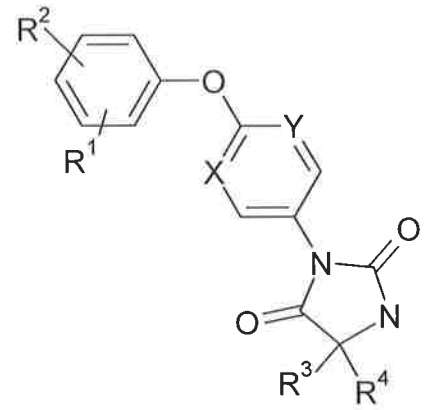
Claims

1) A compound of formula (Ia)



(Ia)

wherein:
R^1 is halo, C_{1-4} alkyl, C_{1-4} alkoxy, halo-C_{1-4}alkyl, halo-C_{1-4}alkoxy, or cyano;
R^2 is H, halo, cyano, C_{1-4} alkyl or C_{1-4} alkoxy; with the proviso that when R_2 is H, R_1 is not in the para position;
X is C or N;
Y is C or N;
R^3 is C_{1-4} alkyl;
R^4 is H, deuterium, or C_{1-4}alkyl; or R_3 and R_4 can be fused to form a C_{3-4} spiro carbocyclyl group;
or a pharmaceutically acceptable salt thereof.

2) A compound according to claim 1 wherein R^1 is halo, C_{1-4} alkyl, C_{1-4} alkoxy, halo-C_{1-4}alkoxy or cyano and R^2 is H, halo, C_{1-4} alkyl or C_{1-4} alkoxy; with the proviso that when R2 is H, R1 is not in the para position; or a pharmaceutically acceptable salt thereof.

3) A compound according to claim 1 or 2 wherein R^1 is halo, C_{1-4} alkyl or C_{1-4} alkoxy; or a pharmaceutically acceptable salt thereof.

4) A compound according to claim 1 wherein R^1 is C_{1-4}alkyl, C_{1-4} alkoxy, or halo-C_{1-4} alkoxy; R^2 is H, cyano or alkyl; X is N, Y is N or C, R_3 is C_{1-4} alkyl, and R^4 is C_{1-4} alkyl or H; or a pharmacuetically acceptable salt thereof.

5) A compound according to claim 1 or claim 4 wherein R^1 is propyl, butyl, methoxy, propoxy, or trifluoromethoxy; R^2 is H, cyano or methyl; X is N, Y is N or C, R^3 is ethyl, and R^4 is methyl or H; or a pharmaceutically acceptable salt thereof.

6) A compound according to claim 1, wherein R^1 is C_{1-4} alkyl, C_{1-4} alkoxy, halo-C_{1-4}alkyl or halo-C_{1-4}alkoxy.

7) A compound according to claim 1, wherein R^2 is C_{1-4} alkyl or C_{1-4} alkoxy.

8) A compound according to claim 1, wherein R^3 is methyl.

9) A compound according to claim 1, wherein R^4 is H or C_{1-4}alkyl.

