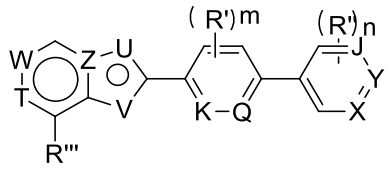
What is claimed is:

1. A heteroaryl compound having a structure of formula (I), or a pharmaceutically acceptable salt, a solvate, a hydrate, an isotopically labeled derivative or a radiolabeled derivative thereof,




(I)

wherein, ~~W is N-R or C-R$^1$;~~

~~R is absent or $C_{1-6}$ alkyl, and the $C_{1-6}$ alkyl of which is optionally substituted by the substituent selected from the group consisting of OH, halogen, $C_{3-6}$ heterocycloalkyloxy, toluenesulfonyloxy and phenyl which is further optionally substituted by $C_{1-3}$ alkoxy, OH or $C_{1-3}$ alkyl; the heteroatom contained in the $C_{3-6}$ heterocycloalkyloxy is selected from the group consisting of N, O and S;~~

~~R$^1$ is H, halogen, OH, $NH_2$, $C_{1-6}$ alkoxycarbonyl, $C_{1-6}$ alkyl, $C_{1-6}$ alkylamino or $C_{1-6}$ alkoxy, and OH, $NH_2$, $C_{1-6}$ alkoxycarbonyl, $C_{1-6}$ alkyl, $C_{1-6}$ alkylamino or $C_{1-6}$ alkoxy of which is optionally substituted by the substituent selected from the group consisting of halogen, OH, $C_{3-6}$ heterocycloalkyloxy and toluenesulfonyloxy;~~

~~T is C-R$^3$ or N;~~

~~R$^3$ is H, OH, $C_{1-6}$ alkoxy or halogen;~~

~~Z is N or C;~~

~~U is N-R$^4$, S, O or C-R$^5$;~~

~~R$^4$ is absent, H, $C_{1-6}$ alkyl, $C_{1-6}$ alkoxycarbonyl, $C_{1-6}$ alkylcarbonyl or benzoyl, and the $C_{1-6}$ alkyl, $C_{1-6}$ alkoxycarbonyl, $C_{1-6}$ alkylcarbonyl and benzoyl of which is optionally substituted by the substituents selected from the group consisting of halogen, OH, $C_{1-3}$ alkoxy, $C_{3-6}$ heterocycloalkyloxy and toluenesulfonyloxy;~~

~~R$^5$ is H or $C_{1-6}$ alkyl, and the $C_{1-6}$ alkyl is optionally substituted by halogen and/or OH;~~

~~V is CH, N or NH;~~

Q is CH or N;

X is CH or N;

Y is CR$^6$ or N;

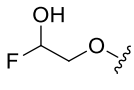
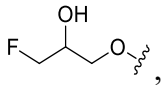
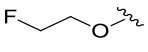
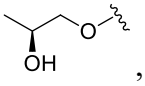
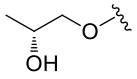
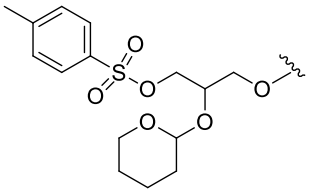
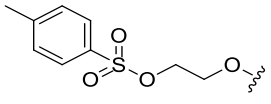
$R^6$ is selected from the group consisting of H, $NH_2$ and a $C_{1-6}$ alkoxy, and $NH_2$ and the $C_{1-6}$ alkoxy is optionally substituted by $C_{1-3}$ alkyl and/or halogen;

J is CH or N;

K is CH or N;

provided that X and Y are not N simultaneously, and J and Y are not N simultaneously;

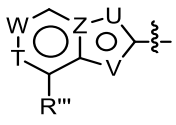
R' is halogen, OH, $C_{1-6}$ alkyl or $C_{1-6}$ alkoxy;

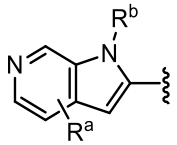
R'' is Br, I, OH, $NH_2$, , , , ethoxy, , , , , $C_{1-6}$ alkylamino or $C_{3-6}$ heterocycloalkyl, and OH, $NH_2$, $C_{1-6}$ alkylamino and $C_{3-6}$ heterocycloalkyl of which is optionally substituted by the substituent selected from the group consisting of oxo, OH, halogen, $C_{3-6}$ cycloalkyl, $C_{1-4}$ alkoxy carbonyl, $C_{3-6}$ heterocycloalkyloxy, toluenesulfonyloxy and phenyl which is further optionally substituted by OH and/or $C_{1-3}$ alkoxy;

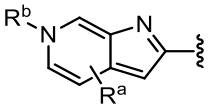
~~R''' is H, OH or halogen;~~

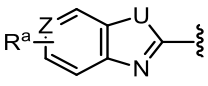
m is 0, 1, 2;

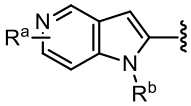
n is 1, 2; ~~provided that U and V are both containing N atom, $R^1$ and $R^3$ are not $CF_3$ or Cl;~~

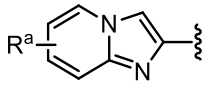
the structural unit  is selected from the group consisting of


Formula I-(a)

, 
Formula I-(b)

, 
Formula I-(c)

, 
Formula I-(d)

and 
Formula I-(e)

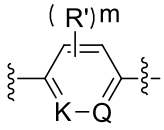
;

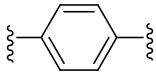
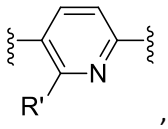
wherein, in Formula I-(c), U is O and Z is N; or, U is S and Z is CH;

$R^a$ is selected from the group consisting of H, OH, halogen, $C_{1-3}$ alkyl, $C_{1-3}$ alkoxy, $NH_2$, $C_{1-3}$ alkylamino and $C_{1-6}$ alkoxycarbonyl, and OH, $C_{1-3}$ alkyl, $C_{1-3}$ alkoxy, $NH_2$, $C_{1-3}$ alkylamino or $C_{1-6}$ alkoxycarbonyl of which is optionally substituted by OH, halogen, $C_{2-6}$ heterocycloalkyloxy or toluenesulfonyloxy;

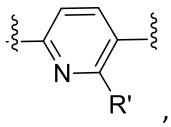
$R^b$ is selected from the group consisting of H, $C_{1-6}$ alkyl, $C_{1-6}$ alkoxycarbonyl, $C_{1-3}$ alkylcarbonyl, benzyl and benzoyl, and the $C_{1-6}$ alkyl, $C_{1-6}$ alkoxycarbonyl, $C_{1-3}$ alkylcarbonyl or benzoyl of which is optionally substituted by halogen, OH, $C_{1-3}$ alkoxy, $C_{2-6}$ heterocycloalkyloxy or toluenesulfonyloxy.

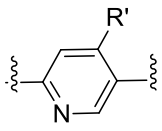
2. The heteroaryl compound having a structure of formula (I), or a pharmaceutically acceptable salt, a solvate, a hydrate, an isotopically labeled derivative or a radiolabeled derivative thereof according to claim 1, wherein the moiety of

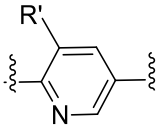



is selected from the group consisting of , 

,

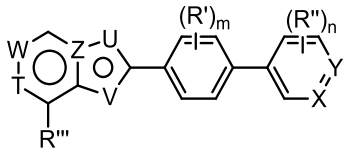


, 

, and 

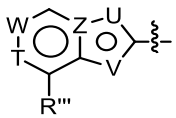
, wherein R' is H or F.

3. The heteroaryl compound having a structure of formula (I), or a pharmaceutically acceptable salt, a solvate, a hydrate, an isotopically labeled derivative or a radiolabeled derivative thereof according to claim 1, which is of the structure of formula (II),

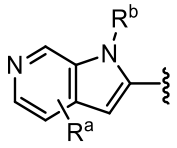



(II)

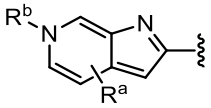
wherein, X is CH or N; Y is CH or N, provided that X and Y are not N simultaneously;

the structural unit 

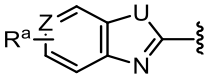
is selected from the group consisting of



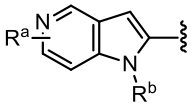
Formula I-(a) ,



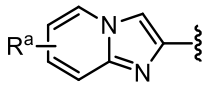
Formula I-(b) ,



Formula I-(c) ,



Formula I-(d) and



Formula I-(e) ;

wherein, in Formula I-(c), U is O and Z is N; or, U is S and Z is CH;

$R^a$ is selected from the group consisting of H, OH, halogen, $C_{1-3}$ alkyl, $C_{1-3}$ alkoxy, $NH_2$, $C_{1-3}$ alkylamino and $C_{1-6}$ alkoxycarbonyl, and OH, $C_{1-3}$ alkyl, $C_{1-3}$ alkoxy, $NH_2$, $C_{1-3}$ alkylamino or $C_{1-6}$ alkoxycarbonyl of which is optionally substituted by OH, halogen, $C_{3-6}$ heterocycloalkyloxy or toluenesulfonyloxy;

$R^b$ is selected from the group consisting of H, $C_{1-6}$ alkyl, $C_{1-6}$ alkoxycarbonyl, $C_{1-3}$ alkylcarbonyl, benzyl and benzoyl, and the $C_{1-6}$ alkyl, $C_{1-6}$ alkoxycarbonyl, $C_{1-3}$ alkylcarbonyl or benzoyl of which is optionally substituted by halogen, OH, $C_{1-3}$ alkoxy, $C_{3-6}$ heterocycloalkyloxy or toluenesulfonyloxy.

