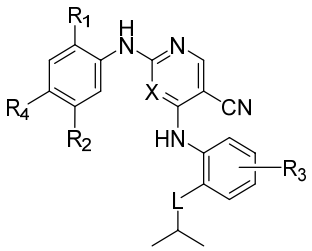
CLAIMS

What is claimed is:

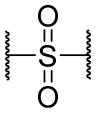
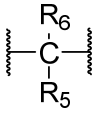
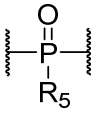
1. A compound represented by formula (I), or a stereoisomer, a tautomer, a hydrate, a solvate, or a pharmaceutically acceptable salt thereof,

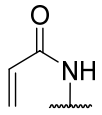


Formula (I)

in formula (I),

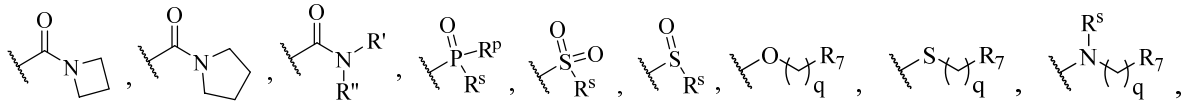
X is N or CH;

L is -O-, -S-, , , , , or -NR_5-, wherein R_5 and R_6 are each independently hydrogen, methyl, ethyl, propyl or isopropyl;

R_1 is ;

R_2 is hydrogen, halogen, C_1-C_3 alkoxy, or C_1-C_3 alkyl;

R_3 is selected from hydrogen, halogen, hydroxyl, amino, cyano, carboxyl, C_1-C_6 alkyl, C_1-C_6 haloalkyl, C_1-C_3 haloalkoxy, C_3-C_6 cycloalkyl, C_2-C_3 alkynyl, C_2-C_3 alkenyl, C_1-C_3 alkoxy, C_1-C_3 alkylthio, mono- or di-C_1-C_3 alkylamino, C_3-C_4 cycloalkyloxy, C_3-C_4 cycloalkyl-substituted C_1-C_3 alkyl, cyano-substituted C_1-C_3 alkyl, carbamoyl-substituted C_1-C_3 alkyl, or the following groups:



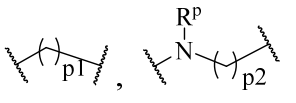
q is an integer of 1-3,

R^s is selected from -H, or C_1-C_3 alkyl, and R^p is selected from -H, or C_1-C_3 alkyl,

R' and R'' are each independently -H, C_1-C_3 alkyl, or C_3-C_4 cycloalkyl,

R_7 is selected from -H, halogen, hydroxyl, cyano, amino, carboxyl, C_1-C_3 alkyl, C_3-C_4 cycloalkyl, C_1-C_3 alkoxy, or mono- or di-C_1-C_3 alkyl-substituted amino;

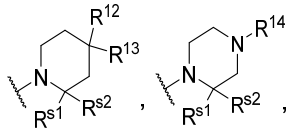
R_4 is $-T_1-R_8$,

T_1 is selected from: ,

p1 is 0, p2 is an integer of 2-3,

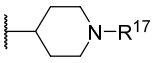
R^p is -H, methyl or ethyl,

R_8 is selected from methylamino, ethylamino, propylamino, dimethylamino, diethylamino, N-methyl-N-ethylamino or the following groups:

,

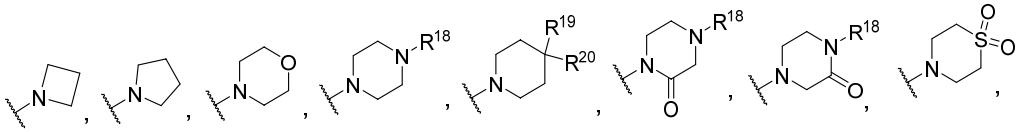
R^{12} is -H, -F, methyl, or ethyl,

R^{13} is -H, or $-NR^{15}R^{16}$,

R^{14} is -H, methyl, ethyl, propyl, isopropyl, or , wherein R^{17} is methyl, ethyl, propyl, or isopropyl,

R^{s1} and R^{s2} are each independently selected from H or methyl;

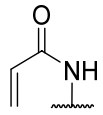
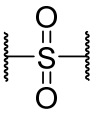
R^{15} and R^{16} are each independently -H, methyl, ethyl, propyl, isopropyl, hydroxyethyl, hydroxypropyl, cyanomethyl, cyanoethyl, methoxyethyl, methoxypropyl, ethoxyethyl, ethoxypropyl, isopropoxyethyl, isopropoxypropyl, cyclopropyl, cyclobutyl, dimethylaminoethyl, dimethylaminopropyl, diethylaminoethyl, diethylaminopropyl, methylethylaminoethyl, methylethylaminopropyl, fluoroethyl, fluoropropyl, methylthioethyl, methylthiopropyl, ethylthioethyl, ethylthiopropyl, isopropylthioethyl, isopropylthiopropyl, methylsulfonylethyl, methylsulfonylpropyl, ethylsulfonylethyl, ethylsulfonylpropyl, 2-hydroxy-2-methylpropyl, 3-hydroxy-3-methylbutyl, oxetan-3-yl, tetrahydrofuran-3-yl, or tetrahydro-2H-pyran-4-yl, or R^{15} and R^{16} together with the nitrogen atom to which they are attached form a substituted or unsubstituted 4- to 6-membered heteroalicyclic group selected from the following groups:



R^{18} is selected from -H, methyl, ethyl, formyl, acetyl, hydroxyethyl, hydroxypropyl,

methoxyethyl, methoxypropyl, ethoxyethyl, ethoxypropyl, methylsulfonyl, or ethylsulfonyl,

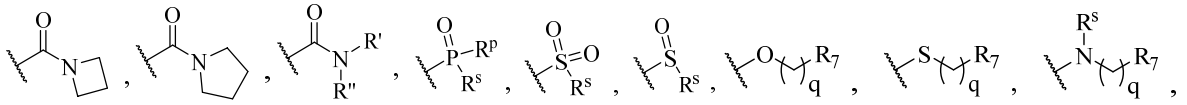
R^{19} and R^{20} are each independently selected from -H, methyl, ethyl, hydroxyl, cyano, fluoro, hydroxyethyl, hydroxypropyl, fluoroethyl, fluoropropyl, methoxyethyl, methoxypropyl, ethoxyethyl, ethoxypropyl, methylsulfonyl, ethylsulfonyl, amino, methylamino, dimethylamino, methoxy, or ethoxy;

and, when R^1 is , R_4 is 4-ethyl-piperazin-1-yl, and L is -O- or , R_2 and R_3 are not both hydrogen.

2. The compound of formula (I) according to claim 1, or a stereoisomer, a tautomer, a hydrate, a solvate, or a pharmaceutically acceptable salt thereof, wherein R_2 is -H, -F, -Cl, methyl or methoxy.

3. The compound of formula (I) according to any one of claims 1-2, or a stereoisomer, a tautomer, a hydrate, a solvate, or a pharmaceutically acceptable salt thereof, wherein

R_3 is selected from -H, -F, -Cl, -Br, hydroxyl, carboxyl, cyano, methyl, ethyl, propyl, isopropyl, tert-butyl, methoxy, ethoxy, propoxy, isopropoxy, cyclopropyloxy, cyclobutyloxy, methylthio, ethylthio, propylthio, isopropylthio, fluoromethyl, difluoromethyl, trifluoromethyl, fluoromethoxy, difluoromethoxy, trifluoromethoxy, ethynyl, ethenyl, cyclopropyl, cyclobutyl, cyclopropylmethyl, cyclobutylmethyl, amino, methylamino, ethylamino, dimethylamino, diethylamino, N-methyl-N-ethylamino, or the following groups:



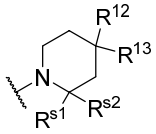
q is an integer of 2-3,

R^s is selected from -H, methyl, or ethyl, and R^p is selected from -H, methyl, or ethyl,

R’ and R’’ are each independently selected from -H, methyl, ethyl, propyl, isopropyl, cyclopropyl, or cyclobutyl,

R_7 is selected from -H, -F, hydroxyl, cyano, carboxyl, amino, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy, isopropoxy, methylamino, ethylamino, or dimethylamino.

4. The compound of formula (I) according to claim 1, or a stereoisomer, a tautomer, a hydrate, a solvate, or a pharmaceutically acceptable salt thereof, wherein

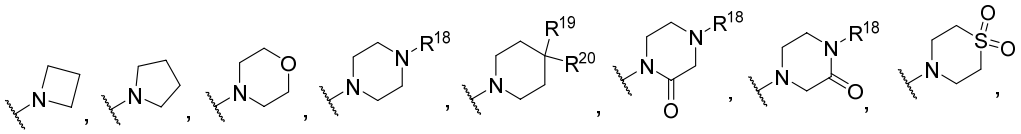
R^4 is 

R^{12} is -H, -F, methyl, or ethyl,

R^{13} is -H or -$NR^{15}R^{16}$,

R^{s1} and R^{s2} are H,

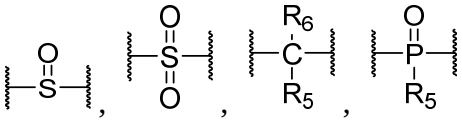
R^{15} and R^{16} are each independently -H, methyl, ethyl, propyl, isopropyl, hydroxyethyl, hydroxypropyl, cyanomethyl, cyanoethyl, methoxyethyl, methoxypropyl, ethoxyethyl, ethoxypropyl, isopropoxyethyl, isopropoxypropyl, cyclopropyl, cyclobutyl, dimethylaminoethyl, dimethylaminopropyl, diethylaminoethyl, diethylaminopropyl, methylethylaminoethyl, methylethylaminopropyl, fluoroethyl, fluoropropyl, methylthioethyl, methylthiopropyl, ethylthioethyl, ethylthiopropyl, isopropylthioethyl, isopropylthiopropyl, methylsulfonylethyl, methylsulfonylpropyl, ethylsulfonylethyl, ethylsulfonylpropyl, 2-hydroxy-2-methylpropyl, 3-hydroxy-3-methylbutyl, oxetan-3-yl, tetrahydrofuran-3-yl, or tetrahydro-2H-pyran-4-yl, or R^{15} and R^{16} together with the nitrogen atom to which they are attached form a substituted or unsubstituted 4- to 6-membered heteroalicyclic group selected from the following groups:



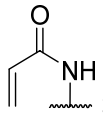
R^{18} is selected from -H, methyl, ethyl, formyl, acetyl, hydroxyethyl, hydroxypropyl, methoxyethyl, methoxypropyl, ethoxyethyl, ethoxypropyl, methylsulfonyl, or ethylsulfonyl,

R^{19} and R^{20} are each independently selected from -H, methyl, ethyl, hydroxyl, cyano, or fluoro.

