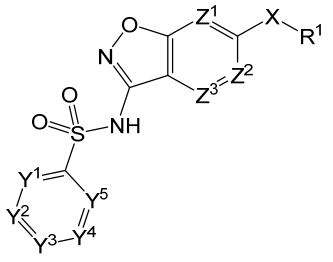
CLAIMS

WHAT IS CLAIMED IS:

1. A compound of Formula (I'), or a pharmaceutically acceptable salt thereof:



Formula (I');

wherein:

Y^1 is CR^{1a} or N;

Y^2 is CR^{2a} or N;

Y^3 is CR^{3a} or N;

Y^4 is CR^{4a} or N;

Y^5 is CR^{5a} or N;

Z^1 is CR^{1b} or N;

Z^2 is CR^{2b} or N;

Z^3 is CR^{3b} or N;

X is -O- or -S-; or

when X is selected from $-C(R^6)(R^{6a})-$ and $-N(R^7)-$, then at least one of Y^1, Y^2, Y^3, Y^4, Y^5, Z^1, Z^2, and Z^3 is N;

R^1 is C_{1-9}heteroaryl optionally substituted with one, two, or three groups selected from R^{15a};

R^{1a}, R^{2a}, R^{3a}, R^{4a}, R^{5a}, R^{1b}, R^{2b}, and R^{3b} are independently selected from hydrogen, halogen, C_{1-6}alkyl, C_{1-6}haloalkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{3-6}cycloalkyl, C_{2-9}heterocycloalkyl, C_{6-10}aryl, C_{1-9}heteroaryl, $-OR^{10}$, $-SR^{10}$, $-SF_5$, $-N(R^{10})(R^{11})$, $-C(O)OR^{10}$, $-OC(O)N(R^{10})(R^{11})$, $-N(R^{12})C(O)N(R^{10})(R^{11})$, $-N(R^{12})C(O)OR^{13}$, $-N(R^{12})S(O)_2R^{13}$, $-C(O)R^{13}$, $-S(O)R^{13}$, $-OC(O)R^{13}$, $-C(O)N(R^{10})(R^{11})$, $-C(O)C(O)N(R^{10})(R^{11})$, $-N(R^{12})C(O)R^{13}$, $-S(O)_2R^{13}$, $-S(O)_2N(R^{10})(R^{11})-$, $S(=O)(=NH)N(R^{10})(R^{11})$, $-CH_2C(O)N(R^{10})(R^{11})$, $-CH_2N(R^{12})C(O)R^{13}$, $-CH_2S(O)_2R^{13}$, and $-CH_2S(O)_2N(R^{10})(R^{11})$, wherein C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{3-6}cycloalkyl, C_{2-9}heterocycloalkyl, C_{6-10}aryl, and C_{1-9}heteroaryl are optionally substituted with one, two, or three groups selected from R^{15b};

R^6 and R^{6a} are independently selected from hydrogen, halogen, C_{1-6}alkyl, C_{1-6}haloalkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{3-6}cycloalkyl, C_{2-9}heterocycloalkyl, C_{6-10}aryl, C_{1-}

$_{9}$heteroaryl, -OR^{10}, -SR^{10}, -$N(R^{10})(R^{11})$, -$C(O)OR^{10}$, -$OC(O)N(R^{10})(R^{11})$, -$N(R^{12})C(O)N(R^{10})(R^{11})$, -$N(R^{12})C(O)OR^{13}$, -$N(R^{12})S(O)_2R^{13}$, -$C(O)R^{13}$, -$S(O)R^{13}$, -$OC(O)R^{13}$, -$C(O)N(R^{10})(R^{11})$, -$C(O)C(O)N(R^{10})(R^{11})$, -$N(R^{12})C(O)R^{13}$, -$S(O)_2R^{13}$, -$S(O)_2N(R^{10})(R^{11})$-, $S(=O)(=NH)N(R^{10})(R^{11})$, -$CH_2C(O)N(R^{10})(R^{11})$, -$CH_2N(R^{12})C(O)R^{13}$, -$CH_2S(O)_2R^{13}$, and -$CH_2S(O)_2N(R^{10})(R^{11})$, wherein C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{3-6}cycloalkyl, C_{2-9}heterocycloalkyl, C_{6-10}aryl, and C_{1-9}heteroaryl are optionally substituted with one, two, or three groups selected from halogen, -CN, hydroxy, C_{1-6}alkyl, C_{1-6}haloalkyl, C_{1-6}alkoxy, C_{3-6}cycloalkyl, C_{2-9}heterocycloalkyl, C_{6-10}aryl, and C_{1-9}heteroaryl;

R^7 is selected from hydrogen, C_{1-6}alkyl, C_{1-6}haloalkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{3-6}cycloalkyl, C_{2-9}heterocycloalkyl, C_{6-10}aryl, and C_{1-9}heteroaryl, wherein C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{3-6}cycloalkyl, C_{2-9}heterocycloalkyl, C_{6-10}aryl, and C_{1-9}heteroaryl are optionally substituted with one, two, or three groups selected from halogen, -CN, hydroxy, C_{1-6}alkyl, C_{1-6}haloalkyl, C_{1-6}alkoxy, C_{3-6}cycloalkyl, C_{2-9}heterocycloalkyl, C_{6-10}aryl, and C_{1-9}heteroaryl;

each R^{10} is independently selected from hydrogen, C_{1-6}alkyl, C_{1-6}haloalkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{3-6}cycloalkyl, C_{2-9}heterocycloalkyl, C_{6-10}aryl, and C_{1-9}heteroaryl, wherein C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{3-6}cycloalkyl, C_{2-9}heterocycloalkyl, C_{6-10}aryl, and C_{1-9}heteroaryl are optionally substituted with one, two, or three groups selected from halogen, -CN, hydroxy, C_{1-6}alkyl, C_{1-6}haloalkyl, C_{1-6}alkoxy, C_{3-6}cycloalkyl, C_{2-9}heterocycloalkyl, C_{6-10}aryl, and C_{1-9}heteroaryl;

each R^{11} is independently selected from hydrogen, C_{1-6}alkyl, and C_{1-6}haloalkyl;

