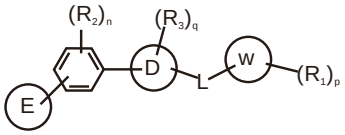
alkynyl, aryl, arylalkyl, cycloalkyl, cycloalkylalkyl, cycloalkenyl, heteroaryl, heterocyclic ring, heterocyclylalkyl, heteroarylalkyl, $-C(O)OR^x$, $-C(O)R^x$, $-C(S)R^x$, $-C(O)NR^xR^y$, $-NR^xC(O)NR^yR^z$, $-N(R^x)S(O)R^y$, $-N(R^x)S(O)_2R^y$, $-NR^xR^y$, $-NR^xC(O)R^y$, $-NR^xC(S)R^y$, $-NR^xC(S)NR^yR^z$, $-S(O)_2NR^xR^y$, $-OR^x$, $-OC(O)R^x$, $-OC(O)NR^xR^y$, $-R^xC(O)OR^y$, $-R^xC(O)NR^yR^z$, $-R^xC(O)R^y$, $-SR^x$, and $-S(O)_2R^x$; wherein each occurrence of R^x, R^y and R^z are independently selected from hydrogen, alkyl, haloalkyl, alkenyl, alkynyl, aryl, arylalkyl, cycloalkyl, cycloalkenyl, heteroaryl, heterocyclic ring, heterocyclylalkyl ring and heteroarylalkyl;

or a pharmaceutically acceptable salt thereof.

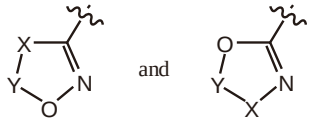
In one aspect of the present invention there is provided a compound of formula (i):



(I)

Wherein

uring E is a 5-membered non aromatic heterocyclic ring selected from



(a) (b)

X, at each occurence, is independently selected from $-C(O)-$, $-CR_4R_5-$ and $-NR-$;

Y, at each occurence, is independenty selected from $-C(O)-$ and $-CR_4R_5-$;

R is selected from alkyl, haloalkyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, heterocyclyl, $-C(O)OR_6$ and $-C(O)R_6$;

ring W is selected from aryl, heteroaryl, cycloalkyl and heterocyclyl;

$R_{1,}$ which may be same or different at each occurrence, is independently selected from halo, cyano, nitro, hydroxyl, alkyl, alkoxy, haloalkoxy, cycloalkyl, aryl, heteroaryl, heterocyclyl, $-S(O)_nR_6$, $-NR6_S(O)_2R_7$, $-NR_6(CR_8R_9)_nC(O)OR_6$, $-NR_6(CR_8R_9)_nC(O)R_6$,

$-NR_6(CR_8R_9)_nC(O)NR_6R_7$, $-C(O)NR_6R_7$, $-C(O)(O)R_6$, $-C(O)R_6$, $-OC(O)R_6$, and $-OC(O)NR_6R_7$;

R_2, which may be same or different at each occurrence, is independently selected from hydrogen, halo, hydroxyl, cyano, nitro, alkyl, haloalkyl, alkenyl, alkynyl, alkoxy, haloalkoxy, alkenyloxy, cycloalkyl, cycloalkoxy, $-C(O)(O)R_6$, $-NR_6R_7$, $-C(O)R_6$, $-NHS(O)_2R_7$ and $-NHC(O)R_6$;

R_3, which may be same or different at each occurrence, is independently selected from hydrogen, halo, hydroxyl, alkyl, alkoxy, haloalkyl, haloalkoxy, $-NR_6R_7$, $-NR_6S(O)_2R7$, $-C(O)NR_6R_7$ and $-C(O)OR_6$;

R_4 and R_5, which may be same or different at each occurrence, are independently selected from hydrogen, halo, $-OR_{10}$, alkyl, haloalkyl, hydroxyalkyl, cycloalkyl, aryl, heteroaryl, heterocyclyl, $-(CR_8R_9)_nC(O)NR_6R_7$, $-C(O)R_6$, and $-(CR_8R_9)nC(O)OR_6$;

