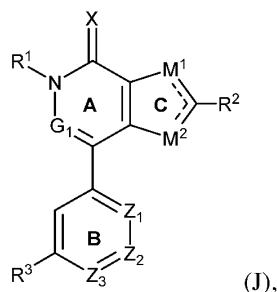


CLAIMS

1. A compound of Formula (J):



or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein:

each $\equiv$ is independently a single bond or double bond;

X is O or S;

R¹ is hydrogen, C₁-C₃ alkyl, -(C₁-C₃ alkylene)OH, C₁-C₃ haloalkyl, or C₃-C₄ cycloalkyl;

G₁ is CR^a or N, wherein:

R^a is hydrogen, halogen, or C₁-C₄ alkyl;

Z₁ is C-W₁-R^c; wherein:

each W₁ is independently -O- or -NR^{w1}-, wherein:

R^{w1} is hydrogen, C₃-C₆ cycloalkyl, or C₁-C₄ alkyl optionally substituted by oxo, -OH, or halogen, and

R^c is independently C₃-C₆ cycloalkyl, 4- to 6- membered heterocyclyl, C₆-C₁₄ aryl, or 5- or 6-membered heteroaryl, each of which is independently optionally substituted by R^{c1}, wherein each R^{c1} is independently halogen, C₁-C₄ alkyl, C₃-C₆ cycloalkyl, 3- to 6-membered heterocyclyl, cyano, oxo, C₁-C₄ alkoxy, C₁-C₄ haloalkoxy, C₁-C₄ haloalkyl, -OR¹⁰, -NR¹⁰R¹¹, -C(O)NR¹⁰R¹¹, -NR¹⁰C(O)R¹¹, -S(O)₂R¹⁰, -NR¹⁰S(O)₂R¹¹, or -S(O)₂NR¹⁰R¹¹;

Z₂ is C-W₂-R^d or N, wherein:

W₂ is -O-, -NR^{w2}-, or a bond, wherein:

R^{w2} is hydrogen, C₃-C₆ cycloalkyl, or C₁-C₄ alkyl optionally substituted by oxo, -OH, or halogen, and

R^d is independently hydrogen, halogen, cyano, 3- to 6-membered heterocyclyl, or C_1 - C_4 alkyl;

Z_3 is $C-R^e$ or N, wherein:

R^e is independently hydrogen, halogen, cyano, 3- to 6-membered heterocyclyl, or C_1 - C_4 alkyl;

M^1 is S or CR^{1a} ;

M^2 is S or CR^{2a} , provided that

(1) when M^1 is S, then the $====$ adjacent to M^1 is a single bond and the $====$ adjacent to M^2 is a double bond,

(2) when M^2 is S, then the $====$ adjacent to M^2 is a single bond and the $====$ adjacent to M^1 is a double bond, and

(3) either M^1 or M^2 is S;

R^{1a} and R^{2a} are each independently hydrogen, halogen, C_1 - C_4 alkyl, C_3 - C_6 cycloalkyl, 3- to 6-membered heterocyclyl, 5- to 10-membered heteroaryl, cyano, oxo, C_1 - C_4 haloalkyl, C_1 - C_4 alkoxy, C_1 - C_4 haloalkoxy, $-OR^{10}$, $-NR^{10}R^{11}$, $-C(O)OR^{10}$, $-C(O)NR^{10}R^{11}$, $-NR^{10}C(O)R^{11}$, $-S(O)_2R^{10}$, $-NR^{10}S(O)_2R^{11}$ or $-S(O)_2NR^{10}R^{11}$, each of which is independently optionally substituted by R^{12} ;

R^2 is hydrogen, halogen, C_1 - C_4 alkyl, C_3 - C_6 cycloalkyl, 3- to 6-membered heterocyclyl, $-(C_1-C_3 \text{ alkylene})$ 3- to 6-membered heterocyclyl, 5- to 10-membered heteroaryl, cyano, oxo, C_1 - C_4 haloalkyl, C_1 - C_4 alkoxy, C_1 - C_4 haloalkoxy, $-OR^{10}$, $-NR^{10}R^{11}$, $-C(O)OR^{10}$, $-C(O)NR^{10}R^{11}$, $-NR^{10}C(O)R^{11}$, $-S(O)_2R^{10}$, $-NR^{10}S(O)_2R^{11}$, or $-S(O)_2NR^{10}R^{11}$, each of which is independently optionally substituted by R^{12} ;

