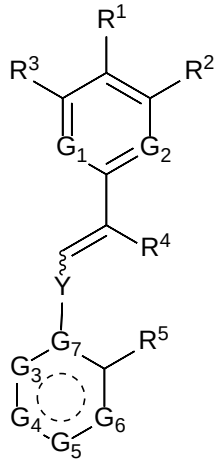
CLAIMS

1. A compound of Formula (A)

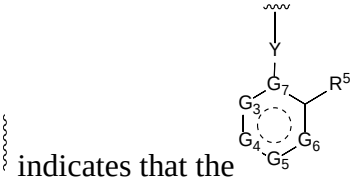


(A),

or a tautomer, or a pharmaceutically acceptable salt of any of the foregoing,

wherein

 indicates that the ring is saturated, partially unsaturated, or fully unsaturated;

 indicates that the is attached in either the E or Z configuration;

G_1 and G_2 are each independently CR^x, or N;

R^x is hydrogen or halogen;

one of R^1 and R^2 is –OH and the other is selected from the group consisting of $-C(O)R^a$, $-CH=NR^j$, $-S(O)R^b$, $-S(O)_2R^c$, $-NHC(O)R^d$, $-NHS(O)_2R^e$, $-C_1$-C_6alkyl-R^f, $-C_2$-C_6alkenyl-R^g, unsubstituted or substituted C_3-C_8 cycloalkyl, unsubstituted or substituted C_3-C_8 cycloalkenyl, and unsubstituted or substituted heterocycloalkyl;

R^a, R^b, R^c, and R^e are each independently H, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_1-C_6haloalkyl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted heteroaryl, benzoyl, or styryl;

R^d is H, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_1-C_6haloalkyl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted heteroaryl, or benzoyl;

R^f and R^g are each independently –OH, unsubstituted heteroaryl, $–NR^mR^n$, benzoyl, or styryl;

R^m and R^n are each independently H, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, or unsubstituted or substituted cycloalkyl;

R^j is unsubstituted or substituted heterocyclyl, unsubstituted or substituted aryl, -OR^k, -NHR^k, -$NHC(O)R^k$, -$NHS(O)_2R^k$, or -$NHC(NH)NH_2$;

R^k is C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_3-C_8 cycloalkyl, or aryl;

R^3 is H, C_1-C_6alkyl, C_1-C_6alkoxy, or halogen, wherein the C_1-C_6alkyl and C_1-C_6alkoxy of R^3 are each independently unsubstituted or substituted with one or more halogen;

wherein:

when R^1 or R^2 is -C_1-C_6alkyl-OH or –C_1-C_6alkyl-NR^mR^n, wherein R^m and R^n are each C_1-C_6alkyl, R^3 is selected from the group consisting of C_1-C_6alkyl, C_2-C_6alkoxy, and halogen;

when R^1 or R^2 is unsubstituted or substituted C_3-C_8 cycloalkyl, -$NHC(O)CH_3$, or –$S(O)_2$-R^c, wherein R^c is an unsubstituted or substituted heterocyclyl, R^3 is selected from the group consisting of C_1-C_6alkyl, C_1-C_6alkoxy, and halogen;

when R^1 or R^2 is –CHO, R^3 is selected from the group consisting of hydrogen, C_2-C_6alkoxy, and halogen;

when R^1 or R^2 is –$C(O)CH_3$, R^3 is selected from the group consisting of C_2-C_6alkoxy and halogen;

when R^1 or R^2 is –$C(O)CH(Br)CH_3$ or –$C(O)CH(Br)CH_2CH_3$, G_7 is C or CH;

when R^3 is hydrogen, no more than one of R^{6a}, R^{6b}, R^{6c}, and R^{6d} is –CF_3, no more than one of R^{6a}, R^{6b}, R^{6c}, and R^{6d} is –CH_3, and no more than one of R^{6a}, R^{6b}, R^{6c}, and R^{6d} is –OH,

Y is -C(O)- or absent and R^4 and R^5 are each H,

or

Y is absent and R^4 and R^5 come together to form –S-;

G_3 is CH(X_1-R^{6a}), C(X_1-R^{6a}), N, N(X_1-R^{6a}), S, or O;

G_4 is CH(X_2-R^{6b}), C(X_2-R^{6b}), N, N(X_2-R^{6b}), S, or O;

G_5 is CH(X_3-R^{6c}), C(X_3-R^{6c}), N, N(X_3-R^{6c}), S, or O;

G_6 is CH(X_4-R^{6d}), C(X_4-R^{6d}), N, N(X_4-R^{6d}), S, O, or absent;

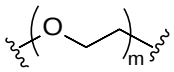
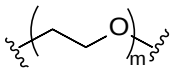
G_7 is N, C, or CH;

wherein when G_5 is N, either at least one of (*i*), (*ii*), and (*iii*) applies:

(*i*) at least one of G_3, G_4, and G_6 is not CH;

(*ii*) R^4 and R^5 come together to form –S-; and

(*iii*) R^3 is–OCH_3 or halo;

X_1, X_2, X_3, and X_4 are each independently absent, , or ;

m is 1-6;

R^{6a}, R^{6b}, R^{6c}, and R^{6d} are each independently hydrogen, C_1-C_6alkyl, C_1-C_6alkoxy, halo, -OH, $-NR^pR^q$, aryl, heterocyclyl, heteroaryl, -C_1-C_6alkyl-heterocyclyl, -OC(O)-heterocyclyl, $-C(O)R^h$, $-S(O)_2NR^{w1}R^{w2}$, $-S(O)_2R^y$, or $-NR^{z1}S(O)_2R^{z2}$, wherein the C_1-C_6alkyl and C_1-C_6alkoxy of R^{6a}, R^{6b}, R^{6c}, and R^{6d} are each independently unsubstituted or substituted with one or more groups selected from the group consisting of cycloalkyl and halogen; the aryl and heteroaryl of R^{6a}, R^{6b}, R^{6c}, and R^{6d} are each independently unsubstituted or substituted with one or more groups selected from the group consisting of C_1-C_6alkyl, C_1-C_6alkoxy, -OH, and C_1-C_6alkyl-OH; and the heterocyclyl, -C_1-C_6alkyl-heterocyclyl, and -OC(O)-heterocyclyl of R^{6a}, R^{6b}, R^{6c}, and R^{6d} are each independently unsubstituted or substituted with one or more groups selected from the group consisting of C_1-C_6alkyl, C_1-C_6alkoxy, -OH, C_1-C_6alkyl-OH, =O, and =S;

R^h is selected from the group consisting of H, C_1-C_6alkyl, C_1-C_6alkoxy, and C_3-C_8cycloalkyl, and $-NR^rR^s$;

R^p is H or C_1-C_6alkyl;

R^q is C_2-C_3alkyl, $-C(O)R^t$, $-C(O)OR^u$, $-C(O)NR^v$;

R^r, R^s, R^{w1}, and R^{z1} each independently selected from H and C_1-C_6alkyl; and

R^t, R^u, R^v, R^{w2}, R^y, and R^{z2} are each independently selected from H, C_1-C_6alkyl, unsubstituted or substituted C_3-C_8cycloalkyl, and unsubstituted or substituted heterocyclyl;

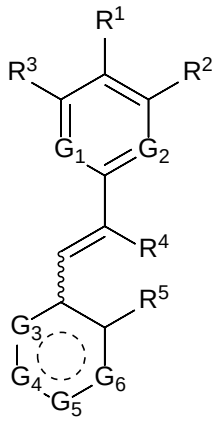
or

G_5 is $CH(X_3\text{-}R^{6c})$ or $C(X_3\text{-}R^{6c})$, G_6 is $CH(X_4\text{-}R^{6d})$ or $C(X_4\text{-}R^{6d})$, and R^{6c} and R^{6d} are taken together with the carbons to which they are attached to form a 6-membered aryl, a 6-membered heterocyclyl, or a 6-membered heteroaryl ring; wherein the 6-membered aryl, 6-membered heterocyclyl, and 6-membered heteroaryl rings are each independently unsubstituted or substituted;

wherein no more than one of R^{6a}, R^{6b}, R^{6c}, and R^{6d} is C_1-C_6alkoxy or –OH; and

wherein the compound is not a compound of Table 1X.

2. A compound of Formula (I):

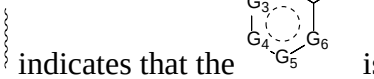


(I),

or a tautomer, or a pharmaceutically acceptable salt of any of the foregoing,

wherein

 indicates that the ring is saturated, partially unsaturated, or fully unsaturated;

 indicates that the is attached in either the E or Z configuration;

G_1 and G_2 are each independently CH or N;

one of R^1 and R^2 is –OH and the other is selected from the group consisting of -C(O)R^a, -S(O)R^b, -$S(O)_2R^c$, -NHC(O)R^d, -$NHS(O)_2R^e$, -C_1-C_6alkyl-R^f, -C_2-C_6alkenyl-R^g, unsubstituted or substituted cycloalkyl, unsubstituted or substituted cycloalkenyl, and unsubstituted or substituted heterocycloalkyl;

R^a, R^b, R^c, and R^e are each independently H, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_1-C_6haloalkyl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted heteroaryl, benzoyl, or styryl;

R^d is H, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_1-C_6haloalkyl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted heteroaryl, or benzoyl;

R^f and R^g are each independently unsubstituted heteroaryl, benzoyl, or styryl;

R^3 is H, C_1-C_6alkyl, C_1-C_6alkoxy, or halogen; and

R^4 and R^5 are each H,

or

R^4 and R^5 come together to form –S-;

G_3 is CH(X_1-R^{6a}), C(X_1-R^{6a}), N, N(X_1-R^{6a}), S, or O;

G_4 is CH(X_2-R^{6b}), C(X_2-R^{6b}), N, N(X_2-R^{6b}), S, or O;

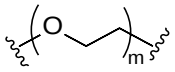
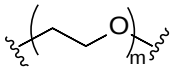
G_5 is CH(X_3-R^{6c}), C(X_3-R^{6c}), N, N(X_3-R^{6c}), S, or O;

G_6 is CH(X_4-R^{6d}), C(X_4-R^{6d}), N, N(X_4-R^{6d}), S, O, or absent;

wherein when G_5 is N, either

(*i*) at least one of G_3, G_4, and G_6 is not CH; or

(*ii*) R^4 and R^5 come together to form –S-;

X_1, X_2, X_3, and X_4 are each independently absent, , or ;

m is 1-6;

R^{6a}, R^{6b}, R^{6c}, and R^{6d} are each independently hydrogen, C_1-C_6alkyl, C_1-C_6alkoxy, halo, or -C(O)R^h, wherein the C_1-C_6alkyl of R^{6a}, R^{6b}, R^{6c}, and R^{6d} is independently unsubstituted or substituted with cycloalkyl or halogen;

R^h is selected from the group consisting of H, C_1-C_6alkyl, C_1-C_6alkoxy, and C_3-C_8cycloalkyl;

wherein the compound is not a compound of Table 1X.