4. The heteroaryl compound having a structure of formula (I), or a pharmaceutically acceptable salt, a solvate, a hydrate, an isotopically labeled derivative or a radiolabeled derivative thereof according to claim 1, wherein,

~~R is $C_{1-3}$ alkyl which is optionally substituted by the substituent selected from the group consisting of F, OH, *p*-toluenesulfonyloxy, $C_{3-5}$ heterocycloalkyloxy and phenyl which is optionally substituted by OH or methoxy;~~

~~and/or, $R^1$ is H, F, OH, $NH_2$, $C_{1-3}$ alkoxycarbonyl, $C_{1-3}$ alkyl, $C_{1-3}$ alkylamino or $C_{1-3}$ alkoxy; and OH, $NH_2$, $C_{1-3}$ alkoxycarbonyl, $C_{1-3}$ alkyl, $C_{1-3}$ alkylamino or $C_{1-3}$ alkoxy of which is optionally substituted by the substituent selected from the group consisting of F, OH, *p*-toluenesulfonyloxy and $C_{3-5}$ heterocycloalkyloxy;~~

~~and/or, $R^3$ is $C_{1-3}$ alkoxy, F or Cl;~~

~~and/or, $R^4$ is $C_{1-3}$ alkyl, $C_{1-4}$ alkoxycarbonyl, $C_{1-3}$ alkylcarbonyl or benzoyl, and $C_{1-3}$ alkyl, $C_{1-4}$ alkoxycarbonyl, $C_{1-3}$ alkylcarbonyl or benzoyl of which is optionally substituted by the substituents selected from the group consisting of F, OH, methoxy, $C_{3-5}$ heterocycloalkyloxy and *p*-toluenesulfonyloxy;~~

~~and/or, $R^5$ is $C_{1-3}$ alkyl;~~

~~and/or,~~ $R^6$ is selected from the group consisting of H, $NH_2$ and a $C_{1-3}$ alkoxy, and $NH_2$ and the $C_{1-3}$ alkoxy is optionally substituted by $C_{1-3}$ alkyl and/or F;

and/or, R' is F, $C_{1-3}$ alkyl or $C_{1-3}$ alkoxy;

and/or, R'' is $C_{1-3}$ alkylamino or $C_{3-5}$ heterocycloalkyl, and OH, $NH_2$, $C_{1-3}$ alkylamino or $C_{3-5}$ heterocycloalkyl of which is optionally substituted by the substituent selected from the group consisting of oxo, OH, F, Cl, $C_{3-5}$ cycloalkyl, $C_{1-3}$ alkoxy carbonyl, $C_{3-5}$ heterocycloalkyloxy, *p*-toluenesulfonyloxy and phenyl which is further optionally substituted by OH, methoxy or ethoxy~~;~~

~~and/or, R''' is F or Cl~~.

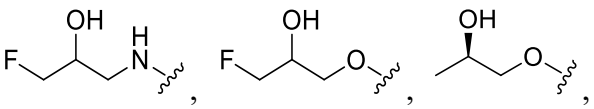
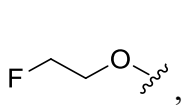
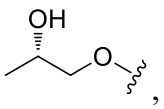
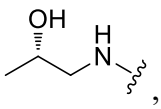
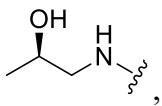
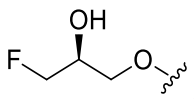
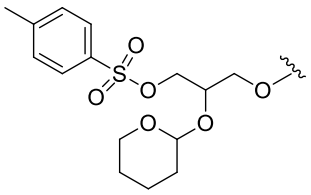
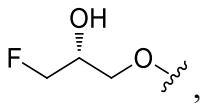
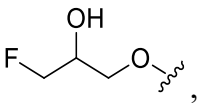
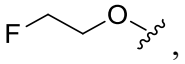
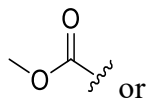
5. The heteroaryl compound having a structure of formula (I), or a pharmaceutically acceptable salt, a solvate, a hydrate, an isotopically labeled derivative or a radiolabeled derivative thereof according to claim 3, wherein,

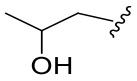
~~in formula I-(c), Z is CH, U is S or O;~~

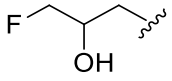
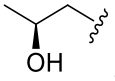
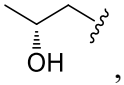
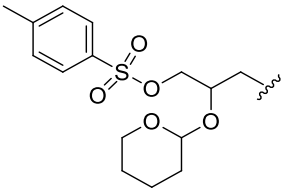
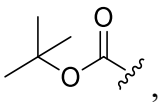
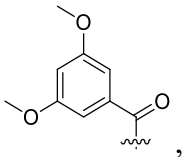
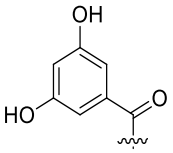
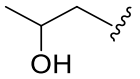
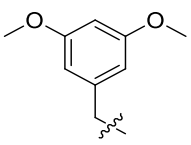
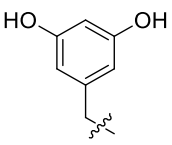
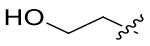
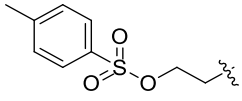
~~and/or,~~ $R^a$ is selected from the group consisting of H, OH, F, Cl, methyl, ethyl, methoxy, ethoxy, *n*-propoxy, $NH_2$, N-methylamino, N-ethylamino, N-*n*-propylamino, N,N-dimethylamino, methylethylamino, methoxycarbonyl and *tert*-butoxy carbonyl, and OH, methyl, ethyl, methoxy, ethoxy, *n*-propoxy, $NH_2$, N-methylamino, N-ethylamino, N-*n*-propylamino, N,N-dimethylamino, methylethylamino, methoxycarbonyl and *tert*-butoxy carbonyl of which is optionally substituted by OH, F, Cl, $C_{3-5}$ heterocycloalkyloxy or toluenesulfonyloxy;

and/or, $R^b$ is H, $C_{1-3}$ alkyl, $C_{1-4}$ alkoxycarbonyl, $C_{1-3}$ alkylcarbonyl, benzyl or benzoyl, and the $C_{1-3}$ alkyl, $C_{1-4}$ alkoxycarbonyl, $C_{1-3}$ alkylcarbonyl or benzoyl of which is optionally substituted by F, Cl, OH, $C_{1-3}$ alkoxy, $C_{3-5}$ heterocycloalkyloxy or toluenesulfonyloxy.

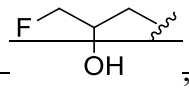
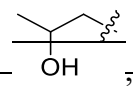
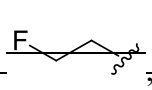
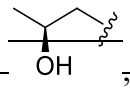
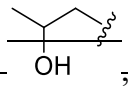
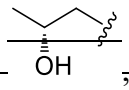
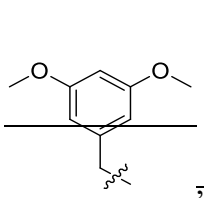
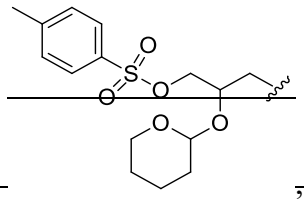
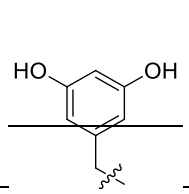
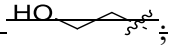
6. The heteroaryl compound having a structure of formula (I), or a pharmaceutically acceptable salt, a solvate, a hydrate, an isotopically labeled derivative or a radiolabeled derivative thereof according to claim 3, wherein,

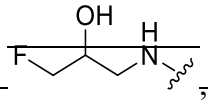
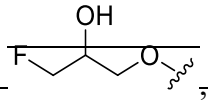
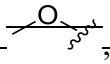
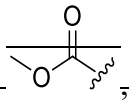
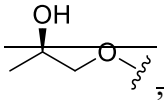
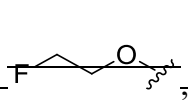
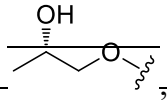
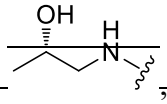
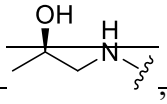
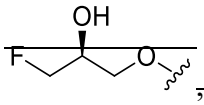
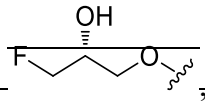
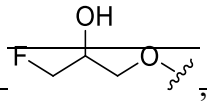
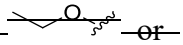
$R^a$ is H, F, OH, $NH_2$, methoxy, ethoxy, , , , , , , , , , , , ,  or

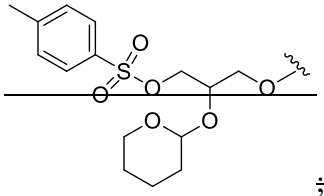

;

$R^b$ is H, methyl, , , , , , , , , , , , , , or .

