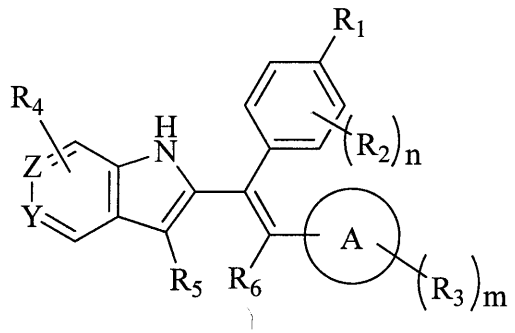
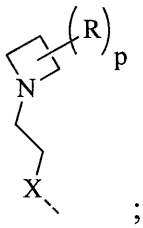
What is claimed is:

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



(I)

wherein,

R_1 is selected from  and  ;

X is selected from single bond, O and S;

Y and Z are each independently selected from N and CH;

ring A is selected from 5-10 membered aryl and 5-10 membered heteroaryl;

R_2 is selected from H, halogen, CN, NO_2, OH, COOH, NH_2, or the group consisting of C_{1-6} alkyl, C_{1-6} heteroalkyl, C_{3-6} cycloalkyl and 3-6 membered heterocycloalkyl, each of which is optionally substituted with 1, 2, or 3 R;

R_3 is selected from H, halogen, CN, NO_2, OH, COOH, NH_2, or the group consisting of C_{1-6} alkyl, C_{1-6} heteroalkyl, C_{3-6} cycloalkyl and 3-6 membered heterocycloalkyl, each of which is optionally substituted with 1, 2, or 3 R;

R_4 and R_5 are each independently selected from H, halogen, CN, NO_2, OH, COOH, NH_2, or the group consisting of C_{1-6} alkyl, C_{1-6} heteroalkyl, C_{3-6} cycloalkyl and 3-6 membered heterocycloalkyl, each of which is optionally substituted with 1, 2, or 3 R;

R_6 is selected from the group consisting of C_{1-6} alkyl, C_{1-6} heteroalkyl, C_{3-6} cycloalkyl and 3-6 membered heterocycloalkyl, each of which is optionally substituted with 1, 2, or 3 R;

R is selected from H, F, Cl, Br, I, OH, CN, NH_2, COOH, C(=O)NH_2, or the group consisting of C_{1-8} alkyl, C_{1-8} heteroalkyl, C_{3-6} cycloalkyl, 3-6 membered

heterocycloalkyl and C_{3-6} cycloalkyl-C_{1-3} alkyl-, each of which is optionally substituted with 1, 2, or 3 R';

n is selected from 0, 1, 2, 3 and 4;

m is selected from 0, 1, 2, 3 and 4;

P is selected from 0, 1, 2 and 3;

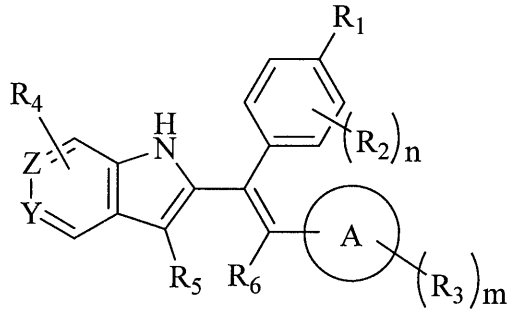
or, when m is 2, R_3 and R_3 are connected together to form a 5-6 membered ring;

R' is selected from the group consisting of F, Cl, Br, I, OH, CN, NH_2, COOH, Me, Et, CF_3, CHF_2, CH_2F, $NHCH_3$ and $N(CH_3)_2$;

"hetero" represents a heteroatom or a heteroatom group, which is selected from the group consisting of -C(=O)N(R)-, -N(R)-, -S(=O)$_2$N(R)-, -S(=O) N(R)-, -O-, -S-, =O, =S, -O-N=, -C(=O)O-, -C(=O) -, -C(=S)-, -S(=O)-, -S(=O)$_2$- and -N(R)C(=O)N(R)-;

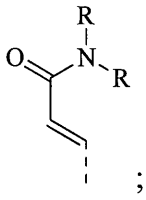
in any of the above cases, the number of the heteroatom or the heteroatom group is independently selected from 1, 2 and 3.

2. A compound represented by formula (I), a pharmaceutically acceptable salt or a hydrate thereof,



(I)

wherein,

R_1 is selected from  ;

Y and Z are each independently selected from N and CH;

ring A is selected from 5-10 membered aryl and 5-10 membered heteroaryl;

R_2 is selected from H, halogen, CN, NO_2, OH, COOH, NH_2, or the group consisting of C_{1-6} alkyl, C_{1-6} heteroalkyl, C_{3-6} cycloalkyl and 3-6 membered heterocycloalkyl, each of which is optionally substituted with 1, 2, or 3 R;

R_3 is selected from H, halogen, CN, NO_2, OH, COOH, NH_2, or the group consisting of C_{1-6} alkyl, C_{1-6} heteroalkyl, C_{3-6} cycloalkyl and 3-6 membered heterocycloalkyl, each of which is optionally substituted with 1, 2, or 3 R;

R_4 and R_5 are each independently selected from H, halogen, CN, NO_2, OH, COOH, NH_2, or the group consisting of C_{1-6} alkyl, C_{1-6} heteroalkyl, C_{3-6} cycloalkyl and 3-6 membered heterocycloalkyl, each of which is optionally substituted with 1, 2, or 3 R;

R_6 is selected from the group consisting of C_{1-6} alkyl, C_{1-6} heteroalkyl, C_{3-6} cycloalkyl and 3-6 membered heterocycloalkyl, each of which is optionally substituted with 1, 2, or 3 R;

R is selected from H, F, Cl, Br, I, OH, CN, NH_2, COOH, $C(=O)NH_2$, or the group consisting of C_{1-8} alkyl, C_{1-8} heteroalkyl, C_{3-6} cycloalkyl, 3-6 membered heterocycloalkyl and C_{3-6} cycloalkyl-C_{1-3} alkyl-, each of which is optionally substituted with 1, 2, or 3 R';

n is selected from 0, 1, 2, 3 and 4;

m is selected from 0, 1, 2, 3 and 4;

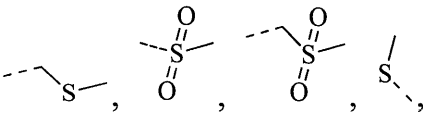
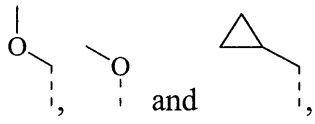
or, when m is 2, R_3 and R_3 are connected together to form a 5-6 membered ring;

R' is selected from the group consisting of F, Cl, Br, I, OH, CN, NH_2, COOH, Me, Et, CF_3, CHF_2, CH_2F, $NHCH_3$ and $N(CH_3)_2$;

