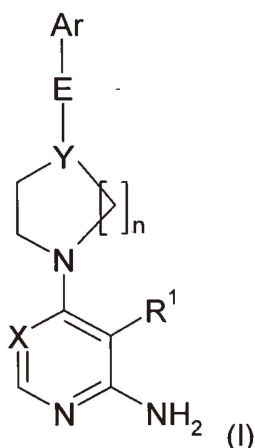


Claims:

1. A compound of Formula (I)



- 5 and pharmaceutically acceptable salts, solvates, or solvates of salts, ~~or~~ prodrugs thereof, wherein:
- X is N or CH;
- Y is N or CR²;
- E is an unbranched or branched alkyl linker having 1, 2, 3, 4, 5, 6 or 7 C atoms,
 10 which may be unsubstituted or mono- or disubstituted with Hal, OH, CN or NH₂,
 in which one CH₃ group may be replaced by Cyc¹, Cyc², CONH₂, CF₃, and in
 which one, two or three CH₂ groups may be replaced by -O-, -NH-, or -CO-, and
 in which one CH group may be replaced by -N-;
- R¹ is H, CN, CONH₂, Hal, LA, O(LA), Ar, Cyc¹ or Cyc²;
- 15 R² is H, NH₂, Hal or CN;
- Hal is F, Cl, Br or I;
- LA is an unbranched or branched, linear saturated or partially unsaturated
 hydrocarbon chain having 1, 2, 3, 4, 5 or 6 C atoms, wherein 1, 2 or 3 H atoms
 may be replaced by Hal or OH;
- 20 Ar is a mono- or bicyclic aromatic homo- or heterocycle having 0, 1, 2, 3 or 4 N, O
 and/or S atoms and 5, 6, 7, 8, 9, or 10 skeleton atoms, which may be
 unsubstituted or, independently of one another, mono- or disubstituted by Hal, LA,
 OH, SH, O(LA), NH₂, NH(LA), N(LA)₂, NO₂, CN, OCN, COOH, COO(LA), CONH₂,
 CONH(LA), CON(LA)₂, NHCO(LA), NHCONH(LA), NHCONH₂, CHO and CO(LA),
 25 and/or monosubstituted by Cyc² or O-Cyc²;

Cyc¹ is a 3, 4, 5 or 6 membered monocyclic aliphatic homo- or heterocycle having 0-2 heteroatoms, selected from O, S and N, which may be mono- or disubstituted by Hal, LA, NH₂, NH(LA), N(LA)₂, HO(LA);

Cyc² is a 5 or 6 membered monocyclic aromatic homo- or heterocycle having 0-3 heteroatoms, selected from O, S and N, which may be mono- or disubstituted by Hal or LA; and

n is 1 or 2.

2. The compound according to claim 1 in which the residues not designated in greater detail have the meaning indicated for the Formula (I), according to claim 1, but in which

in Subformula 1

X is N,

or in Subformula 2

Y is N or CH,

or in Subformula 3

R¹ is Hal, LA, O(LA), Cyc¹ or Cyc²,

or in Subformula 4

Ar is phenyl or pyridyl, which is unsubstituted or mono- or disubstituted by Hal, LA or O(LA),

or in Subformula 5

E is a methyl linker which is substituted by aminomethyl, wherein the amino group of the aminomethyl is unsubstituted, or mono- or disubstituted by LA, or E is a methyl linker which is substituted by (azetidin-1-yl)methyl,

