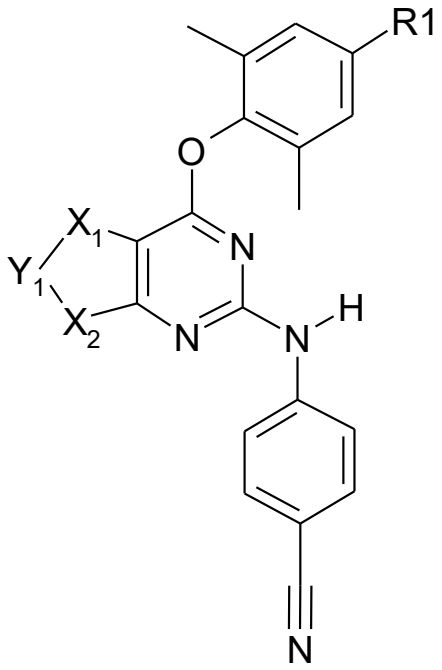
Claims

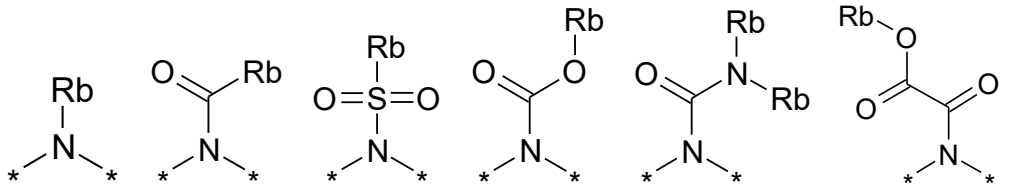
1. Compound of formula I



(1),

X^1, X^2 represent substituent of $(CH_2)_n$ type, wherein, n is selected independently for X_1, X_2 and may take on values from 1 to 3;

Y^1 is selected independently and represents -O-, or substituents of the following type:



;

wherein each substituent R1, Rb is independently selected from the group including:

H, CN, CN-CH=CH-, C=O, CH=CH-COOH,

substituted or unsubstituted C_{1-6}alkyl; substituted or unsubstituted C_{2-6}alkenyl; substituted or unsubstituted C_{2-6}alkynyl; substituted or unsubstituted C_{1-6}alkyloxy; halogen;

NHR^9; NR^9R^{10}; -C(=O)-NHR^9; -C(=O)-NR^9R^{10}; -C(=O)-R^9;

R^7, which is selected either from monocyclic, bicyclic or saturated, or aromatic carbocycle or from monocyclic, bicyclic saturated or aromatic 4-6-membered heterocycle, having 1 to 2 heteroatoms independently selected from the group S, N and O, where each mentioned carbocyclic or heterocyclic fragment may optionally be substituted with one, two substituents, each of which is independently selected from halogen, hydroxy, C_{1-6}alkyl, C_{1-6}alkyloxycarbonyl, aminocarbonyl, $OCH_2C{\equiv}CH$, NHCOO-C_{1-6}-alkyl, -Rb-R^{7a},

where R^{7a} is either a monocyclic or aromatic carbocycle or a monocyclic, bicyclic, saturated or aromatic 4-6-membered heterocycle, having 1 to 2 heteroatoms independently selected from the group N and O, where each mentioned carbocyclic or heterocyclic fragment may optionally be substituted with one, two substituents, each of which is independently selected from halogen, hydroxy, C_1-$_6$alkyl, C_1-$_6$alkyloxycarbonyl or NHCOO-C_{1-6}-alkyl;

or R^9, where each R^9 may independently be hydrogen; cyano, aminocarbonyl, hydroxy group; C_{1-6}alkyl; C_1-$_6$alkyloxy, C_{1-6}alkylcarbonyl; C_{1-6}alkyloxycarbonyl; amino; mono(C_{1-6}alkyl)amino or R^7,

wherein each mentioned C_{1-6}alkyl group taken individually may optionally be substituted with one or two substituents, each of which is independently selected from hydroxy, C_{1-6}alkyloxy, carboxyl, C_{1-6}alkyloxycarbonyl, amino,

and R^{10}, selected from the R^7, which is selected from a series of monocyclic 6-membered saturated heterocycle having 1 O atom, monocyclic 6-membered aromatic carbocycle, bicyclic aromatic 6-membered carbocycle, and aromatic 6-membered heterocycle having 2 N atoms,

COO-tert-butyl, COOH, NHCOO-C_{1-6}-alkyl, where Rb may be linked to the rest of the molecule via a linker of $(CH_2)_n$ type, n may take on values from 1 to 3, and the compound of formula (1) may be represented by its pharmaceutically acceptable salt or may include isotopes.