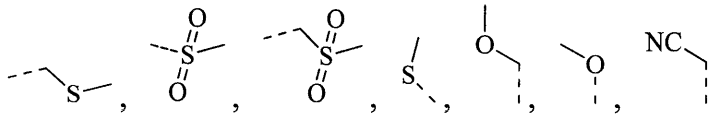
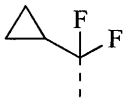
"hetero" represents a heteroatom or a heteroatom group, which is selected from the group consisting of -C(=O)N(R)-, -N(R)-, $-S(=O)_2N(R)-$, -S(=O)N(R)-, -O-, -S-, =O, =S, -O-N=, -C(=O)O-, -C(=O)-, -C(=S)-, -S(=O)-, $-S(=O)_2-$ and -N(R)C(=O)N(R)-;

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

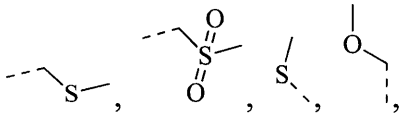
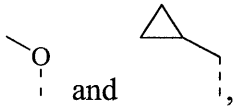
3. The compound, the pharmaceutically acceptable salt or the hydrate thereof as defined in claim 2, wherein, R is selected from H, F, Cl, Br, I, OH, CN, NH_2, COOH, or the group consisting of C_{1-5} alkyl, C_{1-5} heteroalkyl, C_{3-6} cycloalkyl-C_{1-3} alkyl-, each of which is optionally substituted with 1, 2, or 3 R'.

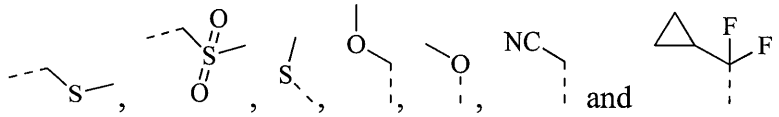
4. The compound, the pharmaceutically acceptable salt or the hydrate thereof as defined in claim 2, wherein, R is selected from H, F, Cl, Br, I, OH, CN, NH_2, COOH, $C(=O)NH_2$, or the group consisting of CH_3, CH_3CH_2, $S(=O)CH_3$,  ,  and , each of which is optionally substituted with 1, 2, or 3 R'.

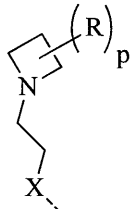
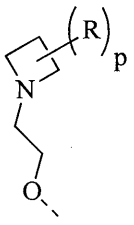
5. The compound, the pharmaceutically acceptable salt or the hydrate thereof as defined in claim 4, wherein, R is selected from the group consisting of H, F,

Cl, Br, I, OH, CN, NH_2, COOH, C(=O)NH_2, CH_3, CH_2Cl, CH_2F, CHF_2, CF_3, OCF_3, CH_2OH, Et, S(=O)CH_3,  , and  .

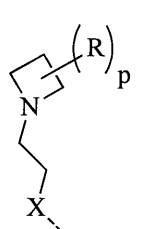
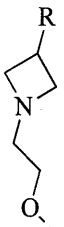
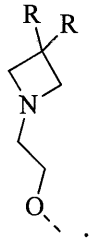
6. The compound, the pharmaceutically acceptable salt or the hydrate thereof as defined in claim 1, wherein, R is selected from H, F, Cl, Br, I, OH, CN, NH_2, COOH, or the group consisting of C_{1-5} alkyl, C_{1-5} heteroalkyl and C_{3-6} cycloalkyl-C_{1-3} alkyl-, each of which is optionally substituted with 1, 2, or 3 R'.

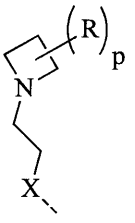
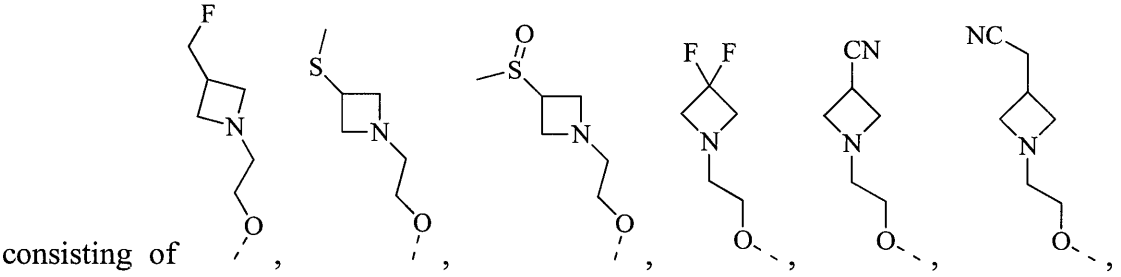
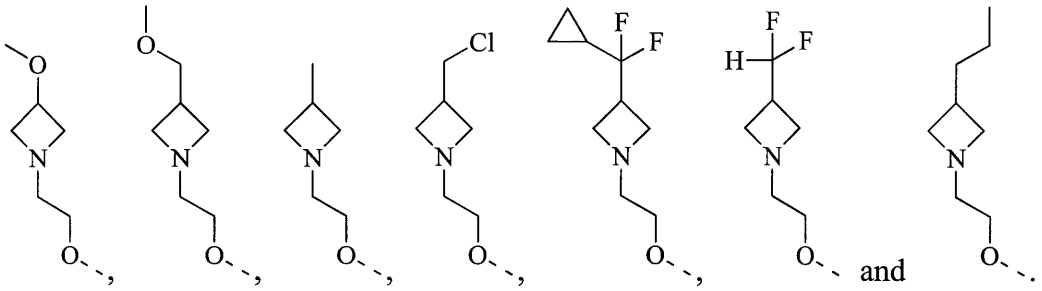
7. The compound, the pharmaceutically acceptable salt or the hydrate thereof as defined in claim 6, wherein, R is selected from H, F, Cl, Br, I, OH, CN, NH_2, COOH, C(=O)NH_2, or the group consisting of CH_3, CH_3CH_2, S(=O)CH_3,  ,  , each of which is optionally substituted with 1, 2, or 3 R'.

8. The compound, the pharmaceutically acceptable salt or the hydrate thereof as defined in claim 7, wherein, R is selected from the group consisting of H, F, Cl, Br, I, OH, CN, NH_2, COOH, C(=O)NH_2, CH_3, CH_2Cl, CH_2F, CHF_2, CF_3, OCF_3, CH_2OH, Et, S(=O)CH_3,  .

9. The compound, the pharmaceutically acceptable salt or the hydrate thereof as defined in any one of claim 1 and claims 6-8, wherein, the structural unit  is selected from  .

10. The compound, the pharmaceutically acceptable salt or the hydrate thereof as

defined in claim 9, wherein, the structural unit  is selected from  and  .