or in Subformula 6

Y is CNH₂,

E is -CH(R³)-NH-CO- or -CO-NH-CH(R³)-,

R³ is H or LA,

	<u>or in Subformula 7</u>	
	X	is N,
	Y	is N or CH,
5	R ¹	is Hal, LA, O(LA), Cyc¹ or Cyc ² ,
	<u>or in Subformula 8</u>	
	X	is N,
	Y	is N or CH,
10	Ar	is phenyl or pyridyl, which is unsubstituted or mono- or disubstituted by Hal, LA or O(LA),
	<u>or in Subformula 9</u>	
	X	is N,
	Y	is N or CH,
15	E	is a methyl linker which is substituted by aminomethyl, wherein the amino group of the aminomethyl is unsubstituted, or mono- or disubstituted by LA, or E is a methyl linker which is substituted by (azetidin-1-yl)methyl,
20	<u>or in Subformula 10</u>	
	X	is N,
	Y	is CNH ₂ ,
	E	is -CH(R ³)-NH-CO- or -CO-NH-CH(R ³)-,
	R ¹	is Hal, LA, O(LA), Cyc¹ or Cyc ² ,
25	R ³	is H or LA,
	<u>or in Subformula 11</u>	
	X	is N,
	Y	is CNH ₂ ,
30	E	is -CH(R ³)-NH-CO- or -CO-NH-CH(R ³)-,
	R ¹	is Hal, LA, O(LA), Cyc¹ or Cyc ² ,
	R ³	is H or LA,
	Ar	is phenyl or pyridyl, which is unsubstituted or mono- or disubstituted by Hal, LA or O(LA),

35

or in Subformula 12

X is N,

Y is CNH₂,

E is -CH(R³)-NH-CO- or -CO-NH-CH(R³)-,

5 R³ is H or LA,

Ar is phenyl or pyridyl, which is unsubstituted or mono- or disubstituted by Hal, LA or O(LA),

or in Subformula 13

10 X is N,

Y is N or CH,

E is a methyl linker which is substituted by aminomethyl, wherein the amino group of the aminomethyl is unsubstituted, or mono- or disubstituted by LA, or E is a methyl linker which is substituted by (azetidin-1-yl)methyl,

15

Ar is phenyl or pyridyl, which is unsubstituted or mono- or disubstituted by Hal, LA or O(LA),

R¹ is Hal, LA, O(LA), Cyc¹ or Cyc²,

20 and pharmaceutically acceptable salts, solvates or, solvates of salts, ~~or~~ prodrugs thereof.

3. Compounds according to claim 1, selected from the group consisting of:

25 6-{4-[(S)-2-Amino-1-(4-trifluoromethyl-phenyl)-ethyl]-piperazin-1-yl}-5-(4-fluoro-phenyl)-pyrimidin-4-ylamine;

6-{4-[2-Amino-1-(4-chloro-3-fluoro-phenyl)-ethyl]-piperazin-1-yl}-5-(4-fluoro-phenyl)-pyrimidin-4-ylamine;

6-(4-(2-amino-1-(4-(trifluoromethoxy)phenyl)ethyl)piperazin-1-yl)-5-(1H-pyrazol-4-yl)pyrimidin-4-amine;

30 2-(4-(6-amino-5-(4-fluorophenyl)pyrimidin-4-yl)piperazin-1-yl)-N-(2-(dimethylamino)ethyl)-2-(4-(trifluoromethyl)phenyl)acetamide;

6-{4-[(R)-2-Amino-1-(6-chloro-pyridin-3-yl)-ethyl]-piperazin-1-yl}-5-(4-fluoro-phenyl)-pyrimidin-4-ylamine;

35 6-{4-[(S)-2-Amino-1-(4-trifluoromethyl-phenyl)-ethyl]-piperidin-1-yl}-5-(4-fluoro-phenyl)-pyrimidin-4-ylamine;