5. The compound of formula (I) according to claim 1, or a stereoisomer, a tautomer, a hydrate, a solvate, or a pharmaceutically acceptable salt thereof, wherein X is N or CH;

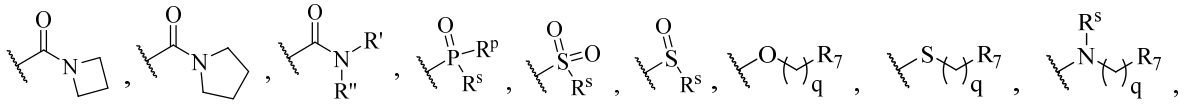
L is -O-, -S-, , or -NR_5-, wherein R_5 and R_6 are each

independently hydrogen, methyl, ethyl, propyl or isopropyl;

R_1 is ;

R_2 is -H, -F, -Cl, methyl, or methoxy;

R_3 is selected from -H, -F, -Cl, -Br, hydroxyl, carboxyl, cyano, methyl, ethyl, propyl, isopropyl, tert-butyl, methoxy, ethoxy, propoxy, isopropoxy, cyclopropyloxy, cyclobutyloxy, methylthio, ethylthio, propylthio, isopropylthio, fluoromethyl, difluoromethyl, trifluoromethyl, fluoromethoxy, difluoromethoxy, trifluoromethoxy, ethynyl, ethenyl, cyclopropyl, cyclobutyl, cyclopropylmethyl, cyclobutylmethyl, amino, methylamino, ethylamino, dimethylamino, diethylamino, N-methyl-N-ethylamino, or the following groups:



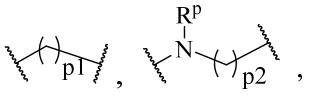
q is an integer of 2-3,

R^s is selected from -H, methyl, or ethyl, and R^p is selected from -H, methyl, or ethyl,

R' and R'' are each independently selected from -H, methyl, ethyl, propyl, isopropyl, cyclopropyl, or cyclobutyl,

R_7 is selected from -H, -F, hydroxyl, cyano, carboxyl, amino, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy, isopropoxy, methylamino, ethylamino, or dimethylamino;

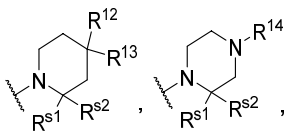
R^4 is $-T_1-R_8$,

T_1 is selected from: ,

p1 is 0, and p2 is an integer of 2-3;

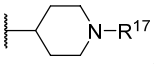
R^p is -H, methyl, or ethyl;

R^8 is selected from methylamino, ethylamino, propylamino, dimethylamino, diethylamino, N-methyl-N-ethylamino or the following groups:



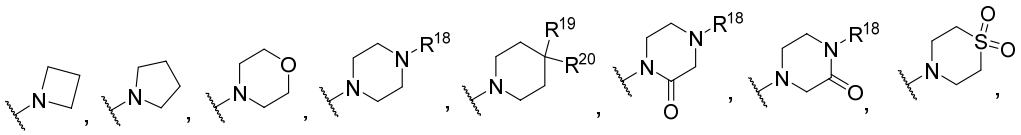
R^{12} is -H, -F, methyl, or ethyl,

R^{13} is -H, or $-NR^{15}R^{16}$,

R^{14} is -H, methyl, ethyl, propyl, isopropyl, or , wherein R^{17} is methyl, ethyl, propyl, or isopropyl,

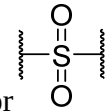
R^{s1} and R^{s2} are each independently selected from -H or methyl;

R^{15} and R^{16} are each independently -H, methyl, ethyl, propyl, isopropyl, hydroxyethyl, hydroxypropyl, cyanomethyl, cyanoethyl, methoxyethyl, methoxypropyl, ethoxyethyl, ethoxypropyl, isopropoxyethyl, isopropoxypropyl, cyclopropyl, cyclobutyl, dimethylaminoethyl, dimethylaminopropyl, diethylaminoethyl, diethylaminopropyl, methylethylaminoethyl, methylethylaminopropyl, fluoroethyl, fluoropropyl, methylthioethyl, methylthiopropyl, ethylthioethyl, ethylthiopropyl, isopropylthioethyl, isopropylthiopropyl, methylsulfonylethyl, methylsulfonylpropyl, ethylsulfonylethyl, ethylsulfonylpropyl, 2-hydroxy-2-methylpropyl, 3-hydroxy-3-methylbutyl, oxetanyl, tetrahydrofuranyl, or tetrahydropyranyl, or R^{15} and R^{16} together with the nitrogen atom to which they are attached form a substituted or unsubstituted 4- to 6-membered heteroalicyclic group selected from the following groups:



R^{18} is selected from -H, methyl, ethyl, formyl, acetyl, hydroxyethyl, hydroxypropyl, methoxyethyl, methoxypropyl, ethoxyethyl, ethoxypropyl, methylsulfonyl, or ethylsulfonyl,