2. Compound according to claim 1, where

R^1 is selected independently and represents H, CN, CN-CH=CH, C=O, CH=CH-COOH, 4-6-membered heterocyclyl, containing 1-2 heteroatom O;

R^b is selected independently and represents:

-H,

substituted or unsubstituted -C_1-C_6-alkyl,

substituted or unsubstituted -C_1-C_6-alkenyl,

substituted or unsubstituted C_6-aryl,

substituted or unsubstituted -5-6-membered-heteroaryl, containing 1 to 2 heteroatoms, independently selected from N, S and/or O,

substituted or unsubstituted -C_3- -cycloalkyl, or

substituted or unsubstituted 4-9-membered heterocyclyl, containing 1 to 2 heteroatoms, independently selected from N, and/or O,

wherein the mentioned above substituents R^b, each independently is selected from a group, comprising:

COO-tert-butyl, NH_2, C_{1-4}-alkoxy, 5-6-membered heteroaryl having 1 to 2 heteroatoms selected independently from the group of N and O, and mentioned heteroaryl is not substituted or is substituted with C_1-alkyl,

BOC; COOH; the rest of radicals are the same as defined in claim 1.

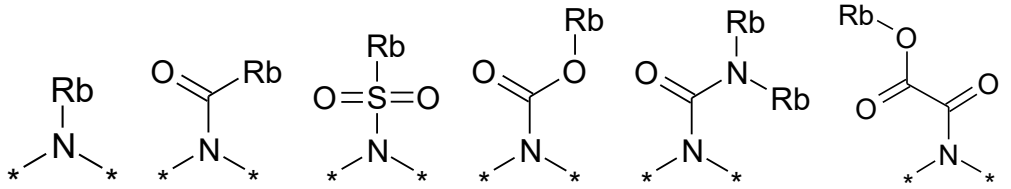
3. Compound according to claim 1, wherein R^1 is selected independently and represents H, -CN, -CH=CH-CN, -C=O or -CH=CH-COOH.

4. Compound according to claim 1, wherein R^1 is selected independently and represents 4-6-membered heterocyclyl, containing 1-2 heteroatom O.

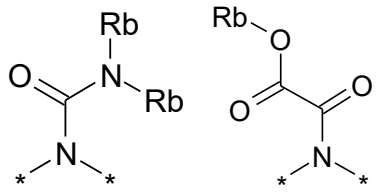
5. Compound according to claim 3, wherein R^1 represents oxetane,

6. Compound according to claim 1, wherein Y^1 represents -O-, -S-, -S(=O)- or -S(=O)$_2$-.

7. Compound according to claim 1, wherein Y^1 is substituents of the following type:



8. Compound according to claim 1, wherein Y^1 is substituents of the following type:



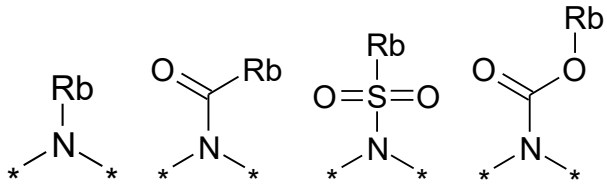
9. Compound according to claim 1, wherein R^b is substituted or unsubstituted methyl, ethyl, , n-propyl, isopropyl, , n-butyl, sec-butyl, tert-butyl or pentyl, wherein substituents are such, as determined in claim 1.

10. Compound according to claim 1, wherein R^b is substituted or unsubstituted phenyl, wherein substituents are as determined in claim 1.

11. Compound according to claim 1, wherein R^b is substituted or unsubstituted pyrrolyl, imidazolyl, pyrazolyl, pyridyl, pyrimidinyl, pyridazinyl, isobenzofuranyl, benzimidazolyl, furan and wherein substituents are as determined in claim 1.

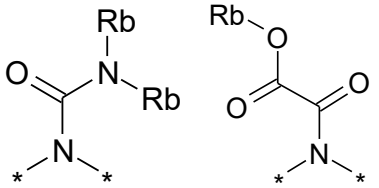
12. Compound according to claim 1, wherein R^b is substituted or unsubstituted piperidine, azetidine, morpholine, , tetrahydropyran, .

13. Compound according to claim 1, wherein Y^1 is substituents of the following type:



, a R^b is substituted or unsubstituted -5-6-membered-heteroaryl or heterocyclyl, containing 1 to 2 heteroatoms, independently selected from N, S and/or O, wherein substituents are as determined in claim 1.

