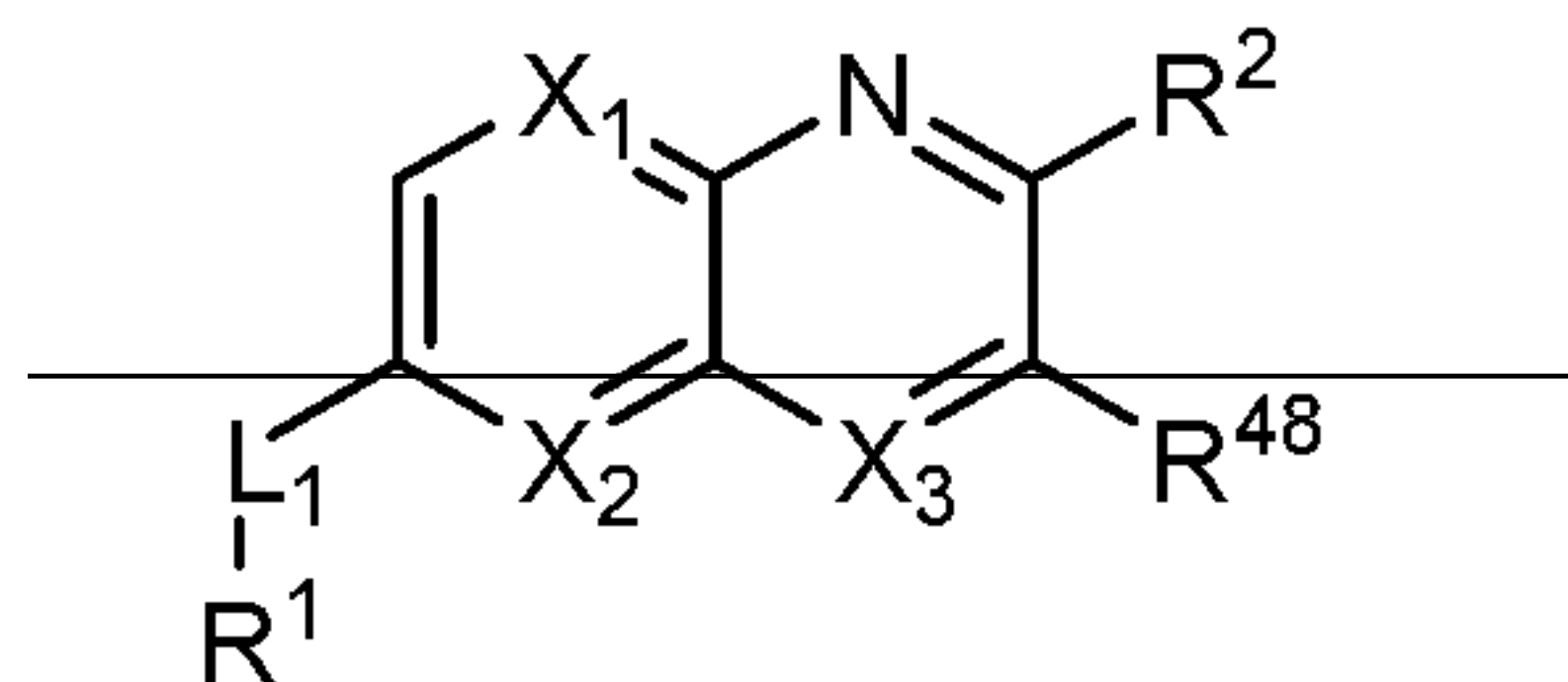


What is claimed is:

1. A compound selected from Formula Ia:



Ia

or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof, wherein:

X_1 is selected from CH and N;

X_2 is selected from CH and N;

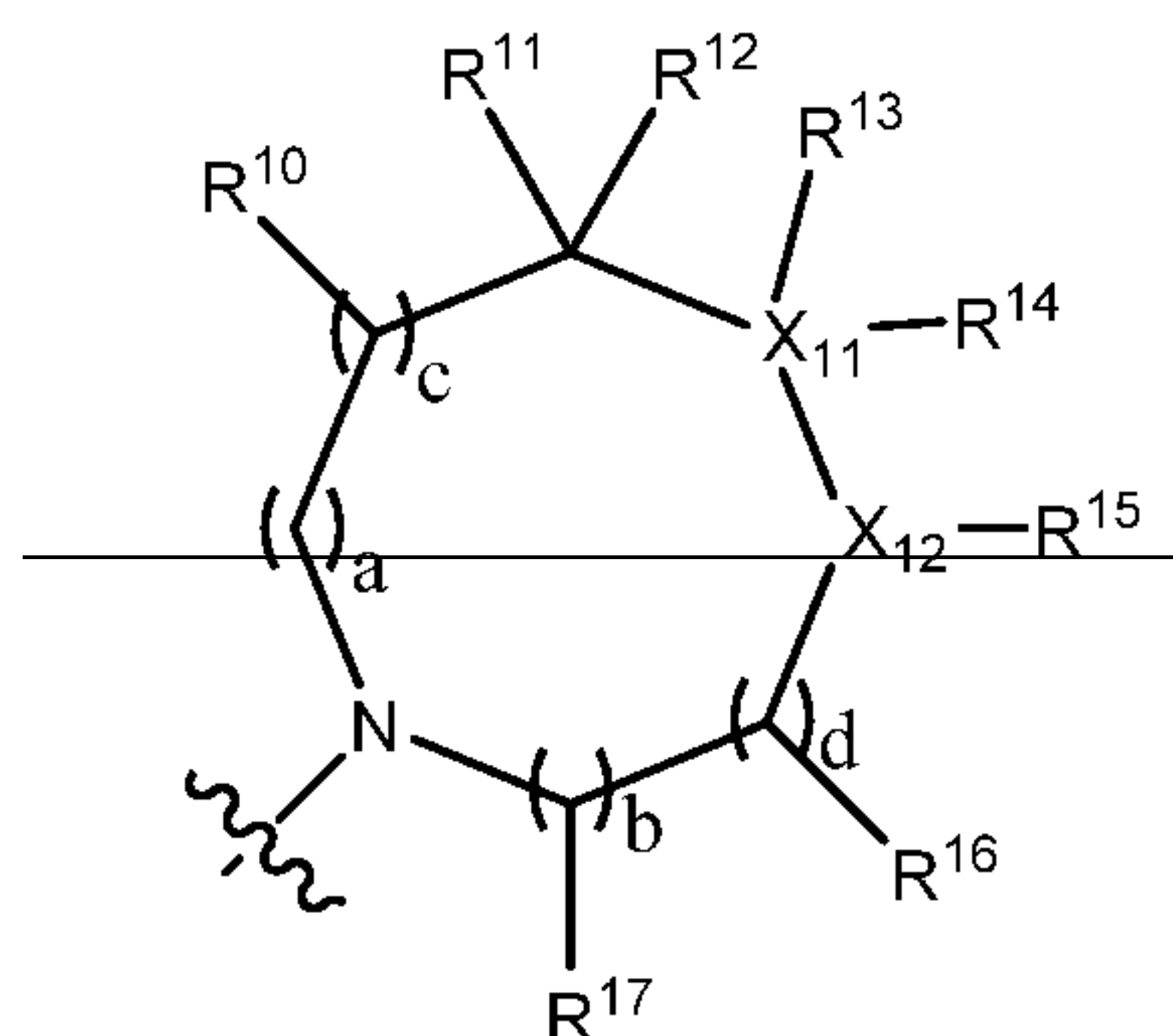
X_3 is selected from CH and N;

L_1 is selected from a direct bond, S, CH_2 , O or NH;

R^1 is selected from phenyl, heteroaryl, bicyclic aryl, bicyclic heterocyclyl, and bicyclic heteroaryl;

wherein the phenyl, heteroaryl, bicyclic aryl, bicyclic heterocyclyl and bicyclic heteroaryl are optionally substituted with one or more groups selected from the group consisting of halogen, OH, oxo, cyano, alkyl optionally substituted with halogen, cyano or OH, $O(alkyl)$ optionally substituted with halogen, cyano or OH, NHR^a , and a heterocycle optionally substituted with halogen, cyano, OH or alkyl optionally substituted with OH or oxo;

R^2 is:



X_{11} is selected from $CR^{13}R^{14}$, $SiR^{13}R^{14}$, NH and O;

X_{12} is selected from CHR^{15} and NH, wherein one or both of X_{11} and X_{12} must be carbon;

R^{10} is selected from hydrogen and alkyl;

R^{11} is selected from hydrogen, OH and CH_2NH_2 ;

R^{12} , R^{16} and R^{17} are hydrogen;

R^{13} is selected from hydrogen, OH, and $(C_0-C_3 \text{ alkyl})NR^bR^c$;

~~R¹⁴ is selected from hydrogen, OH, alkyl optionally substituted with halogen, OH, methyl, OCH₃ and a heteroaryl;~~

~~R¹⁵ is selected from hydrogen or NH₂;~~

~~or one of the following groups may join together:~~

~~R¹⁰ and R¹¹ may join together as CH₂NHCH₂ to form a fused bicyclic;~~

~~R¹⁰ and R¹⁵ may join together as alkyl to form a bridged bicyclic;~~

~~R¹¹ and R¹² may join together as alkyl substituted with NH₂ to form a spirocycle;~~

~~R¹³ and R¹⁴ may join together as a group selected from cycloalkyl, heterocycle, bicyclic carbocycle, and bicyclic heterocycle, wherein the cycloalkyl, heterocycle, carbocycle and heterocycle are optionally substituted with F, Cl, OH, OCH₃, CN, methyl or NH₂ to form a spirocycle;~~

~~R¹⁰ and R¹⁶ may join together as alkyl, O or NH to form a bridged bicyclic;~~

~~R¹¹ and R¹⁵ may join together as alkyl to form a bridged bicyclic;~~

~~R¹¹ and R¹⁶ may join together as alkyl or O to form a bridged bicyclic;~~

~~R¹¹ and R¹⁷ may join together as alkyl to form a bridged bicyclic; or~~

~~R¹³ and R¹⁵ may join together as NHCH₂, or cycloalkyl wherein the cycloalkyl is substituted with NH₂ to form a fused bicyclic;~~

~~R⁴⁸ is selected from hydrogen and methyl;~~

~~R^a is hydrogen, alkyl optionally substituted with OH, methoxy, halogen or cyano, or cyclopropyl;~~

~~R^b and R^c are independently selected from hydrogen, alkyl and a Boc group; and~~

~~a, b, c and d are selected from 0 and 1.~~

~~2. A compound of Claim 1, wherein:~~

~~X₁ is selected from CH and N;~~

~~X₂ is selected from CH and N;~~

~~X₃ is selected from CH and N;~~

~~L₁ is selected from a direct bond, S, CH₂, O or NH;~~

~~R¹ is selected from phenyl, a 5 to 6 membered heteroaryl wherein the heteroaryl contains one to four heteroatoms selected from the group consisting of nitrogen, oxygen and sulfur, a 10 membered bicyclic aryl, a 9-10 membered bicyclic heterocyclyl wherein the heterocyclyl contains one to three heteroatoms selected from the group consisting of nitrogen, oxygen and sulfur, and a 9-10 membered bicyclic heteroaryl wherein the bicyclic heteroaryl contains one to three heteroatoms selected from the group consisting of nitrogen, oxygen and~~

~~membered bicyclic carbocycle, and a saturated or partially unsaturated 8 to 10 membered bicyclic heterocycle wherein the heterocycle contains one to three heteroatoms selected from the group consisting of nitrogen, oxygen and sulfur, wherein the cycloalkyl, heterocycle, bicyclic carbocycle and bicyclic heterocycle are optionally substituted with F, Cl, OH, OCH₃, CN, methyl or NH₂ to form a spirocyclic;~~

~~R¹⁰ and R¹⁶ may join together as C₁-C₄ alkyl, O or NH to form a bridged bicyclic;~~

~~R¹¹ and R¹⁵ may join together as C₁-C₄ alkyl to form a bridged bicyclic;~~

~~R¹¹ and R¹⁶ may join together as C₁-C₄ alkyl or O to form a bridged bicyclic;~~

~~R¹¹ and R¹⁷ may join together as C₁-C₄ alkyl to form a bridged bicyclic; or~~

~~R¹³ and R¹⁵ may join together as NHCH₂, or C₃-C₆ cycloalkyl wherein the cycloalkyl is substituted with NH₂ to form a fused bicyclic;~~

~~R⁴⁸ is selected from hydrogen and methyl;~~

~~R^a is hydrogen, C₁-C₄ alkyl optionally substituted with OH, methoxy, halogen or cyano, or cyclopropyl;~~

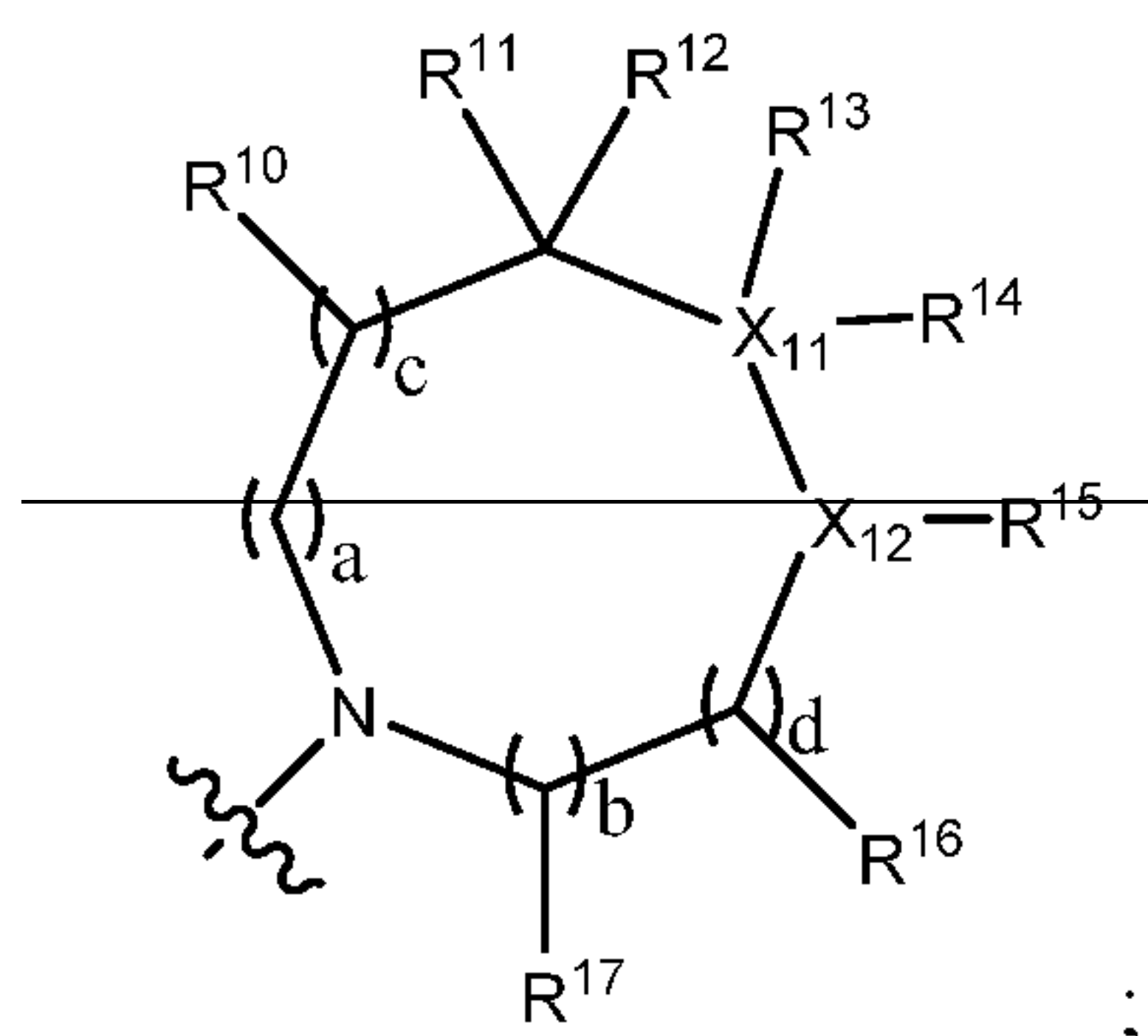
~~R^b and R^c are independently selected from hydrogen, C₁-C₃ alkyl and a Boc group; and~~

~~a, b, c and d are selected from 0 and 1.~~

3. A compound of Claim 1, wherein:

~~X₁ is CH, X₂ is N and X₃ is N; or X₁ is N, X₂ is N and X₃ is CH; or X₁ is CH, X₂ is CH and X₃ is N; L₁ is selected from a direct bond, S, CH₂, O or NH;~~

~~R¹ is selected from the group consisting of: (a) phenyl optionally substituted with one to three substituents selected from the group consisting of halogen, C₁-C₃ alkyl optionally substituted with halogen, O(C₁-C₃ alkyl) optionally substituted with halogen, and cyano; (b) a 6 membered heteroaryl, optionally substituted with one to three groups selected from halogen, C₁-C₃ alkyl optionally substituted with halogen or OH, methoxy, NHR^a, and 3 to 6 membered heterocycle optionally substituted with OH or C₁-C₃ alkyl optionally substituted with OH or oxo, wherein the heterocycle contains one or two heteroatoms selected from nitrogen, oxygen and SO₂; wherein the heteroaryl contains one or two nitrogen heteroatoms; (c) a 10 membered bicyclic aryl; (d) a 10 membered bicyclic heterocyclyl optionally substituted with halogen, OH or oxo, wherein the bicyclic heterocyclyl contains one or two nitrogen heteroatoms; and (e) a 9-10 membered bicyclic heteroaryl optionally substituted with halogen, cyano, amino or C₁-C₃ alkyl optionally substituted with halogen, wherein the bicyclic heteroaryl contains one to three nitrogen heteroatoms;~~

$\mathbb{R}^2$ is:~~X₁₁ is selected from CR¹³R¹⁴, SiR¹³R¹⁴, NH and O;~~

~~X₁₂ is selected from CHR¹⁵ and NH, wherein one or both of X₁₁ and X₁₂ must be carbon;~~

~~R¹⁰ is selected from hydrogen and methyl;~~

~~R¹¹ is selected from hydrogen, OH and CH₂NH₂;~~

~~R¹², R¹⁶ and R¹⁷ are hydrogen;~~

~~R¹³ is selected from hydrogen, OH, CH₂NH₂, NH₂, NH(CH₃), N(CH₃)₂, C(NH₂)(CH₃)₂ or NHBoc;~~

~~R¹⁴ is selected from hydrogen, OH, methyl, ethyl, propyl, CF₃, CH₂OH, CH₂CH₂OH, CH₂C(CH₃)₂OH, CH₂OCH₃, CH₂CH₂OCH₃ and (CH₂)pyridin 2-yl;~~

~~R¹⁵ is selected from hydrogen or NH₂;~~

~~or one of the following groups may join together:~~

~~R¹⁰ and R¹¹ may join together as CH₂NHCH₂ to form a fused bicyclic,~~

~~R¹⁰ and R¹⁵ may join together as ethyl or propyl to form a bridged bicyclic.~~

~~R¹¹ and R¹² may join together as cyclobutane substituted with NH₂ to form a spirocyclic.~~

~~R¹³ and R¹⁴ may join together as a group selected from cyclopentyl, tetrahydrofuran, azetidine, 2,3-dihydro-1*H*-indene, 6,7-dihydro-5*H*-cyclopenta[*b*]pyridine, 2,3-dihydrobenzofuran, or bicyclo[4.2.0]octa-1(6),2,4-triene, optionally substituted with F, Cl, OH, OCH₃, CN, methyl or NH₂ to form a spirocyclic,~~

~~R¹⁰ and R¹⁶ may join together as methyl, ethyl, propyl, O or NH to form a bridged bicyclic.~~

~~R¹¹ and R¹⁵ may join together as methyl or ethyl to form a bridged bicyclic.~~

~~R¹¹ and R¹⁶ may join together as methyl, ethyl, or O to form a bridged bicyclic.~~