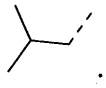
11. The compound, the pharmaceutically acceptable salt or the hydrate thereof as defined in claim 10, wherein, the structural unit  is selected from the group consisting of  and  .

12. The compound, the pharmaceutically acceptable salt or the hydrate thereof as defined in any one of claims 1-8, wherein, R_2 is selected from H, F, Cl, Br, I, CN, NO_2, OH, COOH, NH_2, or the group consisting of C_{1-4} alkyl, C_{1-4} alkoxy, C_{1-4} alkylthio, NH(C_{1-4} alkyl), *N*,*N*-di(C_{1-3} alkyl)amino and C_{3-6} cycloalkyl, each of which is optionally substituted with 1, 2, or 3 R, and/or,

R_3 is selected from H, F, Cl, Br, I, CN, NO_2, OH, COOH, NH_2, or the group consisting of C_{1-4} alkyl, C_{1-4} alkoxy, C_{1-4} alkylthio, NH(C_{1-4} alkyl), *N*,*N*-di(C_{1-3} alkyl)amino, C_{3-6} cycloalkyl, 3-6 membered heterocycloalkyl, 5-6 membered aryl and 5-6 membered heteroaryl, each of which is optionally substituted with 1, 2, or 3 R, and/or,

R_4 and R_5 are each independently selected from H, F, Cl, Br, I, CN, NO_2, OH, COOH, NH_2, or the group consisting of C_{1-4} alkyl, C_{1-4} alkoxy, C_{1-4} alkylthio, NH(C_{1-4} alkyl), *N*,*N*-di(C_{1-3} alkyl)amino and C_{3-6} cycloalkyl, each of which is optionally substituted with 1, 2, or 3 R, and/or,

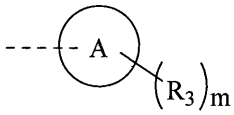
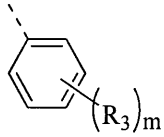
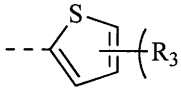
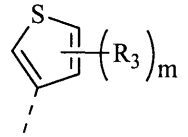
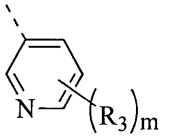
ring A is selected from the group consisting of phenyl, pyridyl, pyrazinyl, imidazolyl, pyrazolyl, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl, thienyl, benzofuranyl, benzothienyl, indolyl, benzimidazolyl, benzothiazolyl, purinyl, quinolinyl and isoquinolinyl, and/or,

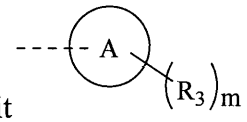
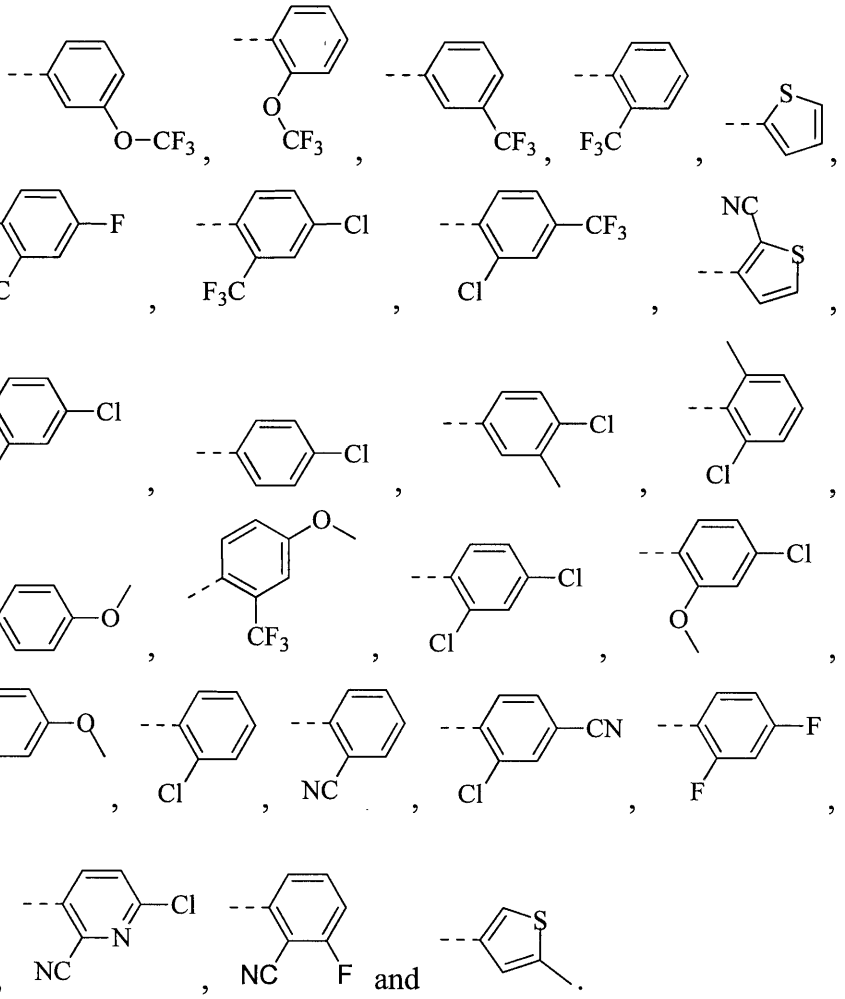
R_6 is selected from  and  .

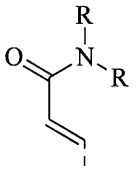
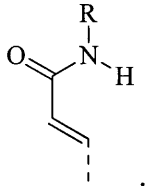
13. The compound, the pharmaceutically acceptable salt or the hydrate thereof as defined in claim 12, wherein, R_3 is selected from H, F, Cl, Br, I, CN, NO_2, OH, COOH, NH_2, or the group consisting of CH_3, CH_3CH_2, CH_3O, CH_3CH_2O and  , each of which is optionally substituted with 1, 2, or 3 R.

14. The compound, the pharmaceutically acceptable salt or the hydrate thereof as defined in claim 13, wherein, R_3 is selected from the group consisting of H, F, Cl, CN, CH_3, CF_3 and  .

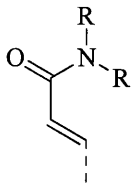
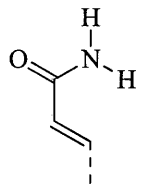
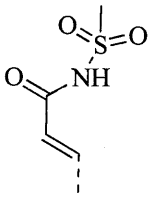
15. The compound, the pharmaceutically acceptable salt or the hydrate thereof as defined in claim 12, wherein, R_4 and R_5 are each independently selected from the group consisting of H, F, Cl, Br, CN and CH_3.