R^3 is $-(CH_2)_mNR^{13}S(O)_2R^{14}$ wherein m is 0, 1, 2 or 3; C_3 - C_6 cycloalkyl optionally substituted by halogen, oxo, -CN, or -OH; C_1 - C_4 alkyl substituted by halogen, oxo, -CN, or -OH; or C_1 - C_6 alkynyl;

R^{10} and R^{11} are each independently hydrogen, C_1 - C_4 alkyl, C_1 - C_4 alkoxy, C_1 - C_4 alkenyl, C_3 - C_6 cycloalkyl, C_6 - C_{14} aryl, 3- to 6-membered heterocyclyl, $-(C_1-C_3 \text{ alkylene})$ C_3 - C_6 cycloalkyl, $-(C_1-C_3 \text{ alkylene})$ 3- to 6-membered heterocyclyl, $-(C_1-C_3 \text{ alkylene})$ C_6 - C_{14} aryl, $-NR^{15}R^{16}$, or $-C(O)R^{12}$, wherein each of R^{10} and R^{11} is independently optionally substituted by halogen, oxo, -CN, -CF₃,

-OH, -NR¹³R¹⁴, -C(O)NR¹³R¹⁴, or C₁-C₄ alkyl optionally substituted by halogen, oxo, -CN, -CF₃, or -OH,

or R¹⁰ and R¹¹ are taken together with the atom or atoms to which they are attached to form a 3- to 6-membered heterocyclyl ring optionally substituted by halogen, oxo, -CN, -CF₃, -OH, or C₁-C₄ alkyl optionally substituted by halogen, oxo, -CN, or -OH;

each R¹² is independently halogen, cyano, C₁-C₄ haloalkyl, C₁-C₄ alkoxy, C₁-C₄ haloalkoxy, -OR¹⁵, -NR¹⁵R¹⁶, -C(O)NR¹⁵R¹⁶, -NR¹⁵C(O)R¹⁶, -S(O)₂R¹⁵, -NR¹⁵S(O)₂R¹⁶, -S(O)₂NR¹⁵R¹⁶, C₃-C₆ cycloalkyl, 3- to 6-membered heterocyclyl, or C₁-C₄ alkyl, each of which is independently optionally substituted by halogen, oxo, -CF₃, -CN, -OH, -NR¹³R¹⁴, or -NR¹³C(O)R¹⁴;

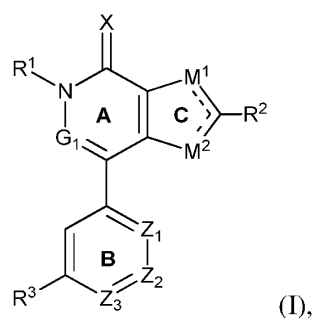
R¹³ and R¹⁴ are independently hydrogen, C₁-C₄ alkyl C₃-C₆ cycloalkyl, or 3- to 6-membered heterocyclyl, each of which is independently optionally substituted by halogen, oxo, -CN, or -OH,

or R¹³ and R¹⁴ are taken together with the atom or atoms to which they are attached to form a 3- to 6-membered heterocyclyl ring optionally substituted by halogen, oxo, -CN, -OH, or C₁-C₄ alkyl optionally substituted by halogen, oxo, -CN, or -OH; and

each R¹⁵ and R¹⁶ are independently hydrogen, C₁-C₄ alkyl, C₃-C₆ cycloalkyl, or 3- to 6-membered heterocyclyl, each of which is independently optionally substituted by halogen, oxo, -CN, or -OH,

or R¹⁵ and R¹⁶ are taken together with the atoms to which they are attached to form a 3- to 6-membered heterocyclyl ring optionally substituted by halogen, oxo, -CN, -OH, or C₁-C₄ alkyl optionally substituted by halogen, oxo, -CN, or -OH.

