 3a)** reacting a compound of formula (VIII):



(VIII)

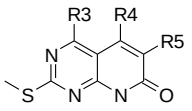
wherein R2, is as defined above, and R3 is hydrogen, chloro or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl; with an compound of formula (IXa):

(IXa)

wherein R5 is hydrogen or OR12, wherein R12 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, to yield a compound of formula (XI) wherein R2, R3 and R4 are as defined above and R5 is hydrogen or OR12 wherein R12 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

or

**Step 3a')** alkylating the intermediate compound of formula (XII):

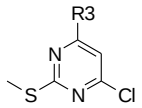


(XII)

wherein, R3 and R4 are as defined above and R5 is hydrogen, fluoro, cyano, an optionally substituted straight or branched ($C_1$-$C_6$)alkyl or OR12, wherein R12 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, with an alkylating agent of formula R2-X (XIII), wherein X is bromine, iodine, -OMs –OTs or hydroxy and R2 is as defined above, to give a compound of formula (XI) wherein R2, R3, R4 and R5 are as defined above;

or

**Step 3a''**) reacting a compound of formula (XIV):



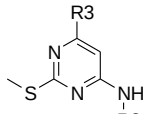
(XIV)

wherein R3 is as defined above, with a compound of formula (V):

(V)

wherein R2 is as defined above;

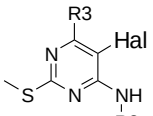
**Step3b)** reacting the resultant intermediate compound of formula (XV):



(XV)

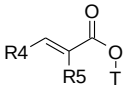
wherein R3 and R2 are as defined above, with a halogenation reagent;

**Step 3c**) reacting the intermediate compound of formula (XVI):



(XVI)

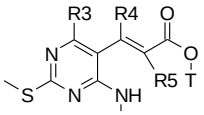
with a compound of formula (XVIIa):



(XVIIa)

wherein R4 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, R5 is hydrogen and T is a straight or branched ($C_1$-$C_6$)alkyl;

**Step 3d)** cyclize an intermediate compound of formula (Xa):

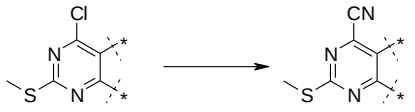


(Xa)

wherein R2, R3, R4, R5 and T are as defined above under basic conditions, so to obtain the intermediate compound of formula (XI), wherein R4 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, R5 is hydrogen and R2 and R3 are as defined above;

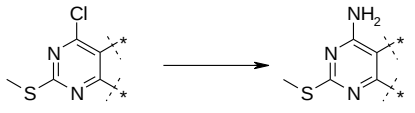
if desired, converting a first compound of formula (XI) into a second compound of formula (XI) by operating according to any one of the following synthetic conditions:

**conv. A)** converting a compound of formula (XI):



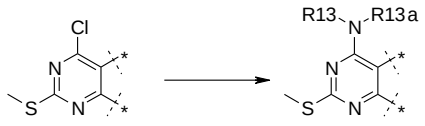

wherein R3 is chloro, into a compound of formula (XI) wherein R3 is CN, by reacting with a source of cyanide, following the condition known in the art for palladium-catalyzed cyanation of aryl halides;

**conv. B)** converting a compound of formula (XI):



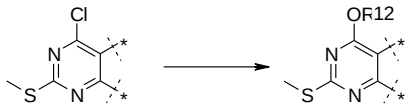

wherein R3 is chloro, into a compound of formula (XI) wherein R3 is NH2, by reacting with ammonia;

**conv. C)** converting a compound of formula (XI):



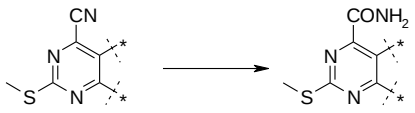

wherein R3 is chloro, into a compound of formula (XI) wherein R3 is NR13R13a, by reacting with an amine NR13R13a wherein R13 and R13a are each independently selected from hydrogen or optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