16. The compound, the pharmaceutically acceptable salt or the hydrate thereof as defined in claim 12, wherein, the structural unit  is selected from the group consisting of  ,  ,  and  .

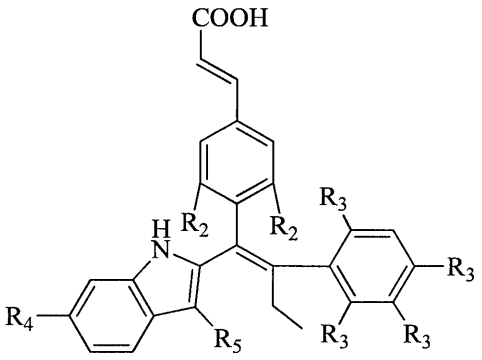
17. The compound, the pharmaceutically acceptable salt or the hydrate thereof as defined in claim 16, wherein, the structural unit  is selected from the group consisting of 

18. The compound, the pharmaceutically acceptable salt or the hydrate thereof as defined in any one of claims 2-5, wherein, the structural unit  is selected from  .

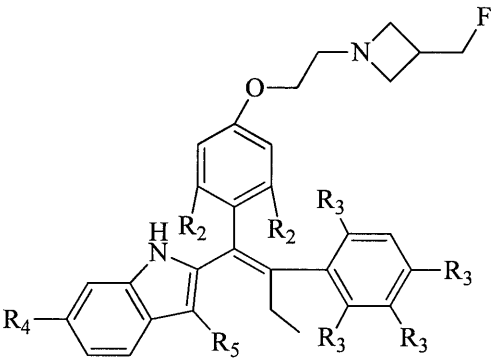
19. The compound, the pharmaceutically acceptable salt or the hydrate

thereof as defined in claim 18, wherein, the structural unit  is selected from  and  .

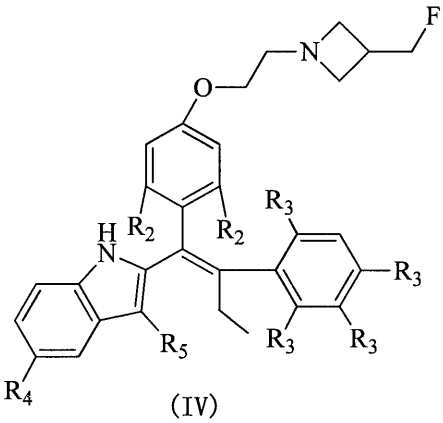
20. The compound, the pharmaceutically acceptable salt or the hydrate thereof as defined in any one of claim 1 and claims 6-17, wherein, the compound is selected from the group consisting of



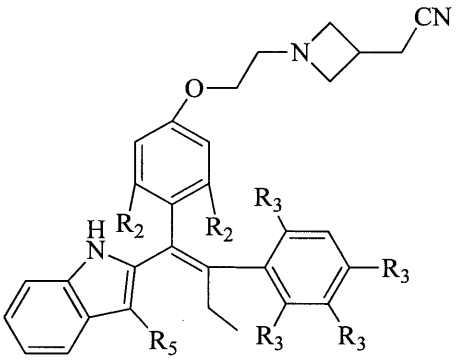
(II),



(III),



(IV),



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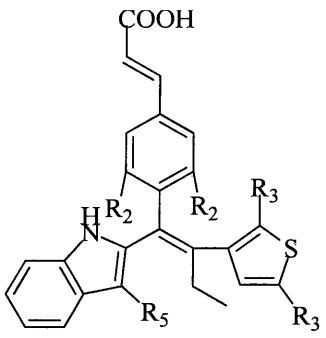
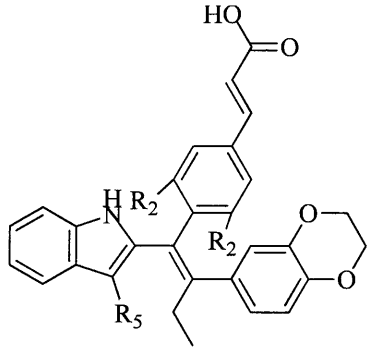


(VI)

and

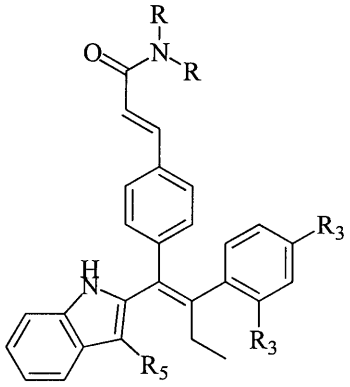


(VII)

,

wherein, R_2, R_3, R_4 and R_5 are defined as any one of claim 1 and claims 6-17.

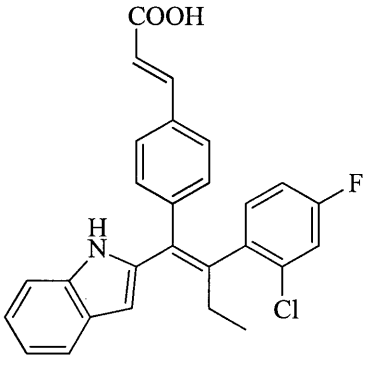
21. The compound, the pharmaceutically acceptable salt or the hydrate thereof as defined in any one of claims 2-5 and claims 12-19, wherein, the compound is selected from



(VIII)

wherein, R_3, R_5 and R are defined as any one of claims 2-5 and claims 12-19.

22. A compound or a pharmaceutically acceptable salt thereof, wherein, the compound is selected from the group consisting of



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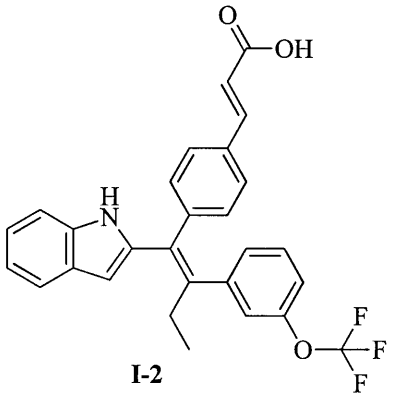

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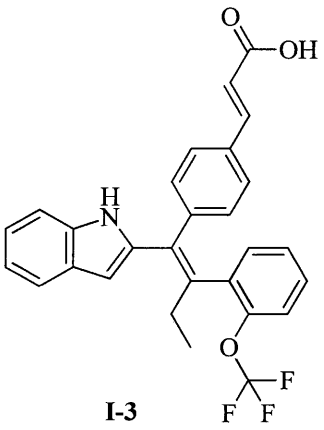

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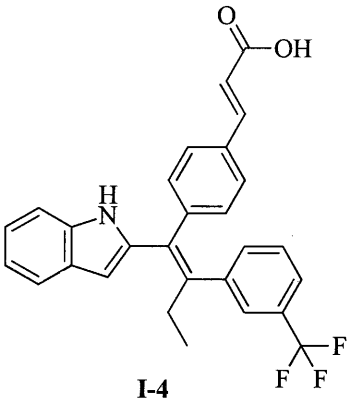