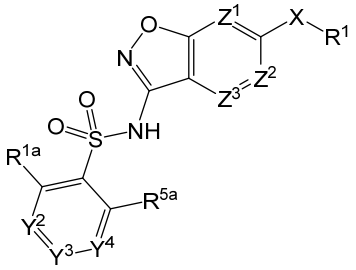
each R^{12} is independently selected from hydrogen, C_{1-6}alkyl, and C_{1-6}haloalkyl;

each R^{13} is independently selected C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{3-6}cycloalkyl, C_{2-9}heterocycloalkyl, C_{6-10}aryl, and C_{1-9}heteroaryl, wherein C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{3-6}cycloalkyl, C_{2-9}heterocycloalkyl, C_{6-10}aryl, and C_{1-9}heteroaryl are optionally substituted with one, two, or three groups selected from halogen, -CN, hydroxy, C_{1-6}alkyl, C_{1-6}haloalkyl, C_{1-6}alkoxy, C_{3-6}cycloalkyl, C_{2-9}heterocycloalkyl, C_{6-10}aryl, and C_{1-9}heteroaryl; and

each R^{15a} and each R^{15b} are each independently selected from halogen, oxo, -CN, C_{1-6}alkyl, C_{1-6}haloalkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{3-10}cycloalkyl, -CH_2-C_{3-6}cycloalkyl, C_{2-9}heterocycloalkyl, -CH_2-C_{2-9}heterocycloalkyl, C_{6-10}aryl, -CH_2-C_{6-10}aryl, C_{1-9}heteroaryl, -CH_2-C_{1-9}heteroaryl, -OR^{10}, -SR^{10}, -$N(R^{10})(R^{11})$, -$C(O)OR^{10}$, -$OC(O)N(R^{10})(R^{11})$, -$N(R^{12})C(O)N(R^{10})(R^{11})$, -$N(R^{12})C(O)OR^{13}$, -$N(R^{12})S(O)_2R^{13}$, -$C(O)R^{13}$, -$S(O)R^{13}$, -$OC(O)R^{13}$, -$C(O)N(R^{10})(R^{11})$, -$C(O)C(O)N(R^{10})(R^{11})$, -$N(R^{12})C(O)R^{13}$, -$S(O)_2R^{13}$, -$S(O)_2N(R^{10})(R^{11})$-, $S(=O)(=NH)N(R^{10})(R^{11})$, -$CH_2C(O)N(R^{10})(R^{11})$, -$CH_2N(R^{12})C(O)R^{13}$, -

$CH_2S(O)_2R^{13}$, and $-CH_2S(O)_2N(R^{10})(R^{11})$, wherein C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{3-6}cycloalkyl, $-CH_2-C_{3-10}$cycloalkyl, C_{2-9}heterocycloalkyl, $-CH_2-C_{2-9}$heterocycloalkyl, C_{6-10}aryl, $-CH_2-C_{6-10}$aryl, $-CH_2-C_{1-9}$heteroaryl, and C_{1-9}heteroaryl are optionally substituted with one, two, or three groups independently selected from halogen, oxo, -CN, C_{1-6}alkyl, C_{1-6}haloalkyl, C_{1-6}alkoxy, C_{1-6}haloalkoxy, $-OR^{10}$, $-SR^{10}$, $-N(R^{10})(R^{11})$, $-C(O)OR^{10}$, $-OC(O)N(R^{10})(R^{11})$, $-N(R^{12})C(O)N(R^{10})(R^{11})$, $-N(R^{12})C(O)OR^{13}$, $-N(R^{12})S(O)_2R^{13}$, $-C(O)R^{13}$, $-S(O)R^{13}$, $-OC(O)R^{13}$, $-C(O)N(R^{10})(R^{11})$, $-C(O)C(O)N(R^{10})(R^{11})$, $-N(R^{12})C(O)R^{13}$, $-S(O)_2R^{13}$, $-S(O)_2N(R^{10})(R^{11})$-, $S(=O)(=NH)N(R^{10})(R^{11})$, $-CH_2C(O)N(R^{10})(R^{11})$, $-CH_2N(R^{12})C(O)R$.

2. The compound of claim 1, or a pharmaceutically acceptable salt thereof, having the structure of Formula (Ia):



Formula (Ia).

3. The compound of claim 1 or 2, or a pharmaceutically acceptable salt thereof, wherein R^{1a} and R^{5a} are independently selected from hydrogen and $-OR^{10}$ and R^{10} is C_{1-6}alkyl.

4. The compound of any one of claims 1-3, or a pharmaceutically acceptable salt thereof, wherein R^{1a} and R^{5a} are $-OR^{10}$ and R^{10} is $-CH_3$.

5. The compound of any one of claims 1-4, or a pharmaceutically acceptable salt thereof, wherein:

Y^2 is N;

Y^3 is CR^{3a}; and

Y^4 is CR^{4a}.