10) A compound selected from the group consisting of:
(5*R*)-5-methyl-3-{4-[(3-methylphenyl)oxy]phenyl}-2,4-imidazolidinedione;
(5R)-5-methyl-3-(4-{[3-(methyloxy)phenyl]oxy}phenyl)-2,4-imidazolidinedione;
(5*R*)-3-(4-{[3-(ethyloxy)phenyl]oxy}phenyl)-5-methyl-2,4-imidazolidinedione;
(5*R*)-3-{4-[(3-chloro-5-fluorophenyl)oxy]phenyl}-5-methyl-2,4-imidazolidinedione;
(5*R*)-3-{4-[(3-chloro-4-fluorophenyl)oxy]phenyl}-5-methyl-2,4-imidazolidinedione;
(5*S*)-3-{4-[(3-chloro-4-fluorophenyl)oxy]phenyl}-5-methyl-2,4-imidazolidinedione;
(5*R*)-5-methyl-3-(4-{[2-methyl-5-(methyloxy)phenyl]oxy}phenyl)-2,4-imidazolidinedione;
(5*R*)-5-methyl-3-(4-{[4-methyl-3-(methyloxy)phenyl]oxy}phenyl)-2,4-imidazolidinedione;
(5*R*)-5-methyl-3-(6-{[3-(1-methylethyl)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
(5*R*)-5-methyl-3-[6-({3-[(1-methylethyl)oxy]phenyl}oxy)-3-pyridinyl]-2,4-imidazolidinedione;
(5*R*)-3-{6-[(2,5-dimethylphenyl)oxy]-3-pyridinyl}-5-methyl-2,4-imidazolidinedione;
(5*R*)-3-{6-[(2,3-dimethylphenyl)oxy]-3-pyridinyl}-5-methyl-2,4-imidazolidinedione;
(5*R*)-3-{6-[(2,6-dimethylphenyl)oxy]-3-pyridinyl}-5-methyl-2,4-imidazolidinedione;
(5*R*)-3-{6-[(2-ethylphenyl)oxy]-3-pyridinyl}-5-methyl-2,4-imidazolidinedione;
(5*R*)-5-methyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
(5*R*)-5-methyl-3-(6-{[2-methyl-5-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
(5*R*)-5-methyl-3-(6-{[2-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
(5*R*)-5-ethyl-3-(4-{[3-(methyloxy)phenyl]oxy}phenyl)-2,4-imidazolidinedione;
(5*R*)-5-ethyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
(5*S*)-5-ethyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
(5*R*)-5-ethyl-3-(6-{[3-(1-methylethyl)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
5,5-dimethyl-3-(4-{[3-(methyloxy)phenyl]oxy}phenyl)-2,4-imidazolidinedione;
3-{4-[(2,3-dimethylphenyl)oxy]phenyl}-5,5-dimethyl-2,4-imidazolidinedione;
3-{6-[(2-ethylphenyl)oxy]-3-pyridinyl}-5,5-dimethyl-2,4-imidazolidinedione;
3-{6-[(2,6-dimethylphenyl)oxy]-3-pyridinyl}-5,5-dimethyl-2,4-imidazolidinedione;
(5*R*)-5-(1-methylethyl)-3-(4-{[4-methyl-3-(methyloxy)phenyl]oxy}phenyl)-2,4-imidazolidinedione;
(5*R*)-5-methyl-3-(2-{[3-(1-methylethyl)phenyl]oxy}-5-pyrimidinyl)-2,4-imidazolidinedione;
(5*R*)-5-ethyl-3-(2-{[3-(ethyloxy)-4-methylphenyl]oxy}-5-pyrimidinyl)-2,4-imidazolidinedione;