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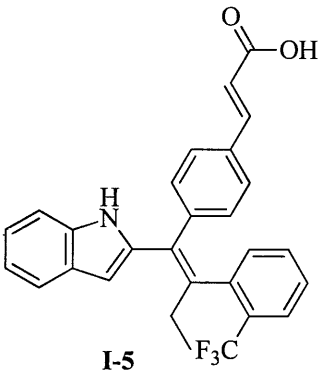

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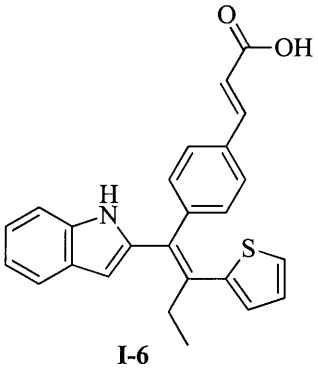

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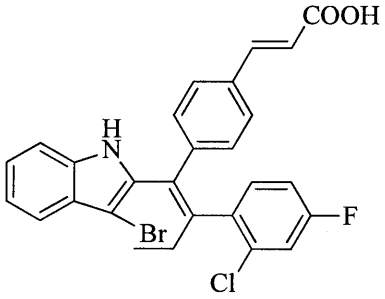

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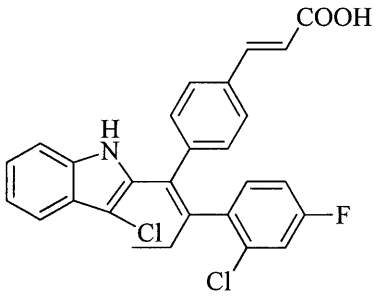

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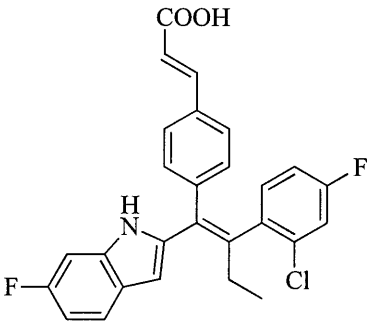

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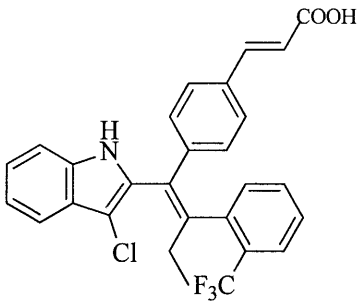

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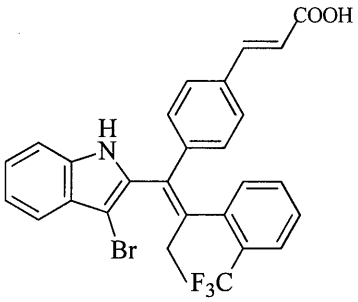

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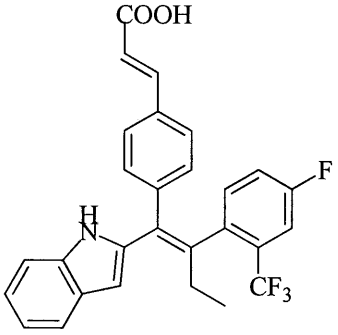

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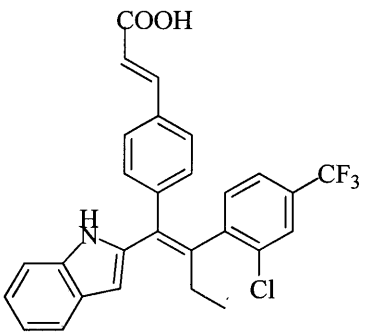

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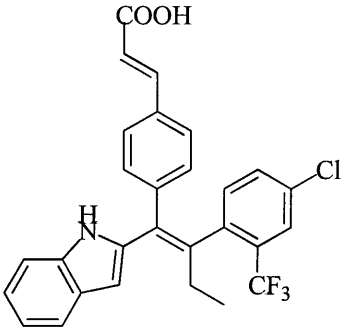

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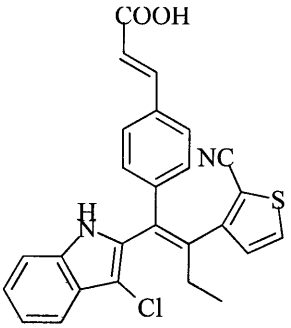

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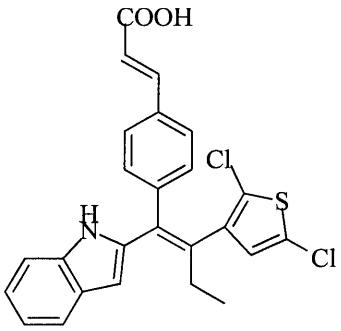

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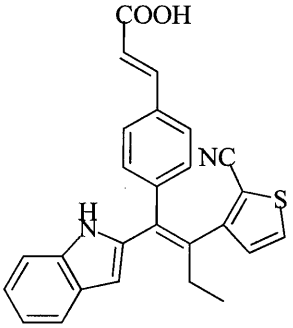

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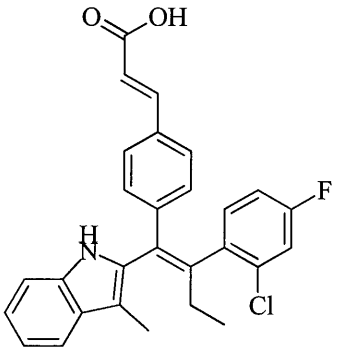

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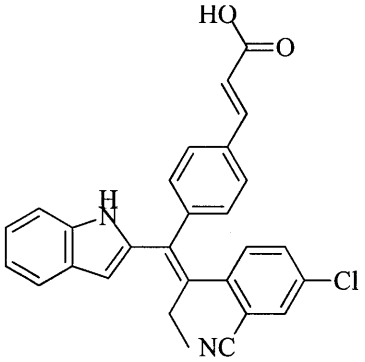

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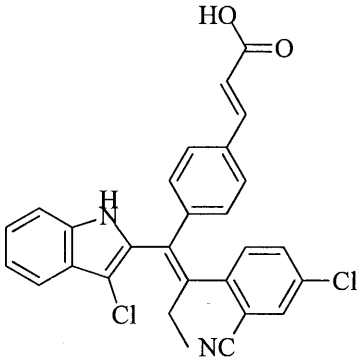