3. The compound of claim 1, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein Y is -C(O)-.

4. The compound of claim 1, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein Y is absent.

5. The compound of any one of claims 1-4, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein G_1 and G_2 are each CR^x.

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

7. The compound of any one of claims 1-5, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein G_2 is CF, CCl, or CBr.

8. The compound of any one of claims 1-5, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein G_1 and G_2 are each CH.

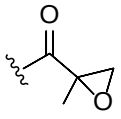
9. The compound of any one of claims 1-4, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein G_1 is CH and G_2 is N.

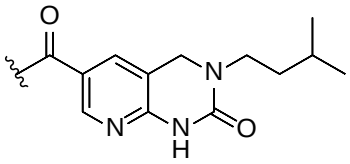
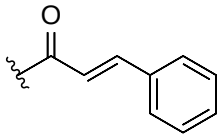
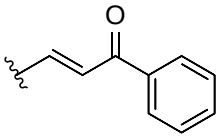
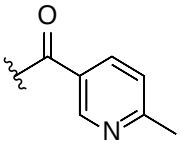
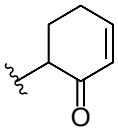
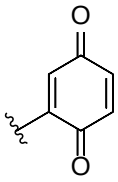
10. The compound of any one of claims 1-4, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein G_1 is N and G_2 is CH.

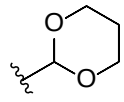
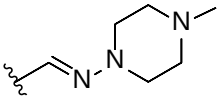
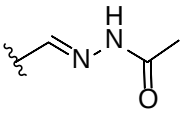
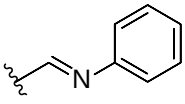
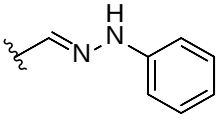
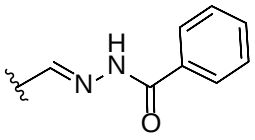
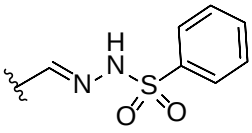
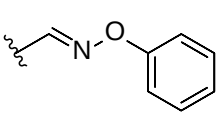
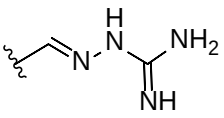
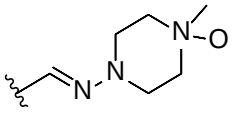
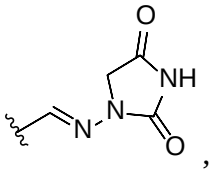
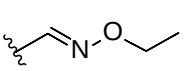
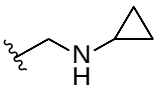
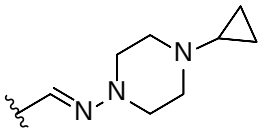
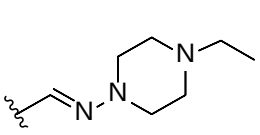
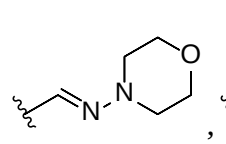
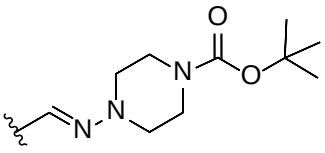
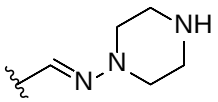
11. The compound of any one of claims 1-10, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^1 is –OH and R^2 is selected from the group consisting of -C(O)R^a, -S(O)R^b, -S(O)$_2R^c$, -NHC(O)R^d, -NHS(O)$_2R^e$, -C_1-C_6alkyl-R^f, -C_2-C_6alkenyl-R^g, unsubstituted or substituted cycloalkyl, unsubstituted or substituted cycloalkenyl, and unsubstituted or substituted heterocycloalkyl.

12. The compound of any one of claims 1-10, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^1 is –OH and R^2 is selected from the group consisting of -C(O)R^a, -S(O)$_2R^c$, -NHC(O)R^d, -NHS(O)$_2R^e$, -C_2-C_6alkenyl-R^g, and unsubstituted or substituted cycloalkenyl.

13. The compound of any one of claims 1-10, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^1 is –OH and R^2 is –CH=NR^j, wherein R^j is unsubstituted or substituted heterocyclyl, unsubstituted or substituted aryl, -OR^k, -NHR^k, -NHC(O)R^k, -NHS(O)$_2R^k$, or -NHC(NH)NH_2.

14. The compound of any one of claims 1-10, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^1 is –OH and R^2 is selected from the group consisting of –CHO, -C(O)CH_3, -C(O)CH_2F, -C(O)CH=CH_2, -S(O)$_2$CH=CH_2, -C(O)C≡CH, -C(O)C≡CCH_3, -NHS(O)$_2$CH=CH_2, -NHC(O)CH=CH_2, -C(O)C(=CH_2)CH_3, ,

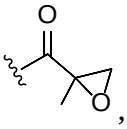
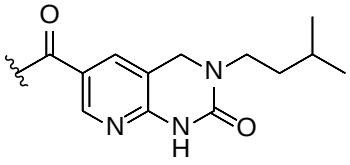
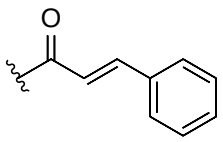
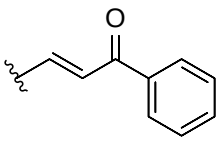
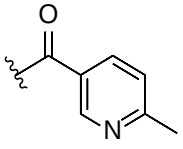
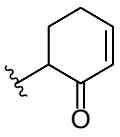
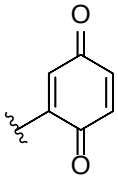





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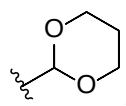
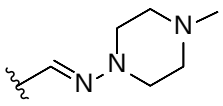
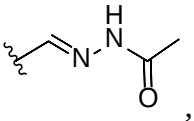
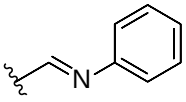
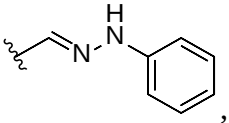
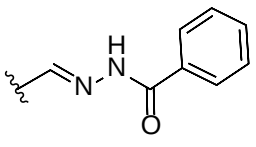
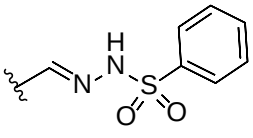
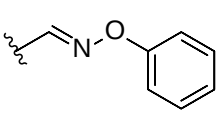
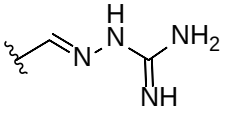
15. The compound of any one of claims 1-10, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^1 is –OH and R^2 is selected from the group consisting of












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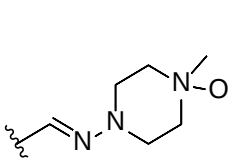
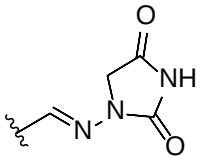
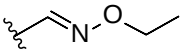
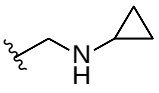
16. The compound of any one of claims 1-10, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^2 is –OH and R^1 is selected from the group consisting of -C(O)R^a, -S(O)R^b, -$S(O)_2R^c$, -NHC(O)R^d, -$NHS(O)_2R^e$, -C_1-C_6alkyl-R^f, -C_2-C_6alkenyl-R^g, unsubstituted or substituted cycloalkyl, unsubstituted or substituted cycloalkenyl, and unsubstituted or substituted heterocycloalkyl.

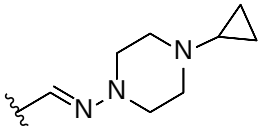
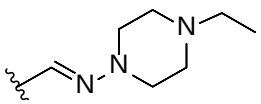
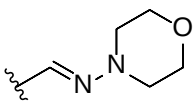
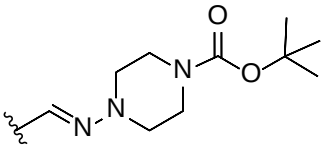
17. The compound of any one of claims 1-10, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^2 is –OH and R^1 is selected from the group consisting of -C(O)R^a, -S(O)$_2R^c$, -NHC(O)R^d, -NHS(O)$_2R^e$, -C_2-C_6alkenyl-R^g, and unsubstituted or substituted cycloalkenyl.

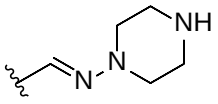
18. The compound of any one of claims 1-10, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^2 is –OH and R^1 is –CH=NR^j, wherein R^j is unsubstituted or substituted heterocyclyl, unsubstituted or substituted aryl, -OR^k, -NHR^k, -NHC(O)R^k, -NHS(O)$_2R^k$, or -NHC(NH)NH_2.

19. The compound of any one of claims 1-10, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^2 is –OH and R^1 is selected from the group consisting of –CHO, -C(O)CH_3, -C(O)CH_2F, -C(O)CH=CH_2, -S(O)$_2$CH=CH_2, -C(O)C≡CH, -C(O)C≡CCH_3, -NHS(O)$_2$CH=CH_2, -NHC(O)CH=CH_2, -C(O)C(=CH_2)CH_3, , , , , , , and .

20. The compound of any one of claims 1-10, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^2 is –OH and R^1 is selected from the group consisting of , , , , , , , , .


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21. The compound of any one of claims 1-20, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^3 is selected from the group consisting of C_1-C_6alkyl, C_1-C_6alkoxy, and halogen.

22. The compound of any one of claims 1-21, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^3 is selected from the group consisting of –OCH_3 or F.

23. The compound of any one of claims 1-20, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^3 is H.

24. The compound of any one of claims 1-23, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^4 and R^5 are each H.

25. The compound of any one of claims 1-23, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^4 and R^5 come together to form –S-.

26. The compound of claim 1, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein G_5 is CH(X_3-R^{6c}) or C(X_3-R^{6c}), G_6 is CH(X_4-R^{6d}) or C(X_4-R^{6d}), and R^{6c} and R^{6d} come together with the carbons to which they are attached to form a 6-membered aryl, a 6-membered heterocyclyl, or a 6-membered heteroaryl ring; wherein the 6-membered aryl, 6-membered heterocyclyl, and 6-membered heteroaryl rings are each independently unsubstituted or substituted.

