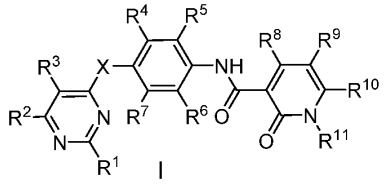
CLAIMS

1. A compound of Formula I:



I

wherein:

X is O or S;

R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9 and R^{10} are each independently selected from the group consisting of H, alkyl, alkyl-R^{12}, aryl, aryl-R^{12}, aralkyl, aralkyl-R^{12}, alicyclic, heterocyclic, halogen, NO_2, CN, CF_3, O-CF_3, OH, O-alkyl, COR^{12}, $COOR^{12}$, O-aryl, O-R^{12}, amino, NH-alkyl, NH-aryl, N-(alkyl)$_2$, N-(aryl)$_2$, N-(alkyl)(aryl), NH-R^{12}, NH-alkyl-N(alkyl)$_2$, N-(R^{12})(R^{13}), N-(alkyl)(R^{12}), N-(aryl)(R^{12}), COOH, $CONH_2$, CONH-alkyl, CONH-aryl, CONH-alicyclic, CON-(alkyl)(R^{12}), CON(aryl)(R^{12}), CONH-R^{12}, CON-(R^{12})(R^{13}), S-alkyl, SO_3H, SO_2-alkyl, SO_2-alkyl-R^{12}, SO_2-aryl, SO_2-aryl-R^{12}, SO_2NH_2, SO_2NH-R^{12}, SO_2N-(R^{12})(R^{13}), CO-alkyl, CO-alkyl-R^{12}, CO-aryl and CO-aryl-R^{12}, wherein said alkyl, aryl, aralkyl, alicyclic and heterocyclic groups may be optionally substituted with one or more groups selected from $C_{1\text{-}6}$ alkyl, O-$C_{1\text{-}6}$ alkyl, CN, OH, NH_2, COOH, $CONH_2$, CF_3, OCF_3 and halogen;

wherein R^{12} and R^{13} are independently selected from COOH, SO_3H, OSO_3H, $SONHCH_3$, $SONHCH_2CH_3$, SO_2CH_3, $SO_2CH_2CH_3$, PO_3H_2 and OPO_3H_2, mono-, di- and poly-hydroxylated alicyclic groups, di- or poly-hydroxylated aliphatic or aryl groups, and N-, O- and/or S-containing heterocyclic groups optionally substituted with one or more $C_{1\text{-}6}$ alkyl, hydroxyl, carbonyl, amino or alkoxy groups, wherein the N-, O- and/or S-containing heterocyclic groups may optionally be linked to the rest of the compound through an alkyl, amine, alkoxy or ketone bridge, wherein at least two of R^1, R^2 and R^3 are other than H; and

R^{11} is selected from phenyl-R^{14},

wherein R^{14} is selected from $C_{1\text{-}6}$ alkyl, O-$C_{1\text{-}6}$ alkyl, CN, OH, NH_2, COOH, $CONH_2$, CF_3, OCF_3 and halogen;

or a pharmaceutically acceptable salt, solvate or prodrug thereof.

2. A compound according to claim 1, wherein R^1, R^2 and R^3 are independently selected from the group consisting of H, C_{1-6} alkyl, CN, CF_3, NH_2, O-C_{1-6} alkyl, NH-C_{1-6} alkyl, S-C_{1-6} alkyl, and halogen.

3. A compound according to claim 2, wherein R^1 is H, C_{1-3} alkyl or NH_2.

4. A compound according to any one of claims 1 to 3, wherein R^2 is H, C_{1-3} alkyl or NH_2.

5. A compound according to any one of claims 1 to 4, wherein R^3 is H, C_{1-3} alkyl, O-alkyl or halogen.

6. A compound according to any one of claims 1 to 5, wherein R^4, R^5, R^6 and R^7 are independently selected from the group consisting of H, C_{1-6} alkyl, CN, CF_3, NH_2, O- C_{1-6} alkyl, NH-C_{1-6} alkyl, S- C_{1-6} alkyl, and halogen.

7. A compound according to claim 6, wherein R^4, R^5, R^6 and R^7 are independently selected from H and halogen.

8. A compound according to any one of claims 1 to 7, wherein at least one of R^4, R^5, R^6 and R^7 is H.

9. A compound according to any one of claims 1 to 7, wherein one or two of R^4, R^5, R^6 and R^7 are halogen.

10. A compound according to claim 6, wherein R^4, R^5, R^6 and R^7 are all H.

11. A compound according to any one of claims 1 to 10, wherein R^8, R^9 and R^{10} are independently selected from the group consisting of H, C_{1-6} alkyl, CN, CF_3, NH_2, O- C_{1-6} alkyl, NH- C_{1-6} alkyl, S- C_{1-6} alkyl, and halogen.