6. The compound of any one of claims 1-4, or a pharmaceutically acceptable salt thereof, wherein:

Y^2 is CR^{2a};

Y^3 is CR^{3a}; and

Y^4 is CR^{4a}.

7. The compound of any one of claims 1-6, or a pharmaceutically acceptable salt thereof, wherein:

R^{2a} is hydrogen, halogen, C_{1-6}alkyl, C_{1-6}haloalkyl, or $-OR^{10}$;

R^{3a} is hydrogen, C_{1-6}alkyl, C_{1-6}haloalkyl, C_{2-6}alkenyl, or C_{2-6}alkynyl; and

R^{4a} is hydrogen, halogen, C_{1-6}alkyl, C_{1-6}haloalkyl, or $-OR^{10}$.

8. The compound of any one of claims 1-7, or a pharmaceutically acceptable salt thereof, wherein:

R^{2a} is hydrogen;

R^{3a} is $C_{1\text{-}6}$alkyl; and

R^{4a} is hydrogen.

9. The compound of any one of claims 1-8, or a pharmaceutically acceptable salt thereof, wherein:

Z^1 is CR^{1b};

Z^2 is CR^{2b}; and

Z^3 is CR^{3b}.

10. The compound of any one of claims 1-8, or a pharmaceutically acceptable salt thereof, wherein:

Z^1 is CR^{1b};

Z^2 is CR^{2b}; and

Z^3 is N.

11. The compound of any one of claims 1-10, or a pharmaceutically acceptable salt thereof, wherein:

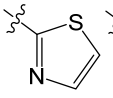
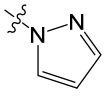
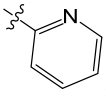
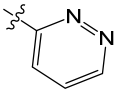
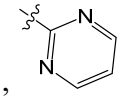
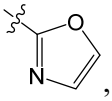
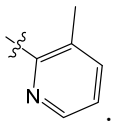
R^{1b} is hydrogen;

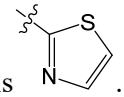
R^{2b} is hydrogen;

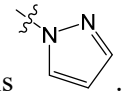
R^{3b} is $-OR^{10}$; and

R^{10} is $C_{1\text{-}6}$alkyl.

12. The compound of any one of claims 1-11, or a pharmaceutically acceptable salt thereof, wherein R^1 is an optionally substituted 5-membered heteroaryl.

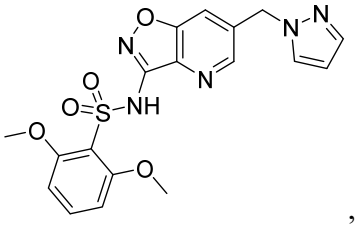
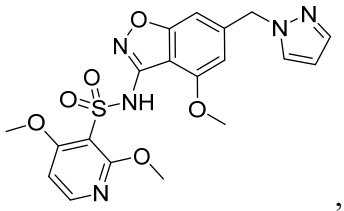
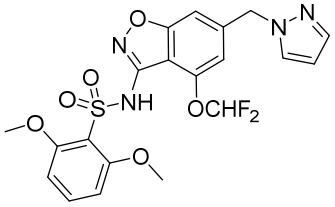
13. The compound of any one of claims 1-11, or a pharmaceutically acceptable salt thereof, wherein R^1 isselected from , , , , , , and .

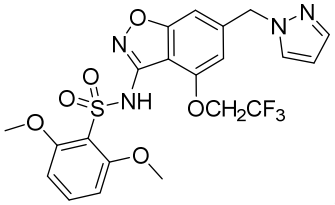
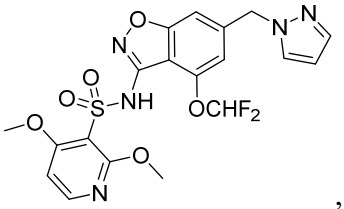
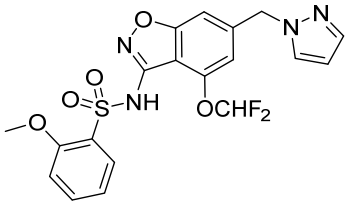
14. The compound of any one of claims 1-11, or a pharmaceutically acceptable salt thereof, wherein R^1 is .

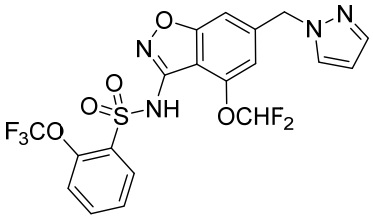
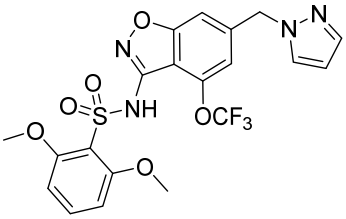
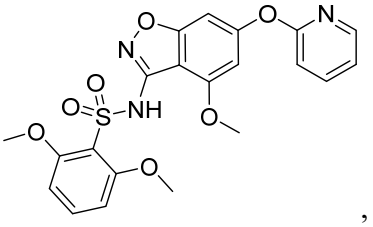
15. The compound of any one of claims 1-11, or a pharmaceutically acceptable salt thereof, wherein R^1 is .