2. The compound of claim 1, wherein the compound is a compound of Formula (I):



or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein:

each $\equiv$ is independently a single bond or double bond;

X is O or S;

R^1 is hydrogen, C₁-C₃ alkyl, -(C₁-C₃ alkylene)OH, C₁-C₃ haloalkyl, or C₃-C₄ cycloalkyl;

G₁ is CR^a or N, wherein:

R^a is hydrogen, halogen, or C₁-C₄ alkyl;

Z₁ is C-W₁-R^c; wherein:

each W₁ is independently -O- or -NR^{w1}-, wherein:

R^{w1} is hydrogen, C₃-C₆ cycloalkyl, or C₁-C₄ alkyl optionally substituted by oxo, -OH, or halogen, and

R^c is independently 4- to 6- membered heterocyclyl, C₆-C₁₄ aryl, or 5- or 6-membered heteroaryl, each of which is independently optionally substituted by R^{cl}, wherein each R^{cl} is independently halogen, C₁-C₄ alkyl, C₃-C₆ cycloalkyl, 3- to 6-membered heterocyclyl, cyano, oxo, C₁-C₄ alkoxy, C₁-C₄ haloalkoxy, C₁-C₄ haloalkyl, -OR¹⁰, -NR¹⁰R¹¹, -C(O)NR¹⁰R¹¹, -NR¹⁰C(O)R¹¹, -S(O)₂R¹⁰, -NR¹⁰S(O)₂R¹¹, or -S(O)₂NR¹⁰R¹¹;

Z₂ is C-W₂-R^d or N, wherein:

W₂ is -O-, -NR^{w2}-, or a bond, wherein:

R^{w2} is hydrogen, C₃-C₆ cycloalkyl, or C₁-C₄ alkyl optionally substituted by oxo, -OH, or halogen, and

R^d is independently hydrogen, halogen, cyano, 3- to 6-membered heterocyclyl, or C₁-C₄ alkyl;

Z₃ is C-R^e or N, wherein:

R^e is independently hydrogen, halogen, cyano, 3- to 6-membered heterocyclyl, or C₁-C₄ alkyl;

M¹ is S or CR^{1a};

M² is S or CR^{2a}, provided that

(1) when M¹ is S, then the $\equiv$ adjacent to M¹ is a single bond and the $\equiv$ adjacent to M² is a double bond,

(2) when M^2 is S, then the $\equiv$ adjacent to M^2 is a single bond and the $\equiv$ adjacent to M^1 is a double bond, and

(3) at least one of M^1 and M^2 is not S;

R^{1a} and R^{2a} are each independently hydrogen, halogen, C_1 - C_4 alkyl, C_3 - C_6 cycloalkyl, 3- to 6-membered heterocyclyl, 5- to 10-membered heteroaryl, cyano, oxo, C_1 - C_4 haloalkyl, C_1 - C_4 alkoxy, C_1 - C_4 haloalkoxy, $-OR^{10}$, $-NR^{10}R^{11}$, $-C(O)OR^{10}$, $-C(O)NR^{10}R^{11}$, $-NR^{10}C(O)R^{11}$, $-S(O)_2R^{10}$, $-NR^{10}S(O)_2R^{11}$ or $-S(O)_2NR^{10}R^{11}$, each of which is independently optionally substituted by R^{12} ;

R^2 is halogen, C_1 - C_4 alkyl, C_3 - C_6 cycloalkyl, 3- to 6-membered heterocyclyl, $-(C_1-C_3 \text{ alkylene})_3$ - to 6-membered heterocyclyl, 5- to 10-membered heteroaryl, cyano, oxo, C_1 - C_4 haloalkyl, C_1 - C_4 alkoxy, C_1 - C_4 haloalkoxy, $-OR^{10}$, $-NR^{10}R^{11}$, $-C(O)OR^{10}$, $-C(O)NR^{10}R^{11}$, $-NR^{10}C(O)R^{11}$, $-S(O)_2R^{10}$, $-NR^{10}S(O)_2R^{11}$, or $-S(O)_2NR^{10}R^{11}$, each of which is independently optionally substituted by R^{12} ;

