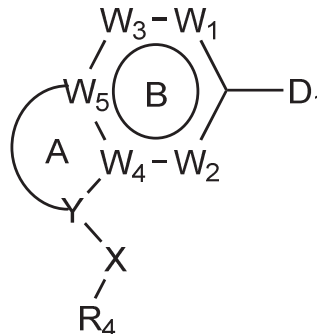


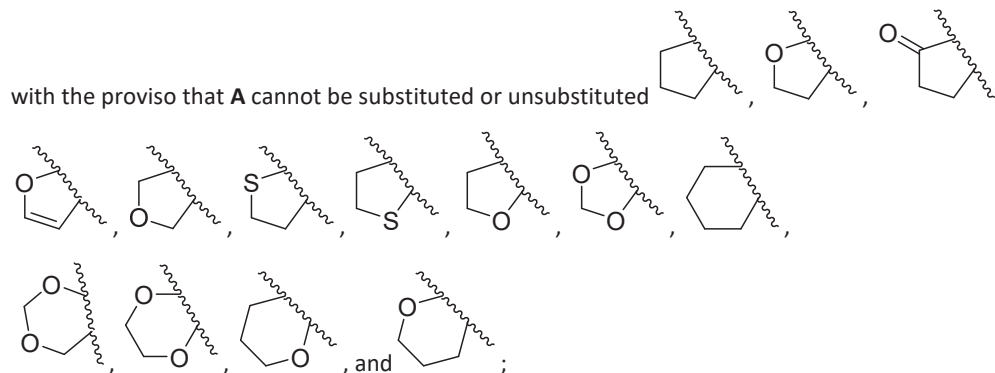
Formula Ia



Formula IIa

or are stereoisomers, tautomers, pharmaceutically acceptable salts, or hydrates thereof, wherein:

A is selected from 5- or 6-membered monocyclic heterocycles fused to ring **B**;



B is a six-membered aromatic carbocycle or heterocycle;

Y is selected from N, C, and CH;

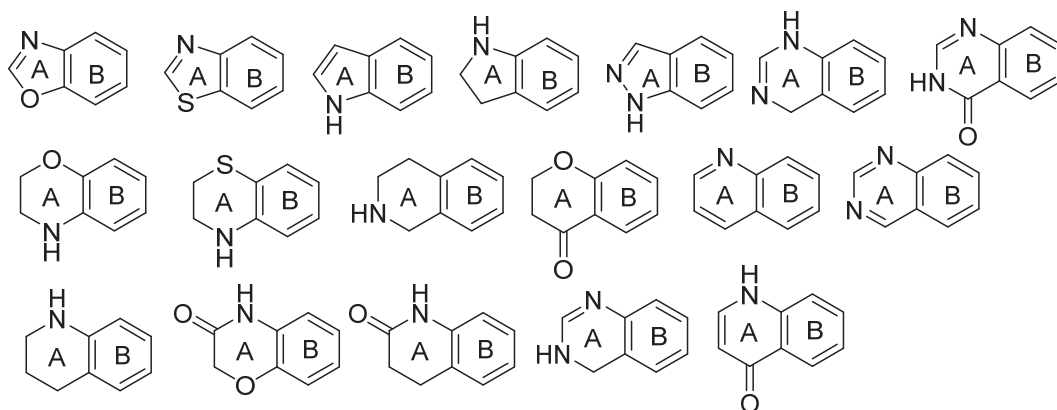
W_1 is selected from N and CR_1 ;

W_2 is selected from N and CR_2 ;

W₃ is selected from N and CR₃;

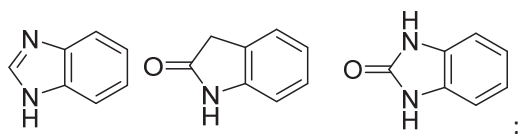
W₄ and **W₅** are independently selected from N, CH, and C or alternatively, **W₄** and **W₅** are both C (see, e.g., Formula Ib and Formula IIb below);

$\mathbf{W}_1$, $\mathbf{W}_2$, and $\mathbf{W}_3$ may be the same or different from each other;

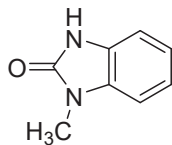


unless the **B** ring is substituted;

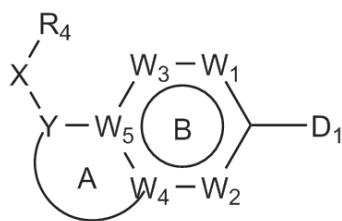
and with the proviso that if each of **R**₁, **R**₂, **R**₃ are hydrogen, then the **A-B** bicyclic ring is not



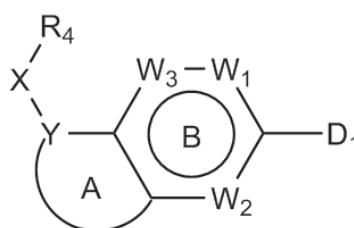
and with the proviso that if each of **R**₁, **R**₂, **R**₃ are hydrogen, then the **A-B** bicyclic ring is not



[028] In certain ~~embodiments~~ examples, **A** is a five membered ring. In some ~~embodiments~~ examples **Y** is N or C. In some embodiments, **R**₁ and **R**₂ are independently selected from hydrogen, deuterium, alkyl, -OH, -NH₂, -thioalkyl, alkoxy, ketone, ester, carboxylic acid, urea, carbamate, amino, amide, halogen, sulfone, sulfoxide, sulfide, sulfonamide, and -CN. In some ~~embodiments~~ examples, the compound of Formula Ia is a compound of Formula Ib, i.e., wherein **W**₄ and **W**₅ of Formula I are both C.

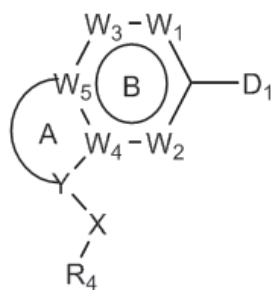


Formula Ia

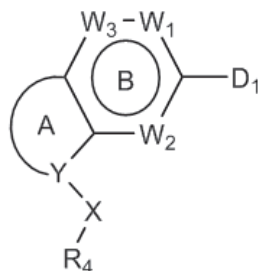


Formula Ib

In some ~~examples~~ embodiments, the compound of Formula IIa is a compound of Formula IIb, i.e., wherein **W**₄ and **W**₅ of Formula I are both C.



Formula IIa



Formula IIb

[029] In another ~~examples aspect of the invention~~, a pharmaceutical composition comprising a compound of Formula Ia, Formula Ib, Formula IIa, and/or Formula IIb, or stereoisomer, tautomer, pharmaceutically acceptable salt, or hydrate thereof and one or more pharmaceutically acceptable carriers, diluents or excipients is provided.

[030] In yet another ~~examples aspect of the invention~~ there is ~~provided~~ described a compound of Formula Ia, Formula Ib, Formula IIa, and/or Formula IIb, or a stereoisomer, tautomer, pharmaceutically acceptable salt, or hydrate thereof, or a pharmaceutical composition comprising such compound, for use in therapy, in particular in the treatment of diseases or conditions for which a bromodomain inhibitor is indicated.

[031] In yet another ~~examples there is disclosed aspect of the invention~~ there is ~~provided~~ a compound of Formula Ia, Formula Ib, Formula IIa, and/or Formula IIb, or a stereoisomer, tautomer, pharmaceutically acceptable salt, or hydrate thereof in the manufacture of a medicament for the treatment of diseases or conditions for which a bromodomain inhibitor is indicated.

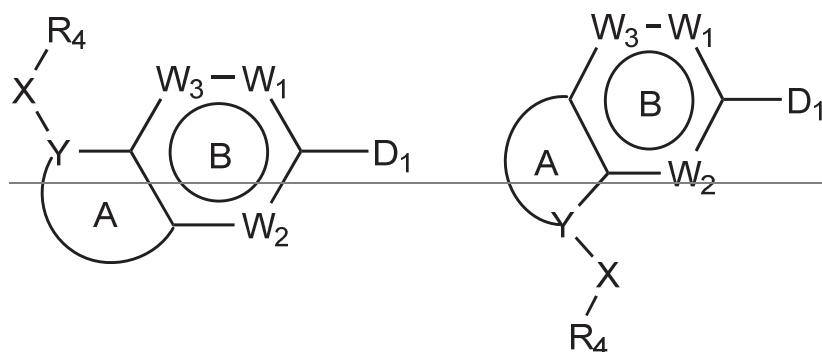
DEFINITIONS

[032] As used in the present specification, the following words, phrases and symbols are generally intended to have the meanings as set forth below, except to the extent that the context in which they are used indicates otherwise. The following abbreviations and terms have the indicated meanings throughout.

[033] As used herein, "cardiovascular disease" refers to diseases, disorders and conditions of the heart and circulatory system that are mediated by BET inhibition. Exemplary cardiovascular diseases, including cholesterol- or lipid-related disorders, include, but are not limited to, acute coronary syndrome, angina, arteriosclerosis, atherosclerosis, carotid atherosclerosis, cerebrovascular disease, cerebral infarction, congestive heart failure, congenital heart disease, coronary heart disease, coronary artery disease, coronary plaque stabilization, dyslipidemias, dyslipoproteinemias, endothelium dysfunctions, familial hypercholesterolemia, familial combined

What is claimed is:

~~1. A compound according to Formula Ib or Formula IIb:~~



~~Formula Ib~~

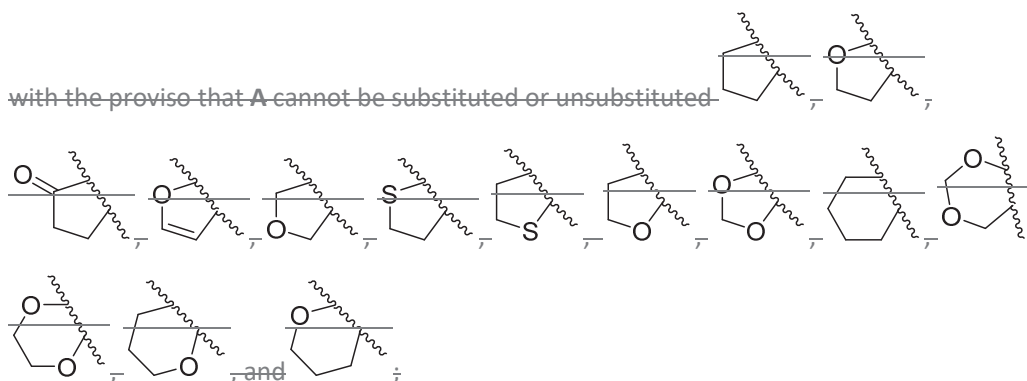
~~Formula IIb~~

~~or a stereoisomer, tautomer, pharmaceutically acceptable salt, or hydrate thereof,~~

~~wherein:~~

~~A is selected from 5- or 6 membered monocyclic heterocycles fused to ring B,~~

~~with the proviso that A cannot be substituted or unsubstituted~~



~~B is a six-membered aromatic carbocycle or heterocycle;~~

~~Y is selected from N and C;~~

~~W_1 is selected from N and CR_1 ;~~

~~W_2 is selected from N and CR_2 ;~~

~~W_3 is selected from N and CR_3 ;~~

~~$W_1, W_2,$ and W_3 may be the same or different from each other;~~

X is selected from —NH— , $\text{—CH}_2\text{—}$, $\text{—CH}_2\text{CH}_2\text{—}$, $\text{—CH}_2\text{CH}_2\text{CH}_2\text{—}$, $\text{—CH}_2\text{CH}_2\text{O—}$, $\text{—CH}_2\text{CH}_2\text{NH—}$, $\text{—CH}_2\text{CH}_2\text{S—}$, —C(O)— , $\text{—C(O)CH}_2\text{—}$, $\text{—C(O)CH}_2\text{CH}_2\text{—}$, $\text{—CH}_2\text{C(O)—}$, $\text{—CH}_2\text{CH}_2\text{C(O)—}$, —C(O)NH— , —C(O)O— , —C(O)S— , $\text{—C(O)NHCH}_2\text{—}$, $\text{—C(O)OCH}_2\text{—}$, $\text{—C(O)SCH}_2\text{—}$, where one or more hydrogen may independently be replaced with deuterium, hydroxy, methyl, halogen, —CF_3 , ketone, and where S may be oxidized to sulfoxide or sulfone;

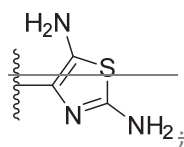
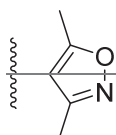
~~R₄ is selected from 3-7 membered carbocycles and heterocycles; and~~

~~D₁ is selected from 5-membered monocyclic heterocycles, where D₁ is attached to the B ring via a carbon atom that is part of a double bond within the D₁ ring;~~

~~R₁ and R₂ are independently selected from hydrogen, deuterium, alkyl, OH, NH₂, thioalkyl, alkoxy, ketone, ester, carboxylic acid, urea, carbamate, amino, amide, halogen, sulfone, sulfoxide, sulfide, sulfonamide, and CN;~~

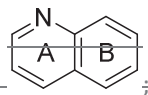
~~R₃ is selected from hydrogen, NH₂, CN, N₃, halogen, NO₂, OMe, OEt, NHC(O)Me, NHSO₂Me, cycloamino, cycloamido, OH, SO₂Me, SO₂Et, CH₂NH₂, C(O)NH₂, C(O)OMe, and deuterium;~~