**conv. D)** converting a compound of formula (XI):



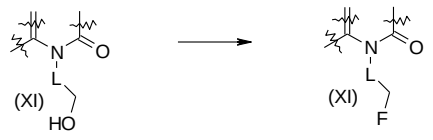

wherein R3 is chloro, into a compound of formula (XI) wherein R3 is OR12, by reacting with an alcohol R12-OH wherein R12 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

**conv. E)** converting a compound of formula (XI):




wherein R3 is cyano, into a compound of formula (XI) wherein R3 is $CONH_2$, by hydrolysis with a suitable agent;

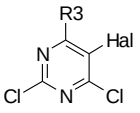
**conv. F)** converting a compound of formula (XI):



wherein R2 is a group of formula L-$CH_2OH$, into a compound of formula (XI), wherein R2 is a group of formula L–$CH_2F$ wherein L is an optionally substituted group selected straight or branched ($C_1$-$C_6$)alkyl, ($C_3$-$C_6$)cycloalkyl-($C_1$-$C_6$)alkyl, aryl-($C_1$-$C_6$)alkyl, and heterocyclyl-($C_1$-$C_6$)alkyl, by reacting with a fluorination agent;

the compound of formula (II) wherein G is chloro and X is nitrogen or -CH-, can be prepared according to the following steps:

**Step 4a**) reacting a compound of formula (XVIII):



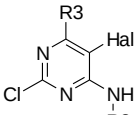
(XVIII)

wherein R3 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, and Hal is preferably bromo or iodo, with an intermediate compound of formula (V):

(V)

wherein R2 is as defined above;

**Step 4b)** mixing the obtained intermediate compound of formula (XIX):



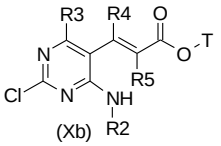
(XIX)

wherein R2, R3 and Hal are as defined above, with a reagent of formula (XVIIb):

(XVIIb)

wherein R4 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$) alkyl, R5 and T are hydrogen;

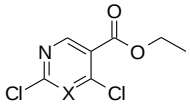
**Step 4c)** cyclize an intermediate compound of formula (Xb):



(Xb)

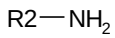
wherein R2, R3, R4, R5 and T are as defined above, with addition of acetic anhydride, to obtain the intermediate compound of formula (II) wherein G is chloro, R4 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$) alkyl, R5 is hydrogen and R2 and R3 are as defined above;

**Step 4d**) substituting the chlorine of an intermediate compound of formula (IVa):



(IVa)

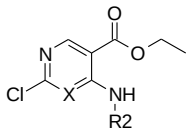
wherein X is N, or -CH, with an amine intermediate compound of formula (V):



(V)

wherein R2 is as defined above;

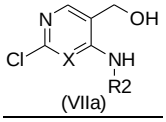
**Step 4e)** reacting a compound of formula (VIa):



(VIa)

wherein X is N, or –CH and R2 is as defined above, with a reducing agent;

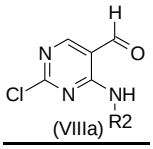
**Step 4f)** reacting the resultant compound of formula (VIIa):



(VIIa)

wherein X is N, or –CH and R2 is as defined above, with an appropriate oxydant reagent;

**Step 4g)** reacting a compound of formula (VIIIa):



(VIIIa)

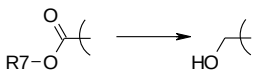
wherein R2 is as defined above, with an compound of formula (IXa):

(IXa)

wherein R5 is hydrogen or OR12, wherein R12 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, to yield a compound of formula (II) wherein G is chloro and X is nitrogen or -CH-, R2 is as defined above, R3 and R4 are hydrogen and R5 is hydrogen or OR12 wherein R12 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl;

a first compound of general formula (I) can be conveniently converted into a second compound of general formula (I) by operating according to any one of the following synthetic conditions:

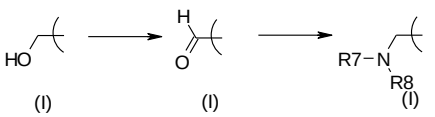
**conv. 1)** converting a compound of formula (I):



