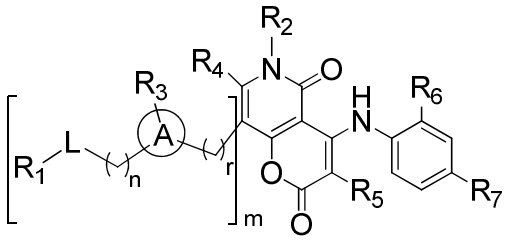
What is claimed is:

1. A compound represented by formula (I), a pharmaceutically acceptable salt thereof or a tautomer thereof:

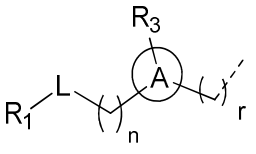


(I)

wherein,

n is selected form 0, 1 or 2;

r is selected from 0, 1, 2 or 3;

m is selected from 0 or 1; when m is 0, then  is H;

ring A is selected from phenyl or 5-6 membered heteroaryl;

L is selected from a single bond, -S(=O)-, -S(=O)$_2$-, -C(=O)-, -NH-, -NH-C(=O)-, -NH-C(=O)-O-, -NH-S(=O)$_2$-, -NH-S(=O)- and -NH-C(=O)-NH-, wherein the -NH-, -NH-C(=O)-, -NH-C(=O)-O-, -NH-S(=O)$_2$-, -NH-S(=O)- and -NH-C(=O)-NH- are each optionally substituted by 1, 2 or 3 R;

R_1 is selected from H, NH_2, C_{1-6} alkyl, 3-6 membered heterocycloalkyl, C_{3-6} cycloalkyl and C_{1-3} heteroalkyl, wherein the NH_2, C_{1-6} alkyl, 3-6 membered heterocycloalkyl, C_{3-6} cycloalkyl and C_{1-3} heteroalkyl are each optionally substituted by 1, 2 or 3 R;

R_2 is selected from H, C_{1-6} alkyl, C_{1-6} heteroalkyl, C_{3-6} cycloalkyl and 5-6 membered heterocycloalkyl, wherein the C_{1-6} alkyl, C_{1-6} heteroalkyl, C_{3-6} cycloalkyl and 5-6 membered heterocycloalkyl are each optionally substituted by 1, 2 or 3 R; with the proviso that R_2 is not H when m is 0;

R_3 is selected from H, F, Cl, Br, I, C_{1-3} alkyl, C_{1-3} alkoxy, C_{1-4} alkynyl, C_{1-4} alkenyl and phenyl, wherein the C_{1-3} alkyl, C_{1-3} alkoxy, C_{1-4} alkynyl, C_{1-4} alkenyl and phenyl are each optionally substituted by 1, 2 or 3 R;

R_4 and R_5 are independently selected from H, F, Cl, Br, I, NH_2, OH, C_{1-6} alkyl and C_{1-3} alkoxy, wherein the C_{1-6} alkyl and C_{1-3} alkoxy are each optionally substituted by 1, 2 or 3 R;

R_6 and R_7 are independently selected from H, F, Cl, Br, I, CH_3, Et, CH_3-O- and CH_3-CH_2-O-;

R is selected from F, Cl, Br, I, OH, NH_2, C_{1-3} alkyl and C_{1-3} heteroalkyl, wherein the NH_2, C_{1-3} alkyl and C_{1-3} heteroalkyl are each optionally substituted by 1, 2 or 3 R';

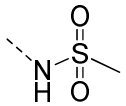
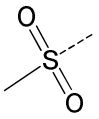
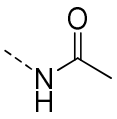
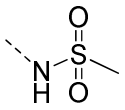
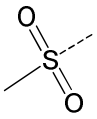
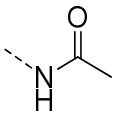
R' is selected from F, Cl, Br, I, NH_2 or C_{1-3} alkyl;

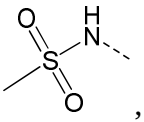
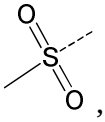
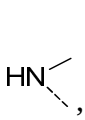
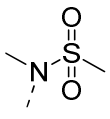
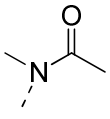
each of the "hetero" in the 5-6 membered heteroaryl, 5-6 membered heterocycloalkyl, 3-6 membered heterocycloalkyl, C_{1-3} heteroalkyl, 5-7 membered heterocycloalkyl, and 5-7 membered heteroaryl is independently selected from -NH-, N, -O-, -S(=O)$_2$-, -S(=O)$_2$-NH-, -NH-S(=O)$_2$-NH-, - C(=O)-NH-, -S(=O)-, -C(=O)-, -S(=O)-NH- and -O-C(=O)-NH-;

in any of the above cases, the number of the heteroatom or heteroatomic group is independently selected from 1, 2, 3 or 4.

2. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof according to claim 1, wherein R' is selected from F, Cl, Br, I, NH_2 or CH_3.

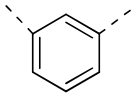
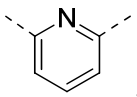
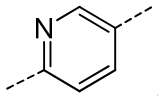
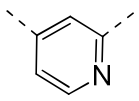
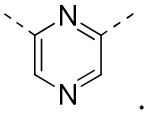
3. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof according to claim 1, wherein R is selected from F, Cl, Br, I, OH, NH_2, methyl, ethyl, C_{1-3} alkyl-S(=O)$_2$-NH-, C_{1-3} alkyl-S(=O)$_2$-, C_{1-3} alkyl-C(=O)-NH- and C_{1-3} alkyl-O-, wherein the NH_2, methyl, ethyl, C_{1-3} alkyl-S(=O)$_2$-NH-, C_{1-3} alkyl-S(=O)$_2$-, C_{1-3} alkyl-C(=O)-NH- and C_{1-3} alkyl-O- are each optionally substituted by 1, 2 or 3 R'.

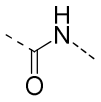
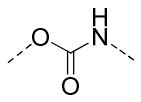
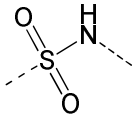
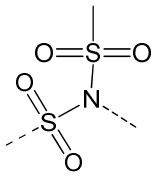
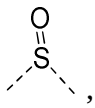
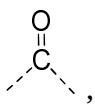
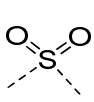
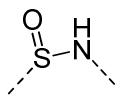
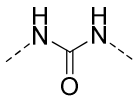
4. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof according to claim 3, wherein R is selected from F, Cl, Br, I, OH, NH_2, CH_3, , ,  and , wherein the NH_2, CH_3, , ,  and  are each optionally substituted by 1, 2 or 3 R'.

5. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof according to claim 4, wherein R is selected from F, Cl, Br, I, OH, NH_2, CH_3, , , , ,  or .

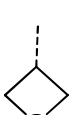
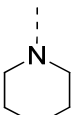
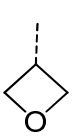
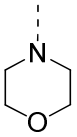
6. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof according to any one of claims 1-5, wherein ring A is selected from phenyl, pyridyl or pyrazinyl.

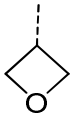
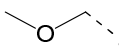
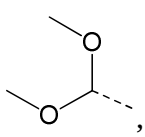
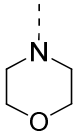
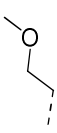
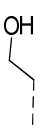
7. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof

according to claim 6, wherein ring A is selected from , , ,  or .

8. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof according to any one of claims 1-5, wherein L is selected from a single bond, -NH-, -N(CH_3)-, , , , , , , ,  or .

9. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof according to any one of claims 1-5, wherein R_1 is selected from H, NH_2, methyl, ethyl, isobutyl, oxetanyl, morpholinyl, cyclopropyl and CH_3-O-, wherein the NH_2, methyl, ethyl, isobutyl, oxetanyl, morpholinyl, cyclopropyl and CH_3-O- are each optionally substituted by 1, 2 or 3 R.

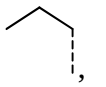
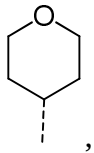
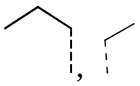
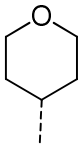
10. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof according to any one of claims 1-5, wherein R_1 is selected from H, NH_2, Me, Et, , , ,  and , wherein the NH_2, Me, Et, , , ,  and  are each optionally substituted by 1, 2 or 3 R.

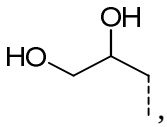
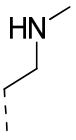
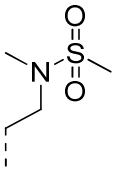
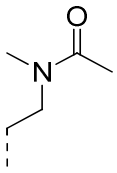
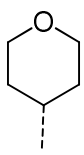
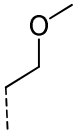
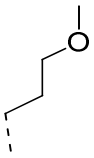
11. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof according to claim 10, wherein R_1 is selected from H, NH_2, CH_3, CF_3, Et, , , , , , , ,  or .

12. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof

according to any one of claims 1-5, wherein R_2 is selected from H, methyl, ethyl, propyl, cyclopropyl and tetrahydropyranyl, wherein the methyl, ethyl, propyl, cyclopropyl and

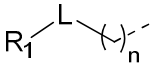
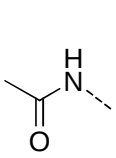
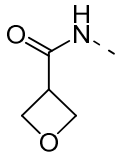
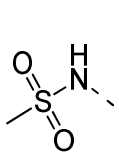
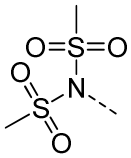
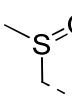
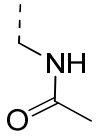
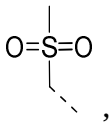
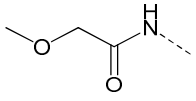
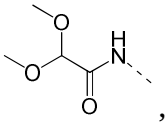
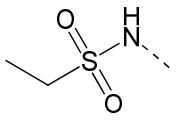
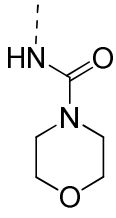
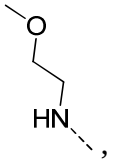
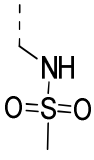
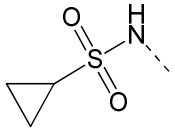
tetrahydropyranyl are each optionally substituted by 1, 2 or 3 R.

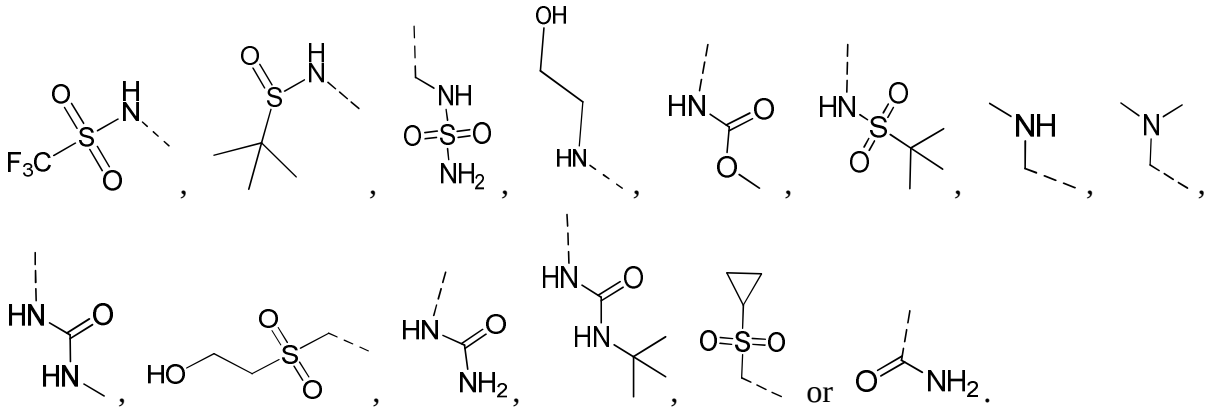
13. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof according to claim 12, wherein R_2 is selected from H, CH_3, , ,  and , wherein the CH_3, , , and  are each optionally substituted by 1, 2 or 3 R.

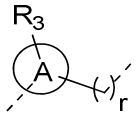
14. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof according to claim 13, wherein R_2 is selected from H, CH_3, , , , , , ,  or .

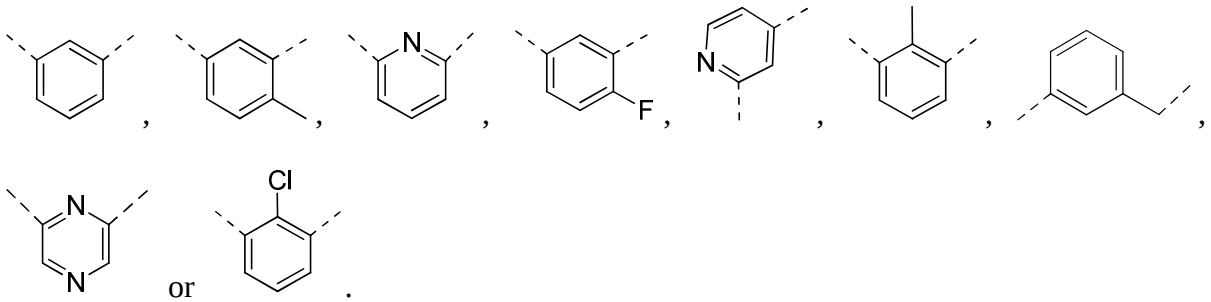
15. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof according to any one of claims 1-5, wherein R_3 is selected from H, F, Cl, Br, I, CH_3, CF_3 or CH_3-O-.

16. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof according to any one of claims 1-5, wherein R_4 and R_5 are independently selected from H, F, Cl, Br, I, CH_3, CH_3CH_2- and CH_3-O-.

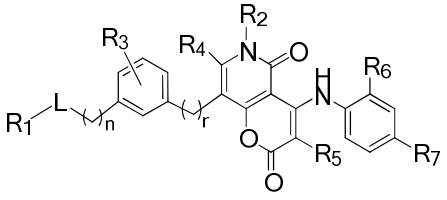
17. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof according to any one of claims 1-5, wherein the structural unit  is selected from H, CH_3, NH_2, , , , , , , , , , , , , , ,



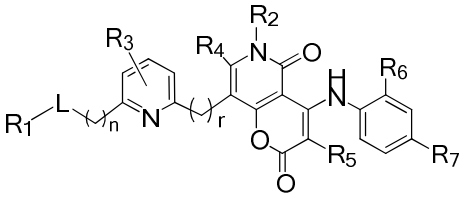
18. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof according to any one of claims 1-5, wherein the structural unit  is selected from



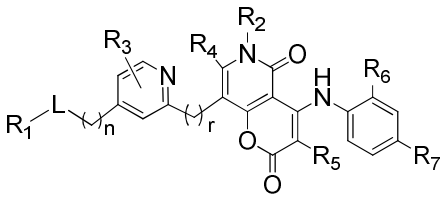
19. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof according to any one of claims 1-16, which is selected from



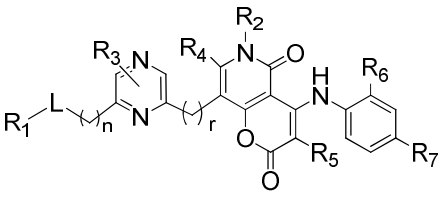
(I -1)



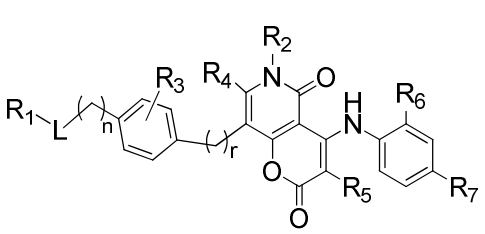
(I -2)



(I -3)

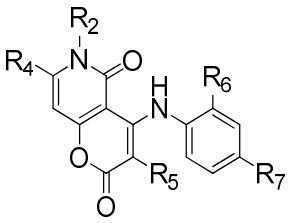


(I -4)