~~with the proviso that if R₃ is hydrogen and A is a 5-membered ring, then D₁ cannot be~~

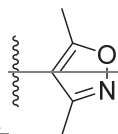


~~and with the proviso that if D₁ is~~

~~and R₂ and R₃ are hydrogen and R₁ is OMe, then~~



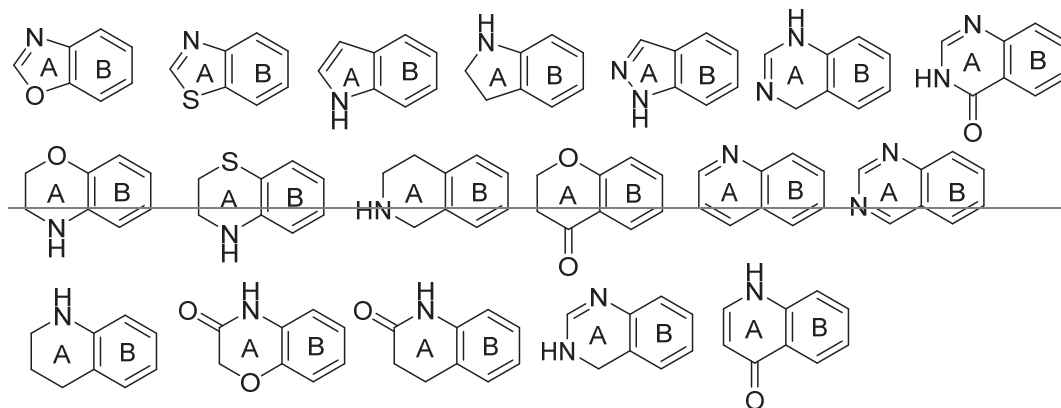
~~the A-B bicyclic ring is different from~~



~~_____ and with the proviso that if D₁ is~~

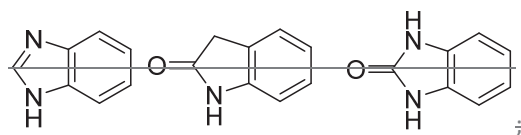
~~and each of R₁, R₂, R₃ are hydrogen, then~~

~~the A-B bicyclic ring is not~~

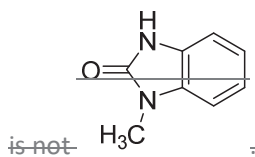


~~_____~~

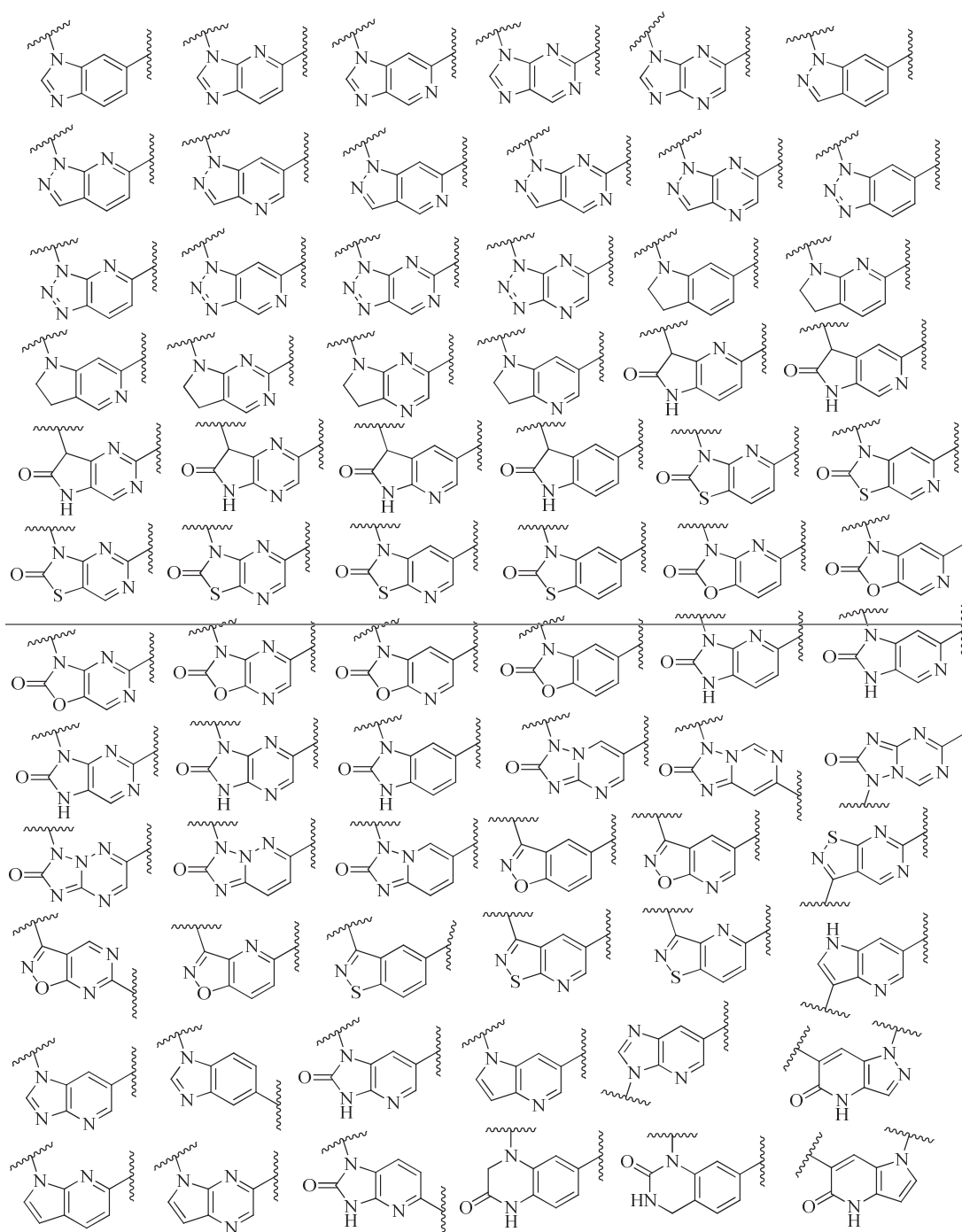
~~_____ and with the proviso that if each of R₁, R₂, R₃ are hydrogen, then the A-B bicyclic ring is not~~



and with the proviso that if each of R_1 , R_2 , R_3 are hydrogen, then the A-B bicyclic ring

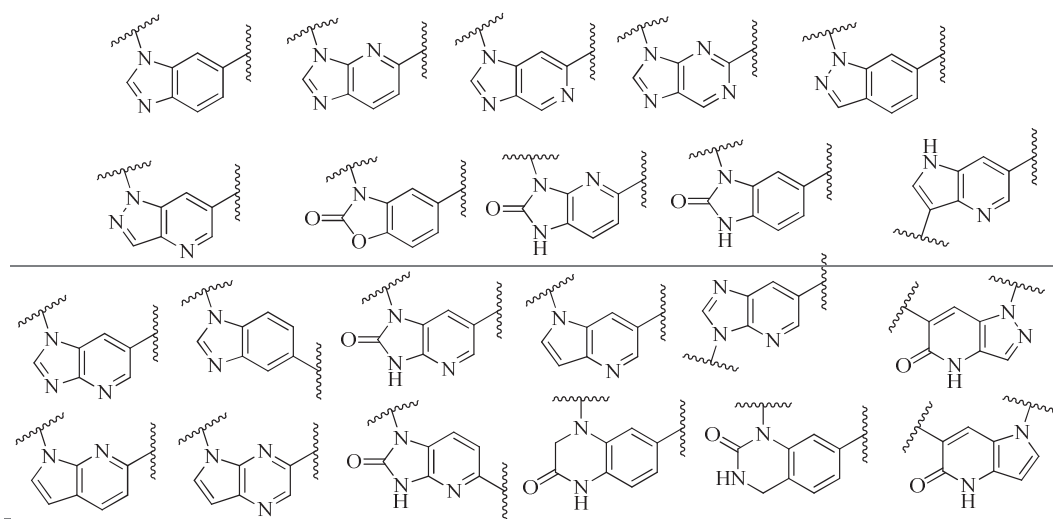


2. The compound according to claim 1, wherein the **A-B** bicyclic ring is selected from:

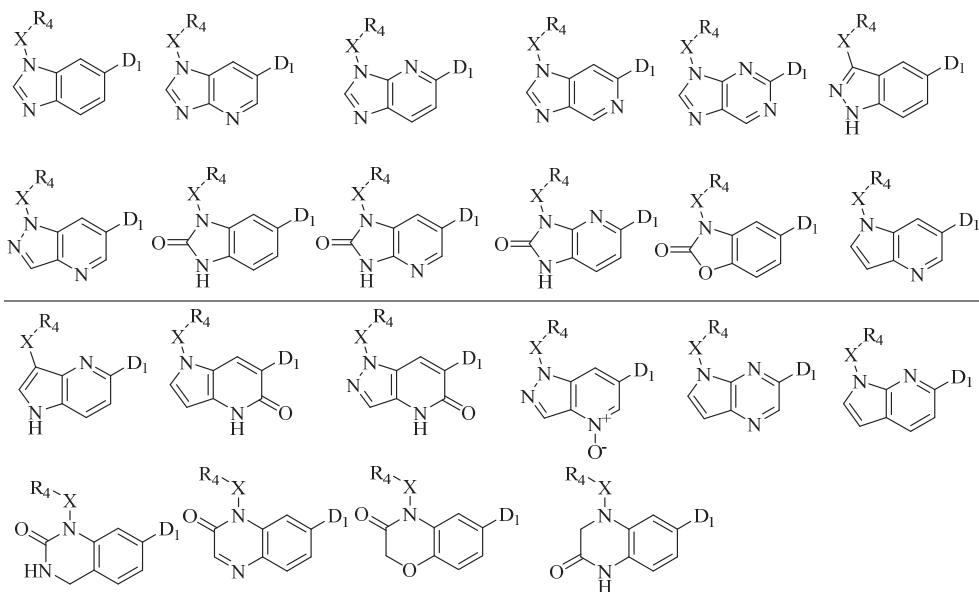


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3. The compound according to claim 2, wherein the ~~A-B~~ bicyclic ring is selected from

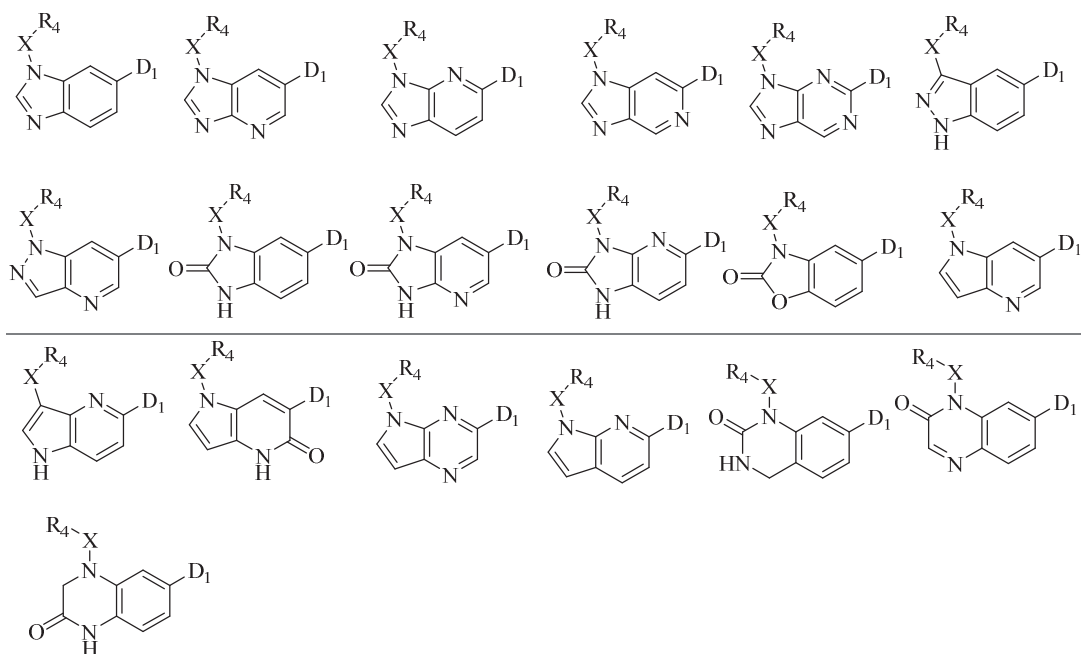


4. The compound according to claim 1, selected from



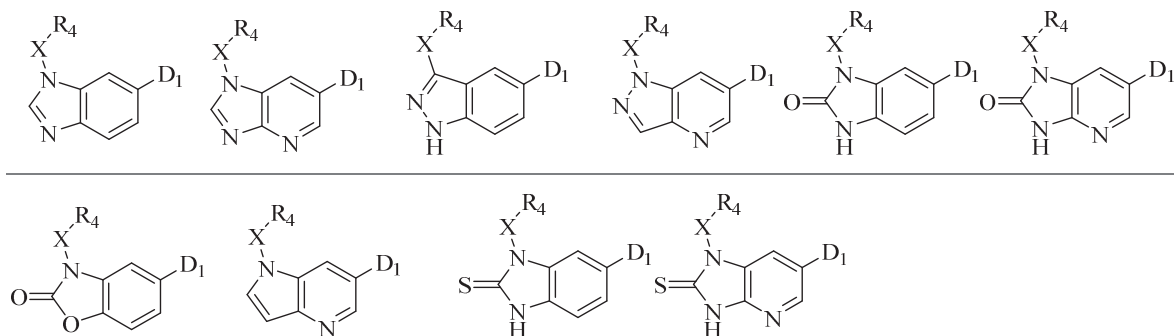
which may be optionally substituted with groups independently selected from hydrogen, deuterium, NH_2 , amino (such as $\text{NH}(\text{C}_1\text{--C}_5)$, $\text{N}(\text{C}_1\text{--C}_5)_2$, NHPh , NHBn , NHpyridyl , $\text{NHheterocycle}(\text{C}_4\text{--C}_6)$, $\text{NHcarbocycle}(\text{C}_4\text{--C}_6)$), heterocycle($\text{C}_4\text{--C}_6$), carbocycle($\text{C}_4\text{--C}_6$), halogen, CN , OH , CF_3 , alkyl($\text{C}_1\text{--C}_6$), thioalkyl($\text{C}_1\text{--C}_6$), alkenyl($\text{C}_1\text{--C}_6$), and alkoxy($\text{C}_1\text{--C}_6$).