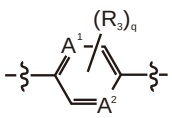
provided that, when any of R_4 or R_5 in Y is $-OR_{10}$ then R_{10} is not hydrogen; or R_4 and R_5, taken together with the carbon atom to which they are attached to, may form a substituted or unsubstituted 3- to 7- membered carbocyclic or heterocyclic ring; or

any one of R_4 and R_5 in X and any one of R_4 and R_5 in Y combined together, when they are attached to carbon atoms, may form a 4- to 7- membered carbocyclic or heterocyclic ring;

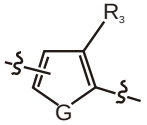
provided that

both R4 or R5 are not simultaneously -C(O)-;

ring D is selected from



and



wherein, both A_1 and A_2 are C or N;

G is selected from NR_{12} and O;

L is -C(O)NR_{11}- or -NR_{11}C(O)-;

R_{11}, at each occurrence, is independently selected from

R_{12}, is selected from hydrogen, alkyl, cycloalkyl, aryl heteroaryl, and heterocyclyl;

R_{10}, is selected from hydrogen, alkyl, cycloalkyl, aryl heteroaryl, and heterocyclyl;

R_6 and R_7, which may be same or different at each occurrence, are independently selected from hydrogen, alkyl, cycloalkyl, aryl, heteroaryl, and heterocyclyl; or R_6 and R_7, taken together with the nitrogen atom to which they are attached to, may form a substituted 3- to 14- membered heterocyclic ring;

R_8 and R_9, which may be same or different at each occurrence, are independently selected from hydrogen, halo, alkyl and alkoxy; or R_8 and R_9, taken together with the carbon atom which they are attached to, may form a 3-to 6- membered cyclic ring wherein the cyclic ring may be carbocyclic or heterocyclic;

n is an integer ranging from 0 to 2, both inclusive;

p is an integer ranging from 0 to 5, both inclusive;

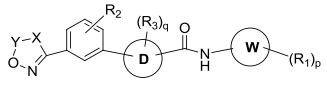
q is an integer ranging from 1 to 4, both inclusive; and

wherein alkyl, haloalkyl, alkenyl, alkynyl, alkoxy, haloalkoxy, alkenyloxy, alkynyloxy, cycloalkyl, cycloalkxy, aryl, heteroaryl, heterocyclyl, wherever they occur may optionally be substituted with one or more substituents independently selected from hydroxyl, halo, cyano, nitro, alkyl, haloalkyl, alkenyl, alkynyl, aryl, arylalkyl, cycloalkyl, cycloalkylalkyl, cycloalkenyl, heteroaryl, alkynyl, aryl, arylalkyl, cycloalkyl, cycloalkylalkyl, cycloalkenyl, heteroaryl, heterocyclic ring, heterocyclylalkyl, heteroarylalkyl, -C(O)OR^x, -C(O)R^x, -C(O)NR^xR^y, -$NR^xC(O)NR^yR^z$, -$N(R^X)S(O)R^y$, -$N(R^x)S(O)^2R^y$, -NR^xR^y, -$NR^xC(O)R^y$, -$S(O)_2NR^xR^y$, -OR^x, -SR^x, and -$S(O)_2R^x$; wherein each occurrence of R^x, R^y and R^z are independently selected from hydrogen, alkyl, haloalkyl, alkenyl, alkynyl, aryl, arylalkyl, cycloalkyl, cycloalkenyl, heteroaryl, heterocyclic ring, heterocyclylakyl ring and heteroarylakyl;

or pharmaceutically acceptable salt thereof or stereoisomers thereof.

The below embodiments, which are illustrative in nature only and are not intended to limit the scope of the invention.

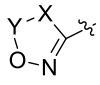
According to one embodiment are provided compounds of Formula (Ia):

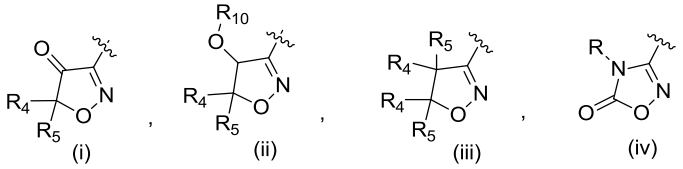


(Ia)

or a pharmaceutically acceptable salt thereof;

wherein

ring  is selected from Formula (i) to (iv)



(i) (ii) (iii) (iv)

ring W, ring D, R, R_1, R_2, R_3, R_4, R_5, R_{10}, 'p' and 'q' are as defined herein above.