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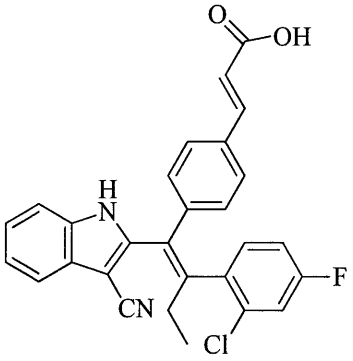

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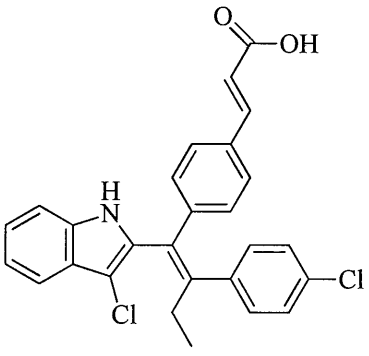

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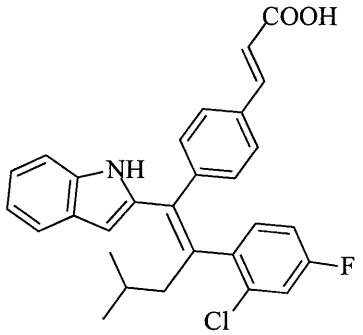

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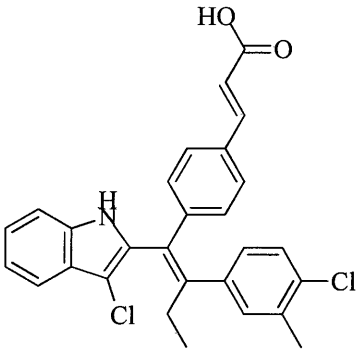

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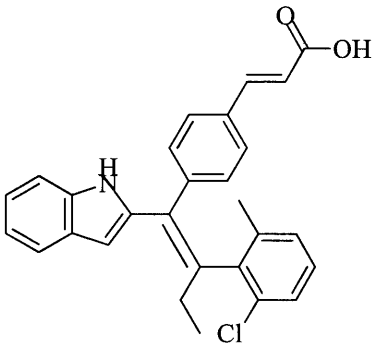

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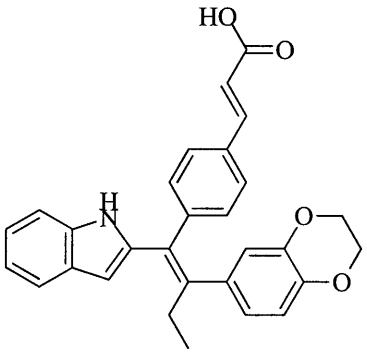

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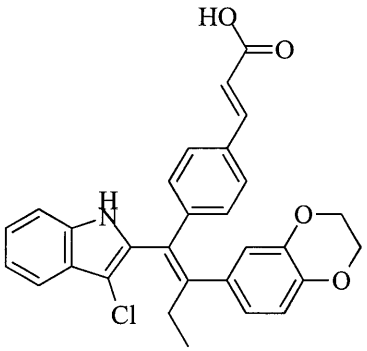

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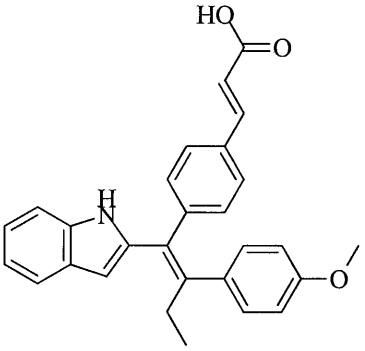

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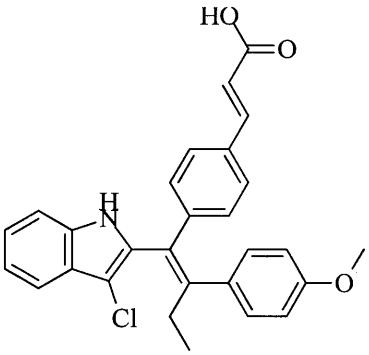

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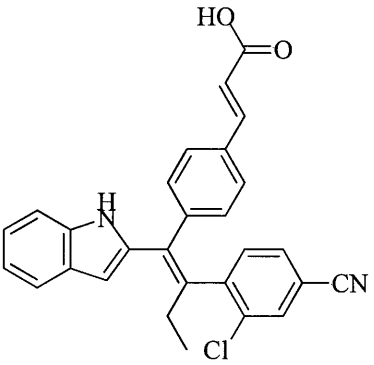

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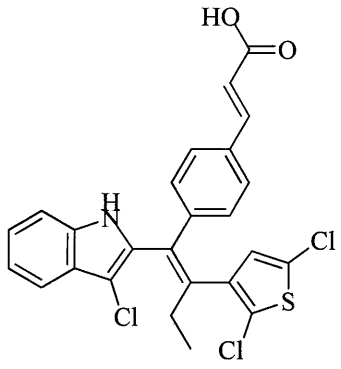

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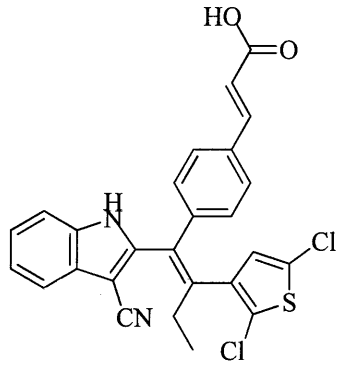

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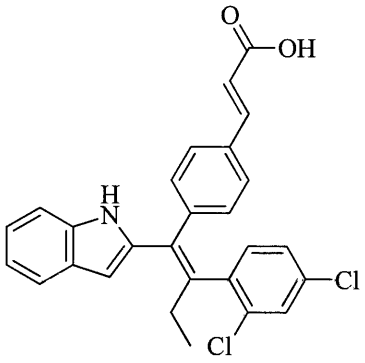

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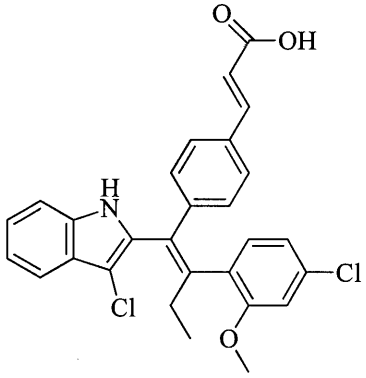

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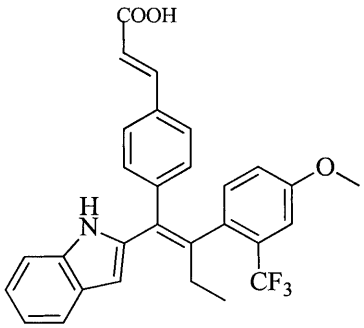