5. ~~The compound according to claim 1, selected from~~



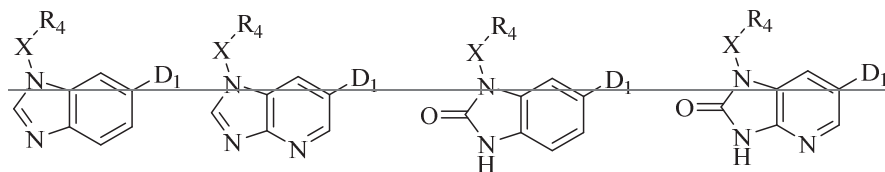
~~which may be optionally substituted with groups independently selected from hydrogen, deuterium, NH₂, amino (such as NH(C₁-C₅), N(C₁-C₅)₂, NHPH, NHBn, NHPyridyl, NHheterocycle(C₄-C₆), NHcarbocycle(C₄-C₆)), heterocycle(C₄-C₆), carbocycle(C₄-C₆), halogen, CN, OH, CF₃, alkyl(C₁-C₆), thioalkyl(C₁-C₆), alkenyl(C₁-C₆), and alkoxy(C₁-C₆).~~

6. ~~The compound according to claim 1, selected from~~



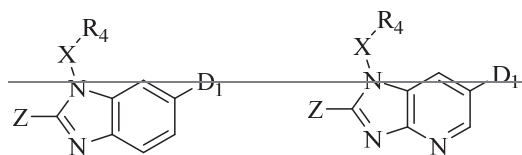
~~which may be optionally substituted with groups independently selected from hydrogen, deuterium, NH₂, amino (such as NH(C₁-C₅), N(C₁-C₅)₂, NHPH, NHBn, NHPyridyl, NHheterocycle(C₄-C₆), NHcarbocycle(C₄-C₆)), heterocycle(C₄-C₆), carbocycle(C₄-C₆), halogen, CN, OH, CF₃, alkyl(C₁-C₆), thioalkyl(C₁-C₆), alkenyl(C₁-C₆), and alkoxy(C₁-C₆).~~

7. ~~The compound according to claim 1, selected from~~



~~which may be optionally substituted with groups independently selected from hydrogen, deuterium, NH_2 , amino (such as $\text{NH}(\text{C}_1\text{--C}_5)$, $\text{N}(\text{C}_1\text{--C}_5)_2$, NHPh , NHBn , NHPyridyl , $\text{NHheterocycle}(\text{C}_4\text{--C}_6)$, $\text{NHcarbocycle}(\text{C}_4\text{--C}_6)$), heterocycle($\text{C}_4\text{--C}_6$), carbocycle($\text{C}_4\text{--C}_6$), halogen, CN , OH , CF_3 , alkyl($\text{C}_1\text{--C}_6$), thioalkyl($\text{C}_1\text{--C}_6$), alkenyl($\text{C}_1\text{--C}_6$), and alkoxy($\text{C}_1\text{--C}_6$).~~

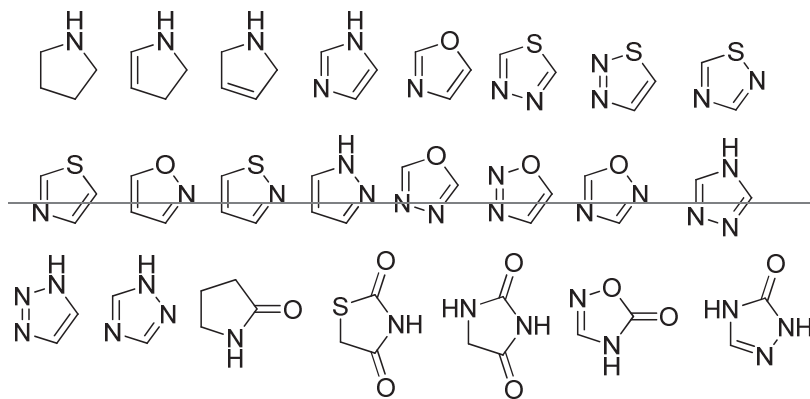
8. ~~The compound according to claim 1, selected from~~



~~wherein **Z** is selected from hydrogen, deuterium, NH_2 , amino (such as $\text{NH}(\text{C}_1\text{--C}_5)$, $\text{N}(\text{C}_1\text{--C}_5)_2$, NHPh , NHBn , NHPyridyl , $\text{NHheterocycle}(\text{C}_4\text{--C}_6)$, $\text{NHcarbocycle}(\text{C}_4\text{--C}_6)$), alkyl($\text{C}_1\text{--C}_6$), thioalkyl($\text{C}_1\text{--C}_6$), alkenyl($\text{C}_1\text{--C}_6$), and alkoxy($\text{C}_1\text{--C}_6$).~~

9. ~~The compound according to any one of claims 1-8, wherein **R**₄ is a 3-7 membered carbocycle.~~

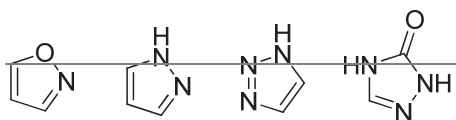
10. ~~The compound according to any one of claims 1-9, wherein **D**₁ is selected from a 5-membered monocyclic heterocycle, such as, but not limited to:~~



~~which is optionally substituted with hydrogen, deuterium, alkyl($\text{C}_1\text{--C}_4$) (such as methyl, ethyl, propyl, isopropyl, butyl), alkoxy($\text{C}_1\text{--C}_4$) (such as methoxy, ethoxy, isopropoxy), amino (such as NH_2 , NHMe ,~~

~~NH₂, NH₂Pr, NHBu, NMe₂, NMeEt, NEt₂, NEtBu, NHC(O)NHalkyl, halogen (such as F, Cl), amide (such as NHC(O)Me, NHC(O)Et, C(O)NHMe, C(O)NEt₂, C(O)N_iPr), CF₃, CN, N₃, ketone (C₁-C₄) (such as acetyl, C(O)Et, C(O)Pr), S(O)Alkyl(C₁-C₄) (such as S(O)Me, S(O)Et), SO₂alkyl(C₁-C₄) (such as SO₂Me, SO₂Et, SO₂Pr), thioalkyl(C₁-C₄) (such as SMe, SEt, SPr, SBu), COOH, and/or ester (such as C(O)OMe, C(O)OEt, C(O)OBu), each of which may be optionally substituted with hydrogen, F, Cl, Br, OH, NH₂, NHMe, OMe, SMe, oxo, and/or thio-oxo.~~

11. The compound according to any one of claims 1-10, wherein **D₁** is selected from a 5-membered monocyclic heterocycle, such as, but not limited to:

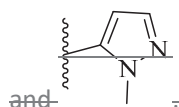
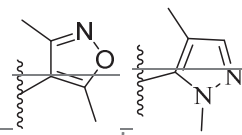


which is optionally substituted with hydrogen, deuterium, alkyl(C₁-C₄) (such as methyl, ethyl, propyl, isopropyl, butyl), alkoxy(C₁-C₄) (such as methoxy, ethoxy, isopropoxy), amino (such as NH₂, NHMe, NH₂Et, NH₂Pr, NHBu, NMe₂, NMeEt, NEt₂, NEtBu, NHC(O)NHalkyl), halogen (such as F, Cl), amide (such as NHC(O)Me, NHC(O)Et, C(O)NHMe, C(O)NEt₂, C(O)N_iPr), CF₃, CN, N₃, ketone (C₁-C₄) (such as acetyl, C(O)Et, C(O)Pr), S(O)Alkyl(C₁-C₄) (such as S(O)Me, S(O)Et), SO₂alkyl(C₁-C₄) (such as SO₂Me, SO₂Et, SO₂Pr), thioalkyl(C₁-C₄) (such as SMe, SEt, SPr, SBu), COOH, and/or ester (such as C(O)OMe, C(O)OEt, C(O)OBu), each of which may be optionally substituted with hydrogen, F, Cl, Br, OH, NH₂, NHMe, OMe, SMe, oxo, and/or thio-oxo.

12. The compound according to any one of claims 1-11, wherein **D₁** is selected from a 5-membered monocyclic heterocycle, which is optionally substituted with hydrogen, deuterium, Alkyl(C₁-C₄), (such as methyl, ethyl, propyl), each of which may be optionally substituted with hydrogen, OH, F, and NH₂.

13. The compound according to any one of claims 1-10, wherein **D₁** is selected from a 5-membered monocyclic heterocycle containing one oxygen and one or two nitrogens, where the heterocycle is connected to the rest of the molecule via a carbon-carbon bond, and which is optionally substituted with hydrogen, deuterium, Alkyl(C₁-C₄), (such as methyl, ethyl, propyl), each of which may be optionally substituted with hydrogen, OH, F, and NH₂.

14. The compound according to claim 1-10, wherein **D₁** is an isoxazole or pyrazole optionally substituted with hydrogen, deuterium, Alkyl(C₁-C₄), (such as methyl, ethyl, propyl), each of which may be optionally substituted with hydrogen, OH, F, and NH₂.



15. The compound according to claim 14, wherein D_1 is selected from
16. The compound according to any one of claims 1-15, wherein W_1 is CR_1 , where R_1 is selected from hydrogen, deuterium, $-OH$, $-NH_2$, methyl, halogen, and $-CN$.
17. The compound according to any one of claims 1-16, wherein W_1 is CH .
18. The compound according to any one of claims 1-17, wherein W_2 is CR_2 , where R_2 is selected from hydrogen, deuterium, $-OH$, $-NH_2$, methyl, halogen, and $-CN$.
19. The compound according to any one of claims 1-18, wherein W_2 is CH .
20. The compound according to any one of claims 1-15, wherein at least one of W_1 and W_2 is nitrogen.
21. The compound according to any one of claims 1-20, wherein W_3 is nitrogen.
22. The compound according to any one of claims 1-20, wherein W_3 is CR_3 , where R_3 is selected from hydrogen, $-NH_2$, and halogen.
23. The compound according to claim 22, wherein R_3 is selected from hydrogen and $-NH_2$.
24. The compound according to claim 23, wherein R_3 is $-NH_2$.
25. The compound according to any one of claims 1-24, wherein X is selected from $-CH_2-$, $CH(CH_3)-$, $CH(OH)-$, $-NH-$, CH_2CH_2- , where one or more hydrogen may independently be replaced with deuterium or halogen.
26. The compound according to claim 25, wherein X is selected from $-CH_2-$, $CH(CH_3)-$, and $-NH-$, where one or more hydrogen may independently be replaced with deuterium or halogen.
27. The compound according to claim 26, wherein X is selected from $-CH_2-$, $CH(CH_3)-$, where one or more hydrogen may independently be replaced with deuterium or halogen.
28. The compound according to any one of claims 1-27, wherein R_4 is selected from hydrogen, deuterium, alkyl, $-OH$, $-NH_2$, thioalkyl, alkoxy, ketone, ester, carboxylic acid, urea,

carbamate, amino, amide, halogen, carbocycle, heterocycle, sulfone, sulfoxide, sulfide, sulfonamide, and ~~and~~ ~~—CN~~.

29. The compound according to any one of claims 1-28, wherein **R₂** is selected from hydrogen, deuterium, alkyl, ~~OH~~, ~~NH₂~~, thioalkyl, alkoxy, ketone, ester, carboxylic acid, urea, carbamate, amino, amide, halogen, carbocycle, heterocycle, sulfone, sulfoxide, sulfide, sulfonamide, and ~~and~~ ~~—CN~~.

30. The compound according to any one of claims 1-29, wherein **R₁** and **R₂** are independently selected from hydrogen, deuterium, alkyl, ~~NH₂~~, thioalkyl, alkoxy, amino, amide, halogen, carbocycle, heterocycle, and ~~—CN~~.

31. The compound according to any one of claims 1-30, wherein **R₁** and **R₂** are independently selected from hydrogen, deuterium, alkyl(C₁-C₆), ~~NH₂~~, thioalkyl(C₁-C₆), alkoxy(C₁-C₆), amino, and amide.