12. A compound according to any one of claims 1 to 11, wherein R^8 is H, C_{1-3} alkyl or O-C_{1-3} alkyl.

13. A compound according to any one of claims 1 to 12, wherein at least one of R^9 and R^{10} is H.

14. A compound according to any one of claims 1 to 13, wherein R^{11} is selected from phenyl-R^{14}, wherein R^{14} is selected from C_{1-3} alkyl, O-C_{1-3} alkyl, CF_3, OCF_3 and halogen .

15. A compound according to claim 14, wherein R^{11} is phenyl-R^{14}, wherein R^{14} is selected from CH_3, OCH_3, CF_3, OCF_3, F and Cl.

16. A compound according to claim 16, wherein R^{11} is fluorophenyl.

17. A compound of claim 1 selected from the group consisting of:
N-(4-((6-amino-5-fluoropyrimidin-4-yl)oxy)-3-fluorophenyl)-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-chloropyrimidin-4-yl)oxy)-3-fluorophenyl)-4-ethoxy-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-chloropyrimidin-4-yl)oxy)-3-fluorophenyl)-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-chloropyrimidin-4-yl)oxy)phenyl)-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-chloropyrimidin-4-yl)oxy)-2-fluorophenyl)-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-fluoropyrimidin-4-yl)oxy)phenyl)-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-fluoropyrimidin-4-yl)oxy)-2-fluorophenyl)-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-fluoropyrimidin-4-yl)oxy)-2,3-difluorophenyl)-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-chloropyrimidin-4-yl)oxy)-2,3-difluorophenyl)-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-chloropyrimidin-4-yl)oxy)-2-fluorophenyl)-2-oxo-1-(p-tolyl)-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-fluoropyrimidin-4-yl)oxy)-2,5-difluorophenyl)-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-chloropyrimidin-4-yl)oxy)-2,5-difluorophenyl)-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-fluoropyrimidin-4-yl)oxy)-3-chlorophenyl)-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-chloropyrimidin-4-yl)oxy)-3-chlorophenyl)-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((2-amino-5-chloropyrimidin-4-yl)oxy)-3-fluorophenyl)-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide

N-(4-((6-amino-5-fluoropyrimidin-4-yl)oxy)-3-fluorophenyl)-4-ethoxy-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-fluoropyrimidin-4-yl)oxy)-2-fluorophenyl)-4-ethoxy-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-chloropyrimidin-4-yl)oxy)-2-fluorophenyl)-4-ethoxy-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-chloropyrimidin-4-yl)oxy)-2-fluorophenyl)-1-(4-chlorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-fluoropyrimidin-4-yl)oxy)-3-fluorophenyl)-1-(4-chlorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-fluoropyrimidin-4-yl)oxy)-3-fluorophenyl)-2-oxo-1-(p-tolyl)-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-chloropyrimidin-4-yl)amino)-3-fluorophenyl)-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide
N-(4-((6-amino-5-chloropyrimidin-4-yl)thio)-2-fluorophenyl)-1-(4-fluorophenyl)-2-oxo-1,2-dihydropyridine-3-carboxamide.

18. Use of a compound according to any one of claims 1 to 17, or a pharmaceutically acceptable salt, solvate or prodrug thereof, for treating cancer or another proliferative cell disease or condition.

19. A method of treating cancer or another proliferative cell disease or condition in a subject, the method comprising administering to said subject a therapeutically effective amount of a compound according to any one of claims 1 to 17 or a pharmaceutically acceptable salt, solvate or prodrug thereof, optionally in combination with a pharmaceutically acceptable carrier, diluent and/or excipient.

20. Use of a compound according to any one of claims 1 to 17, or a pharmaceutically acceptable salt, solvate or prodrug thereof, in the manufacture of a medicament for treating cancer or another proliferative cell disease or condition.

21. A pharmaceutical composition or medicament comprising a compound according to any one of claims 1 to 17, or a pharmaceutically acceptable salt, solvate or prodrug thereof, and a pharmaceutically acceptable carrier, diluent and/or excipient.

22. A method for modulating protein kinase activity in a cell, comprising introducing to or contacting said cell with an effective amount of a compound according to any one of claims 1 to 17 or a pharmaceutically acceptable salt, solvate or prodrug thereof.

23. A method according to claim 22, wherein the method modulates the activity of one or more protein kinase selected from RTKs.