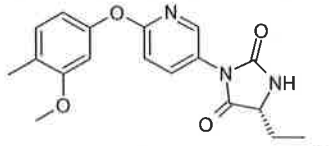
(5*R*)-5-(1,1-dimethylethyl)-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
(5*R*)-5-ethyl-5-methyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
7-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-5,7-diazaspiro[3.4]octane-6,8-dione;
6-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-4,6-diazaspiro[2.4]heptane-5,7-dione;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-2-(1-methylethyl)benzonitrile;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-2-[(trifluoromethyl)oxy]benzonitrile;
3-{6-[(4-fluoro-3-methylphenyl)oxy]-3-pyridinyl}-5,5-dimethyl-2,4-imidazolidinedione;
3-{6-[(4-fluoro-2-methylphenyl)oxy]-3-pyridinyl}-5,5-dimethyl-2,4-imidazolidinedione;
5,5-dimethyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
(5R)-5-(1-methylethyl)-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
3-(6-{[2-(1,1-dimethylethyl)phenyl]oxy}-3-pyridinyl)-5,5-dimethyl-2,4-imidazolidinedione;
3-(2-{[2-(1,1-dimethylethyl)phenyl]oxy}-5-pyrimidinyl)-5,5-dimethyl-2,4-imidazolidinedione;
(5R)-5-ethyl-5-methyl-3-(2-{[4-methyl-3-(methyloxy)phenyl]oxy}-5-pyrimidinyl)-2,4-imidazolidinedione;
(5R)-5-ethyl-3-(2-{[3-(ethyloxy)-4-methylphenyl]oxy}-5-pyrimidinyl)-5-methyl-2,4-imidazolidinedione;
5,5-dimethyl-3-[6-({3-[(trifluoromethyl)oxy]phenyl}oxy)-3-pyridinyl]-2,4-imidazolidinedione;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-3-ethylbenzonitrile;
2-chloro-4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}benzonitrile;
5,5-dimethyl-3-[6-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-3-pyridinyl]-2,4-imidazolidinedione;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-2-(methyloxy)benzonitrile;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-3-methylbenzonitrile;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-3-(trifluoromethyl)benzonitrile;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-2-ethylbenzonitrile;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyrimidinyl]oxy}-2-ethylbenzonitrile;
3-cyclopropyl-4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}benzonitrile;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-3-(1,1-dimethylethyl)benzonitrile;
2-[(cyclopropylmethyl)oxy]-4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}benzonitrile;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-2-(ethyloxy)benzonitrile;
2-cyclopropyl-4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}benzonitrile;
5,5-dimethyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione;

4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyrimidinyl]oxy}-3-(1,1-dimethylethyl)benzonitrile;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-2-[(1-methylethyl)oxy]benzonitrile;
4-({5-[(4R)-4-ethyl-4-methyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-[(1-methylethyl)oxy]benzonitrile;
3-cyclopropyl-4-({5-[(4R)-4-ethyl-4-methyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)benzonitrile;
4-({5-[(4R)-4-ethyl-4-methyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-[(trifluoromethyl)oxy]benzonitrile;
2-cyclopropyl-4-({5-[(4R)-4-ethyl-4-methyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)benzonitrile;
(5R)-5-ethyl-5-methyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione;
3-(1,1-dimethylethyl)-4-({5-[(4R)-4-ethyl-4-methyl-2,5-dioxo-1-imidazolidinyl]-2-pyrimidinyl}oxy)benzonitrile;
3-(1,1-dimethylethyl)-4-({5-[(4R)-4-ethyl-4-methyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)benzonitrile;
4-{[4-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)phenyl]oxy}-2-(methyloxy)benzonitrile;
4-{[4-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)phenyl]oxy}-2-(ethyloxy)benzonitrile;
4-({4-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]phenyl}oxy)-2-(ethyloxy)benzonitrile;
3-cyclopropyl-4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)benzonitrile;
3-(1,1-dimethylethyl)-4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)benzonitrile;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-(methyloxy)benzonitrile;
4-({4-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]phenyl}oxy)-2-(methyloxy)benzonitrile;
2-[(cyclopropylmethyl)oxy]-4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)benzonitrile;
(5R)-5-ethyl-3-[6-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-3-pyridinyl]-2,4-imidazolidinedione;
2-cyclopropyl-4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)benzonitrile;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-(1-methylethyl)benzonitrile;
(5R)-5-ethyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-[(1-methylethyl)oxy]benzonitrile;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-3-methylbenzonitrile;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-[(trifluoromethyl)oxy]benzonitrile;
3-ethyl-4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyrimidinyl}oxy)benzonitrile;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyrimidinyl}oxy)-3-methylbenzonitrile;

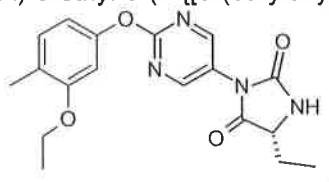
3-(1,1-dimethylethyl)-4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyrimidinyl}oxy)benzonitrileand
4-({5-[(4R)-4-ethyl-4-methyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-(1-methylethyl)benzonitrile;
Or a pharmaceutically acceptable salt thereof.