(I) (I)

wherein R6a is a group of formula –COOR7, R7 is an optionally substituted straight or branched ($C_1$-$C_6$) alkyl, into a compound of formula (I) wherein R6a is a group of formula –$CH_2$OH, by reacting with a suitable reducing reagent;

**conv. 2)** converting a compound of formula (I):

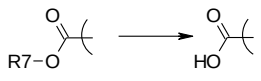


(I) (I) (I)

wherein R6a is a group of formula –$CH_2$OH, into a compound of formula (I) wherein R6a is a group -CH(R14)NR7R8 wherein R14 is hydrogen, by first converting the group –$CH_2$OH into the corresponding aldehyde –CHO then,

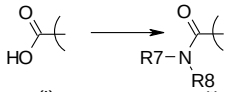
reacting the resulting derivative with a compound of formula R7R8NH (XX), wherein R6 and R7 are as defined above, under reductive amination conditions in the presence of a suitable reducing agents;

**conv. 3)** converting a compound of formula (I):



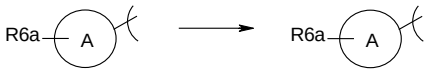

wherein R6a is a group of formula –COOR7, wherein R7 is an optionally substituted straight or branched ($C_1$-$C_6$) alkyl, into a compound of formula (I), wherein R6a is a group of formula –COOH under acidic or basic conditions;

**conv. 4)** converting a compound of the formula (I):




wherein R6a is a group of formula –COOH, into a compound of formula (I), wherein R6a is a group of formula –CONR7R8, wherein R7 and R8 are as defined above by reaction with a compound of formula R7R8NH (XX), in the presence of suitable amide coupling agents;

**conv. 5)** converting a compound of formula (I):




wherein A is aryl or heteroaryl and R6a is chloro, bromo or iodo, into a compound of formula (I), wherein R6a is an optionally substituted group selected from ($C_1$-$C_6$)alkyl, ($C_2$-$C_6$)alkenyl, ($C_2$-$C_6$)alkynyl, ($C_3$-$C_7$)cycloalkyl, heterocyclyl, aryl, heteroaryl, by reaction with a reagent of formula R6aQ (XXI), wherein R6a is as defined above and Q is a group selected from boronic acid, boronic ester, and –Sn[($C_1$-$C_6$)alkyl]$_3$, under Pd-based catalyzed cross-coupling conditions;

**conv. 6)** converting a compound of formula (I):

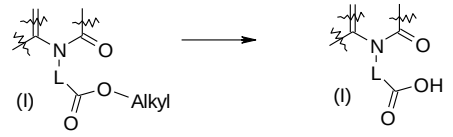
wherein R6a is a linker group M of formula – CH(R14)NR7R8 or –CONR7R8 or NR7R8 wherein R14 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, R7 and R8 together with the nitrogen atom to which they are bound, may form a 5 to 7 membered heterocyclyl group optionally containing one additional group such as N-R9, wherein R9 is a suitable protecting group, into a compound of formula (I), wherein A is as defined above and R9 is hydrogen, under basic or acid hydrogenation conditions;

**conv. 7)** converting a compound of formula (I):

wherein R6a is a linker group M of formula – CH(R14)NR7R8, or –CONR7R8 or NR7R8 wherein R14 is hydrogen or an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, R7 and R8 together with the nitrogen atom to which they are bound, may form a 5 to 7 membered heterocyclyl group optionally containing one additional group such as N-R9,

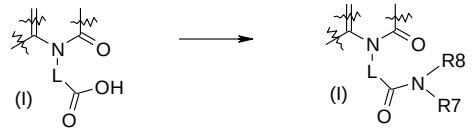
wherein R9 is hydrogen, into a compound of formula (I) wherein A, is as defined above and R9 is –COR11, wherein R11 is an optionally substituted straight or branched ($C_1$-$C_6$)alkyl, ($C_2$-$C_6$) alkenyl or ($C_2$-$C_6$) alkynyl, by reaction with a reagent of formula R11COW (XXII), wherein R11 is as defined above and W is OH or Cl;