R^3 is $-(CH_2)_mNR^{13}S(O)_2R^{14}$, C_3 - C_6 cycloalkyl, or C_1 - C_4 alkyl substituted by halogen, oxo, -CN, or -OH, wherein m is 0, 1, 2 or 3;

R^{10} and R^{11} are each independently hydrogen, C_1 - C_4 alkyl, C_1 - C_4 alkoxy, C_1 - C_4 alkenyl, C_3 - C_6 cycloalkyl, 3- to 6-membered heterocyclyl, $-(C_1-C_3 \text{ alkylene})_3$ - C_3 - C_6 cycloalkyl, $-(C_1-C_3 \text{ alkylene})$ 3- to 6-membered heterocyclyl, $-NR^{15}R^{16}$, or $-C(O)R^{12}$, wherein each of R^{10} and R^{11} is independently optionally substituted by halogen, oxo, -CN, $-CF_3$, -OH, $-NR^{13}R^{14}$, $-C(O)NR^{13}R^{14}$, or C_1 - C_4 alkyl optionally substituted by halogen, oxo, -CN, $-CF_3$, or -OH,

or R^{10} and R^{11} are taken together with the atom or atoms to which they are attached to form a 3- to 6-membered heterocyclyl ring optionally substituted by halogen, oxo, -CN, $-CF_3$, -OH, or C_1 - C_4 alkyl optionally substituted by halogen, oxo, -CN, or -OH;

each R^{12} is independently halogen, cyano, C_1 - C_4 haloalkyl, C_1 - C_4 alkoxy, C_1 - C_4 haloalkoxy, $-OR^{15}$, $-NR^{15}R^{16}$, $-C(O)NR^{15}R^{16}$, $-NR^{15}C(O)R^{16}$, $-S(O)_2R^{15}$, $-NR^{15}S(O)_2R^{16}$, $-S(O)_2NR^{15}R^{16}$, C_3 - C_6 cycloalkyl, 3- to 6-membered heterocyclyl, or C_1 - C_4 alkyl, each of which is independently optionally substituted by halogen, oxo, $-CF_3$, -CN, -OH, $-NR^{13}R^{14}$, or $-NR^{13}C(O)R^{14}$;

R^{13} and R^{14} are independently hydrogen, C_1 - C_4 alkyl, C_3 - C_6 cycloalkyl, or 3- to 6-membered heterocyclyl, each of which is independently optionally substituted by halogen, oxo, -CN, or -OH,

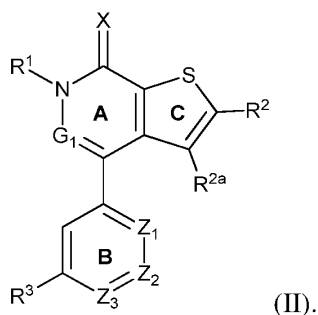
or R^{13} and R^{14} are taken together with the atom or atoms to which they are attached to form a 3- to 6-membered heterocyclyl ring optionally substituted by halogen, oxo, -CN, -OH, or C_1 - C_4 alkyl

optionally substituted by halogen, oxo, -CN, or -OH; and

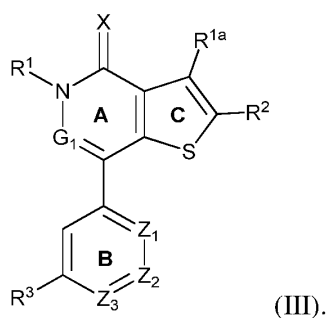
each R^{15} and R^{16} are independently hydrogen, C_1 - C_4 alkyl, C_3 - C_6 cycloalkyl, or 3- to 6-membered heterocyclyl, each of which is independently optionally substituted by halogen, oxo, -CN, or -OH,

or R^{15} and R^{16} are taken together with the atoms to which they are attached to form a 3- to 6-membered heterocyclyl ring optionally substituted by halogen, oxo, -CN, -OH, or C_1 - C_4 alkyl optionally substituted by halogen, oxo, -CN, or -OH.