27. The compound of claim 1, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein G_7 is N.

28. The compound of claim 1, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein G_7 is C or CH.

29. The compound of any one of claims 1-28, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein G_3 is $CH(X_1\text{-}R^{6a})$ or $C(X_1\text{-}R^{6a})$; X_1 is absent; m is 1-6; R^{6a} is hydrogen, C_1-C_6alkyl, C_1-C_6alkoxy, halo, or $-C(O)R^h$, wherein C_1-C_6alkyl is unsubstituted or substituted with cycloalkyl or halogen; and R^h is selected from the group consisting of H, C_1-C_6alkyl, C_1-C_6alkoxy, or C_3-C_8cycloalkyl.

30. The compound of any one of claims 1-28, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein G_3 is N or $N(X_1\text{-}R^{6a})$; X_1 is absent; m is 1-6; R^{6a} is hydrogen, C_1-C_6alkyl, C_1-C_6alkoxy, halo, or $-C(O)R^h$, wherein C_1-C_6alkyl is unsubstituted or substituted with cycloalkyl or halogen; and R^h is selected from the group consisting of H, C_1-C_6alkyl, C_1-C_6alkoxy, or C_3-C_8cycloalkyl.

31. The compound of any one of claims 1-30, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein G_4 is $CH(X_2\text{-}R^{6b})$ or $C(X_2\text{-}R^{6b})$; X_2 is absent; m is 1-6; R^{6b} is hydrogen, C_1-C_6alkyl, C_1-C_6alkoxy, halo, or $-C(O)R^h$, wherein C_1-C_6alkyl is unsubstituted or substituted with cycloalkyl or halogen; and R^h is selected from the group consisting of H, C_1-C_6alkyl, C_1-C_6alkoxy, or C_3-C_8cycloalkyl.

32. The compound of any one of claims 1-30, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein G_4 is N or $N(X_2\text{-}R^{6b})$; X_2 is absent; m is 1-6; R^{6b} is hydrogen, C_1-C_6alkyl, C_1-C_6alkoxy, halo, or $-C(O)R^h$, wherein C_1-C_6alkyl is unsubstituted or substituted with cycloalkyl or halogen; and R^h is selected from the group consisting of H, C_1-C_6alkyl, C_1-C_6alkoxy, or C_3-C_8cycloalkyl.

33. The compound of any one of claims 1-32, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein G_5 is $CH(X_3\text{-}R^{6c})$ or $C(X_3\text{-}R^{6c})$; X_3 is absent; m

is 1-6; R^{6c} is hydrogen, C_1-C_6alkyl, C_1-C_6alkoxy, halo, or -C(O)R^h, wherein C_1-C_6alkyl is unsubstituted or substituted with cycloalkyl or halogen; and R^h is selected from the group consisting of H, C_1-C_6alkyl, C_1-C_6alkoxy, or C_3-C_8cycloalkyl.

34. The compound of any one of claims 1-32, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein G_5 is N or N(X_3-R^{6c}); X_3 is absent; m is 1-6; R^{6c} is hydrogen, C_1-C_6alkyl, C_1-C_6alkoxy, halo, or -C(O)R^h, wherein C_1-C_6alkyl is unsubstituted or substituted with cycloalkyl or halogen; and R^h is selected from the group consisting of H, C_1-C_6alkyl, C_1-C_6alkoxy, or C_3-C_8cycloalkyl.

35. The compound of any one of claims 1-34, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein one of G_3, G_4, and G_5 is S or O.

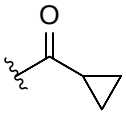
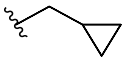
36. The compound of any one of claims 1-35, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein G_6 is absent.

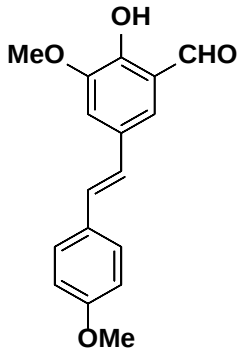
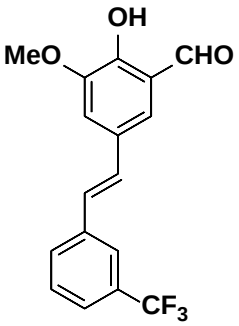
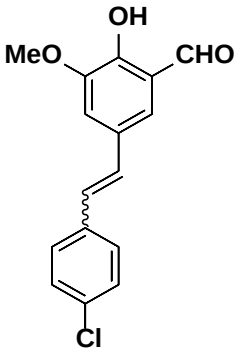
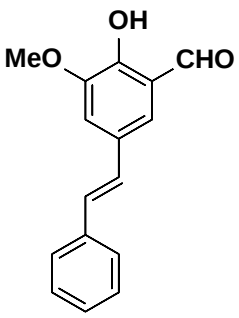
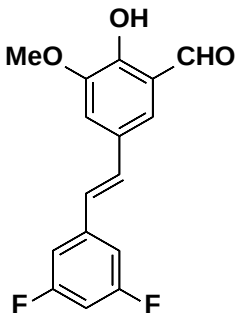
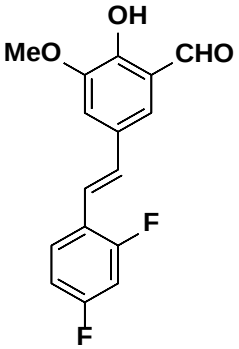
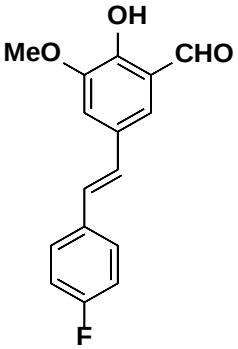
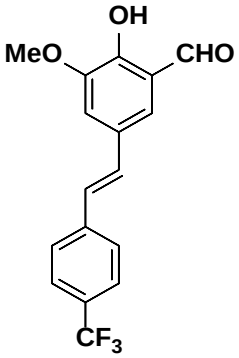
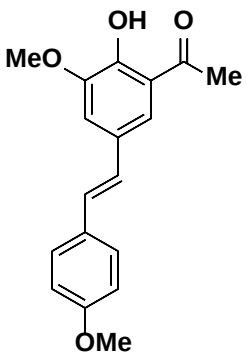
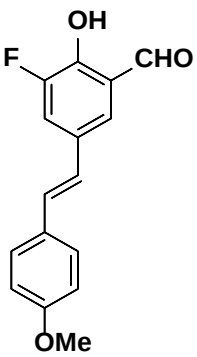
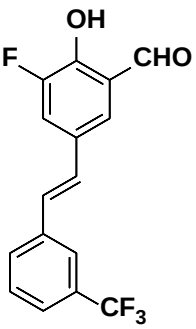
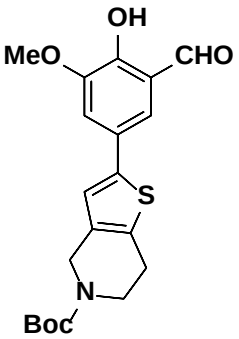
37. The compound of any one of claims 1-35, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein G_6 is CH(X_4-R^{6d}) or C(X_4-R^{6d}); X_4 is absent; m is 1-6; R^{6d} is hydrogen, C_1-C_6alkyl, C_1-C_6alkoxy, halo, or -C(O)R^h, wherein C_1-C_6alkyl is unsubstituted or substituted with cycloalkyl or halogen; and R^h is selected from the group consisting of H, C_1-C_6alkyl, C_1-C_6alkoxy, or C_3-C_8cycloalkyl.

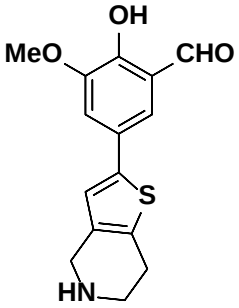
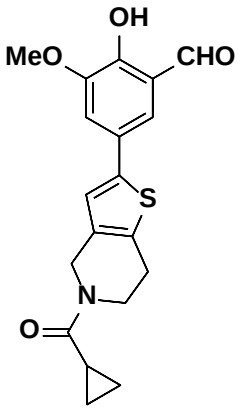
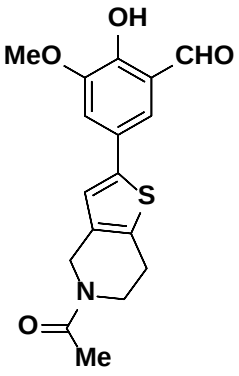
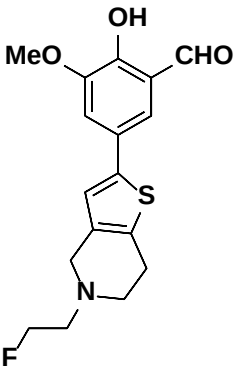
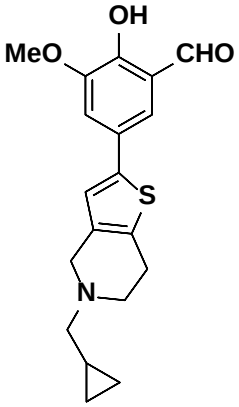
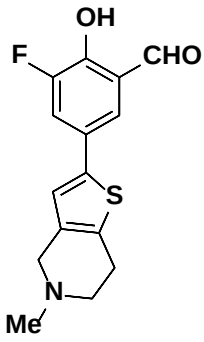
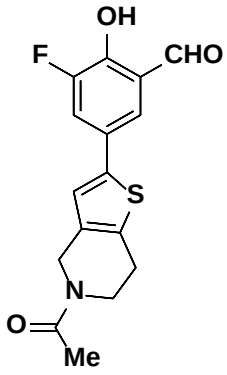
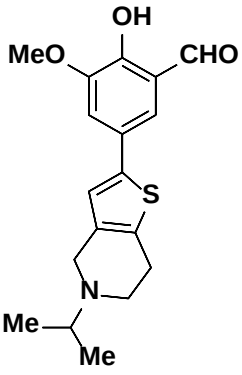
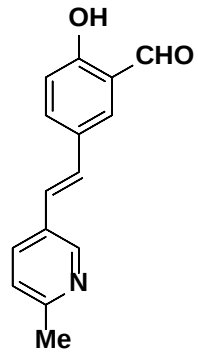
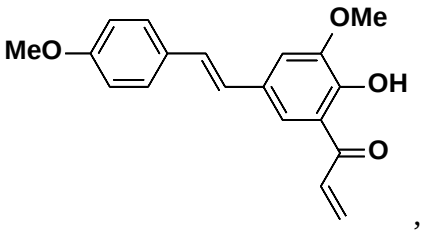
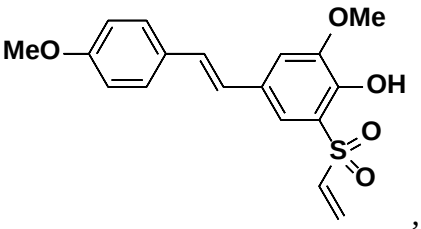
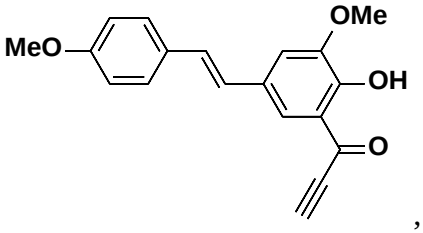
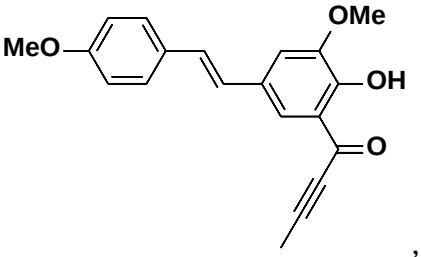
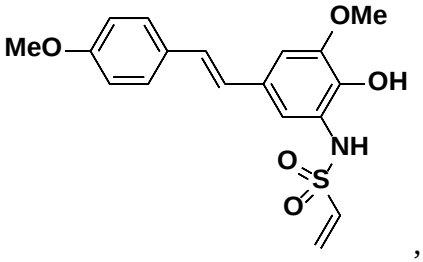
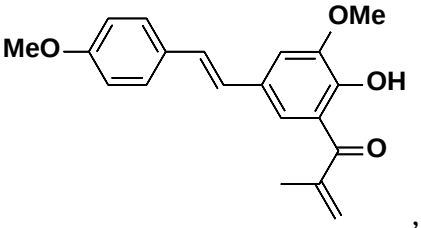
38. The compound of any one of claims 1-35, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein G_6 is N or N(X_4-R^{6d}); X_4 is absent; m is 1-6; R^{6d} is hydrogen, C_1-C_6alkyl, C_1-C_6alkoxy, halo, or -C(O)R^h, wherein C_1-C_6alkyl is unsubstituted or substituted with cycloalkyl or halogen; and R^h is selected from the group consisting of H, C_1-C_6alkyl, C_1-C_6alkoxy, or C_3-C_8cycloalkyl.