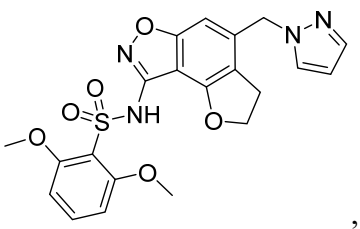
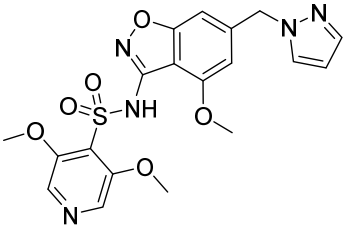
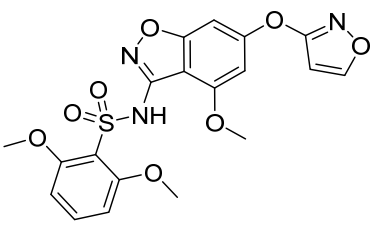
16. The compound of any one of claims 1-15, or a pharmaceutically acceptable salt thereof, wherein X is -O-.

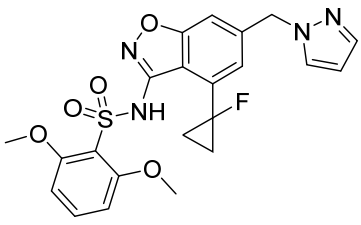
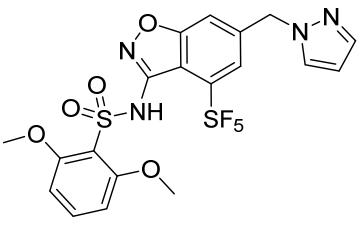
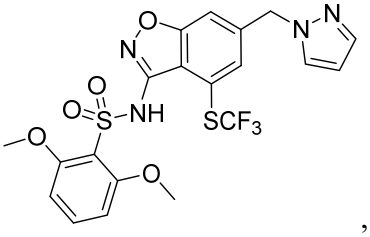
17. A compound, or a pharmaceutically acceptable salt thereof, selected from the group consisting of:

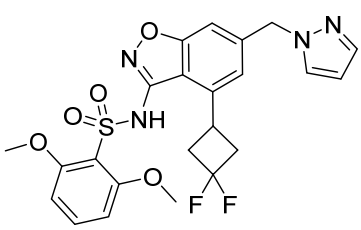
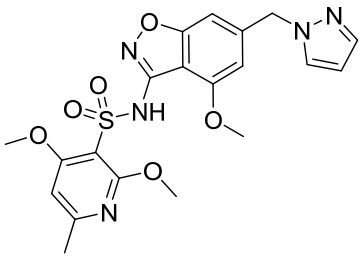
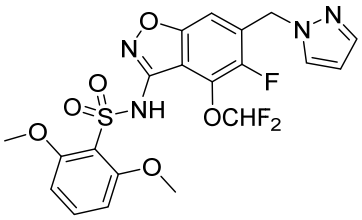
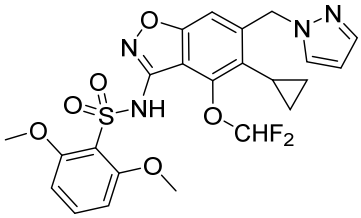
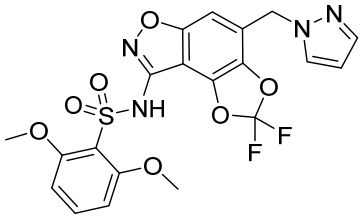
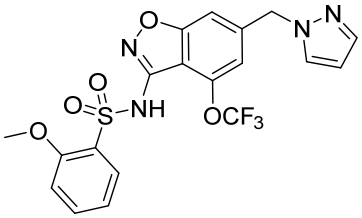
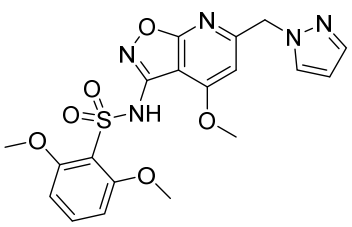
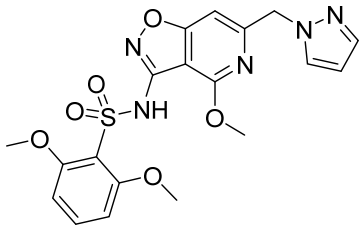
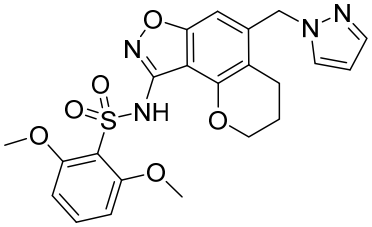
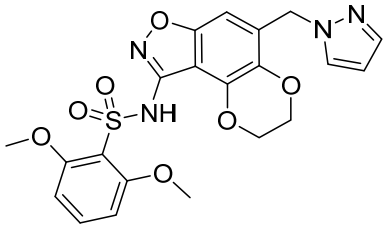
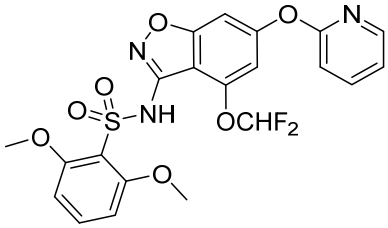
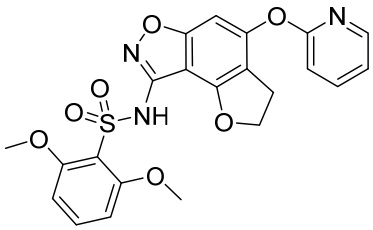
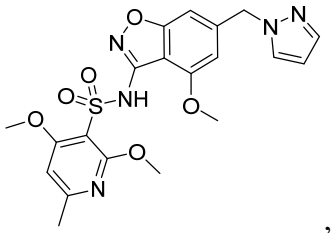
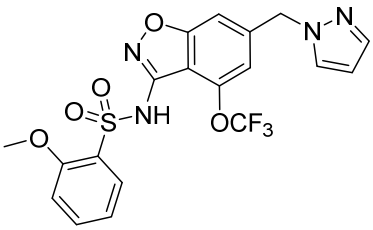
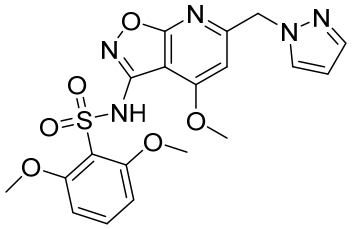
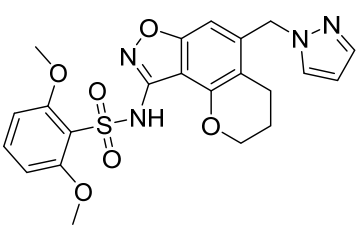
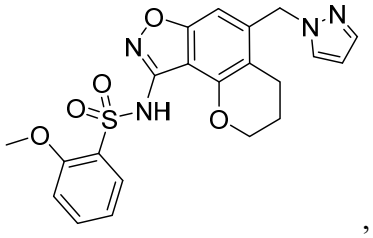
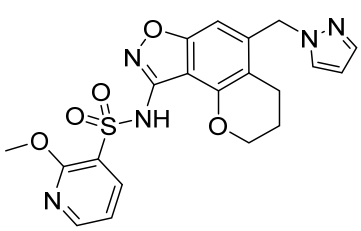
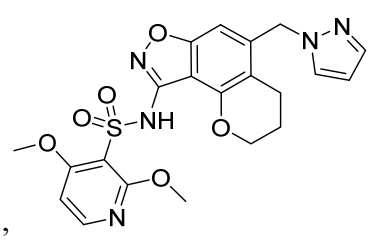
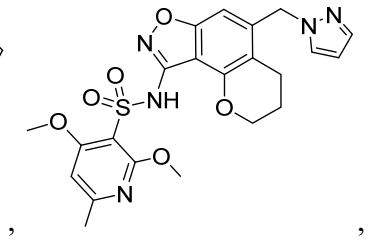
, , ,