~~R¹¹ and R¹⁷ may join together as ethyl to form a bridged bicyclic, or~~

~~R¹³ and R¹⁵ may join together as NHCH₂, or cyclopentyl or cyclohexyl wherein the cyclopentyl or cyclohexyl is substituted with NH₂ to form a fused bicyclic;~~

~~R⁴⁸ is selected from hydrogen and methyl;~~

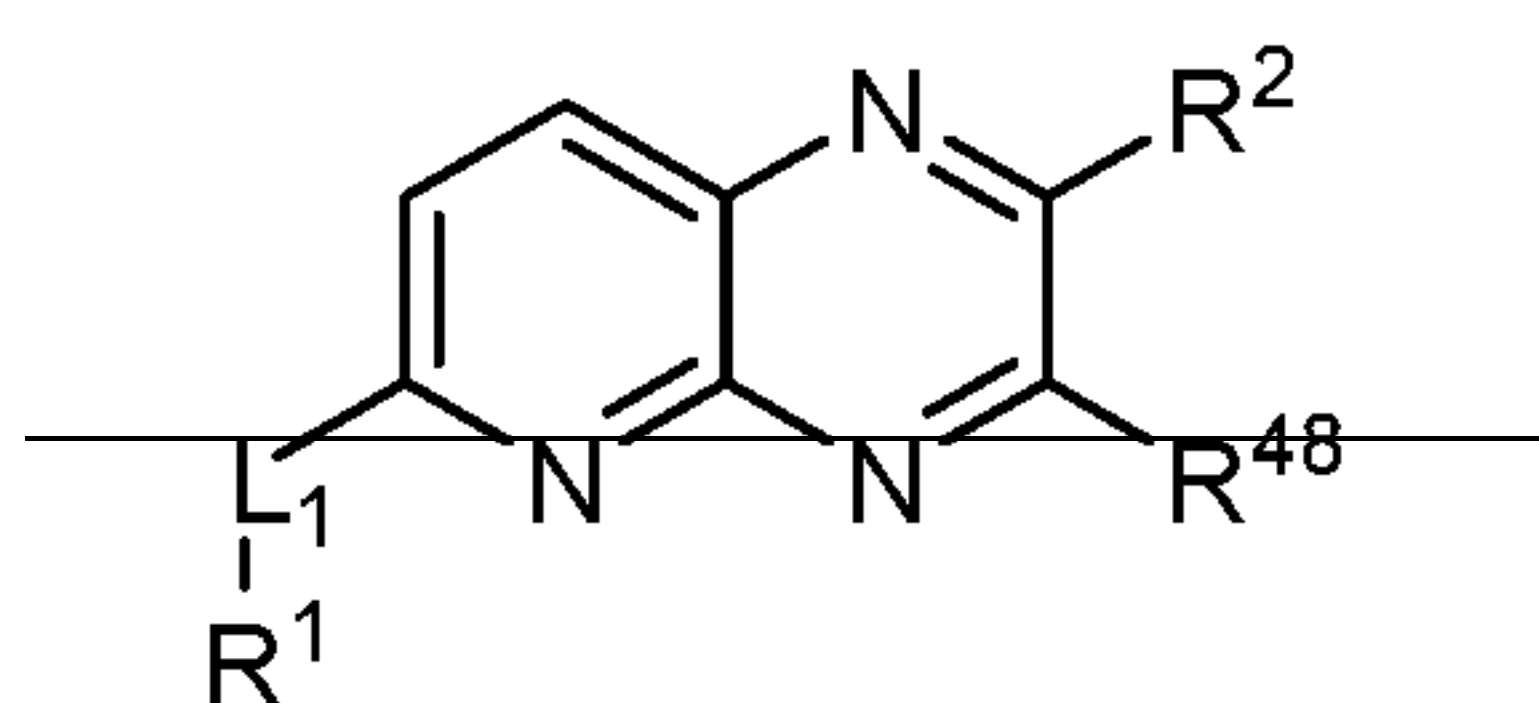
~~R^a is hydrogen, C₁-C₄ alkyl optionally substituted with OH, methoxy, halogen or cyano, or cyclopropyl; and~~

~~a, b, c and d are selected from 0 and 1.~~

~~4. The compound of any one of Claims 1 to 3, wherein X₁ is selected from CH and N; and X₂ is selected from CH and N; and X₃ is selected from CH and N, wherein only one or two of X₁, X₂ and X₃ may be N.~~

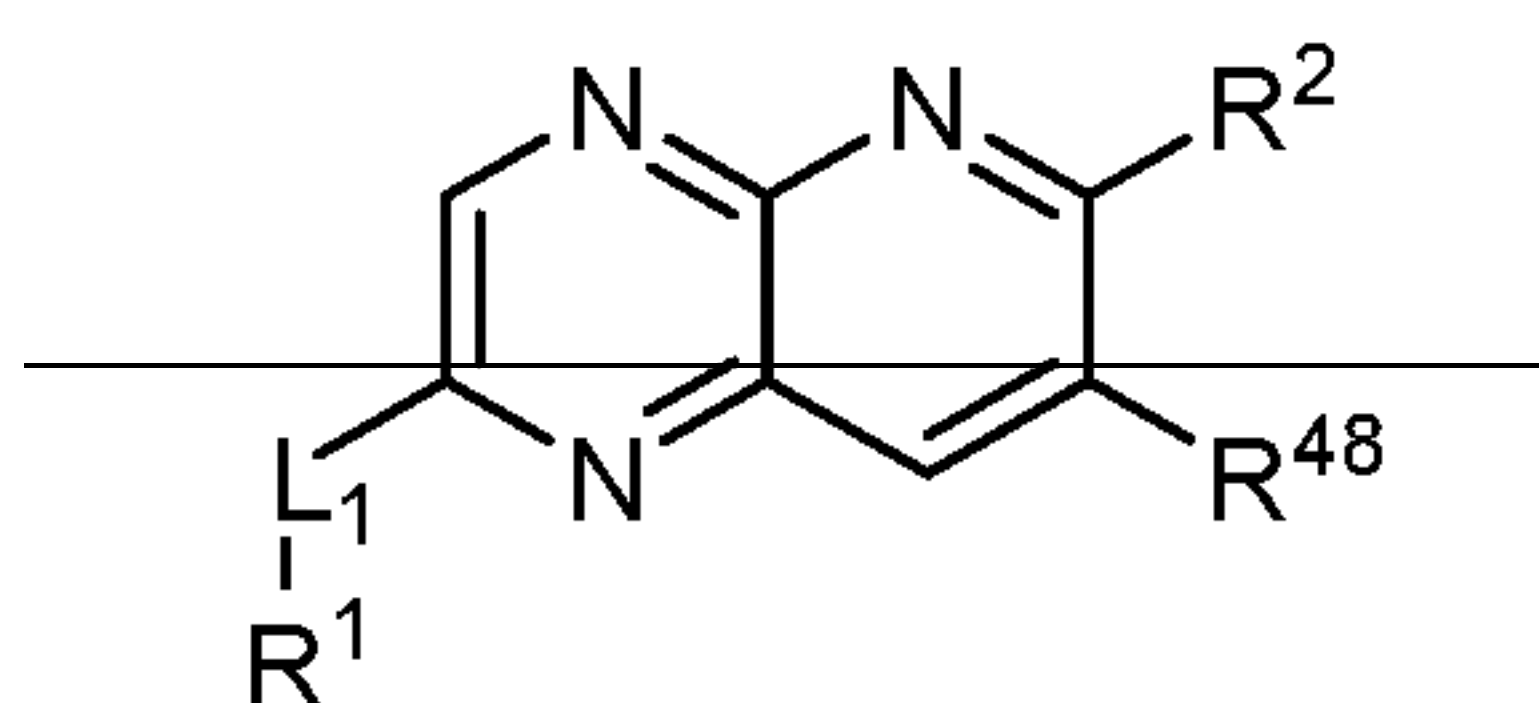
~~5. The compound of any one of Claims 1 to 3, wherein X₁ is selected from CH and N; and X₂ is selected from CH and N; and X₃ is selected from CH and N, wherein only one of X₁, X₂ and X₃ may be N.~~

~~6. The compound any one of Claims 1 to 4, wherein the compounds have the structure of Formula IIa:~~



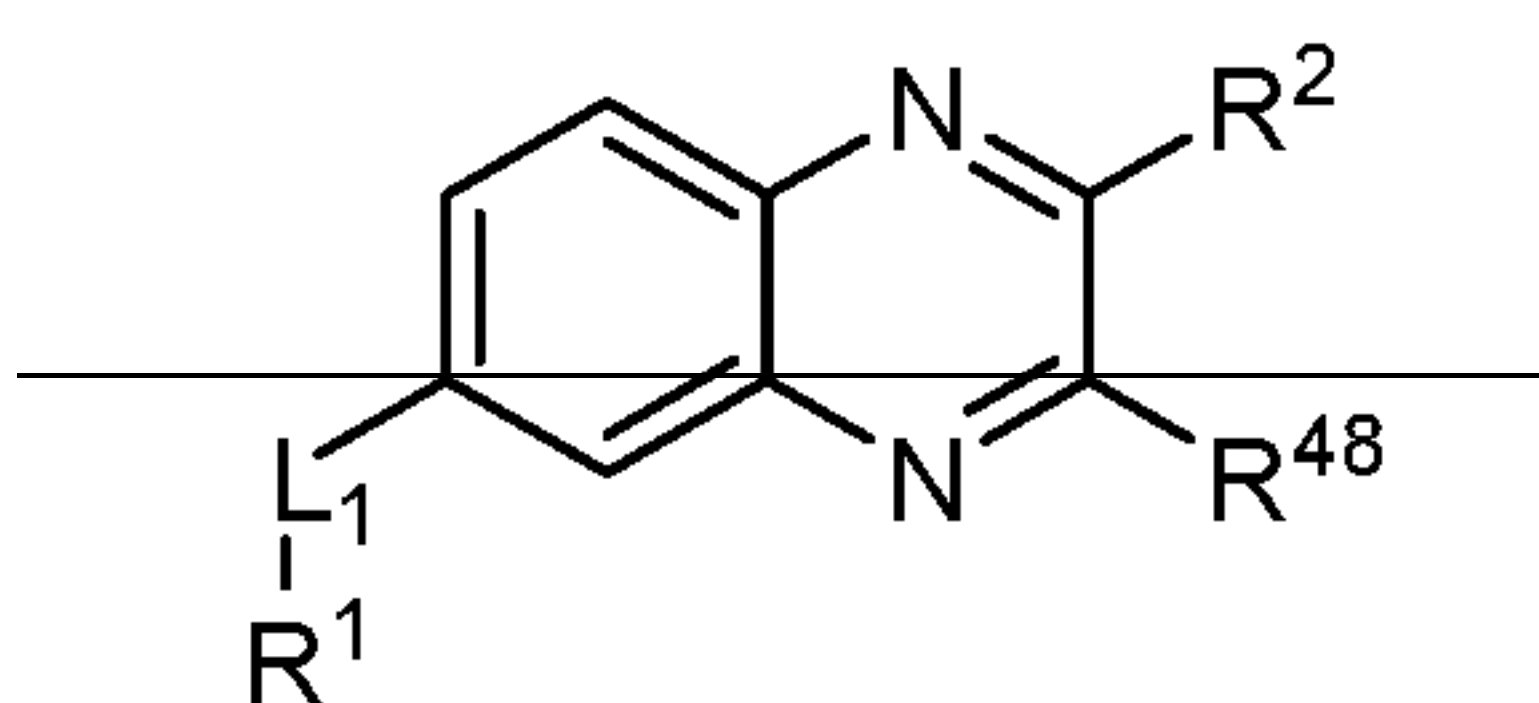
IIa

~~7. The compound any one of Claims 1 to 4, wherein the compounds have the structure of Formula IIIa:~~



IIIa

~~8. The compound any one of Claims 1 to 5, wherein the compounds have the structure of Formula IVa:~~



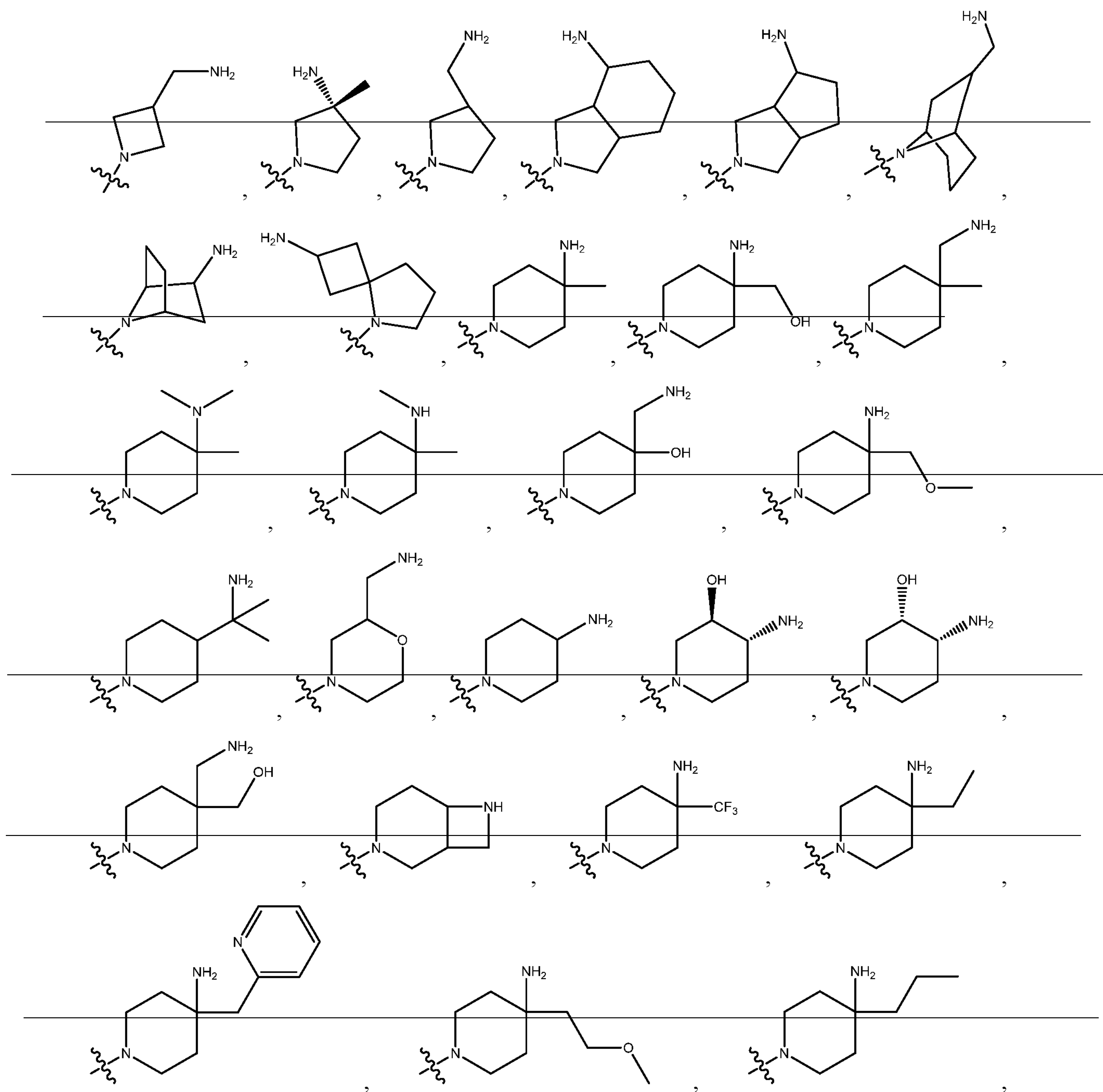
IVa

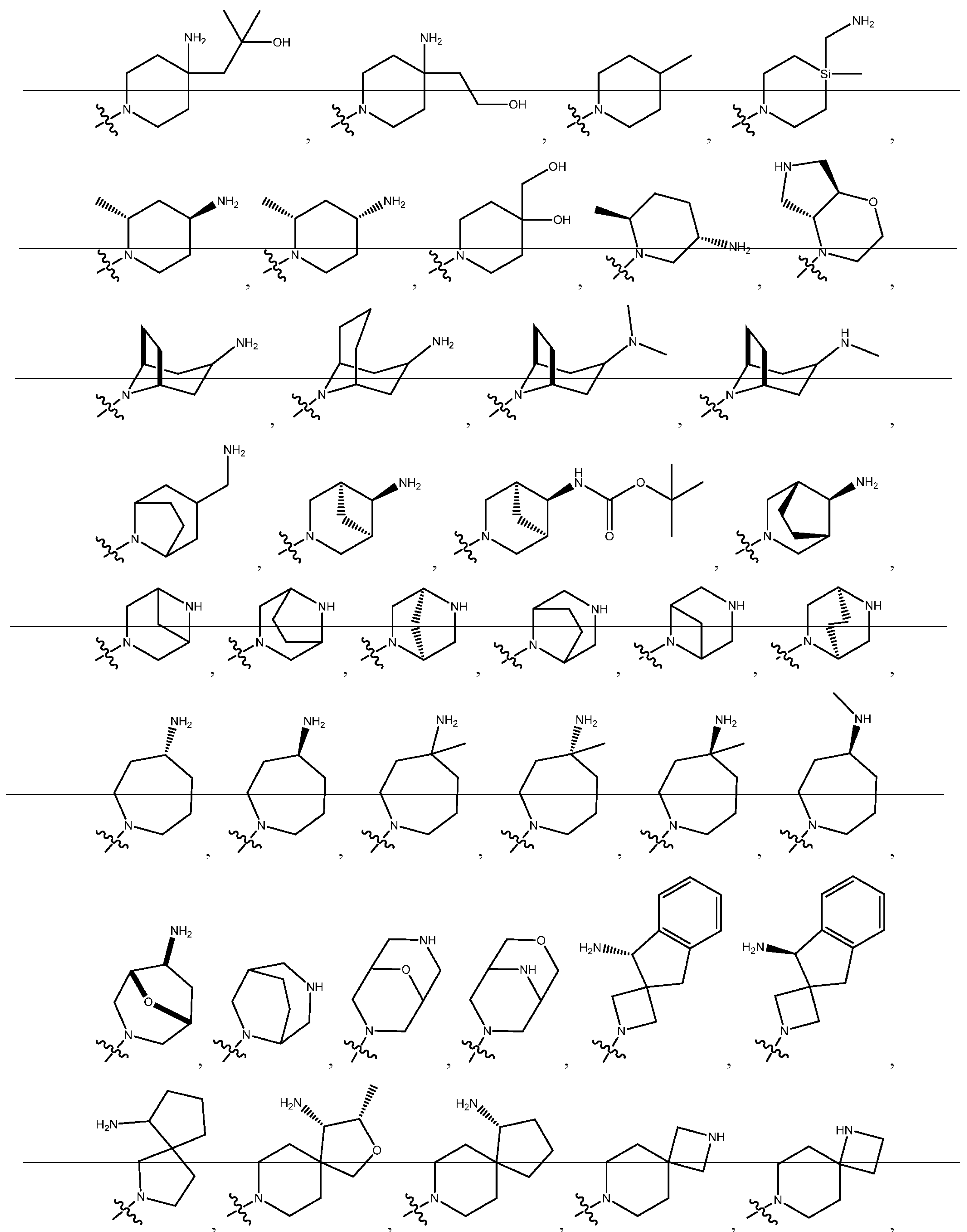
~~9. The compound of any one of Claims 1 to 8, wherein L₁ is selected from a direct bond and S.~~