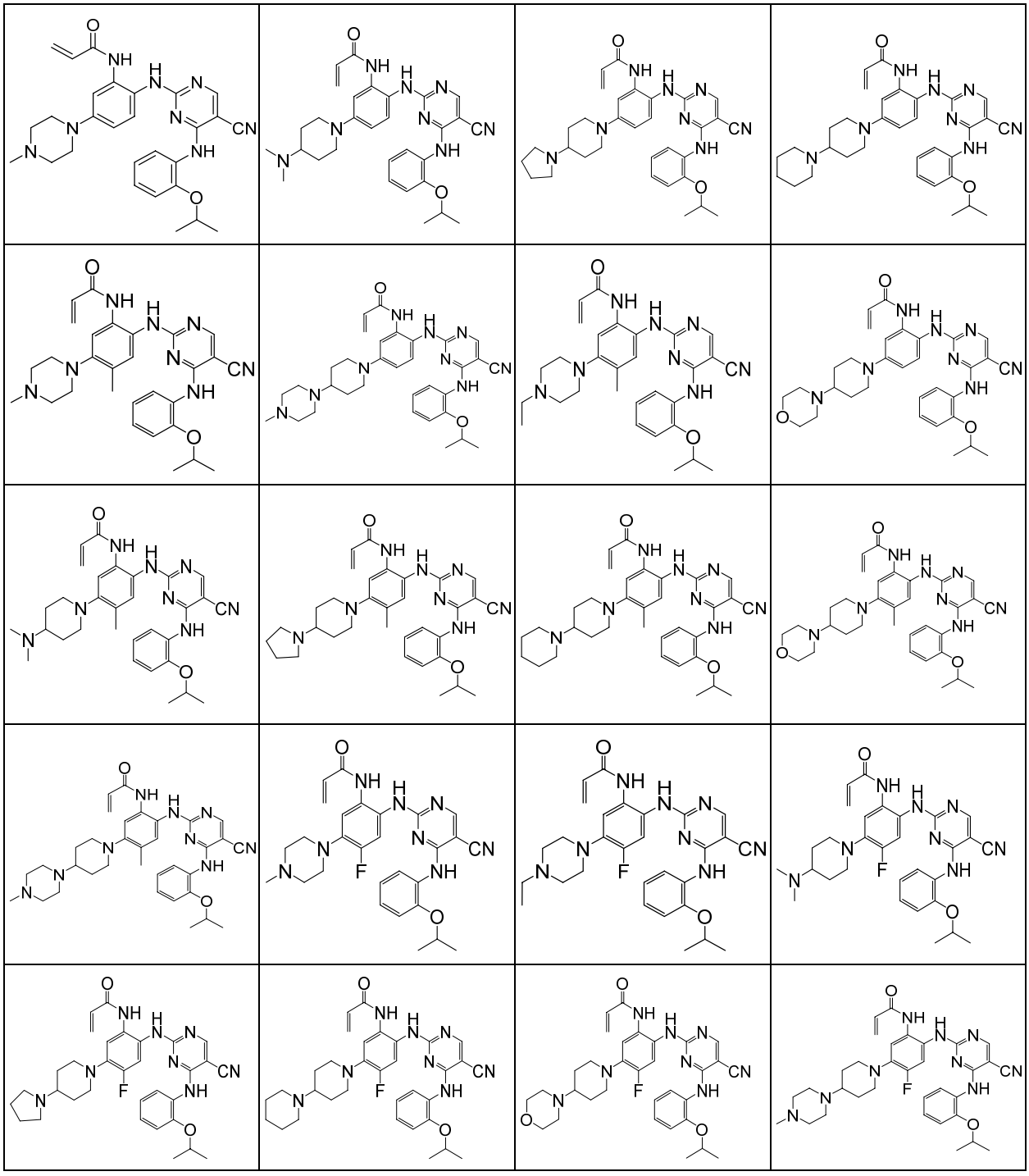
R^{19} and R^{20} are each independently selected from -H, methyl, ethyl, hydroxyl, cyano, fluoro, hydroxyethyl, hydroxypropyl, fluoroethyl, fluoropropyl, methoxyethyl, methoxypropyl, ethoxyethyl, ethoxypropyl, methylsulfonyl, ethylsulfonyl, amino, methylamino, dimethylamino, methoxy, or ethoxy,