11) A compound accoding to claim 10, wherein the compound is selected from the group consisting of:
(5R)-5-ethyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
(5R)-5-ethyl-5-methyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
4-({5-[(4R)-4-ethyl-4-methyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-[(trifluoromethyl)oxy]benzonitrile;
(5R)-5-ethyl-5-methyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione;
3-(1,1-dimethylethyl)-4-({5-[(4R)-4-ethyl-4-methyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)benzonitrile;
(5R)-5-ethyl-3-[6-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-3-pyridinyl]-2,4-imidazolidinedione;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-(1-methylethyl)benzonitrile;
(5R)-5-ethyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-[(1-methylethyl)oxy]benzonitrile;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-[(trifluoromethyl)oxy]benzonitrile;
3-(1,1-dimethylethyl)-4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyrimidinyl}oxy)benzonitrile;
or a pharmaceutically acceptable salt thereof.

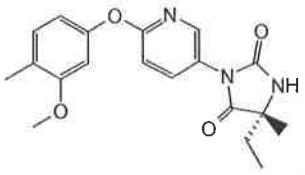
12) A compound according to claim 1, selected from the group consisting of
(5*R*)-5-ethyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione



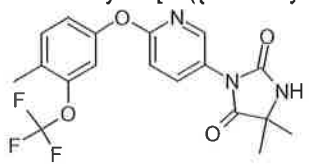
(5*R*)-5-ethyl-3-(2-{[3-(ethyloxy)-4-methylphenyl]oxy}-5-pyrimidinyl)-2,4-imidazolidinedione



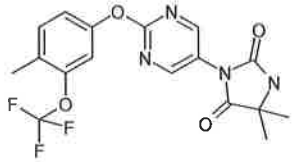
(5*R*)-5-ethyl-5-methyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione



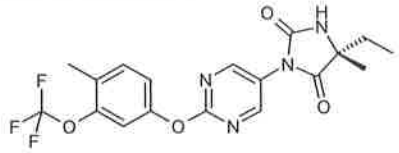
5,5-dimethyl-3-[6-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-3-pyridinyl]-2,4-imidazolidinedione



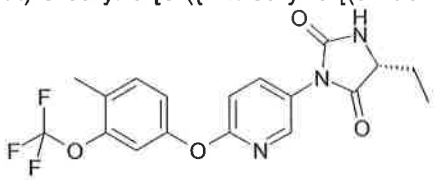
5,5-dimethyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione



(5R)-5-ethyl-5-methyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione

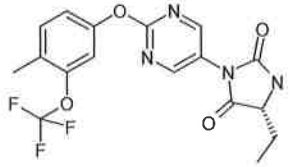


(5R)-5-ethyl-3-[6-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-3-pyridinyl]-2,4-imidazolidinedione



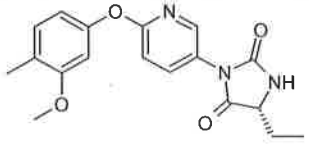
and

(5R)-5-ethyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione



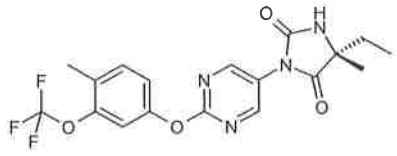
13) A compound according to claim 12, wherein the compound is:

(5*R*)-5-ethyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione

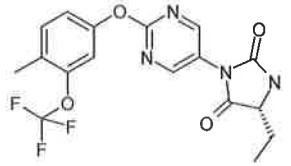


14) A compound according to claim 12, wherein the compound is:

(5R)-5-ethyl-5-methyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione



15) A compound according to claim 12, wherein the compound is:
(5R)-5-ethyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione



16) A compound according to any proceeding claim, or a pharmaceutically acceptable salt thereof, for use in therapy.

17) A compound according to any one of claims 1 to 15 or a pharmaceutically acceptable salt thereof for use for the treatment or prophylaxis of a disease or disorder where a modulator of Kv3.1 and/or Kv3.2 channels is required.