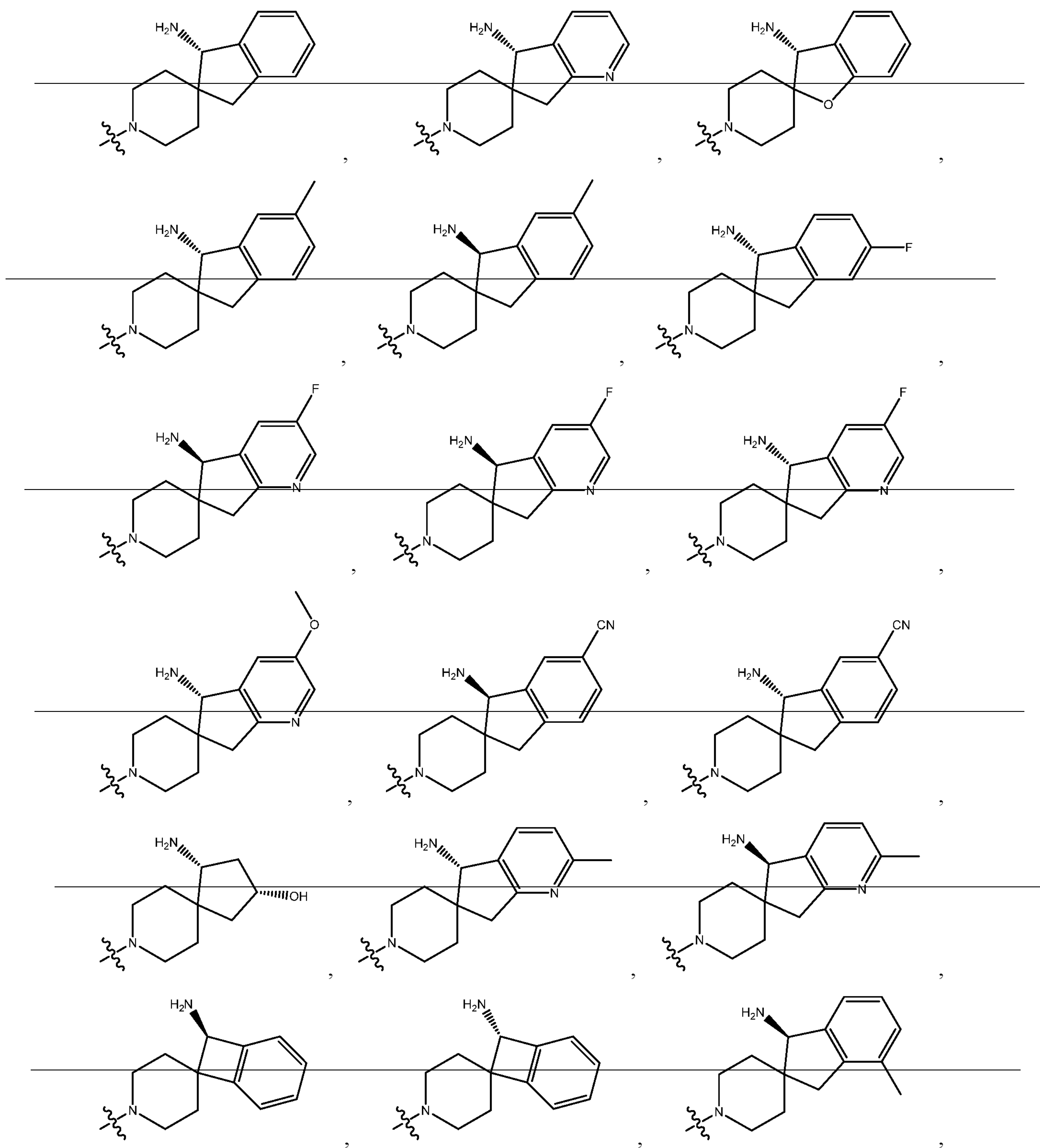
10. ~~The compound of any one of Claims 1 to 8, wherein L₁ is a direct bond.~~
11. ~~The compound of any one of Claims 1 to 8, wherein L₁ is S.~~
12. ~~The compound of any one of Claims 1 to 11, wherein R¹ is selected from the group consisting of phenyl, 2,3-dichlorophenyl, 3-chlorophenyl, 4-fluorophenyl, 3-chloro-2-trifluoromethylphenyl, 2-chloro-3-methoxyphenyl, 3-chloro-2-fluorophenyl, 2-chloro-6-fluoro-3-methoxyphenyl, 2,3-dichloro-4-methoxyphenyl, 2-chloro-3-cyanophenyl, 2-chloro-3-fluorophenyl, 2-amino-3-chloropyridin-4-yl, 3-chloro-2-(pyrrolidin-1-yl)pyridine-4-yl, 3-chloro-2-methoxypyridin-4-yl, 3-chloro-2-(methylamino)pyridine-4-yl, 3-chloro-2-(3-hydroxypyrrolidin-1-yl)pyridin-4-yl, 3-chloro-2-((2-hydroxyethyl)amino)pyridin-4-yl, 3-chloro-2-methylpyridin-4-yl, 6-amino-2,3-dichloropyridin-4-yl, 3-chloro-2-(2-(hydroxymethyl)pyrrolidin-1-yl)pyridin-4-yl, 2-amino-3-methylpyridin-4-yl, 3-chloro-2-(1,1-dioxidothiomorpholino)pyridin-4-yl, 3-chloro-2-(4-hydroxypiperidin-1-yl)pyridin-4-yl, 3-chloro-2-morpholinopyridin-4-yl, 2-(4-acetylpiperazin-1-yl)-3-chloropyridin-4-yl, 3-chloro-2-((S)-3-(hydroxymethyl)pyrrolidin-1-yl)pyridin-4-yl, 3-chloro-2-((S)-3-hydroxypyrrolidin-1-yl)pyridin-4-yl, 3-chloro-2-(3-hydroxypyrrolidin-1-yl)pyridin-4-yl, 3-chloro-2-(hydroxymethyl)pyridin-4-yl, 3-chloro-2-methylpyridin-4-yl, 2-aminopyridin-3-yl, 6-chloro-2-methylpyridin-3-yl, 6-amino-2-chloropyridin-3-yl, 2-chloro-6-methylpyridin-3-yl, 3-chloro-2-((R)-3-(hydroxymethyl)pyrrolidin-1-yl)pyridin-4-yl, 2,3-dimethylpyridin-4-yl, 2-amino-3-fluoropyridin-4-yl, 6-amino-2-(trifluoromethyl)pyridin-3-yl, 2-amino-5-chloropyridin-4-yl, 6-amino-4,5-dichloropyridin-3-yl, 6-amino-3-chloro-2-methoxypyridin-4-yl, 2-amino-3-methoxypyridin-4-yl, 6-amino-5-chloropyrimidin-4-yl, 2-(trifluoromethyl)pyridin-3-yl, 3-chloro-2-((2-methoxyethyl)amino)pyridin-4-yl, 3-chloro-2-(cyclopropylamino)pyridin-4-yl, 3-fluoropyridin-4-yl, 3-chloropyridin-4-yl, 3-(trifluoromethyl)pyridin-4-yl, 3-chloro-2-((2-cyano-2-methylpropyl)amino)pyridin-4-yl, 3-chloro-2-((3-methoxypropyl)amino)pyridin-4-yl, 2-amino-3-(trifluoromethyl)pyridin-4-yl, 2-(trifluoromethyl)pyridin-4-yl, 3,4-dihydroquinolin-1(2H)-yl, 3,4-dihydroquinoxalin-1(2H)-yl, 2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-4-yl, 3,4-dihydro-1,5-naphthyridin-1(2H)-yl, 3,3-difluoro-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-4-yl, 7-hydroxy-6,7-dihydro-5H-cyclopenta[b]pyridin-4-yl, naphthalen-1-yl, 1-methyl-1H-indazol-7-yl, pyrazolo[1,5-a]pyridine-4-yl, pyrazolo[1,5-a]pyrazin-4-yl, isoquinolin-8-yl, 3H-imidazo[4,5-b]pyridin-7-yl, 6-chloroimidazo[1,2-a]pyridin-3-yl, 6-cyanoimidazo[1,2-a]pyridin-3-yl, 1H-pyrazolo[3,4-b]pyridin-4-yl, 1,8-naphthyridin-4-yl, 1H-pyrrolo[2,3-b]pyridin-4-yl, 1-methyl-1H-pyrrolo[2,3-b]pyridin-4-yl, 5-chloro-1H-pyrrolo[2,3-b]pyridin-4-yl, 5-(trifluoromethyl)-1H-pyrrolo[2,3-b]pyridin-4-yl, 3-methyl-1H-pyrrolo[2,3-b]~~

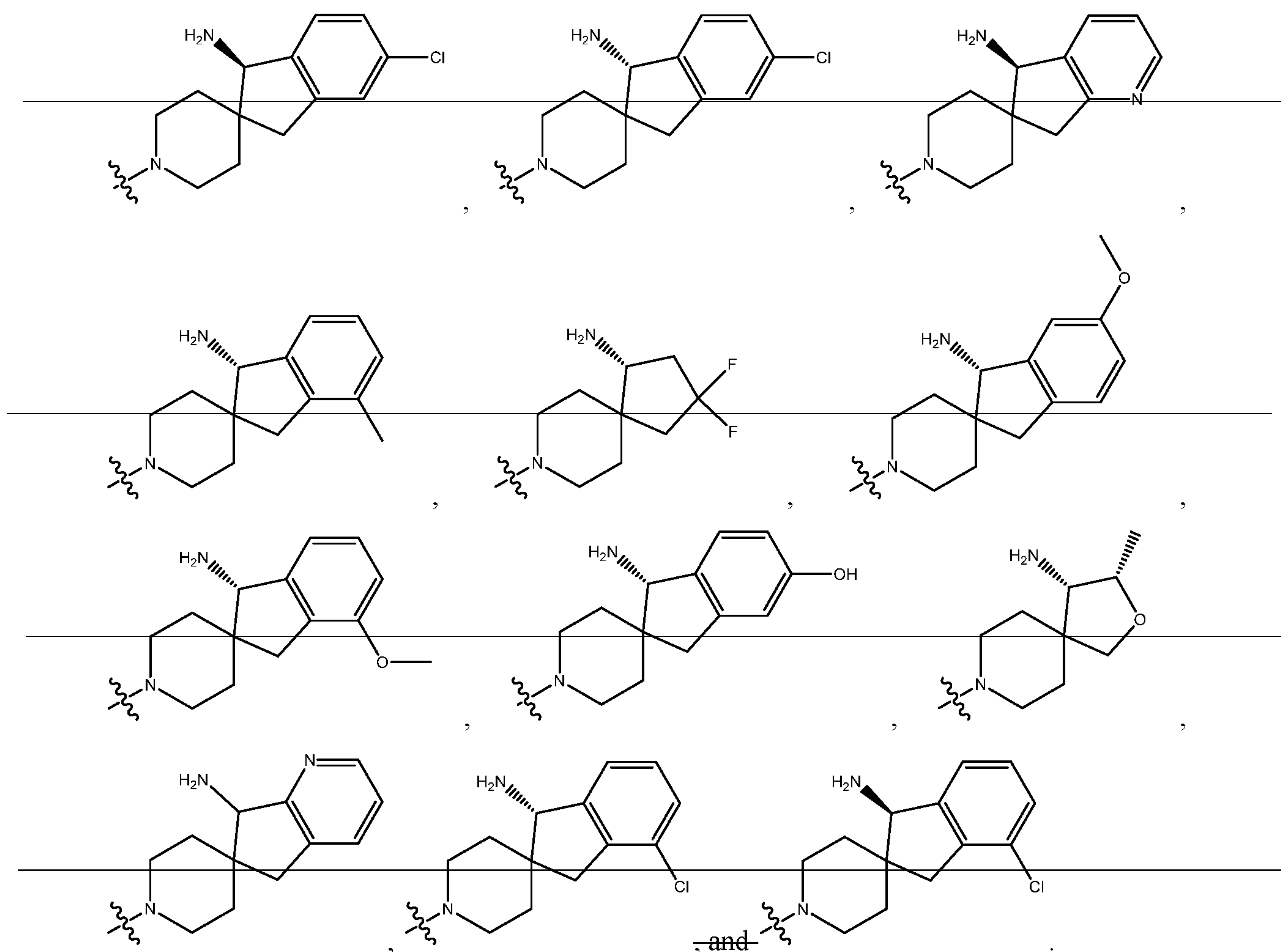
~~*b*]pyridin-4-yl, 6-amino-1*H*-pyrrolo[2,3-*b*]pyridin-4-yl and 5-fluoro-1*H*-pyrrolo[2,3-*b*]pyridin-4-yl.~~

~~13. The compound of any one of Claims 1 to 12, wherein R² is selected from the group consisting of:~~

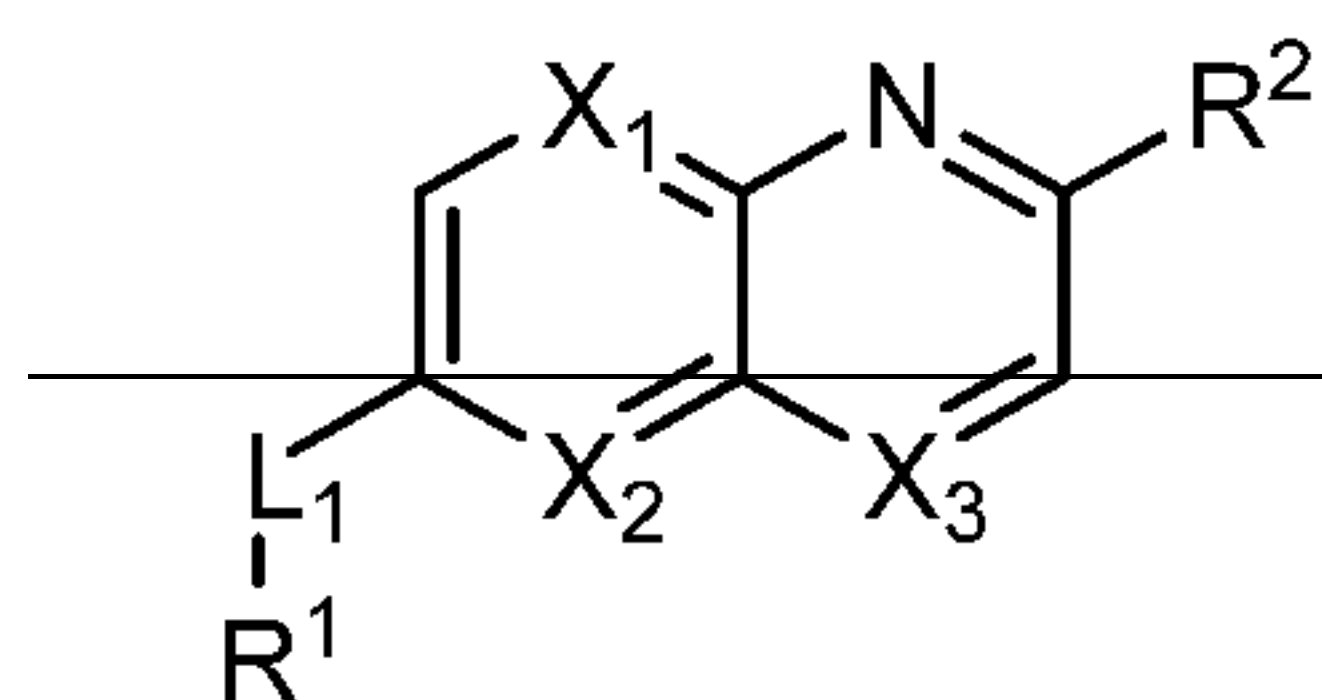








14. The compound of any one of Claims 1 to 13, wherein R^{48} is hydrogen.
15. The compound of Claim 1 wherein the compound is selected from Examples 1 to 22.
16. A compound selected from Formula I:



I

or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof, wherein:

X_1 is selected from CH and N;

X_2 is selected from CH and N;

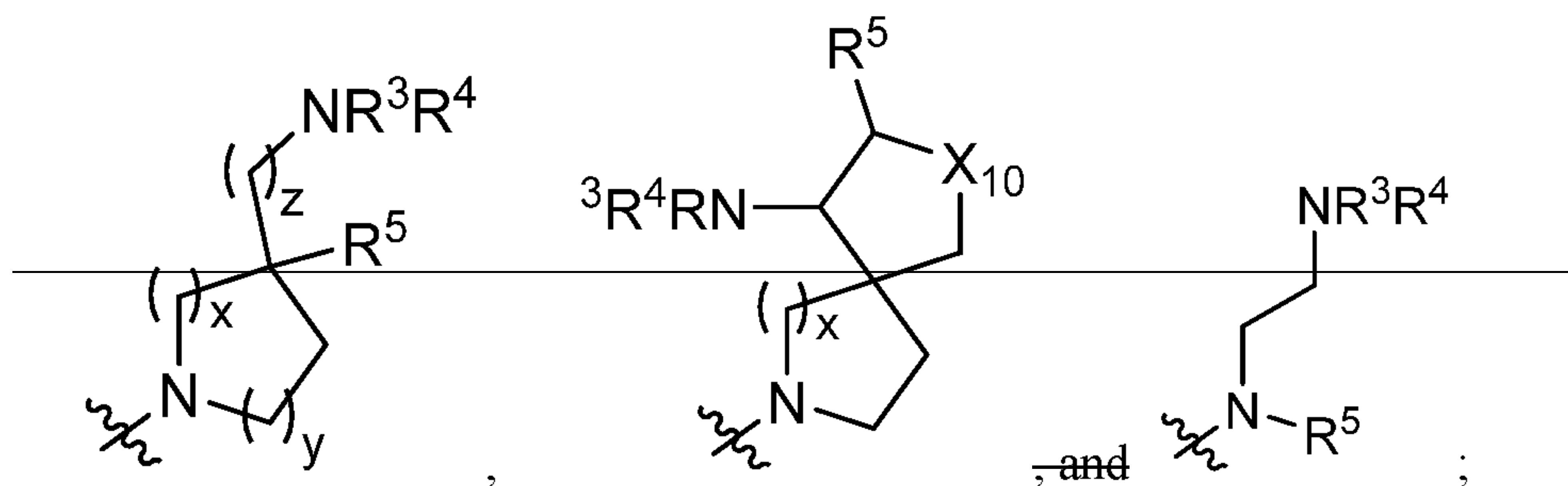
X_3 is selected from CH and N;

L_1 is selected from a direct bond, S, CH_2 , O or NH;

~~R¹ is selected from phenyl, a 5 to 6 membered heteroaryl wherein the heteroaryl contains one to four heteroatoms selected from the group consisting of nitrogen, oxygen and sulfur, a 10 membered bicyclic aryl, and a 9-10 membered bicyclic heteroaryl wherein the bicyclic heteroaryl contains one to three heteroatoms selected from the group consisting of nitrogen, oxygen and sulfur,~~

~~wherein the phenyl, heteroaryl, bicyclic aryl and bicyclic heteroaryl are optionally substituted with one or more groups selected from the group consisting of halogen, cyano, C₁-C₃ alkyl optionally substituted with halogen, cyano or OH, O(C₁-C₃ alkyl) optionally substituted with halogen, cyano or OH, NHR^a, and 3 to 6 membered heterocycle optionally substituted with halogen, cyano or OH, wherein the heterocycle contains one or two heteroatoms selected from nitrogen, oxygen and sulfur;~~

~~R² is selected from the group consisting of:~~



~~R³ and R⁴ are independently selected from hydrogen and methyl;~~

~~R⁵ is selected from the group consisting of hydrogen, methyl, OH and CH₂OH;~~

~~R^a is hydrogen or C₁-C₃ alkyl optionally substituted with OH, methoxy, halogen or cyano;~~