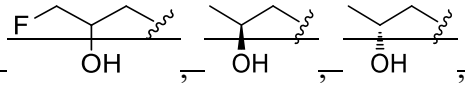
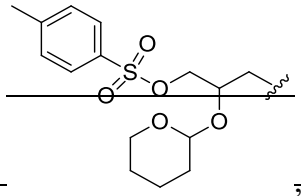
7. The heteroaryl compound having a structure of formula (I), or a pharmaceutically acceptable salt, a solvate, a hydrate, an isotopically labeled derivative or a radiolabeled derivative thereof according to claim 1, wherein,

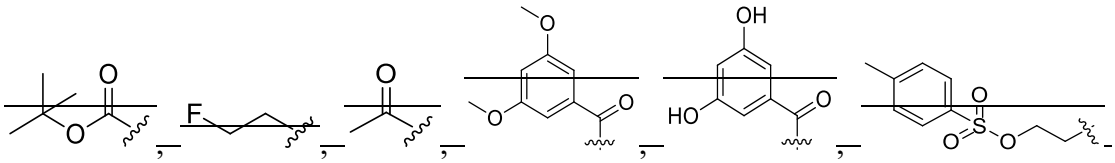
~~R is~~ , , , , , , , , , ~~or~~ ;

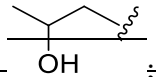
~~and/or, $R^1$ is F, OH, $NH_2$,~~ , , , , , , , , , , , , , ~~or~~



~~and/or, $R^3$ is F, OH, methoxy;~~

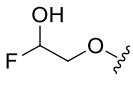
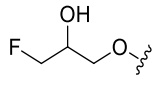
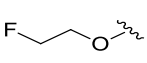
~~and/or, $R^4$ is H, methyl,~~  

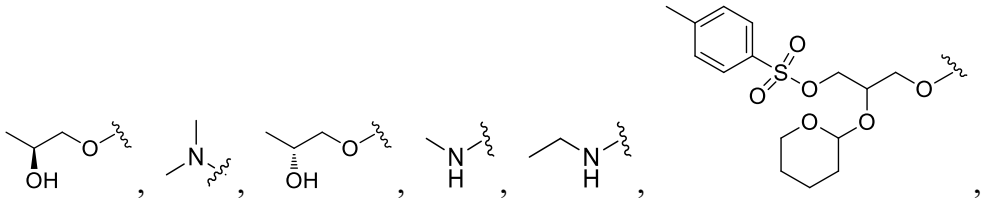


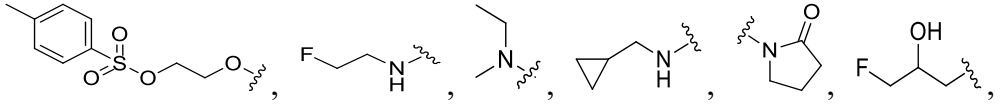
~~or~~ 

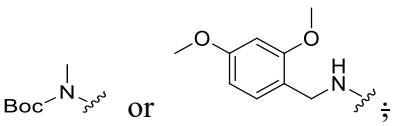
~~and/or, $R^5$ is H, methyl or ethyl;~~

~~and/or,~~ R' is F, OH, methyl or methoxy;

and/or, R'' is OH, $NH_2$, methyl, , , , ethoxy,

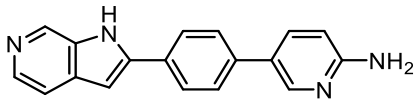


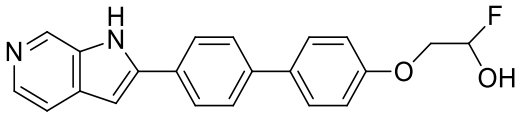


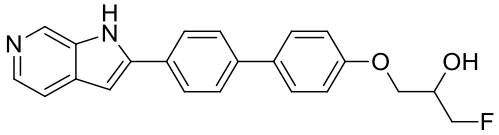
 or

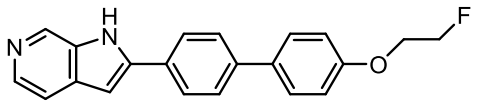
~~and/or, R''' is H or F~~.

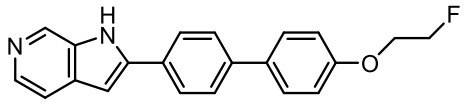
8. A heteroaryl compound having a structure of formula (I), or a pharmaceutically acceptable salt, a solvate, a hydrate, an isotopically labeled derivative or a radiolabeled derivative thereof, which is selected from the group consisting of