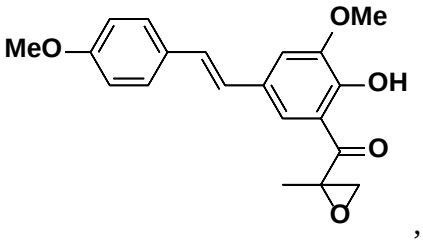
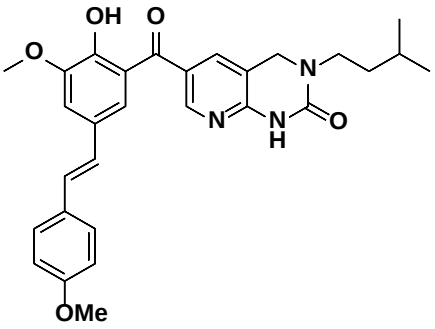
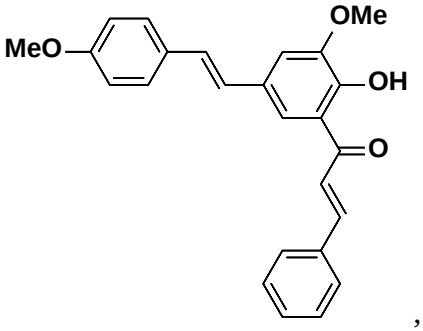
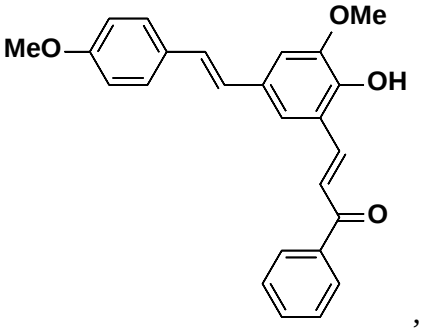
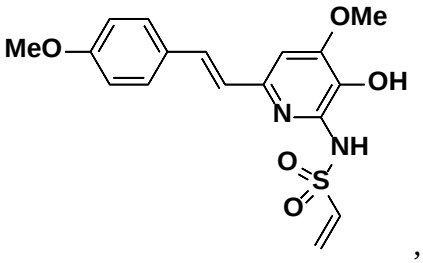
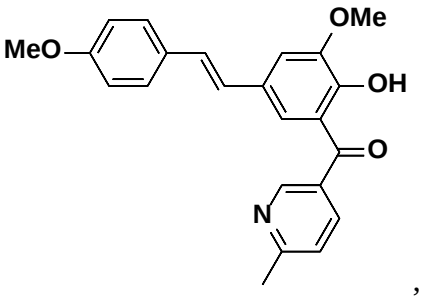
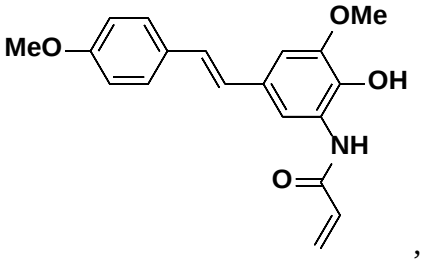
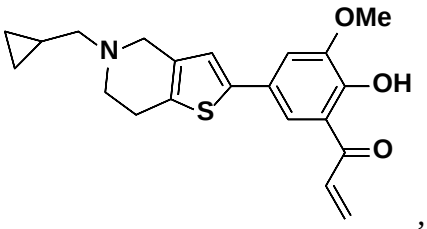
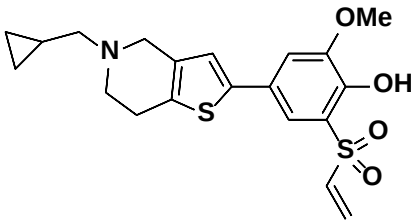
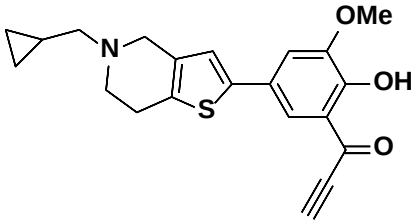
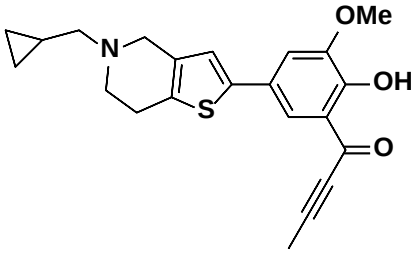
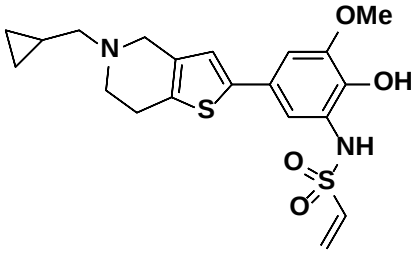
39. The compound of any one of claims 1-38, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^{6a}, R^{6b}, R^{6c}, and R^{6d} are each independently hydrogen, C_1-C_6alkyl, C_1-C_6alkoxy, halo, or -C(O)R^h, wherein C_1-C_6alkyl is unsubstituted or substituted with cycloalkyl or halogen; and R^h is selected from the group consisting of H, C_1-C_6alkyl, C_1-C_6alkoxy, or C_3-C_8cycloalkyl.

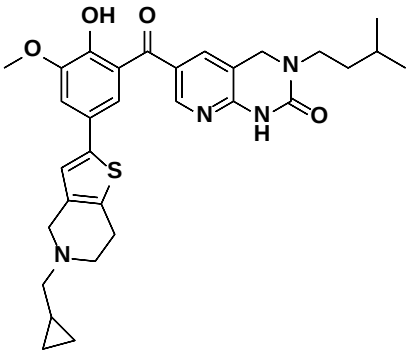
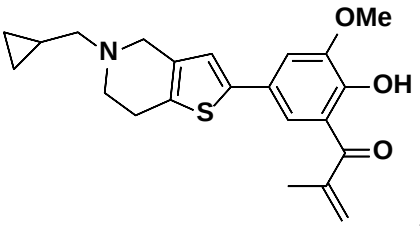
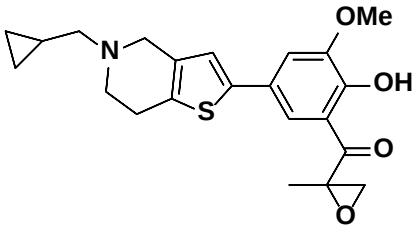
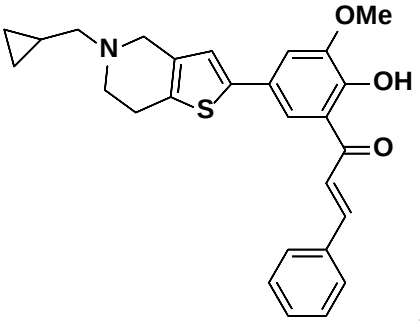
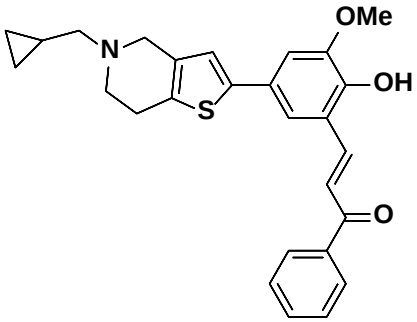
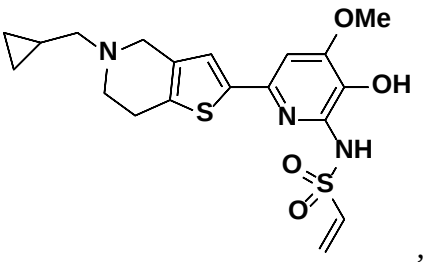
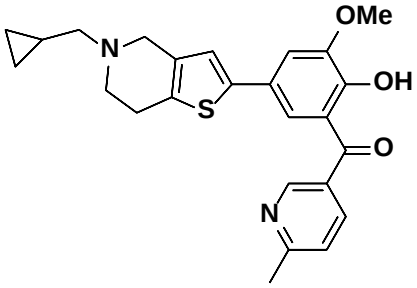
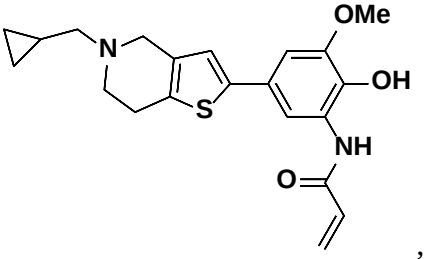
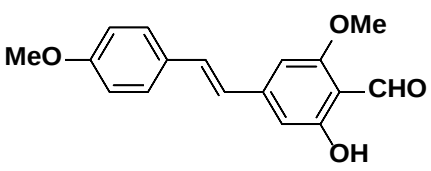
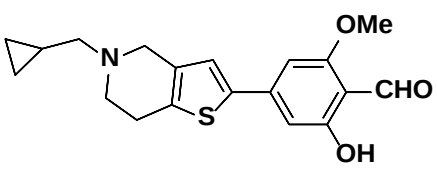
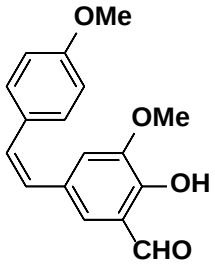
40. The compound of any one of claims 1-38, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^{6a}, R^{6b}, R^{6c}, and R^{6d} are each independently hydrogen, C_1-C_6alkyl, C_1-C_6alkoxy, or halo.