According to another embodiment are provided compounds of Formula (Ib):

other therapeutic agents known in the art for the said conditions, diseases and/or disorders are also encompassed by the present invention.

All patents, patent applications and publications cited in this application are hereby incorporated by reference in their entirety for all purposes to the same extent as if each individual patent, patent application or publication were so individually denoted.

Although certain embodiments and examples have been described in detail above, those having ordinary skill in the art will clearly understand that many modifications are possible in the embodiments and examples without departing from the teachings thereof. All such modifications are intended to be encompassed within the below claims of the invention.

Throughout the specification and claims, unless the context requires otherwise, the word “comprise” or variations such as “comprises” or “comprising”, will be understood to imply the inclusion of a stated integer or group of integers but not the exclusion of any other integer or group of integers.

from hydrogen, halo, hydroxyl, cyano, nitro, alkyl, haloalkyl, alkenyl, alkynyl, alkoxy, haloalkoxy, alkenyloxy, alkynyloxy, cycloalkyl, cycloalkoxy, $-C(O)OR_6$, $-NR_6R_7$, $-C(O)R_6$, $-NHS(O)_2R_7$ and $-NHC(O)R_6$;

R_3, which may be same or different at each occurrence, is independently selected from hydrogen, halo, hydroxyl, alkyl, alkoxy, haloalkyl, haloalkoxy, $-NR_6R_7$, $-NR_6S(O)_2R_7$, $-C(O)NR_6R_7$ and $-C(O)OR_6$;

R_4 and R_5, which may be same or different at each occurrence, are independently selected from hydrogen, halo, $-OR_{10}$, alkyl, haloalkyl, hydroxyalkyl, cycloalkyl, aryl, heteroaryl, heterocyclyl, $-(CR_8R_9)_nC(O)NR_6R_7$, $-C(O)R_6$, and $-(CR_8R_9)_nC(O)OR_6$;

provided that, when any of R_4 or R_5 in Y is $-OR_{10}$ then R_{10} is not hydrogen; or

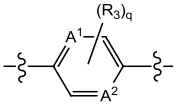
R_4 and R_5, taken together with the carbon atom to which they are attached to, may form a substituted or unsubstituted 3- to 7- membered carbocyclic or heterocyclic ring; or

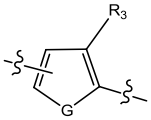
any one of R_4 and R_5 in X and any one of R_4 and R_5 in Y combined together, when they are attached to carbon atoms, may form a 4- to 7- membered substituted or unsubstituted heterocyclic ring in order to give a bicyclic heterocyclic ring;

provided that

both of X and Y are not simultaneously –C(O)-;

ring D is selected from



and


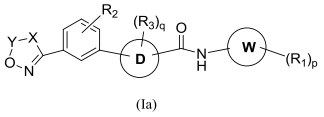
wherein A^1 and A^2 are ~~independently selected from~~ C ~~and~~ or N;

G is selected from ~~S,~~ NR_{12} and O;

L is $-C(O)NR_{11}-$ or $–NR_{11}C(O)-$;

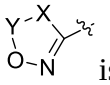
or a pharmaceutically acceptable salt thereof or ~~streoisomers~~ stereoisomers thereof.

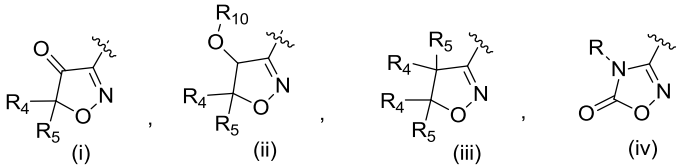
2. The compound of claim 1 having the Formula (Ia):



(Ia)

or a pharmaceutically acceptable salt thereof;

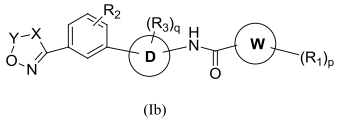
wherein ring  is selected from Formula (i) to (iv)



(i) , (ii) , (iii) , (iv)

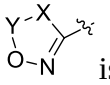
ring W, ring D, R, R_1, R_2, R_3, R_4, R_5, R_{10}, 'p' and 'q' are as defined claim 1.