14 . Compound according to claim 1, wherein Y^1 is substituents of the following type:



and Rb is substituted or unsubstituted C_6-aryl, 5-6-membered heteroaryl or -C_3-cycloalkyl and the substituents are defined in claim 1.

15 . Compound selected from:

4-((4-(2,6-Dimethylphenoxy)-6,7-dihydro-5H-cyclopenta[d]pyrimidine-2-yl)amino)-benzonitrile

4-(2,6-Dimethylphenoxy)-N-(piperidine-4-yl)-6,7-dihydro-5H-cyclopenta[d]pyrimidine-2-amine

Ethylic ether 4-(((6-benzyl-4-(4-cyano-2,6-dimethylphenoxy)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-2-yl)amino)methyl)benzoic acid

Ethylic ether 4-(((6-benzyl-4-(2,6-dimethylphenoxy)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-2-yl)amino)methyl)benzoic acid

4-(((7-Benzyl-4-(2,6-dimethylphenoxy)-5,6,7,8-tetrahydropyrido[3,4-d]pyrimidine-2-yl)amino)methyl)benzonitrile

N-(1-Benzylpiperidine-4-yl)-4-(2,6-dimethylphenoxy)-5,6,7,8-tetrahydroquinazoline-2-amine

N-(1-Benzylpiperidine-4-yl)-4-(2,6-dimethylphenoxy)-6,7-dihydro-5H-cyclopenta[d]pyrimidine-2-amine

4-((2-((4-Cyanophenyl)amino)-7-methyl-5,6,7,8-tetrahydropyrido[3,4-d]pyrimidine -4-yl)oxy)-3,5-dimethylbenzonitrile

4-((4-(4-Formyl-2,6-dimethylphenoxy)-7-methyl-5,6,7,8-tetrahydro[3,4-d]pyrimidine -2-yl)amino)benzonitrile

Tert-butyl 4-(4-(1,3-dioxolane-2-yl)-2,6-dimethylphenoxy)-2-((4-cyanophenyl)amino)-8,9-dihydro-5H-pyrimido[4,5-d]azepine-7(6H)-carboxylate

Tert-butyl 2-((4-cyanophenyl)amino)-4-(4-formyl-2,6-dimethylphenyoxy)-8,9-dihydro-5H-pyrimido[4,5-d]azepine-7(6H)-carboxylate

Tert-butyl 4-(4-cyano-2,6-dimethylphenoxy)-2-((4-cyanophenyl)amino)-7,8-dihydropyrido[4,3-d]pyrimidine-6(5H)-carboxylate

4-((2-((4-Cyanophenyl)amino)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-6-(methylsulfonyl)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

Ethyl 4-(4-cyano-2,6-dimethylphenoxy)-2-((4-cyanophenyl)amino)-7,8-dihydropyrido[4,3-d]pyrimidine-6(5H)-carboxylate

(E)-3-(4-((7-(Tert-butoxycarbonyl)-2-((4-cyanophenyl)amino)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylphenyl)acrylic acid

Tert-butyl 4-(4-cyano-2,6-dimethylphenoxy)-2-((4-cyanophenyl)amino)-8,9-dihydro-5H-pyrimido[4,5-d]azepine-7(6H)-carboxylate

4-((2-((4-Cyanophenyl)amino)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

Tert-butyl 2-((4-cyanophenyl)amino)-4-(4-(2-cyanovinyl)-2,6-dimethylphenoxy)-8,9-dihydro-5H-pyrimido[4,5-d]azepine-7(6H)-carboxylate

4-((2-((4-Cyanophenyl)amino)-7-picolynoyl-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-7-isonicotinoyl-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-7-nicotinoyl-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-7-(pyridine-2-ylmethyl)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-7-(pyridine-3-ylmethyl)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-7-(pyridine-4-ylmethyl)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

Tert-butyl 4-(4-(4-cyano-2,6-dimethylphenoxy)-2-((4-cyanophenyl)amino)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]asein-7-carbonyl)piperidine-1-carboxylate

4-((2-((4-Cyanophenyl)amino)-7-(piperidine-4-carbonyl)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

Tert-butyl 4-(4-(4-cyano-2,6-dimethylphenoxy)-2-((4-cyanophenyl)amino)-8,9-dihydro-5H-pyrimido[4,5-d]azepine-7(6H)-yl)piperidine-1-carboxylate