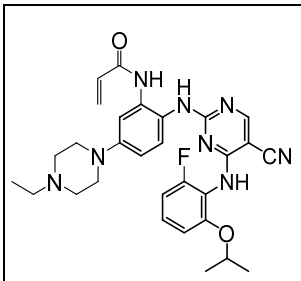
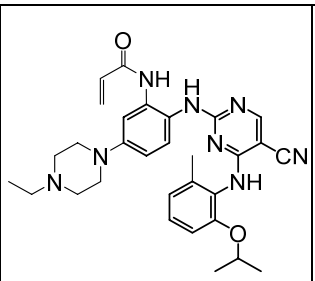
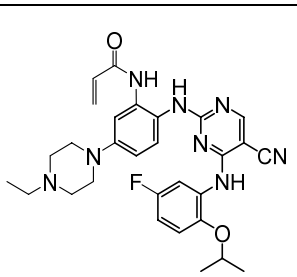
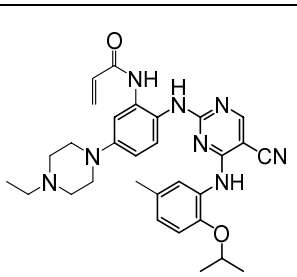
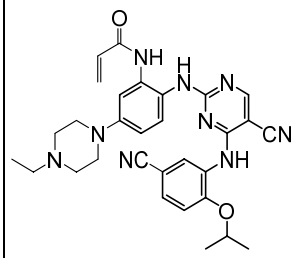
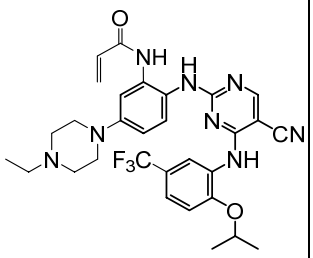
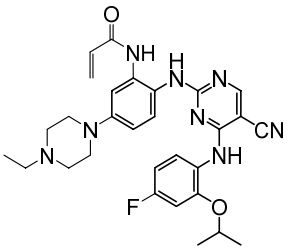
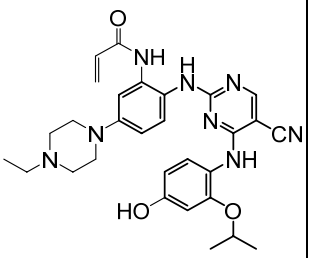
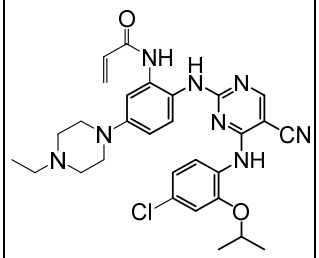
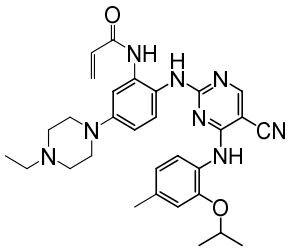
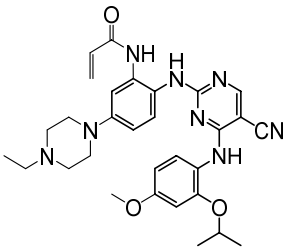
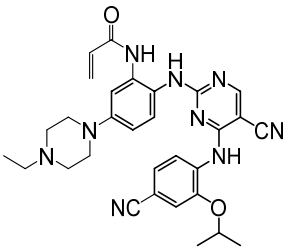
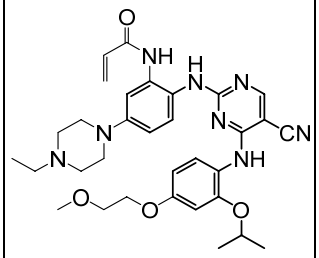
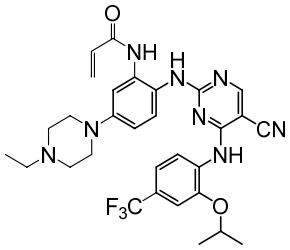
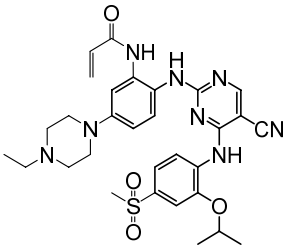
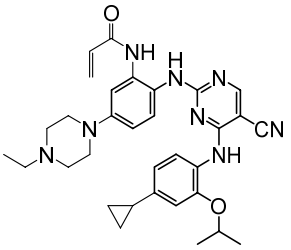
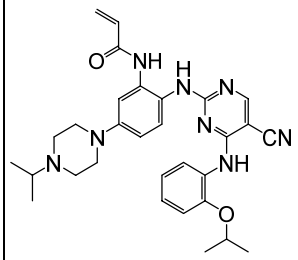
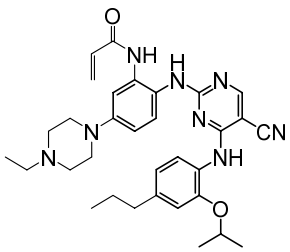
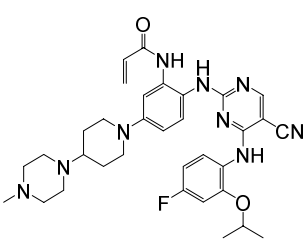
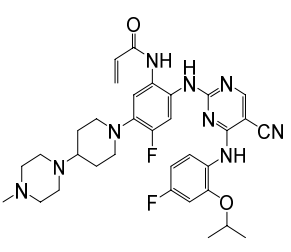
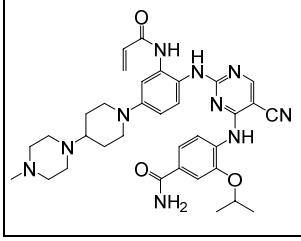
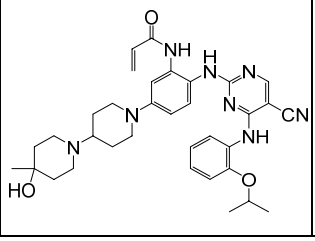
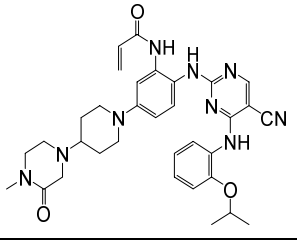
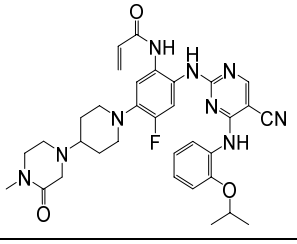
and, when R_4 is 4-ethyl-piperazin-1-yl, and L is -O- or , R_2 and R_3 are not both hydrogen.