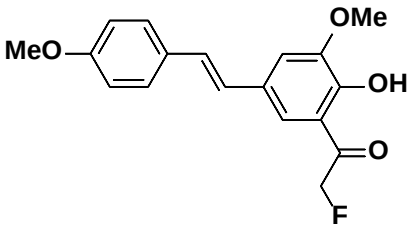
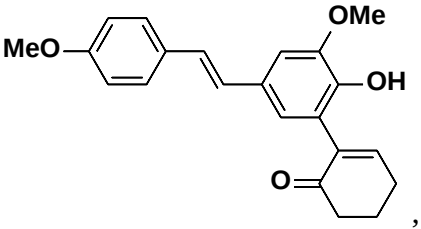
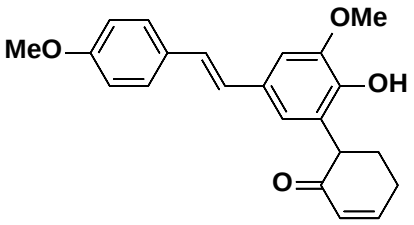
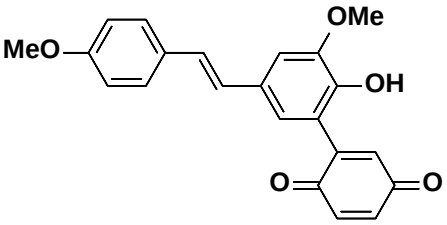
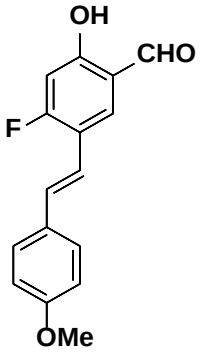
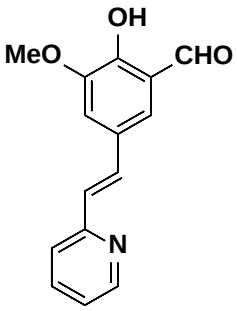
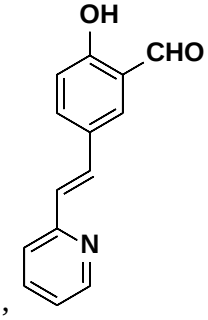
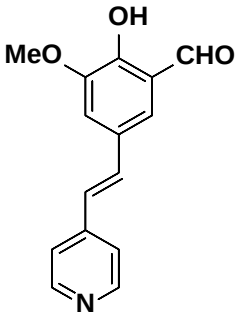
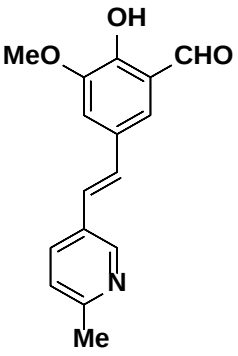
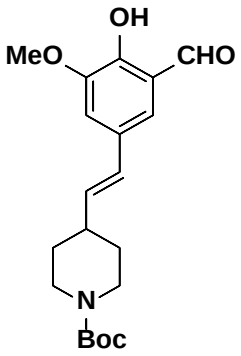
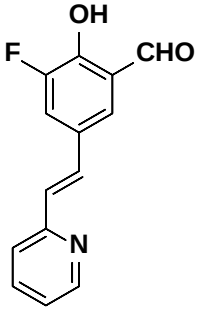
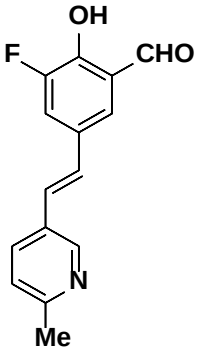
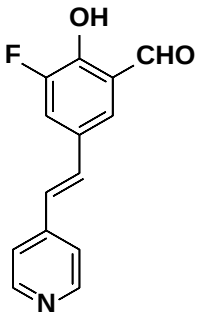
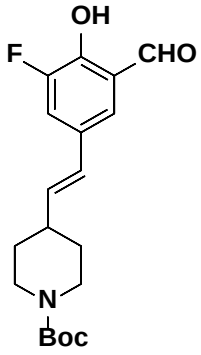
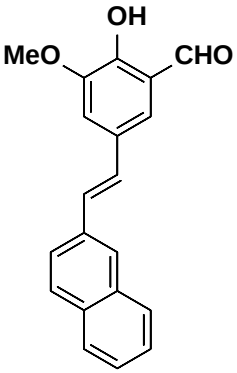
41. The compound of any one of claims 1-38, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, wherein R^{6a}, R^{6b}, R^{6c}, and R^{6d} are each independently selected from the group consisting of Cl, F, $–CH_3$, $–OCH_3$, $–CF_3$, $–CH_2CH_2F$, $–CH(CH_3)_2$, $–C(O)OC(CH_3)_3$, $–C(O)CH_3$, , and .