{4-[6-Amino-5-(4-fluoro-phenyl)-pyrimidin-4-yl]-piperazin-1-yl}-(6-trifluoromethyl-
 pyridin-3-yl)-acetonitrile;
 6-{4-[3-Azetidin-1-yl-1-(4-chloro-phenyl)-propyl]-piperazin-1-yl}-5-(4-fluoro-
 phenyl)-pyrimidin-4-ylamine;
 5 (S)-6-(4-(2-amino-1-(4-(trifluoromethyl)phenyl)ethyl)piperazin-1-yl)-5-(1H-pyrazol-
 4-yl)pyrimidin-4-amine;
 6-{4-[2-Amino-1-(3-fluoro-phenyl)-ethyl]-piperazin-1-yl}-5-(4-fluoro-phenyl)-
 pyrimidin-4-ylamine;
 6-(4-(2-(azetidin-1-yl)-1-(4-(trifluoromethyl)phenyl)ethyl)piperazin-1-yl)-5-(4-
 10 fluorophenyl)pyrimidin-4-amine;
 6-(4-(2-(dimethylamino)-1-(4-(trifluoromethyl)phenyl)ethyl)piperazin-1-yl)-5-(4-
 fluorophenyl)pyrimidin-4-amine;
 6-(4-(2-amino-1-(4-(trifluoromethyl)phenyl)ethyl)piperidin-1-yl)-5-(1H-pyrazol-4-
 yl)pyrimidin-4-amine;
 15 N-{3-Amino-1-[6-amino-5-(4-fluoro-phenyl)-pyrimidin-4-yl]-pyrrolidin-3-ylmethyl}-
 2,4-difluoro-benzamide;
 6-{4-[2-Amino-1-(6-trifluoromethyl-pyridin-3-yl)-ethyl]-piperazin-1-yl}-5-(4-fluoro-
 phenyl)-pyrimidin-4-ylamine;
 6-{4-[(S)-2-Amino-1-(4-chloro-phenyl)-ethyl]-piperazin-1-yl}-5-ethyl-pyrimidin-4-
 20 ylamine;
 6-(4-(2-amino-1-(4-(trifluoromethyl)-phenyl)ethyl)piperazin-1-yl)-5-vinylpyrimidin-
 4-amine;
 6-(4-(2-amino-1-(4-(trifluoromethyl)phenyl)ethyl)piperazin-1-yl)-5-ethoxypyrimidin-
 4-amine;
 25 4-Amino-1-[6-amino-5-(1H-pyrazol-4-yl)-pyrimidin-4-yl]-piperidine-4-carboxylic
 acid [(S)-1-(4-chloro-phenyl)-propyl]-amide;
 6-{4-[2-Amino-1-(4-trifluoromethyl-phenyl)-ethyl]-piperazin-1-yl}-5-chloro-
 pyrimidin-4-ylamine

and, pharmaceutically acceptable salts, or solvates ~~or predrugs~~ thereof.

4. A pharmaceutical composition comprising a compound according to any of claims 1
 to 3, or a pharmaceutically acceptable salt, or solvate ~~or predrug~~ thereof, as active
 ingredient, together with a pharmaceutically acceptable carrier.

5. A compound of any of claims 1 to 3, or a pharmaceutically acceptable salt, or solvate ~~or prodrug thereof~~, for use as a medicament.

6. A compound of any of claims 1 to 3, or a pharmaceutically acceptable salt, or solvate ~~or prodrug thereof~~, for treating cancer.

7. ~~Use of a~~ A compound of any of claims 1 to 36, or a pharmaceutically acceptable salt, or solvate ~~or prodrug thereof~~, for the preparation of a medicament for the treatment of wherein the cancer is selected from brain, lung, colon, epidermoid, squamous cell, bladder, gastric, pancreatic, breast, head, neck, renal, kidney, liver, ovarian, prostate, colorectal, uterine, rectal, oesophageal, testicular, gynecological, thyroid cancer, melanoma, acute myelogenous leukemia, multiple myeloma, chronic myelogenous leukemia, myeloid cell leukemia, glioma, Kaposi's sarcoma, glioblastoma.