~~X₁₀ is CH or O;~~

~~x is 1 or 2;~~

~~y is 1 or 2; and~~

~~z is 0 or 1.~~

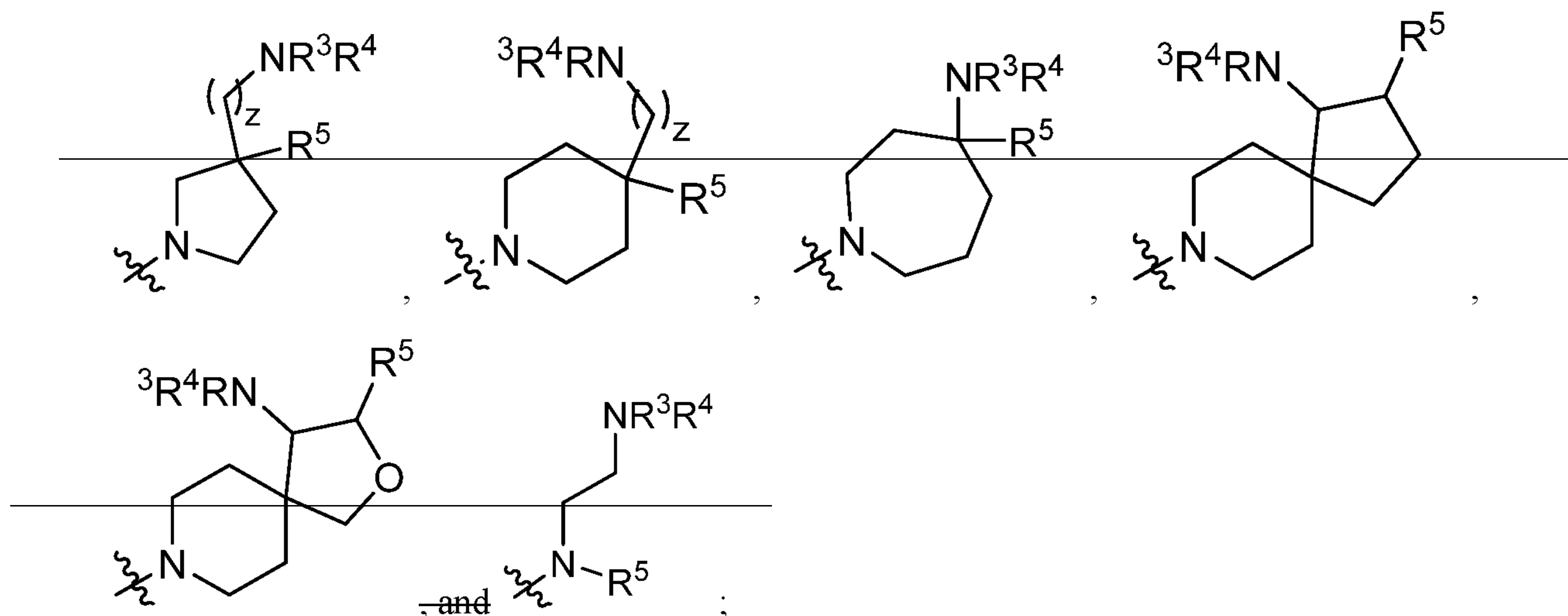
~~17. The compound of Claim 16, wherein X₁ is CH, X₂ is N and X₃ is N; or X₁ is N, X₂ is N and X₃ is CH; or X₁ is CH, X₂ is CH and X₃ is N;~~

~~L₁ is selected from a direct bond, S, CH₂, O or NH;~~

~~R¹ is selected from the group consisting of: (a) phenyl optionally substituted with one to three substituents selected from the group consisting of halogen, C₁-C₃ alkyl optionally substituted with halogen, O(C₁-C₃ alkyl) optionally substituted with halogen, and cyano; (b) a 6 membered heteroaryl, optionally substituted with one or two groups selected from halogen,~~

methoxy, NHR^a , and 3 to 6 membered heterocycle optionally substituted with OH, wherein the heterocycle contains one nitrogen heteroatom, wherein the heteroaryl contains one nitrogen heteroatom; (c) a 10 membered bicyclic aryl; and (d) a 9-10 membered bicyclic heteroaryl optionally substituted with $\text{C}_1\text{-C}_3$ alkyl, wherein the bicyclic heteroaryl contains one to three nitrogen heteroatoms;

R^2 is selected from the group consisting of:



R^3 and R^4 are independently selected from hydrogen and methyl;

R^5 is selected from the group consisting of hydrogen, methyl, OH and CH_2OH ;

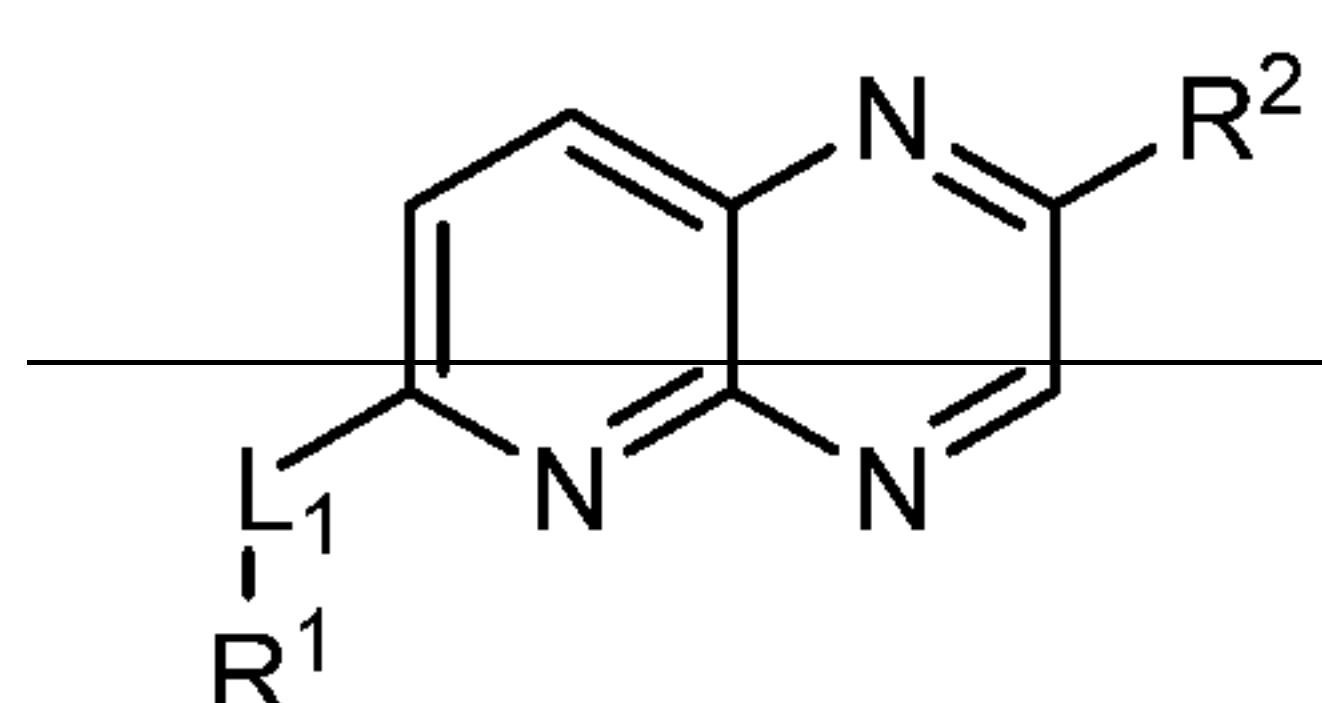
R^a is hydrogen or $\text{C}_1\text{-C}_3$ alkyl optionally substituted with OH, methoxy, halogen or cyano;

z is 0 or 1.

18. The compound of Claim 16, wherein X_1 is selected from CH and N; and X_2 is selected from CH and N; and X_3 is selected from CH and N, wherein only one or two of X_1 , X_2 and X_3 may be N.

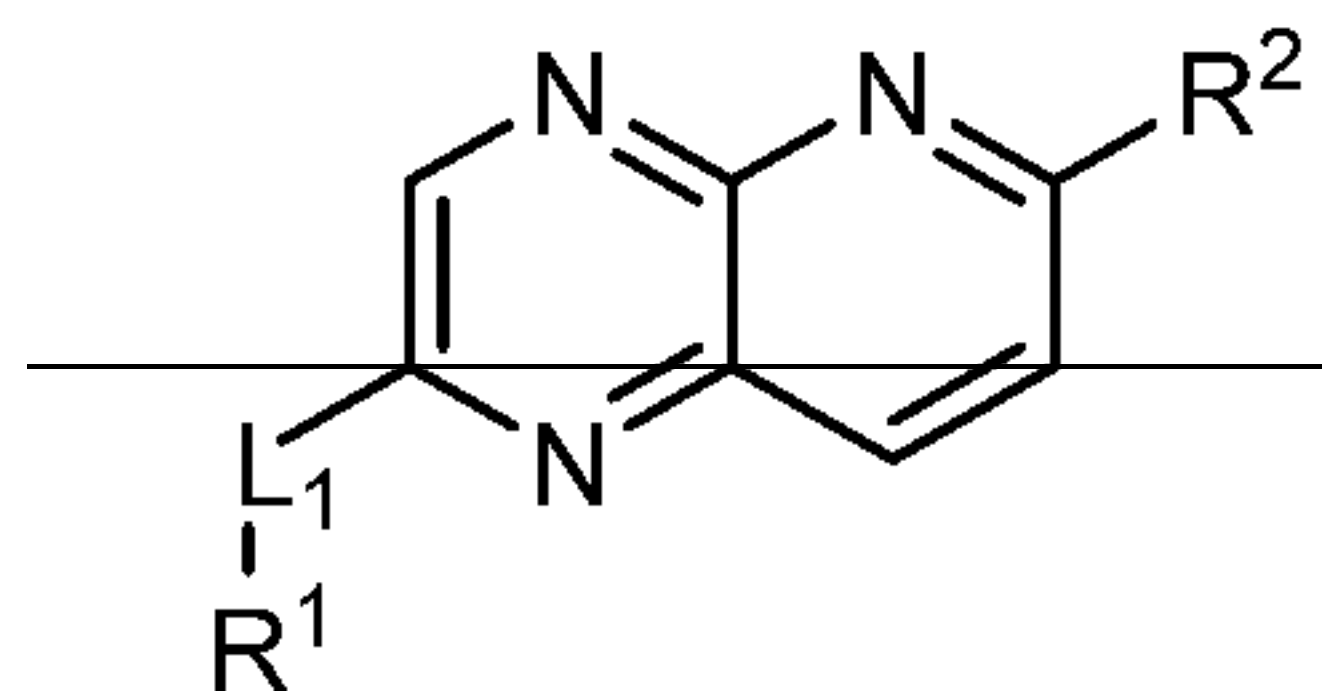
19. The compound of Claim 16, wherein X_1 is selected from CH and N; and X_2 is selected from CH and N; and X_3 is selected from CH and N, wherein only one of X_1 , X_2 and X_3 may be N.

20. The compound of Claim 16, wherein the compounds have the structure of Formula II:

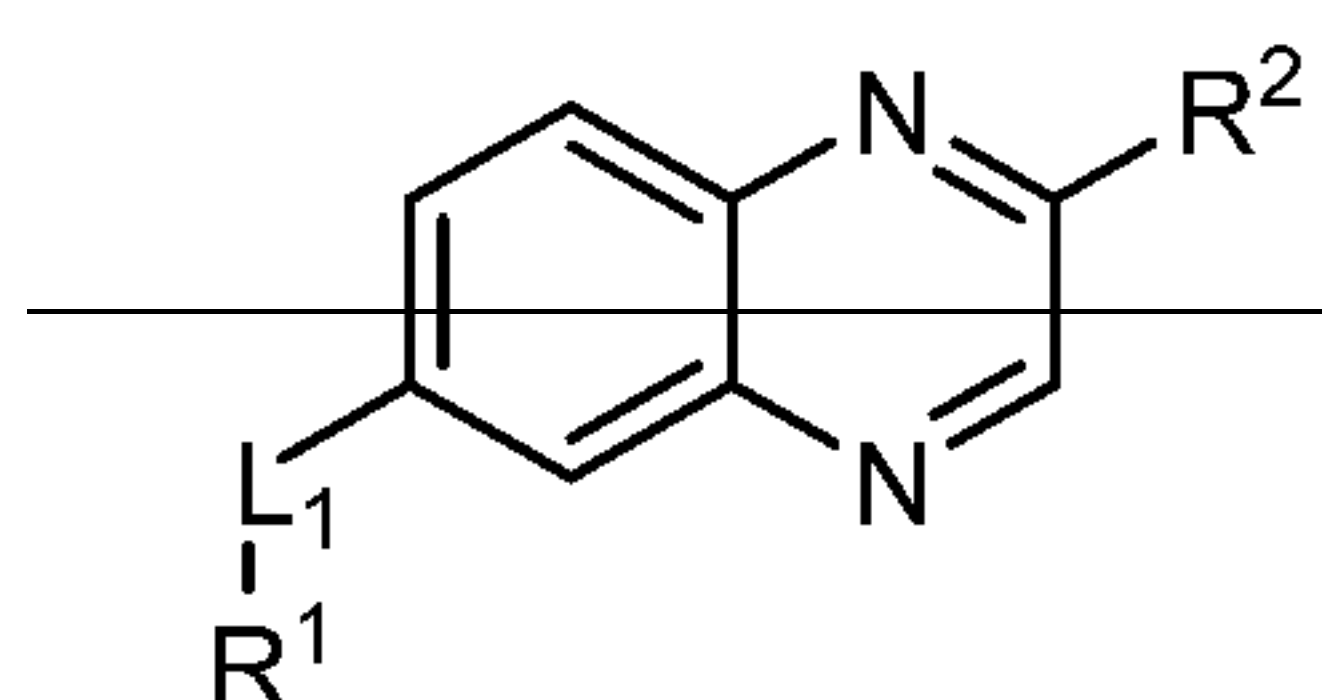


II

21. ~~The compound of Claim 16, wherein the compounds have the structure of Formula III:~~

**III**

22. ~~The compound of Claim 16, wherein the compounds have the structure of Formula IV:~~

**IV**

23. ~~The compound of any one of Claims 16 to 22, wherein L₁ is selected from a direct bond and S.~~

24. ~~The compound of any one of Claims 16 to 22, wherein L₁ is a direct bond.~~

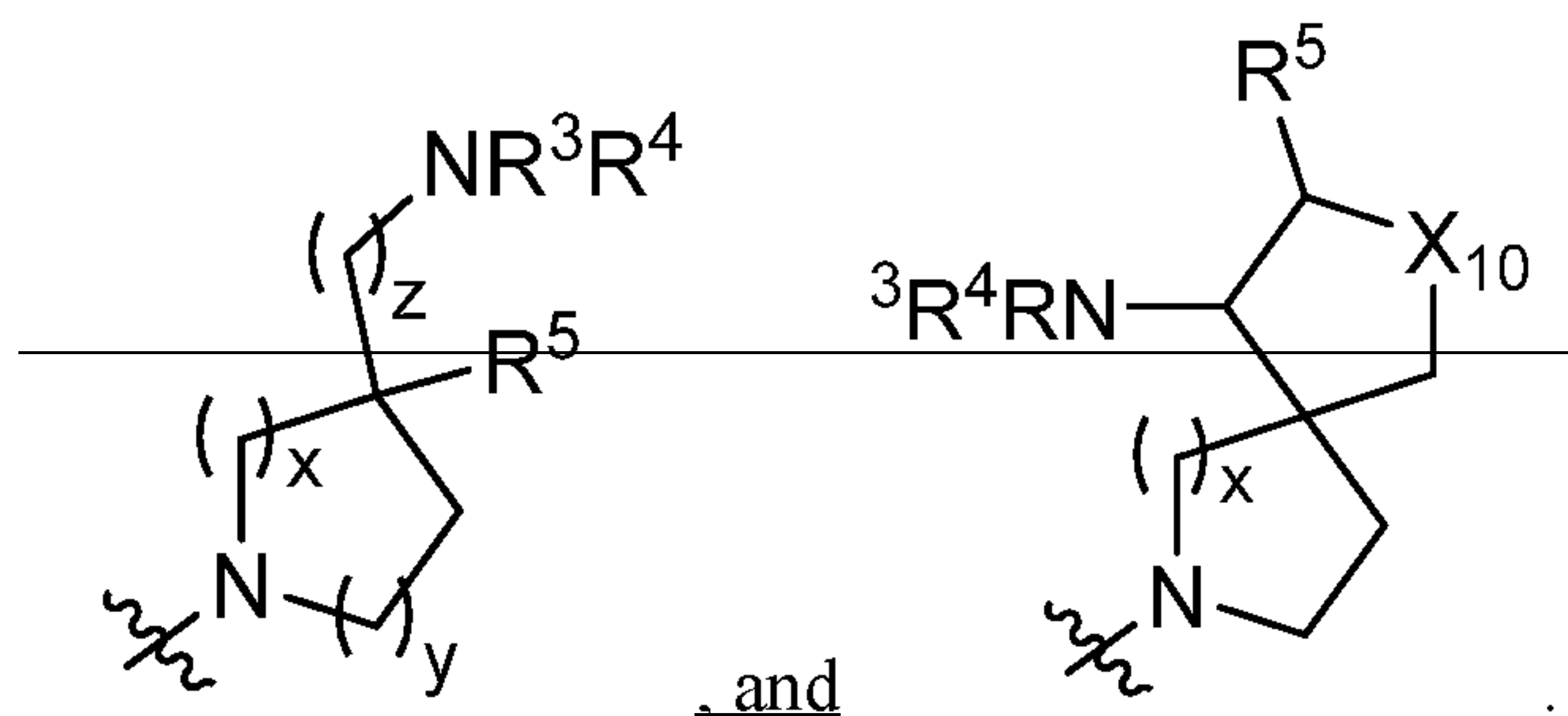
25. ~~The compound of any one of Claims 16 to 22, wherein L₁ is S.~~

26. ~~The compound of any one of Claims 16 to 25, wherein R¹ is selected from the group consisting of: (a) phenyl optionally substituted with one to three substituents selected from the group consisting of halogen, C₁-C₃ alkyl optionally substituted with halogen, O(C₁-C₃ alkyl) optionally substituted with halogen, and cyano; (b) a 6-membered heteroaryl, optionally substituted with one or two groups selected from halogen, methoxy, NHR^a, and 3 to 6-membered heterocycle optionally substituted with OH, wherein the heterocycle contains one nitrogen heteroatom, wherein the heteroaryl contains one nitrogen heteroatom; (c) a 10-membered bicyclic aryl; and (d) a 9-10 membered bicyclic heteroaryl optionally substituted with C₁-C₃ alkyl, wherein the bicyclic heteroaryl contains one to three nitrogen heteroatoms.~~

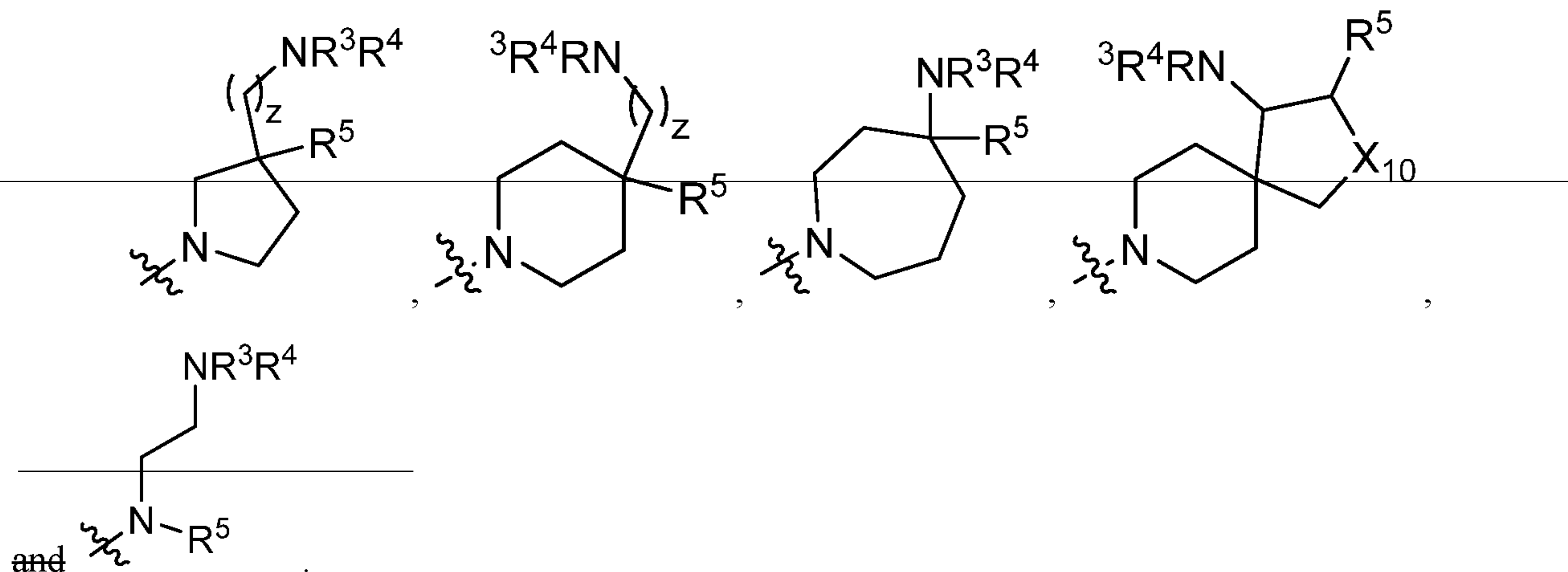
27. ~~The compound of any one of Claims 16 to 25, wherein R¹ is selected from the group consisting of 2,3-dichlorophenyl, 3-chlorophenyl, 3-chloro-2-trifluoromethylphenyl, 2-chloro-3-methoxyphenyl, 3-chloro-2-fluorophenyl, 2-chloro-6-fluoro-3-methoxyphenyl, 2,3-dichloro-4-methoxyphenyl, 2-chloro-3-cyanophenyl, 2-chloro-3-fluorophenyl, 2-amino-3-chloropyridin-4-yl, 3-chloro-2-(pyrrolidin-1-yl)pyridine-4-yl, 3-chloro-2-methoxypyridin-4-yl, 3-chloro-2-(methylamino)pyridine-4-yl, 3-chloro-2-(3-hydroxypyrrolidin-1-yl)pyridin-4-~~

yl, 3-chloro-2-((2-hydroxyethyl)amino)pyridin-4-yl, naphthalen-1-yl, 1-methyl-1*H*-indazol-7-yl, pyrazolo[1,5-*a*]pyridine-4-yl, pyrazolo[1,5-*a*]pyrazin-4-yl and isoquinolin-8-yl.