32. The compound according to claim 1-31, wherein **R₁** and **R₂** are hydrogen.

33. The compound according to any one of claims 1-31, wherein at least one of **R₁**, **R₂**, and **R₃** is different from hydrogen.

34. The compound according to any one of claims 1-33, wherein **R₄** is selected from 5-6 membered carbocycles.

35. The compound according to any one of claims 1-33, wherein **R₄** is selected from a small cycloalkyl(C₃-C₆) and phenyl ring optionally substituted with one or more groups independently selected from hydrogen, deuterium, alkyl(C₁-C₄), alkoxy(C₁-C₄), halogen, ~~CF₃~~, ~~CN~~, and thioalkyl(C₁-C₄), wherein each alkyl, alkoxy, and thioalkyl may be optionally substituted with F, Cl, or Br.

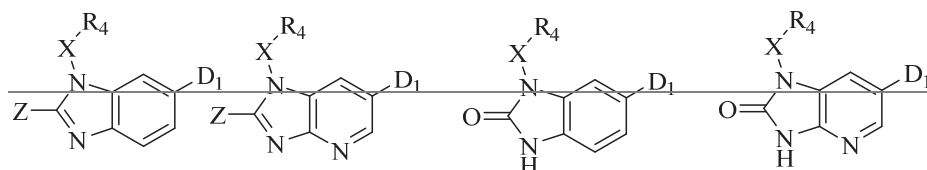
36. The compound according to any one of claims 1-35, wherein **R₄** is a phenyl ring optionally substituted with one or more groups independently selected from deuterium, alkyl(C₁-C₄), alkoxy(C₁-C₄), halogen, ~~CF₃~~, ~~CN~~, and thioalkyl(C₁-C₄), wherein each alkyl, alkoxy, and thioalkyl may be optionally substituted with F, Cl, or Br.

37. The compound according to any one of claims 1-33, wherein **R₄** is selected from an aryl optionally substituted with one or more groups independently selected from deuterium, alkyl(C₁-C₄), alkoxy(C₁-C₄), halogen, ~~CF₃~~, ~~CN~~, and thioalkyl(C₁-C₄), wherein each alkyl, alkoxy, and thioalkyl may be optionally substituted with F, Cl, or Br.

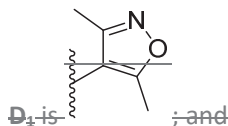
38. The compound according to any one of claims 35-37, wherein the alkyl(C₁-C₄) is selected from methyl, ethyl, propyl, isopropyl, and butyl; the alkoxy(C₁-C₄) is selected from methoxy, ethoxy, and isopropoxy; the halogen is selected from F and Cl; and the thioalkyl(C₁-C₄) is selected from —SMe, —SEt, —SPr, and —Sbu.

39. The compound according to any one of claims 1-33, wherein —X—R₄ is selected from —CH₂Aryl.

40. The compound according to claim 1, wherein the **A-B** bicyclic ring is selected from



wherein **Z** is selected from hydrogen, deuterium, —NH₂, amino (such as —NH(C₁-C₅), —N(C₁-C₅)₂, —NHPh, —NHBn, —NHpyridyl, —NHheterocycle(C₄-C₆), —NHcarbocycle(C₄-C₆)), alkyl(C₁-C₆), thioalkyl(C₁-C₆), alkenyl(C₁-C₆), and alkoxy(C₁-C₆); carboxyl;

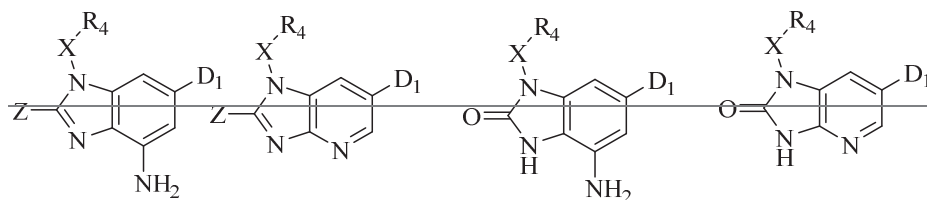


D₁ is —; and

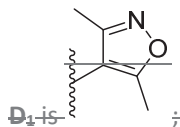
X is selected from —CH₂— and —CH(CH₃)—; and

R₄ is a phenyl ring optionally substituted with groups independently selected with one or more groups independently selected from deuterium, alkyl(C₁-C₄), alkoxy(C₁-C₄), halogen, —CF₃, CN, and thioalkyl(C₁-C₄), wherein each alkyl, alkoxy, and thioalkyl may be optionally substituted with F, Cl, or Br.

41. The compound according to claim 1, wherein the **A-B** bicyclic ring is selected from



wherein **Z** is selected from hydrogen, deuterium, —NH₂, amino (such as —NH(C₁-C₅), —N(C₁-C₅)₂, —NHPh, —NHBn, —NHpyridyl, —NHheterocycle(C₄-C₆), —NHcarbocycle(C₄-C₆)), alkyl(C₁-C₆), thioalkyl(C₁-C₆), alkenyl(C₁-C₆), and alkoxy(C₁-C₆); carboxyl;



~~**X** is selected from $-\text{CH}_2-$ and $-\text{CH}(\text{CH}_2)-$; and~~

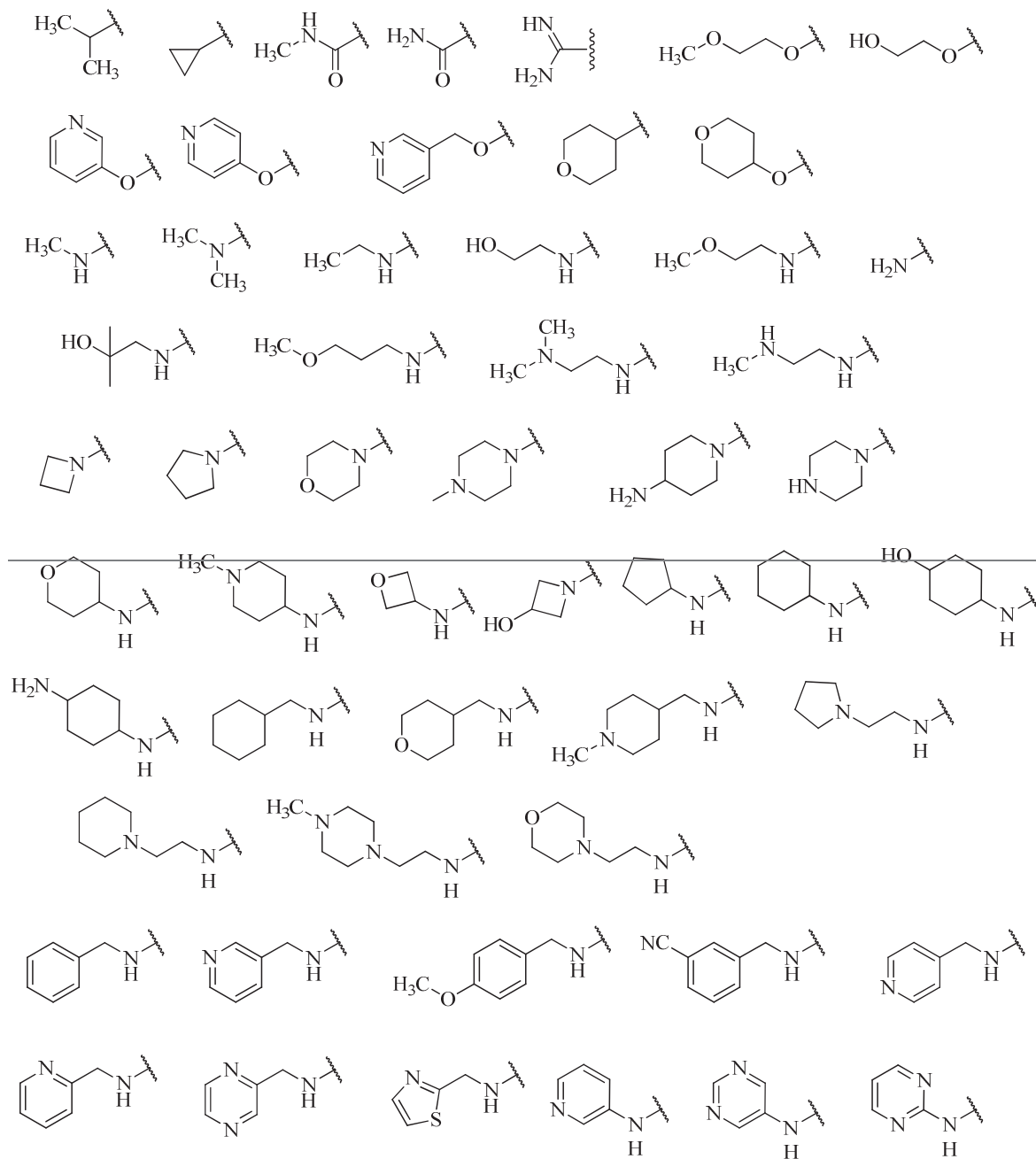
~~**R₄** is a phenyl ring optionally substituted with groups independently selected with one or more groups independently selected from deuterium, alkyl(C_1-C_4), alkoxy(C_1-C_4), halogen, $-\text{CF}_3$, CN, and thioalkyl(C_1-C_4), wherein each alkyl, alkoxy, and thioalkyl may be optionally substituted with F, Cl, or Br.~~

~~42. The compound according to claim 40 or 41, wherein the **R₄** phenyl ring is optionally substituted with one or more alkyl(C_1-C_4) selected from methyl, ethyl, propyl, isopropyl, and butyl; alkoxy(C_1-C_4), selected from methoxy, ethoxy, and isopropoxy; halogen selected from F and Cl; and thioalkyl(C_1-C_4) selected from $-\text{SMe}$, $-\text{SEt}$, $-\text{SPr}$, and $-\text{Sbu}$.~~

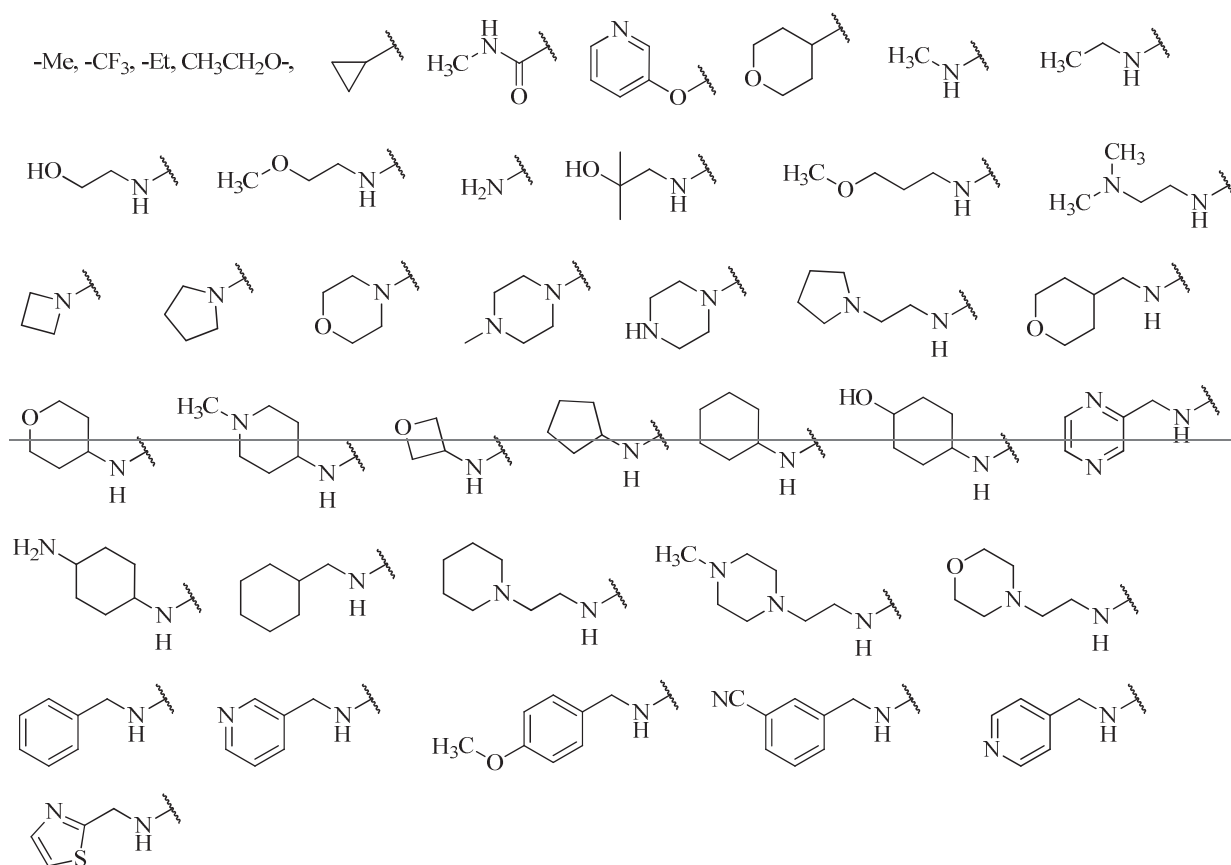
~~43. The compound according to any one of claims 40-42, wherein **Z** is selected from hydrogen and amino~~