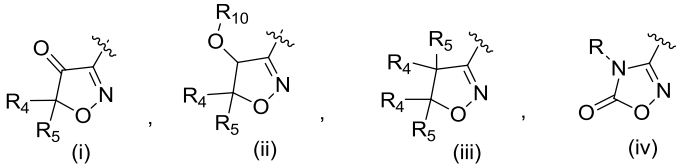
3. The compound of claim 1 having the Formula (Ib):



(Ib)

or a pharmaceutically acceptable salt thereof;

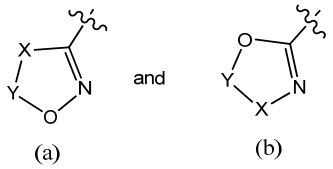
wherein ring  is selected from Formula (i) to (iv)



(i) , (ii) , (iii) , (iv)

ring W, ring D, R, R_1, R_2, R_3, R_4, R_5, R_{10}, 'p' and 'q' are as defined in claim 1.

4. The compound of claim 1 having the Formula (Ic):



(a) (b)

X, at each occurrence, is independently selected from -C(O)-, -CR_4R_5- and –NR-;

Y, at each occurrence, is independently selected from C(O) and -CR_4R_5-;

R is selected from alkyl, haloalkyl, cycloalkyl, aryl and heteroaryl;

R_4 and R_5, which may be same or different at each occurrence, are independently selected from hydrogen, halo, OR_{10}, alkyl, haloalkyl, hydroxyalkyl, cycloalkyl, aryl, heteroaryl, heterocyclyl, -$(CR_8R_9)_nC(O)NR_6R_7$, -$C(O)R_6$, and -$(CR_8R_9)_nC(O)OR_6$; or

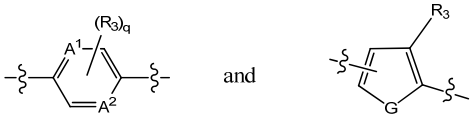
R_4 and R_5, taken together with the carbon atom to which they are attached to, may form a substituted or unsubstituted 3- to 7- membered carbocyclic or heterocyclic ring; or

any one of R_4 and R_5 in X and any one of R_4 and R_5 in Y combined together, when they are attached to carbon atoms, may form a 4- to 7- membered substituted or unsubstituted heterocyclic ring in order to give a bicyclic heterocyclic ring; or

R_6, R_7, R_8 and R_9 are independently selected from hydrogen, substituted or unsubstituted alkyl and substituted or unsubstituted cycloalkyl; and

R_{10} is selected from hydrogen, substituted or unsubstituted alkyl and substituted or unsubstituted cycloalkyl.

7. The compound of claim 1, wherein ring D is



wherein, both A^1 and A^2 are ~~independently selected from~~ C ~~and~~ or N;

G is ~~selected from S and~~ NR_{12}; R_3 is as defined in claim 1;

‘q’ is 0, 1 or 2; and

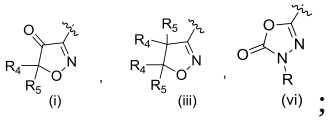
R_{12} is hydrogen or alkyl.

R_{12} is selected from hydrogen, alkyl, cycloalkyl, aryl, heteroaryl and heterocyclyl.

8. The compound of claim 1, wherein ring W is selected from aryl, heteroaryl and cycloalkyl.

9. The compound of claim 1, wherein L is -C(O)NR_{11}- or –NR_{11}C(O)-; where R_{11} is hydrogen or alkyl.

10. The compound of claim 1, wherein ring E is selected from:



;

ring W is aryl or heteroaryl;

R is alkyl; R_3 is hydrogen or alkyl; ‘q’ is 0 or 1;

R_1 is halo or alkyl; ‘p’ is 0, 1 or 2;

R_4 and R_5, which may be same or different at each occurrence, are independently selected from hydrogen, alkyl, haloalkyl, hydroxyalkyl, cycloalkyl, -$(CR_8R_9)_nC(O)NR_6R_7$, and -$(CR_8R_9)_nC(O)OR_6$; ‘n’ is 0 or 1;