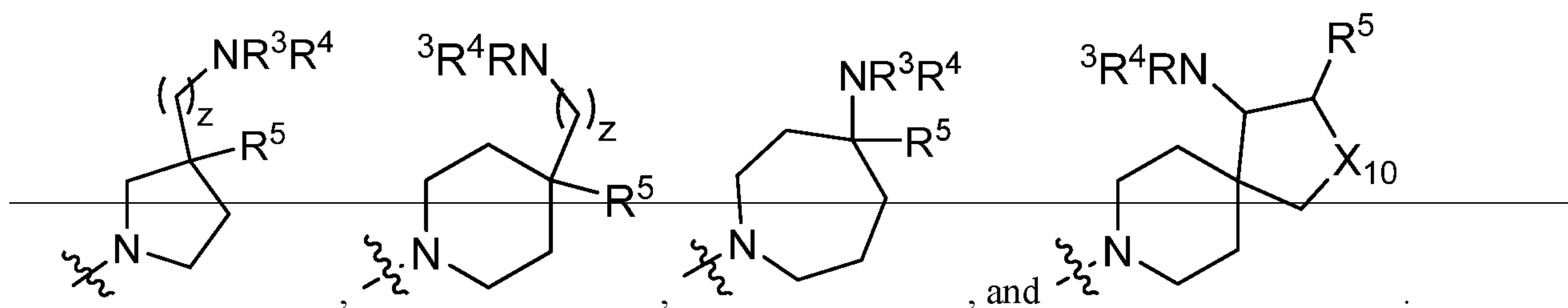
28. The compound of any one of Claims 16 to 27, wherein R^2 is selected from the group consisting of:



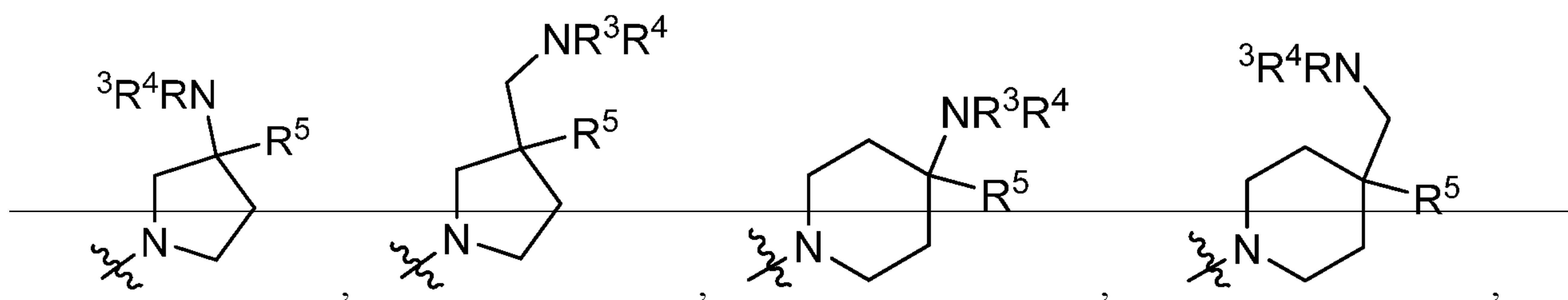
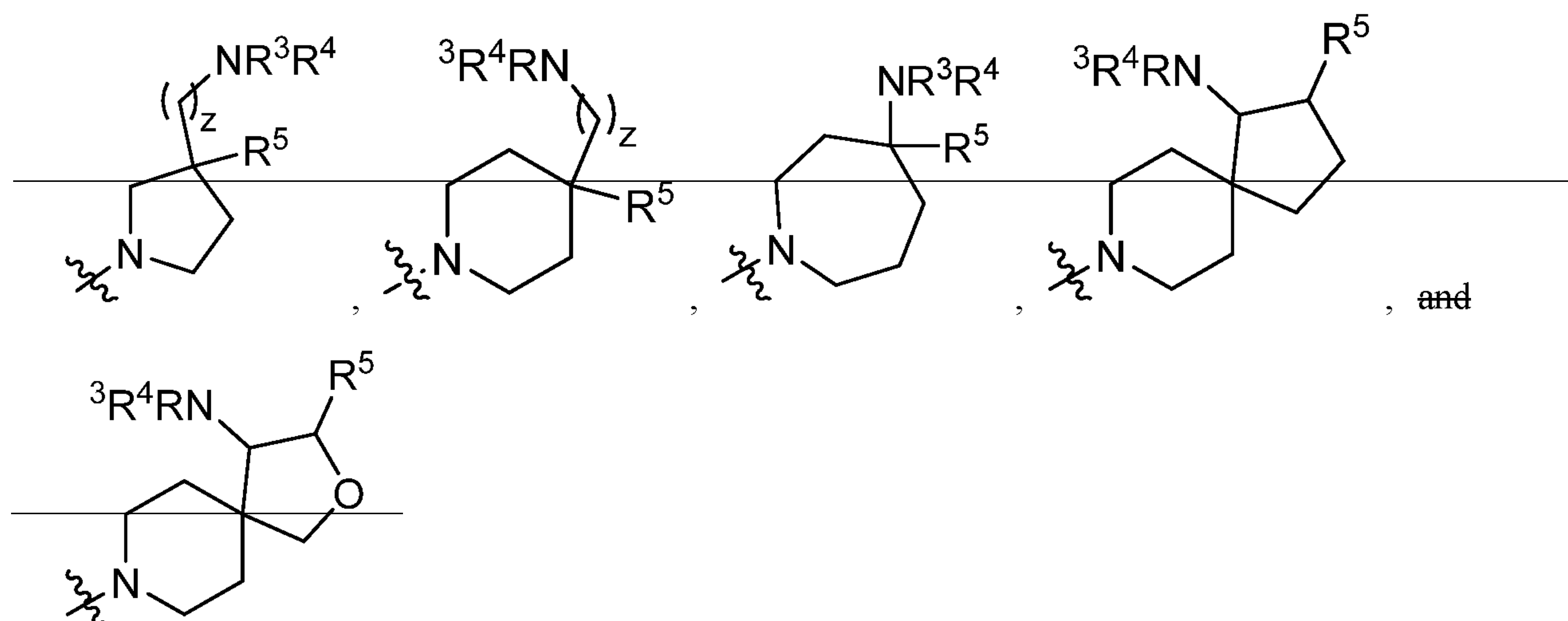
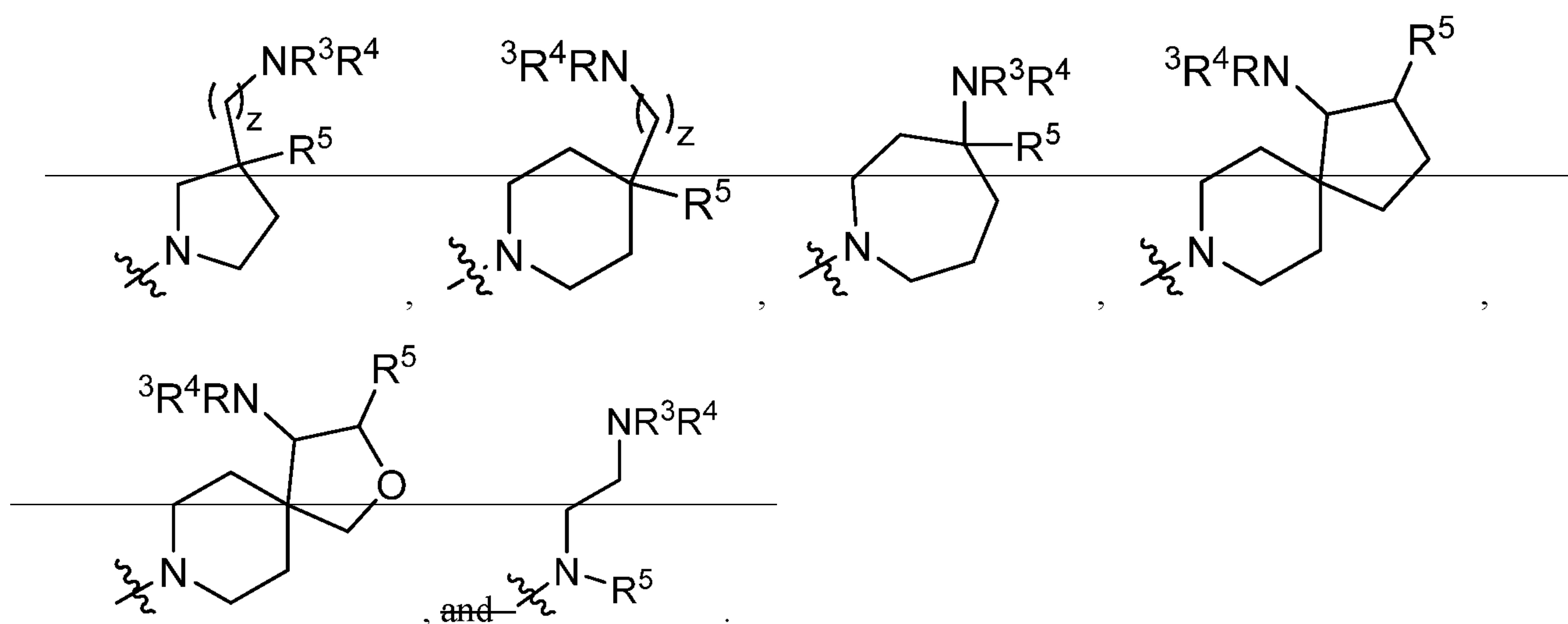
29. The compound of any one of Claims 16 to 27, wherein R^2 is selected from the group consisting of:

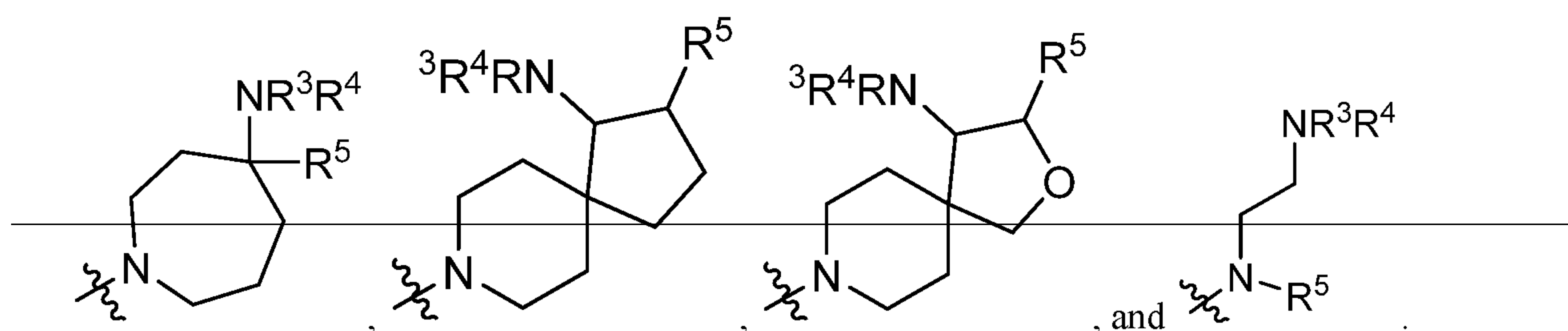


30. The compound of any one of Claims 16 to 27, wherein R^2 is selected from the group consisting of:

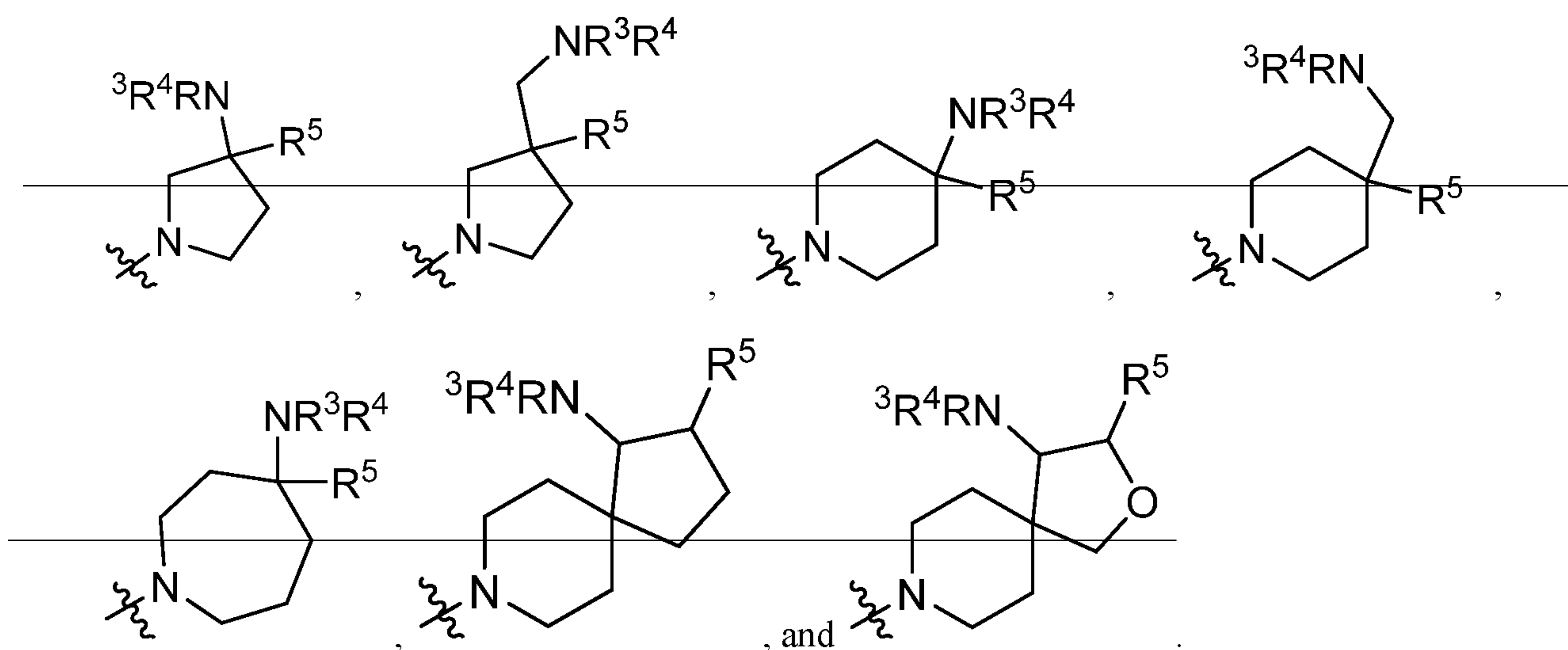


31. The compound of any one of Claims 16 to 27, wherein R^2 is selected from the group consisting of:





34. The compound of any one of Claims 16 to 27, wherein R^2 is selected from the group consisting of:



35. The compound of any one of Claims 16 to 34, wherein R^3 and R^4 are hydrogen.

36. The compound of any one of Claims 16 to 34, wherein R^3 and R^4 are methyl.

37. The compound of any one of Claims 16 to 34, wherein R^3 is hydrogen and R^4 is methyl.

38. A pharmaceutical composition comprising a compound of any one of Claims 1 to 37.

39. A pharmaceutical composition comprising a compound of any one of Claims 1 to 37 and at least one pharmaceutically acceptable carrier, excipient or diluent.

40. A pharmaceutical composition comprising a compound of any one of Claims 1 to 37 for use in the treatment of a hyperproliferative disease.

41. Use of a compound of any one of Claims 1 to 37 in the manufacture of a medicament for the treatment of a hyperproliferative disease.

42. A compound of any one of Claims 1 to 37 for use as a medicament.

43. A compound of any one of Claims 1 to 37 for use in therapy.

44. A compound of any one of Claims 1 to 37 for use in the treatment of a hyperproliferative disease.

~~45. A method of inhibiting SHP2 protein tyrosine phosphatase activity in a cell comprising treating the cell with a compound of Claims 1 to 37.~~

~~46. A method of inhibiting SHP2 protein tyrosine phosphatase activity in a patient in need thereof comprising the step of administering to the patient a compound according to Claims 1 to 37.~~

~~47. A method of treating or ameliorating the severity of a hyperproliferative disorder in a patient in need thereof comprising administering to the patient a compound according to Claims 1 to 37.~~

~~48. The method of Claim 37, wherein the hyperproliferative disease is selected from the group consisting of melanoma, juvenile myelomonocytic leukemias, neuroblastoma, Philadelphia chromosome positive chronic myeloid, Philadelphia chromosome positive acute lymphoblastic leukemias, acute myeloid leukemias, myeloproliferative neoplasms (such as Polycythemia Vera, Essential Thrombocythemia and Primary Myelofibrosis), breast cancer, lung cancer, liver cancer, colorectal cancer, esophageal cancer, gastric cancer, squamous cell carcinoma of the head and neck, glioblastoma, anaplastic large cell lymphoma, thyroid carcinoma, and spitzoid neoplasms.~~

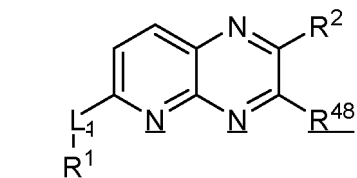
~~49. The method of Claim 37, wherein the hyperproliferative disease is selected from the group consisting of Neurofibromatosis and Noonan Syndrome.~~

~~50. The method of any one of Claims 45 to 49, wherein a compound of any one of Claims 1 to 23 is co-administered with at least one other chemotherapeutic agent used to treat or ameliorate a hyperproliferative disorder.~~

~~51. A pharmaceutical composition comprising a compound of any one of Claims 1 to 37 for use in the treatment of an inflammatory disease.~~

Claims

1. A compound selected from Formula IIa:



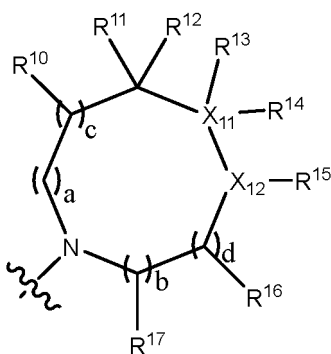
IIa

or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof, wherein:

L₁ is S:

R¹ is selected from phenyl, heteroaryl, bicyclic aryl, bicyclic heterocyclyl, and bicyclic heteroaryl, wherein the phenyl, heteroaryl, bicyclic aryl, bicyclic heterocyclyl and bicyclic heteroaryl are optionally substituted with one or more groups selected from the group consisting of halogen, OH, oxo, cyano, alkyl optionally substituted with halogen, cyano or OH, -O(alkyl) optionally substituted with halogen, cyano or OH, NHR^a, and a heterocycle optionally substituted with halogen, cyano, OH or alkyl optionally substituted with OH or oxo;

R² is:



X₁₁ is selected from CR¹³R¹⁴, SiR¹³R¹⁴, NH and O;

X₁₂ is selected from CHR¹⁵ and NH, wherein one or both of X₁₁ and X₁₂ must be carbon;

R¹⁰ is selected from hydrogen and alkyl;

R¹¹ is selected from hydrogen, OH and CH₂NH₂;

R¹², R¹⁶ and R¹⁷ are hydrogen;

R¹³ is selected from hydrogen, OH, and (C₀-C₃ alkyl)NR^bR^c;

R¹⁴ is selected from hydrogen, OH, alkyl optionally substituted with halogen, OH, methyl, OCH₃ and a heteroaryl;

R¹⁵ is selected from hydrogen or NH₂;

or one of the following groups may join together:

R¹⁰ and R¹¹ may join together as CH₂NHCH₂ to form a fused bicyclic.