44. The compound according to any one of claims 40-42, wherein Z is selected from

-Me, -CF₃, -Et, CH₃CH₂O-, CF₃CH₂-, -SMe, -SOMe, -SO₂Me, -CN,



45. The compound according to claim 44, wherein **Z** is selected from



461. Use of a therapeutically effective amount of Aa compound selected from:

~~9-benzyl-2-(3,5-dimethylisoxazol-4-yl)-9H-purin-6-amine;~~

3-benzyl-5-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2(3H)-one;

1-benzyl-5-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2(3H)-one;

4-(3-benzyl-3H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;

4-(1-benzyl-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;

3-benzyl-5-(3,5-dimethylisoxazol-4-yl)benzo[d]oxazol-2(3H)-one;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-benzo[d]imidazol-4-amine;

1-benzyl-5-(3,5-dimethylisoxazol-4-yl)-1H-benzo[d]imidazol-7-amine;

N,1-dibenzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-benzo[d]imidazol-4-amine;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2(3H)-one;

~~1-benzyl-7-(3,5-dimethylisoxazol-4-yl)quinoxalin-2(1H)-one;~~

1-benzyl-7-(3,5-dimethylisoxazol-4-yl)-3,4-dihydroquinazolin-2(1H)-one;

4-(1-benzyl-2-methyl-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;

4-(1-(cyclopropylmethyl)-2-methyl-4-nitro-1H-benzo[d]imidazol-6-yl)-3,5-dimethylisoxazole;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-4-nitro-1H-benzo[d]imidazol-2(3H)-one;

4-amino-1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-benzo[d]imidazol-2(3H)-one;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-2-ethoxy-1H-benzo[d]imidazol-4-amine;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-ethyl-4-nitro-1H-benzo[d]imidazol-2-amine;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N2-ethyl-1H-benzo[d]imidazole-2,4-diamine;

~~methyl 1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-2-oxo-2,3-dihydro-1H-benzo[d]imidazole-4-carboxylate;~~

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-2-oxo-2,3-dihydro-1H-benzo[d]imidazole-4-carboxamide;

4-(aminomethyl)-1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-benzo[d]imidazol-2(3H)-one;

~~5-(3,5-dimethylisoxazol-4-yl)-N-phenyl-1H-pyrrolo[3,2-b]pyridin-3-amine;~~

~~6-(3,5-dimethylisoxazol-4-yl)-1-(4-fluorobenzyl)-3-methyl-1H-pyrazolo[4,3-b]pyridine-4-oxide;~~

~~6-(3,5-dimethylisoxazol-4-yl)-1-(4-fluorobenzyl)-3-methyl-1H-pyrazolo[4,3-b]pyridin-5(4H)-one;~~

4-(3-benzyl-3H-imidazo[4,5-b]pyridin-5-yl)-3,5-dimethylisoxazole;

6-(3,5-dimethylisoxazol-4-yl)-1-(4-fluorobenzyl)-1H-benzo[d]imidazol-4-amine;

6-(3,5-dimethylisoxazol-4-yl)-1-(4-fluorobenzyl)-N-methyl-1H-benzo[d]imidazol-4-amine;

6-(3,5-dimethylisoxazol-4-yl)-1-(4-fluorobenzyl)-N,N-dimethyl-1H-benzo[d]imidazol-4-amine;

3,5-dimethyl-4-(1-(1-phenylethyl)-1H-imidazo[4,5-b]pyridin-6-yl)isoxazole;

~~4-(1-benzyl-1H-imidazo[4,5-c]pyridin-6-yl)-3,5-dimethylisoxazole;~~

~~1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-c]pyridine-5-oxide;~~

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-c]pyridin-4-amine;

4-(1-benzyl-3-bromo-1H-pyrrolo[3,2-b]pyridin-6-yl)-3,5-dimethylisoxazole;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-pyrrolo[3,2-b]pyridine-3-carbaldehyde;

1-(1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-pyrrolo[3,2-b]pyridin-3-yl)ethanone;

~~1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-pyrrolo[3,2-b]pyridin-5-yl formate;~~

~~4-((6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1H-imidazo[4,5-b]pyridin-1-yl)methyl)benzamide;~~
 4-(1-benzyl-3-nitro-1H-pyrrolo[3,2-b]pyridin-6-yl)-3,5-dimethylisoxazole;
~~3,5-dimethyl-4-(3-(4-(trifluoromethyl)benzyl)-3H-imidazo[4,5-b]pyridin-6-yl)isoxazole;~~
~~3,5-dimethyl-4-(1-(4-(trifluoromethyl)benzyl)-1H-imidazo[4,5-b]pyridin-6-yl)isoxazole;~~
 4-(3-(4-chlorobenzyl)-3H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;
~~4-(1-(4-chlorobenzyl)-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;~~
 4-(3-(4-fluorobenzyl)-3H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;
 4-(1-(4-fluorobenzyl)-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;
 3,5-dimethyl-4-(3-(pyridin-2-ylmethyl)-3H-imidazo[4,5-b]pyridin-6-yl)isoxazole;
~~3,5-dimethyl-4-(1-(pyridin-2-ylmethyl)-1H-imidazo[4,5-b]pyridin-6-yl)isoxazole;~~
 4-(1-(4-fluorobenzyl)-1H-pyrrolo[3,2-b]pyridin-6-yl)-3,5-dimethylisoxazole;
 4-(1-(4-fluorobenzyl)-1H-pyrrolo[2,3-b]pyridin-6-yl)-3,5-dimethylisoxazole;
 4-(5-(4-fluorobenzyl)-5H-pyrrolo[2,3-b]pyrazin-3-yl)-3,5-dimethylisoxazole;
 4-(1-(4-fluorobenzyl)-1H-pyrazolo[4,3-b]pyridin-6-yl)-3,5-dimethylisoxazole;
 6-(3,5-dimethylisoxazol-4-yl)-1-(4-fluorobenzyl)-1H-pyrrolo[2,3-b]pyridin-4-amine;
~~4-(1-(4-fluorobenzyl)-3-methyl-1H-pyrazolo[4,3-b]pyridin-6-yl)-3,5-dimethylisoxazole;~~
 1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-indazol-4-amine;
 1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1H-benzo[d]imidazol-4-amine;
~~1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-pyrrolo[3,2-b]pyridin-5(4H)-one;~~
 3-((5-(3,5-dimethylisoxazol-4-yl)-1H-pyrrolo[3,2-b]pyridin-3-yl)amino)benzonitrile;
 4-(1-(4-fluorobenzyl)-2-methyl-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;
~~4-(1-benzyl-2-ethoxy-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;~~
~~4-((6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1H-imidazo[4,5-b]pyridin-1-yl)methyl)-3,5-dimethylisoxazole;~~
 4-(1-(2,4-dichlorobenzyl)-2-methyl-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;
 4-(1-(4-methoxybenzyl)-2-methyl-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;
 4-(1-(cyclopropylmethyl)-2-methyl-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;
 N-(1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1H-benzo[d]imidazol-4-yl)acetamide;

N-(1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1H-benzo[d]imidazol-4-yl)ethanesulfonamide;
 4-(1-benzyl-4-methoxy-2-methyl-1H-benzo[d]imidazol-6-yl)-3,5-dimethylisoxazole;
 7-amino-3-benzyl-5-(3,5-dimethylisoxazol-4-yl)benzo[d]oxazol-2(3H)-one;
 3,5-dimethyl-4-(2-methyl-1-(pyridin-3-ylmethyl)-1H-imidazo[4,5-b]pyridin-6-yl)isoxazole;
 3,5-dimethyl-4-(2-methyl-1-(thiophen-2-ylmethyl)-1H-imidazo[4,5-b]pyridin-6-yl)isoxazole;
~~4-((6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1H-imidazo[4,5-b]pyridin-1-yl)methyl)benzonitrile;~~
 4-(1-benzyl-1H-pyrrolo[3,2-b]pyridin-6-yl)-3,5-dimethylisoxazole;
 1-(1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-pyrrolo[3,2-b]pyridin-3-yl)-N,N-dimethylmethanamine;
 1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-pyrrolo[2,3-b]pyridin-4-amine;
 3,5-dimethyl-4-(2-methyl-1-(pyridin-4-ylmethyl)-1H-imidazo[4,5-b]pyridin-6-yl)isoxazole;
 1-(cyclopropylmethyl)-6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1H-benzo[d]imidazol-4-amine;
 3,5-dimethyl-4-(2-methyl-1-((5-methylthiophen-2-yl)methyl)-1H-imidazo[4,5-b]pyridin-6-yl)isoxazole;
 4-(1-((5-chlorothiophen-2-yl)methyl)-2-methyl-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;
 5-((6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1H-imidazo[4,5-b]pyridin-1-yl)methyl)thiophene-2-carbonitrile;
~~6-(3,5-dimethylisoxazol-4-yl)-1-(4-fluorobenzyl)-1H-imidazo[4,5-b]pyridine-4-oxide;~~
~~6-(3,5-dimethylisoxazol-4-yl)-1-(4-fluorobenzyl)-1H-imidazo[4,5-b]pyridin-5-yl acetate;~~
~~1-benzyl-6-(1,4-dimethyl-1H-pyrazol-5-yl)-2-methyl-4-nitro-1H-benzo[d]imidazole;~~
 1-benzyl-6-(1,4-dimethyl-1H-pyrazol-5-yl)-2-methyl-1H-benzo[d]imidazol-4-amine;
 4-(1-(4-chlorobenzyl)-2-methyl-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;
 4-((6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1H-imidazo[4,5-b]pyridin-1-yl)methyl)phenol;
 1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1H-benzo[d]imidazole-4-carbonitrile;
 1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-2-oxo-2,3-dihydro-1H-benzo[d]imidazole-4-carbonitrile;
 1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-2-morpholino-1H-benzo[d]imidazol-4-amine;
 1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-pyrrolo[3,2-b]pyridine-3-carbonitrile;
 4-(1-benzyl-3-chloro-1H-pyrrolo[3,2-b]pyridin-6-yl)-3,5-dimethylisoxazole;
 4-amino-1-(4-chlorobenzyl)-6-(3,5-dimethylisoxazol-4-yl)-1H-benzo[d]imidazol-2(3H)-one;

1-(4-chlorobenzyl)-6-(3,5-dimethylisoxazol-4-yl)-4-nitro-1H-benzo[d]imidazol-2(3H)-one;
 4-(1-benzyl-1H-pyrazolo[4,3-b]pyridin-6-yl)-3,5-dimethylisoxazole;
 4-(1-(4-chlorobenzyl)-1H-pyrazolo[4,3-b]pyridin-6-yl)-3,5-dimethylisoxazole;
 1-benzyl-2-methyl-6-(1-methyl-1H-pyrazol-5-yl)-1H-benzo[d]imidazol-4-amine;
 4-(1-(3,4-dichlorobenzyl)-2-methyl-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;
 6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1-(1-phenylethyl)-1H-benzo[d]imidazol-4-amine;
 2-(azetidin-1-yl)-1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-benzo[d]imidazol-4-amine;
 3,5-dimethyl-4-(1-(thiophen-3-ylmethyl)-1H-pyrazolo[4,3-b]pyridin-6-yl)isoxazole;
 N-(1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-pyrrolo[3,2-b]pyridin-3-yl)acetamide;
 1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-pyrrolo[3,2-b]pyridin-3-amine;
 1-(3,4-dichlorobenzyl)-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2(3H)-one;
 1-(4-chlorobenzyl)-6-(3,5-dimethylisoxazol-4-yl)-1H-indazol-4-amine;
 6-(3,5-dimethylisoxazol-4-yl)-1-(4-methoxybenzyl)-4-nitro-1H-benzo[d]imidazol-2(3H)-one;
 4-amino-6-(3,5-dimethylisoxazol-4-yl)-1-(4-methoxybenzyl)-1H-benzo[d]imidazol-2(3H)-one;
 1-(4-chlorobenzyl)-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2(3H)-one;
 6-(3,5-dimethylisoxazol-4-yl)-1-(thiophen-2-ylmethyl)-1H-imidazo[4,5-b]pyridin-2(3H)-one;
 1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-ethyl-1H-imidazo[4,5-b]pyridin-2-amine;
 3,5-dimethyl-4-(2-methyl-1-(1-phenylethyl)-1H-imidazo[4,5-b]pyridin-6-yl)isoxazole;
 1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N2-(tetrahydro-2H-pyran-4-yl)-1H-benzo[d]imidazole-2,4-diamine;
 6-(3,5-dimethylisoxazol-4-yl)-4-nitro-1-(1-phenylethyl)-1H-benzo[d]imidazol-2(3H)-one;
 N-(1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-2-oxo-2,3-dihydro-1H-benzo[d]imidazol-4-yl)acetamide;
 6-(3,5-dimethylisoxazol-4-yl)-1-(1-phenylethyl)-1H-imidazo[4,5-b]pyridin-2(3H)-one;
 6-(3,5-dimethylisoxazol-4-yl)-N-ethyl-1-(1-phenylethyl)-1H-imidazo[4,5-b]pyridin-2-amine;
 4-(1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2-yl)morpholine;
 4-amino-6-(3,5-dimethylisoxazol-4-yl)-1-(1-phenylethyl)-1H-benzo[d]imidazol-2(3H)-one;
 4-(1-(cyclobutylmethyl)-2-methyl-4-nitro-1H-benzo[d]imidazol-6-yl)-3,5-dimethylisoxazole;
 4-(1-(cyclopentylmethyl)-2-methyl-4-nitro-1H-benzo[d]imidazol-6-yl)-3,5-dimethylisoxazole;