R_4 and R_5, taken together with the carbon atom to which they are attached to, may form a substituted or unsubstituted 3- to 7- membered carbocyclic or heterocyclic ring; or

L is -C(O)NR_{11}- or –NR_{11}C(O)-;

R_{11} is selected from hydrogen or alkyl;

R_2 is independently selected from hydrogen, halo, hydroalkyl, alkyl, haloalkyl, alkoxy, haloalkoxy, (C_3-C_{12})cycloalkoxy, -C(O)OR_6, -NR_6R_7, -C(O)R_6, and –NHC(O)R_6; ‘n’ is 0, or 1 or 2; and

R_6, R_7, R_8 and R_9 are independently hydrogen or alkyl; and

ring D ~~and R_2 are as~~ is defined in claim 1;

or a pharmaceutically acceptable salt thereof or stereoisomers thereof.

11. The compound of claim 1, which is selected from:

N-(5-(5-(5,5-Dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-methylphenyl)pyrazine-2-yl)-2,6-difluorobenzamide,

N-(5-(5-(5,5-Dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-methylphenyl)pyrazin-2-yl)-4-methyl-1,2,3-thiadiazole-5-carboxamide,

N-(5’-(5,5-Dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2’-methyl-[1,1’-biphenyl]-4-yl-2,6-difluorobenzamide,

~~*N*-(5-(5-(5,5-Dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-methylphenyl)pyridin-2-yl)-2,6-difluorobenzamide~~,

N-(5-(5-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-ethylphenyl)pyrazin-2-yl)-2,6-difluorobenzamide,

N-(5'-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2'-ethyl-[1,1'-biphenyl]-4-yl)-2,6-difluorobenzamide,

~~*N*-(6-(5-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-ethylphenyl)pyridin-3-yl)-2,6-difluorobenzamide,~~

N-(5-(5-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-isopropylphenyl)pyrazin-2-yl)-2,6-difluorobenzamide,

N-(5'-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2'-isopropyl-[1,1'-biphenyl]-4-yl)-2,6-difluorobenzamide,

N-(2'-(tert-butyl)-5'-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-[1,1'-biphenyl]-4-yl)-2,6-difluorobenzamide,

N-(2'-chloro-5'-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-[1,1'-biphenyl]-4-yl)-2,6-difluorobenzamide,

N-(5-(5-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-fluorophenyl)pyrazin-2-yl)-2,6-difluorobenzamide,

N-(5'-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2'-fluoro-[1,1'-biphenyl]-4-yl)-2,6-difluorobenzamide,

N-(5-(5-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-methoxyphenyl)pyrazin-2-yl)-2,6-difluorobenzamide,

N-(5'-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2'-methoxy-[1,1'-biphenyl]-4-yl)-2,6-difluorobenzamide,

N-(5'-(5,5-Dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2'-methoxy-[1,1'-biphenyl]-4-yl)-4-methyl-1,2,3-thiadiazole-5-carboxamide,

~~*N*-(5-(5-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-methoxyphenyl)pyridin-2-yl)-2,6-difluorobenzamide,~~

~~*N*-(6-(5-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-methoxyphenyl)pyridin-3-yl)-2,6-difluorobenzamide,~~

N-(2'-acetamido-5'-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-[1,1'-biphenyl]-4-yl)-2,6-difluorobenzamide,

N-(5-(3-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)phenyl)pyrazin-2-yl)-2,6-difluorobenzamide,

~~*N*-(6-(3-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)phenyl)pyridin-3-yl)-2,6-difluorobenzamide,~~

N-(3'-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-[1,1'-biphenyl]-4-yl)-2,6-difluorobenzamide,

2,6-difluoro-*N*-(5-(5-(4-methoxy-5,5-dimethyl-4,5-dihydroisoxazol-3-yl)-2-methylphenyl)pyrazin-2-yl)benzamide,

2,6-Difluoro-N-(5'-(4-methoxy-5,5-dimethyl-4,5-dihydroisoxazol-3-yl)-2'-methyl-[1,1'-biphenyl]-4-yl)benzamide,

N-(4'-(5,5-Dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2'-methyl-[1,1'-biphenyl]-4-yl)-2,6-difluorobenzamide,