R¹⁰ and R¹⁵ may join together as alkyl to form a bridged bicyclic.

R¹¹ and R¹² may join together as alkyl substituted with NH₂ to form a spirocycle.

R¹³ and R¹⁴ may join together as a group selected from cycloalkyl, heterocycle, bicyclic carbocycle, and bicyclic heterocycle, wherein the cycloalkyl, heterocycle, carbocycle and heterocycle are optionally substituted with F, Cl, OH, OCH₃, CN, methyl or NH₂ to form a spirocycle.

R¹⁰ and R¹⁶ may join together as alkyl, O or NH to form a bridged bicyclic.

R¹¹ and R¹⁵ may join together as alkyl to form a bridged bicyclic.

R¹¹ and R¹⁶ may join together as alkyl or O to form a bridged bicyclic.

R¹¹ and R¹⁷ may join together as alkyl to form a bridged bicyclic, or

R¹³ and R¹⁵ may join together as NHCH₂, or cycloalkyl wherein the cycloalkyl is substituted with NH₂ to form a fused bicyclic;

R⁴⁸ is selected from hydrogen and methyl;

R^a is hydrogen, alkyl optionally substituted with OH, methoxy, halogen or cyano, or cyclopropyl;

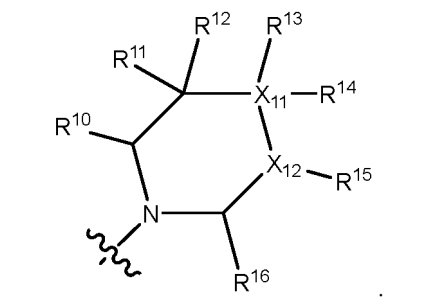
R^b and R^c are independently selected from hydrogen, alkyl and a Boc group; and

a, b, c and d are selected from 0 and 1.

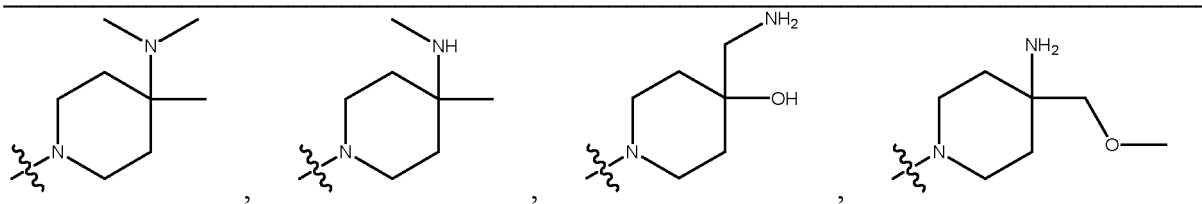
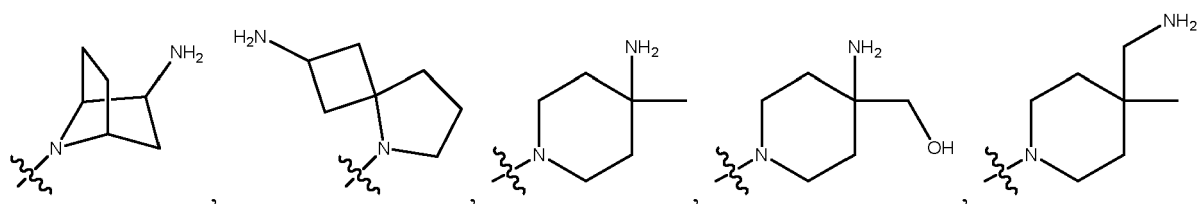
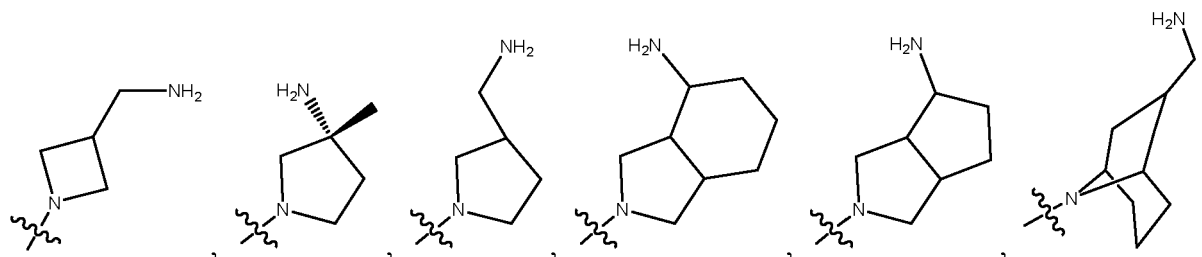
2. The compound of Claim 1, or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof, wherein R¹ is phenyl optionally substituted with one to three groups selected from the group consisting of halogen, cyano, C₁-C₃ alkyl optionally substituted with halogen, cyano or OH, -O(C₁-C₃ alkyl) optionally substituted with halogen, cyano, or OH, NHR^a; and 3 to 6 membered heterocycle optionally substituted with halogen, cyano, or OH, wherein the heterocycle contains one or two heteroatoms selected from nitrogen, oxygen and sulfur.
3. The compound of Claim 1, or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof, wherein R¹ is a 6 membered heteroaryl, optionally substituted with one to three groups selected from halogen; C₁-C₃ alkyl optionally substituted with halogen or OH; methoxy; NHR^a; and 3 to 6 membered heterocycle optionally substituted with OH or C₁-C₃ alkyl optionally substituted with OH or oxo, wherein the heterocycle contains one or two heteroatoms selected from nitrogen, oxygen and SO₂; wherein the heteroaryl contains one or two nitrogen heteroatoms.
4. The compound of Claim 1, or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof, wherein R¹ is selected from the group consisting of phenyl, 2,3-dichlorophenyl, 3-chlorophenyl, 4-fluorophenyl, 3-chloro-2-trifluoromethylphenyl, 2-chloro-3-methoxyphenyl, 3-chloro-2-fluorophenyl, 2-chloro-6-fluoro-3-methoxyphenyl, 2,3-dichloro-4-methoxyphenyl, 2-chloro-3-cyanophenyl, 2-chloro-3-fluorophenyl, 2-amino-3-chloropyridin-4-yl, 3-chloro-2-(pyrrolidin-1-yl)pyridin-4-yl, 3-chloro-2-methoxypyridin-4-yl, 3-chloro-2-(methylamino)pyridin-4-yl, 3-chloro-2-(3-hydroxypyrrolidin-1-yl)pyridin-4-yl, 3-chloro-2-((2-hydroxyethyl)amino)pyridin-4-yl, 3-chloro-2-methylpyridin-4-yl, 6-amino-2,3-dichloropyridin-4-yl, 3-chloro-2-(2-(hydroxymethyl)pyrrolidin-1-yl)pyridin-4-yl, 2-amino-3-methylpyridin-4-yl, 3-chloro-2-(1,1-dioxidothiomorpholino)pyridin-4-yl, 3-chloro-2-(4-hydroxypiperidin-1-yl)pyridin-4-yl, 3-chloro-2-morpholinopyridin-4-yl, 2-(4-acetypiperazin-1-yl)-3-chloropyridin-4-yl, 3-chloro-2-((S)-3-(hydroxymethyl)pyrrolidin-1-yl)pyridin-4-yl, 3-chloro-2-((S)-3-hydroxypyrrolidin-1-yl)pyridin-4-yl, 3-chloro-2-(3-hydroxypyrrolidin-1-yl)pyridin-4-yl, 3-chloro-2-(hydroxymethyl)pyridin-4-yl, 3-chloro-2-methylpyridin-4-yl, 2-aminopyridin-3-yl, 6-chloro-2-methylpyridin-3-yl, 6-amino-2-chloropyridin-3-yl, 2-chloro-6-methylpyridin-3-yl, 3-chloro-2-((R)-3-(hydroxymethyl)pyrrolidin-1-yl)pyridin-4-yl, 2,3-dimethylpyridin-4-yl, 2-amino-3-fluoropyridin-4-yl, 6-amino-2-(trifluoromethyl)pyridin-3-yl, 2-amino-5-chloropyridin-4-yl, 6-amino-4,5-dichloropyridin-3-yl, 6-amino-3-chloro-2-methoxypyridin-4-yl, 2-amino-3-methoxypyridin-4-yl, 6-amino-5-chloropyrimidin-4-yl, 2-(trifluoromethyl)pyridin-3-yl, 3-chloro-2-((2-methoxyethyl)amino)pyridin-4-yl, 3-chloro-2-(cyclopropylamino)pyridin-4-yl, 3-fluoropyridin-4-yl, 3-chloropyridin-4-yl, 3-(trifluoromethyl)pyridin-4-yl, 3-chloro-2-((2-cyano-2-methylpropyl)amino)pyridin-4-yl, 3-chloro-2-((3-methoxypropyl)amino)pyridin-4-yl, 2-amino-3-(trifluoromethyl)pyridin-4-yl, 2-(trifluoromethyl)pyridin-4-yl, 3,4-dihydroquinolin-1(2H)-yl, 3,4-dihydroquinoxalin-1(2H)-yl, 2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-4-yl, 3,4-dihydro-1,5-naphthyridin-1(2H)-yl, 3,3-difluoro-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-4-yl, 7-hydroxy-6,7-dihydro-5H-cyclopenta[b]pyridin-4-yl, naphthalen-1-yl, 1-methyl-1H-indazol-7-yl, pyrazolo[1,5-a]pyridine-4-yl, pyrazolo[1,5-a]pyrazin-4-yl, isoquinolin-8-yl, 3H-imidazo[4,5-b]pyridin-7-yl, 6-chloroimidazo[1,2-a]pyridin-3-yl, 6-cyanoimida-

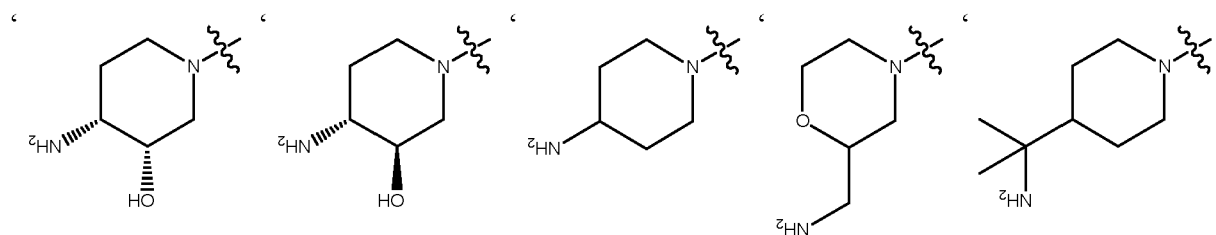
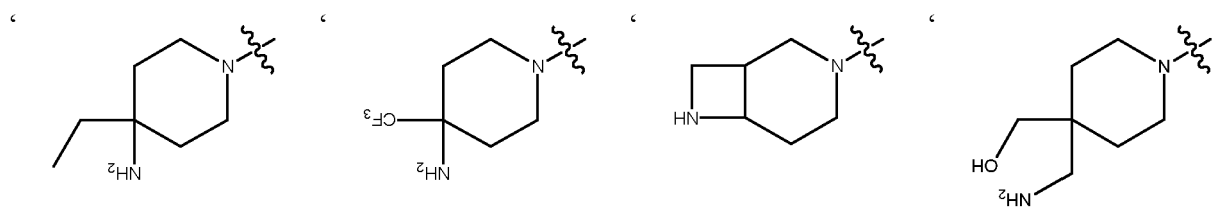
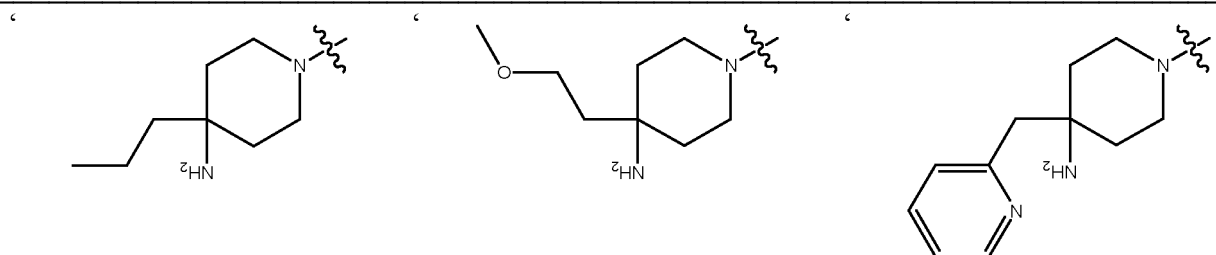
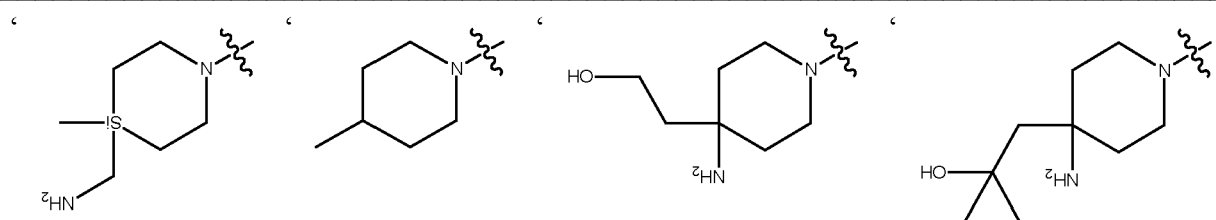
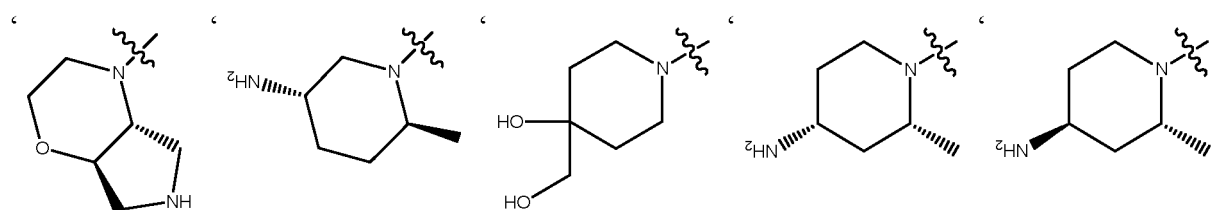
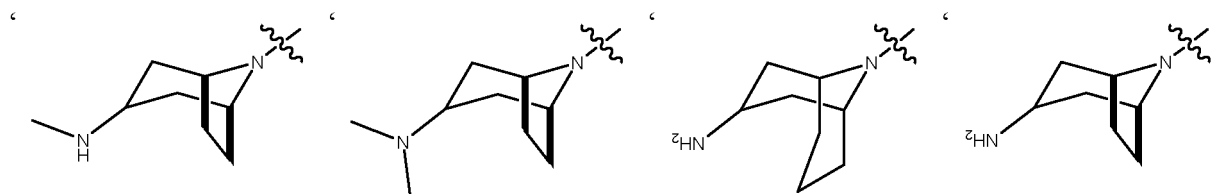
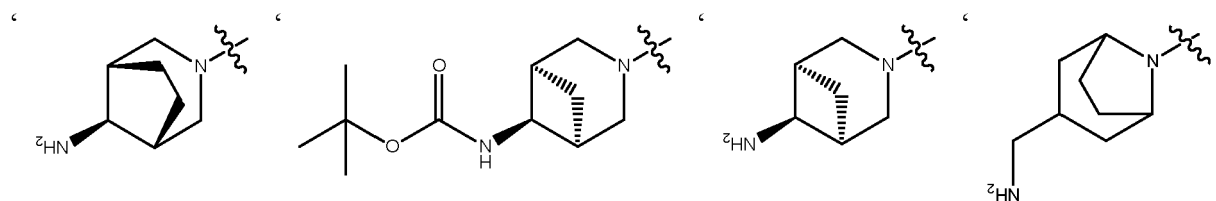
zo[1,2-a]pyridin-3-yl, 1*H*-pyrazolo[3,4-*b*]pyridin-4-yl, 1,8-naphthyridin-4-yl, 1*H*-pyrrolo[2,3-*b*]pyridin-4-yl, 1-methyl-1*H*-pyrrolo[2,3-*b*]pyridin-4-yl, 5-chloro-1*H*-pyrrolo[2,3-*b*]pyridin-4-yl, 5-(trifluoromethyl)-1*H*-pyrrolo[2,3-*b*]pyridin-4-yl, 3-methyl-1*H*-pyrrolo[2,3-*b*]pyridin-4-yl, 6-amino-1*H*-pyrrolo[2,3-*b*]pyridin-4-yl and 5-fluoro-1*H*-pyrrolo[2,3-*b*]pyridin-4-yl.