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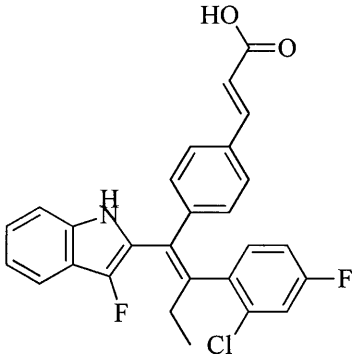

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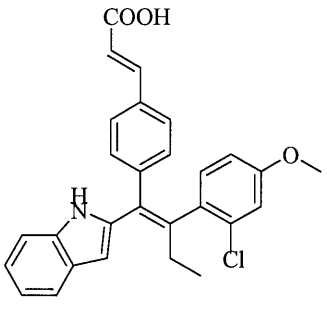

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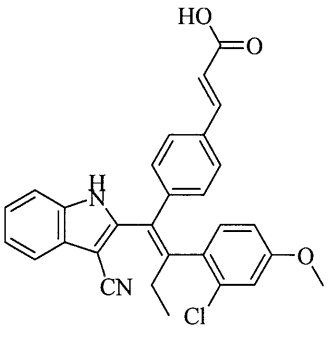

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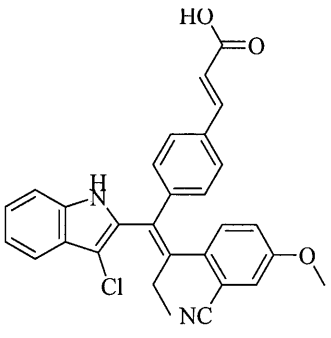

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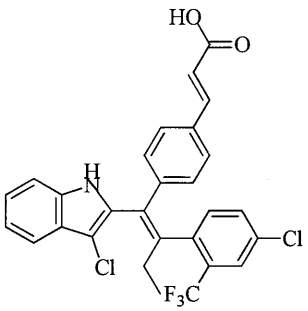

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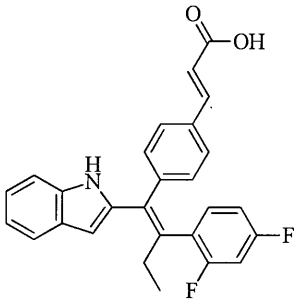

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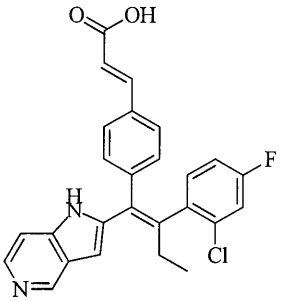

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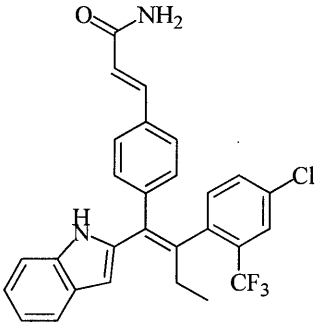

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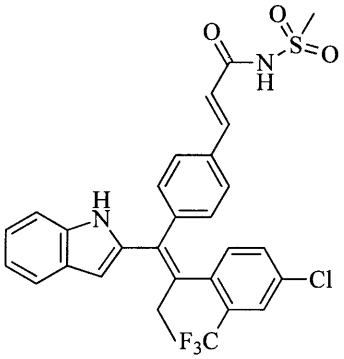

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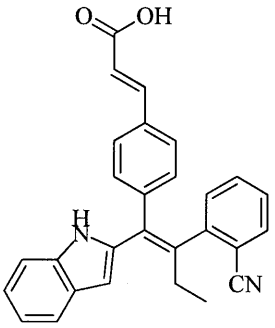

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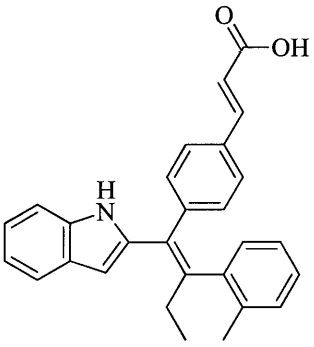

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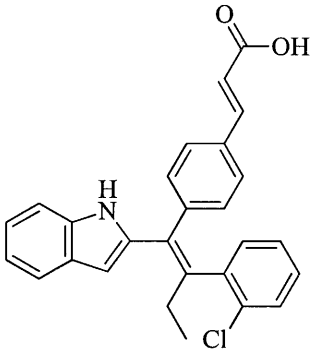

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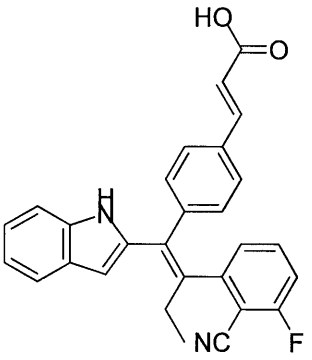

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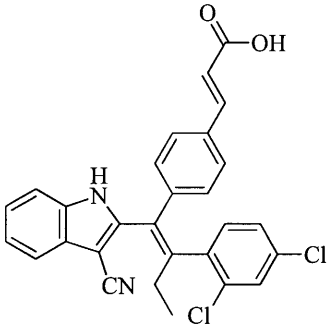

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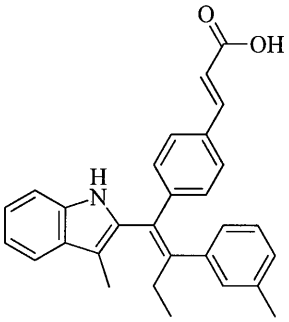

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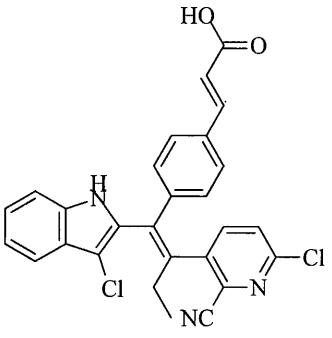

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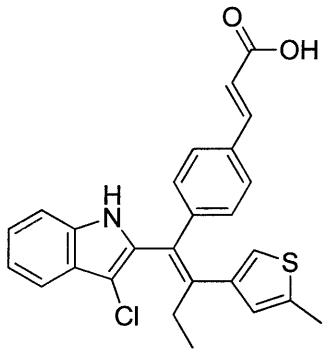

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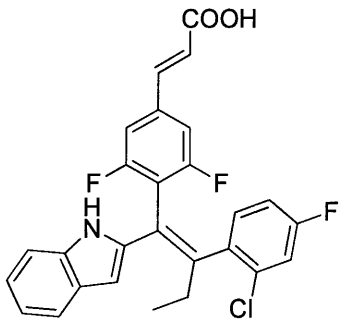