N-(5-(4-(5,5-Dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-methylphenyl)pyrazin-2-yl)-2,6-difluorobenzamide,

~~*N*-(5-(4-(5,5-Dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-methylphenyl)pyridin-2-yl)-2,6-difluorobenzamide,~~

N-(5-(3-(5,5-Dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-methylphenyl)pyrazin-2-yl)-2,6-difluorobenzamide,

N-(3'-(5,5-Dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2'-methyl-[1,1'-biphenyl]-4-yl)-2,6-difluorobenzamide,

~~*N*-(5-(3-(5,5-Dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-methylphenyl)pyridin-2-yl)-2,6-difluorobenzamide,~~

N-(2'-(Difluoromethoxy)-5'-(4-methyl-5-oxo-4,5-dihydro-1,3,4-oxadiazol-2-yl)-[1,1'-biphenyl]-4-yl)-4-methyl-1,2,3-thiadiazole-5-carboxamide,

N-(2'-Chloro-5'-(4-methyl-5-oxo-4,5-dihydro-1,3,4-oxadiazol-2-yl)-[1,1'-biphenyl]-4-yl)-2,6-difluorobenzamide,

N-(2'-Chloro-5'-(4-methyl-5-oxo-4,5-dihydro-1,3,4-oxadiazol-2-yl)-[1,1'-biphenyl]-4-yl)-4-methyl-1,2,3-thiadiazole-5-carboxamide,

2,6-Difluoro-*N*-(2'-methyl-3'-(4-methyl-5-oxo-4,5-dihydro-1,3,4-oxadiazol-2-yl)-[1,1'-biphenyl]-4-yl)benzamide,

2-Chloro-6-fluoro-N-(2'-methyl-3'-(4-methyl-5-oxo-4,5-dihydro-1,3,4-oxadiazol-2-yl)-[1,1'-biphenyl]-4-yl)benzamide,

4-Methyl-*N*-(2'-methyl-3'-(4-methyl-5-oxo-4,5-dihydro-1,3,4-oxadiazol-2-yl)-[1,1'-biphenyl]-4-yl)-1,2,3-thiadiazole-5-carboxamide,

N-(2'-ethyl-3'-(4-methyl-5-oxo-4,5-dihydro-1,3,4-oxadiazol-2-yl)-[1,1'-biphenyl]-4-yl)-4-methyl-1,2,3-thiadiazole-5-carboxamide,

N-(2'-ethyl-3'-(4-methyl-5-oxo-4,5-dihydro-1,3,4-oxadiazol-2-yl)-[1,1'-biphenyl]-4-yl)-2,6-difluorobenzamide,

N-(5-(5,5-Dimethyl-4,5-dihydroisoxazol-3-yl)-2-methylphenyl)pyrazin-2-yl)-2,6-difluorobenzamide,

Methyl 3-(3-(5-(2,6-difluorobenzamido)pyrazin-2-yl)-4-methylphenyl)-5-methyl-4,5-dihydroisoxazole-5-carboxylate,

Methyl-3-(4’-(2,6-difluorobenzmido)-6-methyl-[1,1’-biphenyl]-3-yl)-5-methyl-4,5-dihydroisoxazole-5-carboxylate,

2,6-Difluoro-*N*-(2'-methyl-5'-(1-oxa-2-azaspiro[4.4]non-2-en-3-yl)-[1,1'-biphenyl]-4-yl)benzamide,

2,6-Difluoro-*N*-(5-(2-methyl-5-(1-oxa-2-azaspiro[4.4]non-2-en-3-yl)phenyl)pyrazin-2-yl)benzamide,

~~2,6-Difluoro-*N*-(2'-methyl-5'-(4-oxo-1-oxa-2-azaspiro[4.5]dec-2-en-3-yl)-[1,1'-biphenyl]-4-yl)benzamide,~~

~~*N*-(2,6-Difluorophenyl)-5-(5-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-methylphenyl)thiophene-2-carboxamide,~~

~~*N*-(2,6-Difluorophenyl)-5-(5-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-ethylphenyl)thiophene-2-carboxamide,~~

