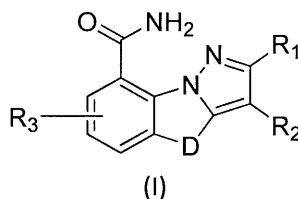


## Claims

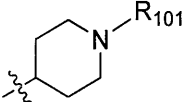
1. A compound of formula (I) or a pharmaceutically acceptable salt thereof,



wherein,

D is -C(R<sub>d1</sub>)(R<sub>d2</sub>)- or -N(R<sub>d4</sub>)-;

R<sub>1</sub> is selected from the group consisting of H, F, Cl, Br, I, CN, OH, SH, NH<sub>2</sub>, C<sub>1-3</sub> alkyl, C<sub>1-3</sub>

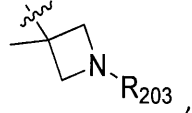
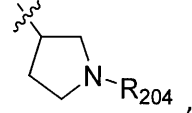
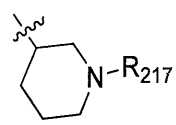
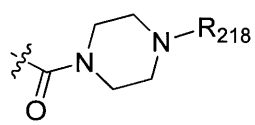
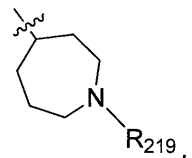
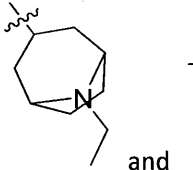
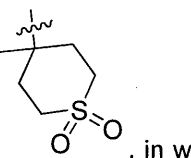
alkyloxy, benzyloxy, and , in which R<sub>101</sub> is selected from the group consisting of H, methyl, ethyl, n-propyl, or isopropyl;

R<sub>3</sub> is selected from the group consisting of H, F, Cl, Br, CN, and methyl;

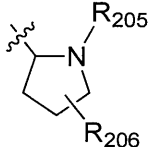
R<sub>2</sub> satisfies any one of following requirements (1) – (10):

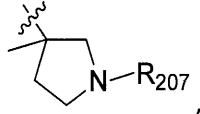
(1) R<sub>2</sub> is selected from H, F, Cl, Br, I, CN, OH, SH, and NH<sub>2</sub>;

(2) R<sub>2</sub> is selected from -CH<sub>2</sub>N(R<sub>201</sub>)(R<sub>202</sub>), in which R<sub>201</sub> and R<sub>202</sub> are separately and independently selected from the group consisting of H, C<sub>1-3</sub> alkyl, C<sub>1-3</sub> alkylacyl, C<sub>3-6</sub> cycloalkylacyl, or C<sub>3-6</sub> cycloalkyl;

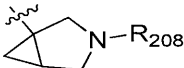
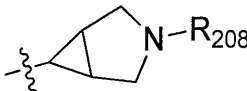
(3) R<sub>2</sub> is selected from the group consisting of , , , , , , and , in which

R<sub>203</sub>, R<sub>204</sub>, R<sub>217</sub>, and R<sub>218</sub> are separately and independently selected from the group consisting of H, substituted or unsubstituted C<sub>1-3</sub> alkyl, cyclopropyl, or cyclopropylmethylene, the substituent is selected from the group consisting of F, Cl, Br, I, CN, OH, NH<sub>2</sub>, methyl, or methyloxy, and the number of substituents is 0, 1, 2, or 3; R<sub>219</sub> is selected from the group consisting of methyl and ethyl;

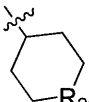
(4) R<sub>2</sub> is selected from , in which R<sub>205</sub> and R<sub>206</sub> are separately and independently selected from the group consisting of H, substituted or unsubstituted C<sub>1-3</sub> alkyl, cyclopropyl, and cyclopropylmethylene, wherein the substituent is selected from the group consisting of F, Cl, Br, I, CN, OH, NH<sub>2</sub>, methyl, or methyloxy, and the number of substituents is 0, 1, 2, or 3; R<sub>206</sub> is also selected from the group consisting of F, Cl, Br, I, CN, OH, and NH<sub>2</sub>;

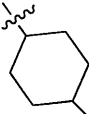
(5) R<sub>2</sub> is selected from , in which R<sub>207</sub> is selected from the group consisting

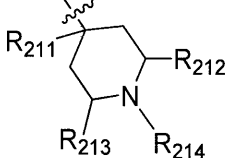
of H, substituted or unsubstituted C<sub>1-3</sub> alkyl, cyclopropyl, cyclopropylmethylene, cyclobutyl, cyclobutylmethylene, oxacyclobutyl or oxacyclobutylalkylene, where the substituent is selected from the group consisting of F, Cl, Br, I, CN, OH, NH<sub>2</sub>, methyl, CF<sub>3</sub>, methyloxy, and methylsulfonyl, and the number of substituents is 0, 1, 2, or 3;

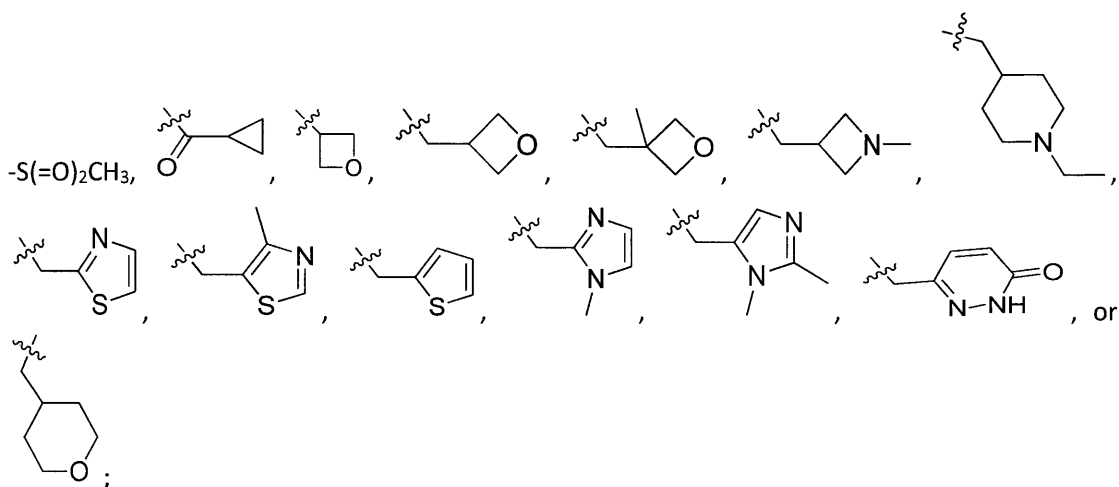
(6) R<sub>2</sub> is selected from the group consisting of -R<sub>208</sub> or  ,

in which R<sub>208</sub> is selected from the group consisting of H, cyclopropylmethylene, substituted or unsubstituted C<sub>1-4</sub> alkyl, in the R<sub>208</sub>, the substituted or unsubstituted C<sub>1-4</sub> alkyl includes linear and cyclic ones, wherein the substituent is selected from the group consisting of F, Cl, Br, I, CN, OH, NH<sub>2</sub>, methyl, CF<sub>3</sub>, methyloxy, and methylsulfonyl, and the number of substituents is 0, 1, 2, or 3;

(7) R<sub>2</sub> is selected from -R<sub>209</sub>, in which R<sub>209</sub> is selected from the group consisting of -C(R<sub>d1</sub>)(R<sub>d2</sub>)-, -C(=O)N(R<sub>d3</sub>)-, -N(R<sub>d4</sub>)-, -C(=NR<sub>d5</sub>)-, -S(=O)<sub>2</sub>N(R<sub>d6</sub>)-, -S(=O)N(R<sub>d7</sub>)-, -O-, -S-, -C(=O)O-, -C(=O)-, -C(=S)-, -S(=O)-, or -S(=O)<sub>2</sub>-;

(8) R<sub>2</sub> is selected from -R<sub>210</sub>, in which R<sub>210</sub> is selected from the group consisting of H, F, Cl, Br, I, CN, OH, NH<sub>2</sub>, N,N-di(C<sub>1-3</sub> alkyl)amino, and C<sub>1-3</sub> alkylamino;

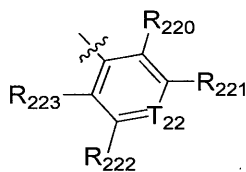
(9) R<sub>2</sub> is selected from  , in which R<sub>211-213</sub> are selected from the group consisting of H or substituted or unsubstituted C<sub>1-4</sub> alkyloxy carbonyl, C<sub>1-4</sub> alkyl, C<sub>3-6</sub> cycloalkyl, C<sub>3-6</sub> cycloalkylmethylene, unsaturated C<sub>5-6</sub> heterocyclohydrocarbonyl, F, Cl, Br, I, CN, OH, and NH<sub>2</sub>, R<sub>214</sub> is selected from the group consisting of H or substituted or unsubstituted C<sub>1-4</sub> alkyloxy carbonyl, C<sub>1-4</sub> alkyl, C<sub>3-6</sub> cycloalkyl, C<sub>3-6</sub> cycloalkylmethylene, or unsaturated C<sub>5-6</sub> heterocyclohydrocarbonyl, and

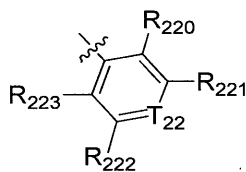


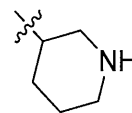
wherein the substituent includes R<sub>215</sub>, the cycloalkyl or unsaturated heterocyclohydrocarbonyl has O, S or NR<sub>216</sub> with a number of 0, 1 or 2; R<sub>216</sub> is selected from the group consisting of H and

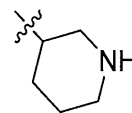
C<sub>1-4</sub>alkyl substituted by R<sub>215</sub>, R<sub>215</sub> is selected from the group consisting of F, Cl, Br, I, CN, OH, NH<sub>2</sub>, methyl, ethyl, methyloxy, ethyloxy, formyl, , acetyl, methylsulfonyl, ethylsulfonyl, methyloxycarbonyl, ethyloxycarbonyl, dimethylamino, diethylamino, dimethylaminocarbonyl, diethylaminocarbonyl, oxo,  
the number of R<sub>215</sub> is 1, 2, or 3,

optionally, R<sub>212</sub> and R<sub>213</sub> join together to form a linker selected from the group consisting of -CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>-, or -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-;



(10) R<sub>2</sub> is selected from , in which T<sub>22</sub> is selected from the group consisting of N or C(R<sub>224</sub>), R<sub>220-224</sub> are separately and independently selected from the group



consisting of H, F, Cl, Br, I, CN, OH, SH, NH<sub>2</sub>, C<sub>1-3</sub> alkylamino-C<sub>1-3</sub> alkyl, and  ;

R<sub>d1</sub>, and R<sub>d2</sub> are separately and independently selected from the group consisting of H, F, Cl, Br, I, CN, OH, SH, and NH<sub>2</sub>, or selected from the group, optionally substituted by R<sub>01</sub>, consisting of C<sub>1-10</sub> alkyl, C<sub>1-10</sub> heteroalkyl, C<sub>3-10</sub> cyclohydrocarbyl and C<sub>3-10</sub> heterocyclohydrocarbyl;

R<sub>01</sub> is selected from the group consisting of F, Cl, Br, I, CN, OH, SH, NH<sub>2</sub>, and R<sub>02</sub>;

R<sub>02</sub> is selected from the group consisting of C<sub>1-10</sub> alkyl, C<sub>1-10</sub> alkylamino, N,N-di(C<sub>1-10</sub> alkyl) amino, C<sub>1-10</sub> alkyloxy, C<sub>1-10</sub> alkylacyl, C<sub>1-10</sub> alkyloxycarbonyl, C<sub>1-10</sub> alkylsulfonyl, C<sub>1-10</sub> alkylsulfinyl, C<sub>3-10</sub> cycloalkyl, C<sub>3-10</sub> cycloalkylamino, C<sub>3-10</sub> heterocycloalkylamino, C<sub>3-10</sub> cycloalkyloxy, C<sub>3-10</sub> cycloalkylacyl, C<sub>3-10</sub> cycloalkyloxycarbonyl, C<sub>3-10</sub> cycloalkylsulfonyl, and C<sub>3-10</sub> cycloalkylsulfinyl;

R<sub>d3-d7</sub> are separately and independently selected from the group consisting of H, and R<sub>03</sub>;

R<sub>03</sub> is C<sub>1-10</sub> alkyl, R<sub>02</sub>, and R<sub>03</sub> are optionally substituted by R<sub>001</sub>;

R<sub>001</sub> is selected from the group consisting of F, Cl, Br, I, CN, OH, N(CH<sub>3</sub>)<sub>2</sub>, NH(CH<sub>3</sub>), NH<sub>2</sub>, CF<sub>3</sub>, (NH<sub>2</sub>)CH<sub>2</sub>, (HO)CH<sub>2</sub>, CH<sub>3</sub>, CH<sub>3</sub>O, CH<sub>3</sub>C(=O), CH<sub>3</sub>O C(=O), CH<sub>3</sub>S(=O)<sub>2</sub>, and CH<sub>3</sub>S(=O); and

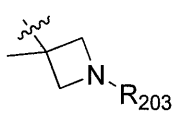
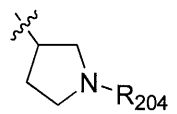
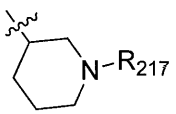
the number of R<sub>01</sub>, R<sub>001</sub>, the heteroatom, or heteroatomic group is separately and independently selected from 0, 1, 2, and 3;

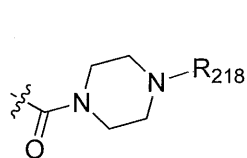
heteroatom or heteroatomic group is separately and independently selected from the group consisting of -C(=O)N(R<sub>d3</sub>)-, -N(R<sub>d4</sub>)-, -C(=NR<sub>d5</sub>)-, -S(=O)<sub>2</sub> N(R<sub>d6</sub>)-, -S(=O) N(R<sub>d7</sub>)-, -O-, -S-, -C(=O)O-, -C(=O)-, -C(=S)-, -S(=O)-, and/or -S(=O)<sub>2</sub>-.

2. The compound of claim 1 or a pharmaceutically acceptable salt thereof, wherein the D is selected from -NH-, -N(CH<sub>3</sub>)-, -C(F)<sub>2</sub>-, -C(H)(F)- and -C(H)(OH)-.

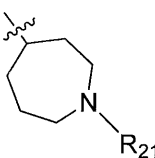
3. The compound of claim 1 or a pharmaceutically acceptable salt thereof, wherein R<sub>2</sub> is selected from -CH<sub>2</sub>N(R<sub>201</sub>)(R<sub>202</sub>), in which R<sub>201</sub> and R<sub>202</sub> are separately and independently selected from the group consisting of H and cyclopropylacyl.

4. The compound of claim 1 or a pharmaceutically acceptable salt thereof, wherein R<sub>2</sub> is

selected from the group consisting of , , ,

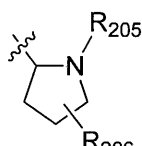


, and



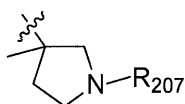
, in which  $R_{203}$  is selected from the group consisting of methyl, ethyl, n-propyl, isopropyl,  $-\text{CH}_2\text{C}(\text{CH}_3)(\text{CH}_3)(\text{OH})$ , and cyclopropylmethylene,  $R_{204}$  is selected from the group consisting of methyl, ethyl, n-propyl, and isopropyl,  $R_{217-219}$  are separately and independently selected from the group consisting of methyl and ethyl.

5.The compound of claim 1 or a pharmaceutically acceptable salt thereof, wherein  $R_2$  is

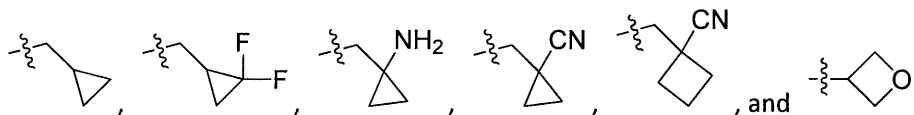


selected from  $R_{206}$ , in which  $R_{205}$  and  $R_{206}$  are separately and independently selected from the group consisting of H, methyl, ethyl, n-propyl, and isopropyl,  $R_{206}$  also is selected from the group consisting of F, Cl, Br, I, CN, OH, and  $\text{NH}_2$ .

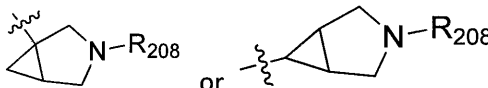
6.The compound of claim 1 or a pharmaceutically acceptable salt thereof, wherein  $R_2$  is



selected from  $R_{207}$ , in which  $R_{207}$  is selected from the group consisting of H, methyl, ethyl, n-propyl, isopropyl,  $-\text{CH}_2\text{CF}_3$ ,  $-\text{CH}_2\text{CH}_2\text{CF}_3$ ,  $-\text{CH}_2\text{CH}_2\text{F}$ ,  $-\text{CH}_2\text{CH}_2\text{S}(=\text{O})_2\text{CH}_3$ ,  $-\text{CH}_2\text{CH}_2\text{CN}$ ,

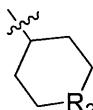


7.The compound of claim 1 or a pharmaceutically acceptable salt thereof, wherein  $R_2$  is



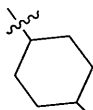
selected from the group consisting of  $R_{208}$  or  $R_{208}$ , in which  $R_{208}$  is selected from the group consisting of H, methyl, ethyl, n-propyl, isopropyl, cyclopropylmethylene, and cyclobutyl.

8.The compound of claim 1 or a pharmaceutically acceptable salt thereof, wherein  $R_2$  is



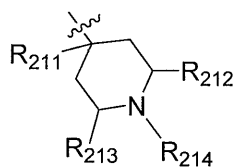
selected from  $R_{209}$ , in which  $R_{209}$  is selected from the group consisting of O and  $\text{S}(=\text{O})_2$ .

9.The compound of claim 1 or a pharmaceutically acceptable salt thereof, wherein  $R_2$  is



selected from  $R_{210}$ , in which  $R_{210}$  is selected from the group consisting of dimethylamino, methylamino, H, F, Cl, Br, I, CN, OH, and  $\text{NH}_2$ .

10.The compound of claim 1 or a pharmaceutically acceptable salt thereof, wherein  $R_2$  is



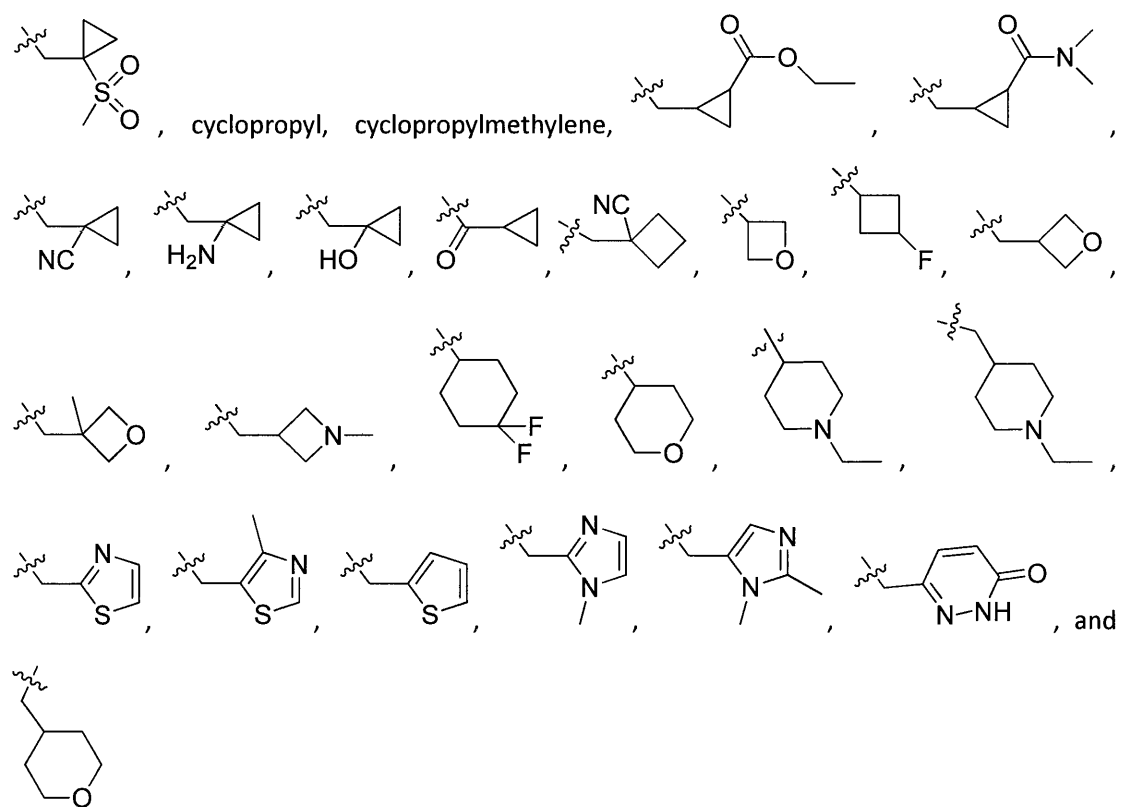
selected from

$R_{211}$  is selected from the group consisting of H, F, Cl, Br, I, CN, OH,  $NH_2$ , methyl, ethyl, hydroxymethyl, and methoxycarbonyl,

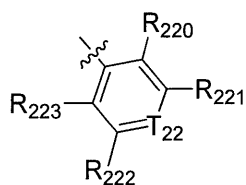
$R_{212}$  is selected from the group consisting of H, F, Cl, Br, I, CN, OH,  $NH_2$ , and methyl,

$R_{213}$  is selected from the group consisting of H, F, Cl, Br, I, CN, OH, and  $NH_2$ ,

$R_{214}$  is selected from the group consisting of H, methyl, ethyl, n-propyl, isopropyl, n-butyl, isobutyl, tert-butyl,  $-CH_2CH(OH)(CH_3)_2$ ,  $-CH_2CH(F)(CH_3)_2$ ,  $-CH_2CH_2F$ ,  $-CH_2CF_3$ ,  $-CH_2CH_2CF_3$ ,  $-CH_2CH_2NH_2$ ,  $-CH_2CH_2OH$ ,  $-CH_2CH_2OCH_3$ ,  $-CH_2CH_2CH_2OCH_3$ ,  $-CH_2CH_2N(CH_3)_2$ ,  $-S(=O)_2CH_3$ ,  $-CH_2CH_2S(=O)_2CH_3$ ,



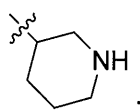
11. The compound of claim 1 or a pharmaceutically acceptable salt thereof, wherein  $R_2$  is



selected from

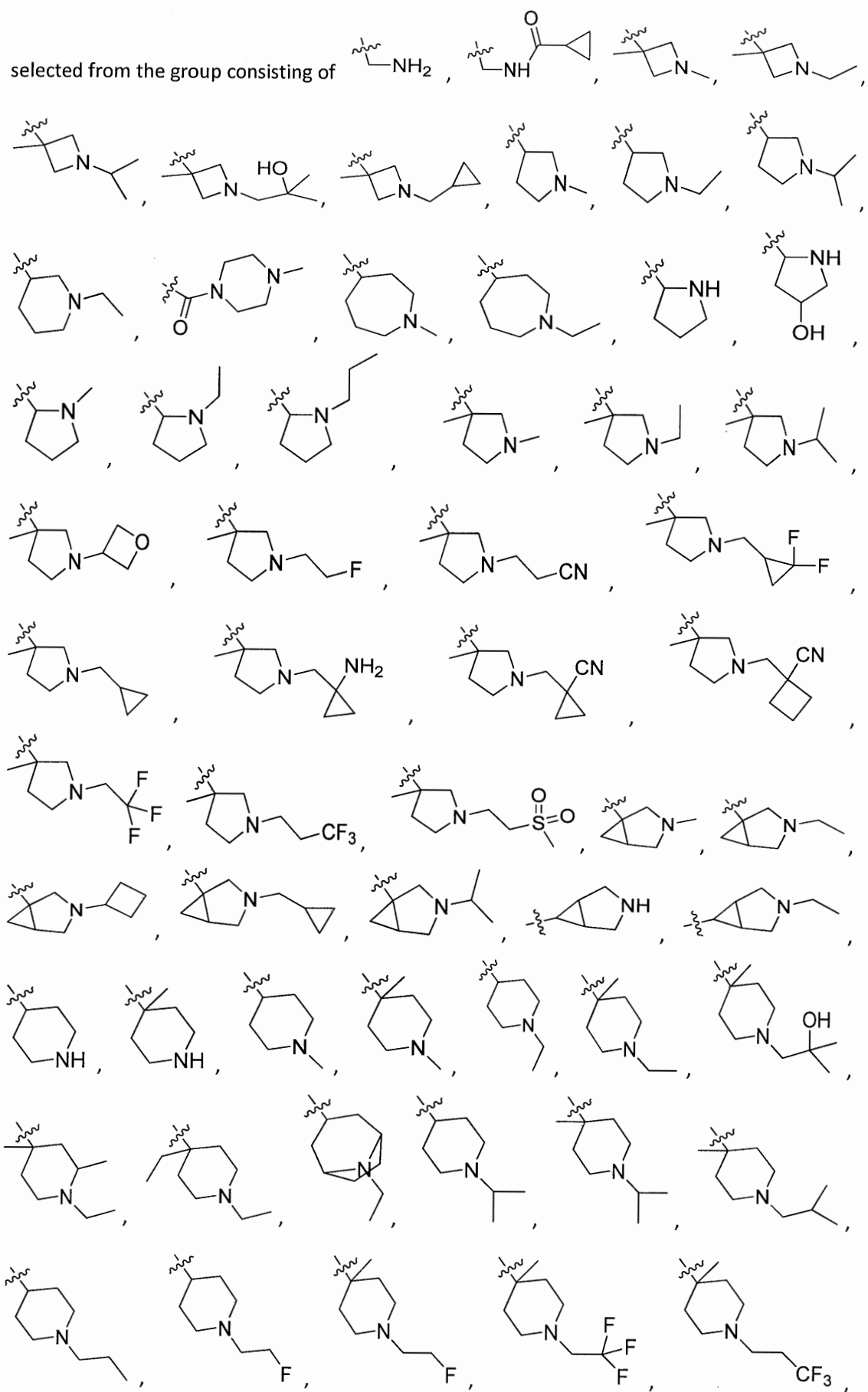
, in which  $T_{22}$  is selected from the group consisting of N or  $C(R_{224})$ ,  $R_{220-224}$  are separately and independently selected from the group consisting of H, F, Cl, Br,

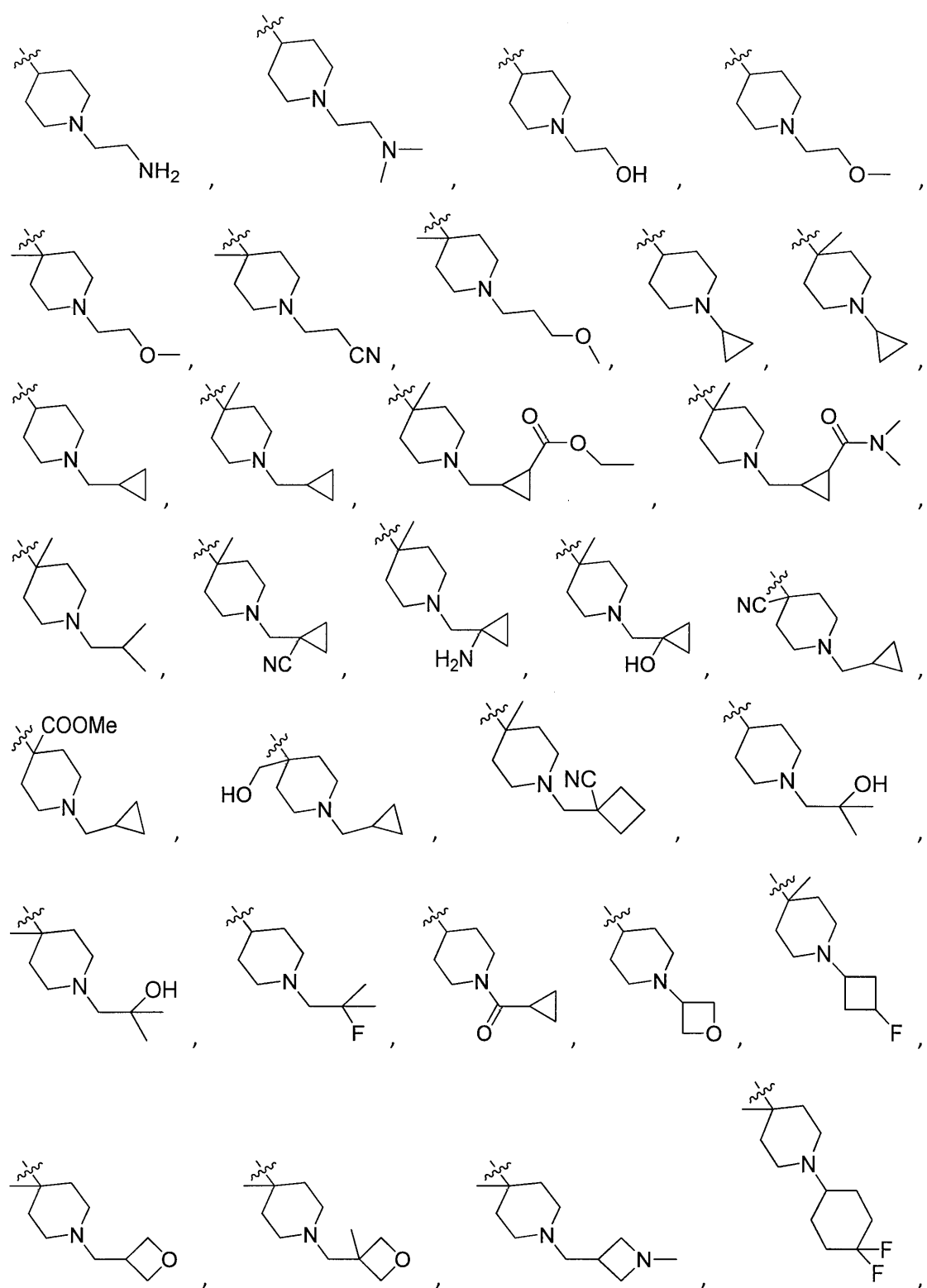
I, CN, OH, SH,  $NH_2$ ,  $C_{1-3}$  alkylamino- $C_{1-3}$  alkyl, and

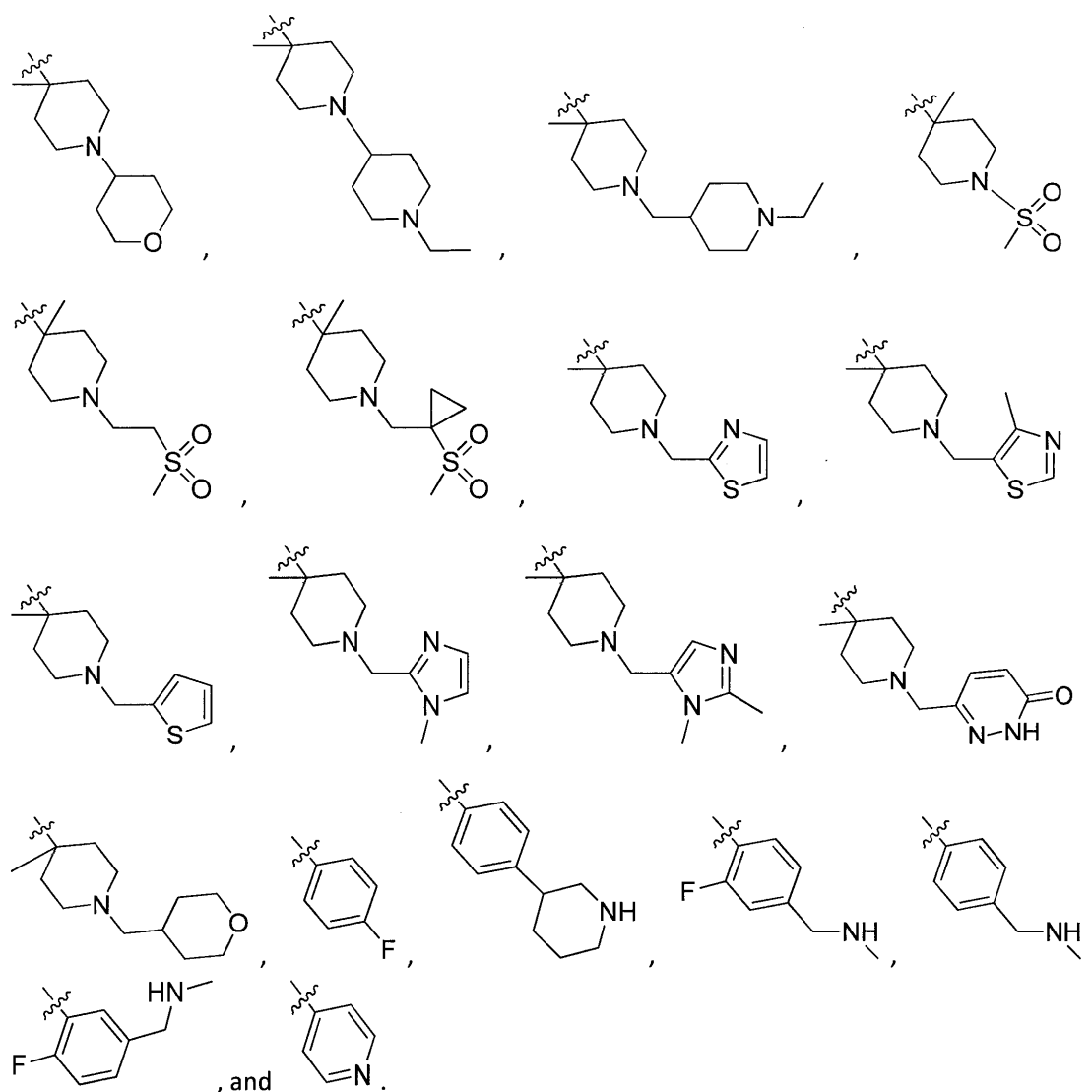


the  $C_{1-3}$  alkylamino- $C_{1-3}$  alkyl is selected from methylaminomethylene.

12. The compound of claim 1 or a pharmaceutically acceptable salt thereof, wherein  $R_2$  is







13. The compound of claim 1 or a pharmaceutically acceptable salt thereof, wherein the compound is selected from the group consisting of:

- 1) 6-fluoro-3-(piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 2) 3-(1-ethylpiperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 3) 6-fluoro-3-(1-(2-fluoroethyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 4) 3-(1-(cyclopropyl)piperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 5) 3-(1-(cyclopropylmethyl)piperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 6) 6-fluoro-3-(1-(2-hydroxy-2-methylpropyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 7) 6-fluoro-3-(1-(2-fluoro-2-methylpropyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 8) 3-(1-(cyclopropanecarbonyl)piperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 9) 6-fluoro-3-(1-methylpiperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;

- 10) 6-fluoro-3-(1-isopropylpiperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 11) 6-fluoro-3-(1-(oxetan-3-yl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 12) 6-fluoro-3-(1-propylpiperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 13) 3-(1-(2-aminoethyl)piperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 14) 3-(1-(2-(dimethylamino)ethyl)piperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 15) 6-fluoro-3-(1-(2-methoxyethyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 16) 6-fluoro-3-(1-(2-hydroxyethyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 17) 3-(1-ethylpiperidin-3-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 18) 3-(1-ethylazepan-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 19) 6-fluoro-3-(1-methylazepan-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 20) 6-fluoro-3-(1-methylpyrrolidin-3-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 21) 3-(1-ethylpyrrolidin-3-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 22) 6-fluoro-3-(1-isopropylpyrrolidin-3-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 23) 6-fluoro-3-(pyrrolidin-2-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 24) 6-fluoro-3-(1-propylpyrrolidin-2-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 25) 3-(1-ethylpyrrolidin-2-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 26) 3-(1-ethylpiperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 27) 6-fluoro-3-(1-methylpyrrolidin-2-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 28) 6-fluoro-3-(3-methyl-3-azabicyclo[3.1.0]hexan-1-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 29) 3-(3-ethyl-3-azabicyclo[3.1.0]hexan-1-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 30) 3-(3-cyclobutyl-3-azabicyclo[3.1.0]hexan-1-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 31) 3-(3-(cyclopropylmethylene)-3-azabicyclo[3.1.0]hexan-1-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 32) 6-fluoro-3-(3-isopropyl-3-azabicyclo[3.1.0]hexan-1-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 33) 3-(3-azabicyclo[3.1.0]hexan-6-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 34) 3-(3-ethyl-3-azabicyclo[3.1.0]hexan-6-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 35) 3-(8-ethyl-8-azabicyclo[3.2.1]octan-3-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 36) 6-fluoro-3-(4-hydroxypyrrolidin-2-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 37) 3-cyano-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 38) 3-cyano-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 39) 3-(aminomethyl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 40) 3-(cyclopropanecarboxamidomethylene)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;

- rboxamide;
- 41) 6-fluoro-3-(4-fluorophenyl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 42) 6-fluoro-3-(2-fluoro-4-((methylamino)methylene)phenyl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 43) 6-fluoro-3-(4-((methylamino)methyl)phenyl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 44) 6-fluoro-3-(2-fluoro-5-((methylamino)methyl)phenyl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 45) 6-fluoro-3-(pyridin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 46) 6-fluoro-3-(4-(piperidin-3-yl)phenyl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 47) 6-fluoro-3-(tetrahydro-2H-pyran-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 48) 3-(4-(dimethylamino)cyclohexyl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 49) 6-fluoro-3-(4-methylpiperazine-1-carbonyl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 50) 3-(1-(cyclopropylmethyl)piperidin-4-yl)-4,4,6-trifluoro-4H-pyrazolo[1,5- $\alpha$ ]indole-8-carboxamide;
  - 51) 3-(1-ethylpiperidin-4-yl)-6-fluoro-4-hydroxy-4H-pyrazolo[1,5- $\alpha$ ]indole-8-carboxamide;
  - 52) 3-(1-ethylpiperidin-4-yl)-6-fluoro-4-methyl-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 53) 6-fluoro-3-(4-methylpiperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 54) 3-(1-ethyl-4-methylpiperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 55) 3-(1-cyclopropyl-4-methylpiperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide ;
  - 56) 6-fluoro-3-(1-(2-hydroxy-2-methylpropyl)-4-methylpiperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 57) 3-(1-(cyclopropylmethylene)-4-methylpiperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 58) 3-(1-(4,4-difluorocyclohexyl)-4-methylpiperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 59) 6-fluoro-3-(4-methyl-1-(tetrahydro-2H-pyran-4-yl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 60) 6-fluoro-3-(1-(2-fluoroethyl)-4-methylpiperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 61) 6-fluoro-3-(4-methyl-1-(2,2,2-trifluoroethyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 62) 6-fluoro-3-(4-methyl-1-(3,3,3-trifluoropropyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 63) 3-(1-((1-cyanocyclopropyl)methyl)-4-methylpiperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 64) 3-(1-((1-cyanocyclobutyl)methyl)-4-methylpiperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 65) 6-fluoro-3-(4-methyl-1-(2-(methylsulfonyl)ethyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]

- pyrazole-8-carboxamide;
- 66) 6-fluoro-3-(4-methyl-1-((tetrahydro-2H-pyran-4-yl)methyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 67) 3-(1-((1-aminocyclopropyl)methyl)-4-methylpiperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 68) 6-fluoro-3-(4-methyl-1-(oxetan-3-ylmethyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 69) 6-fluoro-3-(1-(2-methoxyethyl)-4-methylpiperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 70) 6-fluoro-3-(1-((1-hydroxycyclopropyl)methyl)-4-methylpiperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 71) 6-fluoro-3-(4-methyl-1-((3-methyloxetan-3-yl)methyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 72) 6-fluoro-3-(1-(3-methoxypropyl)-4-methylpiperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 73) 6-fluoro-3-(4-methyl-1-((1-(methylsulfonyl)cyclopropyl)methyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 74) 6-fluoro-3-(4-methyl-1-(thiazol-2-ylmethyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 75) 6-fluoro-3-(4-methyl-1-(methylsulfonyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 76) 6-fluoro-3-(1-(3-fluorocyclobutyl)-4-methylpiperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 77) 6-fluoro-3-(4-methyl-1-(thiophen-2-ylmethyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 78) 3-(1-((1-ethylpiperidin-4-yl)methyl)-4-methylpiperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 79) 6-fluoro-3-(4-methyl-1-((1-methylazetidin-3-yl)methyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 80) ethyl  
2-((4-(8-carbamoyl-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazol-3-yl)-4-methylpiperidin-1-yl)methyl)cyclopropanecarboxylate;
  - 81) 3-(1-((2-(dimethylcarbamoyl)cyclopropyl)methyl)-4-methylpiperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 82) 6-fluoro-3-(1-isobutyl-4-methylpiperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 83) 6-fluoro-3-(4-methyl-1-((4-methylthiazol-5-yl)methyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 84) 6-fluoro-3-(4-methyl-1-((1-methyl-1H-imidazol-2-yl)methyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
  - 85) 3-(1-((1,2-dimethyl-1H-imidazol-5-yl)methyl)-4-methylpiperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide
  - 86) 3-(1'-ethyl-4-methyl-[1,4'-bipiperidin]-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;

- 87) 6-fluoro-3-(4-methyl-1-((6-oxo-1,6-dihydropyridazin-3-yl)methyl)piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 88) 3-(1-(2-cyanoethyl)-4-methylpiperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 89) 6-chloro-3-(1-ethyl-4-methylpiperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 90) 3-(1-ethyl-3-methylpyrrolidin-3-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 91) 3-(1,3-dimethylpyrrolidin-3-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide ;
- 92) 6-fluoro-3-(1-isopropyl-3-methylpyrrolidin-3-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 93) 3-(1-(cyclopropylmethyl)-3-methylpyrrolidin-3-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 94) 6-fluoro-3-(3-methyl-1-(oxetan-3-yl)pyrrolidin-3-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 95) 6-fluoro-3-(1-(2-fluoroethyl)-3-methylpyrrolidin-3-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 96) 3-(1-((2,2-difluorocyclopropyl)methyl)-3-methylpyrrolidin-3-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 97) 6-fluoro-3-(3-methyl-1-(2,2,2-trifluoroethyl)pyrrolidin-3-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 98) 6-fluoro-3-(3-methyl-1-(2-(methylsulfonyl)ethyl)pyrrolidin-3-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 99) 6-fluoro-3-(3-methyl-1-(3,3,3-trifluoropropyl)pyrrolidin-3-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 100) 3-(1-((1-aminocyclopropyl)methyl)-3-methylpyrrolidin-3-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 101) 3-(1-((1-cyanocyclobutyl)methyl)-3-methylpyrrolidin-3-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 102) 3-(1-((1-cyanocyclopropyl)methyl)-3-methylpyrrolidin-3-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 103) 3-(1-(2-cyanoethyl)-3-methylpyrrolidin-3-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 104) 3-(1-(cyclopropylmethyl)-3-methylazetidin-3-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 105) 6-fluoro-3-(1-isopropyl-4-methylpiperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 106) 6-fluoro-3-(4-methyl-1,1-dioxidotetrahydro-2H-thiopyran-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 107) 3-(1,4-diethylpiperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 108) 3-(4-cyano-1-(cyclopropylmethyl)piperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 109) 3-(1-(cyclopropylmethyl)-4-(hydroxymethyl)piperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,

- 2-b]pyrazole-8-carboxamide;
- 110) Methyl  
4-(8-carbamoyl-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazol-3-yl)-1-(cyclopropylmethyl)piperidine-4-carboxylate;
- 111) 3-(1-(cyclopropylmethyl)-4-methylpiperidin-4-yl)-6-fluoro-2-methyl-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 112) 3-(1-ethyl-4-methylpiperidin-4-yl)-6-fluoro-2-methyl-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 113) 6-fluoro-3-(1-isobutyl-4-methylpiperidin-4-yl)-2-methyl-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 114) 6-fluoro-3-(1-isopropyl-4-methylpiperidin-4-yl)-2-methyl-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 115) 3-(1,4-dimethylpiperidin-4-yl)-6-fluoro-2-methyl-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 116) 6-fluoro-3-(1-(2-hydroxy-2-methylpropyl)-4-methylpiperidin-4-yl)-2-methyl-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 117) 3-(1-ethyl-2,4-dimethylpiperidin-4-yl)-6-fluoro-2-methyl-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 118) 3-(1-ethyl-3-methylpyrrolidin-3-yl)-6-fluoro-2-methyl-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 119) 6-fluoro-3-(1-isopropyl-3-methylpyrrolidin-3-yl)-2-methyl-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 120) 3-(1-(cyclopropylmethyl)-3-methylpyrrolidin-3-yl)-6-fluoro-2-methyl-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 121) 3-(1,3-dimethylazetidin-3-yl)-6-fluoro-2-methyl-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 122) 3-(1-ethyl-3-methylazetidin-3-yl)-6-fluoro-2-methyl-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 123) 6-fluoro-3-(1-isopropyl-3-methylazetidin-3-yl)-2-methyl-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 124) 3-(1-(cyclopropylmethyl)-3-methylazetidin-3-yl)-6-fluoro-2-methyl-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 125) 6-fluoro-3-(1-(2-hydroxy-2-methylpropyl)-3-methylazetidin-3-yl)-2-methyl-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 126) 6-fluoro-3-(1-isopropyl-4-methylpiperidin-4-yl)-2-methoxy-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 127) 2-(benzyloxy)-6-fluoro-3-(1-isopropyl-4-methylpiperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 128) 6-fluoro-2-(piperidin-4-yl)-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide;
- 129) 2-(1-ethylpiperidin-4-yl)-6-fluoro-4H-benzo[4,5]imidazo[1,2-b]pyrazole-8-carboxamide.

14. Use of the compound of any one of claims 1-13 or a pharmaceutically acceptable salt thereof in the manufacture of a medicament for the treatment of cancer, stroke, cardiac ischemia, inflammation and diabetes.

15. A therapeutic agent for use in treating cancer, stroke, cardiac ischemia, inflammation or

diabetes, comprising the compound of any one of claims 1-13 or a pharmaceutically acceptable salt thereof.