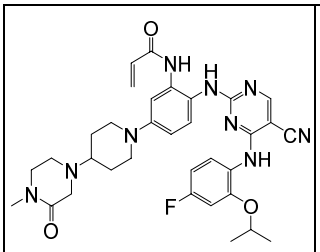
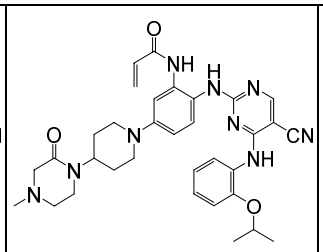
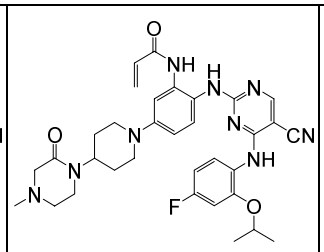
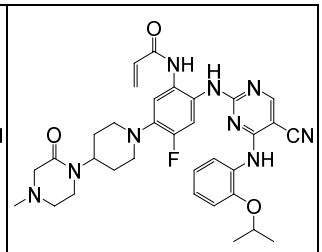
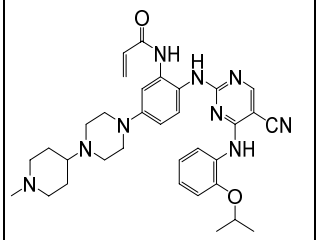
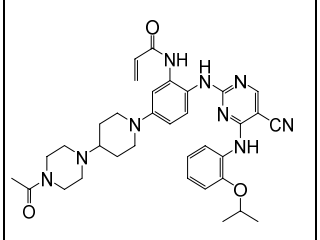
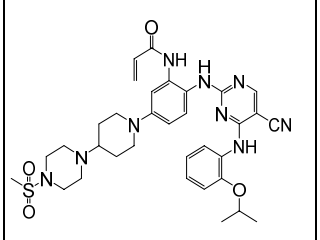
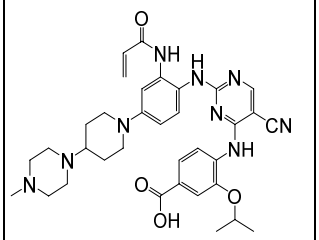
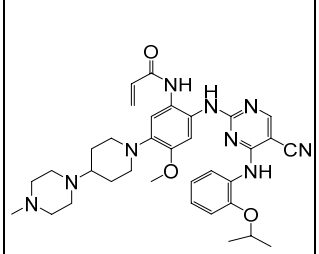
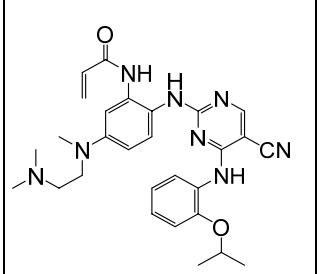
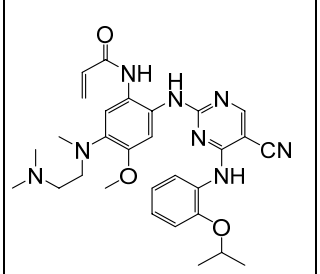
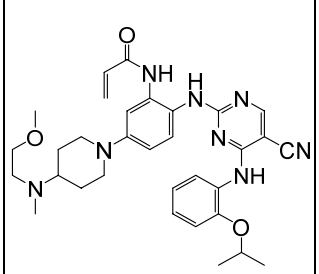
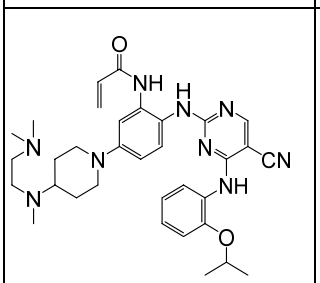
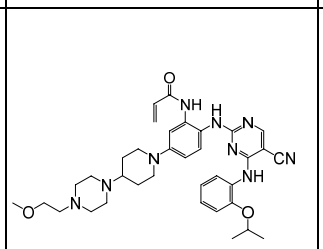
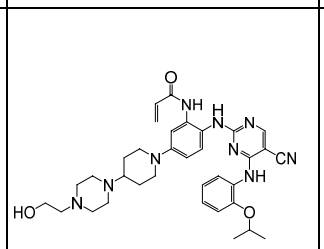
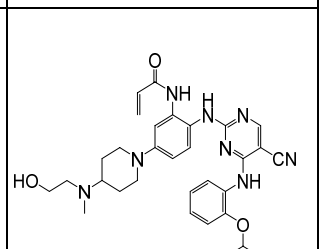
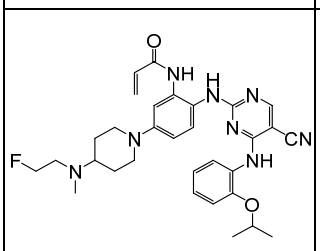
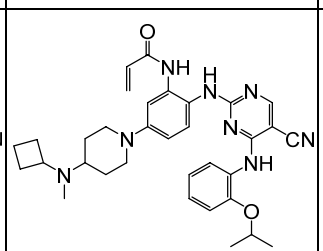
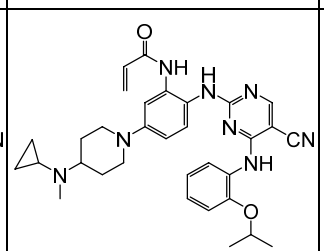
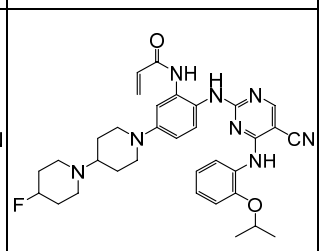
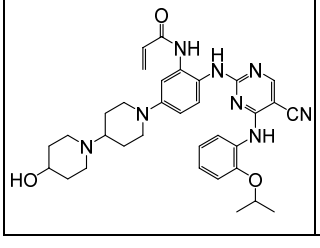
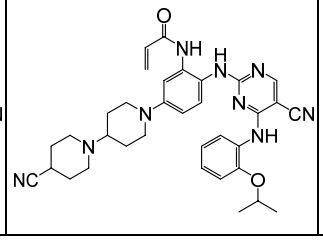
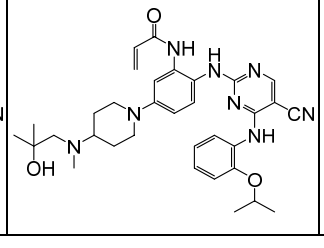
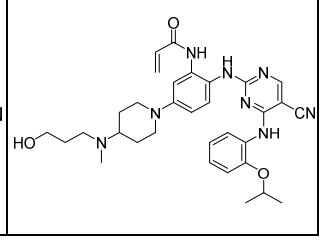
6. The compound of formula (I) according to claim 5, or a stereoisomer, a tautomer, a hydrate, a solvate, or a pharmaceutically acceptable salt thereof, wherein L is -O-, and, when R_4 is 4-