8. ~~A method for treating cancer, comprising administering to a subject a compound of any of claims 1 to 3, or a pharmaceutically acceptable salt, solvate or prodrug thereof.~~

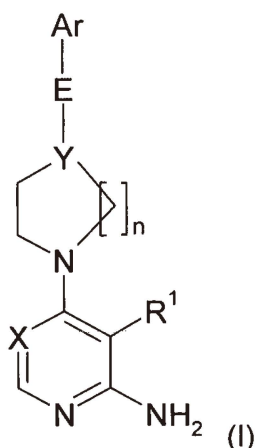
9. ~~The method of claim 8, wherein said cancer is selected from the group consisting of brain, lung, colon, epidermoid, squamous cell, bladder, gastric, pancreatic, breast, head, neck, renal, kidney, liver, ovarian, prostate, colorectal, uterine, rectal, oesophageal, testicular, gynecological, thyroid cancer, melanoma, hematologic malignancies such as acute myelogenous leukemia, multiple myeloma, chronic myelogenous leukemia, myeloid cell leukemia, glioma and Kaposi's sarcoma.~~

10. ~~8-10.~~ Set (kit) consisting of separate packs of

- a) an effective amount of a compound according to one or more of claims 1 to 3 or a pharmaceutically acceptable salt, solvate or prodrug thereof, and
- b) an effective amount of a further medicament active ingredient.

Claims:

1. A compound of Formula (I)



- 5 and pharmaceutically acceptable salts, solvates, or solvates of salts thereof, wherein:
- X is N or CH;
- Y is N or CR²;
- E is an unbranched or branched alkyl linker having 1, 2, 3, 4, 5, 6 or 7 C atoms, which may be unsubstituted or mono- or disubstituted with Hal, OH, CN or NH₂,
10 in which one CH₃ group may be replaced by Cyc², CONH₂, CF₃, and in which one, two or three CH₂ groups may be replaced by -NH-, or -CO-, and in which one CH group may be replaced by -N-;
- R¹ is CN, CONH₂, Hal, LA, O(LA), Ar or Cyc²;
- R² is H, NH₂, Hal or CN;
- 15 Hal is F, Cl, Br or I;
- LA is an unbranched or branched, linear saturated or partially unsaturated hydrocarbon chain having 1, 2, 3 4, 5 or 6 C atoms, wherein 1, 2 or 3 H atoms may be replaced by Hal or OH;
- Ar is a mono- or bicyclic aromatic homo- or heterocycle having 0, 1, 2, 3 or 4 N, O
20 and/or S atoms and 5, 6, 7, 8, 9, or 10 skeleton atoms, which may be unsubstituted or, independently of one another, mono- or disubstituted by Hal, LA, OH, SH, O(LA), NH₂, NH(LA), N(LA)₂, NO₂, CN, OCN, COOH, COO(LA), CONH₂, CONH(LA), CON(LA)₂, NHCO(LA), NHCONH(LA), NHCONH₂, CHO and CO(LA), and/or monosubstituted by Cyc² or O-Cyc²;
- 25 Cyc² is a 5 or 6 membered monocyclic aromatic homo- or heterocycle having 0-3 heteroatoms, selected from O, S and N, which may be mono- or disubstituted by Hal or LA; and

n is 1 or 2.

2. The compound according to claim 1 in which the residues not designated in greater detail have the meaning indicated for the Formula (I), according to claim 1, but in which

in Subformula 1

X is N,

or in Subformula 2

Y is N or CH,

or in Subformula 3

R¹ is Hal, LA, O(LA or Cyc²,

or in Subformula 4

Ar is phenyl or pyridyl, which is unsubstituted or mono- or disubstituted by Hal, LA or O(LA),

or in Subformula 5

E is a methyl linker which is substituted by aminomethyl, wherein the amino group of the aminomethyl is unsubstituted, or mono- or disubstituted by LA, or E is a methyl linker which is substituted by (azetidin-1-yl)methyl,