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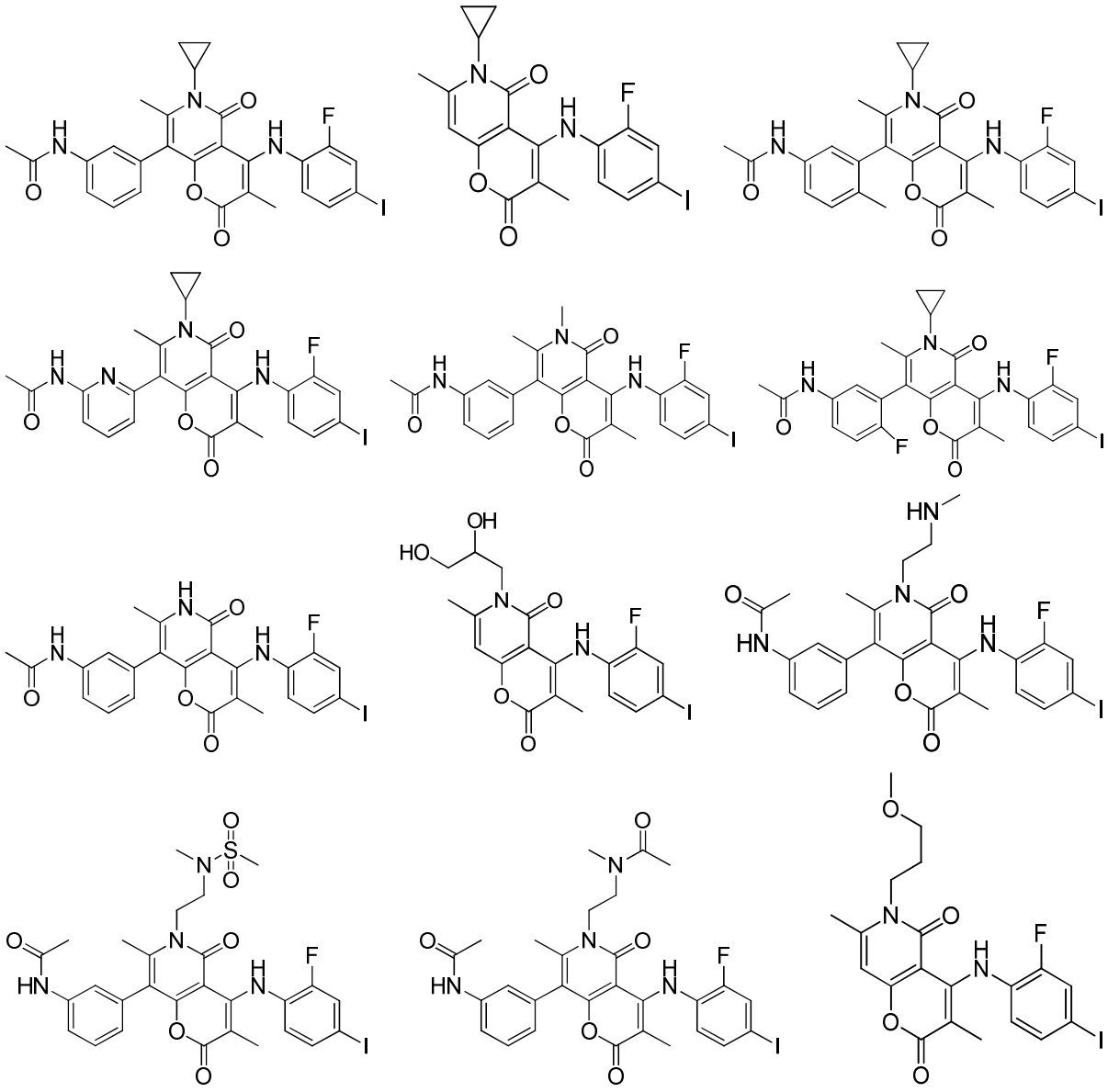
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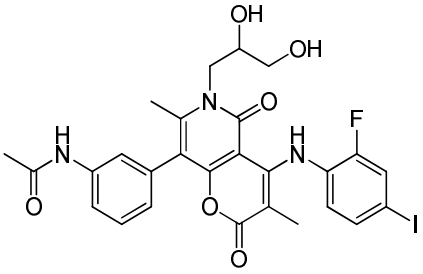


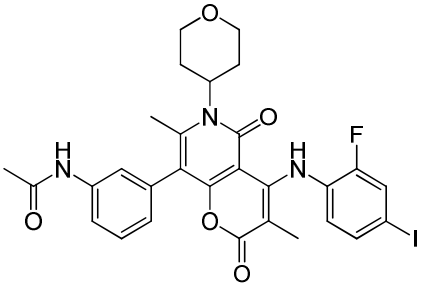
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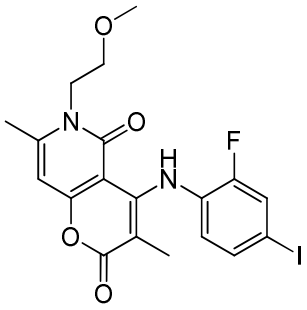
wherein, R_1, R_2, R_3, R_4, R_5, R_6, R_7, L, r and n are as defined in claims 1-16.

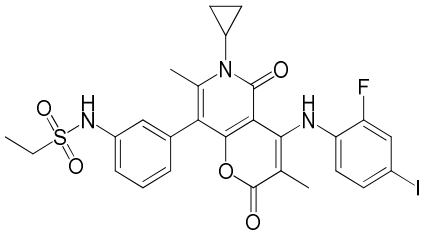
20. A compound, a pharmaceutically acceptable salt thereof or a tautomer thereof, wherein the compound is selected from