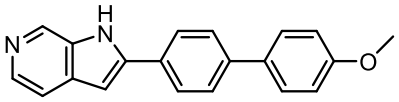


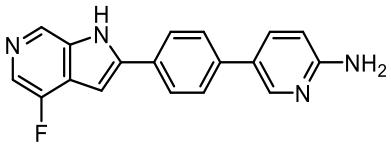


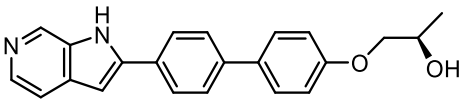


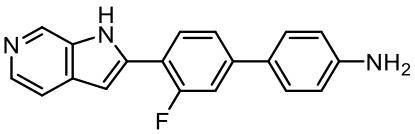


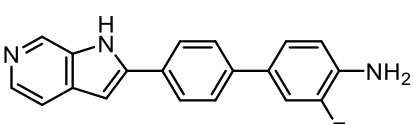




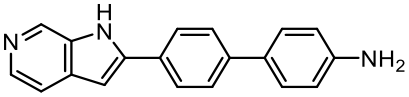


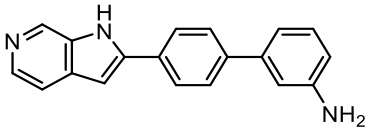


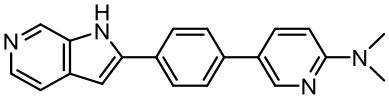


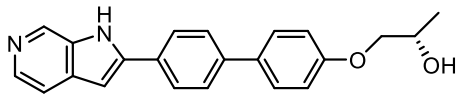


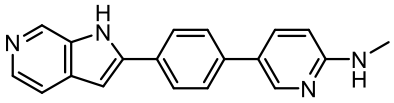


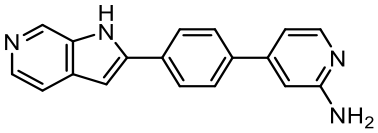


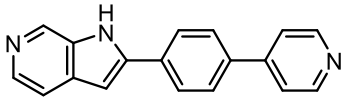


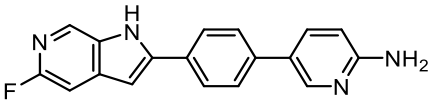


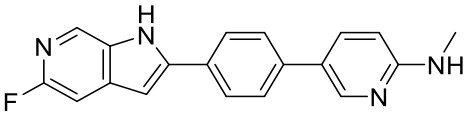


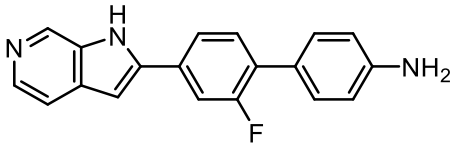


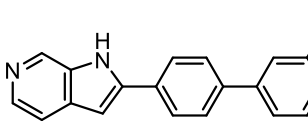


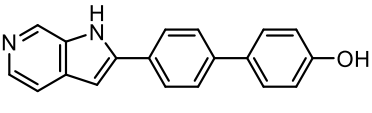


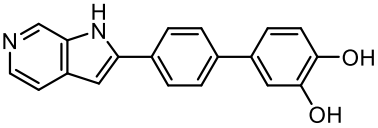


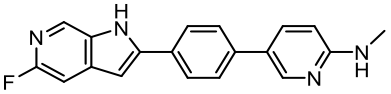


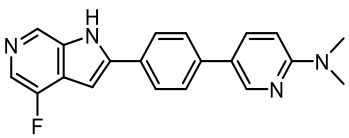


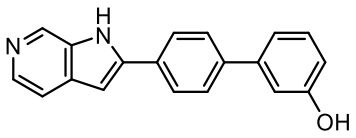


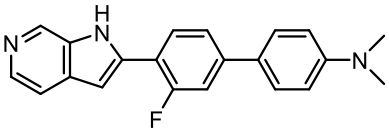


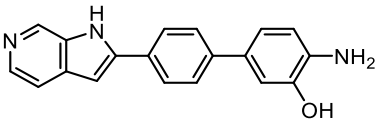


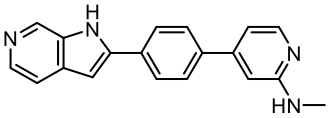


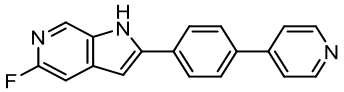


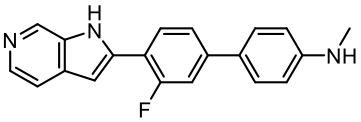


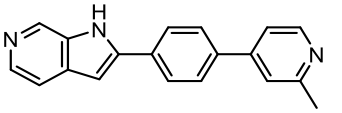


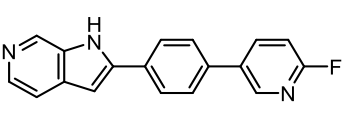




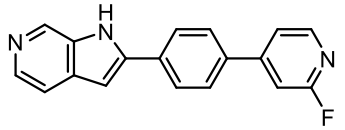


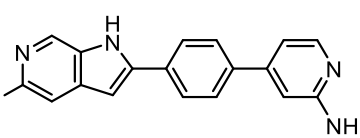


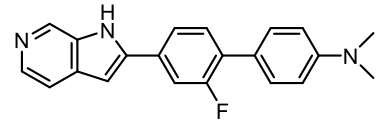


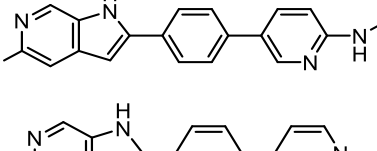


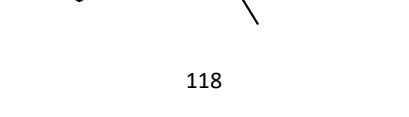


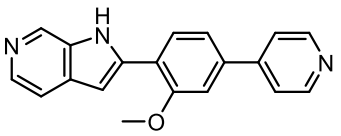


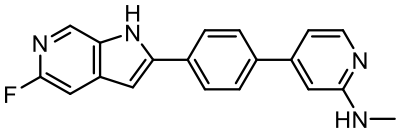


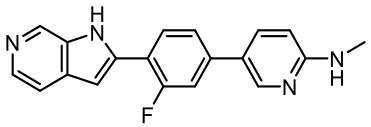


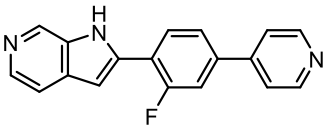


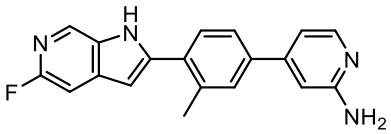


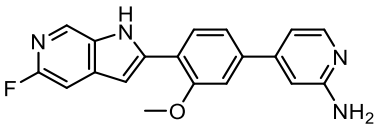


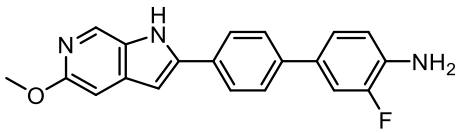


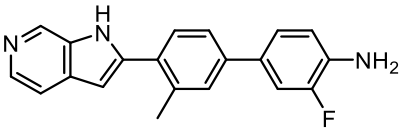


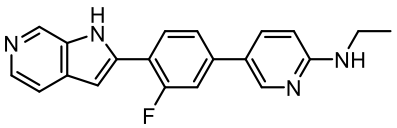


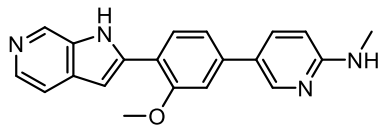


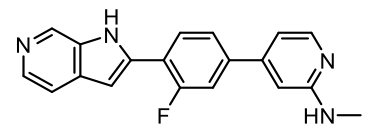


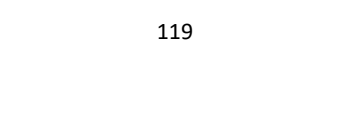


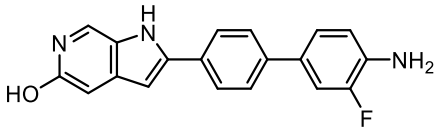


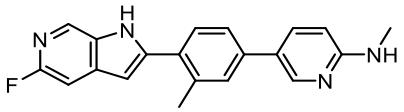


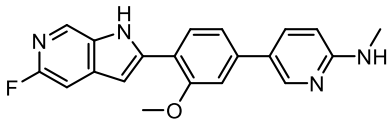


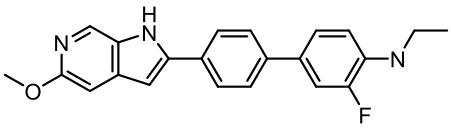


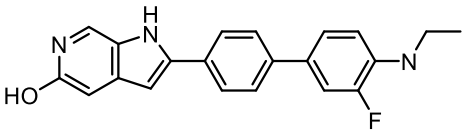


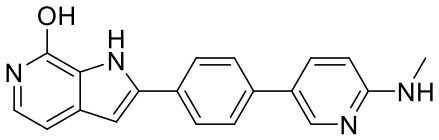


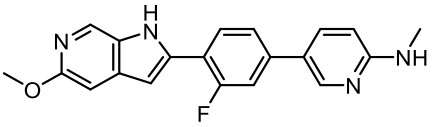


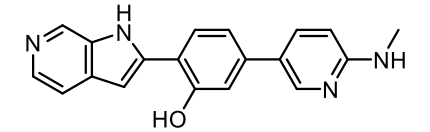


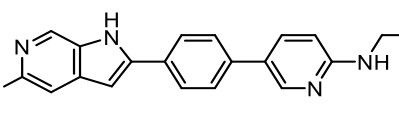




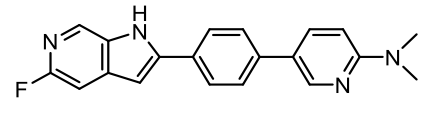


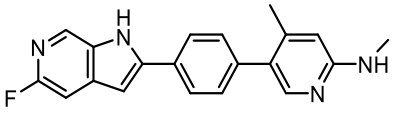


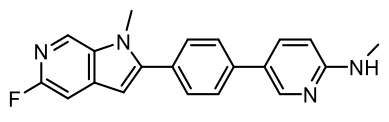


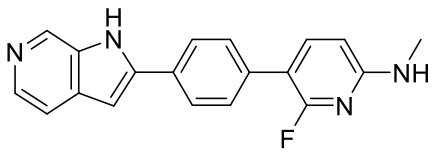


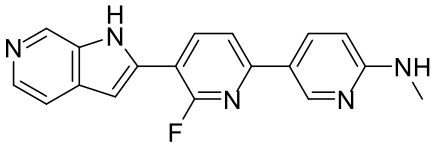


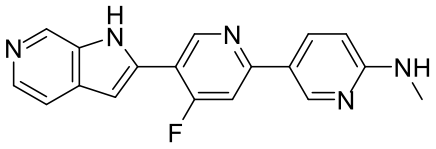


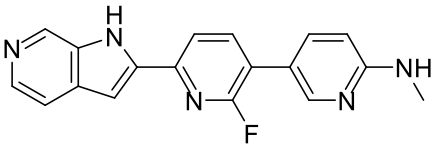


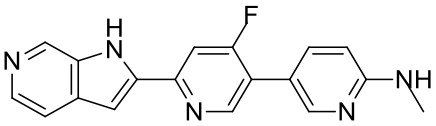


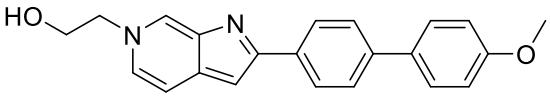


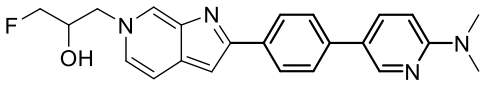


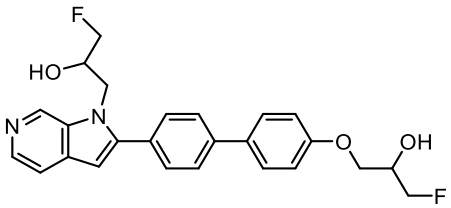


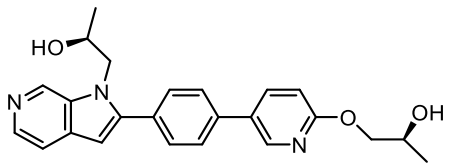


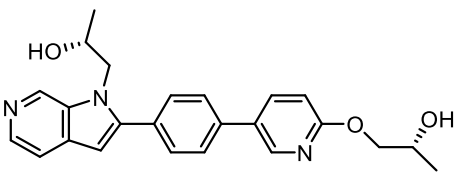


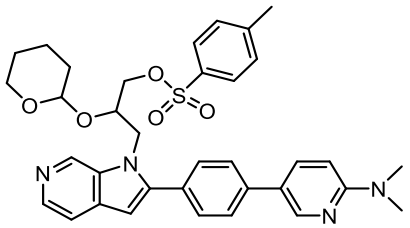


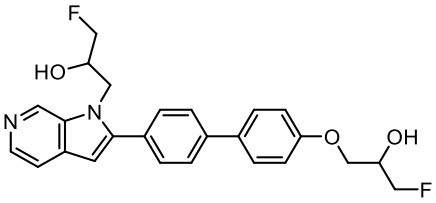


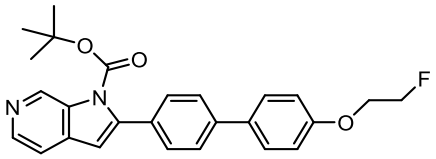


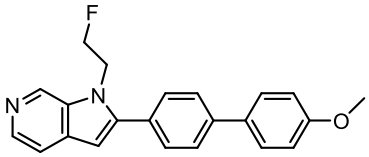


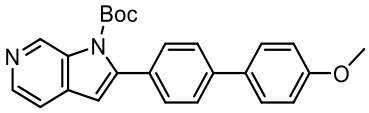


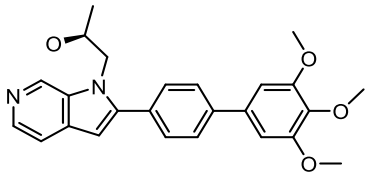


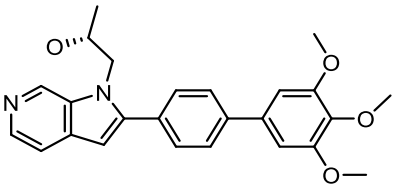


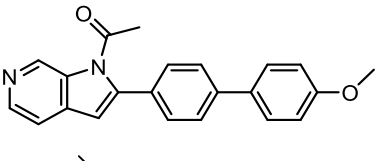


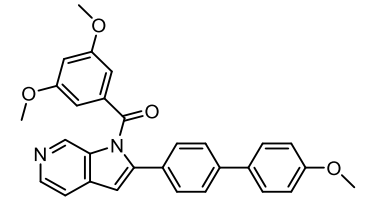


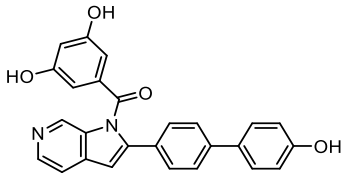


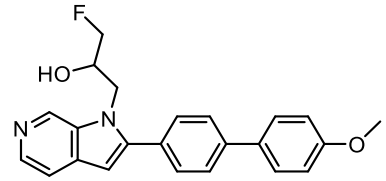


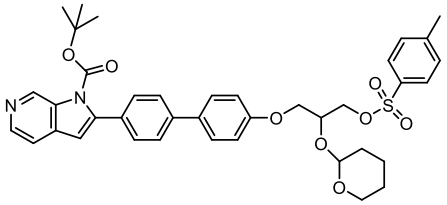


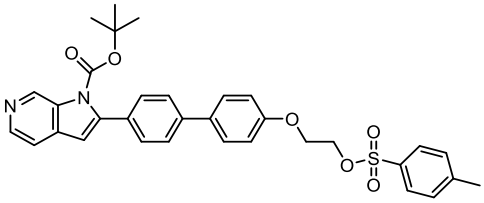


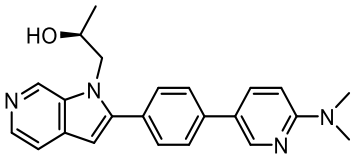


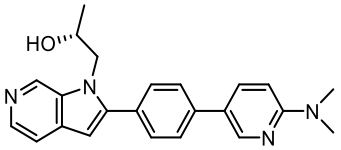


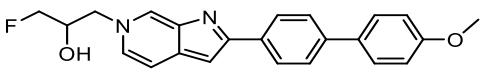


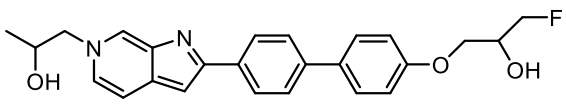


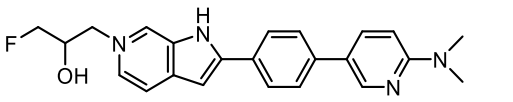


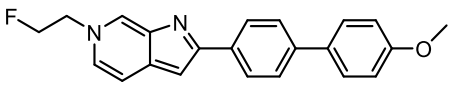


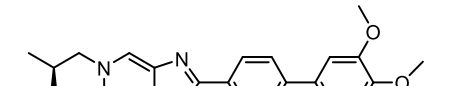


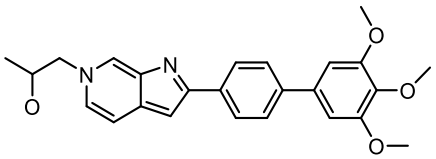


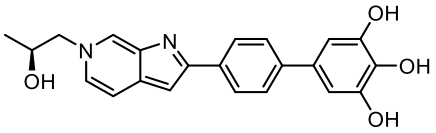


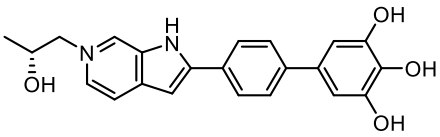


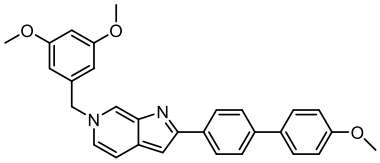


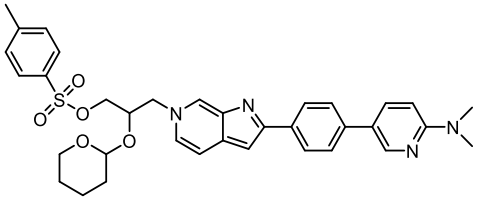


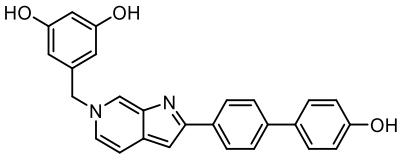


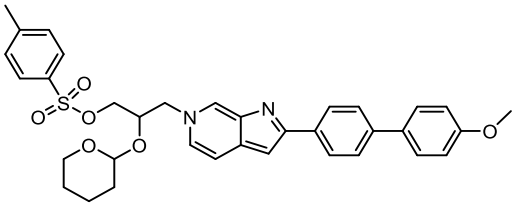


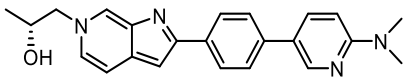


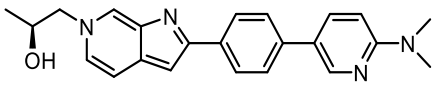


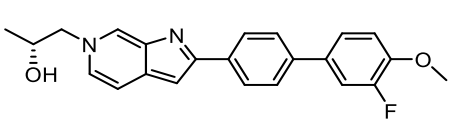


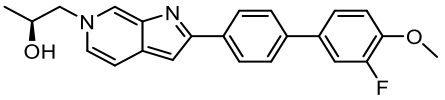


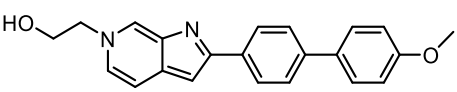


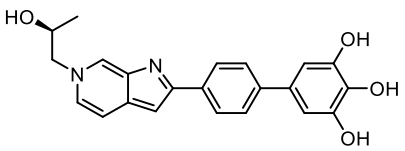


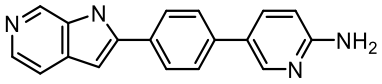


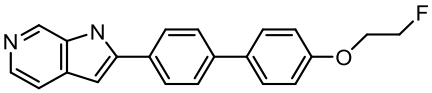


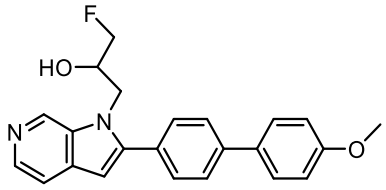


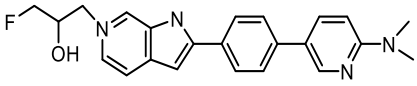


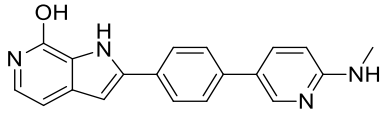


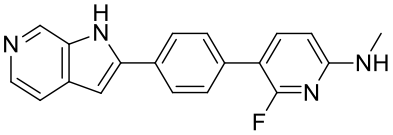


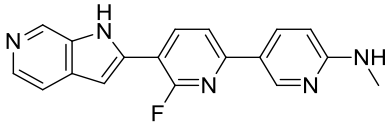


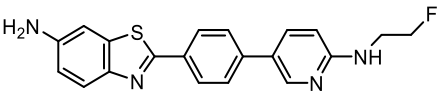


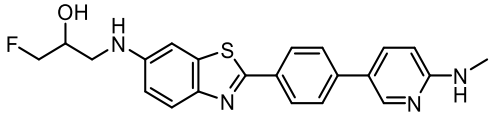


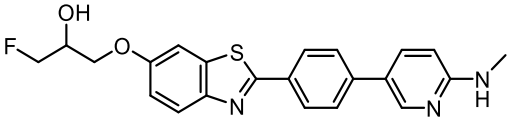


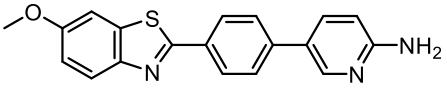


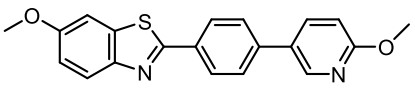


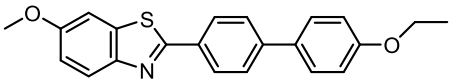


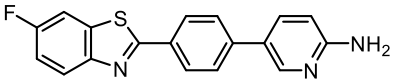


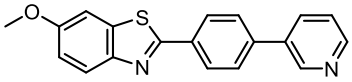


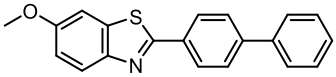


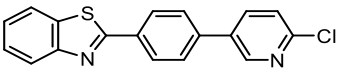


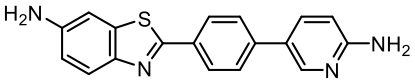


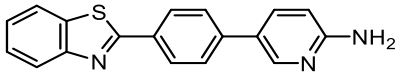


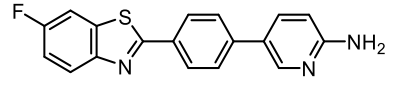


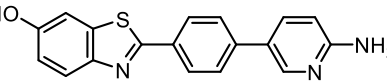


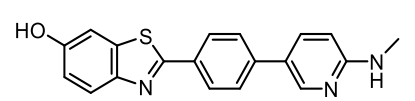


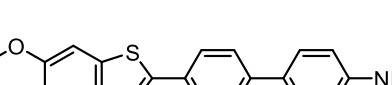




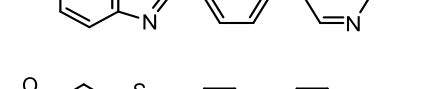


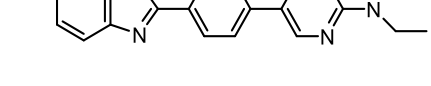


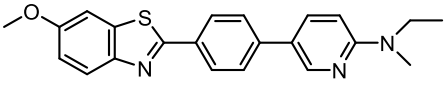


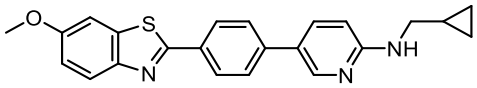


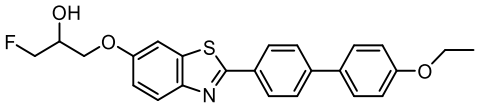


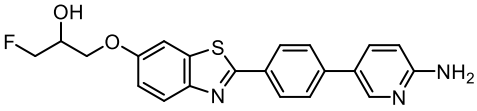


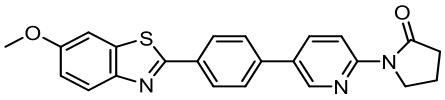


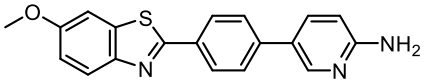


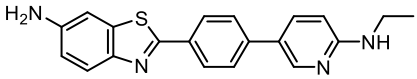


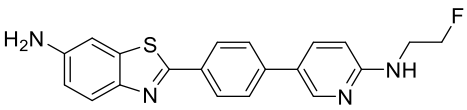


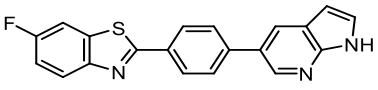


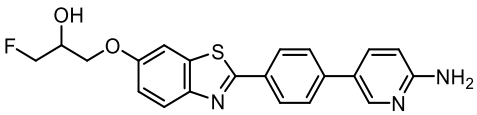


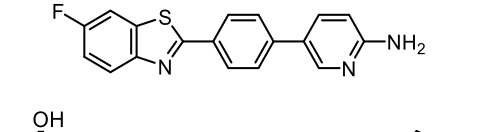


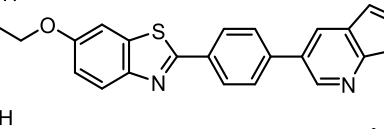




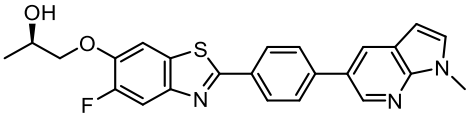


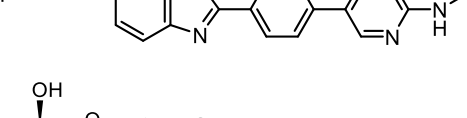


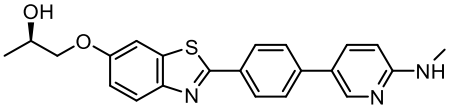


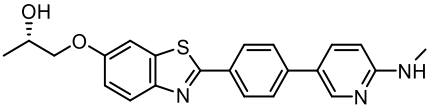


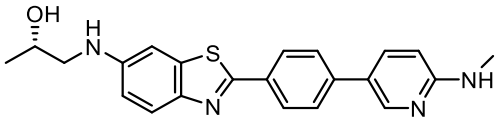


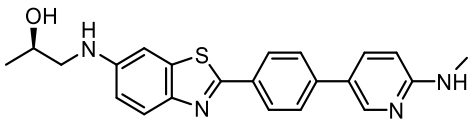


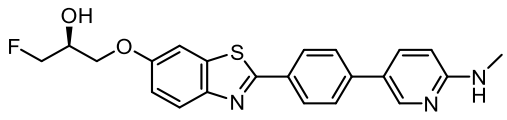


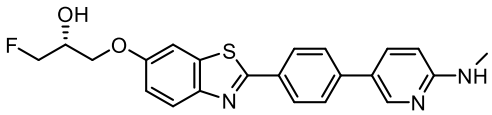


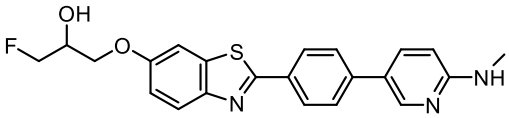


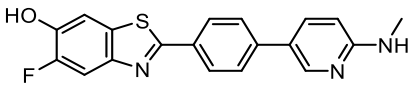


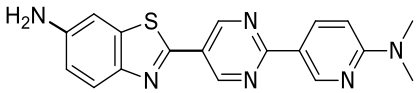


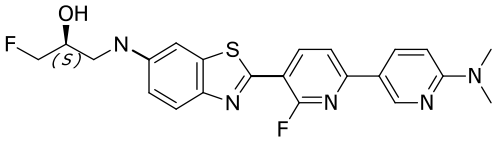


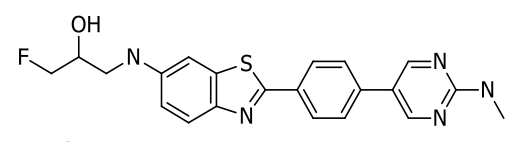


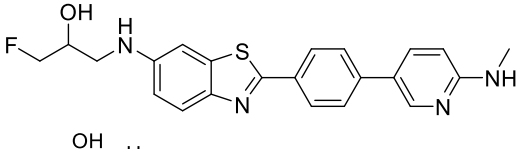


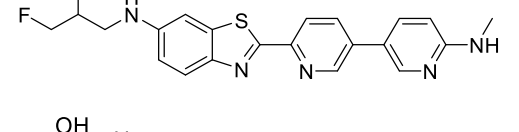


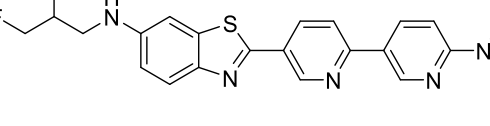


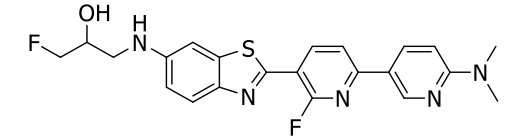


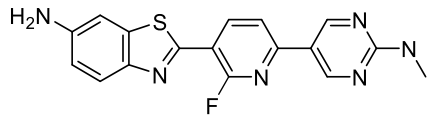
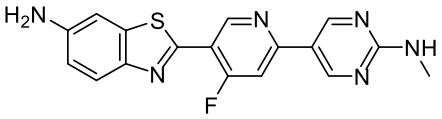
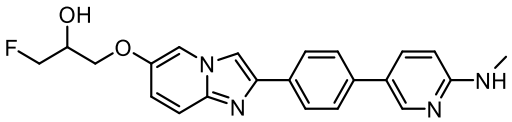
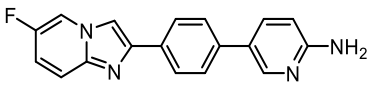
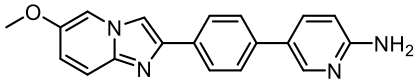
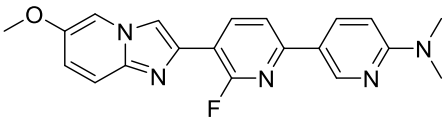
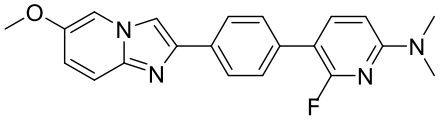
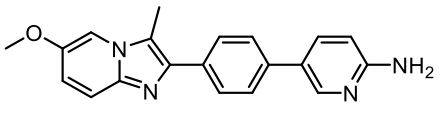
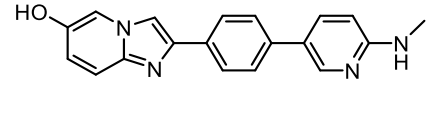
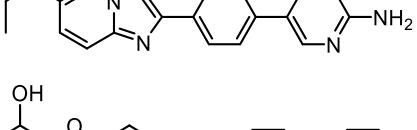
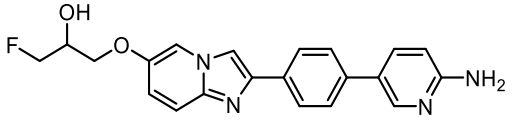
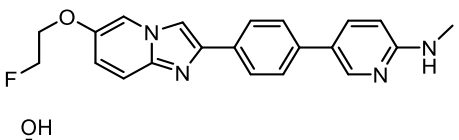
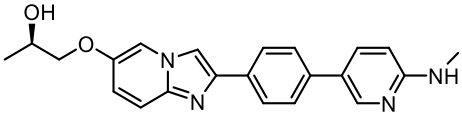


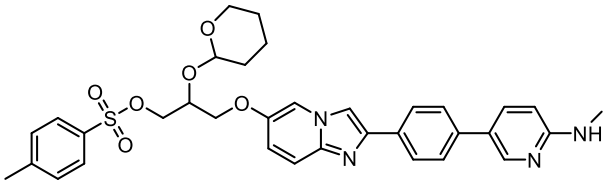


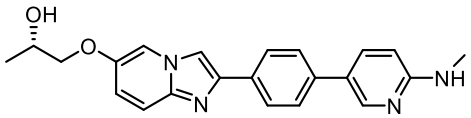


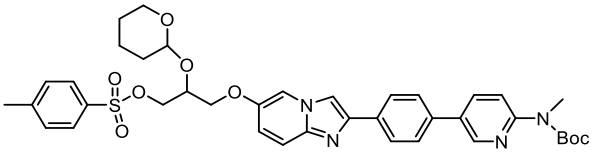


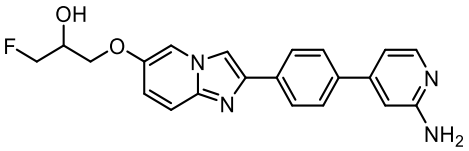


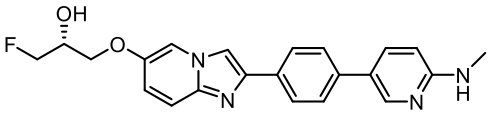














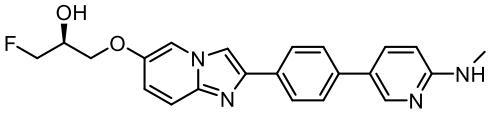


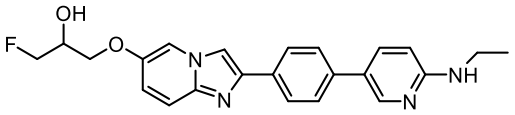


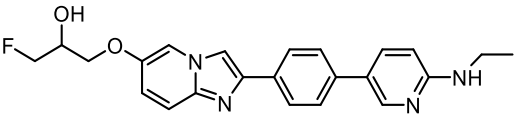


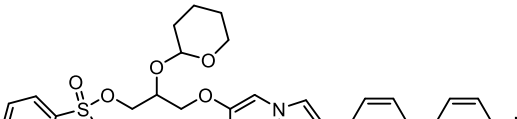




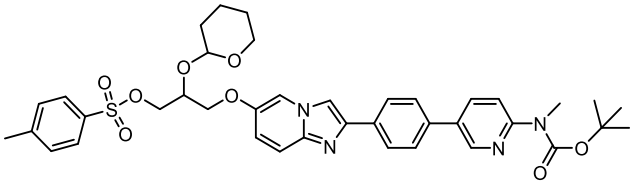


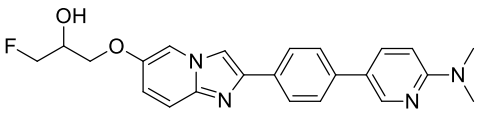


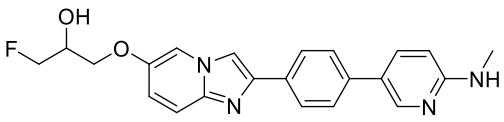


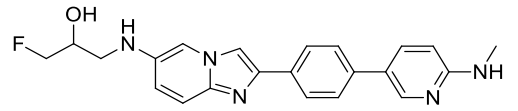
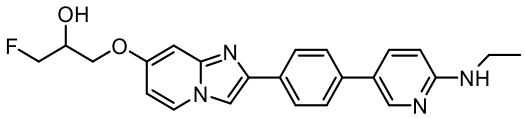
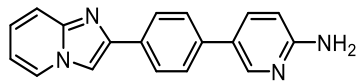
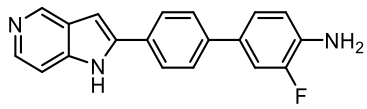
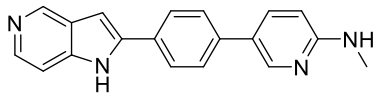
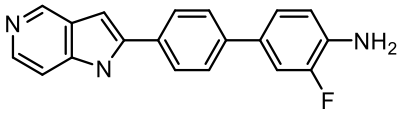
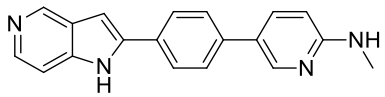
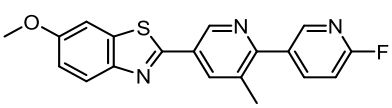
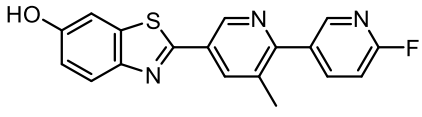
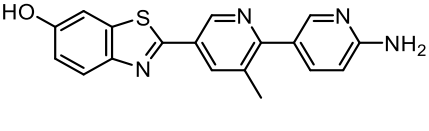
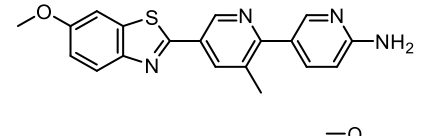
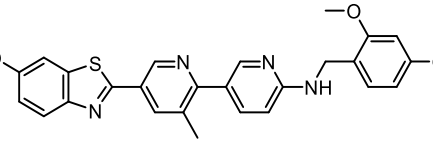


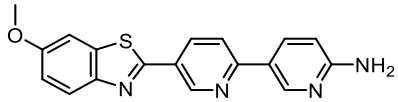
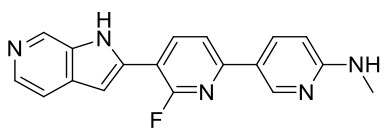


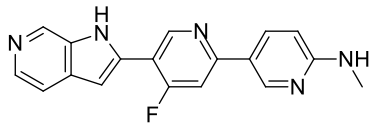


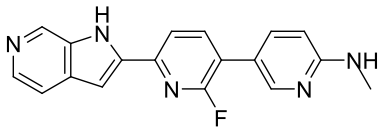


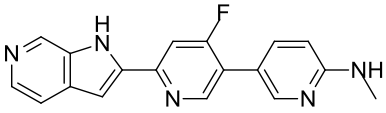


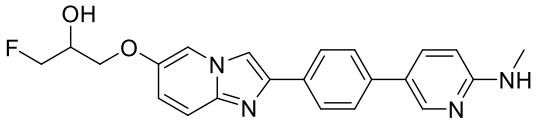













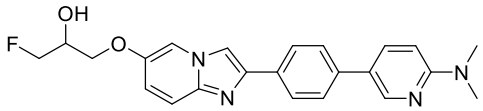



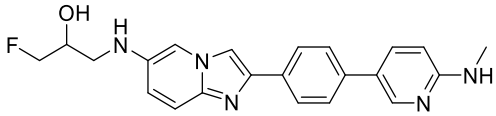


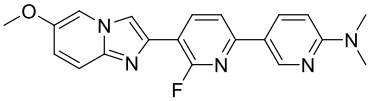


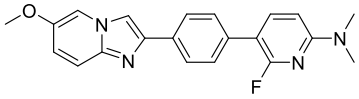


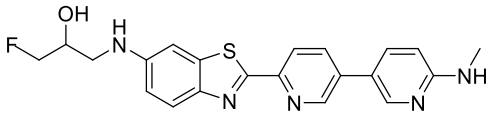


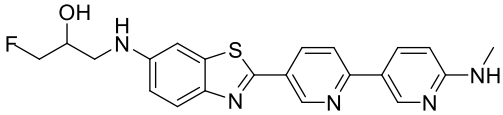


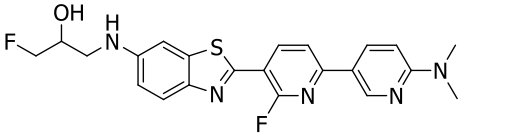


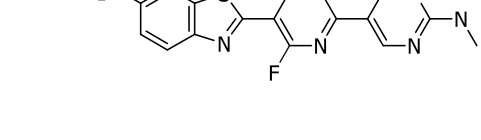


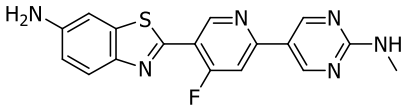






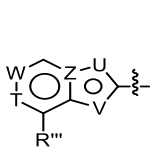
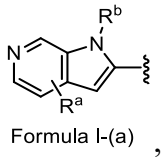






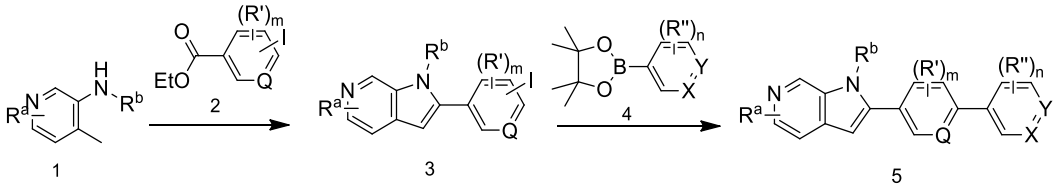
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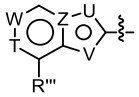
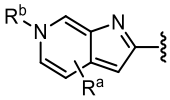
9. A process for preparing the heteroaryl compound having a structure of formula (I), or a pharmaceutically acceptable salt, a solvate, a hydrate, an isotopically labeled derivative or a radiolabeled derivative thereof according to any one of claims 1 to 8,

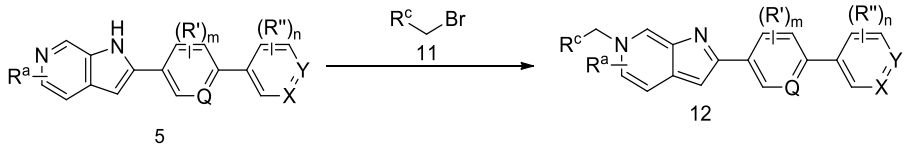
when the structural unit  is  Formula I-(a) , comprising the steps of

(i) reacting compound 1 with compound 2 to give compound 3 at -78℃ in an organic solvent and in the presence of a base;

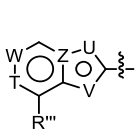
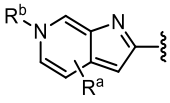
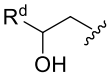
(ii) reacting the compound 3 obtained from step (i) with compound 4 in an organic solvent and in the presence of a base and a Pd catalyst at 80℃;



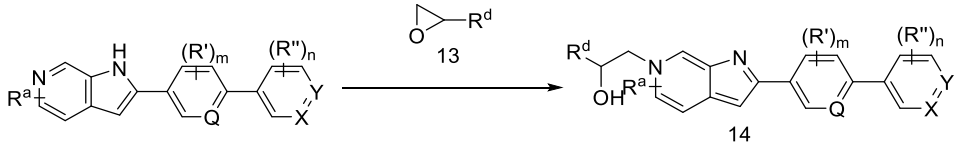
when the structural unit  is  Formula I-(b) and $R^b$ is  , comprising reacting compound 5 with compound 11 at 60℃ in an organic solvent and in the presence of a base;



wherein $R^c$ is H, $C_{1-5}$ alkyl, $C_{1-5}$ alkoxycarbonyl, $C_{1-2}$ alkylcarbonyl and phenyl, and the $C_{1-5}$ alkyl, $C_{1-5}$ alkoxycarbonyl, $C_{1-2}$ alkylcarbonyl and phenyl of which is optionally substituted by halogen, OH, $C_{1-3}$ alkoxy, $C_{3-6}$ heterocycloalkyloxy or toluenesulfonyloxy;

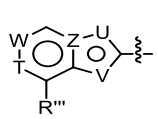
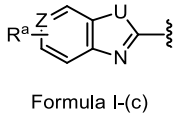
when the structural unit  is  Formula I-(b) and $R^b$ is  , comprising