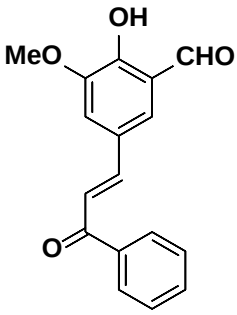
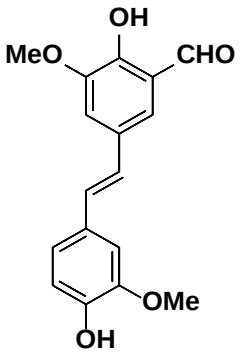
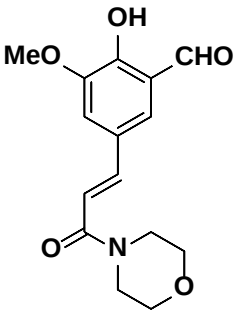
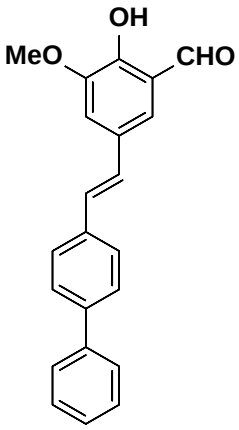
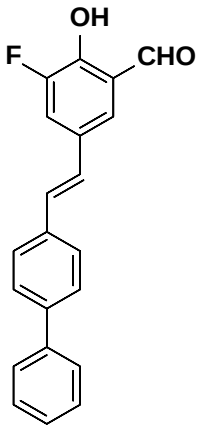
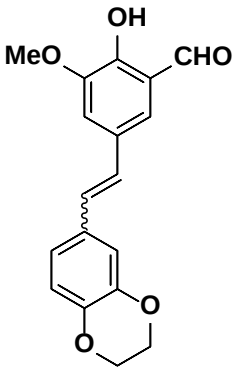
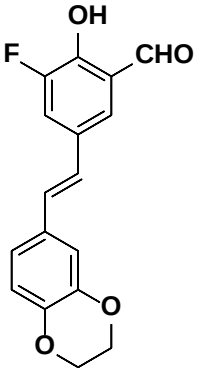
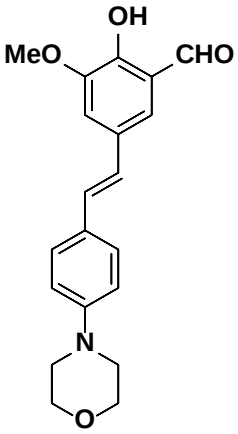
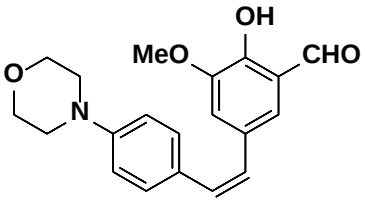
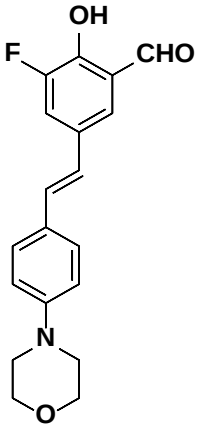
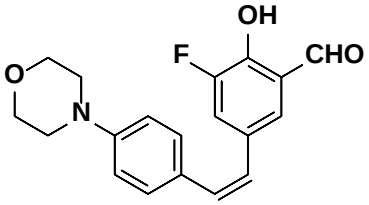
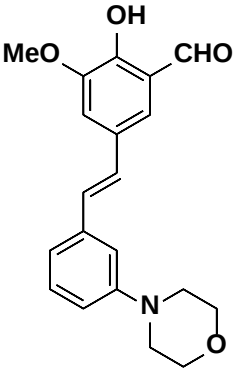
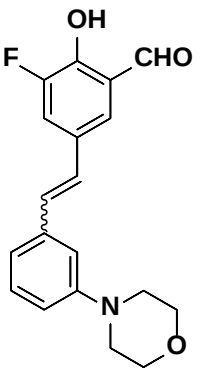
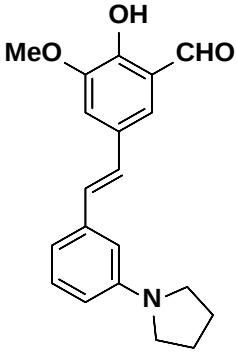
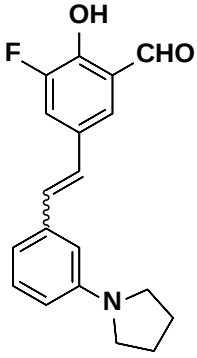
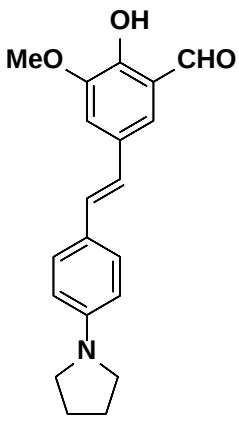
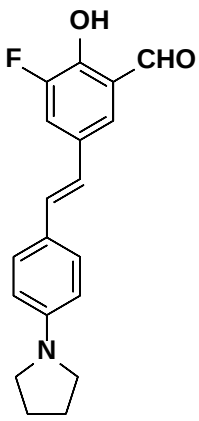
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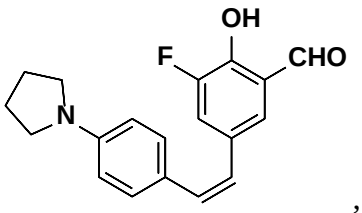
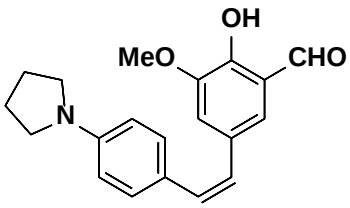
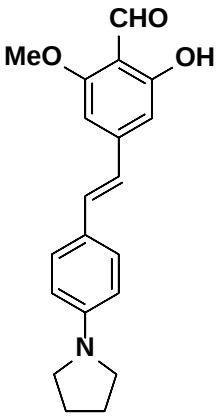
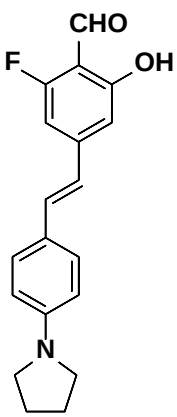
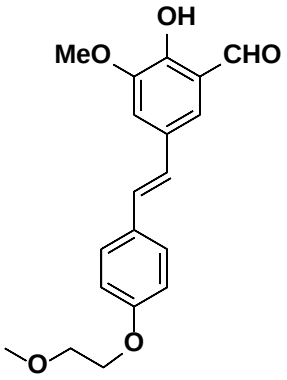
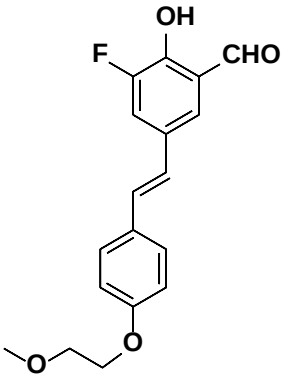
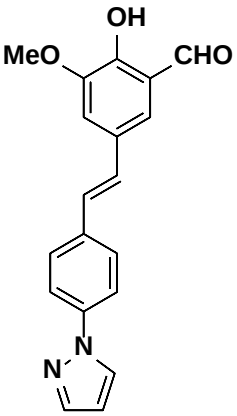
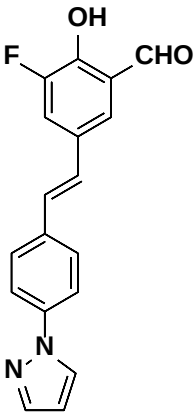
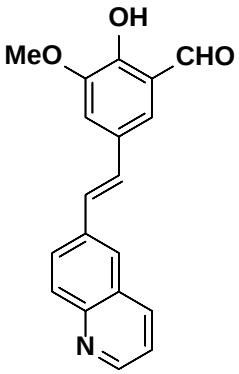
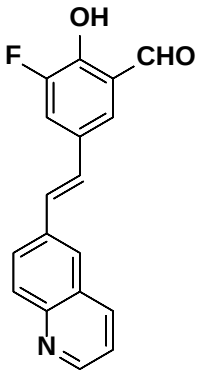
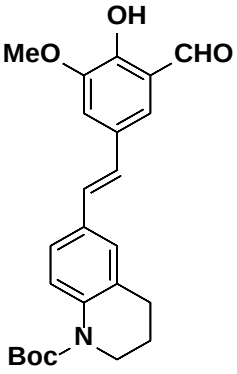
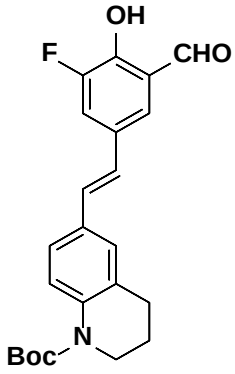
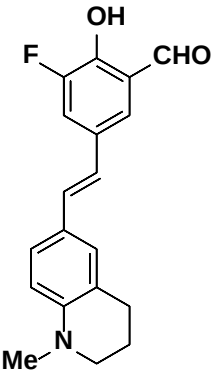
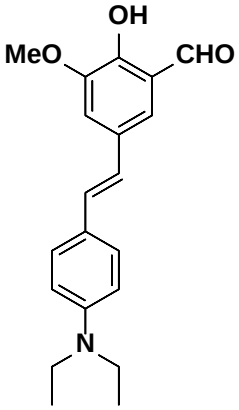
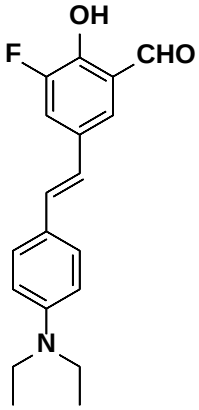
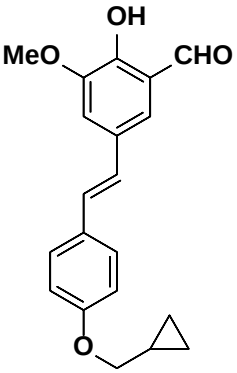
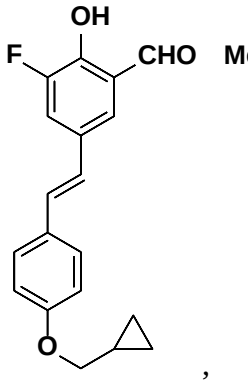
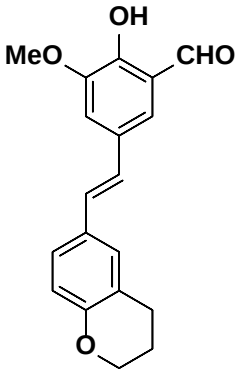

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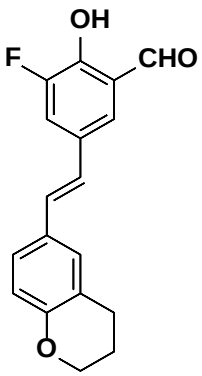
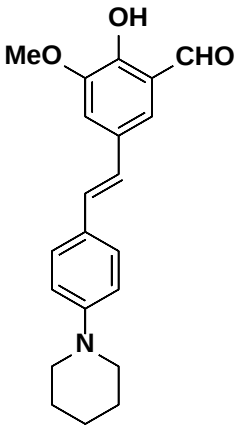
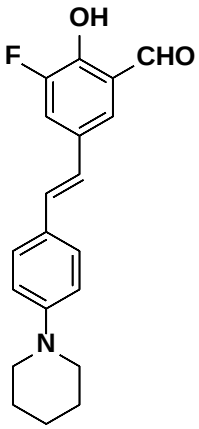
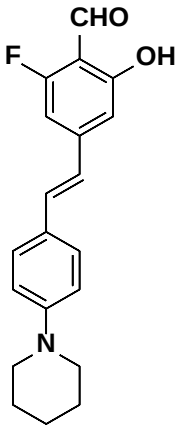
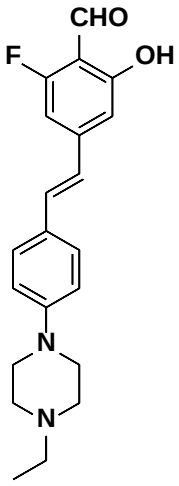
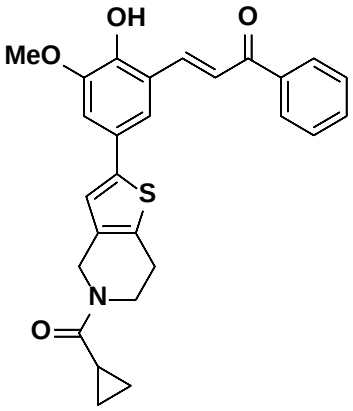
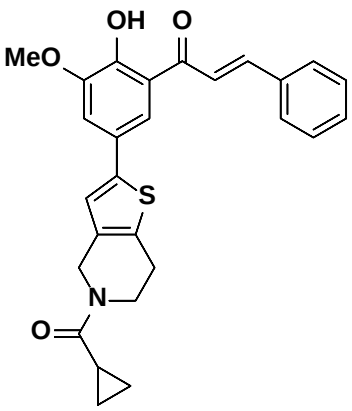
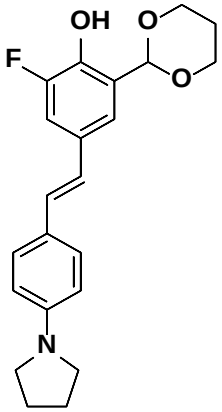
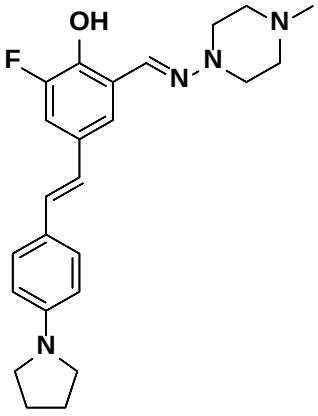
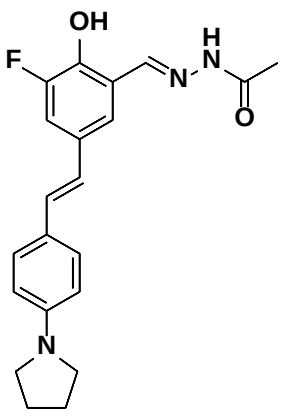
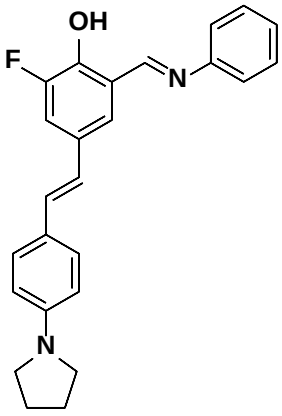
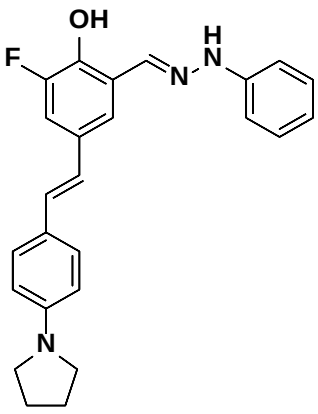
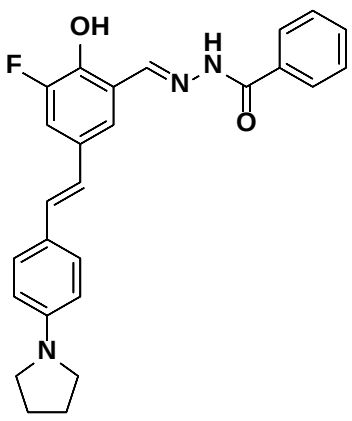
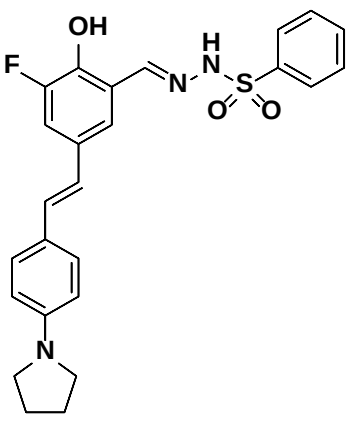