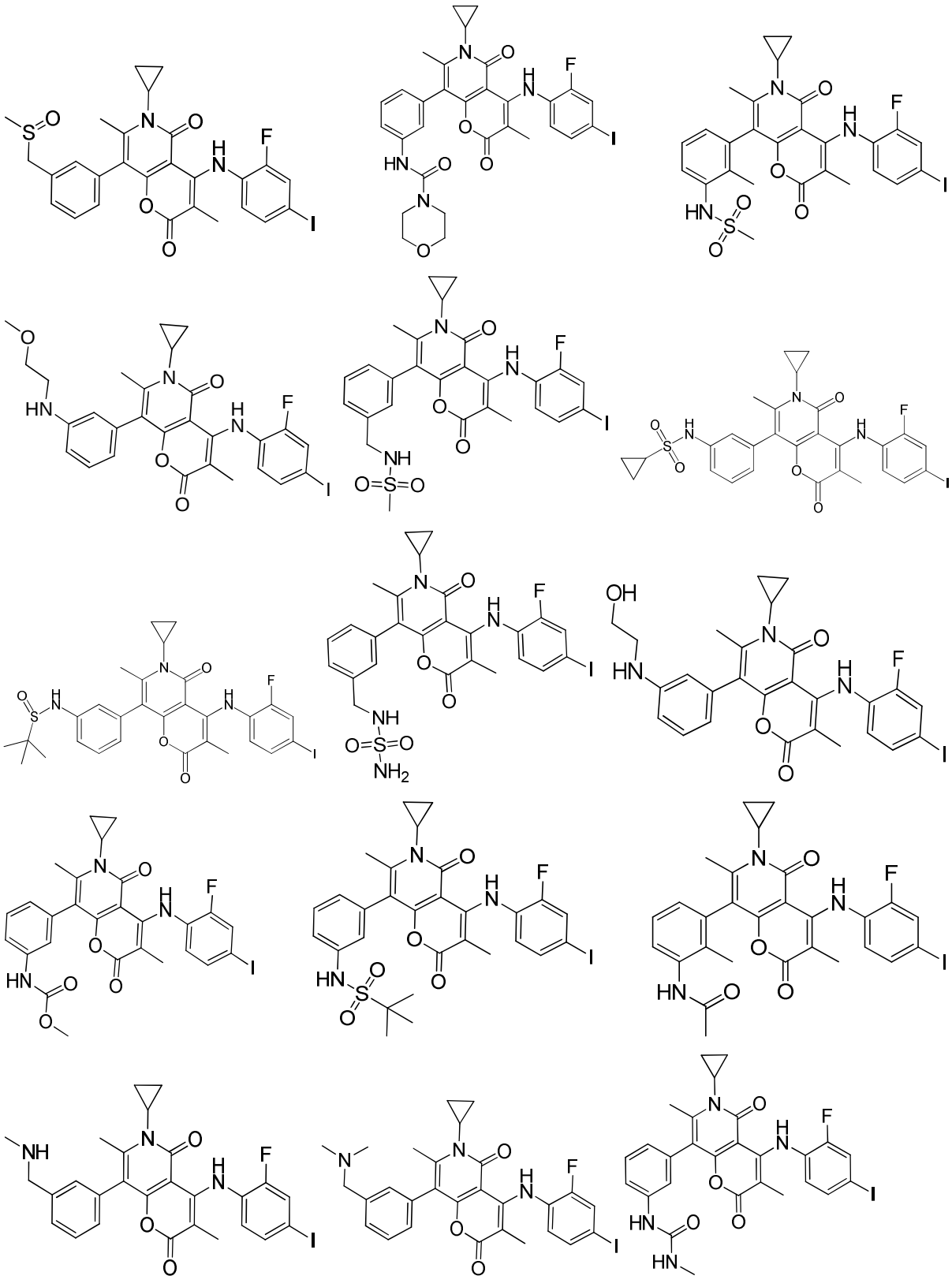


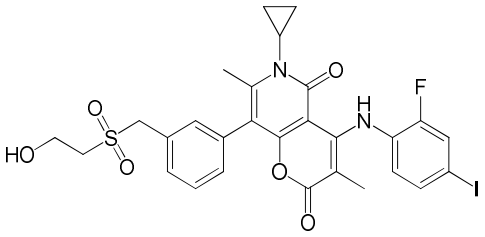


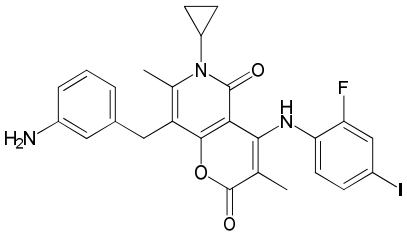


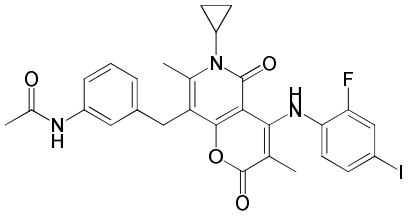


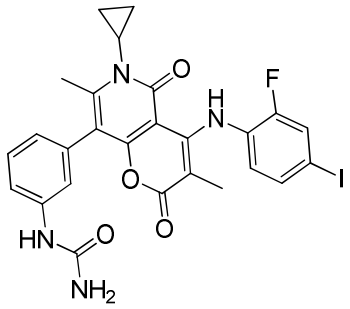

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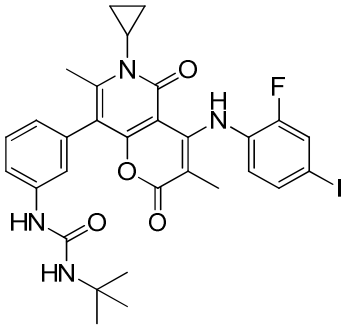