**conv. 8)** converting a compound of formula (I):



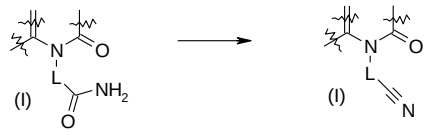

wherein R2 is a group of formula L-COOAlkyl wherein L is an optionally substituted group selected straight or branched ($C_1$-$C_6$)alkyl, ($C_3$-$C_6$)cycloalkyl-($C_1$-$C_6$)alkyl, aryl-($C_1$-$C_6$)alkyl, and heterocyclyl-($C_1$-$C_6$)alkyl, into a compound of formula (I) wherein R2 is a group of formula L-COOH, wherein L is as defined above; under acidic or basic conditions;

**conv. 9)** converting a compound of formula (I):



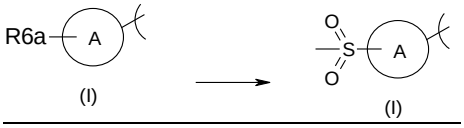

wherein R2 is a group of formula L-COOH, wherein L is as defined above, into a compound of formula (I), wherein R2 is a group of formula L–CONR7R8, wherein L, R7 and R8 are as defined above, by reaction with a compound of formula R7R8NH (XX), in the presence of a amide coupling agents;

**conv. 10)** converting a compound of formula (I):



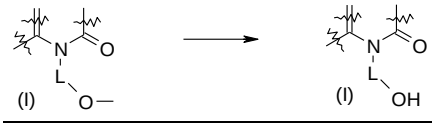

wherein R2 is a group of formula L-$CONH_2$ wherein L is as defined above, into a compound of formula (I), wherein R2 is a group of formula L–CN, wherein L is as defined above, by reaction with a dehydration agent;

**conv. 11)** converting a compound of formula (I):



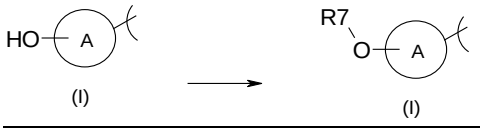

wherein A is aryl or heteroaryl and R6a is chloro, bromo or iodo, into a compound of formula (I), wherein R6a is methylsulphonyl group, under cross-coupling reaction conditions;

**conv. 12)** converting a compound of formula (I):



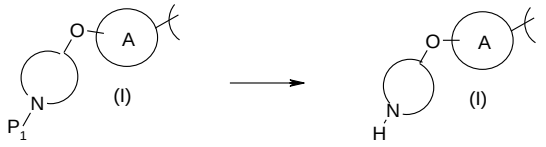

wherein L is a group selected from aryl ($C_1$-$C_6$)alkyl, and heterocyclyl-($C_1$-$C_6$) alkyl, into a compound of formula (I) wherein L is defined above, under strong Lewis acid conditions;

**conv. 13)** converting a compound of formula (I):



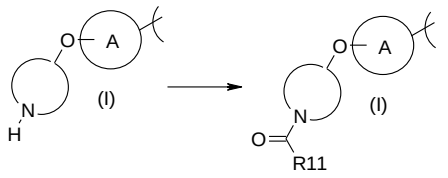

wherein R6a is a phenolic group, into a compound of formula (I) wherein R6a is a group OR7 wherein R7 is as defined above, by reaction with a reagent of formula R7-X (XXIII), wherein R7 is as defined above and X is hydroxy, bromine, iodine, -OMs or -OTs;

**conv. 14)** converting a compound of formula (I):



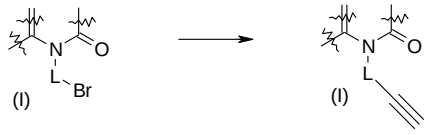

wherein A is as defined above and R6a is a group –OR7 wherein R7 is heterocyclyl group and P1 is a suitable protecting group, into a compound of formula (I), wherein A is as defined above and R7 is heterocyclyl, operating, e.g., under basic or acid hydrogenation;

**conv. 15)** converting a compound of formula (I):




wherein A is as defined above and R6a is a group -OR7 wherein R7 is a heterocyclyl group, into a compound of formula (I), wherein A and R11 are as defined above, by reaction with a reagent of formula R11COW, (XXII) wherein R11 is as defined above and W is OH or Cl.