, , ,

, , ,

, , ,

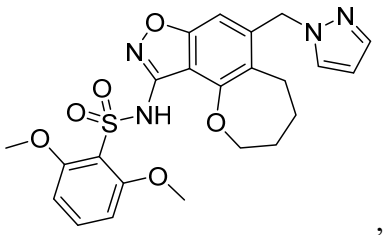
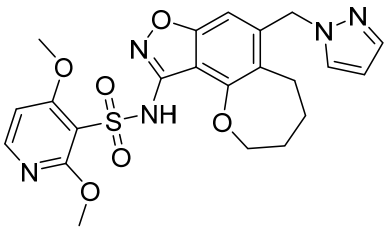
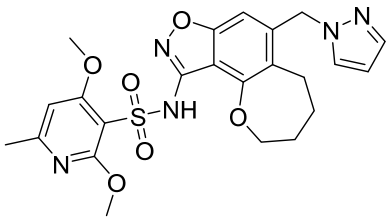
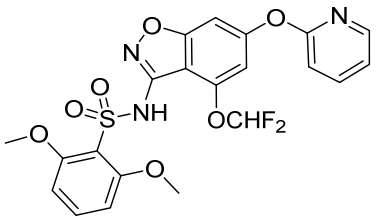
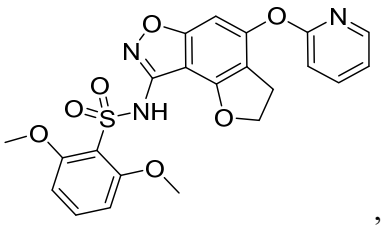
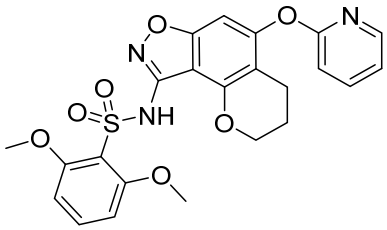
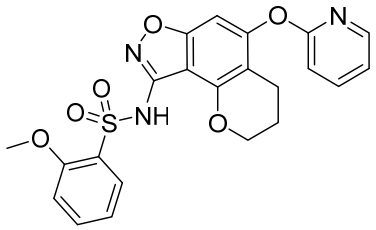
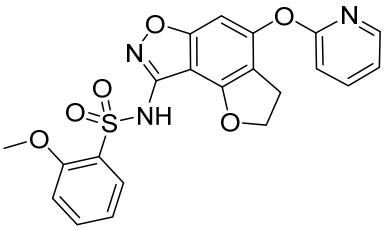
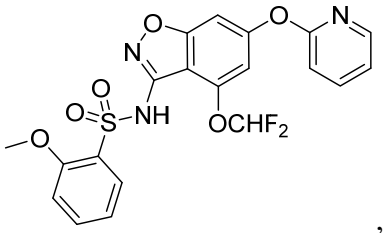
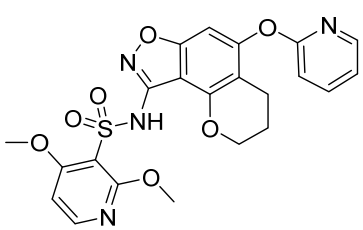
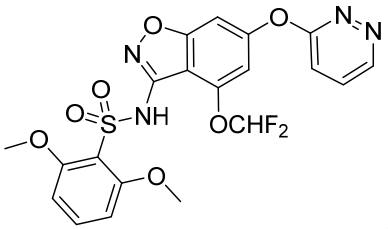
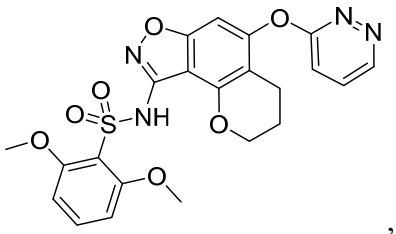
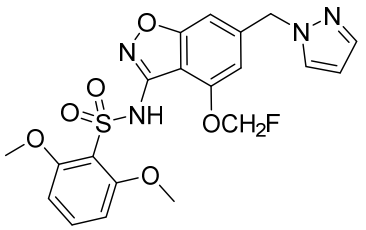
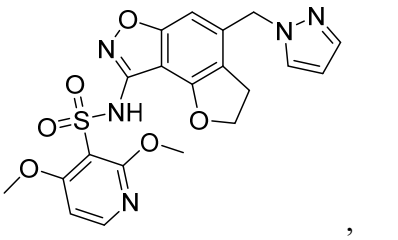
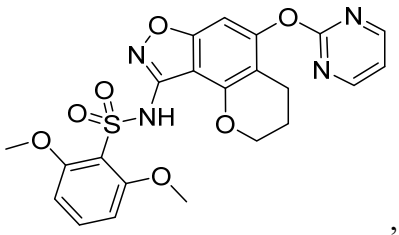
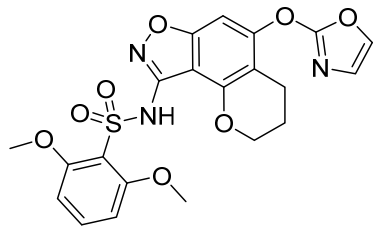
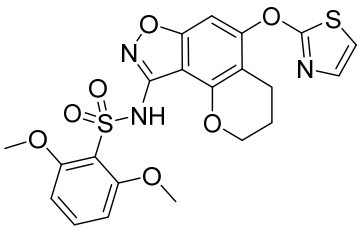
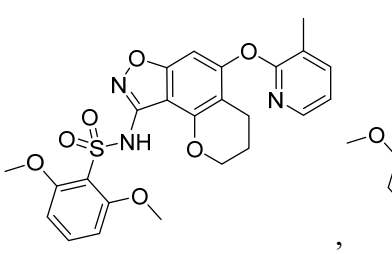
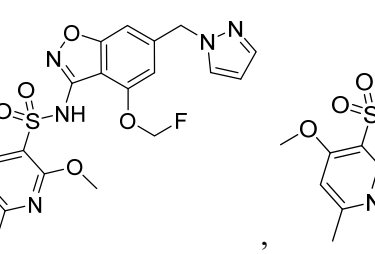
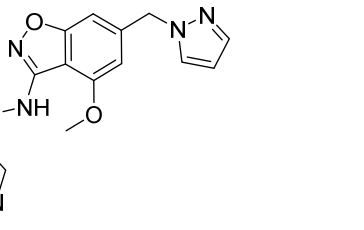
, , ,