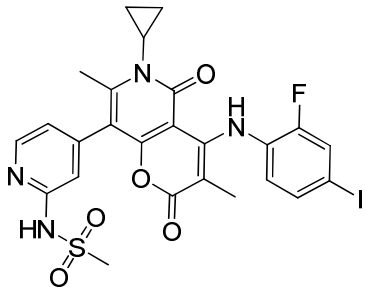


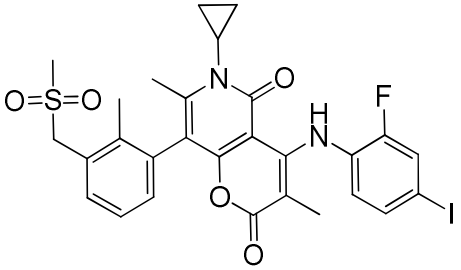


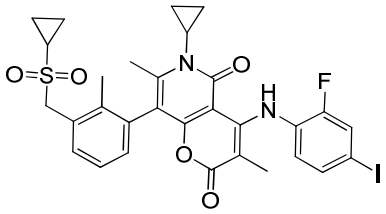


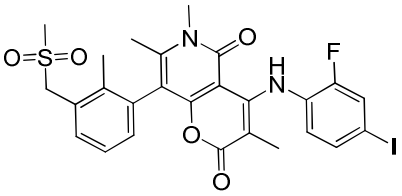


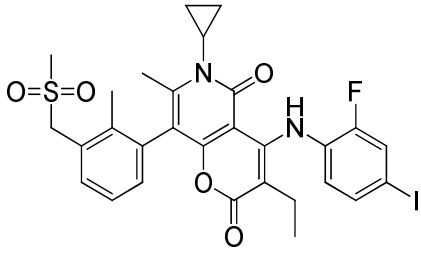


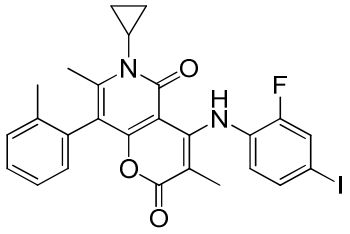


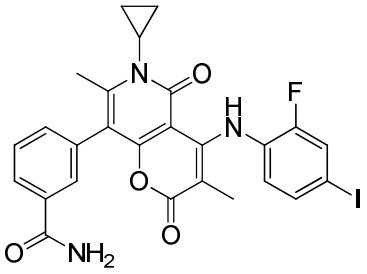


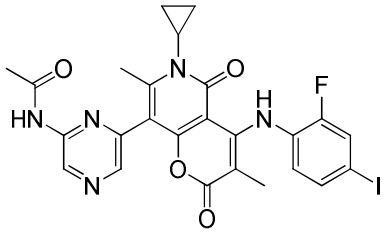


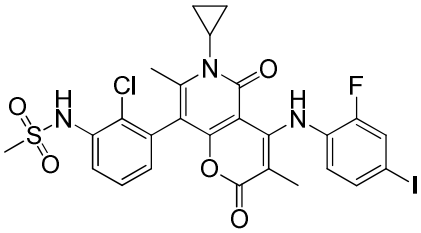




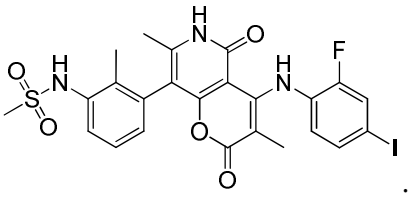






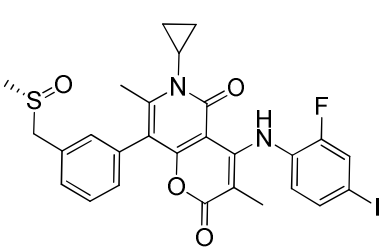


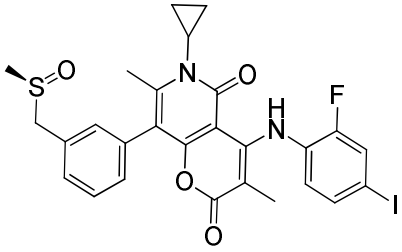
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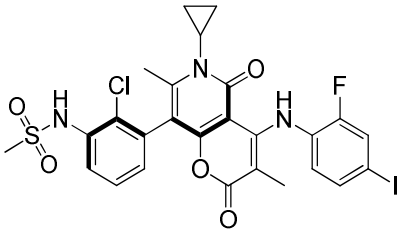


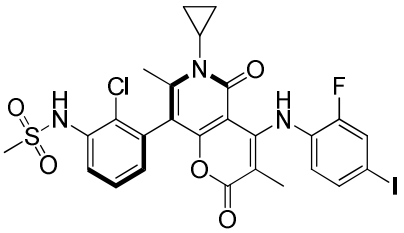
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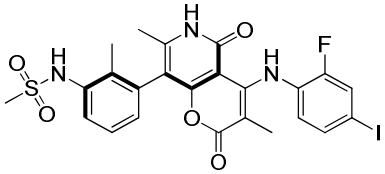
21. The compound according to claim 20, which is selected from

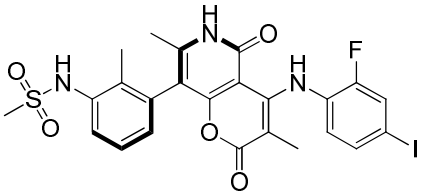


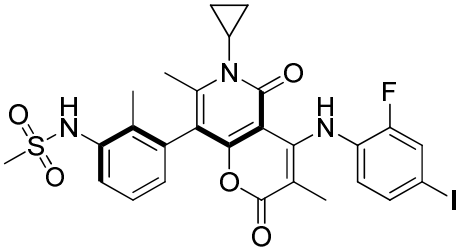




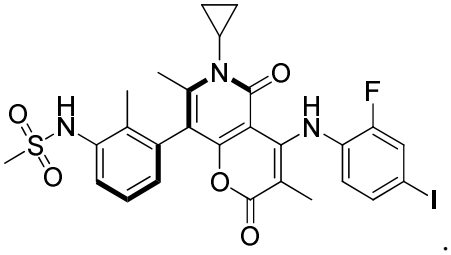








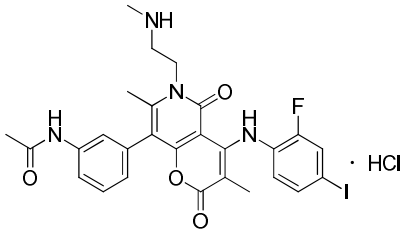
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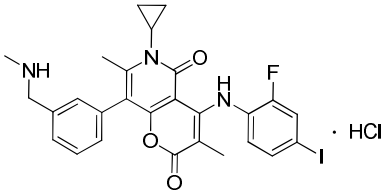


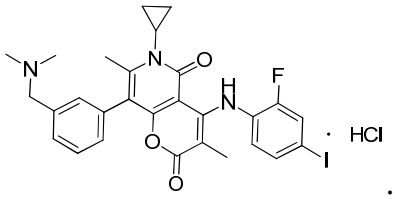
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22. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof according to any one of claims 1-20, wherein the salt is selected from hydrochloride or formate.

23. The compound, the pharmaceutically acceptable salt thereof or the tautomer thereof according to claim 22, wherein the hydrochloride is selected from



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or


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24. A pharmaceutical composition comprising a therapeutically effective amount of the compound or the pharmaceutically acceptable salt thereof according to any one of claims 1-23 as an active ingredient and a pharmaceutically acceptable carrier.

25. A use of the compound or the pharmaceutically acceptable salt thereof according to any one of claims 1-23 or the composition according to claim 24 in manufacturing a medicament for treating a MEK-related disease, wherein the MEK-related disease is selected from malignant and benign hyperproliferative diseases and inflammation.