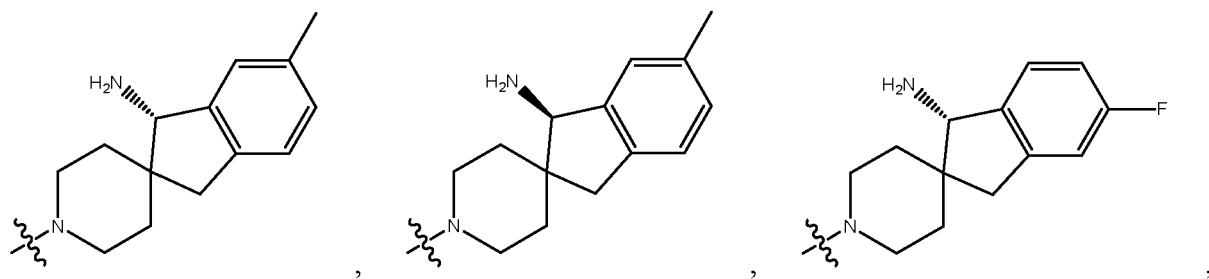
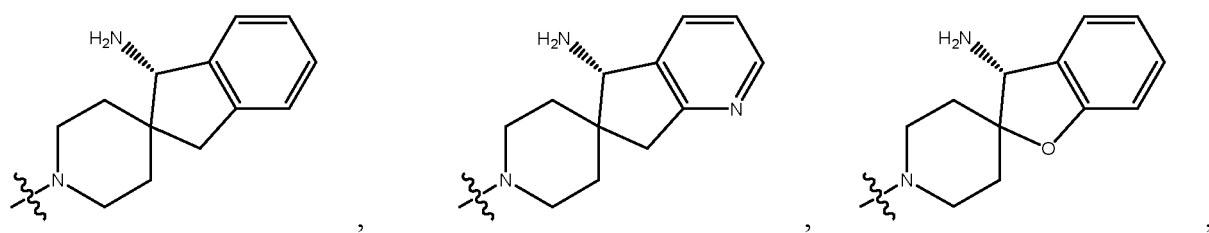
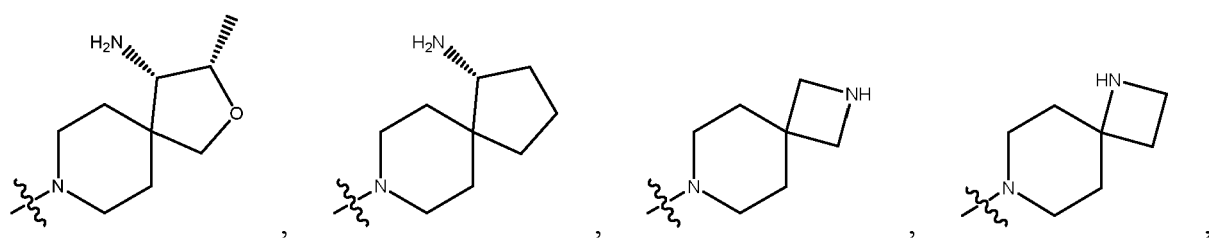
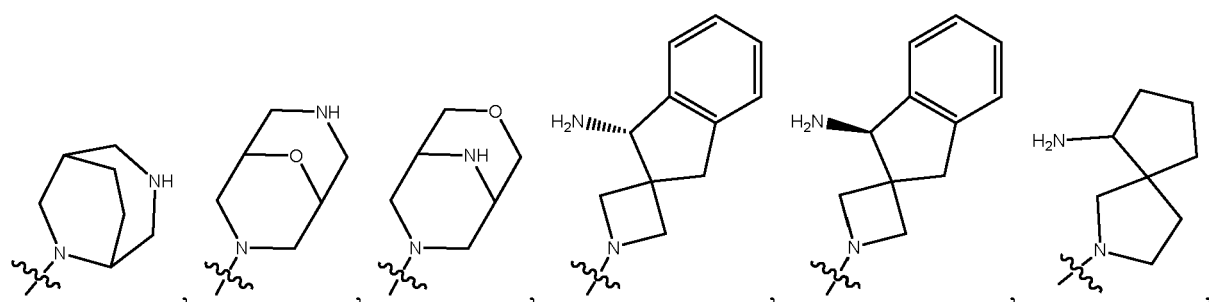
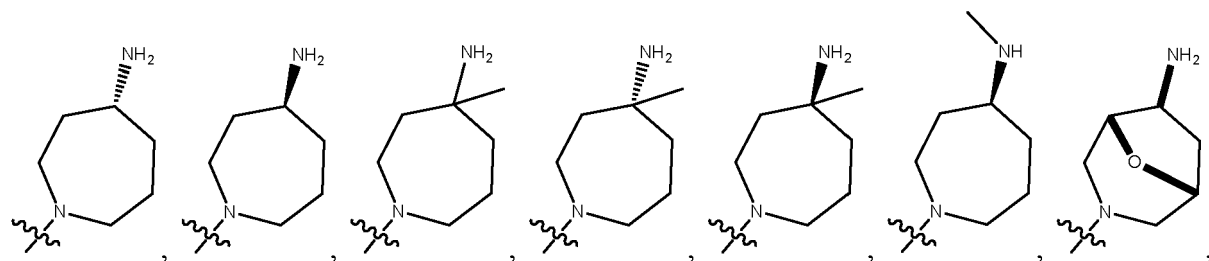
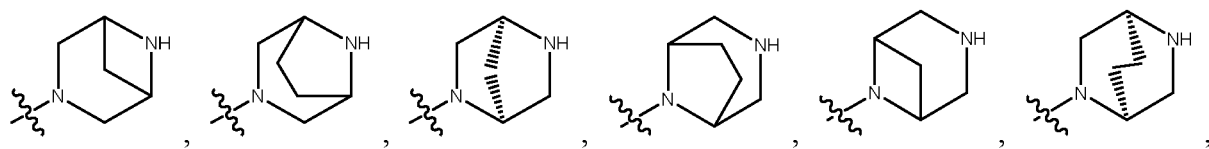
5. The compound of Claim 1, or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof, wherein *a* and *b* are 0 and *c* and *d* are 1, such that *R*² is

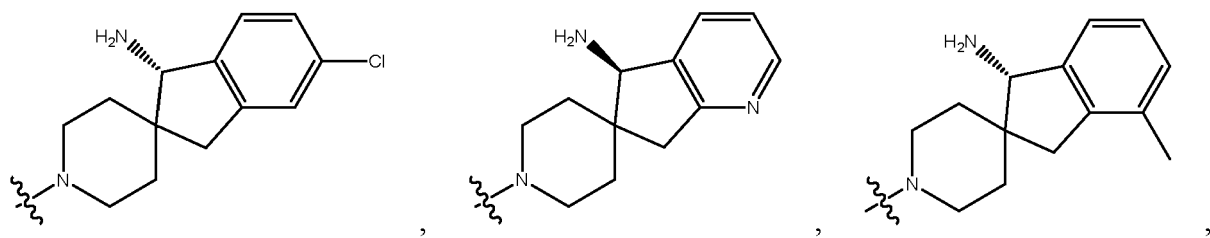
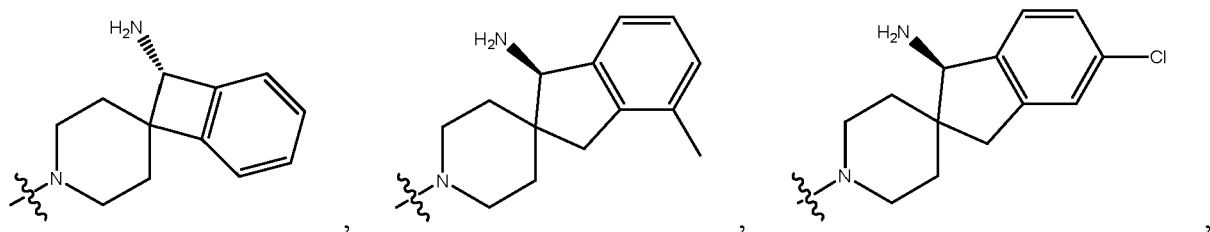
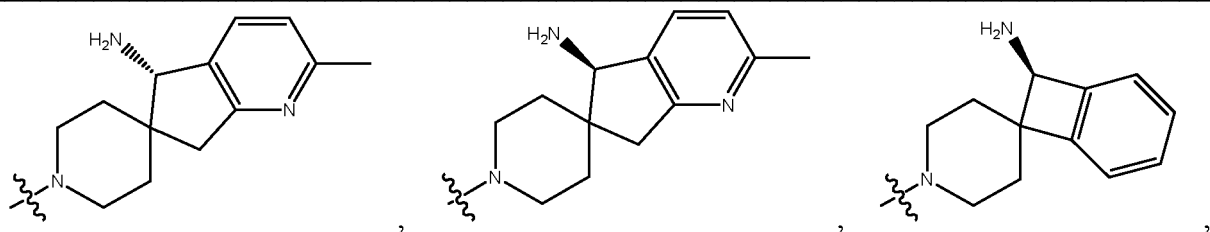
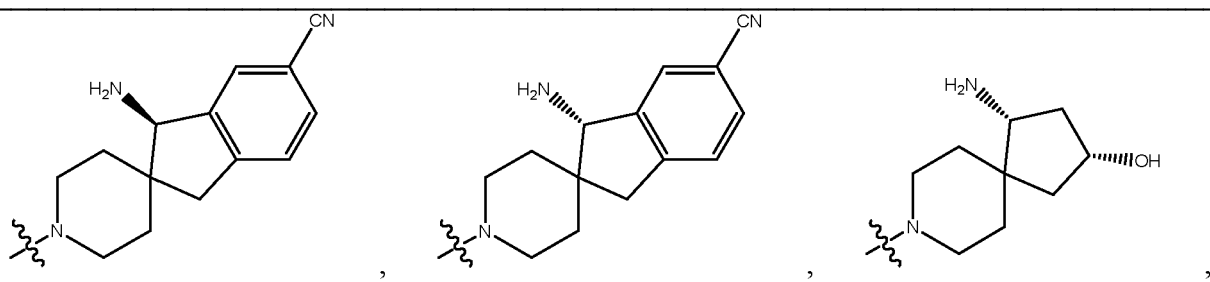
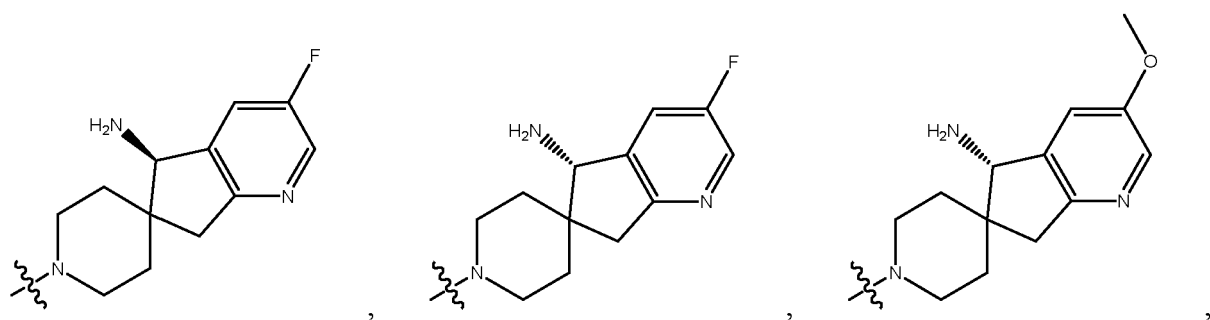


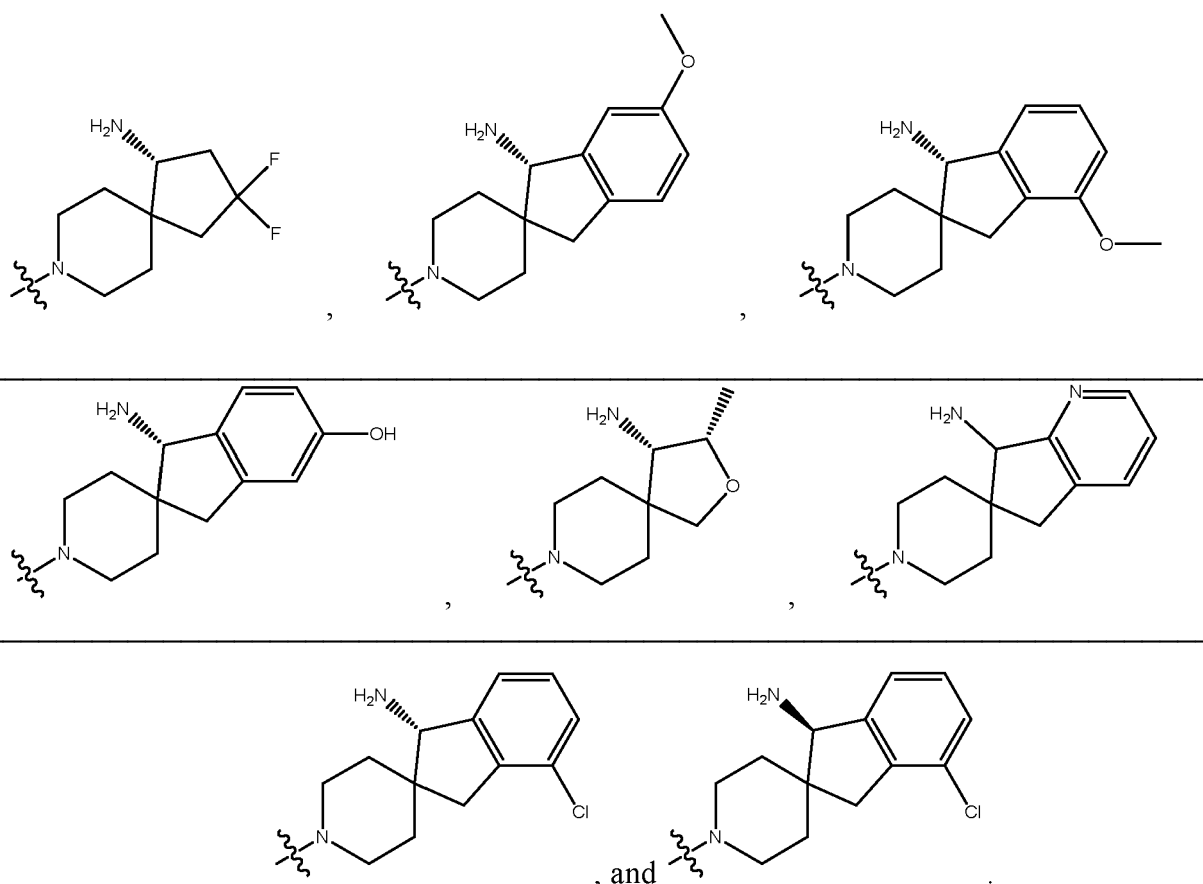
6. The compound of Claim 1, or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof, wherein *R*¹³ and *R*¹⁴ join together to form a group selected from C₃-C₆ cycloalkyl, 4 to 6 membered heterocycle wherein the heterocycle contains one heteroatom selected from the group consisting of nitrogen and oxygen, saturated or partially unsaturated 8 to 10 membered bicyclic carbocycle and a saturated or partially unsaturated 8 to 10 membered bicyclic heterocycle wherein the heterocycle contains one heteroatom selected from the group consisting of nitrogen and oxygen, wherein the cycloalkyl, heterocycle, bicyclic carbocycle and bicyclic heterocycle are optionally substituted with F, Cl, OH, OCH₃, CN, methyl or NH₂.
7. The compound of Claim 1, or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof, wherein *R*² is selected from the group consisting of:











8. The compound of Claim 1, or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof, wherein R⁴⁸ is hydrogen.

9. The compound of Claim 1 wherein the compound is selected from the group consisting of:

4-((2-(4-amino-4-methylpiperidin-1-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 (3*S*,4*S*)-8-(6-((2,3-dichlorophenyl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine;
 1-(6-((2,3-dichlorophenyl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-4-methylpiperidin-4-amine;
 (*R*)-8-(6-((2,3-dichlorophenyl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-8-azaspiro[4.5]decan-1-amine;
 (4-amino-1-(6-((2,3-dichlorophenyl)thio)pyrido[2,3-*b*]pyrazin-2-yl)piperidin-4-yl)methanol;
 4-((2-(4-(aminomethyl)-4-methylpiperidin-1-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 (3*S*,4*S*)-8-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine;
 1-(6-((2-chloro-3-methoxyphenyl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-4-methylpiperidin-4-amine;
 1-(6-((3-chloro-2-methoxypyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-4-methylpiperidin-4-amine;
 (*R*)-4-((2-(3-amino-3-methylpyrrolidin-1-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 (3*S*,4*S*)-8-(6-((3-chloro-2-(pyrrolidin-1-yl)pyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine;
 3-chloro-4-((2-(4-methyl-4-(methylamino)piperidin-1-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)pyridin-2-amine;
 (3*S*,4*S*)-8-(6-((3-chloro-2-(methylamino)pyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine;
 4-methyl-1-(6-((1-methyl-1*H*-indazol-7-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)piperidin-4-amine;
 3-((2-(4-amino-4-methylpiperidin-1-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-2-chlorobenzonitrile;
 4-methyl-1-(6-(pyrazolo[1,5-*a*]pyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)piperidin-4-amine;
 4-methyl-1-(6-(pyrazolo[1,5-*a*]pyrazin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)piperidin-4-amine;
 (*R*)-1-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)azepan-4-amine;
 1-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-4-(aminomethyl)piperidin-4-ol;

(4-amino-1-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)piperidin-4-yl)methanol;
 (4-amino-1-(6-((3-chloro-2-methoxypyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)piperidin-4-yl)methanol;
 (4-amino-1-(6-((3-chloro-2-(pyrrolidin-1-yl)pyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)piperidin-4-yl)methanol;
 1-(6-(isoquinolin-8-ylthio)pyrido[2,3-*b*]pyrazin-2-yl)-4-methylpiperidin-4-amine;
 1-(6-((3-chloro-2-(pyrrolidin-1-yl)pyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-4-methylpiperidin-4-amine;
 (S)-1-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)azepan-4-amine;
 (1*R*,3*S*,5*S*)-8-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-8-azabicyclo[3.2.1]octan-3-amine;
 4-((2-(4-amino-4-(methoxymethyl)piperidin-1-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 4-((2-(2,7-diazaspiro[3.5]nonan-7-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 4-((2-(1,7-diazaspiro[3.5]nonan-7-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 (1*R*,5*S*)-9-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-9-azabicyclo[3.3.1]nonan-3-amine;
 (4-amino-1-(6-((3-chloro-2-methylpyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)piperidin-4-yl)methanol;
 (1*R*,5*R*,6*S*)-3-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-8-oxa-3-azabicyclo[3.2.1]octan-6-amine;
 (1*R*,5*R*,6*S*)-3-(6-((2,3-dichlorophenyl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-8-oxa-3-azabicyclo[3.2.1]octan-6-amine;
 4-((2-(4-(2-aminopropan-2-yl)piperidin-1-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 2-(1-(6-((2,3-dichlorophenyl)thio)pyrido[2,3-*b*]pyrazin-2-yl)piperidin-4-yl)propan-2-amine;
 4-((2-(2-(aminomethyl)morpholino)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 (4-(2-(2,3-dichlorophenyl)thio)pyrido[2,3-*b*]pyrazin-2-yl)morpholin-2-yl)methanamine;
 (1*R*,3*S*,5*S*)-8-(6-((3-chloro-2-methylpyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-8-azabicyclo[3.2.1]octan-3-amine dihydrochloride;
 (3*S*,4*S*)-8-(6-((6-amino-2,3-dichloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine;
 ((S)-1-(4-((2-((3*S*,4*S*)-4-amino-3-methyl-2-oxa-8-azaspiro[4.5]decan-8-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-yl)pyrrolidin-2-yl)methanol;
 (3*S*,4*S*)-8-(6-((2-amino-3-methylpyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine;
 1-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-4-methylazepan-4-amine;
 (*R*)-1-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-4-methylazepan-4-amine;
 (S)-1-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-4-methylazepan-4-amine;
 (S)-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-1,3-dihydrospiro[indene-2,4'-piperidin]-1-amine;
 4-(4-((2-((3*S*,4*S*)-4-amino-3-methyl-2-oxa-8-azaspiro[4.5]decan-8-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-yl)thiomorpholine 1,1-dioxide;
 1-(4-((2-((3*S*,4*S*)-4-amino-3-methyl-2-oxa-8-azaspiro[4.5]decan-8-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-yl)piperidin-4-ol;
 (3*S*,4*S*)-8-(6-((3-chloro-2-morpholinopyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine;
 1-(4-(4-((2-((3*S*,4*S*)-4-amino-3-methyl-2-oxa-8-azaspiro[4.5]decan-8-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-yl)piperazin-1-yl)ethan-1-one;
 4-((2-(4-aminopiperidin-1-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 (3*R*,4*R*)-4-amino-1-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)piperidin-3-ol;
 2-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-2-azaspiro[4.4]nonan-6-amine;
 (3*S*,4*R*)-4-amino-1-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)piperidin-3-ol;
 4-((2-(3-(aminomethyl)azetidin-1-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 (1-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-4-(aminomethyl)piperidin-4-yl)methanol;
 ((S)-1-(4-((2-((3*S*,4*S*)-4-amino-3-methyl-2-oxa-8-azaspiro[4.5]decan-8-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-yl)pyrrolidin-3-yl)methanol;
 (S)-1-(4-(2-((3*S*,4*S*)-4-amino-3-methyl-2-oxa-8-azaspiro[4.5]decan-8-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-yl)pyrrolidin-3-ol;
 1-(4-((2-((3*S*,4*S*)-4-amino-3-methyl-2-oxa-8-azaspiro[4.5]decan-8-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-yl)pyrrolidin-3-ol;
 (4-((2-((3*S*,4*S*)-4-amino-3-methyl-2-oxa-8-azaspiro[4.5]decan-8-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-yl)methanol;
 (S)-1-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-*N*-methylazepan-4-amine;
 (1*R*,3*S*,5*S*)-8-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-*N,N*-dimethyl-8-azabicyclo[3.2.1]octan-3-amine;