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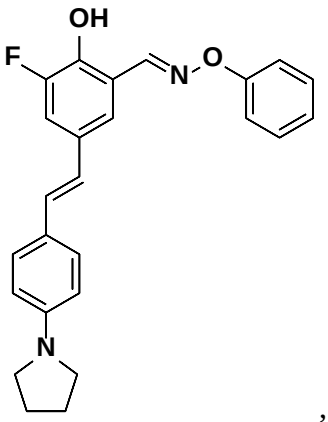
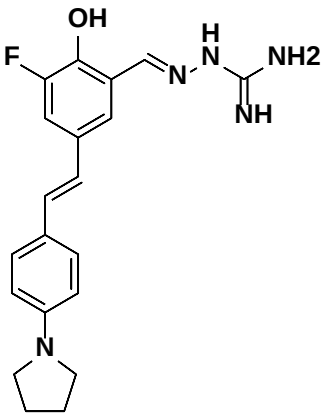
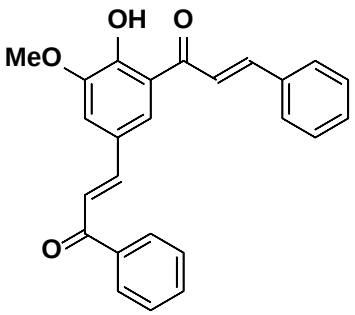
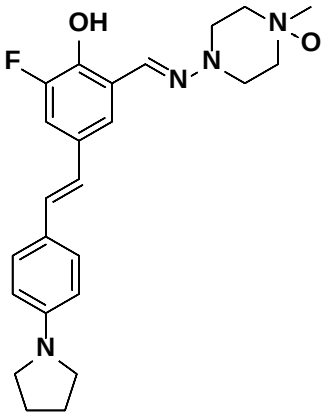
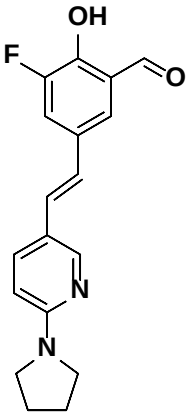
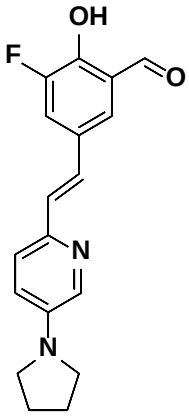
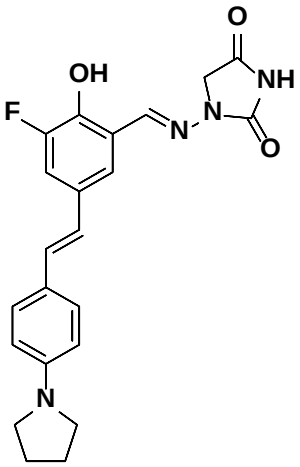
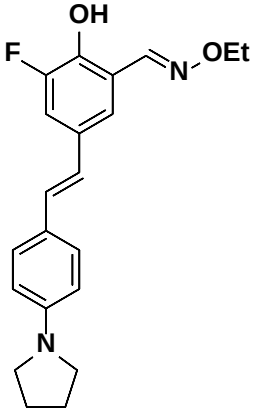
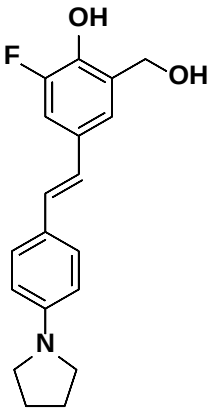
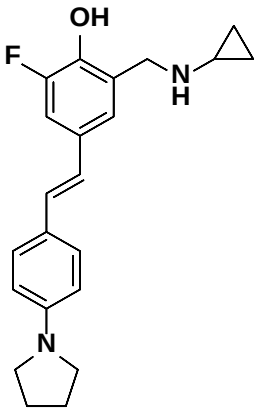
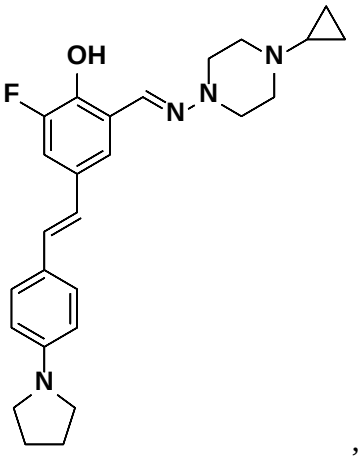

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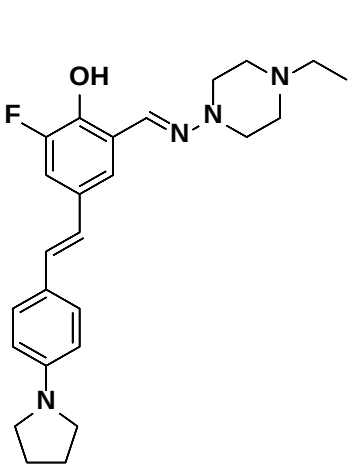
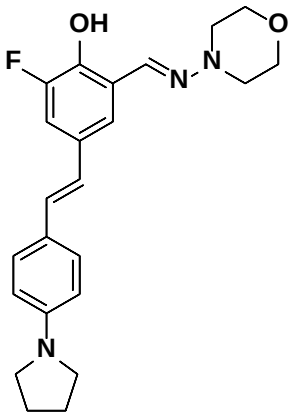
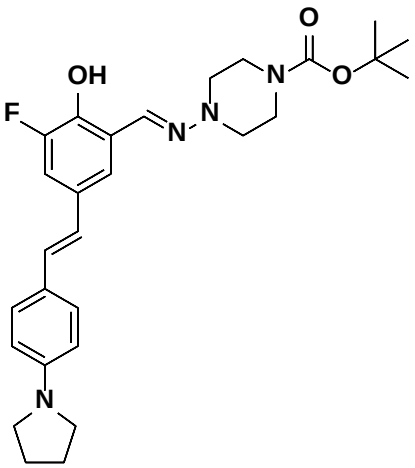
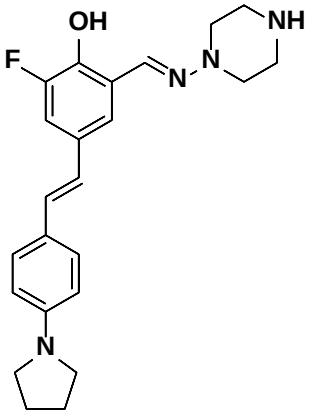
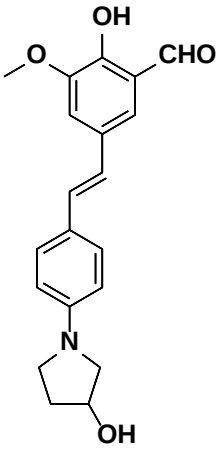
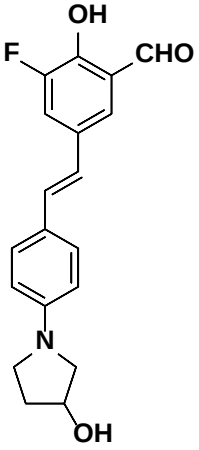
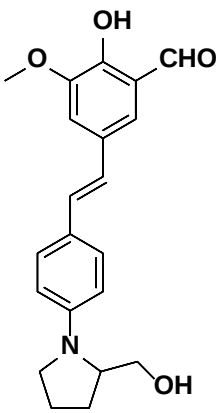
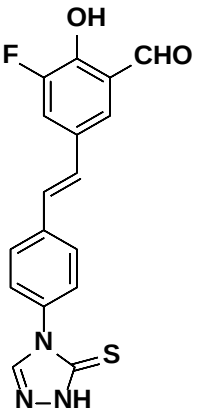
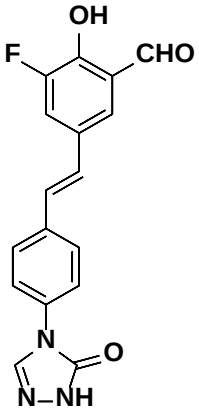
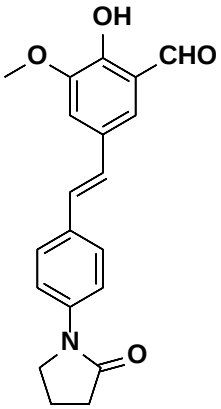
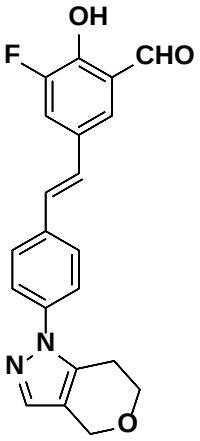
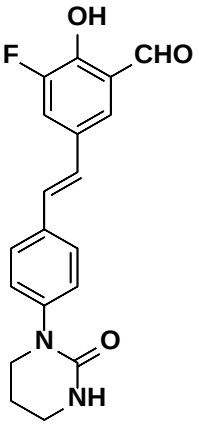
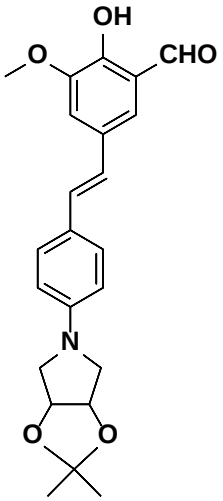