~~5-(5-(5,5-Dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-ethylphenyl)-N-(3-methylpyridin-4-yl)thiophene-2-carboxamide,~~

~~*N*-(2,6-Difluorophenyl)-5-(5-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-fluorophenyl)thiophene-2-carboxamide,~~

~~*N*-(2,6-Difluorophenyl)-5-(5-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-methoxyphenyl)thiophene-2-carboxamide,~~

~~*N*-(2,6-Difluorophenyl)-5-(3-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-methylphenyl)thiophene-2-carboxamide,~~

~~*N*-(2,6-Difluorophenyl)-5-(5-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-methylphenyl)-3-methylthiophene-2-carboxamide,~~

~~*N*-(2,6-Difluorophenyl)-5-(3-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)phenyl)-3-methylthiophene-2-carboxamide,~~

~~*N*-(2,6-Difluorophenyl)-4-(5-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-methoxyphenyl)thiophene-2-carboxamide,~~

~~*N*-(2,6-Difluorophenyl)-4-(5-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-methylphenyl)-3-methylthiophene-2-carboxamide,~~

~~*N*-(2,6-Difluorophenyl)-4-(3-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)phenyl)-3-methylthiophene-2-carboxamide,~~

N-(2,6-difluorophenyl)-5-(5-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-methylphenyl)-1-methyl-1H-pyrrole-2-carboxamide,

N-(2,6-difluorophenyl)-5-(5-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-methoxyphenyl)-1-methyl-1H-pyrrole-2-carboxamide~~,~~ and

N-(2,6-difluorophenyl)-5-(5-(5,5-dimethyl-4-oxo-4,5-dihydroisoxazol-3-yl)-2-ethylphenyl)-1-methyl-1H-pyrrole-2-carboxamide,

~~*N*-(2,6-Difluorophenyl)-5-(2-methyl-5-(4-methyl-5-oxo-4,5-dihydro-1,3,4-oxadiazol-2-yl)phenyl)thiophene-2-carboxamide,~~

~~N-(2,6-Difluorophenyl)-5-(2-ethyl-5-(4-methyl-5-oxo-4,5-dihydro-1,3,4-oxadiazol-2-yl)phenyl)thiophene-2-carboxamide,~~

~~*N*-(2,6-Difluorophenyl)-5-(2-fluoro-5-(4-methyl-5-oxo-4,5-dihydro-1,3,4-oxadiazol-2-yl)phenyl)thiophene-2-carboxamide,~~

~~5-(2-(Difluoromethoxy)-5-(4-methyl-5-oxo-4,5-dihydro-1,3,4-oxadiazol-2-yl)phenyl)-N-(2,6-difluorophenyl)thiophene-2-carboxamide,~~

~~*N*-(2,6-Difluorophenyl)-5-(2-methoxy-5-(4-methyl-5-oxo-4,5-dihydro-1,3,4-oxadiazol-2-yl)phenyl)-3-methylthiophene-2-carboxamide,~~

~~5-(2-Chloro-5-(4-methyl-5-oxo-4,5-dihydro-1,3,4-oxadiazol-2-yl)phenyl)-*N*-(2,6-difluorophenyl)thiophene-2-carboxamide,~~

~~*N*-(2,6-Difluorophenyl)-5-(2-methyl-3-(4-methyl-5-oxo-4,5-dihydro-1,3,4-oxadiazol-2-yl)phenyl)thiophene-2-carboxamide and~~

~~*N*-(2,6-difluorophenyl)-5-(2-ethyl-3-(4-methyl-5-oxo-4,5-dihydro-1,3,4-oxadiazol-2-yl)phenyl)thiophene-2-carboxamide~~

or pharmaceutically acceptable salt thereof.

12. A pharmaceutical composition comprising one or more compounds of Formula (I) according to claim 1, and one or more pharmaceutically acceptable excipients.

13. A method of treating, preventing, managing and/or lessening diseases or disorders, syndromes or conditions associated with the modulation of calcium release-activated calcium (CRAC) channel in a subject in need thereof wherein the method comprises administering to the subject a therapeutically effective amount of a compound of claim 1 or a pharmaceutically acceptable salt thereof.