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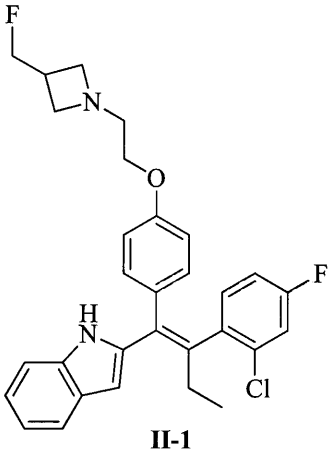

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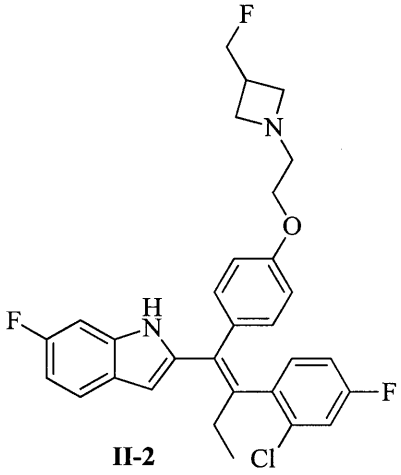

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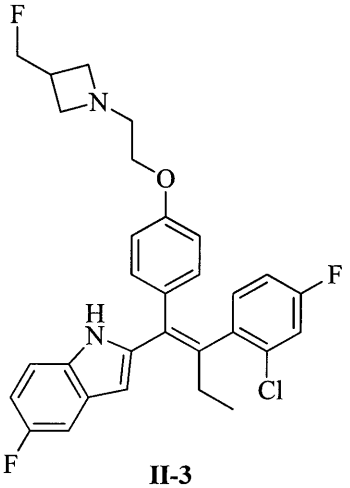

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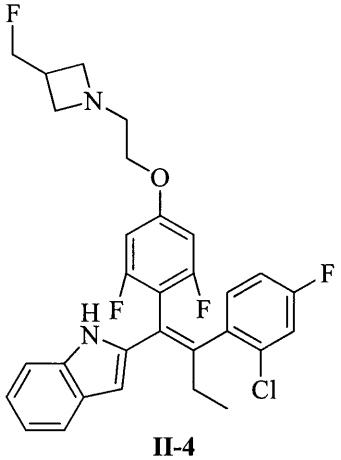

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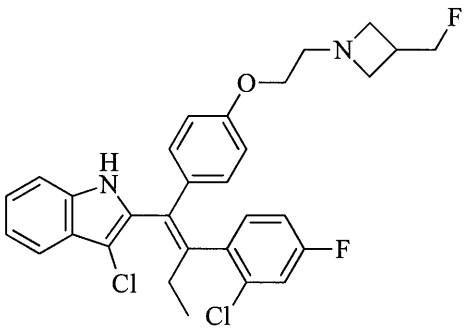

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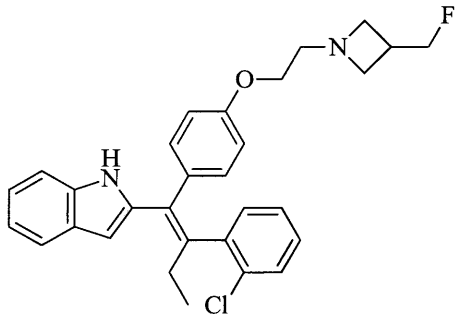

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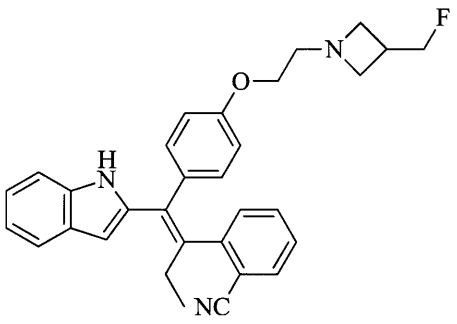

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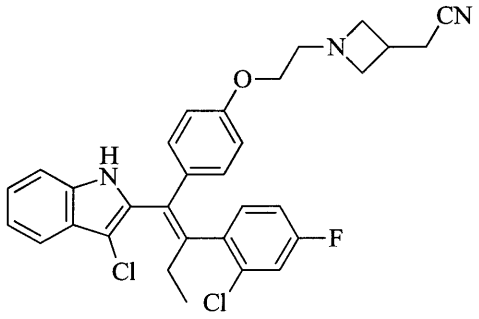

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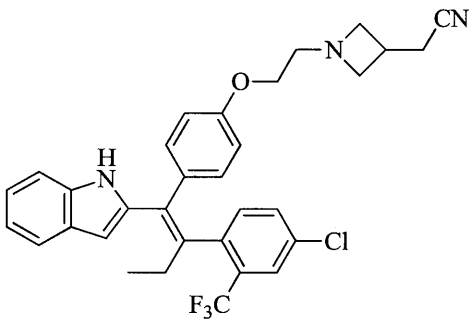

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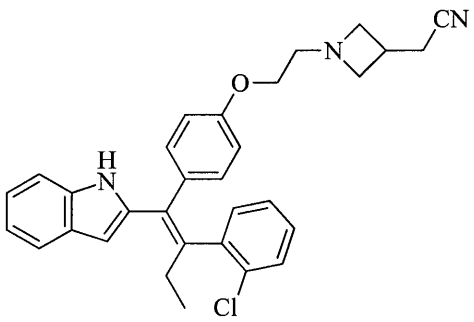

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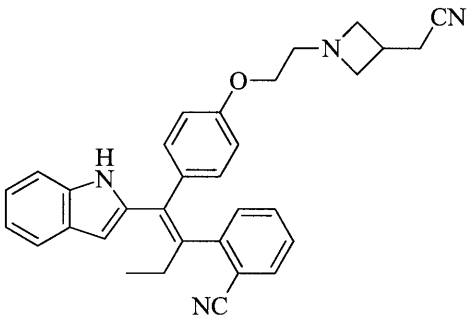

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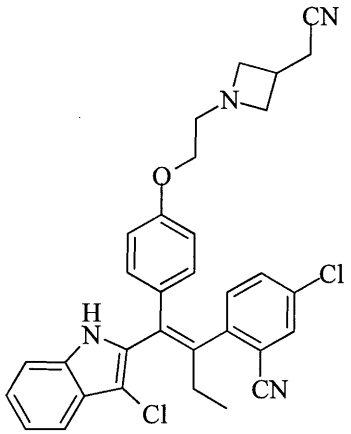

II-12

23. A pharmaceutical composition comprising a therapeutically effective amount of the compound or the pharmaceutically acceptable salt thereof as defined in any one of

claims 1-22 and a pharmaceutically acceptable carrier.

24. A use of the compound or the pharmaceutically acceptable salt thereof as defined in any one of claims 1-22 or the pharmaceutical composition as defined in claim 23 in preparing a medicament for treating ER-positive breast cancer.