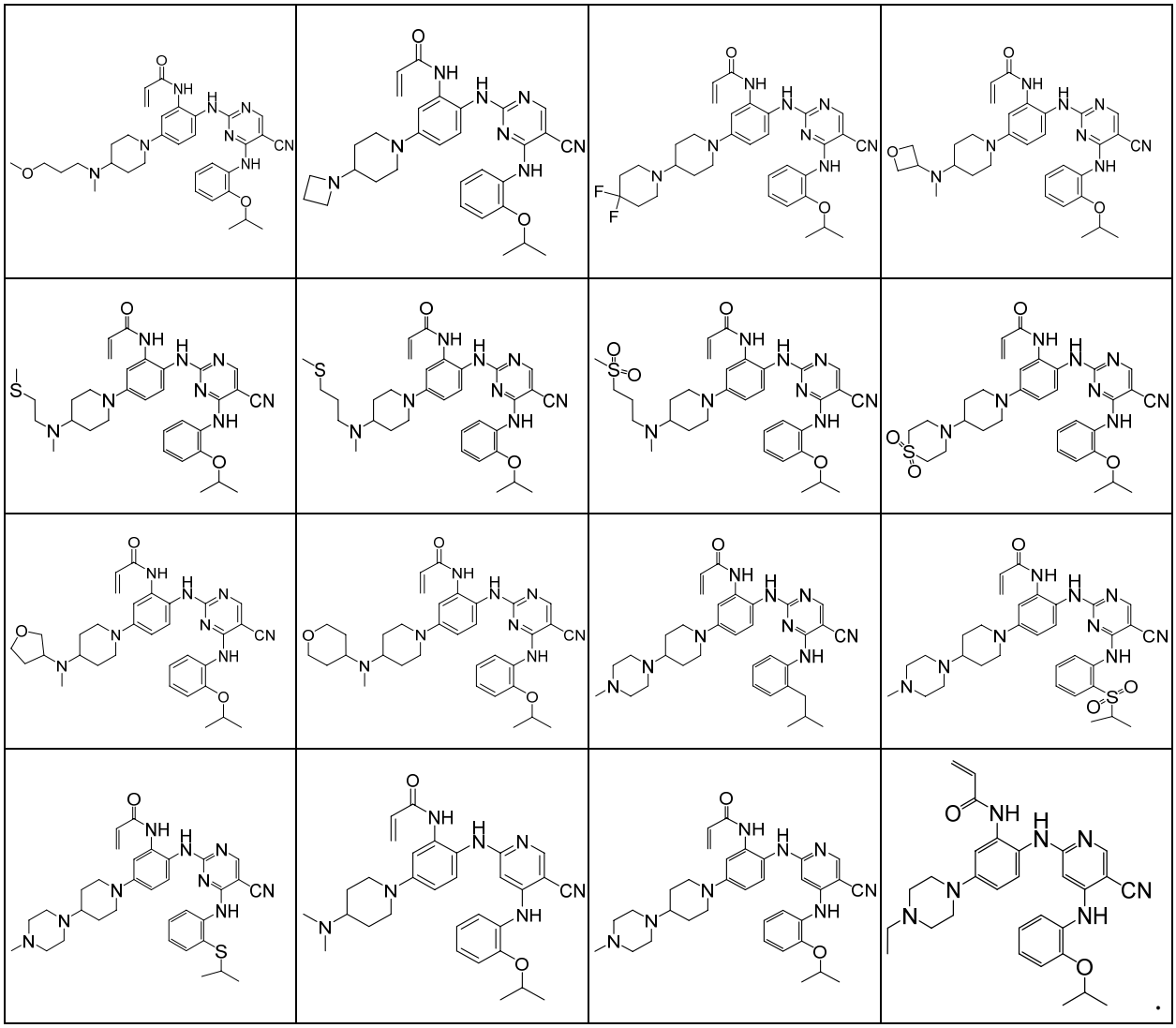
ethyl-piperazin-1-yl, R_2 and R_3 are not both hydrogen.