4-((2-((4-Cyanophenyl)amino)-7-(piperidine-4-yl)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((6-(2-Aminoacetyl)-2-((4-cyanophenyl)amino)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-6-(2-(3-hydroxyazetidine-1-yl)acetyl)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-({2-[(4-Cyanophenyl)amino]-6-[2-(morpholine-4-yl)acetyl]-5H,6H,7H,8H-pyrido[4,3-d]pyrimidine-4-yl}oxy)-3,5-dimethylbenzonitrile

4-({2-[(4-Cyanophenyl)amino]-6-[2-(4,4-difluoropiperidine-1-yl)acetyl]-5H,6H,7H,8H-pyrido[4,3-d]pyrimidine-4-yl}oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-7-(cyclopropanecarbonyl)-5,6,7,8-tetrahydro-[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-({2-[(4-Cyanophenyl)amino]-6-(morpholine-4-carbonyl)-5H,6H,7H,8H-pyrido[4,3-d]pyrimidine-4-yl}oxy)-3,5-dimethylbenzonitrile

4-({2-[(4-Cyanophenyl)amino]-6-(4-methylpiperazine-1-carbonyl)-5H,6H,7H,8H-pyrido[4,3-d]pyrimidine-4-yl}oxy)-3,5-dimethylbenzonitrile

Tert-butyl 2-(4-(4-cyano-2,6-dimethylphenoxy)-2-((cyanophenyl)amino)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-7-carbonyl)pyrrolidine-1-carboxylate

(R)-Tert-butyl 2-(4-(4-cyano-2,6-dimethylphenoxy)-2-((cyanophenyl)amino)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-7-carbonyl)pyrrolidine-1-carboxylate

(S)-Tert-butyl 2-(4-(4-cyano-2,6-dimethylphenoxy)-2-((cyanophenyl)amino)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-7-carbonyl)pyrrolidine-1-carboxylate

4-((2-((4-Cyanophenyl)amino)-7-(tetrahydro-2H-pyran-4-yl)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-7-(5-methylfuran-2-yl)methyl)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-7-(1-methyl-1H-pyrrol-2-yl)methyl)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-7-(4-hydroxybenzyl)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-7-(1-methoxypropane-2-yl)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

Tert-butyl 2-(4-(4-cyano-2,6-dimethylphenoxy)-2-((4-cyanophenyl)amino)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-6-carbonyl)pyrrolidine-1-carboxylate

4-((2-((4-Cyanophenyl)amino)-6-(pyrrolidine-2-carbonyl)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((6-(Azetidine-3-carbonyl)-2-((4-cyanophenyl)amino)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-6-(pyrazine-2-carbonyl)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

(S)-Tert-butyl (1-(4-(4-cyano-2,6-dimethylphenoxy)-2-((4-cyanophenyl)amino)-7,8-dihydropyrido[4,3-d]pyrimidine-6(5H)-yl)-1-oxopropane-2-yl)carbamate

(S)-4-((6-(2-Aminopropanoyl)-2-((4-cyanophenyl)amino)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

(S)-Ttert-butyl (1-(4-(4-cyano-2,6-dimethylphenoxy)-2-((4-cyanophenyl)amino)-7,8-dihydropyrido[4,3-d]pyrimidine-6(5H)-yl)-1-oxo-3-phenylpropane-2-yl)carbamate

(S)-4-((6-(2-Amino-3-phenylpropanoyl)-2-((4-cyanophenyl)amino)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-7-(2-morpholineoEthyl)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

(R)-Tert-butyl (1-(4-(4-cyano-2,6-dimethylphenoxy)-2-((4-cyanophenyl)amino)-7,8-dihydropyrido[4,3-d]pyrimidine-6(5H)-yl)-3-hydroxy-1-oxopropane-2-yl)carbamate

Tert-butyl (1-(4-(4-cyano-2,6-dimethylphenoxy)-2-((4-cyanophenyl)amino)-7,8-dihydropyrido[4,3-d]pyrimidine-6(5H)-yl)-4-(methylthio)-1-oxobutane-2-yl)carbamate

4-({6-[2-Amino-3-(1H-imidazole-5-yl)propanoyl]-2-[(4-cyanophenyl)amino]-5H,6H,7H,8H-pyrido[4,3-d]pyrimidine-4-yl}oxy)-3,5-dimethylbenzonitrile

4-((6-(2-Amino-3-(1H-pyrazole-4-yl)propanoyl)-2-((4-cyanophenyl)amino)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

Tert-butyl 4-(2-((tert-butoxycarbonyl)amino)-3-(4-(4-cyano-2,6-dimethylphenoxy)-2-((4-cyanophenyl)amino)-7,8-dihydropyrido[4,3-d]pyrimidine-6(5H)-yl)-3-oxopropyl)-1H-pyrazole-1-carboxylate

(R)-4-((6-(2-Amino-3-hydroxypropanoyl)-2-((4-cyanophenyl)amino)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

(S)-Tert-butyl (1-(4-(4-cyano-2,6-dimethylphenoxy)-2-((4-cyanophenyl)amino)-7,8-dihydropyrido[4,3-d]pyrimidine-6(5H)-yl)-3-(4-hydroxyphenyl)-1-oxopropane--2-yl)carbamate

(S)-4-((6-(2-Amino-3-(4-hydroxyphenyl)propanoyl)-2-((4-cyanophenyl)amino)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

(R)-Tert-butyl (1-(4-(4-cyano-2,6-dimethylphenoxy)-2-((4-cyanophenyl)amino)-7,8-dihydropyrido[4,3-d]pyrimidine-6(5H)-yl)-3-methyl-1-oxobutane-2-yl)carbamate

(R)-4-((6-(2-Amino-3-methylbutanoyl)-2-((4-cyanophenyl)amino)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

(S)-Tert-butyl (1-(4-(4-cyano-2,6-dimethylphenoxy)-2-((4-cyanophenyl)amino)-7,8-dihydropyrido[4,3-d]pyrimidine-6(5H)-yl)-4-methyl-1-oxopentane-2-yl)carbamate

(S)-4-((6-(2-Amino-4-methylpentanoyl)-2-((4-cyanophenyl)amino)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

(S)-di-Tert-butyl (6-(4-(4-cyano-2,6-dimethylphenoxy)-2-((4-cyanophenyl)amino)-7,8-dihydropyrido[4,3-d]pyrimidine-6(5H)-yl)-6-oxohexane-1,5-diyl)dicarbamate

(S)-4-((2-((4-Cyanophenyl)amino)-6-(2,6-diaminohexanoyl)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((7-(2-Chloroacetyl)-2-((4-cyanophenyl)amino)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

Methyl 4-(4-cyano-2,6-dimethylphenoxy)-2-((4-4-cyanophenyl) amino)-8,9-dihydro-5H- pyrimido[4,5-d]azepine-7(6H)-carboxylate

4-((2-((4-Cyanophenyl)amino)-7-(methylsulfonyl)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-6-(pyridine-4-ylmethyl)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-6-(pyridine-3-ylmethyl)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-6-(2-hydroxybenzyl)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-6-(2-(prop-2-in-1-yloxy)benzyl)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidine-4-yl)oxy)-3,5-dimethylbenzonitrile

3-(4-(4-Cyano-2,6-dimethylphenoxy)-2-((4-cyanophenyl)amino)-8,9-dihydro-5H- pyrimido[4,5-d]azepine-7(6H)-yl)propanoic acid

4-((7-Allyl-2-((4-cyanophenyl)amino)-6,7,8,9-tetrahydro-5H- pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((7-Acetyl-2-((4-cyanophenyl)amino)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((7-(2-(1H-Imidazole-1-yl)acetyl)-2-((4-cyanophenyl)amino)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-((2-((4-Cyanophenyl)amino)-7-(2-(methyl-1H-imidazole-1-yl)acetyl)-6,7,8,9-tetrahydro-5H-pyrimido[4,5-d]azepine-4-yl)oxy)-3,5-dimethylbenzonitrile

4-(4-Cyano-2,6-dimethylphenoxy)-2-[(4-cyanophenyl)amino]-5H,6H,7H,8H-pyrido[4,3-d]pyrimidine-6-sulfonamide

Methyl 2-{2-[(4-cyanophenyl)amino]-4-(4-formyl-2,6-dimethylphenoxy)-5H,6H,7H,8H,9H-pyrimido [4,5-d]azepine-7-yl}-2-oxoacetate

4-(4-Cyano-2,6-dimethylphenoxy)-2-[(4-cyanophenyl)amino]-N-(oxane-4-yl)-4aH,5H,6H,7H,8H,8aH-pyrido [4,3-d]pyrimidine-6-carboxamide.

16. The compound of any one of claims 1-15 in a form of the pharmaceutically acceptable salt obtained using counter-ions such as halides, hydroxides, carboxylates, sulphates

17. Compound according to any of claims 1-15 for the use as an inhibitor of HIV reverse transcriptase.

18. Compound according to any of claims 1-15 for the use as a pharmaceutical preparation, having anti-HIV antiviral activity.