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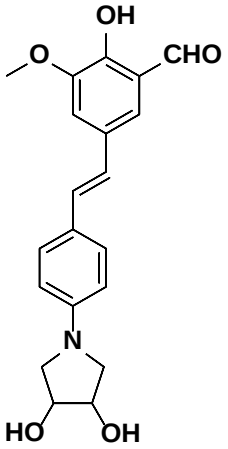
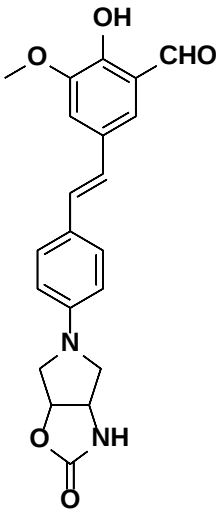
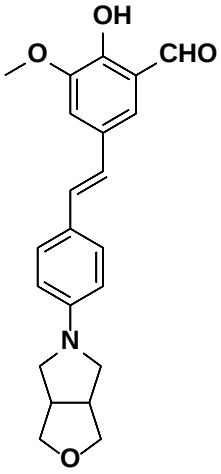
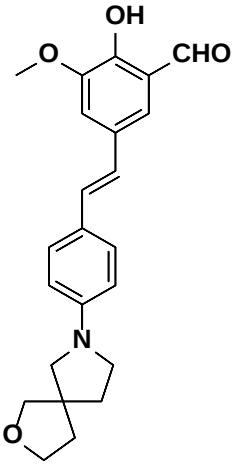
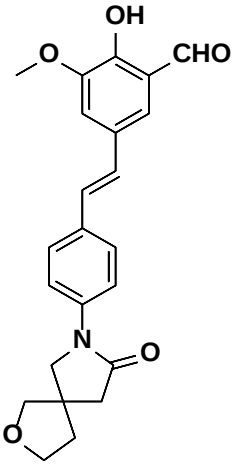
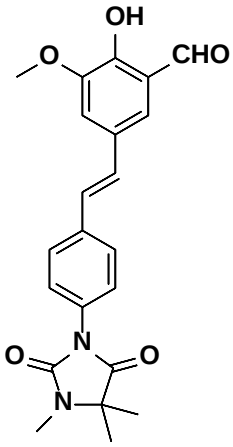
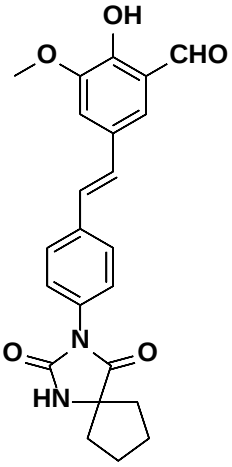
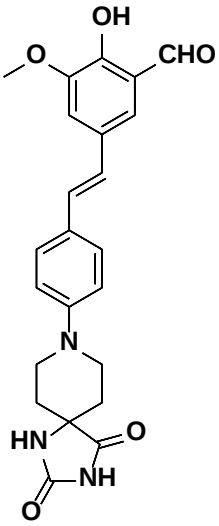
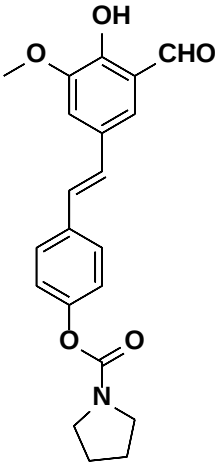
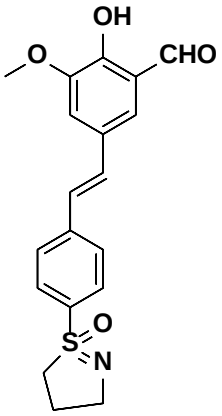
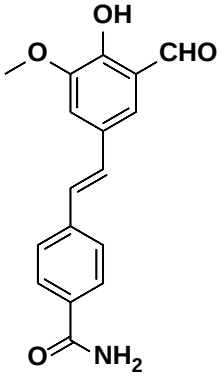
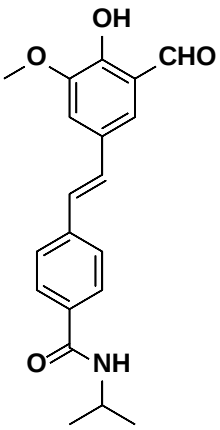
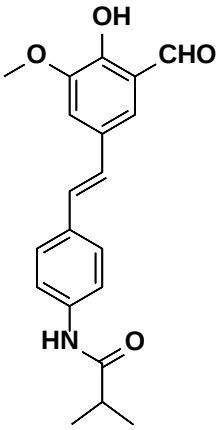
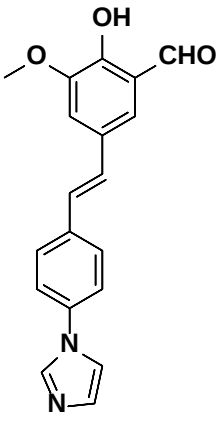
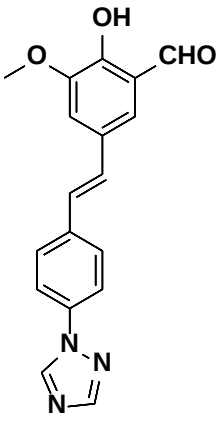

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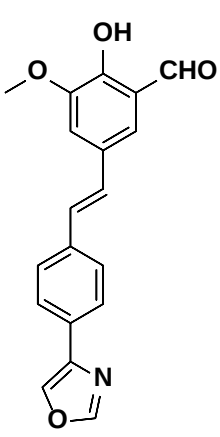
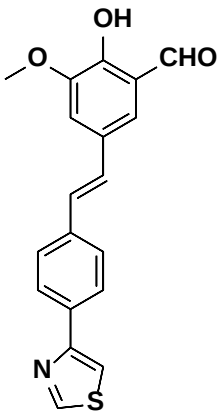
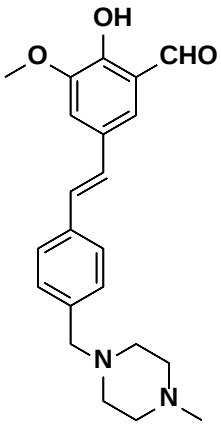
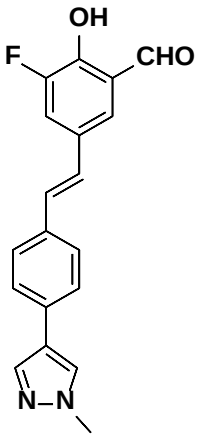
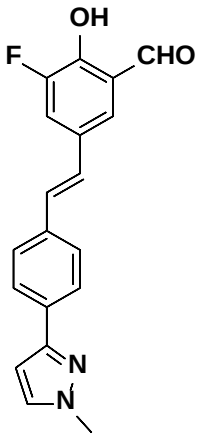
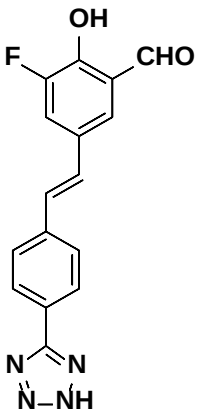
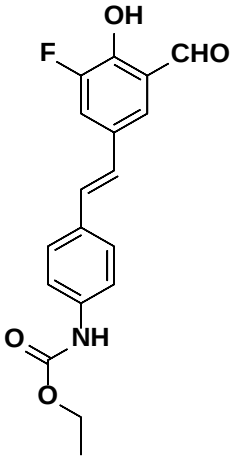
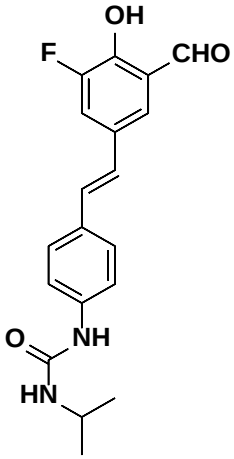
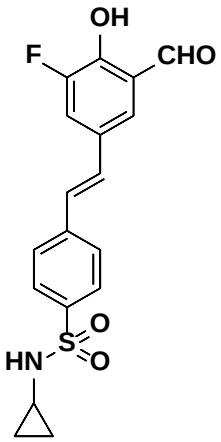
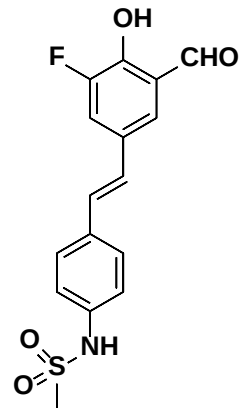
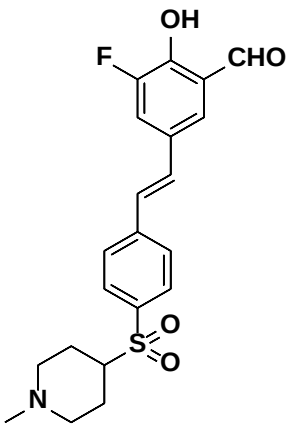

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, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing.

43. A pharmaceutical composition comprising at least one compound according to any one of claims 1-42, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, optionally further comprising a pharmaceutically acceptable excipient.

44. The compound according to any one of claims 1-42, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, for use as a medicament.

45. Use of an effective amount of at least one compound according to any one of claims 1-42, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, in the manufacture of a medicament for the treatment of a disease or condition associated with TLR2 heterodimerization in a subject in need of such treatment, wherein the medicament is to be administered to the subject.

46. The use of claim 45, wherein the disease or condition is selected from the group consisting of: Alzheimer's disease, Parkinson's disease, fronto-temporal dementia, dementia with Lewy bodies (Lewy body disease), Parkinson's disease with dementia, multiple system atrophy, amyotrophic lateral sclerosis, Huntington's disease, Progressive Supranuclear Palsy (PSP), Niemann-Pick disease type C, inflammatory diseases, asthma, chronic obstructive pulmonary disease (COPD), chronic peptic ulcers, irritable bowel disease, tuberculosis, rheumatoid arthritis, osteoarthritis, chronic sinusitis, hepatitis, hepatitis B, hepatitis C, gout, lupus, pleurisy, eczema, gastritis, psoriasis, psoriatic arthritis, vasculitis, laryngitis, allergic reactions, multiple sclerosis, Crohn's disease, traumatic brain injury, CIDP (chronic inflammatory demyelinating polyneuropathy), stroke, ischemic heart disease, atopic dermatitis, acne vulgaris, rosacea, non-alcoholic fatty liver disease, non-alcoholic steatohepatisis, corneal wounds, corneal disorders, corneal HSV, Stargardt disease (Juvenile macular degeneration), age-related macular degeneration, sepsis, diabetic wounds, herpes simplex virus, and anti-fungal, anti-bacterial, anitviral and antitumor diseases or conditions.

47. A method of interfering with the heterodimerization of TLR2 in a cell, or modulating, preventing, slowing, reversing, or inhibiting TLR2 heterodimerization in a cell, comprising contacting the cell with an effective amount of at least one compound according to any one of claims 1-42, or a tautomer thereof, or a pharmaceutically acceptable salt of any of the foregoing, and/or with at least one pharmaceutical composition according to claim 43, wherein the contacting is *in vitro* or *ex vivo*.