1-(cyclopropylmethyl)-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2(3H)-one;
 N-(1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-2-(ethylamino)-1H-benzo[d]imidazol-4-yl)acetamide;
 N-(1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-2-ethoxy-1H-benzo[d]imidazol-4-yl)acetamide;
 4-(1-benzyl-4-bromo-2-methyl-1H-benzo[d]imidazol-6-yl)-3,5-dimethylisoxazole;
 3-benzyl-5-(3,5-dimethylisoxazol-4-yl)-1-ethyl-1H-benzo[d]imidazol-2(3H)-one;
 4-(2-(azetidin-1-yl)-1-benzyl-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;
 1-((5-chlorothiophen-2-yl)methyl)-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2(3H)-one;
 (S)-3,5-dimethyl-4-(2-methyl-4-nitro-1-(1-phenylethyl)-1H-benzo[d]imidazol-6-yl)isoxazole;
 (R)-3,5-dimethyl-4-(2-methyl-4-nitro-1-(1-phenylethyl)-1H-benzo[d]imidazol-6-yl)isoxazole;
 6-(3,5-dimethylisoxazol-4-yl)-N-ethyl-4-nitro-1-(1-phenylethyl)-1H-benzo[d]imidazol-2-amine;
 4-(1-benzyl-2-ethyl-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;
 4-amino-6-(3,5-dimethylisoxazol-4-yl)-1-(4-hydroxybenzyl)-1H-benzo[d]imidazol-2(3H)-one;
 N-(2-(azetidin-1-yl)-1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-benzo[d]imidazol-4-yl)acetamide;
 1-(cyclopropylmethyl)-6-(3,5-dimethylisoxazol-4-yl)-N-ethyl-1H-imidazo[4,5-b]pyridin-2-amine;
 1-(cyclobutylmethyl)-6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1H-benzo[d]imidazol-4-amine;
 1-(cyclopentylmethyl)-6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1H-benzo[d]imidazol-4-amine;
 6-(3,5-dimethylisoxazol-4-yl)-N2-ethyl-1-(1-phenylethyl)-1H-benzo[d]imidazole-2,4-diamine;
 4-(1-benzyl-4-nitro-2-(pyrrolidin-1-yl)-1H-benzo[d]imidazol-6-yl)-3,5-dimethylisoxazole;
 4-(1-benzyl-2-(4-methylpiperazin-1-yl)-4-nitro-1H-benzo[d]imidazol-6-yl)-3,5-dimethylisoxazole;
 1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-(2-methoxyethyl)-4-nitro-1H-benzo[d]imidazol-2-amine;
 4-(1-benzyl-2-cyclopropyl-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;
 1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N2-(2-methoxyethyl)-1H-benzo[d]imidazole-2,4-diamine;
 1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-2-(pyrrolidin-1-yl)-1H-benzo[d]imidazol-4-amine;
 1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-2-(4-methylpiperazin-1-yl)-1H-benzo[d]imidazol-4-amine;
 1-benzyl-N6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1H-benzo[d]imidazole-4,6-diamine;
 (S)-6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1-(1-phenylethyl)-1H-benzo[d]imidazol-4-amine;
 (R)-6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1-(1-phenylethyl)-1H-benzo[d]imidazol-4-amine;

1-(cyclopropylmethyl)-6-(3,5-dimethylisoxazol-4-yl)-4-nitro-1H-benzo[d]imidazol-2(3H)-one;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-methyl-1H-imidazo[4,5-b]pyridin-2-amine;

N,1-dibenzyl-6-(3,5-dimethylisoxazol-4-yl)-4-nitro-1H-benzo[d]imidazol-2-amine;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-4-nitro-N-(pyridin-3-ylmethyl)-1H-benzo[d]imidazol-2-amine;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-methyl-4-nitro-1H-benzo[d]imidazol-2-amine;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-3-methyl-4-nitro-1H-benzo[d]imidazol-2(3H)-one;

~~1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N2-methyl-1H-benzo[d]imidazole-2,4-diamine;~~

N2,1-dibenzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-benzo[d]imidazole-2,4-diamine;

N,1-dibenzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2-amine;

~~1-benzyl-2-methyl-6-(1-methyl-1H-pyrazol-5-yl)-1H-imidazo[4,5-b]pyridine;~~

~~N-(1-benzyl-2-methyl-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazol-4-amine;~~

4-benzyl-6-(3,5-dimethylisoxazol-4-yl)-3,4-dihydroquinoxalin-2(1H)-one;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N2-(pyridin-3-ylmethyl)-1H-benzo[d]imidazole-2,4-diamine;

4-(1-benzyl-4-fluoro-2-methyl-1H-benzo[d]imidazol-6-yl)-3,5-dimethylisoxazole;

1-(cyclopropylmethyl)-6-(3,5-dimethylisoxazol-4-yl)-N-ethyl-4-nitro-1H-benzo[d]imidazol-2-amine;

1-(cyclopropylmethyl)-6-(3,5-dimethylisoxazol-4-yl)-N2-ethyl-1H-benzo[d]imidazole-2,4-diamine;

~~4-amino-1-(cyclopropylmethyl)-6-(3,5-dimethylisoxazol-4-yl)-1H-benzo[d]imidazol-2(3H)-one;~~

4-amino-1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-3-methyl-1H-benzo[d]imidazol-2(3H)-one;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-4-fluoro-1H-benzo[d]imidazol-2(3H)-one;

N-(1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-3-methyl-2-oxo-2,3-dihydro-1H-benzo[d]imidazol-4-yl)acetamide;

4-(1-benzyl-2-(4-methylpiperazin-1-yl)-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;

4-benzyl-6-(1-methyl-1H-pyrazol-5-yl)-3,4-dihydroquinoxalin-2(1H)-one;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-(2-methoxyethyl)-1H-imidazo[4,5-b]pyridin-2-amine;

4-(1-benzyl-2-methyl-4-(methylsulfonyl)-1H-benzo[d]imidazol-6-yl)-3,5-dimethylisoxazole;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-(pyridin-4-ylmethyl)-1H-imidazo[4,5-b]pyridin-2-amine;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-(tetrahydro-2H-pyran-4-yl)-1H-imidazo[4,5-b]pyridin-2-amine;

1-benzyl-6-(1-methyl-1H-pyrazol-5-yl)-1H-imidazo[4,5-b]pyridin-2(3H)-one;

(S)-6-(3,5-dimethylisoxazol-4-yl)-4-nitro-1-(1-phenylethyl)-1H-benzo[d]imidazol-2(3H)-one;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1H-benzo[d]imidazol-4-ol;

(R)-4-benzyl-6-(3,5-dimethylisoxazol-4-yl)-3-methyl-3,4-dihydroquinoxalin-2(1H)-one;

4-(1-benzyl-6-(1-methyl-1H-pyrazol-5-yl)-1H-imidazo[4,5-b]pyridin-2-yl)morpholine;

1-benzyl-6-(1-methyl-1H-pyrazol-5-yl)-N-(tetrahydro-2H-pyran-4-yl)-1H-imidazo[4,5-b]pyridin-2-amine;

4-amino-1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-benzo[d]imidazole-2(3H)-thione;

(S)-4-amino-6-(3,5-dimethylisoxazol-4-yl)-1-(1-phenylethyl)-1H-benzo[d]imidazol-2(3H)-one;

(R)-4-amino-6-(3,5-dimethylisoxazol-4-yl)-1-(1-phenylethyl)-1H-benzo[d]imidazol-2(3H)-one;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-7-methyl-1H-imidazo[4,5-b]pyridin-2(3H)-one;

4-(1-benzyl-2,7-dimethyl-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;

4-(1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1H-benzo[d]imidazol-4-yl)morpholine;

1-(1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1H-benzo[d]imidazol-4-yl)azetidin-2-one;

1-benzyl-2-methyl-6-(1,3,5-trimethyl-1H-pyrazol-4-yl)-1H-benzo[d]imidazol-4-amine;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-(pyridin-3-ylmethyl)-1H-imidazo[4,5-b]pyridin-2-amine;

~~4-(4-bromo-2-methyl-1-phenethyl-1H-benzo[d]imidazol-6-yl)-3,5-dimethylisoxazole;~~

4-(4-bromo-2-methyl-1-(3-phenylpropyl)-1H-benzo[d]imidazol-6-yl)-3,5-dimethylisoxazole;

4-(7-bromo-2-methyl-1-(3-phenylpropyl)-1H-benzo[d]imidazol-5-yl)-3,5-dimethylisoxazole;

4-(4-bromo-2-methyl-1-(2-phenoxyethyl)-1H-benzo[d]imidazol-6-yl)-3,5-dimethylisoxazole;

4-(7-bromo-2-methyl-1-(2-phenoxyethyl)-1H-benzo[d]imidazol-5-yl)-3,5-dimethylisoxazole;

4-(1-(cyclohexylmethyl)-2-methyl-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;

4-(1-(cyclopentylmethyl)-2-methyl-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;

4-(1-(cyclobutylmethyl)-2-methyl-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-(pyridin-2-ylmethyl)-1H-imidazo[4,5-b]pyridin-2-amine;

4-(1-benzyl-2-(pyrrolidin-1-yl)-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;

2-((1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2-yl)amino)ethanol;

1-(1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1H-benzo[d]imidazol-4-yl)azetidin-3-ol;

1-benzyl-3-methyl-6-(1-methyl-1H-pyrazol-5-yl)-4-nitro-1H-benzo[d]imidazol-2(3H)-one;

4-amino-1-benzyl-3-methyl-6-(1-methyl-1H-pyrazol-5-yl)-1H-benzo[d]imidazol-2(3H)-one;

~~(4-bromo-6-(3,5-dimethylisoxazol-4-yl)-2-methyl-1H-benzo[d]imidazol-1-yl)(phenyl)methanone;~~

1-benzyl-2-methyl-6-(5-methylisoxazol-4-yl)-1H-benzo[d]imidazol-4-amine;

1-(cyclopentylmethyl)-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2(3H)-one;

1-(cyclobutylmethyl)-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2(3H)-one;

N-(1-benzyl-3-methyl-6-(1-methyl-1H-pyrazol-5-yl)-2-oxo-2,3-dihydro-1H-benzo[d]imidazol-4-yl)acetamide;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-(4-methoxybenzyl)-1H-imidazo[4,5-b]pyridin-2-amine;

~~1-benzyl-2-methyl-6-(1-methyl-1H-1,2,3-triazol-5-yl)-1H-imidazo[4,5-b]pyridine;~~

4-((1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2-yl)amino)cyclohexanol;

4-(1-(cyclopentylmethyl)-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2-yl)morpholine;

4-(2-(azetidin-1-yl)-1-(cyclopentylmethyl)-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;

4-(1-(cyclobutylmethyl)-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2-yl)morpholine;

4-(2-(azetidin-1-yl)-1-(cyclobutylmethyl)-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;

N1-(1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2-yl)-N2,N2-dimethylethane-1,2-diamine;

4-(1-benzyl-2-(piperazin-1-yl)-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;

1-benzyl-N-cyclopentyl-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2-amine;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-(2-morpholinoethyl)-1H-imidazo[4,5-b]pyridin-2-amine;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2-amine;

3-(((1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2-yl)amino)methyl)benzonitrile;

(R)-6-(3,5-dimethylisoxazol-4-yl)-1-(1-phenylethyl)-1H-imidazo[4,5-b]pyridin-2(3H)-one;

(S)-6-(3,5-dimethylisoxazol-4-yl)-1-(1-phenylethyl)-1H-imidazo[4,5-b]pyridin-2(3H)-one;

4-(1-benzyl-2-(tetrahydro-2H-pyran-4-yl)-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-methyl-1H-imidazo[4,5-b]pyridine-2-carboxamide;

1-(cyclopentylmethyl)-6-(3,5-dimethylisoxazol-4-yl)-N-(tetrahydro-2H-pyran-4-yl)-1H-imidazo[4,5-b]pyridin-2-amine;

1-(cyclobutylmethyl)-6-(3,5-dimethylisoxazol-4-yl)-N-(tetrahydro-2H-pyran-4-yl)-1H-imidazo[4,5-b]pyridin-2-amine

N1-(1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2-yl)cyclohexane-1,4-diamine;

1-benzyl-N-(cyclohexylmethyl)-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2-amine;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-(3-methoxypropyl)-1H-imidazo[4,5-b]pyridin-2-amine;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-(oxetan-3-yl)-1H-imidazo[4,5-b]pyridin-2-amine;

6-(3,5-dimethylisoxazol-4-yl)-1-(4-fluorobenzyl)-1H-imidazo[4,5-b]pyridin-2(3H)-one;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-(pyrazin-2-ylmethyl)-1H-imidazo[4,5-b]pyridin-2-amine;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-((tetrahydro-2H-pyran-4-yl)methyl)-1H-imidazo[4,5-b]pyridin-2-amine;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-(2-(4-methylpiperazin-1-yl)ethyl)-1H-imidazo[4,5-b]pyridin-2-amine;

6-(3,5-dimethylisoxazol-4-yl)-1-(4-fluorobenzyl)-N-methyl-1H-imidazo[4,5-b]pyridin-2-amine;