7. The compound of formula (I) according to claim 1, or a stereoisomer, a tautomer, a hydrate, a solvate, or a pharmaceutically acceptable salt thereof, wherein the compound is selected from:





8. A pharmaceutical composition, comprising the compound according to any one of claims 1-7, or a pharmaceutically acceptable salt, a hydrate, or a solvate thereof, and a pharmaceutically acceptable carrier or excipient.

9. The pharmaceutical composition according to claim 8, wherein the pharmaceutical composition further comprises one or more other therapeutic agents.

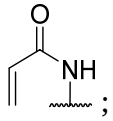
10. Use of the compound according to any one of claims 1-7, or a pharmaceutically acceptable salt, a hydrate, a solvate or a prodrug thereof, or the pharmaceutical composition according to claim 8 or 9 in the manufacture of a medicament for treating a disease selected from the group consisting of fundus oculi disease, xerophthalmia, psoriasis, vitiligo, dermatitis, alopecia areata,

rheumatoid arthritis, colitis, multiple sclerosis, systemic lupus erythematosus, Crohn's disease, atherosclerosis, pulmonary fibrosis, liver fibrosis, bone marrow fibrosis, non-small cell lung cancer, small cell lung cancer, breast cancer, pancreatic cancer, glioma, glioblastoma, ovarian cancer, cervical cancer, colorectal cancer, melanoma, endometrial cancer, prostate cancer, bladder cancer, leukemia, gastric cancer, liver cancer, gastrointestinal stromal tumor, thyroid cancer, chronic granulocytic leukemia, acute myelocytic leukemia, non-Hodgkin's lymphoma, nasopharyngeal cancer, esophageal cancer, brain tumor, B-cell and T-cell lymphoma, lymphoma, multiple myeloma, biliary tract cancerous sarcoma, and cholangiocarcinoma.

11. The compound of formula (I) according to claim 1, or a stereoisomer, a tautomer, a hydrate, a solvate, or a pharmaceutically acceptable salt thereof, wherein

X is N;

L is -O-;

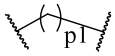
R_1 is 

;

R_2 is hydrogen, or C_1-C_3 alkoxy;

R_3 is selected from hydrogen, or halogen;

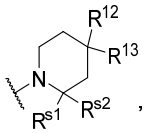
R_4 is -T_1-R_8;

T_1 is: 

;

p1 is 0;

R_8 is the following groups:



,

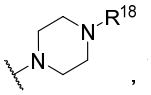
R^{12} is -H, -F, methyl, or ethyl,

R^{13} is -$NR^{15}R^{16}$,

R^{s1} and R^{s2} are each independently selected from H or methyl;

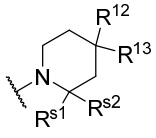
R^{15} and R^{16} are each independently -H, methyl, ethyl, propyl, isopropyl, hydroxyethyl, hydroxypropyl, fluoroethyl, fluoropropyl, 2-hydroxy-2-methylpropyl, or 3-hydroxy-3-

methylbutyl, or R^{15} and R^{16} together with the nitrogen atom to which they are attached form a substituted or unsubstituted 4- to 6-membered heteroalicyclic group selected from the following group:



R^{18} is selected from -H, methyl, ethyl.

12. The compound of formula (I) according to claim 11, or a stereoisomer, a tautomer, a hydrate, a solvate, or a pharmaceutically acceptable salt thereof, wherein

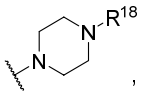
R^4 is 

R^{12} is -H,

R^{13} is $-NR^{15}R^{16}$,

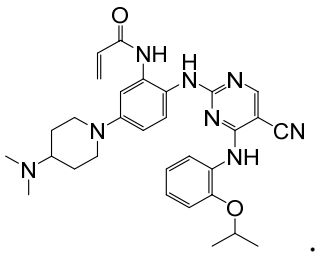
R^{s1} and R^{s2} are H,

R^{15} and R^{16} are each independently -H, methyl, ethyl, propyl, isopropyl, hydroxyethyl, hydroxypropyl, 2-hydroxy-2-methylpropyl, or 3-hydroxy-3-methylbutyl, or R^{15} and R^{16} together with the nitrogen atom to which they are attached form a substituted or unsubstituted 4- to 6-membered heteroalicyclic group selected from the following group:

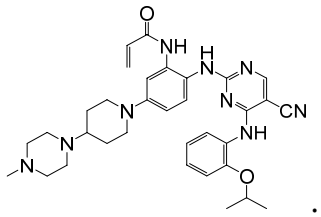


R^{18} is selected from -H, methyl, or ethyl.

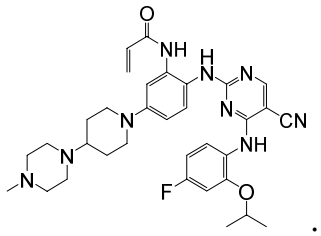
13. A compound of the following structure, or a pharmaceutically acceptable salt thereof:



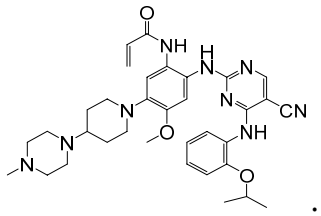
14. A compound of the following structure, or a pharmaceutically acceptable salt thereof:



15. A compound of the following structure, or a pharmaceutically acceptable salt thereof:



16. A compound of the following structure, or a pharmaceutically acceptable salt thereof:



17. A compound of the following structure, or a pharmaceutically acceptable salt thereof:

