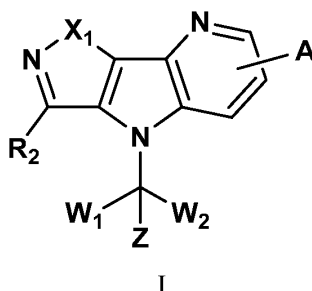


What is claimed is:

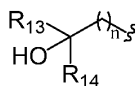
1. A compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof:



5       Wherein,

$X_1$  is selected from O, S, SO, SO<sub>2</sub> or NR<sub>1</sub>;

$R_1$  is selected from hydrogen; deuterium; -CN; -SOR<sub>11</sub>; -SO<sub>2</sub>R<sub>11</sub>; -SO<sub>2</sub>NR<sub>11</sub>R<sub>12</sub>; -C<sub>1-6</sub>alkyl;



10       ; -C<sub>2-6</sub>alkenyl; -C<sub>2-6</sub>alkynyl; carboxyl; -NO<sub>2</sub>; -COOR<sub>11</sub>; -COR<sub>11</sub>; -CONR<sub>11</sub>R<sub>12</sub>; -POR<sub>11</sub>R<sub>12</sub>; -C<sub>5-6</sub>aryl; -C<sub>5-6</sub>heteroaryl containing 1, 2, 3 or 4 heteroatoms selected from N, O, S, SO or SO<sub>2</sub>; -C<sub>3-8</sub>heterocyclic containing 1, 2, 3 or 4 heteroatoms selected from N, O, S, SO or SO<sub>2</sub>; or -C<sub>3-8</sub>carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen, -OH, oxo, -CN, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkoxy, -NH<sub>2</sub>, -NH(C<sub>1-6</sub>alkyl), -N(C<sub>1-6</sub>alkyl)<sub>2</sub>, carboxyl or -C<sub>3-8</sub>carbocyclic;

15       Each of R<sub>11</sub> and R<sub>12</sub> at each occurrence is independently selected from hydrogen; deuterium; -OH; -NH<sub>2</sub>; -CN; -C<sub>1-6</sub>alkyl; -C<sub>1-6</sub>alkoxy; -C<sub>5-6</sub>aryl; -C<sub>5-6</sub>heteroaryl containing 1, 2, 3 or 4 heteroatoms selected from N, O, S, SO or SO<sub>2</sub>; -C<sub>1-6</sub>alkylene-C<sub>3-8</sub>carbocyclic; or -C<sub>3-8</sub>carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen, -OH, -CN, -NH<sub>2</sub>, -NH(C<sub>1-6</sub>alkyl), -N(C<sub>1-6</sub>alkyl)<sub>2</sub>, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkoxy, carboxyl, -SO<sub>2</sub>(C<sub>1-6</sub>alkyl) or -C<sub>3-8</sub>carbocyclic; or

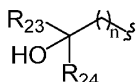
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25       R<sub>11</sub> and R<sub>12</sub> together with the nitrogen atom to which they are both attached form 4-8 membered heterocyclic ring, and each of the heterocyclic ring at each occurrence can further contains 1, 2, 3 or 4 heteroatoms selected from N, O, S, SO or SO<sub>2</sub>, and each of the heterocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium; halogen; -OH; oxo; -CN; -C<sub>1-6</sub>alkyl; -C<sub>1-6</sub>alkoxy; -SO<sub>2</sub>(C<sub>1-6</sub>alkyl); -CON(C<sub>1-6</sub>alkyl)<sub>2</sub>; -SO<sub>2</sub>N(C<sub>1-6</sub>alkyl)<sub>2</sub>; -NH<sub>2</sub>; -NH(C<sub>1-6</sub>alkyl); -N(C<sub>1-6</sub>alkyl)<sub>2</sub>; -C<sub>3-6</sub>heterocyclic containing 1 or 2 heteroatoms selected from N, O or S; or -C<sub>1-6</sub>alkyl substituted with deuterium;

30       Each of R<sub>13</sub> and R<sub>14</sub> at each occurrence is independently selected from hydrogen, deuterium, halogen, -NH<sub>2</sub>, -C<sub>1-6</sub>alkoxy or -C<sub>1-6</sub>alkyl; or

R<sub>13</sub> and R<sub>14</sub> together with the carbon atom to which they are both attached form 3-6 membered carbocyclic ring, and each of the carbocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen, -OH, -NH<sub>2</sub>, -CN, -C<sub>1-6</sub>alkyl or -C<sub>1-6</sub>alkoxy;

R<sub>2</sub> is selected from hydrogen; deuterium; halogen; -OR<sub>21</sub>; -NR<sub>21</sub>R<sub>22</sub>; -CN; -SR<sub>21</sub>; -SOR<sub>21</sub>; -SO<sub>2</sub>R<sub>21</sub>;



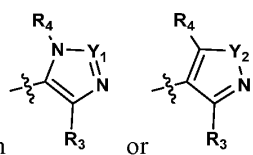
-SO<sub>2</sub>NR<sub>21</sub>R<sub>22</sub>; -C<sub>1-6</sub>alkyl; -C<sub>2-6</sub>alkenyl; -C<sub>2-6</sub>alkynyl; carboxyl; -NO<sub>2</sub>; -COOR<sub>21</sub>; -COR<sub>21</sub>; -CONR<sub>21</sub>R<sub>22</sub>; -NR<sub>21</sub>COR<sub>22</sub>; -NR<sub>21</sub>CONR<sub>21</sub>R<sub>22</sub>; -NR<sub>21</sub>SO<sub>2</sub>R<sub>22</sub>; -NR<sub>21</sub>SO<sub>2</sub>NR<sub>21</sub>R<sub>22</sub>; -OCONR<sub>21</sub>R<sub>22</sub>; -POR<sub>21</sub>R<sub>22</sub>; -C<sub>5-6</sub>aryl; -C<sub>5-6</sub>heteroaryl containing 1, 2, 3 or 4 heteroatoms selected from N, O, S, SO or SO<sub>2</sub>; or -C<sub>3-8</sub>heterocyclic containing 1, 2, 3 or 4 heteroatoms selected from N, O, S, SO or SO<sub>2</sub>; or -C<sub>3-8</sub>carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen, -OH, oxo, -CN, -NH<sub>2</sub>, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkoxy, carboxyl or -C<sub>3-8</sub>carbocyclic;

Each of R<sub>21</sub> and R<sub>22</sub> at each occurrence is independently selected from hydrogen; deuterium; -OH; NH<sub>2</sub>; -CN; -C<sub>1-6</sub>alkyl; -C<sub>1-6</sub>alkoxy; -C<sub>5-6</sub>aryl; -C<sub>5-6</sub>heteroaryl containing 1, 2, 3 or 4 heteroatoms selected from N, O, S, SO or SO<sub>2</sub>; -C<sub>1-6</sub>alkylene-C<sub>3-8</sub>carbocyclic; or -C<sub>3-8</sub>carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen, -OH, -CN, -NH<sub>2</sub>, -NH(C<sub>1-6</sub>alkyl), -N(C<sub>1-6</sub>alkyl)<sub>2</sub>, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkoxy, carboxyl, -SO<sub>2</sub>(C<sub>1-6</sub>alkyl) or -C<sub>3-8</sub>carbocyclic; or

R<sub>21</sub> and R<sub>22</sub> together with the nitrogen atom to which they are both attached form 4-8 membered heterocyclic ring, and each of the heterocyclic ring at each occurrence can further contains 1, 2, 3 or 4 heteroatoms selected from N, O, S, SO or SO<sub>2</sub>, and each of the heterocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium; halogen; -OH; oxo; -CN; -C<sub>1-6</sub>alkyl; -C<sub>1-6</sub>alkoxy; -SO<sub>2</sub>(C<sub>1-6</sub>alkyl); -CON(C<sub>1-6</sub>alkyl)<sub>2</sub>; -SO<sub>2</sub>N(C<sub>1-6</sub>alkyl)<sub>2</sub>; -NH<sub>2</sub>; -NH(C<sub>1-6</sub>alkyl); -N(C<sub>1-6</sub>alkyl)<sub>2</sub>; -C<sub>3-6</sub>heterocyclic containing 1 or 2 heteroatoms selected from N, O or S; or -C<sub>1-6</sub>alkyl substituted with deuterium;

Each of R<sub>23</sub> and R<sub>24</sub> at each occurrence is independently selected from hydrogen, deuterium, halogen, -NH<sub>2</sub>, -C<sub>1-6</sub>alkoxy or -C<sub>1-6</sub>alkyl; or

R<sub>23</sub> and R<sub>24</sub> together with the carbon atom to which they are both attached form 3-6 membered carbocyclic ring, and each of the carbocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen, -OH, -NH<sub>2</sub>, -CN, -C<sub>1-6</sub>alkyl or -C<sub>1-6</sub>alkoxy;



A is selected from

$Y_1$  is selected from N or  $CR_{Y1}$ ;

$Y_2$  is selected from O, S,  $CR_{Y1}R_{Y2}$  or  $NR_{Y2}$ ;

Each of  $R_{Y1}$  and  $R_{Y2}$  at each occurrence is independently selected from hydrogen, deuterium, halogen, -OH,  $NH_2$ , -CN, - $C_{1-6}$ alkyl or - $C_{1-6}$ alkoxy;

Each of  $R_3$  and  $R_4$  at each occurrence is independently selected from hydrogen, deuterium, halogen, -CN, - $SOR_5$ , - $SO_2R_5$ , - $SO_2NR_5R_6$ , - $C_{1-6}$ alkyl, - $C_{1-6}$ alkoxy, -COR<sub>5</sub>, -CONR<sub>5</sub>R<sub>6</sub> or -POR<sub>5</sub>R<sub>6</sub>; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen, -OH, - $NH_2$ , -CN, - $C_{1-6}$ alkyl or - $C_{1-6}$ alkoxy;

Each of  $R_5$  and  $R_6$  at each occurrence is independently selected from hydrogen; deuterium; -OH; - $NH_2$ ; -CN; - $C_{1-6}$ alkyl; - $C_{1-6}$ alkoxy; - $C_{5-6}$ aryl; - $C_{5-6}$ heteroaryl containing 1, 2, 3 or 4 heteroatoms selected from N, O, S, SO or  $SO_2$ ; - $C_{1-6}$ alkylene- $C_{3-8}$ carbocyclic; or - $C_{3-8}$ carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen, -OH, -CN, - $NH_2$ , -NH( $C_{1-6}$ alkyl), -N( $C_{1-6}$ alkyl)<sub>2</sub>, - $C_{1-6}$ alkyl, - $C_{1-6}$ alkoxy, carboxyl, - $SO_2$ ( $C_{1-6}$ alkyl) or - $C_{3-8}$ carbocyclic; or

$R_5$  and  $R_6$  together with the nitrogen atom to which they are both attached form 4-8 membered heterocyclic ring, and each of the heterocyclic ring at each occurrence can further contains 1, 2, 3 or 4 heteroatoms selected from N, O, S, SO or  $SO_2$ , and each of the heterocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium; halogen; -OH; oxo; -CN; - $C_{1-6}$ alkyl; - $C_{1-6}$ alkoxy; - $SO_2$ ( $C_{1-6}$ alkyl); -CON( $C_{1-6}$ alkyl)<sub>2</sub>; - $SO_2$ N( $C_{1-6}$ alkyl)<sub>2</sub>; - $NH_2$ ; -NH( $C_{1-6}$ alkyl); -N( $C_{1-6}$ alkyl)<sub>2</sub>; - $C_{3-6}$ heterocyclic containing 1 or 2 heteroatoms selected from N, O or S; or - $C_{1-6}$ alkyl substituted with deuterium;

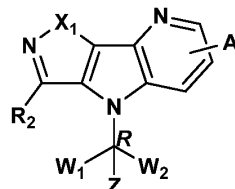
n is selected from 0, 1, 2, 3, 4, 5 or 6;

$W_1$  is selected from hydrogen; deuterium; halogen; - $NH_2$ ; -CN; -OH; - $NO_2$ ; carboxyl; - $C_{1-6}$ alkyl; - $C_{1-6}$ alkoxy; - $C_{1-6}$ alkylene- $C_{1-6}$ alkoxy; - $C_{5-10}$ aryl; - $C_{5-10}$ heteroaryl containing 1, 2, 3 or 4 heteroatoms selected from N, O, S, SO or  $SO_2$ ; - $C_{3-8}$ heterocyclic containing 1, 2, 3 or 4 heteroatoms selected from N, O, S, SO or  $SO_2$ ; or - $C_{3-8}$ carbocyclic; and each of which at each occurrence is independently optionally substituted;

$W_2$  is selected from hydrogen; deuterium; halogen; - $NH_2$ ; -CN; -OH; - $NO_2$ ; carboxyl; - $C_{1-6}$ alkyl; - $C_{1-6}$ alkoxy; - $C_{5-10}$ aryl; - $C_{5-10}$ heteroaryl containing 1, 2, 3 or 4 heteroatoms selected from N, O, S, SO or  $SO_2$ ; - $C_{3-8}$ heterocyclic containing 1, 2, 3 or 4 heteroatoms selected from N, O, S, SO or  $SO_2$ ; or - $C_{3-8}$ carbocyclic; and each of which at each occurrence is independently optionally substituted;

Z is selected from hydrogen, deuterium, halogen, -NH<sub>2</sub>, -CN, -OH, carboxyl, -C<sub>1-6</sub>alkyl or -C<sub>1-6</sub>alkoxy.

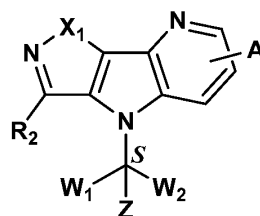
2. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to claim 1, wherein the compound is of formula I-1:



I-1

“R” in the formula I-1 indicates that the absolute configuration of the carbon that contacts with the W<sub>1</sub>, W<sub>2</sub> and Z is R configuration when the carbon is chiral carbon.

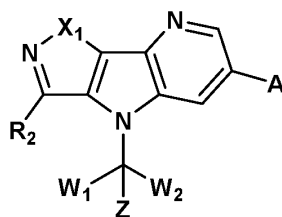
3. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to claim 1, wherein the compound is of formula I-2:



I-2

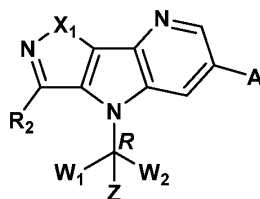
“S” in the formula I-2 indicates that the absolute configuration of the carbon that contacts with the W<sub>1</sub>, W<sub>2</sub> and Z is S configuration when the carbon is chiral carbon.

4. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to claim 1, wherein the compound is of formula II:



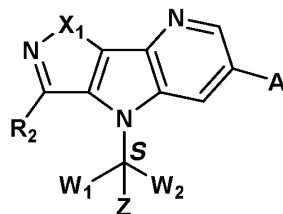
II.

5. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to claim 1 or 4, wherein the compound is of formula II-1:

II-1  
112

“*R*” in the formula II-1 indicates that the absolute configuration of the carbon that contacts with the  $W_1$ ,  $W_2$  and  $Z$  is *R* configuration when the carbon is chiral carbon.

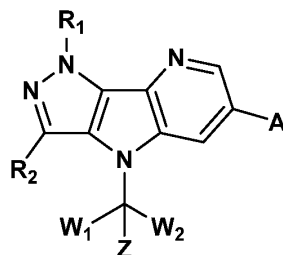
6. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to claim 1 or 4, wherein the compound is of formula II-2:



II-2

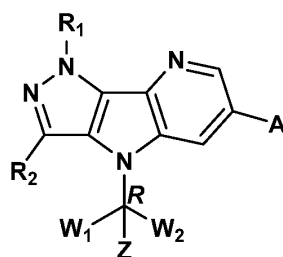
“*S*” in the formula II-2 indicates that the absolute configuration of the carbon that contacts with the  $W_1$ ,  $W_2$  and  $Z$  is *S* configuration when the carbon is chiral carbon.

7. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to claim 1 or 4, wherein the compound is of formula III:



III.

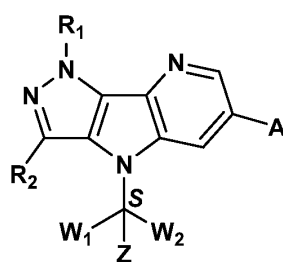
8. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to claim 1, 4 or 7, wherein the compound is of formula III-1:



III-1

“*R*” in the formula III-1 indicates that the absolute configuration of the carbon that contacts with the  $W_1$ ,  $W_2$  and  $Z$  is *R* configuration when the carbon is chiral carbon.

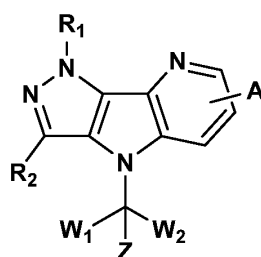
9. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to claim 1, 4 or 7, wherein the compound is of formula III-2:



III-2

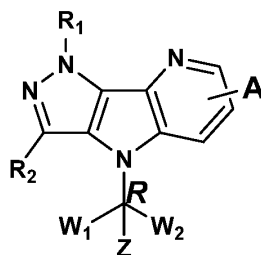
“S” in the formula III-2 indicates that the absolute configuration of the carbon that contacts with the  $W_1$ ,  $W_2$  and  $Z$  is *S* configuration when the carbon is chiral carbon.

- 5        10. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to claim 1, the compound is of formula IV:



IV.

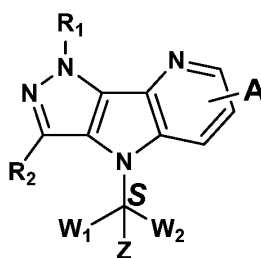
11. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof  
10 according to claim 1 or 10, the compound is of formula IV-1:



IV-1

“R” in the formula IV-1 indicates that the absolute configuration of the carbon that contacts with the  $W_1$ ,  $W_2$  and  $Z$  is *R* configuration when the carbon is chiral carbon.

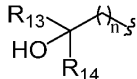
- 15        12. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to claim 1 or 10, the compound is of formula IV-2:



## IV-2

“S” in the formula IV-2 indicates that the absolute configuration of the carbon that contacts with the W<sub>1</sub>, W<sub>2</sub> and Z is *S* configuration when the carbon is chiral carbon.

13. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-12, wherein R<sub>1</sub> is selected from hydrogen; deuterium; -SOR<sub>11</sub>; -SO<sub>2</sub>R<sub>11</sub>;

5 ; -SO<sub>2</sub>NR<sub>11</sub>R<sub>12</sub>; -C<sub>1-6</sub>alkyl; -COOR<sub>11</sub>; -COR<sub>11</sub>; -CONR<sub>11</sub>R<sub>12</sub>; -POR<sub>11</sub>R<sub>12</sub>; -C<sub>5-6</sub>heteroaryl containing 1, 2, 3 or 4 heteroatoms selected from N, O, S or SO<sub>2</sub>; -C<sub>3-8</sub>heterocyclic containing 1, 2, 3 or 4 heteroatoms selected from N, O, S or SO<sub>2</sub>; or -C<sub>3-8</sub>carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen, -OH, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkoxy, -NH<sub>2</sub>, -NH(C<sub>1-6</sub>alkyl), -N(C<sub>1-6</sub>alkyl)<sub>2</sub> or -C<sub>3-8</sub>carbocyclic;

Each of R<sub>11</sub> and R<sub>12</sub> at each occurrence is independently selected from hydrogen, deuterium, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkylene-C<sub>3-8</sub>carbocyclic or -C<sub>3-8</sub>carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen, -OH, -CN, -NH<sub>2</sub>, -NH(C<sub>1-6</sub>alkyl), -N(C<sub>1-6</sub>alkyl)<sub>2</sub>, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkoxy, -SO<sub>2</sub>(C<sub>1-6</sub>alkyl) or -C<sub>3-8</sub>carbocyclic; or

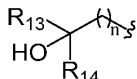
R<sub>11</sub> and R<sub>12</sub> together with the nitrogen atom to which they are both attached form 4-6 membered heterocyclic ring, and each of the heterocyclic ring at each occurrence can further contains 1, 2 or 3 heteroatoms selected from N, O, S or SO<sub>2</sub>, and each of the heterocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium; halogen; -OH; oxo; -CN; -C<sub>1-6</sub>alkyl; -C<sub>1-6</sub>alkoxy; -SO<sub>2</sub>(C<sub>1-6</sub>alkyl); -CON(C<sub>1-6</sub>alkyl)<sub>2</sub>; -SO<sub>2</sub>N(C<sub>1-6</sub>alkyl)<sub>2</sub>; -NH<sub>2</sub>; -NH(C<sub>1-6</sub>alkyl); -N(C<sub>1-6</sub>alkyl)<sub>2</sub>; -C<sub>3-6</sub>heterocyclic containing 1 or 2 heteroatoms selected from N, O or S; or -C<sub>1-6</sub>alkyl substituted with deuterium;

Each of R<sub>13</sub> and R<sub>14</sub> at each occurrence is independently selected from hydrogen, deuterium or -C<sub>1-6</sub>alkyl; or

R<sub>13</sub> and R<sub>14</sub> together with the carbon atom to which they are both attached form 3-6 membered carbocyclic ring, and each of the carbocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3 or 4 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen, -OH, -NH<sub>2</sub>, -CN, -C<sub>1-6</sub>alkyl or -C<sub>1-6</sub>alkoxy;

n is selected from 0, 1, 2 or 3.

14. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-13, wherein R<sub>1</sub> is selected from hydrogen; deuterium; -SOR<sub>11</sub>; -SO<sub>2</sub>R<sub>11</sub>;

35 ; -SO<sub>2</sub>NR<sub>11</sub>R<sub>12</sub>; -C<sub>1-3</sub>alkyl; -COOR<sub>11</sub>; -COR<sub>11</sub>; -CONR<sub>11</sub>R<sub>12</sub>; -POR<sub>11</sub>R<sub>12</sub>; -C<sub>5-6</sub>heteroaryl containing 1, 2, 3 or 4 heteroatoms selected from N, O, S or SO<sub>2</sub>; -C<sub>3-6</sub>heterocyclic containing 1, 2, 3 or 4

heteroatoms selected from N, O, S or SO<sub>2</sub>; or -C<sub>3-6</sub>carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, -C<sub>1-3</sub>alkyl, -C<sub>1-3</sub>alkoxy, -NH<sub>2</sub>, -NH(C<sub>1-3</sub>alkyl), -N(C<sub>1-3</sub>alkyl)<sub>2</sub> or -C<sub>3-6</sub>carbocyclic;

5 Each of R<sub>11</sub> and R<sub>12</sub> at each occurrence is independently selected from hydrogen, deuterium, -C<sub>1-3</sub>alkyl, -C<sub>1-3</sub>alkylene-C<sub>3-6</sub>carbocyclic or -C<sub>3-6</sub>carbocyclic, and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, -CN, -NH<sub>2</sub>, -NH(C<sub>1-3</sub>alkyl), -N(C<sub>1-3</sub>alkyl)<sub>2</sub>, -C<sub>1-3</sub>alkyl, -C<sub>1-3</sub>alkoxy, -SO<sub>2</sub>(C<sub>1-3</sub>alkyl) or -C<sub>3-6</sub>carbocyclic; or

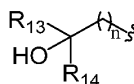
10 R<sub>11</sub> and R<sub>12</sub> together with the nitrogen atom to which they are both attached form 4-6 membered heterocyclic ring, and each of the heterocyclic ring at each occurrence can further contains 1, 2 or 3 heteroatoms selected from N, O or SO<sub>2</sub>, and each of the heterocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium; -F; -Cl; -Br; -OH; oxo; -CN; -C<sub>1-3</sub>alkyl; 15 -C<sub>1-3</sub>alkoxy; -SO<sub>2</sub>(C<sub>1-3</sub>alkyl); -CON(C<sub>1-3</sub>alkyl)<sub>2</sub>; -SO<sub>2</sub>N(C<sub>1-3</sub>alkyl)<sub>2</sub>; -NH<sub>2</sub>; -NH(C<sub>1-3</sub>alkyl); -N(C<sub>1-3</sub>alkyl)<sub>2</sub>; -C<sub>4-6</sub>heterocyclic containing 1 heteroatoms selected from N or O; or -C<sub>1-3</sub>alkyl substituted with deuterium;

Each of R<sub>13</sub> and R<sub>14</sub> at each occurrence is independently selected from hydrogen, deuterium or -C<sub>1-3</sub>alkyl; or

20 R<sub>13</sub> and R<sub>14</sub> together with the carbon atom to which they are both attached form 3-6 membered carbocyclic ring, and each of the carbocyclic ring is independently optionally substituted with 1, 2, 3 or 4 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, -NH<sub>2</sub>, -CN, -C<sub>1-3</sub>alkyl or -C<sub>1-3</sub>alkoxy;

n is selected from 0, 1, 2 or 3.

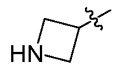
25 15. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-14, wherein R<sub>1</sub> is selected from hydrogen; deuterium; -SOR<sub>11</sub>; -SO<sub>2</sub>R<sub>11</sub>;



-SO<sub>2</sub>NR<sub>11</sub>R<sub>12</sub>; methyl; ethyl; propyl; isopropyl; -COOR<sub>11</sub>; -COR<sub>11</sub>; -CONR<sub>11</sub>R<sub>12</sub>; -POR<sub>11</sub>R<sub>12</sub>; 5-membered heteroaryl containing 1, 2 or 3 heteroatoms selected from N, O, S or SO<sub>2</sub>; 6-membered heteroaryl containing 1, 2 or 3 heteroatoms selected from N, O, S or SO<sub>2</sub>; 3-membered 30 heterocyclic containing 1, 2 or 3 heteroatoms selected from N, O, S or SO<sub>2</sub>; 4-membered heterocyclic containing 1, 2 or 3 heteroatoms selected from N, O, S or SO<sub>2</sub>; 5-membered heterocyclic containing 1, 2 or 3 heteroatoms selected from N, O, S or SO<sub>2</sub>; 6-membered heterocyclic containing 1, 2 or 3 heteroatoms selected from N, O, S or SO<sub>2</sub>; 3-membered carbocyclic; 4-membered carbocyclic; 5-membered carbocyclic; or 6-membered carbocyclic; and each of which at each occurrence is independently 35 optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, methyl, ethyl, propyl, isopropyl,

methoxy, ethoxy, propoxy, isopropoxy,  $-\text{NH}_2$ ,  $-\text{NH}(\text{CH}_3)$ ,  $-\text{NH}(\text{CH}_2\text{CH}_3)$ ,  $-\text{NH}(\text{CH}_2\text{CH}_2\text{CH}_3)$ ,  $-\text{NH}(\text{CH}(\text{CH}_3)_2)$ ,  $-\text{N}(\text{CH}_3)_2$ ,  $-\text{N}(\text{CH}_2\text{CH}_3)_2$ ,  $-\text{N}(\text{CH}_3)(\text{CH}_2\text{CH}_3)$ ,  $-\text{N}(\text{CH}_3)(\text{CH}_2\text{CH}_2\text{CH}_3)$ , 3-membered carbocyclic, 4-membered carbocyclic, 5-membered carbocyclic or 6-membered carbocyclic;

Each of  $\text{R}_{11}$  and  $\text{R}_{12}$  at each occurrence is independently selected from hydrogen, deuterium, methyl, ethyl, propyl, isopropyl, -methylene-3-membered carbocyclic, -methylene-4-membered carbocyclic, -methylene-5-membered carbocyclic, -methylene-6-membered carbocyclic, -ethylene-3-membered carbocyclic, -ethylene-4-membered carbocyclic, -ethylene-5-membered carbocyclic, -ethylene-6-membered carbocyclic, 3-membered carbocyclic, 4-membered carbocyclic, 5-membered carbocyclic or 6-membered carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, -CN,  $-\text{NH}_2$ ,  $-\text{NH}(\text{CH}_3)$ ,  $-\text{NH}(\text{CH}_2\text{CH}_3)$ ,  $-\text{NH}(\text{CH}_2\text{CH}_2\text{CH}_3)$ ,  $-\text{NH}(\text{CH}(\text{CH}_3)_2)$ ,  $-\text{N}(\text{CH}_3)_2$ ,  $-\text{N}(\text{CH}_2\text{CH}_3)_2$ ,  $-\text{N}(\text{CH}_3)(\text{CH}_2\text{CH}_3)$ ,  $-\text{N}(\text{CH}_3)(\text{CH}_2\text{CH}_2\text{CH}_3)$ , methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy, isopropoxy,  $-\text{SO}_2\text{CH}_3$ ,  $-\text{SO}_2\text{CH}_2\text{CH}_3$ ,  $-\text{SO}_2\text{CH}_2\text{CH}_2\text{CH}_3$ ,  $-\text{SO}_2\text{CH}(\text{CH}_3)_2$ , 3-membered carbocyclic, 4-membered carbocyclic, 5-membered carbocyclic or 6-membered carbocyclic; or

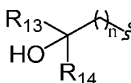
$\text{R}_{11}$  and  $\text{R}_{12}$  together with the nitrogen atom to which they are both attached form 4 membered heterocyclic ring, 5 membered heterocyclic ring or 6 membered heterocyclic ring, and each of the heterocyclic ring at each occurrence can further contains 1 or 2 heteroatoms selected from N, O or  $\text{SO}_2$ , and each of the heterocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, oxo, -CN, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy, isopropoxy,  $-\text{SO}_2\text{CH}_3$ ,  $-\text{SO}_2\text{CH}_2\text{CH}_3$ ,  $-\text{SO}_2\text{CH}_2\text{CH}_2\text{CH}_3$ ,  $-\text{SO}_2\text{CH}(\text{CH}_3)_2$ ,  $-\text{CON}(\text{CH}_3)_2$ ,  $-\text{CON}(\text{CH}_2\text{CH}_3)_2$ ,  $-\text{CON}(\text{CH}_2\text{CH}_2\text{CH}_3)_2$ ,  $-\text{CON}(\text{CH}(\text{CH}_3)_2)_2$ ,  $-\text{SO}_2\text{N}(\text{CH}_3)_2$ ,  $-\text{SO}_2\text{N}(\text{CH}_2\text{CH}_3)_2$ ,  $-\text{SO}_2\text{N}(\text{CH}_2\text{CH}_2\text{CH}_3)_2$ ,  $-\text{SO}_2\text{N}(\text{CH}(\text{CH}_3)_2)_2$ ,  $-\text{NH}_2$ ,  $-\text{NH}(\text{CH}_3)$ ,  $-\text{NH}(\text{CH}_2\text{CH}_3)$ ,  $-\text{NH}(\text{CH}_2\text{CH}_2\text{CH}_3)$ ,  $-\text{NH}(\text{CH}(\text{CH}_3)_2)$ ,  $-\text{N}(\text{CH}_3)_2$ ,  $-\text{N}(\text{CH}_2\text{CH}_3)_2$ ,  $-\text{N}(\text{CH}_3)(\text{CH}_2\text{CH}_3)$ ,  $-\text{N}(\text{CH}_3)(\text{CH}_2\text{CH}_2\text{CH}_3)$ , , , , , , , methyl substituted with deuterium, ethyl substituted with deuterium, propyl substituted with deuterium or isopropyl substituted with deuterium;

Each of  $\text{R}_{13}$  and  $\text{R}_{14}$  at each occurrence is independently selected from hydrogen, deuterium, methyl, ethyl, propyl or isopropyl; or

$\text{R}_{13}$  and  $\text{R}_{14}$  together with the carbon atom to which they are both attached form 3 membered carbocyclic ring, 4 membered carbocyclic ring, 5 membered carbocyclic ring or 6 membered carbocyclic ring, and each of carbocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3 or 4 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH,  $-\text{NH}_2$ , -CN, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy or isopropoxy;

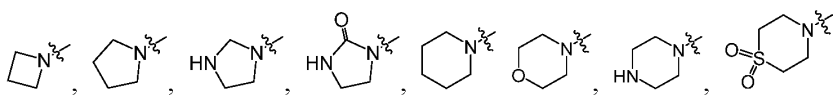
n is selected from 0, 1, 2 or 3.

16. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-15, wherein  $R_1$  is selected from hydrogen; deuterium;  $-\text{SOR}_{11}$ ;  $-\text{SO}_2\text{R}_{11}$ ;

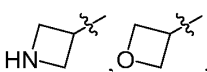
$-\text{SO}_2\text{NR}_{11}\text{R}_{12}$ ; methyl; ethyl; propyl; isopropyl; ;  $-\text{COOR}_{11}$ ;  $-\text{COR}_{11}$ ;  $-\text{CONR}_{11}\text{R}_{12}$ ;  $-\text{POR}_{11}\text{R}_{12}$ ; 5-membered heteroaryl containing 1, 2 or 3 heteroatoms selected from N, O, S or  $\text{SO}_2$ ;  
5 6-membered heterocyclic containing 1, 2 or 3 heteroatoms selected from N, O, S or  $\text{SO}_2$ ; or 3-membered carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy, isopropoxy,  $-\text{NH}_2$ ,  $-\text{NH}(\text{CH}_3)$ ,  $-\text{NH}(\text{CH}_2\text{CH}_3)$ ,  $-\text{N}(\text{CH}_3)_2$ ,  $-\text{N}(\text{CH}_3)(\text{CH}_2\text{CH}_3)$  or 3-membered carbocyclic;

10 Each of  $R_{11}$  or  $R_{12}$  at each occurrence is independently selected from hydrogen, deuterium, methyl, ethyl, propyl, isopropyl, -methylene-3-membered carbocyclic or 3-membered carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH,  $-\text{NH}_2$ ,  $-\text{NH}(\text{CH}_3)$ ,  $-\text{N}(\text{CH}_3)_2$ , methyl, methoxy,  $-\text{SO}_2\text{CH}_3$  or 3-membered carbocyclic; or

15  $R_{11}$  and  $R_{12}$  together with the nitrogen atom to which they are both attached form the heterocyclic

selected from , and the

heterocyclic ring is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, oxo, -CN, methyl, methoxy,  $-\text{SO}_2\text{CH}_3$ ,  $-\text{CON}(\text{CH}_3)_2$ ,  $-\text{SO}_2\text{N}(\text{CH}_3)_2$ ,  $-\text{NH}_2$ ,  $-\text{NH}(\text{CH}_3)$ ,  $-\text{N}(\text{CH}_3)_2$ ,

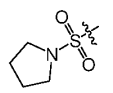
20 ,  $-\text{CH}_2\text{D}$ ,  $-\text{CHD}_2$  or  $-\text{CD}_3$ ;

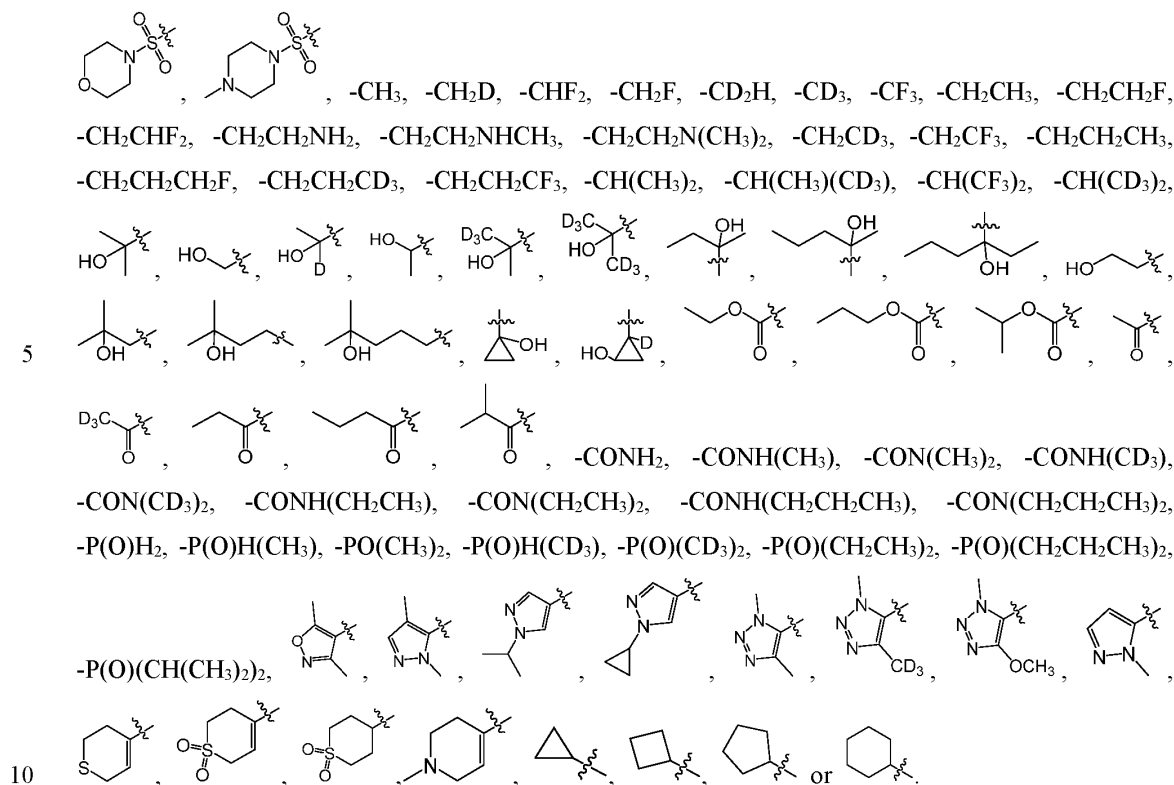
Each of  $R_{13}$  and  $R_{14}$  at each occurrence is independently selected from hydrogen, deuterium, methyl, ethyl, propyl or isopropyl; or

$R_{13}$  and  $R_{14}$  together with the carbon atom to which they are both attached form 3 membered carbocyclic ring, and the carbocyclic ring is independently optionally substituted with 1, 2, 3 or 4  
25 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -OH, methyl, ethyl, propyl or isopropyl;

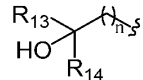
$n$  is selected from 0 or 1.

17. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-16, wherein  $R_1$  is selected from hydrogen, deuterium,  $-\text{SOCH}_3$ ,  
30  $-\text{SOCH}_2\text{CH}_3$ ,  $-\text{SOCH}_2\text{CH}_2\text{CH}_3$ ,  $-\text{SOCH}(\text{CH}_3)_2$ ,  $-\text{SO}_2\text{CH}_3$ ,  $-\text{SO}_2\text{CD}_3$ ,  $-\text{SO}_2\text{CH}_2\text{CH}_3$ ,  $-\text{SO}_2\text{CH}_2\text{CH}_2\text{CH}_3$ ,  $-\text{SO}_2\text{CH}(\text{CH}_3)_2$ ,  $-\text{SO}_2\text{CH}(\text{CD}_3)_2$ ,  $-\text{SO}_2\text{NH}_2$ ,  $-\text{SO}_2\text{NH}(\text{CH}_3)$ ,  $-\text{SO}_2\text{N}(\text{CH}_3)_2$ ,  $-\text{SO}_2\text{NH}(\text{CD}_3)$ ,  $-\text{SO}_2\text{N}(\text{CD}_3)_2$ ,

$-\text{SO}_2\text{NH}(\text{CH}_2\text{CH}_3)$ ,  $-\text{SO}_2\text{N}(\text{CH}_2\text{CH}_3)_2$ ,  $-\text{SO}_2\text{NH}(\text{CH}_2\text{CH}_2\text{CH}_3)$ ,  $-\text{SO}_2\text{N}(\text{CH}_2\text{CH}_2\text{CH}_3)_2$ , ,



18. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof

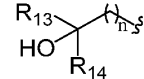
according to any one of claims 1-13, wherein R<sub>1</sub> is selected from -SO<sub>2</sub>R<sub>11</sub>, -C<sub>1-6</sub>alkyl,  or -C<sub>3-8</sub>carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen, -OH, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkoxy, -NH<sub>2</sub>, -NH(C<sub>1-6</sub>alkyl), or -N(C<sub>1-6</sub>alkyl)<sub>2</sub>;

R<sub>11</sub> is selected from hydrogen, deuterium or -C<sub>1-6</sub>alkyl;

Each of R<sub>13</sub> and R<sub>14</sub> at each occurrence is independently selected from hydrogen, deuterium or -C<sub>1-6</sub>alkyl;

n is selected from 0, 1, 2, 3, 4, 5 or 6.

19. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof

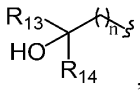
according to any one of claims 1-13 or 18, wherein R<sub>1</sub> is selected from -SO<sub>2</sub>R<sub>11</sub>, -C<sub>1-3</sub>alkyl,  or -C<sub>3-6</sub>carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen, -OH, -C<sub>1-3</sub>alkyl, -C<sub>1-3</sub>alkoxy, -NH<sub>2</sub>, -NH(C<sub>1-3</sub>alkyl) or -N(C<sub>1-3</sub>alkyl)<sub>2</sub>;

R<sub>11</sub> is selected from hydrogen, deuterium or -C<sub>1-3</sub>alkyl;

Each of R<sub>13</sub> and R<sub>14</sub> at each occurrence is independently selected from hydrogen, deuterium or -C<sub>1-3</sub>alkyl;

n is selected from 0, 1, 2 or 3.

20. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-13, 18 or 19, wherein R<sub>1</sub> is selected from -SO<sub>2</sub>R<sub>11</sub>, methyl, ethyl, propyl,

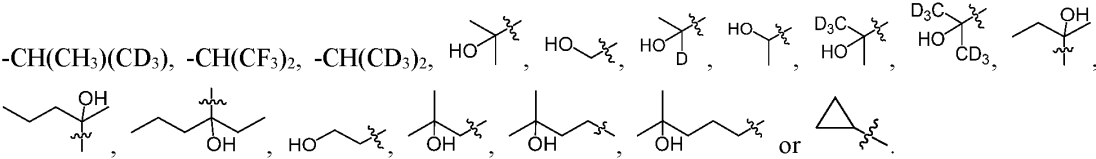
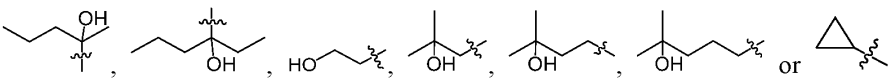
isopropyl, , 3-membered carbocyclic, 4-membered carbocyclic, 5-membered carbocyclic or 6-membered carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy, isopropoxy, -NH<sub>2</sub>, -NH(CH<sub>3</sub>), -NH(CH<sub>2</sub>CH<sub>3</sub>), -NH(CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>), -NH(CH(CH<sub>3</sub>)<sub>2</sub>), -N(CH<sub>3</sub>)<sub>2</sub>, -N(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, -N(CH<sub>3</sub>)(CH<sub>2</sub>CH<sub>3</sub>) or -N(CH<sub>3</sub>)(CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>);

10 R<sub>11</sub> is selected from hydrogen, deuterium, methyl, ethyl, propyl or isopropyl;

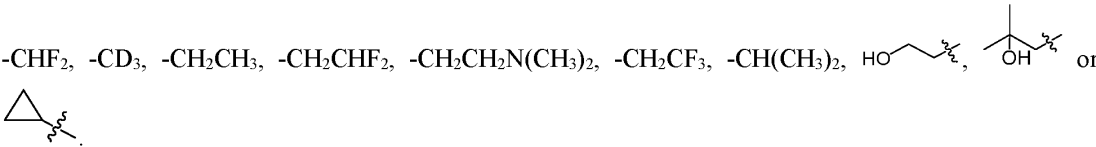
Each of R<sub>13</sub> and R<sub>14</sub> at each occurrence is independently selected from hydrogen, deuterium, methyl, ethyl, propyl or isopropyl;

n is selected from 0, 1, 2 or 3.

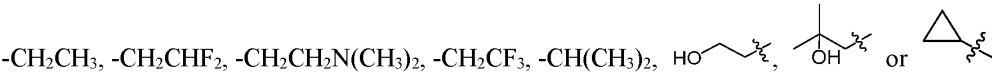
21. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-13 or 18-20, wherein R<sub>1</sub> is selected from -SO<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>CD<sub>3</sub>, -SO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, -SO<sub>2</sub>CH(CD<sub>3</sub>)<sub>2</sub>, -CH<sub>3</sub>, -CH<sub>2</sub>D, -CHF<sub>2</sub>, -CH<sub>2</sub>F, -CD<sub>2</sub>H, -CD<sub>3</sub>, -CF<sub>3</sub>, -CH<sub>2</sub>CH<sub>3</sub>, -CH<sub>2</sub>CH<sub>2</sub>F, -CH<sub>2</sub>CHF<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>NHCH<sub>3</sub>, -CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, -CH<sub>2</sub>CD<sub>3</sub>, -CH<sub>2</sub>CF<sub>3</sub>, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>F, -CH<sub>2</sub>CH<sub>2</sub>CD<sub>3</sub>, -CH<sub>2</sub>CH<sub>2</sub>CF<sub>3</sub>, -CH(CH<sub>3</sub>)<sub>2</sub>,

20 -CH(CH<sub>3</sub>)(CD<sub>3</sub>), -CH(CF<sub>3</sub>)<sub>2</sub>, -CH(CD<sub>3</sub>)<sub>2</sub>,  or .

22. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-13, wherein R<sub>1</sub> is selected from hydrogen, deuterium, -SO<sub>2</sub>CH<sub>3</sub>, -CH<sub>3</sub>,

-CHF<sub>2</sub>, -CD<sub>3</sub>, -CH<sub>2</sub>CH<sub>3</sub>, -CH<sub>2</sub>CHF<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, -CH<sub>2</sub>CF<sub>3</sub>, -CH(CH<sub>3</sub>)<sub>2</sub>,  or .

23. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 18-21, wherein R<sub>1</sub> is selected from -SO<sub>2</sub>CH<sub>3</sub>, -CH<sub>3</sub>, -CHF<sub>2</sub>, -CD<sub>3</sub>,

-CH<sub>2</sub>CH<sub>3</sub>, -CH<sub>2</sub>CHF<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, -CH<sub>2</sub>CF<sub>3</sub>, -CH(CH<sub>3</sub>)<sub>2</sub>,  or .

24. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-13 or 18, wherein R<sub>1</sub> is -C<sub>1-6</sub>alkyl.

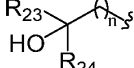
25. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-13, 18 or 24, wherein R<sub>1</sub> is -C<sub>1-3</sub>alkyl.

26. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof

according to any one of claims 1-13, 18, 24 or 25, wherein  $R_1$  is selected from methyl, ethyl, propyl or isopropyl.

27. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-13, 18 or 24-26, wherein  $R_1$  is methyl.

- 5 28. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-27, wherein  $R_2$  is selected from hydrogen; deuterium; halogen;  $-OR_{21}$ ;

$-NR_{21}R_{22}$ ;  $-CN$ ;  $-SR_{21}$ ;  $-SOR_{21}$ ;  $-SO_2R_{21}$ ;  $-SO_2NR_{21}R_{22}$ ;  $-C_{1-6}alkyl$ ; ;  $-C_{2-6}alkenyl$ ;  $-COOR_{21}$ ;  $-COR_{21}$ ;  $-CONR_{21}R_{22}$ ;  $-NR_{21}COR_{22}$ ;  $-NR_{21}SO_2R_{22}$ ;  $-POR_{21}R_{22}$ ;  $-C_{5-6}heteroaryl$  containing 1, 2, 3 or 4 heteroatoms selected from N, O, S or  $SO_2$ ;  $-C_{3-8}heterocyclic$  containing 1, 2, 3 or 4 heteroatoms selected from N, O, S or  $SO_2$ ; or  $-C_{3-8}carbocyclic$ ; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each substituents at each occurrence is independently selected from deuterium, halogen,  $-OH$ ,  $-C_{1-6}alkyl$ ,  $-C_{1-6}alkoxy$  or  $-C_{3-8}carbocyclic$ ;

- 10 Each of  $R_{21}$  and  $R_{22}$  at each occurrence is independently selected from hydrogen, deuterium,  $-C_{1-6}alkyl$ ,  $-C_{1-6}alkylene-C_{3-8}carbocyclic$  or  $-C_{3-8}carbocyclic$ ; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen,  $-OH$ ,  $-CN$ ,  $-NH_2$ ,  $-NH(C_{1-6}alkyl)$ ,  $-N(C_{1-6}alkyl)_2$ ,  $-C_{1-6}alkyl$ ,  $-C_{1-6}alkoxy$ ,  $-SO_2(C_{1-6}alkyl)$  or  $-C_{3-8}carbocyclic$ ; or

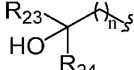
- 15  $R_{21}$  and  $R_{22}$  together with the nitrogen atom to which they are both attached form 4-6 membered heterocyclic ring, each of the heterocyclic ring at each occurrence can further contains 1, 2 or 3 heteroatoms selected from N, O, S or  $SO_2$ , and each of the heterocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium; halogen;  $-OH$ ; oxo;  $-CN$ ;  $-C_{1-6}alkyl$ ;  $-C_{1-6}alkoxy$ ;  $-SO_2(C_{1-6}alkyl)$ ;  $-CON(C_{1-6}alkyl)_2$ ;  $-SO_2N(C_{1-6}alkyl)_2$ ;  $-NH_2$ ;  $-NH(C_{1-6}alkyl)$ ;  $-N(C_{1-6}alkyl)_2$ ;  $-C_{3-6}heterocyclic$  containing 1 or 2 heteroatoms selected from N, O or S; or  $-C_{1-6}alkyl$  substituted with deuterium;

25 Each of  $R_{23}$  and  $R_{24}$  at each occurrence is independently selected from hydrogen, deuterium or  $-C_{1-6}alkyl$ ; or

- $R_{23}$  and  $R_{24}$  together with the carbon atom to which they are both attached form 3-6 membered carbocyclic ring, and each of the carbocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3 or 4 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen,  $-OH$ ,  $-NH_2$ ,  $-CN$ ,  $-C_{1-6}alkyl$  or  $-C_{1-6}alkoxy$ ;

$n$  is selected from 0, 1, 2, 3, 4, 5 or 6.

29. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-28, wherein  $R_2$  is selected from hydrogen; deuterium;  $-F$ ;  $-Cl$ ;  $-Br$ ;  $-OR_{21}$ ;

- 35  $-NR_{21}R_{22}$ ;  $-CN$ ;  $-SR_{21}$ ;  $-SOR_{21}$ ;  $-SO_2R_{21}$ ;  $-SO_2NR_{21}R_{22}$ ;  $-C_{1-3}alkyl$ ; ;  $-C_{2-3}alkenyl$ ;  $-COOR_{21}$ ;

-COR<sub>21</sub>; -CONR<sub>21</sub>R<sub>22</sub>; -NR<sub>21</sub>COR<sub>22</sub>; -NR<sub>21</sub>SO<sub>2</sub>R<sub>22</sub>; -POR<sub>21</sub>R<sub>22</sub>; -C<sub>5-6</sub>heteroaryl containing 1, 2, 3 or 4 heteroatoms selected from N, O, S or SO<sub>2</sub>; -C<sub>3-6</sub>heterocyclic containing 1, 2, 3 or 4 heteroatoms selected from N, O, S or SO<sub>2</sub>; or -C<sub>3-6</sub>carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, -C<sub>1-3</sub>alkyl, -C<sub>1-3</sub>alkoxy or -C<sub>3-6</sub>carbocyclic;

Each of R<sub>21</sub> or R<sub>22</sub> at each occurrence is independently selected from hydrogen, deuterium, -C<sub>1-3</sub>alkyl, -C<sub>1-3</sub>alkylene-C<sub>3-6</sub>carbocyclic or -C<sub>3-6</sub>carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, -CN, -NH<sub>2</sub>, -NH(C<sub>1-3</sub>alkyl), -N(C<sub>1-3</sub>alkyl)<sub>2</sub>, -C<sub>1-3</sub>alkyl, -C<sub>1-3</sub>alkoxy, -SO<sub>2</sub>(C<sub>1-3</sub>alkyl) or -C<sub>3-6</sub>carbocyclic; or

R<sub>21</sub> and R<sub>22</sub> together with the nitrogen atom to which they are both attached form 4-6 membered heterocyclic ring, each of the heterocyclic ring at each occurrence can further contains 1, 2 or 3 heteroatoms selected from N, O or SO<sub>2</sub>, and each of the heterocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium; -F; -Cl; -Br; -OH; oxo; -CN; -C<sub>1-3</sub>alkyl; -C<sub>1-3</sub>alkoxy; -SO<sub>2</sub>(C<sub>1-3</sub>alkyl); -CON(C<sub>1-3</sub>alkyl)<sub>2</sub>; -SO<sub>2</sub>N(C<sub>1-3</sub>alkyl)<sub>2</sub>; -NH<sub>2</sub>; -NH(C<sub>1-3</sub>alkyl); -N(C<sub>1-3</sub>alkyl)<sub>2</sub>; -C<sub>4-6</sub>heterocyclic containing 1 heteroatoms selected from N or O; or -C<sub>1-3</sub>alkyl substituted with deuterium;

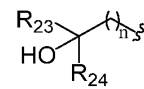
Each of R<sub>23</sub> and R<sub>24</sub> at each occurrence is independently selected from hydrogen, deuterium or -C<sub>1-3</sub>alkyl; or

R<sub>23</sub> and R<sub>24</sub> together with the carbon atom to which they are both attached form 3-6 membered carbocyclic ring, and each of the carbocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3 or 4 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen, -OH, -NH<sub>2</sub>, -CN, -C<sub>1-3</sub>alkyl or -C<sub>1-6</sub>alkoxy;

n is selected from 0, 1, 2 or 3.

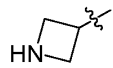
30. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-29, wherein R<sub>2</sub> is selected from hydrogen; deuterium; -F; -Cl; -Br; -OR<sub>21</sub>;

-NR<sub>21</sub>R<sub>22</sub>; -CN; -SR<sub>21</sub>; -SOR<sub>21</sub>; -SO<sub>2</sub>R<sub>21</sub>; -SO<sub>2</sub>NR<sub>21</sub>R<sub>22</sub>; methyl; ethyl; propyl; isopropyl; ethenyl; propenyl; -COOR<sub>21</sub>; -COR<sub>21</sub>; -CONR<sub>21</sub>R<sub>22</sub>; -NR<sub>21</sub>COR<sub>22</sub>; -NR<sub>21</sub>SO<sub>2</sub>R<sub>22</sub>; -POR<sub>21</sub>R<sub>22</sub>; 5-membered heteroaryl containing 1, 2 or 3 heteroatoms selected from N, O, S or SO<sub>2</sub>; 6-membered heteroaryl containing 1, 2 or 3 heteroatoms selected from N, O, S or SO<sub>2</sub>; 3-membered heterocyclic containing 1, 2 or 3 heteroatoms selected from N, O, S or SO<sub>2</sub>; 4-membered heterocyclic containing 1, 2 or 3 heteroatoms selected from N, O, S or SO<sub>2</sub>; 5-membered heterocyclic containing 1, 2 or 3 heteroatoms selected from N, O, S or SO<sub>2</sub>; 6-membered heterocyclic containing 1, 2 or 3 heteroatoms selected from N, O, S or SO<sub>2</sub>; 3-membered carbocyclic; 4-membered carbocyclic; 5-membered carbocyclic; or 6-membered carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6



substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy, isopropoxy, 3-membered carbocyclic, 4-membered carbocyclic, 5-membered carbocyclic or 6-membered carbocyclic;

Each of R<sub>21</sub> or R<sub>22</sub> at each occurrence is independently selected from hydrogen, deuterium, methyl, ethyl, propyl, isopropyl, -methylene-3-membered carbocyclic, -methylene-4-membered carbocyclic, -methylene-5-membered carbocyclic, -methylene-6-membered carbocyclic, -ethylene-3-membered carbocyclic, -ethylene-4-membered carbocyclic, -ethylene-5-membered carbocyclic, -ethylene-6-membered carbocyclic, 3-membered carbocyclic, 4-membered carbocyclic, 5-membered carbocyclic or 6-membered carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, -CN, -NH<sub>2</sub>, -NH(CH<sub>3</sub>), -NH(CH<sub>2</sub>CH<sub>3</sub>), -NH(CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>), -NH(CH(CH<sub>3</sub>)<sub>2</sub>), -N(CH<sub>3</sub>)<sub>2</sub>, -N(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, -N(CH<sub>3</sub>)(CH<sub>2</sub>CH<sub>3</sub>), -N(CH<sub>3</sub>)(CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>), methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy, isopropoxy, -SO<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, 3-membered carbocyclic, 4-membered carbocyclic, 5-membered carbocyclic or 6-membered carbocyclic; or

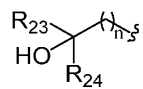
R<sub>21</sub> and R<sub>22</sub> together with the nitrogen atom to which they are both attached form 4 membered heterocyclic ring, 5 membered heterocyclic ring, 6 membered heterocyclic ring, each of the heterocyclic ring at each occurrence can further contains 1 or 2 heteroatoms selected from N, O or SO<sub>2</sub>, and each of the heterocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, oxo, -CN, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy, isopropoxy, -SO<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, -CON(CH<sub>3</sub>)<sub>2</sub>, -CON(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, -CON(CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, -CON(CH(CH<sub>3</sub>)<sub>2</sub>)<sub>2</sub>, -SO<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, -SO<sub>2</sub>N(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, -SO<sub>2</sub>N(CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, -SO<sub>2</sub>N(CH(CH<sub>3</sub>)<sub>2</sub>)<sub>2</sub>, -NH<sub>2</sub>, -NH(CH<sub>3</sub>), -NH(CH<sub>2</sub>CH<sub>3</sub>), -NH(CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>), -NH(CH(CH<sub>3</sub>)<sub>2</sub>), -N(CH<sub>3</sub>)<sub>2</sub>, -N(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, -N(CH<sub>3</sub>)(CH<sub>2</sub>CH<sub>3</sub>), -N(CH<sub>3</sub>)(CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>), , , , , , , methyl substituted with deuterium, ethyl substituted with deuterium, propyl substituted with deuterium or isopropyl substituted with deuterium;

Each of R<sub>23</sub> and R<sub>24</sub> at each occurrence is independently selected from hydrogen, deuterium, methyl, ethyl, propyl or isopropyl; or

R<sub>23</sub> and R<sub>24</sub> together with the carbon atom to which they are both attached form 3-membered carbocyclic ring, 4-membered carbocyclic ring, 5-membered carbocyclic ring or 6 membered carbocyclic ring, and each of the carbocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3 or 4 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, -NH<sub>2</sub>, -CN, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy or isopropoxy;

n is selected from 0, 1, 2 or 3.

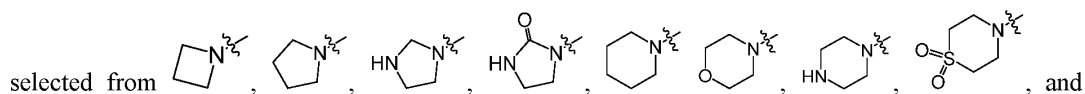
31. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-30, wherein  $R_2$  is independently selected from hydrogen; deuterium; -F; -Cl; -Br; -OR<sub>21</sub>; -NR<sub>21</sub>R<sub>22</sub>; -CN; -SR<sub>21</sub>; -SOR<sub>21</sub>; -SO<sub>2</sub>R<sub>21</sub>; -SO<sub>2</sub>NR<sub>21</sub>R<sub>22</sub>; methyl; ethyl; propyl; isopropyl;



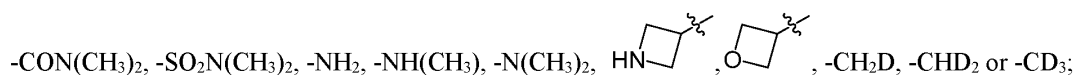
- 5 5-membered heteroaryl containing 1, 2 or 3 heteroatoms selected from N, O, S or SO<sub>2</sub>; 6-membered heterocyclic containing 1, 2 or 3 heteroatoms selected from N, O, S or SO<sub>2</sub>; or 3-membered carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy, isopropoxy or
- 10 3-membered carbocyclic;

- Each of R<sub>21</sub> and R<sub>22</sub> at each occurrence is independently selected from hydrogen, deuterium, methyl, ethyl, propyl, isopropyl, -methylene-3-membered carbocyclic or 3-membered carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from
- 15 deuterium, -F, -Cl, -Br, -OH, -NH<sub>2</sub>, -NH(CH<sub>3</sub>), -N(CH<sub>3</sub>)<sub>2</sub>, methyl, methoxy, -SO<sub>2</sub>CH<sub>3</sub> or 3-membered carbocyclic; or

R<sub>21</sub> and R<sub>22</sub> together with the nitrogen atom to which they are both attached form the heterocyclic



- selected from each of the heterocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3, 4,
- 20 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, oxo, -CN, methyl, ethyl, propyl, isopropyl, methoxy, -SO<sub>2</sub>CH<sub>3</sub>,



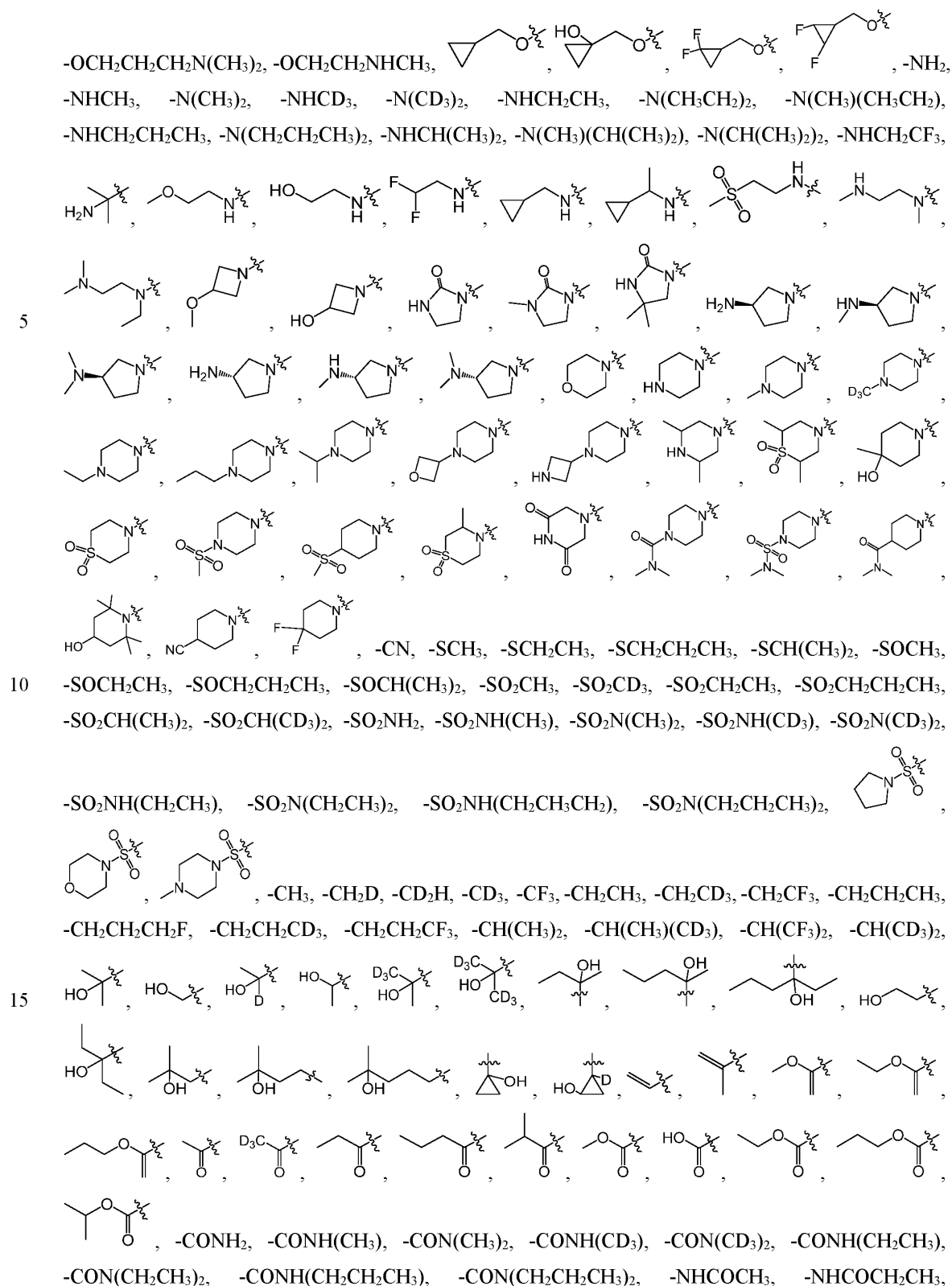
-CON(CH<sub>3</sub>)<sub>2</sub>, -SO<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, -NH<sub>2</sub>, -NH(CH<sub>3</sub>), -N(CH<sub>3</sub>)<sub>2</sub>, -CH<sub>2</sub>D, -CHD<sub>2</sub> or -CD<sub>3</sub>;

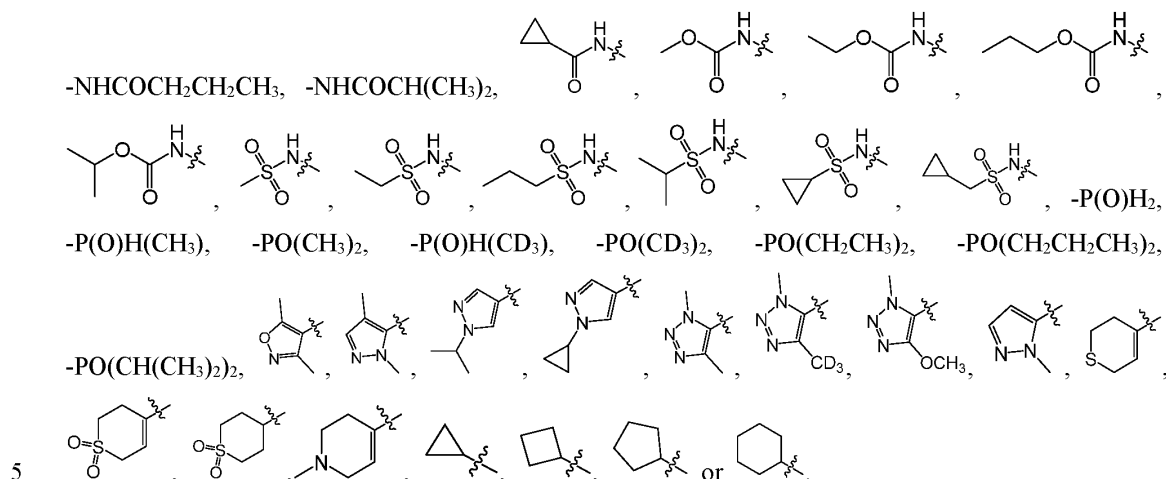
Each of R<sub>23</sub> and R<sub>24</sub> at each occurrence is independently selected from hydrogen, deuterium, methyl, ethyl, propyl or isopropyl; or

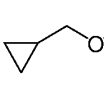
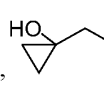
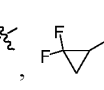
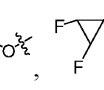
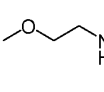
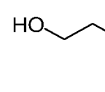
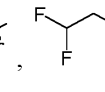
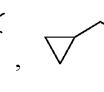
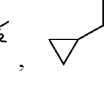
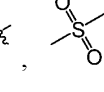
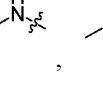
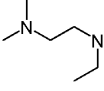
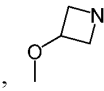
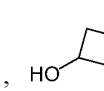
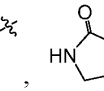
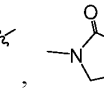
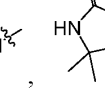
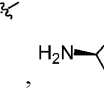
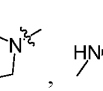
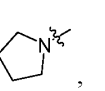
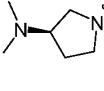
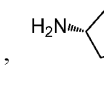
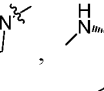
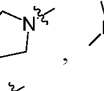
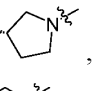
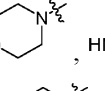
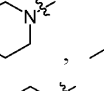
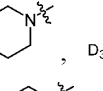
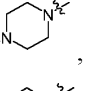
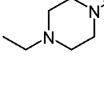
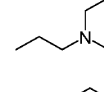
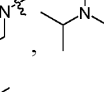
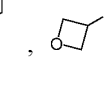
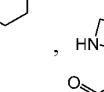
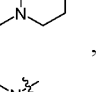
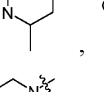
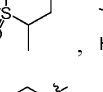
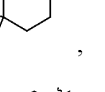
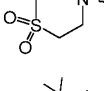
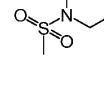
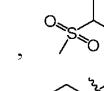
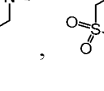
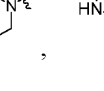
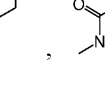
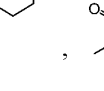
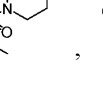
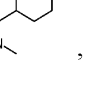
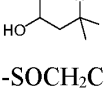
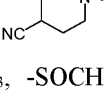
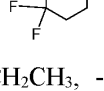
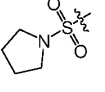
- 25 R<sub>23</sub> and R<sub>24</sub> together with the carbon atom to which they are both attached form 3-membered carbocyclic ring, and the carbocyclic ring is independently optionally substituted with 1, 2, 3 or 4 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, -NH<sub>2</sub>, -CN, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy or isopropoxy;

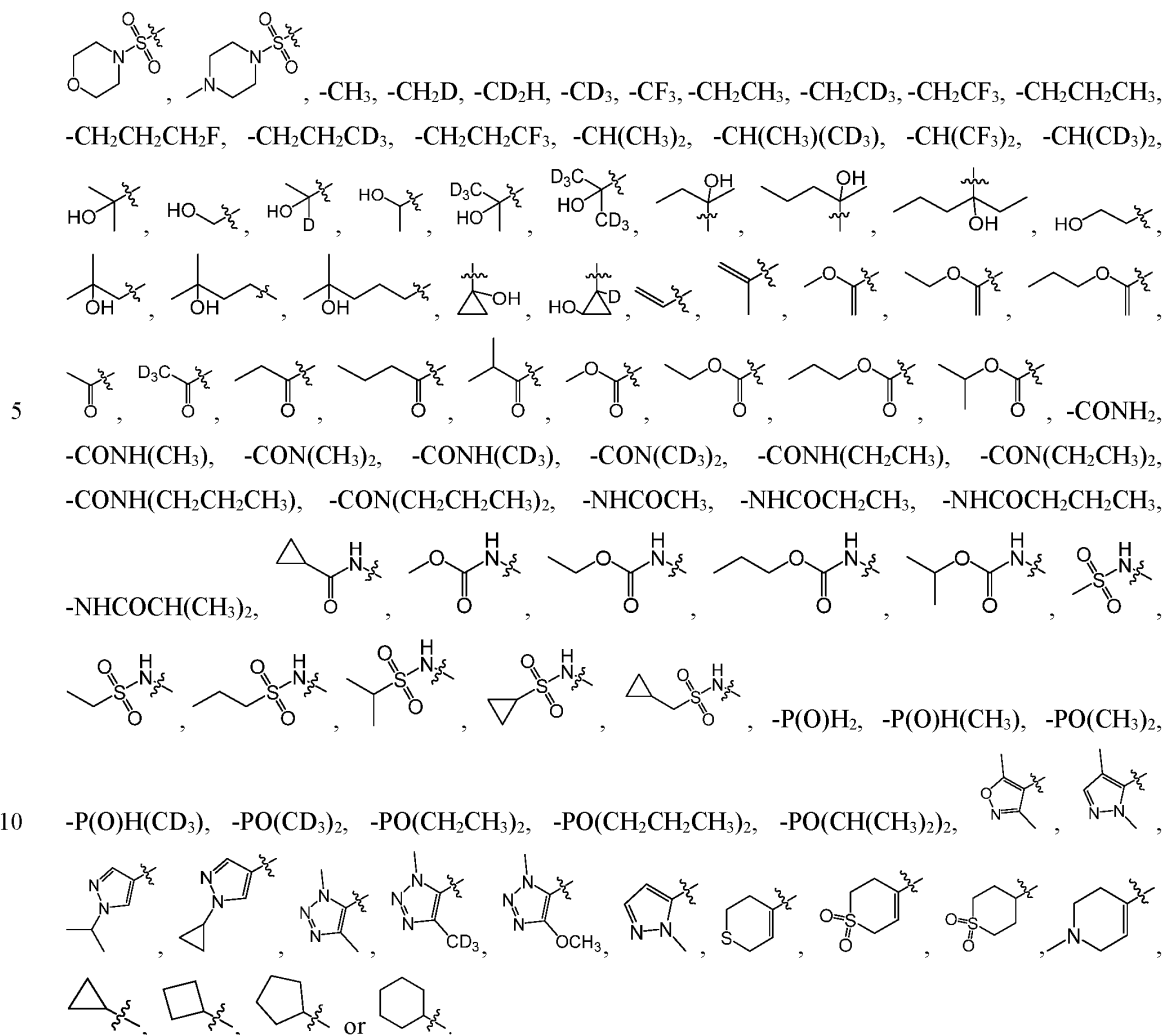
- 30 n is selected from 0 or 1.

32. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-26, wherein  $R_2$  is selected from hydrogen, deuterium, -F, -Cl, -Br, -OH, -OCH<sub>3</sub>, -OCD<sub>3</sub>, -OCH<sub>2</sub>CH<sub>3</sub>, -OCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -OCH(CH<sub>3</sub>)<sub>2</sub>, -OCH<sub>2</sub>CF<sub>3</sub>, -OCH<sub>2</sub>CHF<sub>2</sub>, -OCF<sub>2</sub>CH<sub>3</sub>, -OCH<sub>2</sub>OH, -OCH<sub>2</sub>CH<sub>2</sub>OH, -OCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OH, -OCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, -OCH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, -OCH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>,

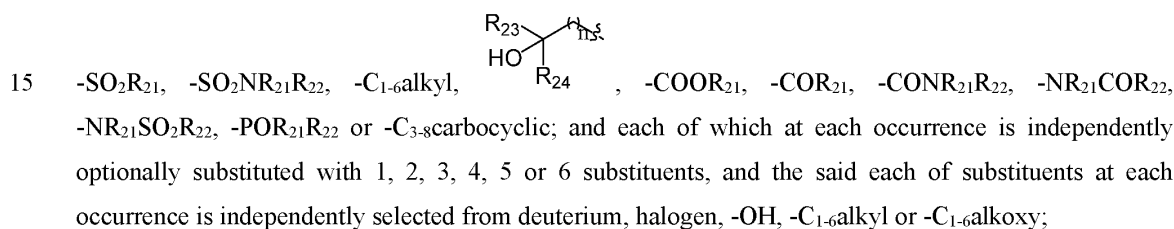




33. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-32, wherein  $\text{R}_2$  is selected from hydrogen, deuterium, -F, -Cl, -Br, -OH, -OCH<sub>3</sub>, -OCD<sub>3</sub>, -OCH<sub>2</sub>CH<sub>3</sub>, -OCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -OCH(CH<sub>3</sub>)<sub>2</sub>, -OCH<sub>2</sub>CF<sub>3</sub>, -OCH<sub>2</sub>CHF<sub>2</sub>, -OCF<sub>2</sub>CH<sub>3</sub>, -OCH<sub>2</sub>OH, -OCH<sub>2</sub>CH<sub>2</sub>OH, -OCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OH, -OCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, -OCH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, -OCH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, -OCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, -OCH<sub>2</sub>CH<sub>2</sub>NHCH<sub>3</sub>, -OCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, -OCH<sub>2</sub>CH<sub>2</sub>NHCH<sub>3</sub>, , , , , -NH<sub>2</sub>, -NHCH<sub>3</sub>, -N(CH<sub>3</sub>)<sub>2</sub>, -NHCD<sub>3</sub>, -N(CD<sub>3</sub>)<sub>2</sub>, -NHCH<sub>2</sub>CH<sub>3</sub>, -N(CH<sub>3</sub>CH<sub>2</sub>)<sub>2</sub>, -N(CH<sub>3</sub>)(CH<sub>3</sub>CH<sub>2</sub>), -NHCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -N(CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, -NHCH(CH<sub>3</sub>)<sub>2</sub>, -N(CH<sub>3</sub>)(CH(CH<sub>3</sub>)<sub>2</sub>), -N(CH(CH<sub>3</sub>)<sub>2</sub>)<sub>2</sub>, -NHCH<sub>2</sub>CF<sub>3</sub>, , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , -CN, -SCH<sub>3</sub>, -SCH<sub>2</sub>CH<sub>3</sub>, -SCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -SCH(CH<sub>3</sub>)<sub>2</sub>, -SOCH<sub>3</sub>, -SOCH<sub>2</sub>CH<sub>3</sub>, -SOCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -SOCH(CH<sub>3</sub>)<sub>2</sub>, -SO<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>CD<sub>3</sub>, -SO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, -SO<sub>2</sub>CH(CD<sub>3</sub>)<sub>2</sub>, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NH(CH<sub>3</sub>), -SO<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, -SO<sub>2</sub>NH(CD<sub>3</sub>)<sub>2</sub>, -SO<sub>2</sub>NH(CH<sub>2</sub>CH<sub>3</sub>), -SO<sub>2</sub>N(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, -SO<sub>2</sub>NH(CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>), -SO<sub>2</sub>N(CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, .



34. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-28, wherein R<sub>2</sub> is selected from hydrogen, deuterium, halogen, -NR<sub>21</sub>R<sub>22</sub>,



Each of R<sub>21</sub> or R<sub>22</sub> at each occurrence is independently selected from hydrogen, deuterium or  
 20 -C<sub>1-6</sub>alkyl; or

R<sub>21</sub> and R<sub>22</sub> together with the nitrogen atom to which they are both attached form 4-6 membered  
 heterocyclic ring, each of the heterocyclic ring at each occurrence can further contains 1, 2 or 3  
 heteroatoms selected from N, O, S or SO<sub>2</sub>, and each of the heterocyclic ring at each occurrence is  
 independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents  
 25 at each occurrence is independently selected from deuterium; oxo; -C<sub>1-6</sub>alkyl; -NH(C<sub>1-6</sub>alkyl); or

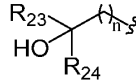
-C<sub>3-6</sub>heterocyclic containing 1 or 2 heteroatoms selected from N or O;

Each of R<sub>23</sub> and R<sub>24</sub> at each occurrence is independently selected from hydrogen, deuterium or -C<sub>1-6</sub>alkyl; or

R<sub>23</sub> and R<sub>24</sub> together with the carbon atom to which they are both attached form 3-6 membered carbocyclic ring, and each of the carbocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -OH or -C<sub>1-6</sub>alkyl;

n is selected from 0, 1, 2, 3, 4, 5 or 6.

35. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-28 or 34, wherein R<sub>2</sub> is selected from hydrogen, deuterium, halogen,

-NR<sub>21</sub>R<sub>22</sub>, -SO<sub>2</sub>R<sub>21</sub>, -SO<sub>2</sub>NR<sub>21</sub>R<sub>22</sub>, -C<sub>1-3</sub>alkyl, , -COOR<sub>21</sub>, -COR<sub>21</sub>, -CONR<sub>21</sub>R<sub>22</sub>, -NR<sub>21</sub>COR<sub>22</sub>, -NR<sub>21</sub>SO<sub>2</sub>R<sub>22</sub>, -POR<sub>21</sub>R<sub>22</sub> or -C<sub>3-6</sub>carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen, -OH, -C<sub>1-3</sub>alkyl or -C<sub>1-3</sub>alkoxy;

Each of R<sub>21</sub> or R<sub>22</sub> at each occurrence is independently selected from hydrogen, deuterium or -C<sub>1-3</sub>alkyl; or

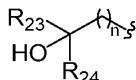
R<sub>21</sub> and R<sub>22</sub> together with the nitrogen atom to which they are both attached form 4-membered heterocyclic ring, 5-membered heterocyclic ring, 6-membered heterocyclic ring, each of the heterocyclic ring at each occurrence can further contains 1 or 2 heteroatoms selected from N or O, and each of the heterocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, oxo, -C<sub>1-3</sub>alkyl, -NH(C<sub>1-3</sub>alkyl) or -C<sub>4-6</sub>heterocyclic containing 1 heteroatoms selected from N or O;

Each of R<sub>23</sub> and R<sub>24</sub> at each occurrence is independently selected from hydrogen, deuterium or -C<sub>1-3</sub>alkyl; or

R<sub>23</sub> and R<sub>24</sub> together with the carbon atom to which they are both attached form 3-6 membered carbocyclic ring, and each of the carbocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -OH or -C<sub>1-3</sub>alkyl;

n is selected from 0, 1, 2 or 3.

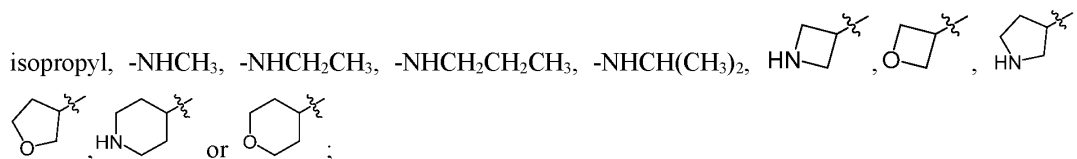
36. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any of claims 1-28, 34 or 35, wherein R<sub>2</sub> is selected from hydrogen, deuterium, -F, -Cl, -Br,

-NR<sub>21</sub>R<sub>22</sub>, -SO<sub>2</sub>R<sub>21</sub>, -SO<sub>2</sub>NR<sub>21</sub>R<sub>22</sub>, methyl, ethyl, propyl, isopropyl, , -COOR<sub>21</sub>, -COR<sub>21</sub>, -CONR<sub>21</sub>R<sub>22</sub>, -NR<sub>21</sub>COR<sub>22</sub>, -NR<sub>21</sub>SO<sub>2</sub>R<sub>22</sub>, -POR<sub>21</sub>R<sub>22</sub>, 3-membered carbocyclic, 4-membered carbocyclic, 5-membered carbocyclic or 6-membered carbocyclic; and each of which at each occurrence is

independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, -OH, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy or isopropoxy;

Each of R<sub>21</sub> or R<sub>22</sub> at each occurrence is independently selected from hydrogen, deuterium, methyl, ethyl, propyl or isopropyl; or

R<sub>21</sub> and R<sub>22</sub> together with the nitrogen atom to which they are both attached form 5-membered heterocyclic ring, 6-membered heterocyclic ring, each of the heterocyclic ring at each occurrence ring can further contains 1 heteroatoms selected from N or O, and each of the heterocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, oxo, methyl, ethyl, propyl,

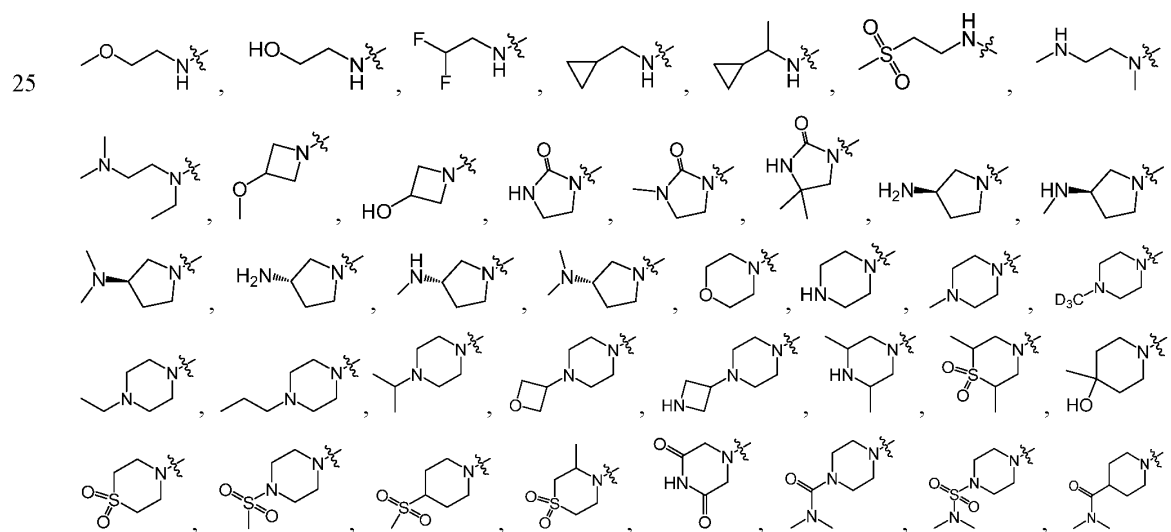


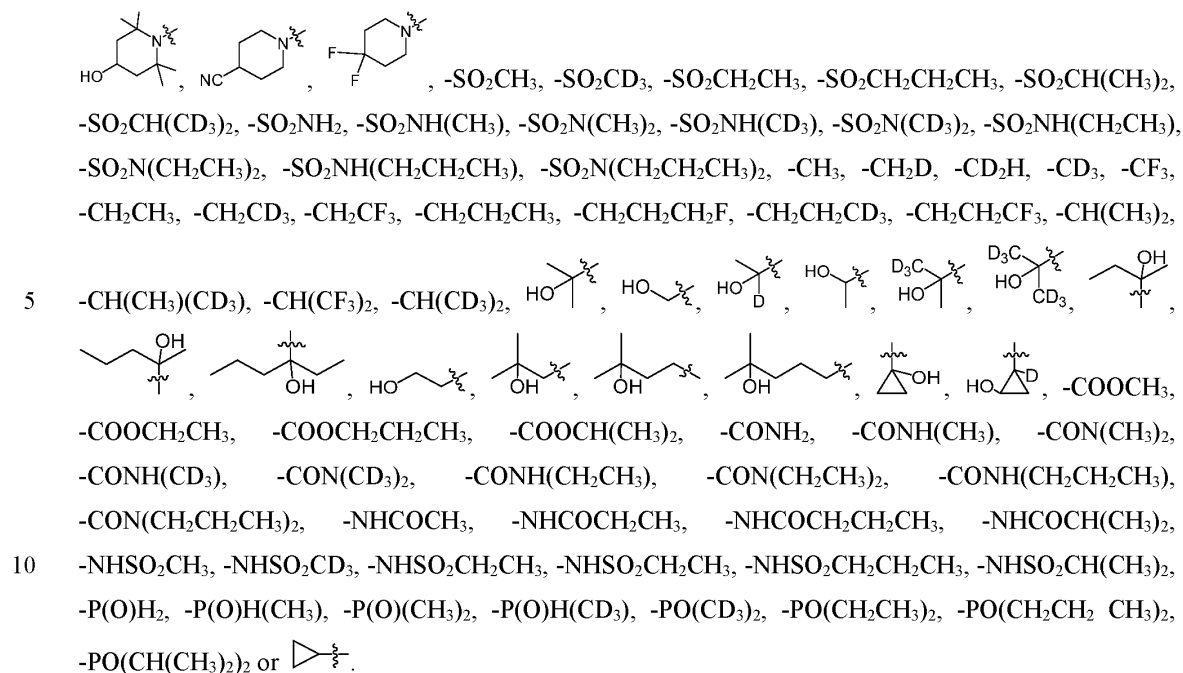
Each of R<sub>23</sub> and R<sub>24</sub> at each occurrence is independently selected from hydrogen, deuterium, methyl, ethyl, propyl or isopropyl; or

R<sub>23</sub> and R<sub>24</sub> together with the carbon atom to which they are both attached form 3-membered carbocyclic ring, 4-membered carbocyclic ring, 5-membered carbocyclic ring, 6-membered carbocyclic ring, and each of the carbocyclic ring at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -OH, methyl, ethyl, propyl or isopropyl;

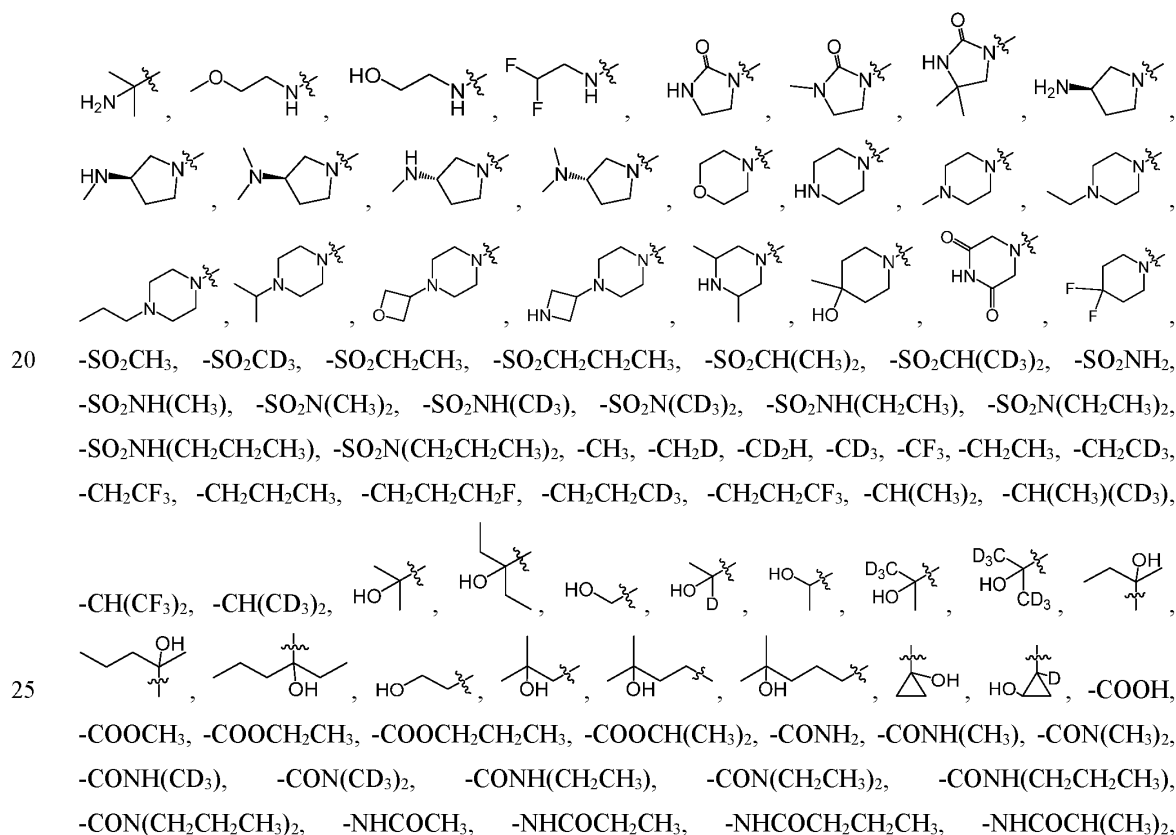
n is selected from 0, 1, 2 or 3.

37. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-28, wherein R<sub>2</sub> is selected from hydrogen, deuterium, -F, -Cl, -Br, -NH<sub>2</sub>, -NHCH<sub>3</sub>, -N(CH<sub>3</sub>)<sub>2</sub>, -NHCD<sub>3</sub>, -N(CD<sub>3</sub>)<sub>2</sub>, -NHCH<sub>2</sub>CH<sub>3</sub>, -N(CH<sub>3</sub>CH<sub>2</sub>)<sub>2</sub>, -N(CH<sub>3</sub>)(CH<sub>3</sub>CH<sub>2</sub>), -NHCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -N(CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, -NHCH(CH<sub>3</sub>)<sub>2</sub>, -N(CH<sub>3</sub>)(CH(CH<sub>3</sub>)<sub>2</sub>), -N(CH(CH<sub>3</sub>)<sub>2</sub>)<sub>2</sub>, -NHCH<sub>2</sub>CF<sub>3</sub>,



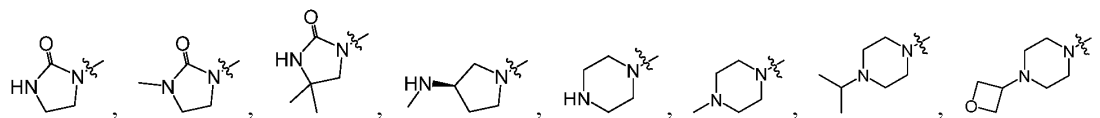


38. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-28, wherein R<sub>2</sub> is selected from hydrogen, deuterium, -F, -Cl, -Br, -NH<sub>2</sub>,  
15 -NHCH<sub>3</sub>, -N(CH<sub>3</sub>)<sub>2</sub>, -NHCD<sub>3</sub>, -N(CD<sub>3</sub>)<sub>2</sub>, -NHCH<sub>2</sub>CH<sub>3</sub>, -N(CH<sub>3</sub>CH<sub>2</sub>)<sub>2</sub>, -N(CH<sub>3</sub>)(CH<sub>3</sub>CH<sub>2</sub>),  
-NHCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -N(CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, -NHCH(CH<sub>3</sub>)<sub>2</sub>, -N(CH<sub>3</sub>)(CH(CH<sub>3</sub>)<sub>2</sub>), -N(CH(CH<sub>3</sub>)<sub>2</sub>)<sub>2</sub>, -NHCH<sub>2</sub>CF<sub>3</sub>,



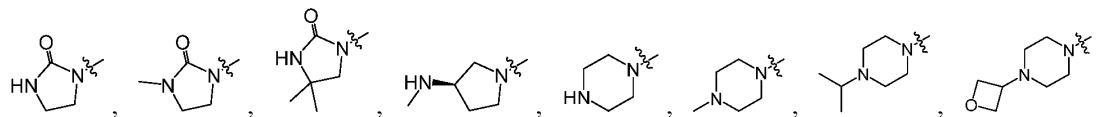
-NHSO<sub>2</sub>CH<sub>3</sub>, -NHSO<sub>2</sub>CD<sub>3</sub>, -NHSO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -NHSO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -NHSO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -NHSO<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>,  
 -P(O)H<sub>2</sub>, -P(O)H(CH<sub>3</sub>), -P(O)(CH<sub>3</sub>)<sub>2</sub>, -P(O)H(CD<sub>3</sub>), -PO(CD<sub>3</sub>)<sub>2</sub>, -PO(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, -PO(CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>,  
 -PO(CH(CH<sub>3</sub>)<sub>2</sub>)<sub>2</sub> or .

39. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof  
 5 according to any one of claims 1-28 or 38, wherein R<sub>2</sub> is selected from hydrogen, -Cl, -Br, -NH<sub>2</sub>, ,

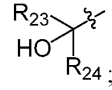


-SO<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHCH<sub>3</sub>, -SO<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, -CH<sub>3</sub>, , , , -COOH, -COOCH<sub>3</sub>,  
 -CONH<sub>2</sub>, -CONHCH<sub>3</sub>, -CON(CH<sub>3</sub>)<sub>2</sub>, -NHC(O)CH<sub>3</sub>, -NHSO<sub>2</sub>CH<sub>3</sub>, -PO(CH<sub>3</sub>)<sub>2</sub> or .

40. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof  
 10 according to any one of claims 1-28 or 34-37, wherein R<sub>2</sub> is selected from hydrogen, -Cl, -Br, -NH<sub>2</sub>,



-SO<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHCH<sub>3</sub>, -SO<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, -CH<sub>3</sub>, , , , -COOCH<sub>3</sub>, -CONH<sub>2</sub>,  
 -CONHCH<sub>3</sub>, -CON(CH<sub>3</sub>)<sub>2</sub>, -NHC(O)CH<sub>3</sub>, -NHSO<sub>2</sub>CH<sub>3</sub>, -PO(CH<sub>3</sub>)<sub>2</sub> or .

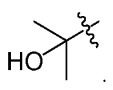
41. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof  
 15 according to any one of claims 1-28 or 34, wherein R<sub>2</sub> is 

Each of R<sub>23</sub> and R<sub>24</sub> at each occurrence is -C<sub>1-6</sub>alkyl.

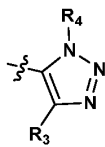
42. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof  
 according to any one of claims 1-28, 34 or 41, wherein each of R<sub>23</sub> and R<sub>24</sub> at each occurrence is  
 -C<sub>1-3</sub>alkyl.

20 43. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof  
 according to any one of claims 1-28, 34, 41 or 42, wherein each of R<sub>23</sub> and R<sub>24</sub> at each occurrence is  
 selected from methyl, ethyl, propyl or isopropyl.

44. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof

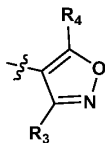
according to any one of claims 1-28, 34 or 41-43, wherein R<sub>2</sub> is .

25 45. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof



according to any one of claims 1-44, wherein the A is

46. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof



according to any one of claims 1-44, wherein the A is

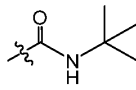
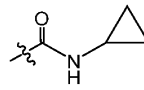
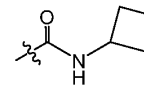
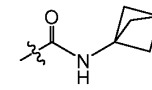
47. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-46, wherein each of R<sub>3</sub> and R<sub>4</sub> at each occurrence is independently selected from hydrogen, deuterium, halogen, -CN, -SOR<sub>5</sub>, -SO<sub>2</sub>R<sub>5</sub>, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHR<sub>5</sub>, -SO<sub>2</sub>NR<sub>5</sub>R<sub>6</sub>, -C<sub>1-3</sub>alkyl, -C<sub>1-3</sub>alkoxy, -COR<sub>5</sub>, -CONH<sub>2</sub>, -CONHR<sub>5</sub>, -CONR<sub>5</sub>R<sub>6</sub>, -P(O)H<sub>2</sub>, -P(O)HR<sub>5</sub> or -POR<sub>5</sub>R<sub>6</sub>; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen or -OH;

Each of R<sub>5</sub> and R<sub>6</sub> at each occurrence is independently selected from deuterium; -C<sub>1-3</sub>alkyl; -C<sub>5-6</sub>aryl; -C<sub>5-6</sub>heteroaryl containing 1, 2, 3 or 4 heteroatoms selected from N, O, S, SO or SO<sub>2</sub>; or -C<sub>3-6</sub>carbocyclic, and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, halogen, -C<sub>1-3</sub>alkyl or -C<sub>1-3</sub>alkoxy.

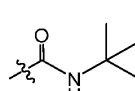
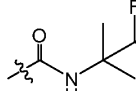
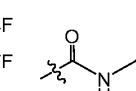
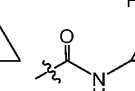
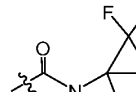
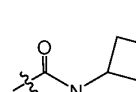
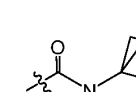
48. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-47, wherein each of R<sub>3</sub> and R<sub>4</sub> at each occurrence is independently selected from hydrogen, deuterium, -F, -Cl, -Br, -CN, -SOR<sub>5</sub>, -SO<sub>2</sub>R<sub>5</sub>, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHR<sub>5</sub>, -SO<sub>2</sub>NR<sub>5</sub>R<sub>6</sub>, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy, isopropyl, -CONH<sub>2</sub>, -CONHR<sub>5</sub>, -CONR<sub>5</sub>R<sub>6</sub>, -P(O)H<sub>2</sub>, -P(O)HR<sub>5</sub> or -POR<sub>5</sub>R<sub>6</sub>; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br or -OH;

Each of R<sub>5</sub> and R<sub>6</sub> at each occurrence is independently selected from deuterium; methyl; ethyl; propyl; isopropyl; phenyl; 5-membered heteroaryl containing 1, 2, 3 or 4 heteroatoms selected from N, O, S, SO or SO<sub>2</sub>; 6-membered heteroaryl containing 1, 2, 3 or 4 heteroatoms selected from N, O, S, SO or SO<sub>2</sub>; 3-membered carbocyclic; 4-membered carbocyclic; 5-membered carbocyclic; or 6-membered carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy or isopropyl.

49. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-48, wherein each of R<sub>3</sub> and R<sub>4</sub> at each occurrence is independently selected from hydrogen, deuterium, -F, -Cl, -Br, -CN, -SOCH<sub>3</sub>, -SOCH<sub>2</sub>CH<sub>3</sub>, -SOCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -SOCH(CH<sub>3</sub>)<sub>2</sub>, -SO<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHCH<sub>3</sub>, -SO<sub>2</sub>NHCH<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>NHCH(CH<sub>3</sub>)<sub>2</sub>, -SO<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, -SO<sub>2</sub>N(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, -SO<sub>2</sub>N(CH<sub>3</sub>)(CH<sub>2</sub>CH<sub>3</sub>), -SO<sub>2</sub>N(CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, -CH<sub>3</sub>, -CH<sub>2</sub>CH<sub>3</sub>, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -CH(CH<sub>3</sub>)<sub>2</sub>, -OCH<sub>3</sub>, -OCH<sub>2</sub>CH<sub>3</sub>, -OCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -OCH(CH<sub>3</sub>)<sub>2</sub>, -CONH<sub>2</sub>, -CONHCH<sub>3</sub>, -CONHCH<sub>2</sub>CH<sub>3</sub>, -CONHCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>,

$-\text{CONHCH}(\text{CH}_3)_2$ , , , , ,  $-\text{CON}(\text{CH}_3)_2$ ,  
 $-\text{CON}(\text{CH}_2\text{CH}_3)_2$ ,  $-\text{CON}(\text{CH}_3)(\text{CH}_2\text{CH}_3)$ ,  $-\text{CON}(\text{CH}_2\text{CH}_2\text{CH}_3)_2$ ,  $-\text{P}(\text{O})\text{H}_2$ ,  $-\text{P}(\text{O})\text{HCH}_3$ ,  $-\text{P}(\text{O})\text{HCH}_2\text{CH}_3$ ,  
 $-\text{P}(\text{O})\text{HCH}_2\text{CH}_2\text{CH}_3$ ,  $-\text{P}(\text{O})\text{HCH}(\text{CH}_3)_2$ ,  $-\text{PO}(\text{CH}_3)_2$ ,  $-\text{PO}(\text{CH}_2\text{CH}_3)_2$ ,  $-\text{PO}(\text{CH}_3)(\text{CH}_2\text{CH}_3)$  or  
 $-\text{PO}(\text{CH}_2\text{CH}_2\text{CH}_3)_2$ ; and each of which at each occurrence is independently optionally substituted with 1,  
 5 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected  
 from deuterium, -F or methyl.

50. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof  
 according to any one of claims 1-49, wherein each of  $\text{R}_3$  and  $\text{R}_4$  at each occurrence is independently  
 selected from hydrogen, deuterium, -F, -Cl, -Br, -CN, - $\text{SOCH}_3$ , - $\text{SOCD}_3$ , - $\text{SOCH}_2\text{CH}_3$ , - $\text{SOCH}_2\text{CH}_2\text{CH}_3$ ,  
 10 - $\text{SOCH}(\text{CH}_3)_2$ , - $\text{SO}_2\text{CH}_3$ , - $\text{SO}_2\text{CD}_3$ , - $\text{SO}_2\text{CH}_2\text{CH}_3$ , - $\text{SO}_2\text{CH}_2\text{CH}_2\text{CH}_3$ , - $\text{SO}_2\text{CH}(\text{CH}_3)_2$ , - $\text{SO}_2\text{NH}_2$ ,  
 - $\text{SO}_2\text{NHCH}_3$ , - $\text{SO}_2\text{NHCD}_3$ , - $\text{SO}_2\text{NHCH}_2\text{CH}_3$ , - $\text{SO}_2\text{NHCH}_2\text{CH}_2\text{CH}_3$ , - $\text{SO}_2\text{NHCH}(\text{CH}_3)_2$ , - $\text{SO}_2\text{N}(\text{CH}_3)_2$ ,  
 - $\text{SO}_2\text{N}(\text{CD}_3)_2$ , - $\text{SO}_2\text{N}(\text{CH}_2\text{CH}_3)_2$ , - $\text{SO}_2\text{N}(\text{CH}_3)(\text{CH}_2\text{CH}_3)$ , - $\text{SO}_2\text{N}(\text{CH}_2\text{CH}_2\text{CH}_3)_2$ , - $\text{CH}_3$ , - $\text{CD}_3$ , - $\text{CH}_2\text{CH}_3$ ,  
 - $\text{CD}_2\text{CD}_3$ , - $\text{CH}_2\text{CH}_2\text{CH}_3$ , - $\text{CH}_2\text{CH}_2\text{CD}_3$ , - $\text{CH}(\text{CH}_3)_2$ , - $\text{CH}(\text{CD}_3)_2$ , - $\text{OCH}_3$ , - $\text{OCH}_2\text{CH}_3$ , - $\text{OCH}_2\text{CH}_2\text{CH}_3$ ,  
 - $\text{OCH}(\text{CH}_3)_2$ , - $\text{CONH}_2$ , - $\text{CONHCH}_3$ , - $\text{CONHCD}_3$ , - $\text{CONHCH}_2\text{CH}_3$ , - $\text{CONHCD}_2\text{CD}_3$ ,

15  $-\text{CONHCH}_2\text{CH}_2\text{CH}_3$ ,  $-\text{CONHCH}(\text{CH}_3)_2$ , , , , ,  
, , ,  $-\text{CON}(\text{CH}_3)_2$ ,  $-\text{CON}(\text{CH}_2\text{CH}_3)_2$ ,  $-\text{CON}(\text{CH}_3)(\text{CH}_2\text{CH}_3)$ ,  
 $-\text{CON}(\text{CH}_2\text{CH}_2\text{CH}_3)_2$ ,  $-\text{P}(\text{O})\text{H}_2$ ,  $-\text{P}(\text{O})\text{HCH}_3$ ,  $-\text{P}(\text{O})\text{HCH}_2\text{CH}_3$ ,  $-\text{P}(\text{O})\text{HCH}_2\text{CH}_2\text{CH}_3$ ,  $-\text{P}(\text{O})\text{HCH}(\text{CH}_3)_2$ ,  
 $-\text{PO}(\text{CH}_3)_2$ ,  $-\text{PO}(\text{CH}_2\text{CH}_3)_2$ ,  $-\text{PO}(\text{CH}_3)(\text{CH}_2\text{CH}_3)$  or  $-\text{PO}(\text{CH}_2\text{CH}_2\text{CH}_3)_2$ .

51. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof  
 20 according to any one of claims 1-47, wherein each of  $\text{R}_3$  and  $\text{R}_4$  at each occurrence is independently  
 selected from  $-\text{C}_{1-3}\text{alkyl}$ , - $\text{CONH}_2$ , - $\text{CONHR}_5$  or - $\text{CONR}_5\text{R}_6$ ; and each of which at each occurrence is  
 independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents  
 at each occurrence is independently selected from deuterium or halogen;

Each of  $\text{R}_5$  and  $\text{R}_6$  at each occurrence is independently selected from  $-\text{C}_{1-3}\text{alkyl}$  or  $-\text{C}_{3-6}\text{carbocyclic}$ ,  
 25 and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6  
 substituents, and the said each of substituents at each occurrence is independently selected from  
 deuterium, halogen or  $-\text{C}_{1-3}\text{alkyl}$ .

52. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof  
 according to any one of claims 1-47 or 51, wherein each of  $\text{R}_3$  and  $\text{R}_4$  at each occurrence is independently  
 30 selected from methyl, ethyl, propyl, isopropyl, - $\text{CONH}_2$ , - $\text{CONHR}_5$  or - $\text{CONR}_5\text{R}_6$ ; and each of which at  
 each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said  
 each of substituents at each occurrence is independently selected from deuterium, -F, -Cl or -Br;

Each of  $R_5$  and  $R_6$  at each occurrence is independently selected from methyl, ethyl, propyl, isopropyl, 3-membered carbocyclic, 4-membered carbocyclic, 5-membered carbocyclic or 6-membered carbocyclic, and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl, -Br, methyl, ethyl, propyl or isopropyl.

53. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-47, 51 or 52, wherein each of  $R_3$  or  $R_4$  at each occurrence is independently selected from  $-\text{CH}_3$ ,  $-\text{CH}_2\text{CH}_3$ ,  $-\text{CH}_2\text{CH}_2\text{CH}_3$ ,  $-\text{CH}(\text{CH}_3)_2$ ,  $-\text{OCH}_3$ ,  $-\text{OCH}_2\text{CH}_3$ ,  $-\text{OCH}_2\text{CH}_2\text{CH}_3$ ,  $-\text{OCH}(\text{CH}_3)_2$ ,  $-\text{CONH}_2$ ,  $-\text{CONHCH}_3$ ,  $-\text{CONHCH}_2\text{CH}_3$ ,  $-\text{CONHCH}_2\text{CH}_2\text{CH}_3$ ,  $-\text{CONHCH}(\text{CH}_3)_2$ ,  $-\text{CON}(\text{CH}_3)_2$ ,  $-\text{CON}(\text{CH}_2\text{CH}_3)_2$ ,  $-\text{CON}(\text{CH}_3)(\text{CH}_2\text{CH}_3)$  or  $-\text{CON}(\text{CH}_2\text{CH}_2\text{CH}_3)_2$ ; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F or methyl.

54. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-47 or 51-53, wherein each of  $R_3$  or  $R_4$  at each occurrence is independently selected from  $-\text{CH}_3$ ,  $-\text{CD}_3$ ,  $-\text{CH}_2\text{CH}_3$ ,  $-\text{CD}_2\text{CH}_3$ ,  $-\text{CH}_2\text{CH}_2\text{CH}_3$ ,  $-\text{CH}_2\text{CH}_2\text{CD}_3$ ,  $-\text{CH}(\text{CH}_3)_2$ ,  $-\text{CH}(\text{CD}_3)_2$ ,  $-\text{CONH}_2$ ,  $-\text{CONHCH}_3$ ,  $-\text{CONHCD}_3$ ,  $-\text{CONHCH}_2\text{CH}_3$ ,  $-\text{CONHCD}_2\text{CH}_3$ ,  $-\text{CONHCH}_2\text{CH}_2\text{CH}_3$ ,  $-\text{CONHCH}(\text{CH}_3)_2$ ,  $-\text{CON}(\text{CH}_3)_2$ ,  $-\text{CON}(\text{CH}_2\text{CH}_3)_2$ ,  $-\text{CON}(\text{CH}_3)(\text{CH}_2\text{CH}_3)$  or  $-\text{CON}(\text{CH}_2\text{CH}_2\text{CH}_3)_2$ .

55. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any of claims 1-47 or 51-54, wherein each of  $R_3$  or  $R_4$  at each occurrence is independently

selected from  $-\text{CH}_3$ ,  $-\text{CD}_3$ ,  $-\text{CONH}_2$ ,  $-\text{CONHCH}_3$ ,  $-\text{CONHCH}_2\text{CH}_3$ ,  $-\text{CONHCH}(\text{CH}_3)_2$ ,  $-\text{CON}(\text{CH}_3)_2$ ,  $-\text{CON}(\text{CH}_2\text{CH}_3)_2$ ,  $-\text{CON}(\text{CH}_3)(\text{CH}_2\text{CH}_3)$  or  $-\text{CON}(\text{CH}_2\text{CH}_2\text{CH}_3)_2$ .

56. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-47 or 51, wherein each of  $R_3$  and  $R_4$  at each occurrence is independently selected from  $-\text{C}_{1-3}\text{alkyl}$ , and the  $-\text{C}_{1-3}\text{alkyl}$  is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is independently selected from deuterium, -F, -Cl or -Br.

5 at each occurrence is independently selected from deuterium, -F, -Cl or -Br.

10 at each occurrence is independently selected from deuterium or -F.

15      $-\text{CH}(\text{CD}_3)_2$ .

from -C<sub>1-3</sub>alkyl or the -C<sub>1-3</sub>alkyl substituted with 1, 2, 3, 4, 5 or 6 deuterium.

20 according to any one of claims 1-47, 51, 56 or 60, wherein each of R<sub>3</sub> and R<sub>4</sub> at each occurrence is selected from methyl, ethyl, propyl, isopropyl, methyl substituted with deuterium, ethyl substituted with deuterium, propyl substituted with deuterium or isopropyl substituted with deuterium.

according to any one of claims 1-47, 51, 56, 60 or 61, wherein the A is selected from:



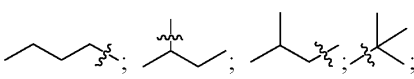
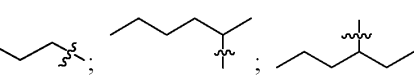
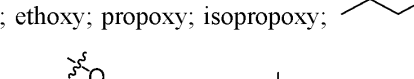
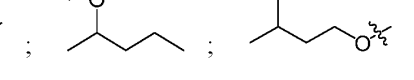
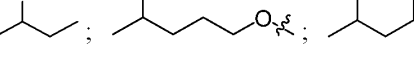
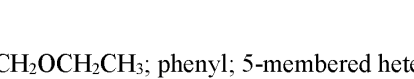
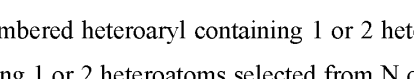
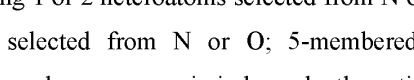
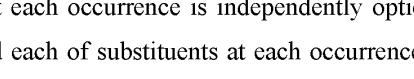
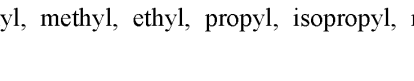
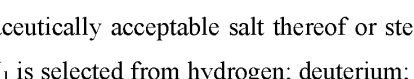
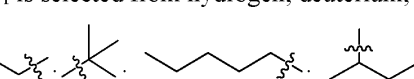
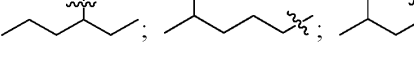
according to any one of claims 1-47, 51, 56 or 60-62, wherein the A is independently selected from:

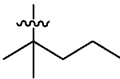


30 according to any one of claims 1-63, wherein W<sub>1</sub> is selected from hydrogen; deuterium; -F; -Cl; -NH<sub>2</sub>; -CN; -OH; carboxyl; -C<sub>1-6</sub>alkyl; -C<sub>1-6</sub>alkoxy; -C<sub>1-3</sub>alkylene-C<sub>1-3</sub>alkoxy; phenyl; 5-membered heteroaryl containing 1, 2 or 3 heteroatoms selected from N, O; 6-membered heteroaryl containing 1, 2 or 3 heteroatoms selected from N, O; 3-membered heterocyclic containing 1, 2 or 3 heteroatoms selected from

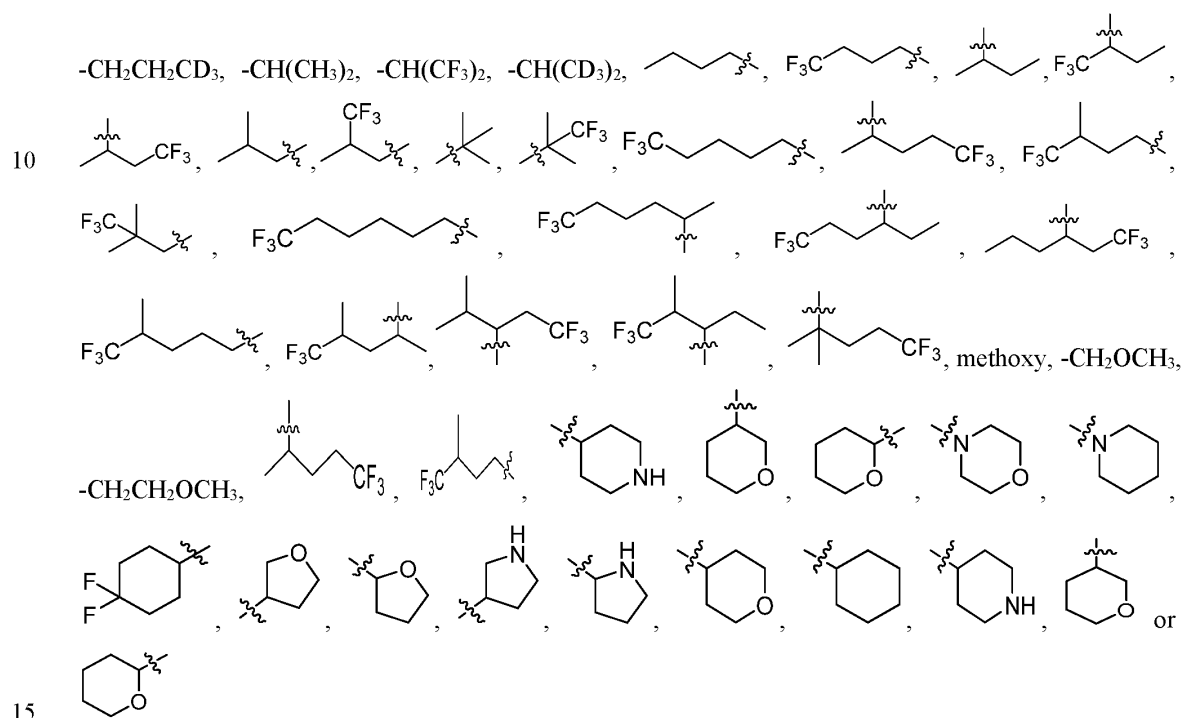
N, O; 4-membered heterocyclic containing 1, 2 or 3 heteroatoms selected from N, O; 5-membered heterocyclic containing 1, 2 or 3 heteroatoms selected from N, O; 6-membered heterocyclic containing 1, 2 or 3 heteroatoms selected from N, O; 3-membered carbocyclic; 4-membered carbocyclic; 5-membered carbocyclic; or 6-membered carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4, 5 or 6 substituents, and the said each of substituents at each occurrence is selected from deuterium, halogen, -NH<sub>2</sub>, -CN, -OH, -NO<sub>2</sub>, carboxyl, -C<sub>1-3</sub>alkyl, or -C<sub>1-3</sub>alkoxy.

65. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-64, wherein W<sub>1</sub> is selected from hydrogen; deuterium; -F; -Cl; -NH<sub>2</sub>;

10 -CN; -OH; methyl; ethyl; propyl; isopropyl; ; ; ; ; ; methoxy; ethoxy; propoxy; isopropoxy; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;

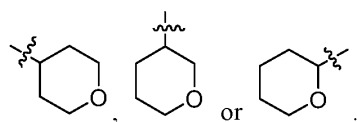
; methoxy; -CH<sub>2</sub>OCH<sub>3</sub>; -CH<sub>2</sub>CH<sub>2</sub>OCH<sub>3</sub>; 6-membered heteroaryl containing 1 or 2 heteroatoms selected from N or O; 5-membered heterocyclic containing 1 or 2 heteroatoms selected from N or O; 6-membered heterocyclic containing 1 or 2 heteroatoms selected from N or O; 5-membered carbocyclic; or 6-membered carbocyclic; and each of which at each occurrence is independently optionally substituted with deuterium or -F.

67. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-66, wherein W<sub>1</sub> is selected from hydrogen, deuterium, -F, -CH<sub>3</sub>, -CD<sub>3</sub>, -CH<sub>2</sub>F, -CF<sub>2</sub>H, -CF<sub>3</sub>, -CH<sub>2</sub>CH<sub>3</sub>, -CH<sub>2</sub>CD<sub>3</sub>, -CH<sub>2</sub>CH<sub>2</sub>F, -CH<sub>2</sub>CHF<sub>2</sub>, -CH<sub>2</sub>CF<sub>3</sub>, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -CH<sub>2</sub>CH<sub>2</sub>CF<sub>3</sub>,



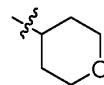
68. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-64, wherein W<sub>1</sub> is selected from -C<sub>1-6</sub>alkyl substituted with F or 6-membered heterocyclic containing 1 heteroatoms selected from O.

69. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-64 or 68, wherein W<sub>1</sub> is selected from -C<sub>1-6</sub>alkyl substituted with F,



70. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof

according to any one of claims 1-64, 68 or 69, wherein W<sub>1</sub> is selected from -CH<sub>2</sub>CH<sub>2</sub>CF<sub>3</sub> or

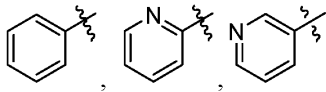


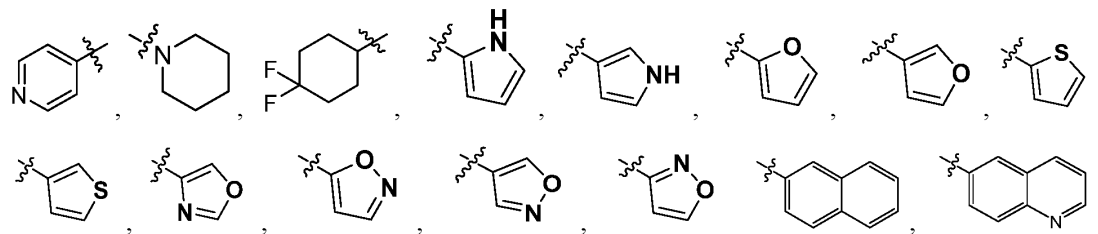
71. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-70, wherein W<sub>2</sub> is selected from hydrogen; deuterium; -F; -Cl; -NH<sub>2</sub>; -CN; -OH; carboxyl; -C<sub>1-3</sub>alkyl; -C<sub>1-3</sub>alkoxy; phenyl; naphthyl; 5-membered heteroaryl containing 1, 2 or 3 heteroatoms selected from N, O or S; 6-membered heteroaryl containing 1, 2 or 3 heteroatoms selected from N, O, or S; 7-membered heteroaryl containing 1, 2 or 3 heteroatoms selected from N, O or S; 8-membered heteroaryl containing 1, 2 or 3 heteroatoms selected from N, O or S; 9-membered heteroaryl containing 1, 2 or 3 heteroatoms selected from N, O or S; 10-membered heteroaryl containing 1, 2 or 3 heteroatoms selected from N, O, or S; 3-membered heterocyclic containing 1, 2 or 3 heteroatoms selected from N, O or S; 4-membered heterocyclic containing 1, 2 or 3 heteroatoms selected from N, O or S; 5-membered heterocyclic containing 1, 2 or 3 heteroatoms selected from N, O or S; 6-membered heterocyclic containing 1, 2 or 3 heteroatoms selected from N, O or S; 3-membered carbocyclic; 4-membered carbocyclic; 5-membered carbocyclic; or 6-membered carbocyclic; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4 or 5 substituents, and the said each of substituents at each occurrence is selected from deuterium, halogen, -NH<sub>2</sub>, -CN, -OH, -NO<sub>2</sub>, carboxyl, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy or isopropoxy.

72. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-71, wherein W<sub>2</sub> is selected from hydrogen; deuterium; phenyl; 5-membered heteroaryl containing 1 or 2 heteroatoms selected from N, O or S; or 6-membered heteroaryl containing 1 or 2 heteroatoms selected from N, O or S; and each of which at each occurrence is independently optionally substituted with 1, 2, 3, 4 or 5 substituents, and the said each of substituents at each occurrence is selected from deuterium, -F, -Cl, -Br, -NH<sub>2</sub>, -CN, -OH, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy or isopropoxy.

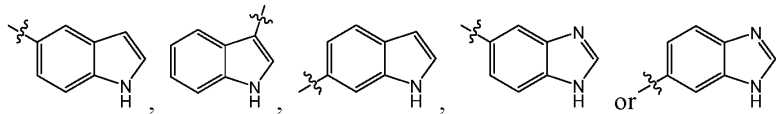
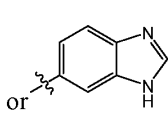
73. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-72, wherein W<sub>2</sub> is selected from phenyl; 5-membered heteroaryl containing 1 or 2 heteroatoms selected from N, O, or S; or 6-membered heteroaryl containing 1 or 2 heteroatoms selected from N, O or S; and each of which at each occurrence is independently optionally substituted with 1, 2 or 3 substituents, and the said each of substituents at each occurrence is selected from -F, -Cl, -Br, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy or isopropoxy.

74. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof

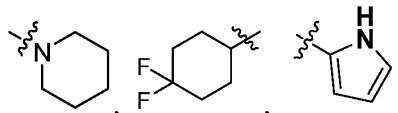
according to any one of claims 1-71, wherein  $W_2$  is selected from ,



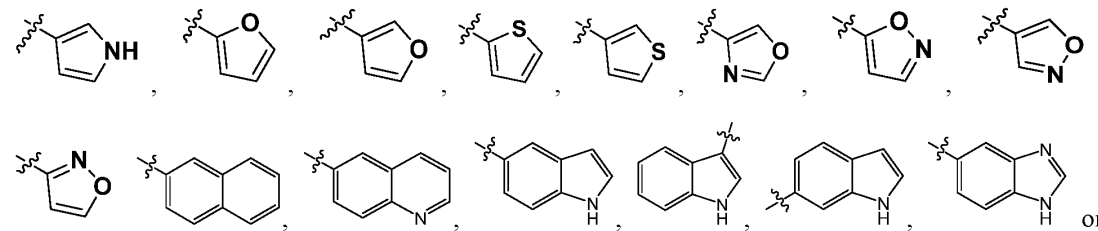
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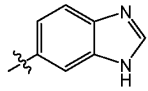
 or ; and each of which at each occurrence is independently optionally substituted with 1, 2 or 3 substituents, and the said each of substituents at each occurrence is selected from -F, -Cl, methyl or methoxy.

75. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof

according to any one of claims 1-71, wherein  $W_2$  is selected from ,

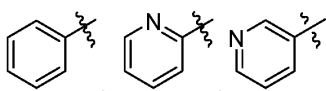
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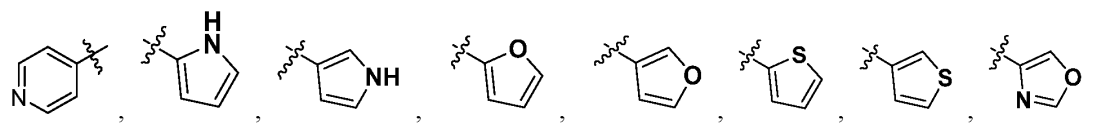


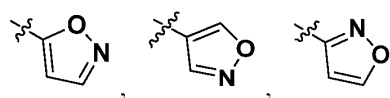
; and each of which at each occurrence is independently optionally substituted with 1, 2 or 3 substituents, and the said each of substituents at each occurrence is selected from -F, -Cl, methyl or methoxy.

15

76. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof

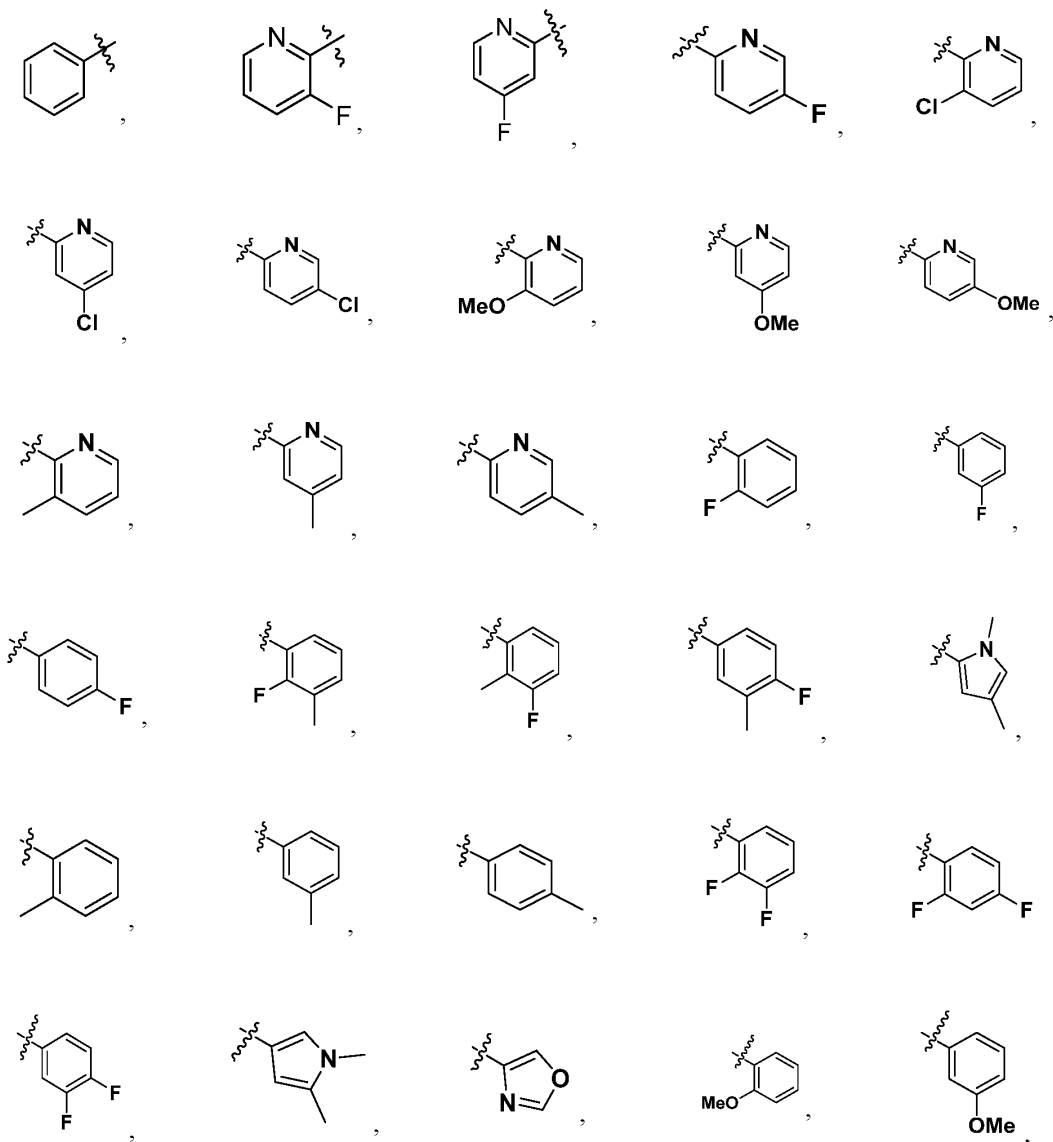
according to any one of claims 1-75, wherein  $W_2$  is selected from ,

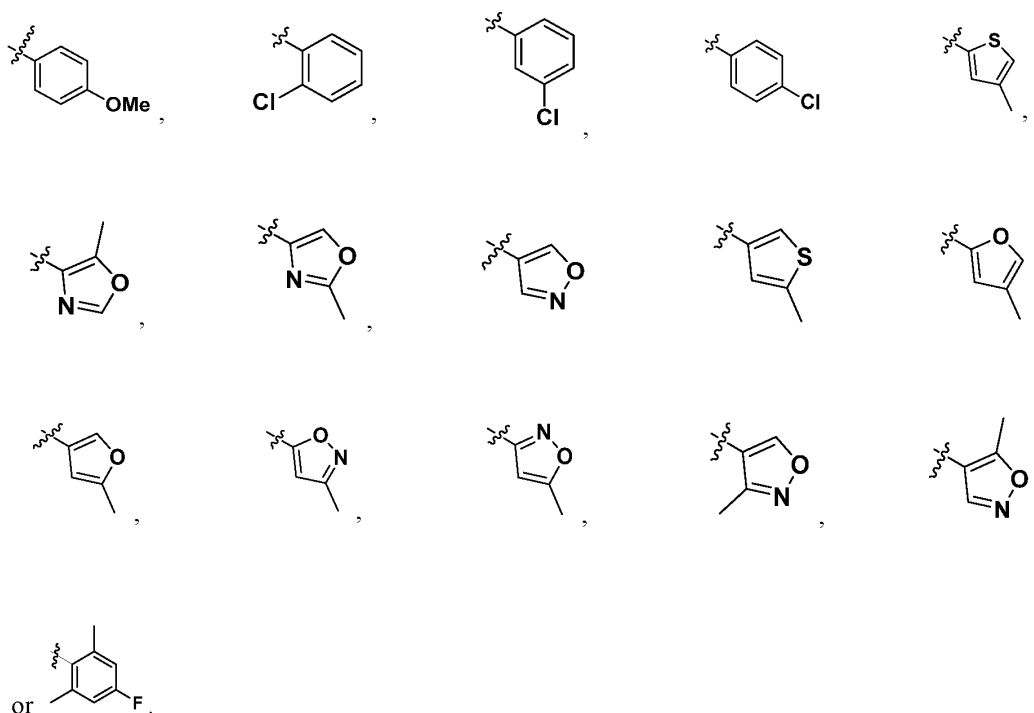




; and each of which at each occurrence is independently optionally substituted with 1, 2 or 3 substituents, and the said each of substituents at each occurrence is selected from -F, -Cl, methyl or methoxy.

77. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof  
 5 according to any one of claims 1-76, wherein  $W_2$  is independently selected from:





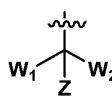
78. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-77, wherein Z is selected from hydrogen, deuterium, -F, -Cl, -OH, -C<sub>1-3</sub>alkyl or -C<sub>1-3</sub>alkoxy.

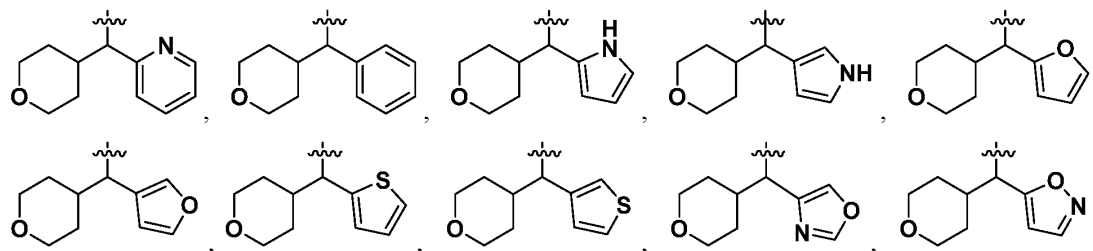
79. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-78, wherein Z is selected from hydrogen, deuterium, -F, -Cl, -OH, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy or isopropoxy.

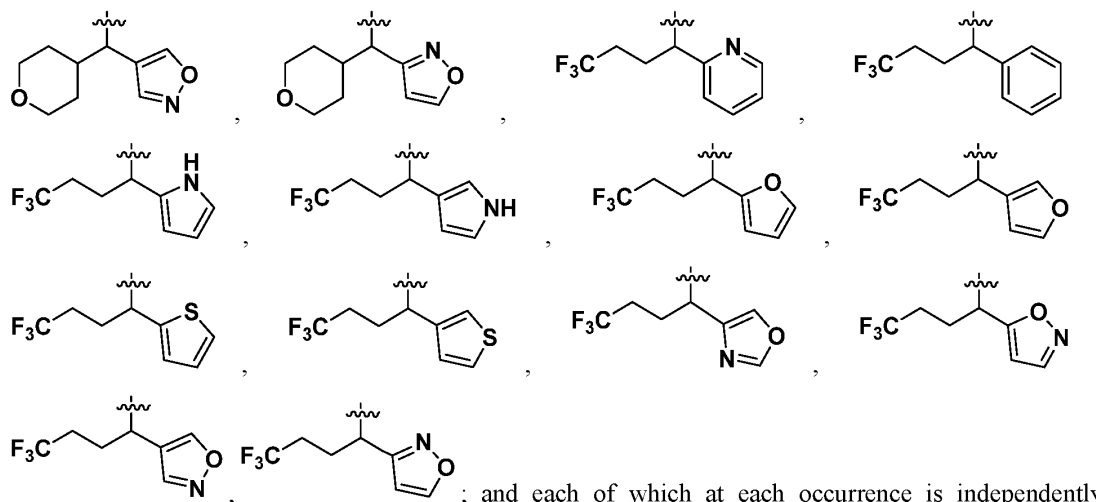
80. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-79, wherein Z is selected from hydrogen or deuterium.

81. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-80, wherein Z is hydrogen.

82. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof

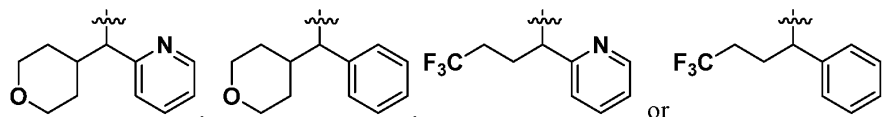
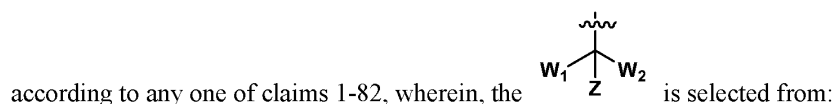
according to any one of claims 1-81, wherein,  is selected from:





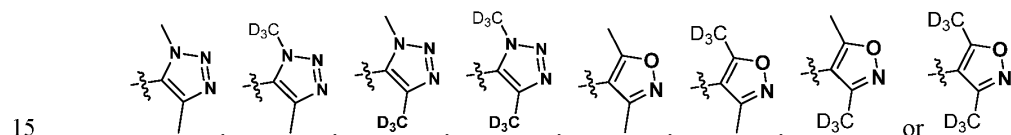
optionally substituted with 1, 2 or 3 substituents, and the said each of substituents at each occurrence is selected from -F, -Cl, -Br, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy or isopropoxy.

83. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof



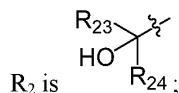
10 and each of which at each occurrence is independently optionally substituted with 1, 2 or 3 substituents, and the said each of substituents at each occurrence is selected from -F, -Cl, methyl or methoxy.

84. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-83, wherein the A is independently selected from:

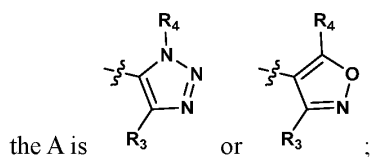


85. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-84, wherein,

R<sub>1</sub> is -C<sub>1-6</sub>alkyl;



20 Each of R<sub>23</sub> and R<sub>24</sub> at each occurrence is -C<sub>1-6</sub>alkyl;



Each of R<sub>3</sub> and R<sub>4</sub> at each occurrence is selected from -C<sub>1-6</sub>alkyl or -C<sub>1-6</sub>alkyl substituted with 1, 2, 3, 4, 5 or 6 deuterium;

W<sub>1</sub> is selected from -C<sub>1-6</sub>alkyl substituted with -F or 6-membered heterocyclic containing 1  
5 heteroatoms selected from O;

W<sub>2</sub> is selected from phenyl; 5-membered heteroaryl containing 1 or 2 heteroatoms selected from N, O or S; or 6-membered heteroaryl containing 1 or 2 heteroatoms selected from N, O, or S; and each of which at each occurrence is independently optionally substituted with 1, 2 or 3 substituents, and the said each of substituents at each occurrence is selected from -F, -Cl, -Br, methyl, ethyl, propyl, isopropyl,  
10 methoxy, ethoxy, propoxy or isopropoxy;

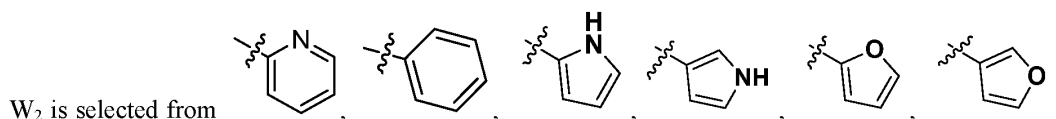
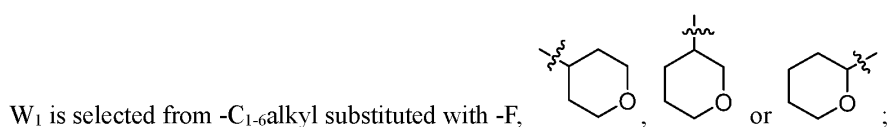
Z is selected from hydrogen or deuterium.

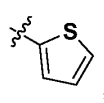
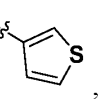
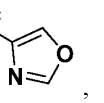
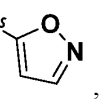
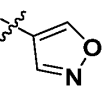
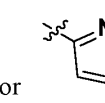
86. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-85, wherein,

R<sub>1</sub> is -C<sub>1-3</sub>alkyl;

15 Each of R<sub>23</sub> and R<sub>24</sub> at each occurrence is -C<sub>1-3</sub>alkyl;

Each of R<sub>3</sub> and R<sub>4</sub> at each occurrence is selected from -C<sub>1-3</sub>alkyl or -C<sub>1-3</sub>alkyl substituted with 1, 2, 3, 4, 5 or 6 deuterium;



20 , , , ,  or  ; and each of which at each occurrence is independently optionally substituted with 1, 2 or 3 substituents, and the said each of substituents at each occurrence is selected from -F, -Cl, -Br, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy or isopropoxy;

Z is selected from hydrogen.

25 87. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-86, wherein,

R<sub>1</sub> is selected from methyl, ethyl, propyl or isopropyl;

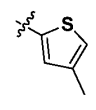
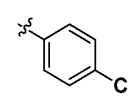
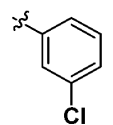
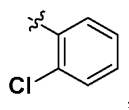
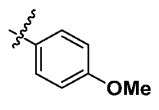
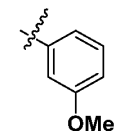
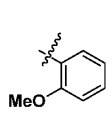
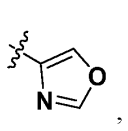
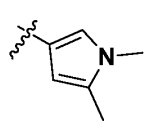
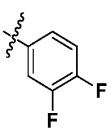
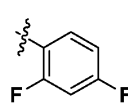
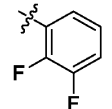
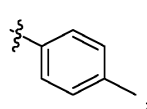
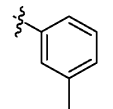
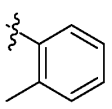
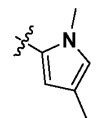
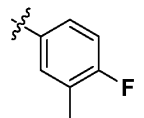
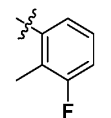
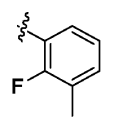
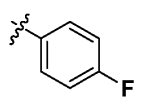
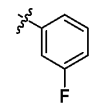
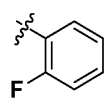
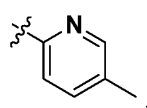
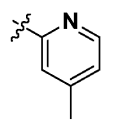
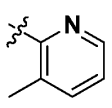
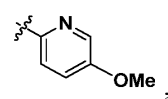
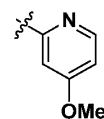
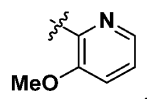
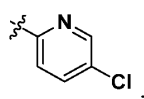
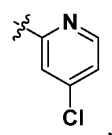
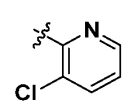
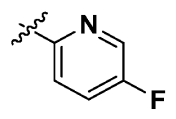
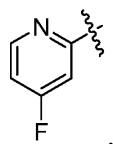
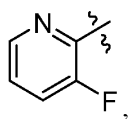
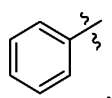
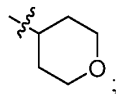
Each of R<sub>23</sub> or R<sub>24</sub> at each occurrence is selected from methyl, ethyl, propyl or isopropyl;

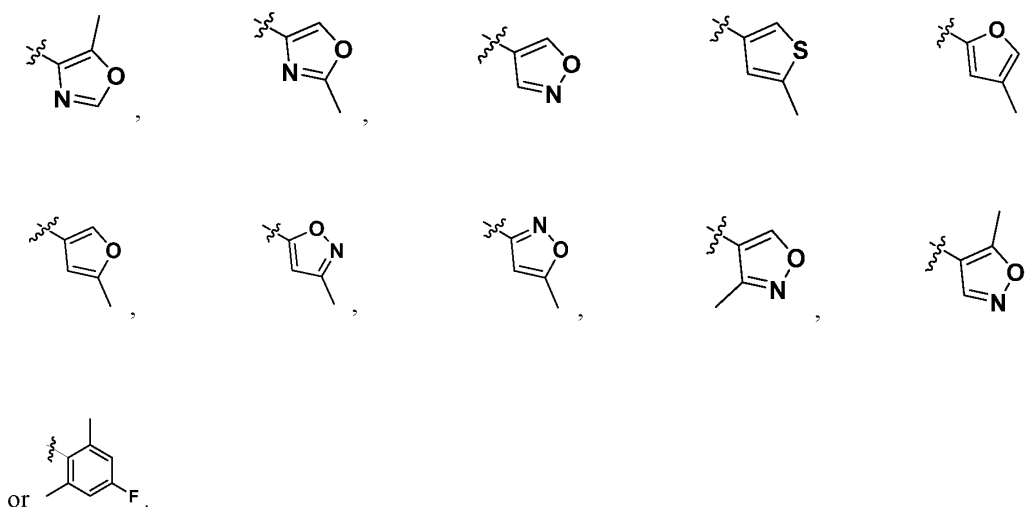
Each of R<sub>3</sub> and R<sub>4</sub> at each occurrence is selected from methyl, ethyl, propyl, isopropyl, methyl substituted with deuterium, ethyl substituted with deuterium, propyl substituted with deuterium or isopropyl substituted with deuterium;

W<sub>1</sub> is selected from -CH<sub>2</sub>CH<sub>2</sub>CF<sub>3</sub> or

5

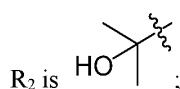
W<sub>2</sub> is selected from:





88. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-87, wherein,

$R_1$  is methyl;



5 Each of  $R_3$  and  $R_4$  at each occurrence is independently selected from  $-CH_3$  or  $-CD_3$ .

89. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-88, the compound is:

|    |                                                                                                                                                                        |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                  |
| 2  | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;  |
| 3  | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-methylpyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;  |
| 4  | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-methoxypyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol; |
| 5  | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((2-fluorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;        |
| 6  | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((2-methoxyphenyl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;       |
| 7  | 2-(4-((3-chloropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;  |
| 8  | 2-(4-((2-chlorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;        |
| 9  | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((4-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;  |
| 10 | 2-(4-((4-chloropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;  |
| 11 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-methoxyphenyl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;       |

|    |                                                                                                                                                                          |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((4-methylpyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;    |
| 13 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((5-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;    |
| 14 | 2-(4-((5-chloropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;    |
| 15 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((4-methoxypyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;   |
| 16 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((5-methoxypyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;   |
| 17 | 2-(6-(3,5-dimethylisoxazol-4-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;             |
| 18 | 2-(6-(3,5-dimethylisoxazol-4-yl)-4-((3-methoxypyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;            |
| 19 | 2-(4-((3-chloropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(3,5-dimethylisoxazol-4-yl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;             |
| 20 | 2-(6-(3,5-dimethylisoxazol-4-yl)-4-((4-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;             |
| 21 | 2-(4-((4-chloropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(3,5-dimethylisoxazol-4-yl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;             |
| 22 | 2-(6-(3,5-dimethylisoxazol-4-yl)-4-((5-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;             |
| 23 | 2-(4-((5-chloropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(3,5-dimethylisoxazol-4-yl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;             |
| 24 | 2-(6-(3,5-dimethylisoxazol-4-yl)-4-((4-methoxypyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;            |
| 25 | 2-(6-(3,5-dimethylisoxazol-4-yl)-4-((5-methoxypyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;            |
| 26 | 2-(6-(1-methyl-4-(methyl-d3)-1H-1,2,3-triazol-5-yl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;          |
| 27 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((tetrahydro-2H-pyran-4-yl)(o-tolyl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                 |
| 28 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;          |
| 29 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((5-methylpyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;    |
| 30 | 2-(6-(3,5-dimethylisoxazol-4-yl)-4-((3-methylpyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;             |
| 31 | 2-(6-(3,5-dimethylisoxazol-4-yl)-4-((4-methylpyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;             |
| 32 | 2-(6-(3,5-dimethylisoxazol-4-yl)-4-((5-methylpyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;             |
| 33 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((4-fluorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;          |
| 34 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((tetrahydro-2H-pyran-4-yl)(m-tolyl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                 |
| 35 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((tetrahydro-2H-pyran-4-yl)(p-tolyl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                 |
| 36 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((4-methoxyphenyl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;         |
| 37 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((2-fluoro-3-methylphenyl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol; |
| 38 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoro-2-methylphenyl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol; |

|    |                                                                                                                                                                                      |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 39 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((4-fluoro-3-methylphenyl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;             |
| 40 | 2-(4-((2,3-difluorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                  |
| 41 | 2-(4-((2,4-difluorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                  |
| 42 | 2-(4-((3,4-difluorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                  |
| 43 | 2-(4-((3-chlorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                      |
| 44 | 2-(4-((4-chlorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                      |
| 45 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-phenylbutyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                                         |
| 46 | 2-(6-(1-methyl-4-(methyl-d3)-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-phenylbutyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                               |
| 47 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(3-fluoropyridin-2-yl)butyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                         |
| 48 | 2-(6-(1-methyl-4-(methyl-d3)-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(3-methylpyridin-2-yl)butyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;               |
| 49 | 1-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)cyclopropan-1-ol;                           |
| 50 | 1-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)cyclopropan-1-ol;           |
| 51 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(oxazol-4-yl)butyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                                  |
| 52 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(5-methyloxazol-4-yl)butyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                          |
| 53 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(2-methyloxazol-4-yl)butyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                          |
| 54 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(isoxazol-4-yl)butyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                                |
| 55 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(5-methylisoxazol-4-yl)butyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                        |
| 56 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(3-methylisoxazol-4-yl)butyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                        |
| 57 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((2-methyloxazol-4-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                 |
| 58 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((5-methylisoxazol-3-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;               |
| 59 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-methylisoxazol-5-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;               |
| 60 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((5-methylfuran-3-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                  |
| 61 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((4-methylfuran-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isothiazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                  |
| 62 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;  |
| 63 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-((3-methylpyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;  |
| 64 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-methoxypyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol; |
| 65 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((2-fluorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;        |

[illegible]

|     |                                                                                                                                                                                          |
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| 93  | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-((tetrahydro-2H-pyran-4-yl)(m-tolyl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                   |
| 94  | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-((tetrahydro-2H-pyran-4-yl)(p-tolyl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                   |
| 95  | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((4-methoxyphenyl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;           |
| 96  | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((2-fluoro-3-methylphenyl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;   |
| 97  | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoro-2-methylphenyl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;   |
| 98  | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((4-fluoro-3-methylphenyl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;   |
| 99  | 2-(4-((2,3-difluorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;        |
| 100 | 2-(4-((2,4-difluorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;        |
| 101 | 2-(4-((3,4-difluorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;        |
| 102 | 2-(4-((3-chlorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;            |
| 103 | 2-(4-((4-chlorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;            |
| 104 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(4,4,4-trifluoro-1-phenylbutyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                               |
| 105 | 2-(1-methyl-6-(1-methyl-4-(methyl-d3)-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-phenylbutyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                     |
| 106 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(4,4,4-trifluoro-1-(3-fluoropyridin-2-yl)butyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;               |
| 107 | 2-(1-methyl-6-(1-methyl-4-(methyl-d3)-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(3-methylpyridin-2-yl)butyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;     |
| 108 | 2-(1-methyl-6-(1-methyl-4-(methyl-d3)-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(oxazol-4-yl)butyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;              |
| 109 | 1-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)cyclopropan-1-ol;                 |
| 110 | 1-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)cyclopropan-1-ol; |
| 111 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(4,4,4-trifluoro-1-(oxazol-4-yl)butyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                        |
| 112 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(4,4,4-trifluoro-1-(5-methyloxazol-4-yl)butyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                |
| 113 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(4,4,4-trifluoro-1-(2-methyloxazol-4-yl)butyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                |
| 114 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(4,4,4-trifluoro-1-(isoxazol-4-yl)butyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                      |
| 115 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(4,4,4-trifluoro-1-(5-methylisoxazol-4-yl)butyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;              |
| 116 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(4,4,4-trifluoro-1-(3-methylisoxazol-4-yl)butyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;              |
| 117 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-((2-methyloxazol-4-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;       |
| 118 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-((5-methylisoxazol-3-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;     |
| 119 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-((3-methylisoxazol-5-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;     |

|     |                                                                                                                                                                                            |
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| 120 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-((5-methylfuran-3-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;          |
| 121 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-((4-methylfuran-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;          |
| 122 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-((4-methylthiophen-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;       |
| 123 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-((5-methylthiophen-3-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;       |
| 124 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((1,4-dimethyl-1H-pyrrol-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol; |
| 125 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((1,5-dimethyl-1H-pyrrol-3-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol; |
| 126 | (S)-2-(6-(3,5-dimethylisoxazol-4-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                             |
| 127 | 2-(6-(3,5-dimethylisoxazol-4-yl)-1-methyl-4-((tetrahydro-2H-pyran-4-yl)(o-tolyl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                              |
| 128 | 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-3-(methylsulfonyl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine;                        |
| 129 | 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine-3-sulfonamide;                             |
| 130 | 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-N,1-dimethyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine-3-sulfonamide;                         |
| 131 | (6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)dimethylphosphine oxide;              |
| 132 | 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine-3-carboxamide;                             |
| 133 | 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-N,1-dimethyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine-3-carboxamide;                         |
| 134 | 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-N,N,1-trimethyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine-3-carboxamide;                      |
| 135 | 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-N,N,1-trimethyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine-3-sulfonamide;                      |
| 136 | 1-(3-chloro-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)pyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-1(4H)-yl)-2-methylpropan-2-ol;                       |
| 137 | 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-amine;                                    |
| 138 | N-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)acetamide;                          |
| 139 | N-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)methanesulfonamide;                 |
| 140 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-ethyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                         |
| 141 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-isopropyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                     |
| 142 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1-(2,2,2-trifluoroethyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;        |
| 143 | 3-chloro-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-(methylsulfonyl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine;                        |
| 144 | 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-3-methyl-1-(methylsulfonyl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine;                        |
| 145 | 2-(6-(3,5-dimethylisoxazol-4-yl)-1-methyl-4-(4,4,4-trifluoro-1-(3-methylpyridin-2-yl)butyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                          |
| 146 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                                        |

[illegible]

|     |                                                                                                                                                                          |
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| 174 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((5-methylpyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;      |
| 175 | 2-(6-(3,5-dimethylisoxazol-4-yl)-4-((3-methylpyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;               |
| 176 | 2-(6-(3,5-dimethylisoxazol-4-yl)-4-((4-methylpyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;               |
| 177 | 2-(6-(3,5-dimethylisoxazol-4-yl)-4-((5-methylpyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;               |
| 178 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((4-fluorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;            |
| 179 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((tetrahydro-2H-pyran-4-yl)(m-tolyl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                   |
| 180 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((tetrahydro-2H-pyran-4-yl)(p-tolyl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                   |
| 181 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((4-methoxyphenyl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;           |
| 182 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((2-fluoro-3-methylphenyl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;   |
| 183 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoro-2-methylphenyl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;   |
| 184 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((4-fluoro-3-methylphenyl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;   |
| 185 | 2-(4-((2,3-difluorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;        |
| 186 | 2-(4-((2,4-difluorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;        |
| 187 | 2-(4-((3,4-difluorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;        |
| 188 | 2-(4-((3-chlorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;            |
| 189 | 2-(4-((4-chlorophenyl)(tetrahydro-2H-pyran-4-yl)methyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;            |
| 190 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-phenylbutyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                               |
| 191 | 2-(6-(1-methyl-4-(methyl-d3)-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-phenylbutyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                     |
| 192 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(3-fluoropyridin-2-yl)butyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;               |
| 193 | 2-(6-(1-methyl-4-(methyl-d3)-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(3-methylpyridin-2-yl)butyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;     |
| 194 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(oxazol-4-yl)butyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                        |
| 195 | 2-(6-(1-methyl-4-(methyl-d3)-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(oxazol-4-yl)butyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;              |
| 196 | 1-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)cyclopropan-1-ol;                 |
| 197 | 1-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)cyclopropan-1-ol; |
| 198 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(5-methyloxazol-4-yl)butyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                |
| 199 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(2-methyloxazol-4-yl)butyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                |
| 200 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(isoxazol-4-yl)butyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                      |

|     |                                                                                                                                                                                          |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 201 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(5-methylisoxazol-4-yl)butyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                              |
| 202 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(4,4,4-trifluoro-1-(3-methylisoxazol-4-yl)butyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                              |
| 203 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((2-methyloxazol-4-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                       |
| 204 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((5-methylisoxazol-3-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                     |
| 205 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-methylisoxazol-5-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                     |
| 206 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((5-methylfuran-3-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                        |
| 207 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((4-methylfuran-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-4H-isoxazolo[5',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                        |
| 208 | (S)-2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                  |
| 209 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(4,4,4-trifluoro-1-(3-methylpyridin-2-yl)butyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;               |
| 210 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine-3-yl)propan-2-ol;     |
| 211 | 2-(6-(3,5-dimethylisoxazol-4-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;               |
| 212 | 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine;                                         |
| 213 | 3-bromo-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine;                                 |
| 214 | 1-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)-4,4-dimethylimidazolidin-2-one;  |
| 215 | 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-3-(piperazin-1-yl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine;                      |
| 216 | 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-3-(4-methylpiperazin-1-yl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine;              |
| 217 | 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-3-(4-(oxetan-3-yl)piperazin-1-yl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine;       |
| 218 | 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-3-(4-isopropylpiperazin-1-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine;           |
| 219 | (3R)-1-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)-N-methylpyrrolidin-3-amine; |
| 220 | 1-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)imidazolidin-2-one;               |
| 221 | 1-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)-3-methylimidazolidin-2-one;      |
| 222 | methyl 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine-3-carboxylate;                             |
| 223 | 2-(1-cyclopropyl-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                 |
| 224 | 2-(1-(difluoromethyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;            |
| 225 | 2-(1-(2,2-difluoroethyl)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;         |
| 226 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1-(2,2,2-trifluoroethyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;      |
| 227 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-(methyl-d3)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                 |

|     |                                                                                                                                                                                          |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 228 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-(2-hydroxyethyl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;            |
| 229 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-ethyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                       |
| 230 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-(2-(dimethylamino)ethyl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol; or |
| 231 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-(methylsulfonyl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol.            |

90. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-89, the compound further is:

|     |                                                                                                                                                                                                    |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 232 | 2-(6-(1,4-Dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                         |
| 233 | 2-(4-((3-Fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-(methyl-d3)-6-(1-methyl-4-(methyl-d3)-1H-1,2,3-triazol-5-yl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol; |
| 234 | 2-(6-(1,4-Dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-amine;                             |
| 235 | 3-(6-(1,4-Dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)pentan-3-ol;                                |
| 236 | 6-(1,4-Dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine-3-carboxylic acid;                 |
| 237 | 6-(1,4-Dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine-3-carboxamide;                     |
| 238 | 2-(6-(1,4-Dimethyl-1H-1,2,3-triazol-5-yl)-4-((4-methylpyridin-3-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                |
| 239 | 2-(4-((3-Fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-6-(1-methyl-4-(methyl-d3)-1H-1,2,3-triazol-5-yl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;      |
| 240 | 2-(6-(1,4-Dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoropyridin-4-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                |
| 241 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((4-methoxypyridin-3-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;               |
| 242 | 2-(6-(1,4-Dimethyl-1H-1,2,3-triazol-5-yl)-4-(1-(4-fluoro-2,6-dimethylphenyl)ethyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                                  |
| 243 | (S)-N-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)methanesulfonamide;                     |
| 244 | (S)-N-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)acetamide;                              |
| 245 | Methyl 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine-3-carboxylate;              |
| 246 | 2-(6-(3,5-dimethylisoxazol-4-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                                         |
| 247 | (S)-2-(6-(3,5-dimethylisoxazol-4-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                     |
| 248 | (S)-2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(4,4,4-trifluoro-1-phenylbutyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                                     |
| 249 | (S)-2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(4,4,4-trifluoro-1-(3-fluoropyridin-2-yl)butyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                     |
| 250 | (S)-2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-((3-methylpyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;            |
| 251 | 2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                                |

|     |                                                                                                                                                                                                        |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 252 | (S)-2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                |
| 253 | (S)-2-(6-(3,5-dimethylisoxazol-4-yl)-1-methyl-4-((3-methylpyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                         |
| 254 | (S)-2-(6-(3,5-dimethylisoxazol-4-yl)-1-methyl-4-((tetrahydro-2H-pyran-4-yl)(o-tolyl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                                      |
| 255 | (S)-2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(4,4,4-trifluoro-1-(oxazol-4-yl)butyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                                  |
| 256 | (S)-2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(4,4,4-trifluoro-1-(3-methylpyridin-2-yl)butyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                         |
| 257 | (S)-2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-((2-methyloxazol-4-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                 |
| 258 | (S)-2-(6-(1,4-Dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                         |
| 259 | (S)-2-(4-((3-Fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-(methyl-d3)-6-(1-methyl-4-(methyl-d3)-1H-1,2,3-triazol-5-yl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol; |
| 260 | (S)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-N,N,1-trimethyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine-3-carboxamide;                              |
| 261 | (S)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine-3-carboxamide;                                     |
| 262 | (S)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-N,1-dimethyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine-3-carboxamide;                                 |
| 263 | (S)-2-(6-(1,4-Dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-amine;                             |
| 264 | (S)-3-(6-(1,4-Dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)pentan-3-ol;                                |
| 265 | (S)-6-(1,4-Dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine-3-carboxylic acid;                 |
| 266 | (S)-6-(1,4-Dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine-3-carboxamide;                     |
| 267 | (S)-2-(6-(1,4-Dimethyl-1H-1,2,3-triazol-5-yl)-4-((4-methylpyridin-3-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                |
| 268 | (S)-2-(4-((3-Fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-6-(1-methyl-4-(methyl-d3)-1H-1,2,3-triazol-5-yl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;      |
| 269 | (S)-2-(6-(1,4-Dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoropyridin-4-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                |
| 270 | (S)-2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((4-methoxypyridin-3-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;               |
| 271 | (S)-2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-methoxypyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;               |
| 272 | (S)-2-(6-(1,4-Dimethyl-1H-1,2,3-triazol-5-yl)-4-(1-(4-fluoro-2,6-dimethylphenyl)ethyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol;                                  |
| 273 | (S)-N-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)methanesulfonamide;                         |
| 274 | N-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)acetamide; or                                   |
| 275 | (S)-Methyl 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine-3-carboxylate.              |

91. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-90, the compound further is:

|     |                                                                                                                                                                                            |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 276 | 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-3-((4-methylpiperazin-1-yl)methyl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine;        |
| 277 | (S)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-3-((4-methylpiperazin-1-yl)methyl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine;    |
| 278 | 6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-3-((methylsulfonyl)methyl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine;                |
| 279 | (S)-6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-3-((methylsulfonyl)methyl)-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridine;            |
| 280 | 4-((6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)methyl)morpholine;                 |
| 281 | (S)-4-((6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)methyl)morpholine;             |
| 282 | N-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)-N-(methylsulfonyl)acetamide;       |
| 283 | (S)-N-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-1-methyl-4-(phenyl(tetrahydro-2H-pyran-4-yl)methyl)-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)-N-(methylsulfonyl)acetamide;   |
| 284 | (R)-2-(6-(1,4-dimethyl-1H-1,2,3-triazol-5-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol; or |
| 285 | (R)-2-(6-(3,5-dimethylisoxazol-4-yl)-4-((3-fluoropyridin-2-yl)(tetrahydro-2H-pyran-4-yl)methyl)-1-methyl-1,4-dihydropyrazolo[3',4':4,5]pyrrolo[3,2-b]pyridin-3-yl)propan-2-ol.             |

92. A pharmaceutical composition comprising at least one compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-91, and at least one pharmaceutically acceptable excipient.

93. The pharmaceutical composition according to claim 92, wherein the said compound in a weight ratio to the said excipient within the range from about 0.0001 to about 10.

94. The pharmaceutical composition according to claim 92 or 93, wherein the said compound in a weight ratio to the said excipient within the range from about 0.0005 to about 0.25.

95. A method of treating a patient having a diseases or conditions related to bromodomain proteins, said method comprising administering to the patient a therapeutically effective amount of at least one compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof according to any one of claims 1-91; or the pharmaceutical composition according to any one of claims 92-94.

96. The method according to claim 95, wherein the diseases or conditions related to bromodomain proteins is solid tumor and/or blood tumor.

97. The method according to claim 96, wherein the solid tumor is selected from lung cancer, gastrointestinal cancer, colon cancer, rectal cancer, colorectal cancer and/or ovarian cancer; the blood tumor is selected from myeloma and/or leukemia.

98. The method according to claim 97, wherein the lung cancer contains non-small cell lung cancer and/or small cell lung cancer; the gastrointestinal cancer contains esophageal cancer; the leukemia contains acute myeloid leukemia (AML) and/or acute lymphocytic leukemia(ALL); the myeloma contains multiple myeloma.

99. A compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof; or the pharmaceutical composition for use in the treatment of diseases or conditions related to bromodomain protein.

100. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof;  
5 or the pharmaceutical composition for use in the treatment of diseases or conditions related to bromodomain protein according to claim 99, wherein the diseases or conditions related to bromodomain proteins is solid tumor and/or blood tumor.

101. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof; or the pharmaceutical composition for use in the treatment of diseases or conditions related to  
10 bromodomain protein according to claim 100, wherein the solid tumor is selected from lung cancer, gastrointestinal cancer, colon cancer, rectal cancer, colorectal cancer and/or ovarian cancer; the blood tumor is selected from myeloma and/or leukemia.

102. The compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer thereof; or the pharmaceutical composition for use in the treatment of diseases or conditions related to  
15 bromodomain protein according to claim 101, the lung cancer contains non-small cell lung cancer and/or small cell lung cancer; the gastrointestinal cancer contains esophageal cancer; the leukemia contains acute myeloid leukemia (AML)) and/or acute lymphocytic leukemia(ALL); the myeloma contains multiple myeloma.

103. Use of the compound of formula I, a pharmaceutically acceptable salt thereof or stereoisomer  
20 thereof according to any one of claims 1-91; or the pharmaceutical composition according to any one of claims 92-94 for the manufacture of a medicament for the treatment of diseases or conditions related to bromodomain protein.

104. The use according to claim 103, wherein the diseases or conditions related to bromodomain proteins is solid tumor and/or blood tumor.

25 105. The use according to claim 104, wherein the solid tumor is selected from lung cancer, gastrointestinal cancer, colon cancer, rectal cancer, colorectal cancer and/or ovarian cancer; the blood tumor is selected from myeloma and/or leukemia.

106. The use according to claim 105, wherein the lung cancer contains non-small cell lung cancer and/or small cell lung cancer; the gastrointestinal cancer contains esophageal cancer; the leukemia  
30 contains acute myeloid leukemia (AML)) and/or acute lymphocytic leukemia(ALL); the myeloma contains multiple myeloma.