1-(4-chlorobenzyl)-6-(3,5-dimethylisoxazol-4-yl)-N-methyl-1H-imidazo[4,5-b]pyridin-2-amine;

1-benzyl-N-cyclohexyl-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2-amine;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-(1-methylpiperidin-4-yl)-1H-imidazo[4,5-b]pyridin-2-amine;

4-(1-benzyl-2-(pyridin-3-yloxy)-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;

1-((1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2-yl)amino)-2-methylpropan-2-ol;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-(2-(pyrrolidin-1-yl)ethyl)-1H-imidazo[4,5-b]pyridin-2-amine;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-(2-(piperidin-1-yl)ethyl)-1H-imidazo[4,5-b]pyridin-2-amine;

(R)-6-(3,5-dimethylisoxazol-4-yl)-4-nitro-1-(1-phenylethyl)-1H-benzo[d]imidazol-2(3H)-one;

4-(1-benzyl-7-methoxy-2-(trifluoromethyl)-1H-benzo[d]imidazol-6-yl)-3,5-dimethylisoxazole;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-(thiazol-2-ylmethyl)-1H-imidazo[4,5-b]pyridin-2-amine;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-benzo[d]imidazole-2-carboximidamide;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-benzo[d]imidazole-2-carboxamide;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-((1-methylpiperidin-4-yl)methyl)-1H-imidazo[4,5-b]pyridin-2-amine;

1-(1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-1H-imidazo[4,5-b]pyridin-2-yl)azetidin-3-ol;

4-(1-benzyl-2-(pyridin-4-yloxy)-1H-imidazo[4,5-b]pyridin-6-yl)-3,5-dimethylisoxazole;

1-benzyl-6-(3,5-dimethylisoxazol-4-yl)-N-(pyridin-3-yl)-1H-benzo[d]imidazol-2-amine and;

3-(1-benzyl-1H-benzo[d]imidazol-6-yl)-4-ethyl-1H-1,2,4-triazol-5(4H)-one; and

or stereoisomers, tautomers, pharmaceutically acceptable salts, or hydrates thereof for the manufacture of a medicament effective in treating a disease or condition associated with BET proteins by inhibiting a BET protein function.

~~47. A pharmaceutical composition comprising the compound of any one of claims 1-46 or a stereoisomer, tautomer, pharmaceutically acceptable salt, or hydrate thereof, and a pharmaceutically acceptable carrier.~~

~~48. A method for inhibition of BET protein function comprising administering a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47.~~

~~49. A method of treating an autoimmune or inflammatory disorder associated with BET proteins comprising administering a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47.2. The use according to claim 1, wherein the compound is to be administered in a pharmaceutical composition that further comprises a pharmaceutically acceptable carrier.~~

3. The use according to claim 1 or 2, wherein the disease or disorder is selected from an autoimmune diseases or disorder, an inflammatory diseases or disorder, cancer, a benign proliferative or fibrotic disorder, a cardiovascular diseases or disorder, a metabolic diseases or disorder, HIV, and a neurological diseases or disorder.

~~504. The method-use of claim 493, wherein the autoimmune or inflammatory disorder is selected from Acute Disseminated Encephalomyelitis, Agammaglobulinemia, Allergic Disease, Ankylosing spondylitis, Anti-GBM/Anti-TBM nephritis, Anti-phospholipid syndrome, Autoimmune aplastic anemia, Autoimmune hepatitis, Autoimmune inner ear disease, Autoimmune myocarditis, Autoimmune pancreatitis, Autoimmune retinopathy, Autoimmune thrombocytopenic purpura, Behcet's Disease, Bullous pemphigoid, Castleman's Disease, Celiac Disease, Churg-Strauss syndrome, Crohn's Disease, Cogan's syndrome, Dry eye syndrome, Essential mixed cryoglobulinemia, Dermatomyositis, Devic's Disease, Encephalitis, Eosinophilic esophagitis, Eosinophilic fasciitis, Erythema nodosum, Giant cell arteritis, Glomerulonephritis, Goodpasture's syndrome, Granulomatosis with Polyangiitis (Wegener's), Graves' Disease, Guillain-Barre syndrome, Hashimoto's thyroiditis, Hemolytic anemia, Henoch-Schonlein purpura, idiopathic pulmonary~~

fibrosis, IgA nephropathy, Inclusion body myositis, Type I diabetes, Interstitial cystitis, Kawasaki's Disease, Leukocytoclastic vasculitis, Lichen planus, Systemic Lupus erythematosus (SLE), Microscopic polyangitis, Multiple sclerosis, Myasthenia gravis, myositis, Optic neuritis, Pemphigus, POEMS syndrome, Polyarteritis nodosa, Primary biliary cirrhosis, Psoriasis, Psoriatic arthritis, Pyoderma gangrenosum, Relapsing polychondritis, Rheumatoid arthritis, Sarcoidosis, Scleroderma, Sjogren's syndrome, Takayasu's arteritis, Transverse myelitis, Ulcerative colitis, Uveitis, and Vitiligo.

~~51. A method of treating an acute or chronic non-autoimmune inflammatory disorder characterized by dysregulation of IL-6 and/or IL-17 comprising administering a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47.~~

~~525. The method use of claim 513, wherein the acute or chronic non-autoimmune inflammatory disease or disorder is selected from sinusitis, pneumonitis, osteomyelitis, gastritis, enteritis, gingivitis, appendicitis, irritable bowel syndrome, tissue graft rejection, chronic obstructive pulmonary disease (COPD), septic shock, osteoarthritis, acute gout, acute lung injury, acute renal failure, burns, Herxheimer reaction, and SIRS associated with viral infections.~~

~~53. The method of claim 51, wherein the acute or chronic non-autoimmune inflammatory disorder is selected from rheumatoid arthritis (RA) and multiple sclerosis (MS).~~

~~54. A method of treating a cancer associated with overexpression, translocation, amplification, or rearrangement of a myc family oncoprotein that is sensitive to BET inhibition comprising administering a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47.~~

6. The use of claim 3, wherein the disease or disorder is cancer.

~~557. The method use of claim 546, wherein the cancer is selected from B-acute lymphocytic leukemia, Burkitt's lymphoma, ~~D~~diffuse large cell lymphoma, ~~M~~multiple myeloma, ~~P~~primary plasma cell leukemia, ~~A~~atypical carcinoid lung cancer, ~~B~~bladder cancer, ~~B~~reast-breast cancer, ~~C~~cervix cancer, ~~C~~colon cancer, ~~G~~gastric cancer, ~~G~~glioblastoma, ~~H~~hepatocellular carcinoma, ~~I~~large cell neuroendocrine carcinoma, ~~m~~Medulloblastoma, ~~m~~Melanoma, nodular, ~~M~~melanoma, superficial spreading, ~~N~~neuroblastoma, esophageal squamous cell carcinoma, ~~O~~Osteosarcoma, ~~O~~Ovarian cancer, ~~P~~prostate cancer, ~~R~~renal clear cell carcinoma, ~~R~~retinoblastoma, ~~R~~rhabdomyosarcoma, ~~and~~ ~~S~~small cell lung carcinoma, NUT midline carcinoma, B-cell lymphoma, non-small cell lung cancer, head and neck squamous cell carcinoma, chronic lymphocytic leukemia follicular lymphoma, diffuse large B cell lymphoma with germinal center phenotype, Hodgkin's lymphoma, activated anaplastic~~

large cell lymphoma, primary neuroectodermal tumor, pancreatic cancer, adenoid cystic carcinoma, T-cell prolymphocytic leukemia, malignant glioma, Barret's adenocarcinoma, hepatoma, pro-myelocytic leukemia, and mantle cell lymphoma.

8. The use of claim 6, wherein the cancer:

i. is associated with overexpression, translocation, amplification, or rearrangement of a myc family oncoprotein that is sensitive to BET inhibition; or

ii. is associated with overexpression, translocation, amplification, or rearrangement of BET proteins; or

iii. relies on pTEFb (Cdk9/cyclin T) and BET proteins to regulate oncogenes; or

iv. is associated with upregulation of BET responsive genes CDK6, Bcl2, TYRO3, MYB, and hTERT; or

v. is sensitive to effects of BET inhibition; or

vi. is associated with a virus.

~~56. A method of treating a cancer associated with overexpression, translocation, amplification, or rearrangement of BET proteins comprising administering a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47.~~

~~57. The method of claim 56, wherein the cancer is selected from NUT midline carcinoma, B-cell lymphoma, non-small cell lung cancer, esophageal cancer, head and neck squamous cell carcinoma, and colon cancer.~~

~~58. A method of treating a cancer that relies on pTEFb (Cdk9/cyclin T) and BET proteins to regulate oncogenes comprising administering a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47.~~

~~59. The method of claim 58, wherein the cancer is selected from chronic lymphocytic leukemia and multiple myeloma, follicular lymphoma, diffuse large B cell lymphoma with germinal center phenotype, Burkitt's lymphoma, Hodgkin's lymphoma, follicular lymphomas and activated, anaplastic large cell lymphoma, neuroblastoma and primary neuroectodermal tumor, rhabdomyosarcoma, prostate cancer, and breast cancer.~~

~~60. A method of treating a cancer associated with upregulation of BET responsive genes CDK6, Bcl2, TYRO3, MYB, and hTERT comprising administering a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47.~~

61. The method of claim 58, wherein the cancer is selected from pancreatic cancer, breast cancer, colon cancer, glioblastoma, adenoid cystic carcinoma, T-cell prolymphocytic leukemia, malignant glioma, bladder cancer, medulloblastoma, thyroid cancer, melanoma, multiple myeloma, Barret's adenocarcinoma, hepatoma, prostate cancer, pro-myelocytic leukemia, chronic lymphocytic leukemia, mantle cell lymphoma, diffuse large B-cell lymphoma, small cell lung cancer, and renal carcinoma.

62. A method of treating a cancer that is sensitive to effects of BET inhibition comprising administering a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47.

9. The use of claim 6, wherein the cancer is associated with overexpression, translocation, amplification, or rearrangement of a myc family oncoprotein that is sensitive to BET inhibition and selected from B-acute lymphocytic leukemia, Burkitt's lymphoma, Diffuse large cell lymphoma, Multiple myeloma, Primary plasma cell leukemia, Atypical carcinoid lung cancer, Bladder cancer, Breast cancer, Cervix cancer, Colon cancer, Gastric cancer, Glioblastoma, Hepatocellular carcinoma, Large cell neuroendocrine carcinoma, Medulloblastoma, Nodular melanoma, Superficial spreading melanoma, Neuroblastoma, esophageal squamous cell carcinoma, Osteosarcoma, Ovarian cancer, Prostate cancer, Renal clear cell carcinoma, Retinoblastoma, Rhabdomyosarcoma, and Small cell lung carcinoma.

6310. The method use of claim 628, wherein the cancer is associated with overexpression, translocation, amplification, or rearrangement of BET proteins and selected from NUT-midline carcinoma (NMV), acute myeloid leukemia (AML), acute B lymphoblastic leukemia (B-ALL), Burkitt's Lymphoma, B-cell Lymphoma, Melanoma, mixed lineage leukemia, multiple myeloma, pro-myelocytic leukemia (PML), non-Hodgkin's lymphoma, Neuroblastoma, Medulloblastoma non-small cell lung cancer, esophageal cancer, head and neck squamous cell carcinoma, and colon cancer, lung carcinoma (NSCLC, SCLC), and colon carcinoma.

11. The method or use of claim 8, wherein the cancer relies on pTEFb (Cdk9/cyclin T) and BET proteins to regulate oncogenes and is selected from chronic lymphocytic leukemia, multiple myeloma, follicular lymphoma, diffuse large B cell lymphoma with germinal center phenotype, Burkitt's lymphoma, Hodgkin's lymphoma, follicular lymphomas and activated, anaplastic large cell lymphoma, neuroblastoma, primary neuroectodermal tumor, rhabdomyosarcoma, prostate cancer, and breast cancer.

12. The method or use of claim 8, wherein the cancer is associated with upregulation of BET responsive genes CDK6, Bcl2, TYRO3, MYB, and/or hTERT and is selected from pancreatic cancer, breast cancer, colon cancer, glioblastoma, adenoid cystic carcinoma, T-cell prolymphocytic leukemia, malignant glioma, bladder cancer, medulloblastoma, thyroid cancer, melanoma, multiple myeloma, Barrett's adenocarcinoma, hepatoma, prostate cancer, pro-myelocytic leukemia, chronic lymphocytic leukemia, mantle cell lymphoma, diffuse large B-cell lymphoma, small cell lung cancer, and renal carcinoma.

13. The method or use of claim 8, wherein the cancer is sensitive to effects of BET inhibition and is selected from NUT-midline carcinoma (NMV), acute myeloid leukemia (AML), acute B lymphoblastic leukemia (B-ALL), Burkitt's Lymphoma, B-cell Lymphoma, Melanoma, mixed lineage leukemia, multiple myeloma, pro-myelocytic leukemia (PML), non-Hodgkin's lymphoma, Neuroblastoma, Medulloblastoma, lung carcinoma (NSCLC, SCLC), and colon carcinoma.

~~6414.~~ The method use of any one of claims 486-6313, wherein the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47 is to be administered combined with other therapies, chemotherapeutic agents or antiproliferative agents.