or in Subformula 6

Y is CNH₂,

E is -CH(R³)-NH-CO- or -CO-NH-CH(R³)-,

R³ is H or LA,

or in Subformula 7

X is N,

Y is N or CH,

R¹ is Hal, LA, O(LA) or Cyc²,

or in Subformula 8

	X	is N,
	Y	is N or CH,
	Ar	is phenyl or pyridyl, which is unsubstituted or mono- or disubstituted by Hal, LA or O(LA),
5	or in Subformula 9	
	X	is N,
	Y	is N or CH,
	E	is a methyl linker which is substituted by aminomethyl, wherein
10		the amino group of the aminomethyl is unsubstituted, or mono- or disubstituted by LA, or E is a methyl linker which is substituted by (azetidin-1-yl)methyl,
	or in Subformula 10	
15	X	is N,
	Y	is CNH ₂ ,
	E	is -CH(R ³)-NH-CO- or -CO-NH-CH(R ³)-,
	R ¹	is Hal, LA, O(LA) or Cyc ² ,
	R ³	is H or LA,
20	or in Subformula 11	
	X	is N,
	Y	is CNH ₂ ,
	E	is -CH(R ³)-NH-CO- or -CO-NH-CH(R ³)-,
25	R ¹	is Hal, LA, O(LA) or Cyc ² ,
	R ³	is H or LA,
	Ar	is phenyl or pyridyl, which is unsubstituted or mono- or disubstituted by Hal, LA or O(LA),
30	or in Subformula 12	
	X	is N,
	Y	is CNH ₂ ,
	E	is -CH(R ³)-NH-CO- or -CO-NH-CH(R ³)-,
	R ³	is H or LA,

Ar is phenyl or pyridyl, which is unsubstituted or mono- or disubstituted by Hal, LA or O(LA),

or in Subformula 13

5 X is N,

Y is N or CH,

E is a methyl linker which is substituted by aminomethyl, wherein the amino group of the aminomethyl is unsubstituted, or mono- or disubstituted by LA, or E is a methyl linker which is substituted by (azetidin-1-yl)methyl,

10

Ar is phenyl or pyridyl, which is unsubstituted or mono- or disubstituted by Hal, LA or O(LA),

R¹ is Hal, LA, O(LA) or Cyc²,

15 and pharmaceutically acceptable salts, solvates or solvates of salts thereof.

3. Compounds according to claim 1, selected from the group consisting of:

6-{4-[(S)-2-Amino-1-(4-trifluoromethyl-phenyl)-ethyl]-piperazin-1-yl}-5-(4-fluoro-phenyl)-pyrimidin-4-ylamine;

20

6-{4-[2-Amino-1-(4-chloro-3-fluoro-phenyl)-ethyl]-piperazin-1-yl}-5-(4-fluoro-phenyl)-pyrimidin-4-ylamine;

6-(4-(2-amino-1-(4-(trifluoromethoxy)phenyl)ethyl)piperazin-1-yl)-5-(1H-pyrazol-4-yl)pyrimidin-4-amine;

25

2-(4-(6-amino-5-(4-fluorophenyl)pyrimidin-4-yl)piperazin-1-yl)-N-(2-(dimethylamino)ethyl)-2-(4-(trifluoromethyl)phenyl)acetamide;

6-{4-[(R)-2-Amino-1-(6-chloro-pyridin-3-yl)-ethyl]-piperazin-1-yl}-5-(4-fluoro-phenyl)-pyrimidin-4-ylamine;

6-{4-[(S)-2-Amino-1-(4-trifluoromethyl-phenyl)-ethyl]-piperidin-1-yl}-5-(4-fluoro-phenyl)-pyrimidin-4-ylamine;

30

{4-[6-Amino-5-(4-fluoro-phenyl)-pyrimidin-4-yl]-piperazin-1-yl}-(6-trifluoromethyl-pyridin-3-yl)-acetonitrile;

6-{4-[3-Azetidin-1-yl-1-(4-chloro-phenyl)-propyl]-piperazin-1-yl}-5-(4-fluoro-phenyl)-pyrimidin-4-ylamine;

(S)-6-(4-(2-amino-1-(4-(trifluoromethyl)phenyl)ethyl)piperazin-1-yl)-5-(1H-pyrazol-4-yl)pyrimidin-4-amine;

35

6-{4-[2-Amino-1-(3-fluoro-phenyl)-ethyl]-piperazin-1-yl}-5-(4-fluoro-phenyl)-pyrimidin-4-ylamine;

6-(4-(2-(azetidin-1-yl)-1-(4-(trifluoromethyl)phenyl)ethyl)piperazin-1-yl)-5-(4-fluorophenyl)pyrimidin-4-amine;