14. A coumpound of any one of claims 1 to 11 or a pharmaceutically acceptable salt thereof for use in the treatment, prevention or management of diseases or disorders, syndromes or conditions associated with the modulation of calcium release-activated calcium (CRAC) channel.

15. Use of a compound of any one of claims 1 to 11 or a pharmaceutically acceptable salt thereof for preparation of a medicament for the treatment, prevention or management of diseases or disorders, syndromes or conditions associated with the modulation of calcium release activated calcium (CRAC) Channel

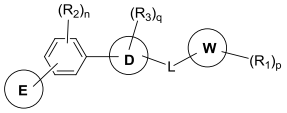
~~14~~ 16. The method of claim 13, wherein the diseases, disorders, syndromes or conditions associated with the modulation of calcium release-activated calcium (CRAC) channel are selected from the group consisting of inflammatory diseases, autoimmune diseases, allergic disorders, organ transplant, cancer and cardiovascular disorders.

~~15~~ 17. The method of claim 13, wherein the disease is rheumatoid arthritis, multiple sclerosis and psoriasis.

~~16~~ 18. The method of claim 13, wherein the disease is allergic disorders selected from asthma, chronic obstructive pulmonary disorder (COPD) or respiratory disorders.

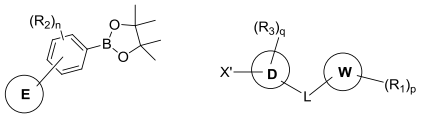
~~17~~ 19. The method of claim 14, wherein inflammatory diseases are selected from rheumatoid arthritis, osteoarthritis, ankylosing spondylitis, psoriatic arthritis, chronic obstructive pulmonary disease (COPD), inflammatory bowel diseases, pancreatitis, peripheral neuropathy, multiple sclerosis (MS) and inflammation associated with cancer.

~~18~~ 20. A process for the preparation of a compound of Formula (I):



(I)

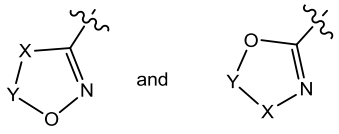
comprising reacting a compound of Formula (1) with a compound of Formula (2)



(1) (2)

wherein X' is halo;

ring E is a 5-membered non aromatic heterocyclic ring selected from

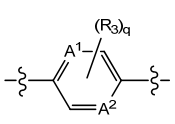
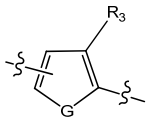


(a) (b)

X, at each occurrence, is independently selected from -C(O)-, -CR_4R_5- and –NR-;

Y, at each occurrence, is independently selected from C(O) and -CR_4R_5-;

ring D is selected from

 and 

wherein, both A^1 and A^2 are ~~independently selected from~~ C ~~and~~ or N;

G is selected from S, NR_{12} and O; L is $-C(O)NR_{11}-$ or $-NR_{11}C(O)-$;

R_{11}, at each occurrence, is independently selected from hydrogen, alkyl and aryl;

R_{12} is selected from hydrogen, alkyl, cycloalkyl, aryl, heteroaryl, and heterocyclyl;

R_{10} is selected from hydrogen, alkyl, cycloalkyl, aryl, heteroaryl, and heterocyclyl;

R_6 and R_7, which may be same or different at each occurrence, are independently selected from hydrogen, alkyl, cycloalkyl, aryl, heteroaryl, and heterocyclyl; or R_6 and R_7, taken together with the nitrogen atom to which they are attached to, may form a substituted or unsubstituted 3- to 14- membered heterocyclic ring;

R_8 and R_9, which may be same or different at each occurrence, are independently selected from hydrogen, halo, alkyl and alkoxy; or R_8 and R_9, taken together with the carbon atom they are attached to, may form a 3- to 6- membered cyclic ring wherein the cyclic ring may be carbocyclic or heterocyclic;

n is an integer ranging from 0 to 2, both inclusive;

p is an integer ranging from 0 to 5, both inclusive; and

q is an integer ranging from 1 to 4, both inclusive;

in presence of a catalyst selected from $Pd(PPh_3)_2Cl_2$, Pd_2dba_3, $Pd(PPh_3)_4$ or $Pd(OAc)_2$ or a mixture thereof; a ligand selected from BINAP, xanthophos or triphenylphosphine or a mixture thereof and a base.