**conv. 16)** converting a compound of formula (I):




wherein L is a group selected from aryl($C_1$-$C_6$)alkyl, and heterocyclyl-($C_1$-$C_6$)-alkyl, into a compound of formula (I) wherein L is defined above, under Sonogashira reaction;

**7.** Use of a compound of formula (I) or a pharmaceutically acceptable salt thereof, as defined in claim 1, in the manufacture of a medicament for the treatment of a disease caused by and/or associated with increased 2-hydroxyglutarate level, wherein an effective amount of a compound of formula (I) as defined in claim 1 is to be administered to a mammal, preferably a human, in need thereof .

**8**. Use of a compound of formula (I) or a pharmaceutically acceptable salt thereof, as defined in claim 1, in the manufacture of a medicament for the treatment of diseases caused by and/or associated with mutated IDH enzymes, wherein an effective amount of compound of formula (I) as defined in claim 1 is to be administered to a mammal, preferably a human, in need thereof.

**9**. Use of a compound of formula (I) or a pharmaceutically acceptable salt thereof, as defined in claim 1, in the manufacture of a medicament for the treatment of diseases caused by and/or associated with IDH wt over-functions, , wherein an effective amount of compound of formula (I) as defined in claim 1 is to be administered to a mammal, preferably a human, in need thereof.

**10.** The use according to any of the claims 7 to 9, wherein the disease is selected from the group consisting of cancer, cell proliferative disorders and immune-related disorders.

**11.** The use according to claim 10 wherein the cancer is selected from the group consisting of: carcinomas, such as bladder, breast, kidney, liver, colon, lung, including small cell lung cancer, esophagus, gall-bladder, ovary, pancreas, stomach, cervix, prostate, and skin, including squamous cell carcinoma; hematopoietic tumors of lymphoid lineage including leukemia, acute lymphocitic leukemia, acute lymphoblastic leukemia, B-cell lymphoma, angioimmunoblastic T-cell lymphoma, Hodgkin's lymphoma, non-Hodgkin's lymphoma, hairy cell lymphoma and Burkitt's lymphoma; hematopoietic tumors of myeloid lineage, including acute and chronic myelogenous leukemias, myelodysplastic syndrome and promyelocytic leukemia; tumors of mesenchymal origin, including fibrosarcoma and rhabdomyosarcoma; tumors of the central and peripheral nervous system, including glioma, glioblastoma, glioblastoma multiforme, astrocytoma, oligodendroglioma, paraglioma, neuroblastoma, and schwannomas; and other tumors, including melanoma, seminoma, teratocarcinoma, osteosarcoma, xeroderma pigmentosum, keratoxanthoma, thyroid cancers, such as papillary thyroid carcinoma and medullary thyroid carcinoma, Kaposi's sarcoma, chondrosarcoma, and cholangiocarcinoma.

**12.** A compound of formula (I) or a pharmaceutically acceptable salt thereof, as defined in claim 1, for use as a medicament.

**13.** A pharmaceutical composition comprising a compound of formula (I) or a pharmaceutically acceptable salt thereof, as defined in claim 1, in association with a pharmaceutically acceptable excipient, carrier or diluent.

**14.** A pharmaceutical composition according to claim 13 further comprising one or more chemotherapeutic agents.

**15.** A product or kit comprising a compound of formula (I) or a pharmaceutically acceptable salt thereof, as defined in claim 1, and one or more chemotherapeutic agents, as a combined preparation for simultaneous, separate or sequential use in anticancer therapy.