5 6-(4-(2-(dimethylamino)-1-(4-(trifluoromethyl)phenyl)ethyl)piperazin-1-yl)-5-(4-fluorophenyl)pyrimidin-4-amine;

6-(4-(2-amino-1-(4-(trifluoromethyl)phenyl)ethyl)piperidin-1-yl)-5-(1H-pyrazol-4-yl)pyrimidin-4-amine;

10 N-{3-Amino-1-[6-amino-5-(4-fluoro-phenyl)-pyrimidin-4-yl]-pyrrolidin-3-ylmethyl}-2,4-difluoro-benzamide;

6-{4-[2-Amino-1-(6-trifluoromethyl-pyridin-3-yl)-ethyl]-piperazin-1-yl}-5-(4-fluoro-phenyl)-pyrimidin-4-ylamine;

6-{4-[(S)-2-Amino-1-(4-chloro-phenyl)-ethyl]-piperazin-1-yl}-5-ethyl-pyrimidin-4-ylamine;

15 6-(4-(2-amino-1-(4-(trifluoromethyl)-phenyl)ethyl)piperazin-1-yl)-5-vinylpyrimidin-4-amine;

6-(4-(2-amino-1-(4-(trifluoromethyl)phenyl)ethyl)piperazin-1-yl)-5-ethoxypyrimidin-4-amine;

20 4-Amino-1-[6-amino-5-(1H-pyrazol-4-yl)-pyrimidin-4-yl]-piperidine-4-carboxylic acid [(S)-1-(4-chloro-phenyl)-propyl]-amide;

6-{4-[2-Amino-1-(4-trifluoromethyl-phenyl)-ethyl]-piperazin-1-yl}-5-chloro-pyrimidin-4-ylamine

and, pharmaceutically acceptable salts, or solvates thereof.

25 4. A pharmaceutical composition comprising a compound according to any of claims 1 to 3, or a pharmaceutically acceptable salt, or solvate thereof, as active ingredient, together with a pharmaceutically acceptable carrier.

5. A compound of any of claims 1 to 3, or a pharmaceutically acceptable salt, or solvate thereof, for use as a medicament.

6. A compound of any of claims 1 to 3, or a pharmaceutically acceptable salt, or solvate thereof, for treating cancer.

7. ~~Use of~~ A compound of ~~any of claim 1 to 3~~ 6, or a pharmaceutically acceptable salt, or solvate or prodrug thereof, for the preparation of a medicament for the treatment of wherein the cancer is selected from brain, lung, colon, epidermoid, squamous cell, bladder, gastric, pancreatic, breast, head, neck, renal, kidney, liver, ovarian, prostate, colorectal, uterine, rectal, oesophageal, testicular, gynecological, thyroid cancer, melanoma, acute myelogenous leukemia, multiple myeloma, chronic myelogenous leukemia, myeloid cell leukemia, glioma, Kaposi's sarcoma, glioblastoma.
8. ~~A method compound as claimed in any one of the claims 1 to 7 for the preparation of~~ a medicament for treating cancer, comprising administering to a subject a compound of any of claims 1 to 3, or a pharmaceutically acceptable salt, solvate or prodrug thereof.
9. ~~The method of~~ A medicament as claimed in claim 8, wherein said cancer is selected from the group consisting of brain, lung, colon, epidermoid, squamous cell, bladder, gastric, pancreatic, breast, head, neck, renal, kidney, liver, ovarian, prostate, colorectal, uterine, rectal, oesophageal, testicular, gynecological, thyroid cancer, melanoma, hematologic malignancies such as acute myelogenous leukemia, multiple myeloma, chronic myelogenous leukemia, myeloid cell leukemia, glioma, Kaposi's sarcoma.
10. Set (kit) consisting of separate packs of
- a) an effective amount of a compound according to one or more of claims 1 to 3 or a pharmaceutically acceptable salt, solvate or prodrug thereof, and
 - b) an effective amount of a further medicament active ingredient.