19. Compound according to any of claims 1-15 for obtaining of a pharmaceutical preparation, having anti-HIV antiviral activity.

20. Pharmaceutical composition, having activity against reverse transcriptase,

comprising the compound according to any of claims 1-15 in a therapeutically effective amount and at least one carrier, excipient or diluent.

21. Pharmaceutical composition for use in the treatment or prevention of HIV, comprising at least one compound according to any of claims 1-15 in a therapeutically effective amount and at least one carrier, excipient or diluent.

22 . Use of pharmaceutical composition comprising at least one compound according to any of claims 1-15 in a therapeutically effective amount and at least one carrier, excipient or diluent, in the manufacture of a medicament for the treatment or prevention of HIV.

23 . A pharmaceutical composition, having activity against HIV reverse transcriptase, comprising the compound according to any of claims 1-15 in a therapeutically effective amount, and at least one compound selected from a group, comprising HIV protease inhibitors, nucleoside reverse transcriptase inhibitors, non-nucleoside reverse transcriptase inhibitors, CCR5 antagonists and viral cell entry inhibitors.

24. A pharmaceutical composition, having activity against HIV reverse transcriptase, wherein HIV reverse transcriptase contains at least one mutation compared to Wild type HIV, comprising the compound according to any of claims 1-15 in a therapeutically effective amount.

25. A pharmaceutical composition, having activity against HIV reverse transcriptase, wherein HIV reverse transcriptase has reduced sensitivity to Efavirenz, Nevirapine, Doravirine or Delavirdine, comprising the compound according to any of claims 1-15 in a therapeutically effective amount.

26. A pharmaceutical composition for obtaining of an agent for use in the treatment or prevention of HIV, comprising at least one compound according to any of claims 1-15 in a therapeutically effective amount and pharmaceutically acceptable carrier.

27. The compounds according to any of claims 1-15 for obtaining of an agent for use in the treatment or prevention of HIV.

28. The pharmaceutical composition according to claim 21 for obtaining of an agent for use in the treatment or prevention of HIV.

29. Use of compound according to any of claims 1-15 in the manufacture of a pharmaceutical composition for the treatment or prevention of HIV.

30. Use of pharmaceutical composition according to any of claims 20-21 and 23-25 in the manufacture of a medicament for the treatment or prevention of HIV.

31 Use of a therapeutically effective amount of compounds according to any of claims 1-15 in the manufacture of a medicament for the treatment or prevention of HIV infection, wherein the medicament is to be administered to a subject as needed for treatment.

32. The use according to claim 31, wherein the specified therapeutically effective

amount of compounds means a daily dose, which is approximately 0.1 - approximately 500 mg/kg body weight in parenteral infusion.

33 . The use according to claim 29 and 30, wherein a single dose or 1-5 divided doses may be administered daily.

34. Combination for use in the treatment or prevention of HIV-mediated diseases, including therapeutically effective amount of compounds according to any of claims 1-15 and at least one compound selected from a group, comprising HIV protease inhibitors, nucleoside reverse transcriptase inhibitors, non-nucleoside reverse transcriptase inhibitors, CCR5 antagonists and viral cell entry inhibitors.

35. Use of a combination including therapeutically effective amount of compounds according to any of claims 1-15 and at least one compound selected from a group, comprising HIV protease inhibitors, nucleoside reverse transcriptase inhibitors, non-nucleoside reverse transcriptase inhibitors, CCR5 antagonists and viral cell entry inhibitors, in the manufacture of a medicament for the treatment or prevention of HIV-mediated diseases.

36. Use of a therapeutically effective amount of compounds according to any of claims 1-15 and at least one compound selected from a group, comprising HIV protease inhibitors, nucleoside reverse transcriptase inhibitors, non-nucleoside reverse transcriptase inhibitors, CCR5 antagonists and viral cell entry inhibitors in the manufacture of a medicament for the treatment or prevention of HIV-mediated diseases, wherein the medicament is to be administered to a subject as needed for treatment.

37. Use of a therapeutically effective amount of compounds according to any of claims 1-15 in the manufacture of a medicament for the inhibition of HIV reverse transcriptase in the body of a HIV infected subject, wherein the medicament is to be administered to a subject as needed for treatment.

38. Method of obtaining of a pharmaceutical composition according to claim 20, consisting of mixing compounds according to claims 1-15 with pharmaceutically acceptable carriers.