~~6515.~~ The method use of claim 6414, wherein the chemotherapeutic agent is selected from ABT-737, Azacitidine (Vidaza), AZD1152 (Barasertib), AZD2281 (Olaparib), AZD6244 (Selumetinib), BEZ235, Bleomycin Sulfate, Bortezomib (Velcade), Busulfan (Myleran), Camptothecin, Cisplatin, Cyclophosphamide (Clafen), CYT387, Cytarabine (Ara-C), Dacarbazine, DAPT (GSI-IX), Decitabine, Dexamethasone, Doxorubicin (Adriamycin), Etoposide, Everolimus (RAD001), Flavopiridol (Alvocidib), Ganetespib (STA-9090), Gefitinib (Iressa), Idarubicin, Ifosfamide (Mitoxana), IFNa2a (Roferon A), Melphalan (Alkeran), Methazolastone (temozolomide), Metformin, Mitoxantrone (Novantrone), Paclitaxel, Phenformin, PKC412 (Midostaurin), PLX4032 (Vemurafenib), Pomalidomide (CC-4047), Prednisone (Deltasone), Rapamycin, Revlimid (Lenalidomide), Ruxolitinib (INCB018424), Sorafenib (Nexavar), SU11248 (Sunitinib), SU11274, Vinblastine, Vincristine (Oncovin), Vinorelbine (Navelbine), Vorinostat (SAHA), and WP1130 (Degrasyn).

~~6616.~~ A method of treating a~~The use of claim 3, wherein the~~ benign proliferative or fibrotic disorder, is selected from the group consisting of benign soft tissue tumors, bone tumors, brain and spinal tumors, eyelid and orbital tumors, granuloma, lipoma, meningioma, multiple endocrine neoplasia, nasal polyps, pituitary tumors, prolactinoma, pseudotumor cerebri, seborrheic keratoses, stomach polyps, thyroid nodules, cystic neoplasms of the pancreas, hemangiomas, vocal cord nodules, polyps, and cysts, Castleman disease, chronic pilonidal disease, dermatofibroma, pilar cyst,

pyogenic granuloma, juvenile polyposis syndrome, idiopathic pulmonary fibrosis, renal fibrosis, post-operative stricture, keloid formation, scleroderma, and cardiac fibrosis comprising administering a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47.

~~67. A method of treating a disease or disorder that benefits from up-regulation of ApoA1 transcription and protein expression comprising administering a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47.~~

~~68. The method of claim 67, wherein the disease is cardiovascular disease, dyslipidemia, atherosclerosis, hypercholesterolemia, metabolic syndrome, and Alzheimer's disease.~~

~~69. A method of treating a metabolic disease or disorder comprising administering a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47.~~

~~70~~17. The ~~method~~use of claim ~~69~~3, wherein the metabolic disorder is selected from obesity-associated inflammation, type II diabetes, and insulin resistance.

~~71. A method of treating a cancer associated with a virus comprising administering a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47.~~

~~72~~18. The ~~method~~use of claim ~~71~~8, wherein the cancer is associated with a virus and the virus is selected from Epstein-Barr Virus (EBV), hepatitis B virus (HBV), hepatitis C virus (HCV), Kaposi's sarcoma associated virus (KSHV), human papilloma virus (HPV), Merkel cell polyomavirus, and human cytomegalovirus (CMV).

~~73. A method for treating HIV infection comprising administering a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47 alone or in combination with anti-retroviral therapeutic.~~

~~74~~19. A ~~method for treating a~~The use of claim 3, wherein the neurological disease or disorder selected from Alzheimer's disease, Parkinson's disease, Huntington disease, bipolar disorder, schizophrenia, Rubinstein-Taybi syndrome, and epilepsy ~~comprising administering a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47.~~

75. A method of male contraception comprising administering a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47.

76. Use of a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47 for the manufacture of a medicament for use in a method of for treating according to any one of claims —48-75.

77. Use of a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47 for treating a disease or condition associated with BET by inhibiting a BET protein function.

78. Use of a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47 in method of treating an autoimmune or inflammatory disorder associated with BET proteins.

79. The use according to claim 78, wherein the autoimmune or inflammatory disorder is selected from Acute Disseminated Encephalomyelitis, Agammaglobulinemia, Allergic Disease, Ankylosing spondylitis, Anti-GBM/Anti-TBM nephritis, Anti-phospholipid syndrome, Autoimmune aplastic anemia, Autoimmune hepatitis, Autoimmune inner ear disease, Autoimmune myocarditis, Autoimmune pancreatitis, Autoimmune retinopathy, Autoimmune thrombocytopenic purpura, Behcet's Disease, Bullous pemphigoid, Castleman's Disease, Celiac Disease, Churg-Strauss syndrome, Crohn's Disease, Cogan's syndrome, Dry eye syndrome, Essential mixed cryoglobulinemia, Dermatomyositis, Devic's Disease, Encephalitis, Eosinophilic esophagitis, Eosinophilic fasciitis, Erythema nodosum, Giant cell arteritis, Glomerulonephritis, Goodpasture's syndrome, Granulomatosis with Polyangiitis (Wegener's), Graves' Disease, Guillain-Barre syndrome, Hashimoto's thyroiditis, Hemolytic anemia, Henoch-Schonlein purpura, idiopathic pulmonary fibrosis, IgA nephropathy, Inclusion body myositis, Type I diabetes, Interstitial cystitis, Kawasaki's Disease, Leukocytoclastic vasculitis, Lichen planus, Lupus (SLE), Microscopic polyangiitis, Multiple sclerosis, Myasthenia gravis, myositis, Optic neuritis, Pemphigus, POEMS syndrome, Polyarteritis nodosa, Primary biliary cirrhosis, Psoriasis, Psoriatic arthritis, Pyoderma gangrenosum, Relapsing polychondritis, Rheumatoid arthritis, Sarcoidosis, Scleroderma, Sjogren's syndrome, Takayasu's arteritis, Transverse myelitis, Ulcerative colitis, Uveitis, and Vitiligo.

80. Use of a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47 for treating an acute or chronic non-autoimmune inflammatory disorder characterized by dysregulation of IL-6 and/or IL-17.

81. The use according to ~~of claim 80, wherein the acute or chronic non-autoimmune inflammatory disorder is selected from sinusitis, pneumonitis, osteomyelitis, gastritis, enteritis, gingivitis, appendicitis, irritable bowel syndrome, tissue graft rejection, chronic obstructive pulmonary disease (COPD), septic shock, osteoarthritis, acute gout, acute lung injury, acute renal failure, burns, Herxheimer reaction, and SIRS associated with viral infections.~~

82. The use according to claim 80, wherein the acute or chronic non-autoimmune inflammatory disorder is selected from rheumatoid arthritis (RA) and multiple sclerosis (MS).

83. Use of a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47 for treating a cancer associated with overexpression, translocation, amplification, or rearrangement of a myc family oncoprotein that is sensitive to BET inhibition.

84. The use according to claim 83, wherein the cancer is selected from B-acute lymphocytic leukemia, Burkitt's lymphoma, Diffuse large-cell lymphoma, Multiple myeloma, Primary plasma-cell leukemia, Atypical carcinoid lung cancer, Bladder cancer, Breast cancer, Cervix cancer, Colon cancer, Gastric cancer, Glioblastoma, Hepatocellular carcinoma, Large cell neuroendocrine carcinoma, Medulloblastoma, Melanoma, nodular, Melanoma, superficial spreading, Neuroblastoma, esophageal squamous cell carcinoma, Osteosarcoma, Ovarian cancer, Prostate cancer, Renal clear cell carcinoma, Retinoblastoma, Rhabdomyosarcoma, and Small cell lung carcinoma.

85. Use of a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47 for treating a cancer associated with overexpression, translocation, amplification, or rearrangement of BET proteins.

86. The use according to claim 85, wherein the cancer is selected from NUT midline carcinoma, B-cell lymphoma, non-small cell lung cancer, esophageal cancer, head and neck squamous cell carcinoma, and colon cancer.

87. Use of a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47 for treating a cancer that relies on pTEFb (Cdk9/cyclin-T) and BET proteins to regulate oncogenes.

88. The use according to claim 87, wherein the cancer is selected from chronic lymphocytic leukemia and multiple myeloma, follicular lymphoma, diffuse large B-cell lymphoma with germinal center phenotype, Burkitt's lymphoma, Hodgkin's lymphoma, follicular lymphomas and activated,

anaplastic large cell lymphoma, neuroblastoma and primary neuroectodermal tumor, rhabdomyosarcoma, prostate cancer, and breast cancer.

89. Use of a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47 for treating a cancer associated with upregulation of BET responsive genes CDK6, Bcl2, TYRO3, MYB, and hTERT.

90. The use according to claim 89, wherein the cancer is selected from pancreatic cancer, breast cancer, colon cancer, glioblastoma, adenoid cystic carcinoma, T-cell prolymphocytic leukemia, malignant glioma, bladder cancer, medulloblastoma, thyroid cancer, melanoma, multiple myeloma, Barret's adenocarcinoma, hepatoma, prostate cancer, pro-myelocytic leukemia, chronic lymphocytic leukemia, mantle cell lymphoma, diffuse large B-cell lymphoma, small cell lung cancer, and renal carcinoma.

91. Use of a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47 for treating a cancer that is sensitive to effects of BET inhibition.

92. The use according to claim 91, wherein the cancer is selected from NUT-midline carcinoma (NMV), acute myeloid leukemia (AML), acute B-lymphoblastic leukemia (B-ALL), Burkitt's Lymphoma, B-cell Lymphoma, Melanoma, mixed lineage leukemia, multiple myeloma, pro-myelocytic leukemia (PML), non-Hodgkin's lymphoma, Neuroblastoma, Medulloblastoma, lung carcinoma (NSCLC, SCLC), and colon carcinoma.

93. The use according to any one of claims 77-92, wherein the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47 is combined with other therapies, chemotherapeutic agents or antiproliferative agents.

94. The use according to claim 93, wherein the therapeutic agent is selected from ABT-737, Azacitidine (Vidaza), AZD1152 (Barasertib), AZD2281 (Olaparib), AZD6244 (Selumetinib), BEZ235, Bleomycin Sulfate, Bortezomib (Velcade), Busulfan (Myleran), Camptothecin, Cisplatin, Cyclophosphamide (Clafen), CYT387, Cytarabine (Ara-C), Dacarbazine, DAPT (GSI-IX), Decitabine, Dexamethasone, Doxorubicin (Adriamycin), Etoposide, Everolimus (RAD001), Flavopiridol (Alvocidib), Ganetespib (STA-9090), Gefitinib (Iressa), Idarubicin, Ifosfamide (Mitoxana), IFN α 2a (Roferon A), Melphalan (Alkeran), Methazolastone (temozolomide), Metformin, Mitoxantrone (Novantrone), Paclitaxel, Phenformin, PKC412 (Midostaurin), PLX4032 (Vemurafenib), Pomalidomide (CC-4047), Prednisone (Deltasone), Rapamycin, Revlimid (Lenalidomide), Ruxolitinib (INCB018424), Sorafenib

(Nexavar), SU11248 (Sunitinib), SU11274, Vinblastine, Vincristine (Oncovin), Vinorelbine (Navelbine), Vorinostat (SAHA), and WP1130 (Degrasyn).

95. Use of a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47 for treating a benign proliferative or fibrotic disorder, selected from the group consisting of benign soft tissue tumors, bone tumors, brain and spinal tumors, eyelid and orbital tumors, granuloma, lipoma, meningioma, multiple endocrine neoplasia, nasal polyps, pituitary tumors, prolactinoma, pseudotumor cerebri, seborrheic keratoses, stomach polyps, thyroid nodules, cystic neoplasms of the pancreas, hemangiomas, vocal cord nodules, polyps, and cysts, Castleman disease, chronic pilonidal disease, dermatofibroma, pilar cyst, pyogenic granuloma, juvenile polyposis syndrome, idiopathic pulmonary fibrosis, renal fibrosis, post-operative stricture, keloid formation, scleroderma, and cardiac fibrosis.

96. Use of a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47 for treating a disease or disorder that benefits from up-regulation or ApoA1 transcription and protein expression.

97. The use according to claim 96, wherein the disease is cardiovascular disease, dyslipidemia, atherosclerosis, hypercholesterolemia, metabolic syndrome, and Alzheimer's disease.

98. Use of a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47 for treating a metabolic disease or disorder.

99. The use according to claim 98, wherein the metabolic disorder is selected from obesity-associated inflammation, type II diabetes, and insulin resistance.

100. Use of a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47 for treating a cancer associated with a virus.

101. The use according to claims 100, wherein the virus is selected from Epstein-Barr Virus (EBV), hepatitis B virus (HBV), hepatitis C virus (HCV), Kaposi's sarcoma-associated virus (KSHV), human papilloma virus (HPV), Merkel cell polyomavirus, and human cytomegalovirus (CMV).

102. Use of a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47, alone or in combination with an anti-retroviral therapeutic for treating HIV infection.

~~103. Use of a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47 for treating a disease or disorder selected from Alzheimer's disease, Parkinson's disease, Huntington disease, bipolar disorder, schizophrenia, Rubinstein-Taybi syndrome, and epilepsy.~~

~~104. Use of a therapeutically effective amount of the compound of any one of claims 1-46 or a pharmaceutical composition according to claim 47 for male contraception.~~