(1R,3s,5S)-8-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-N-methyl-8-azabicyclo[3.2.1]octan-3-amine;
1-(6-((3-chloro-2-methylpyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-4-methylpiperidin-4-amine;
3-((2-(4-amino-4-methylpiperidin-1-yl)pyrido[2,3-b]pyrazin-6-yl)thio)pyridin-2-amine;
1-(6-((6-chloro-2-methylpyridin-3-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-4-methylpiperidin-4-amine;
5-((2-(4-amino-4-methylpiperidin-1-yl)pyrido[2,3-b]pyrazin-6-yl)thio)-6-chloropyridin-2-amine;
1-(6-((2-chloro-6-methylpyridin-3-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-4-methylpiperidin-4-amine;
2-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)octahydro-1H-isoindol-4-amine;
2-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)octahydrocyclopenta [c]pyrrol-4-amine;
4-((2-(3-(aminomethyl)-9-azabicyclo[3.3.1]nonan-9-yl)pyrido[2,3-b]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
4-((2-(3-(aminomethyl)-8-azabicyclo[3.2.1]octan-8-yl)pyrido[2,3-b]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
4-((2-(3,7-diazabicyclo[4.2.0]octan-3-yl)pyrido[2,3-b]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
4-((2-(4-amino-4-(trifluoromethyl)piperidin-1-yl)pyrido[2,3-b]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
(3S,4S)-8-(6-(6-amino-2-chloropyridin-3-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine;
((R)-1-(4-((2-((3S,4S)-4-amino-3-methyl-2-oxa-8-azaspiro[4.5]decan-8-yl)pyrido[2,3-b]pyrazin-6-yl)thio)-3-chloropyridin-2-yl)pyrrolidin-3-yl)methanol;
(R)-1-(4-((2-((3S,4S)-4-amino-3-methyl-2-oxa-8-azaspiro[4.5]decan-8-yl)pyrido[2,3-b]pyrazin-6-yl)thio)-3-chloropyridin-2-yl)pyrrolidin-3-ol;
(S)-2-(4-((2-(5-amino-5,7-dihydrospiro[cyclopenta[b]pyridine-6,4'-piperidin]-1'-yl)pyrido[2,3-b]pyrazin-6-yl)thio)-3-chloropyridin-2-yl)amino)ethan-1-ol;
4-((2-(4-(Aminomethyl)-4-methyl-1,4-azasilinan-1-yl)pyrido[2,3-b]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
(S)-2-(4-((2-(1-amino-1,3-dihydrospiro[indene-2,4'-piperidin]-1'-yl)pyrido[2,3-b]pyrazin-6-yl)thio)-3-chloropyridin-2-yl)amino)ethan-1-ol;
(R)-1-amino-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-1,3-dihydrospiro[indene-2,4'-piperidine]-6-carbonitrile;
(S)-1-amino-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-1,3-dihydro spiro [indene-2,4'-piperidine]-6-carbonitrile;
(R)-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-2-methyl-5,7-dihydrospiro[cyclopenta[b]pyridine-6,4'-piperidin]-5-amine;
(S)-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-2-methyl-5,7-dihydrospiro[cyclopenta[b]pyridine-6,4'-piperidin]-5-amine;
(S)-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-3-methoxy-5,7-dihydrospiro[cyclopenta[b]pyridine-6,4'-piperidin]-5-amine;
(R)-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-2-methoxy-5,7-dihydrospiro[cyclopenta[b]pyridine-6,4'-piperidin]-5-amine;
(S)-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-3-fluoro-5,7-dihydrospiro[cyclopenta[b]pyridine-6,4'-piperidin]-5-amine;
(R)-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-3-fluoro-5,7-dihydrospiro[cyclopenta[b]pyridine-6,4'-piperidin]-5-amine;
(S)-1'-(6-((6-amino-4,5-dichloropyridin-3-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-1,3-dihydrospiro[indene-2,4'-piperidin]-1-amine;
1-(6-((2,3-dichlorophenyl)thio)-3-methylpyrido[2,3-b]pyrazin-2-yl)-4-methylpiperidin-4-amine;
4-((2-((2R,4R)-4-amino-2-methylpiperidin-1-yl)pyrido[2,3-b]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
4-((2-((2R,4S)-4-amino-2-methylpiperidin-1-yl)pyrido[2,3-b]pyrazin-6-yl)thio)-3-chloropyridin-2-amine dihydrochloride;
(R)-1-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-1',3'-dihydrospiro[azetidine-3,2'-inden]-1'-amine;
(S)-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-5,7-dihydrospiro[cyclopenta[b]pyridine-6,4'-piperidin]-5-amine;
(S)-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-4-methyl-1,3-dihydrospiro[indene-2,4'-piperidin]-1-amine;
(S)-1'-(6-((6-chloroimidazo[1,2-a]pyridin-3-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-1,3-dihydrospiro[indene-2,4'-piperidin]-1-amine;
2-(4-amino-1-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)piperidin-4-yl)ethan-1-ol;
1-(4-amino-1-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)piperidin-4-yl)-2-methylpropan-2-ol;
4-((2-(4-amino-4-ethylpiperidin-1-yl)pyrido[2,3-b]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;

(3S,4S)-8-(6-((3H-imidazo[4,5-b]pyridin-7-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine;

(R)-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-3H-spiro[benzofuran-2,4'-piperidin]-3-amine;

(S)-1'-(6-((2-amino-5-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-5,7-dihydrospiro[cyclopenta[b]pyridine-6,4'-piperidin]-5-amine;

3-((4-((2-(4-amino-4-methylpiperidin-1-yl)pyrido[2,3-b]pyrazin-6-yl)thio)-3-chloropyridin-2-yl)amino)-2,2-dimethylpropanenitrile;

(3S,4S)-8-(6-((2-amino-3-(trifluoromethyl)pyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine;

((1R,5S,6r)-3-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-3-azabicyclo[3.1.1]heptan-6-amine;

(tert-butyl ((1R,5S,6r)-3-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-3-azabicyclo[3.1.1]heptan-6-yl)carbamate;

(3S,4S)-3-methyl-8-(6-((3-methyl-1H-pyrrolo[2,3-b]pyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-2-oxa-8-azaspiro[4.5]decan-4-amine;

(3S,4S)-8-(6-((6-amino-1H-pyrrolo[2,3-b]pyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine;

(3S,4S)-8-(6-((5-fluoro-1H-pyrrolo[2,3-b]pyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine;

(S)-4-(2-(1-amino-1,3-dihydrospiro[indene-2,4'-piperidin]-1'-yl)pyrido[2,3-b]pyrazin-6-yl)thio)-3,3-difluoro-1,3-dihydro-2H-pyrrolo[2,3-b]pyridin-2-one;

3-chloro-4-((2-(4-methylpiperidin-1-yl)pyrido[2,3-b]pyrazin-6-yl)thio)pyridin-2-amine;

(3S,4S)-8-(6-((2-amino-5-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine;

(S)-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-5-fluoro-1,3-dihydrospiro[indene-2,4'-piperidin]-1-amine;

1-(6-((3-chloro-2-(methylamino)pyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-4-methylazepan-4-amine;

1-(6-((3-chloro-2-methylpyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-4-methylazepan-4-amine;

(R)-1-(6-((3-chloro-2-(methylamino)pyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-4-methylazepan-4-amine;

(S)-1-(6-((3-chloro-2-(methylamino)pyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-4-methylazepan-4-amine;

(R)-1-(6-((3-chloro-2-methylpyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-4-methylazepan-4-amine;

(S)-1-(6-((3-chloro-2-methylpyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-4-methylazepan-4-amine;

(3S,4S)-8-(6-((2-amino-3-methoxypyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine;

5-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-5-azaspiro[3.4]octan-2-amine;

6-((2-amino-3-chloropyridin-4-yl)thio)-N-(3-(aminomethyl)tetrahydrofuran-3-yl)pyrido[2,3-b]pyrazin-2-amine;

(S)-1-amino-1'-(6-((3-chloro-2-methylpyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-1,3-dihydrospiro[indene-2,4'-piperidin]-5-ol;

4-((2-((3S,4S)-4-amino-3-methyl-2-oxa-8-azaspiro[4.5]decan-8-yl)pyrido[2,3-b]pyrazin-6-yl)thio)-6,7-dihydro-SH-cyclopenta[b]pyridin-7-ol;

1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-5,7-dihydrospiro[cyclopenta[b]pyridine-6,4'-piperidin]-7-amine;

(S)-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-4-chloro-1,3-dihydrospiro[indene-2,4'-piperidin]-1-amine;

(2R,4R)-4-amino-8-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-8-azaspiro[4.5]decan-2-ol;

4-((2-(4-amino-4-methylpiperidin-1-yl)pyrido[2,3-b]pyrazin-6-yl)thio)-3-chloro-N-methylpyridin-2-amine;

(S)-1'-(6-((2-(trifluoromethyl)pyridin-3-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-1,3-dihydrospiro[indene-2,4'-piperidin]-1-amine;

(S)-1'-(6-((2-(trifluoromethyl)pyridin-3-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-5,7-dihydrospiro[cyclopenta[b]pyridine-6,4'-piperidin]-5-amine;

(S)-1-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-1',3'-dihydrospiro[azetidine-3,2'-inden]-1'-amine;

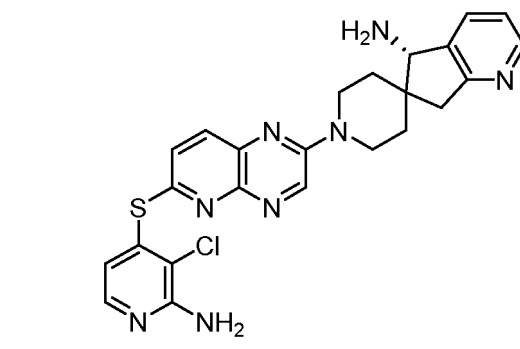
(S)-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)spiro[bicyclo[4.2.0]octane-7,4'-piperidine]-1(6),2,4-trien-8-amine;

(R)-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)spiro[bicyclo[4.2.0]octane-7,4'-piperidine]-1(6),2,4-trien-8-amine;

(R)-1'-((6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-5,7-dihydrospiro[cyclopenta[*b*]pyridine-6,4'-piperidin]-5-amine:
(R)-1'-((6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-4-methyl-1,3-dihydrospiro[indene-2,4'-piperidin]-1-amine:
(S)-1'-((6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-5-chloro-1,3-dihydrospiro[indene-2,4'-piperidin]-1-amine:
(R)-1'-((6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-5-chloro-1,3-dihydrospiro[indene-2,4'-piperidin]-1-amine:
(S)-1'-((6-((6-amino-3-chloro-2-methoxy-pyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-1,3-dihydrospiro[indene-2,4'-piperidin]-1-amine:
(S)-3-((2-(1-amino-1,3-dihydrospiro[indene-2,4'-piperidin]-1'-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)imidazo[1,2-*a*]pyridine-6-carbonitrile:
4-((2-(4-amino-4-propylpiperidin-1-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine:
(3S,4S)-8-(6-((2,3-dimethylpyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine:
(3S,4S)-8-(6-((2-amino-3-fluoropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine:
(3S,4S)-8-(6-((6-amino-2-(trifluoromethyl)pyridin-3-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine:
(3S,4S)-8-(6-((2,3-dichloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine:
(S)-1'-((6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-6-methyl-1,3-dihydrospiro[indene-2,4'-piperidin]-1-amine:
(R)-1'-((6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-6-methyl-1,3-dihydrospiro[indene-2,4'-piperidin]-1-amine:
4-((2-(4-amino-4-(pyridin-2-yl)methyl)piperidin-1-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine:
4-((2-(4-amino-4-(2-methoxyethyl)piperidin-1-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine:
(3S,4S)-8-(6-((3-chloro-2-((2-methoxyethyl)amino)pyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine:
(3S,4S)-8-(6-((3-chloro-2-(cyclopropylamino)pyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine:
2-((4-((2-((3S,4S)-4-amino-3-methyl-2-oxa-8-azaspiro[4.5]decan-8-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-yl)amino)ethan-1-ol:
(3S,4S)-8-(6-((3-fluoropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine:
(3S,4S)-8-(6-((3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine:
(3S,4S)-3-methyl-8-(6-((3-(trifluoromethyl)pyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-2-oxa-8-azaspiro[4.5]decan-4-amine:
(3S,4S)-8-(6-((1*H*-pyrrolo[2,3-*b*]pyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine:
(3S,4S)-3-methyl-8-(6-((2-(trifluoromethyl)pyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-2-oxa-8-azaspiro[4.5]decan-4-amine:
(3S,4S)-3-methyl-8-(6-((1-methyl-1*H*-pyrrolo[2,3-*b*]pyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-2-oxa-8-azaspiro[4.5]decan-4-amine:
(3S,4S)-8-(6-((5-chloro-1*H*-pyrrolo[2,3-*b*]pyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine:
(3S,4S)-3-methyl-8-(6-((5-(trifluoromethyl)-1*H*-pyrrolo[2,3-*b*]pyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-2-oxa-8-azaspiro[4.5]decan-4-amine:
4-((2-(4-amino-4-methylpiperidin-1-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloro-*N*-(2-methoxyethyl)pyridin-2-amine:
4-((2-(4-amino-4-methylpiperidin-1-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloro-*N*-(3-methoxypropyl)pyridin-2-amine:
1-(6-((2,3-dihydro-1*H*-pyrrolo[2,3-*b*]pyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-4-methylpiperidin-4-amine:
1-(6-((1,8-naphthyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-4-methylpiperidin-4-amine:
1-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-4-(hydroxymethyl)piperidin-4-ol:
(1*R*,5*S*,8*S*)-3-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-azabicyclo[3.2.1]octan-8-amine:

4-((2-(3,6-diazabicyclo[3.1.1]heptan-3-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 4-((2-(3,8-diazabicyclo[3.2.1]octan-3-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 4-((2-(3,6-diazabicyclo[3.2.2]nonan-6-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 4-((2-(1*S*,4*S*)-2,5-diazabicyclo[2.2.1]heptan-2-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 4-((2-(3,8-diazabicyclo[3.2.1]octan-8-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 4-((2-(3,8-diazabicyclo[3.2.1]octan-8-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 4-((2-(9-oxa-3,7-diazabicyclo[3.3.1]nonan-3-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 4-((2-(3-oxa-7,9-diazabicyclo[3.3.1]nonan-7-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 4-((2-(1*S*,4*S*)-2,5-diazabicyclo[2.2.2]octan-2-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 (S)-1-(4-((2-(5-amino-5,7-dihydrospiro[cyclopenta[*b*]pyridine-6,4'-piperidin]-1'-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-yl)piperidin-4-ol;
 ((S)-1-(4-((2-((S)-5-amino-5,7-dihydrospiro[cyclopenta[*b*]pyridine-6,4'-piperidin]-1'-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-yl)pyrrolidin-3-yl)methanol;
 4-((2-(4-(aminomethyl)-4-fluoropiperidin-1-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 (1-(6-((2,3-dichlorophenyl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-4-fluoropiperidin-4-yl)methanamine;
 (1*S*,2*S*,4*R*)-7-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-7-azabicyclo[2.2.1]heptan-2-amine;
 (3*S*,4*S*)-8-(6-((1*H*-pyrazolo[3,4-*b*]pyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine;
 3-chloro-4-((2-((4*aR*,7*aR*)-hexahydropyrrolo[3,4-*b*][1,4]oxazin-4(4*aH*)-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)pyridine-2-amine;
 4-((2-((2*S*,5*S*)-5-amino-2-methylpiperidin-1-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 (3*S*,4*S*)-8-(6-((6-amino-5-chloropyrimidin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3-methyl-2-oxa-8-azaspiro[4.5]decan-4-amine;
 8-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-3,3-difluoro-8-azaspiro[4.5]decan-1-amine;
 (S)-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-6-methoxy-1,3-dihydrospiro[indene-2,4'-piperidin]-1-amine;
 (R)-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-4-chloro-1,3-dihydrospiro[indene-2,4'-piperidin]-1-amine;
 (3*S*,4*S*)-3-methyl-8-(6-((2-(trifluoromethyl)pyridin-3-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-2-oxa-8-azaspiro[4.5]decan-4-amine; and
 4-((2-(4-amino-4-benzylpiperidin-1-yl)pyrido[2,3-*b*]pyrazin-6-yl)thio)-3-chloropyridin-2-amine;
 or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof.

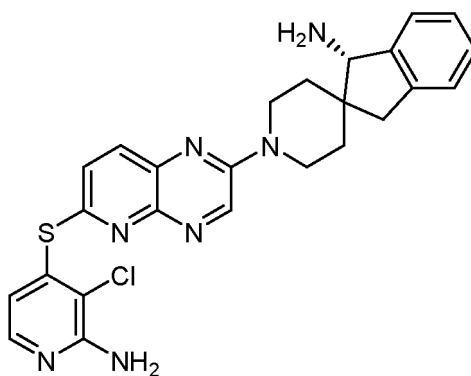
10. The compound of Claim 1 which is:



or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof.

11. The compound of Claim 1 which is (S)-1'-(6-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-*b*]pyrazin-2-yl)-5,7-dihydrospiro[cyclopenta[*b*]pyridine-6,4'-piperidin]-5-amine.

12. The compound of Claim 1 which is:



or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof.

13. The compound of Claim 1 which is (S)-1'-((2-amino-3-chloropyridin-4-yl)thio)pyrido[2,3-b]pyrazin-2-yl)-1,3-dihydrospiro[indene-2,4'-piperidin]-1-amine.
14. A pharmaceutical composition comprising a compound of any one of Claims 1 to 13, or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof.
15. A pharmaceutical composition comprising a compound of any one of Claims 1 to 13, or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof, and at least one pharmaceutically acceptable carrier, excipient or diluent.
16. A compound of any one of Claims 1 to 13 or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof, for use as a medicament.
17. A compound of any one of Claims 1 to 13 or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof, for use in therapy.
18. A compound of any one of Claims 1 to 13 or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof, for use in the treatment of a hyperproliferative disease.
19. The compound for use according to Claim 18, wherein the hyperproliferative disease is cancer.
20. The compound for use according to Claim 18, wherein the hyperproliferative disease is selected from the group consisting of melanoma, juvenile myelomonocytic leukemias, neuroblastoma, Philadelphia chromosome positive chronic myeloid, Philadelphia chromosome positive acute lymphoblastic leukemias, acute myeloid leukemias, myeloproliferative neoplasms (such as Polycythemia Vera, Essential Thrombocythemia and Primary Myelofibrosis), breast cancer, lung cancer, liver cancer, colorectal cancer, esophageal cancer, gastric cancer, squamous-cell carcinoma of the head and neck, glioblastoma, anaplastic large-cell lymphoma, thyroid carcinoma, and spitzoid neoplasms.
21. The compound for use according to Claim 18, wherein the hyperproliferative disease is selected from the group consisting of Neurofibromatosis and Noonan Syndrome.
22. The compound for use according to any one of Claims 18 to 20, wherein said compound, or a stereoisomer, tautomer, or pharmaceutically acceptable salt thereof, is co-administered with at least one other chemotherapeutic agent used to treat or ameliorate a hyperproliferative disorder.
23. The compound for use according to Claim 22, wherein the at least one other chemotherapeutic agent is an inhibitor of the RAS pathway.
24. The compound for use according to Claim 23, wherein the at least one other chemotherapeutic agent is selected from one or more of trametinib, binimetinib, selumetinib, cobimetinib, LErafAON, ISIS 5132, vemurafenib, pimaserib, TAK733, R04987655, CI-1040, PD-0325901, CH5126766, MAP855, AZD6244, refametinib, GDC-0973/XI.581, AZD8330, R05126766, ARS-853, LY3214996, BVD523, GSK1 120212, ulixertinib and abemaciclib.