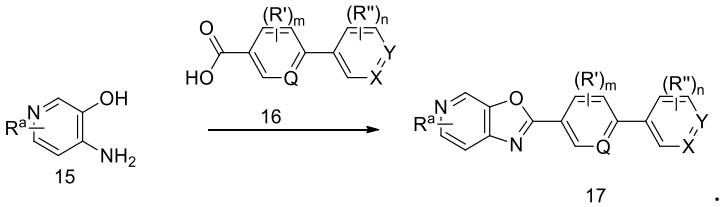
reacting compound 5 with compound 13 at 50℃ in an organic solvent and in the presence of a base;



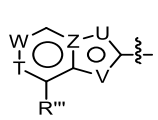
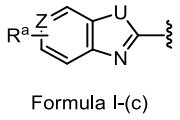
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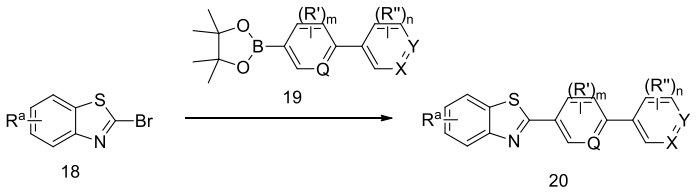
wherein $R^d$ is H or $C_{1-3}$ alkyl;

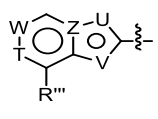
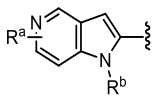
when the structural unit  is  Formula I-(c) where U is O and Z is N, comprising reacting compound 15 with compound 16 at 120℃ in polyphosphoric acid (PPA);



;

when the structural unit  is  Formula I-(c) where U is S and Z is C, comprising reacting compound 18 with compound 19 at 90℃ in an organic solvent and in the presence of a base and a Pd catalyst;

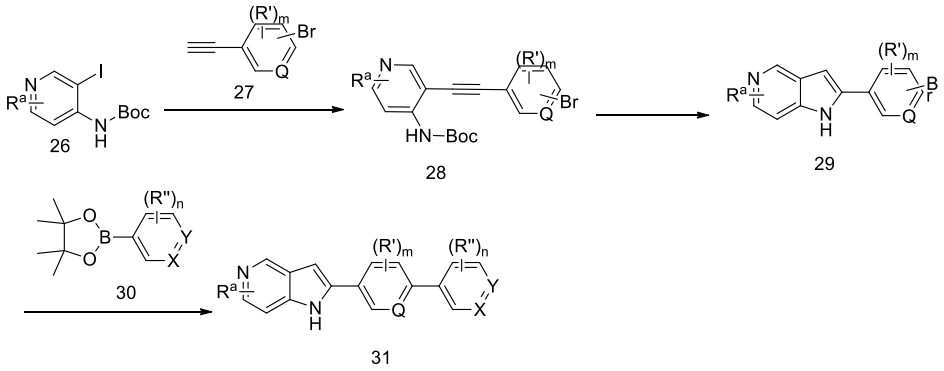


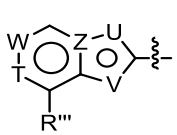
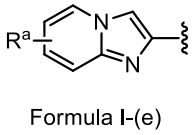
when the structural unit  is  Formula I-(d) , wherein $R^b$ is H, comprising the steps of

i) reacting compound 26 with compound 27 to form compound 28 in an organic solvent and in the presence of a Pd catalyst, CuI and an organic base at room temperature;

ii) reacting the compound 28 obtained from step i) with DBU to form compound 29 in a mixed solvent of MeOH and $H_2O$ at 80℃;

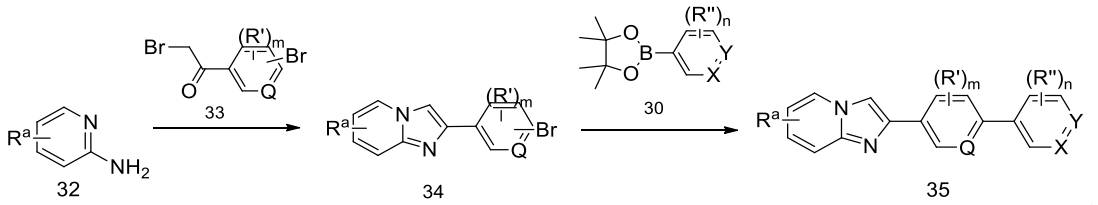
iii) reacting the compound 29 obtained from step ii) with compound 30 to form compound 31 in an organic solvent and in the presence of a Pd catalyst and a base at 80℃;



when the structural unit  is , comprising the steps of

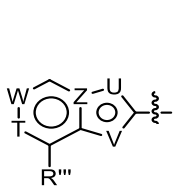
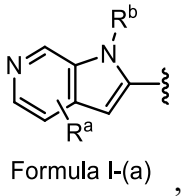
i) reacting compound 32 with compound 33 to form compound 34 in an alcoholic solvent and in the presence of a base at 80℃;

ii) reacting the compound 34 obtained from step i) with compound 30 in an organic solvent and in the presence of a base and a Pd catalyst at 80℃;



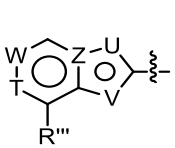
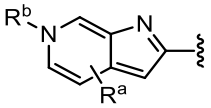
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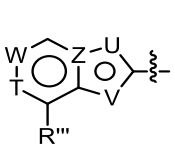
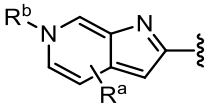
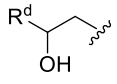
10. The process according to claim 9, wherein,

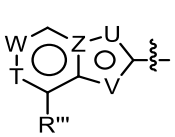
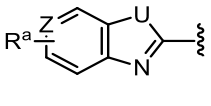
when the structural unit  is , comprising the steps of

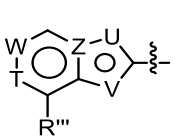
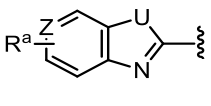
(i) reacting compound 1 with compound 2 to give compound 3 at -78℃ in THF and in the presence of *s*-butyllithium;

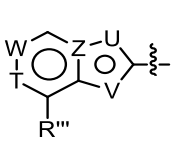
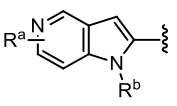
(ii) reacting the compound 3 obtained from step (i) with compound 4 in DMF and in the presence of $Na_2CO_3$ and $Pd(PPh_3)_4$ at 80℃;

when the structural unit  is  Formula I-(b) and $R^b$ is , comprising reacting compound 5 with compound 11 at 60℃ in DMF and in the presence of $Cs_2CO_3$; wherein $R^c$ is a $C_{1-3}$ alkyl or a halogenated $C_{1-3}$ alkyl;

when the structural unit  is  Formula I-(b) and $R^b$ is , comprising reacting compound 5 with compound 13 at 50℃ in DMF and in the presence of $K_2CO_3$;


when the structural unit  is Formula I-(c) where U is O and Z is N, comprising reacting compound 15 with compound 16 at 120℃ in polyphosphoric acid (PPA);

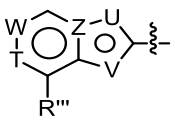
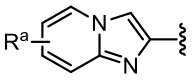

when the structural unit  is Formula I-(c) where U is S and Z is CH, comprising reacting compound 18 with compound 19 at 90℃ in $CH_3CN$ and in the presence of $K_2CO_3$ and $Pd(PPh_3)_4$;


when the structural unit  is Formula I-(d), wherein $R^b$ is H, comprising the steps of

i) reacting compound 26 with compound 27 to form compound 28 in DMF and in the presence of $Pd(PPh_3)_2Cl_2$, CuI and triethanolamine at room temperature;

ii) reacting the compound 28 obtained from step i) with DBU to form compound 29 in a mixed solvent of MeOH and $H_2O$ at 80℃;

iii) reacting the compound 29 obtained from step ii) with compound 30 to form compound 31 in DMF and in the presence of $Pd(PPh_3)_4$ and $Na_2CO_3$ at 80℃;


when the structural unit  is Formula I-(e), comprising the steps of

i) reacting compound 32 with compound 33 to form compound 34 in EtOH and in the presence of $NaHCO_3$ at 80℃;

ii) reacting the compound 34 obtained from step i) with compound 30 in DMF and in the presence of $K_2CO_3$ and $Pd(PPh_3)_4$ at 80℃.

11. A pharmaceutical composition comprising heteroaryl compound having a structure of formula (I), or pharmaceutically acceptable salt, solvate, hydrate, isotopically labeled derivative or radiolabeled derivative thereof according to any one of claims 1 to 8, and optionally a pharmaceutically acceptable excipient.

12. A use of the heteroaryl compound having a structure of formula (I), or pharmaceutically acceptable salt, solvate, hydrate, isotopically labeled derivative or radiolabeled derivative thereof according to any one of claims 1 to 8 in detecting Tau aggregates *in vitro*, *ex vivo*, and *in vivo*.

13. A use of the heteroaryl compound having a structure of formula (I), or a pharmaceutically acceptable salt, solvate, hydrate, isotopically labeled derivative or a radiolabeled derivative thereof according to any one of claims 1 to 8 in manufacturing an imaging agent for Tau aggregates.

14. A method of Tau imaging, comprising the steps of

(a) administering to a subject an effective amount of (i) the heteroaryl compound having a structure of formula (I), or a pharmaceutically acceptable salt, a solvate, a hydrate, an isotopically labeled derivative or a radiolabeled derivative thereof according to any one of claims 1 to 8, or (ii) the pharmaceutical composition according to claim 11; and

(b) imaging the brain of the subject.