,

,

,

,

,

,

,

,

,

,

,

,

,

,

,

,

,

,

,

,

,

,

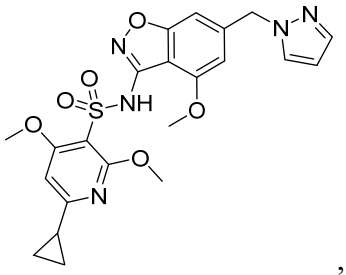
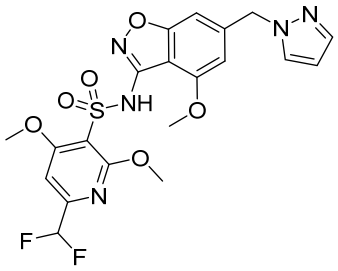
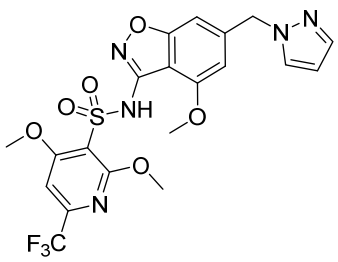
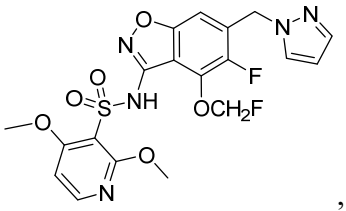
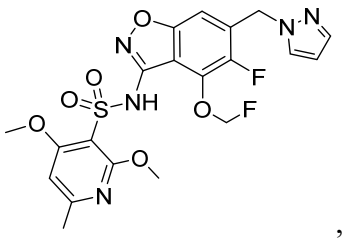
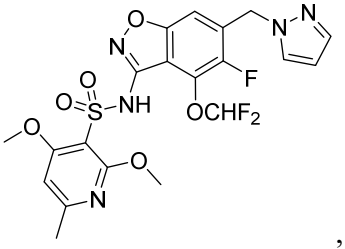
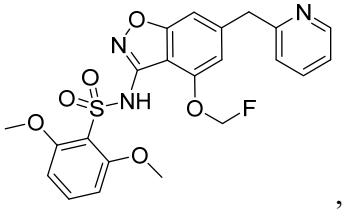
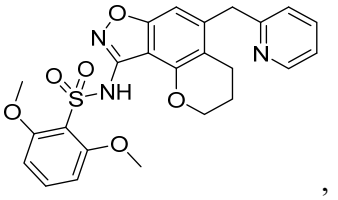
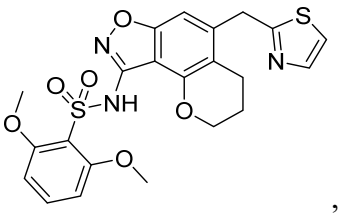
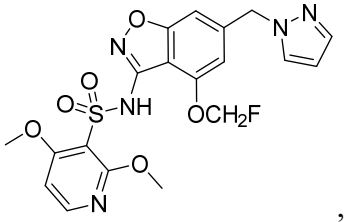
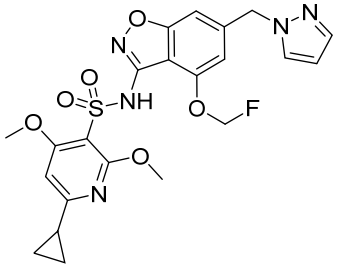
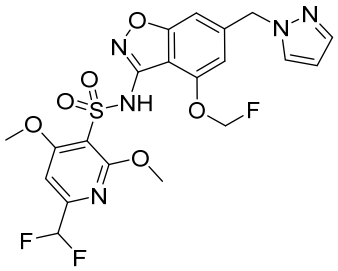
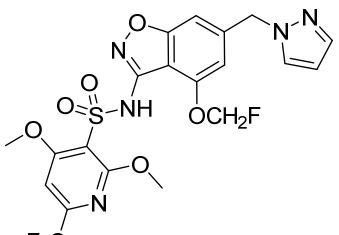
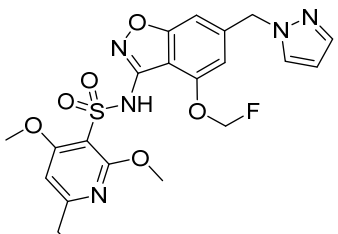
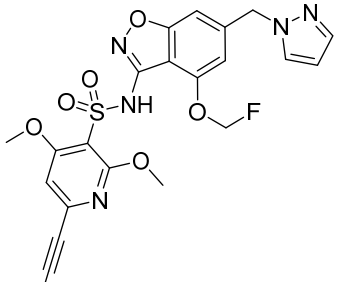
,


,

,

,

,

,

,

,

,

,

,

,

,

,

,

,

,

,

,

,

,

,

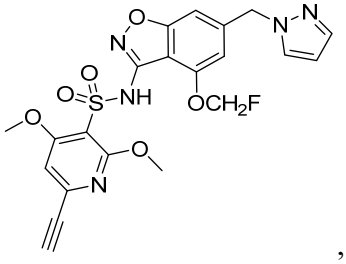
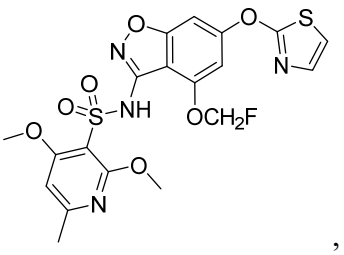
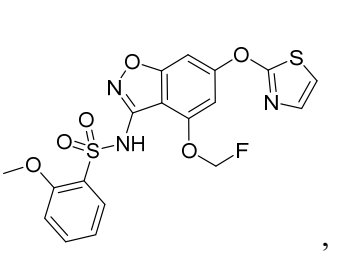
,

,


,

,

,

,

,

,

,

,

,

,

,

,

,

,

,

,

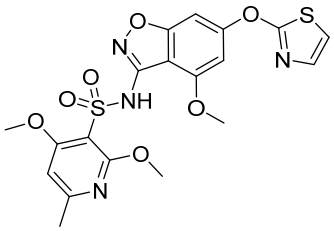
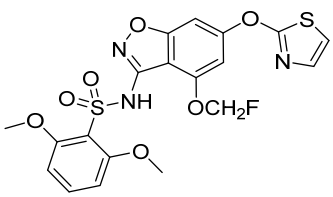
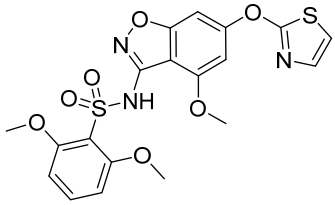
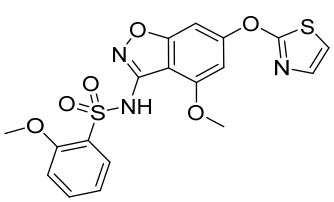
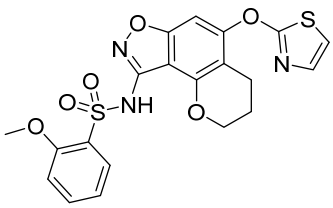
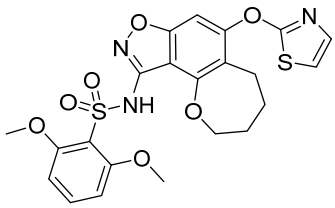
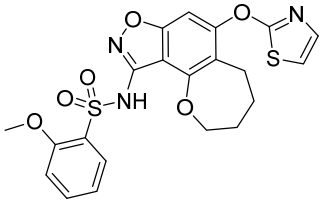
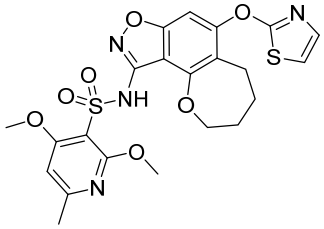
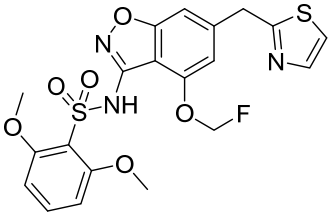
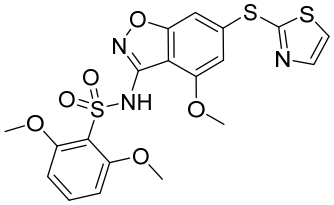
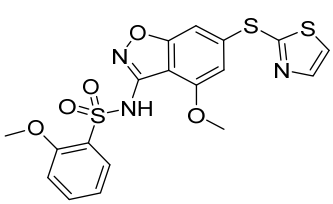
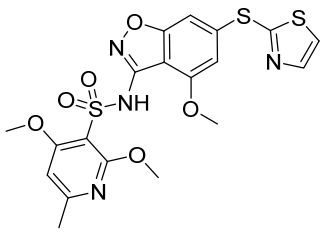
,

,

,

,

,

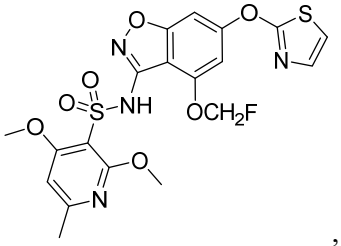
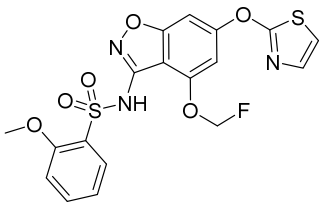
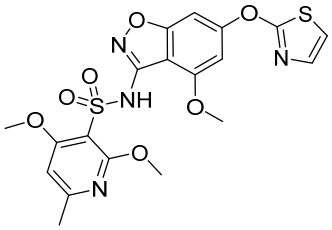
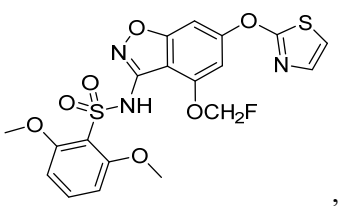
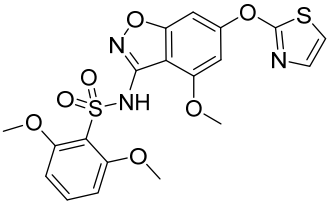
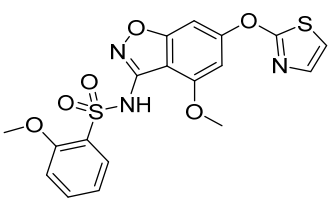
,

,

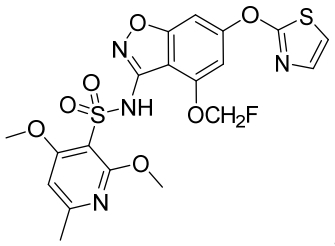
,


,

,

,

,

,

,

,

,

,

,

, and

,
or a pharmaceutically acceptable salt thereof.

18. The compound of claim 17, or a pharmaceutically acceptable salt thereof, which is a compound selected from the group consisting of:

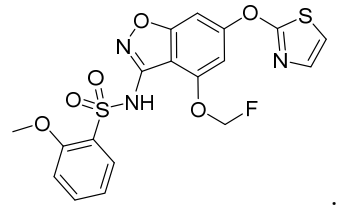

,

,

,

,

, and

.

19. The compound of claim 18, or a pharmaceutically acceptable salt thereof, wherein the compound is:



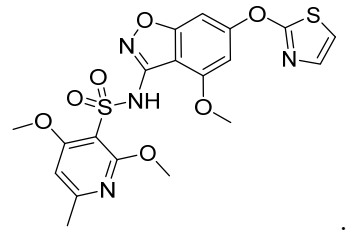
.

20. The compound of claim 18, or a pharmaceutically acceptable salt thereof, wherein the compound is:



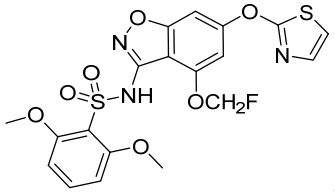
.

21. The compound of claim 18, or a pharmaceutically acceptable salt thereof, wherein the compound is:



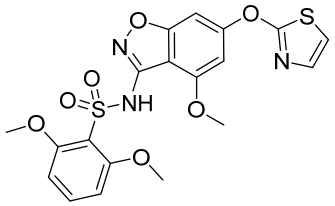
.

22. The compound of claim 18, or a pharmaceutically acceptable salt thereof, wherein the compound is:



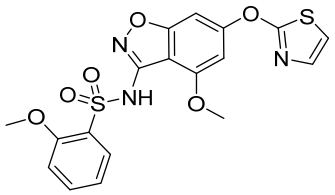
.

23. The compound of claim 18, or a pharmaceutically acceptable salt thereof, wherein the compound is:



.

24. The compound of claim 18, or a pharmaceutically acceptable salt thereof, wherein the compound is:



.

25. A pharmaceutical composition comprising a compound of any one of claims 1-24, or a pharmaceutically acceptable salt thereof, and at least one pharmaceutically acceptable excipient.

26. Use of a compound of any one of claims 1-24, or a pharmaceutically acceptable salt thereof, in the manufacture of a medicament for treating cancer.

27. A compound of any one of claims 1-24, or a pharmaceutically acceptable salt thereof, for use as a medicament.