3. The compound of claim 1 or 2, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein the compound is of Formula (II),



4. The compound of claim 1 or 2, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein the compound is of Formula (III),



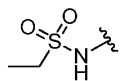
5. The compound of any one of claims 1-4, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein X is O.

6. The compound of any one of claims 1-5, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein G_1 is CH.

7. The compound of any one of claims 1-6, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein Z^1 is $C-W_1-R^c$ and R^c is C_6 - C_{14}

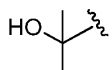
aryl optionally substituted by R^{c1}.

8. The compound of claim 7, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^c is phenyl optionally substituted by halogen or C₁-C₄ alkyl.
9. The compound of any one of claims 1-8, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein Z₂ is CH.
10. The compound of any one of claims 1-9, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein Z₃ is CH.
11. The compound of any one of claims 1-10, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R¹ is C₁-C₃ alkyl.
12. The compound of any one of claims 1-11, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R² is -C(O)NR¹⁰R¹¹, 5- to 10-membered heteroaryl, -(C₁-C₃ alkylene)₃- to 6-membered heterocyclyl, or C₁-C₄ alkyl, each of which is independently optionally substituted by R¹².
13. The compound of claim 12, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R² is -C(O)NR¹⁰R¹¹ which is optionally substituted by R¹², wherein R¹⁰ and R¹¹ are each independently hydrogen, C₁-C₄ alkyl, or C₃-C₆ cycloalkyl, or R¹⁰ and R¹¹ are taken together with the atom or atoms to which they are attached to form a 3- to 6-membered heterocyclyl ring optionally substituted by halogen.
14. The compound of claim 12, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R² is 5- to 10-membered heteroaryl optionally substituted by R¹².
15. The compound of any one of claims 1-14, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R³ is -(CH₂)_mNR¹³S(O)₂R¹⁴ or C₁-C₄ alkyl substituted by halogen, oxo, -CN, or -OH.
16. The compound of any one of claims 1-15, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R³ is -(CH₂)_mNR¹³S(O)₂R¹⁴.
17. The compound of any one of claims 1-16, or a tautomer or isomer thereof, or a

pharmaceutically acceptable salt of any of the foregoing, wherein R³ is .

18. The compound of any one of claims 1-15, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R³ is C₁-C₄ alkyl substituted by -OH.

19. The compound of claim 18, or a tautomer or isomer thereof, or a pharmaceutically

acceptable salt of any of the foregoing, wherein R³ is .

20. The compound of any one of claims 1 and 4-19, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^{1a} is hydrogen.

21. The compound of any one of claims 1, 2, 3 and 5-19, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^{2a} is hydrogen.

22. The compound of claim 1 or 2, or a pharmaceutically acceptable salt thereof, wherein the compound is selected from the group consisting of the compounds in Table 1.

23. A pharmaceutical composition comprising the compound of any one of claims 1-22, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, and a pharmaceutically acceptable carrier.

24. A method of treating disease mediated by bromodomain and extraterminal domain (BET) in an individual in need thereof comprising administering to the individual a therapeutically effective amount of the compound of any one of claims 1-22, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing.

25. A method of treating cancer in an individual in need thereof comprising administering to the individual a therapeutically effective amount of the compound of any one of claims 1-22, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing.

26. A method of inhibiting bromodomain and extraterminal domain (BET) in a cell, comprising administering the compound of any one of claims 1-22, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, to the cells.

27. Use of the compound of any one of claims 1-22, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, in the manufacture of a medicament for

treatment of a disease mediated by bromodomain and extraterminal domain (BET).

28. A kit comprising the compound of any one of claims 1-22, or a tautomer or isomer thereof, or a pharmaceutically acceptable salt of any of the foregoing.