18) A compound according to any one of claims 1 to 15 or a pharmaceutically acceptable salt thereof for use for the treatment or prophylaxis of a disease or disorder selected from the group consisting of depression and mood disorders, hearing disorders, schizophrenia, substance abuse disorders, sleep disorders and epilepsy.

19) The use of a compound according to any one of claims 1 to 15, or a pharmaceutically acceptable salt thereof, in the manufacture of a medicament for the treatment or prophylaxis of a disease or disorder where a modulator of Kv3 is required.

20) The use of a compound according to any one of claims 1 to 15, in the manufacture of a medicament for the treatment or prophylaxis of a disease or disorder selected from the group consisting of depression and mood disorders, hearing disorders, schizophrenia, substance abuse disorders, sleep disorders and epilepsy.

21) A compound according to claim 18, wherein the disease or disorder is schizophrenia.

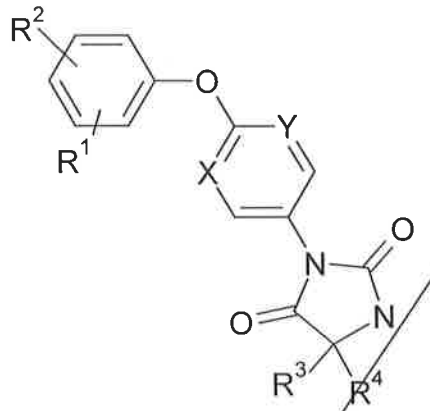
22) A compound according to claim 18, wherein the disease or disorder is a hearing disorder.

23) The use according to claim 20, wherein the disease or disorder is schizophrenia.

24) The use according to claim 20, wherein the disease or disorder is a hearing disorder.

Claims

1) A compound of formula (Ia)



(Ia)

wherein:
R^1 is halo, C_{1-4} alkyl, C_{1-4} alkoxy, halo-C_{1-4}alkyl, halo-C_{1-4}alkoxy, or cyano;
R^2 is H, halo, cyano, C_{1-4} alkyl or C_{1-4} alkoxy, with the proviso that when R_2 is H, R_1 is not in the para position;
X is C or N;
Y is C or N;
R^3 is C_{1-4} alkyl;
R^4 is H, deuterium, or C_{1-4}alkyl; or R_3 and R_4 can be fused to form a C_{3-4} spiro carbocyclyl group;
or a pharmaceutically acceptable salt thereof.

2) A compound according to claim 1 wherein R^1 is halo, C_{1-4} alkyl, C_{1-4} alkoxy, halo-C_{1-4}alkoxy or cyano and R^2 is H, halo, C_{1-4} alkyl or C_{1-4} alkoxy; with the proviso that when R2 is H, R1 is not in the para position; or a pharmaceutically acceptable salt thereof.

3) A compound according to claim 1 or 2 wherein R^1 is halo, C_{1-4} alkyl or C_{1-4} alkoxy; or a pharmaceutically acceptable salt thereof.

4) A compound according to claim 1 wherein R^1 is C_{1-4}alkyl, C_{1-4} alkoxy, or halo-C_{1-4} alkoxy; R^2 is H, cyano or alkyl; X is N, Y is N or C, R_3 is C_{1-4} alkyl, and R^4 is C_{1-4} alkyl or H; or a pharmacuetically acceptable salt thereof.

5) A compound according to claim 1 or claim 4 wherein R^1 is propyl, butyl, methoxy, propoxy, or trifluoromethoxy; R^2 is H, cyano or methyl; X is N, Y is N or C, R^3 is ethyl, and R^4 is methyl or H; or a pharmaceutically acceptable salt thereof.

6) A compound selected from the group consisting of:
(5*R*)-5-methyl-3-{4-[(3-methylphenyl)oxy]phenyl}-2,4-imidazolidinedione;
(5R)-5-methyl-3-(4-{[3-(methyloxy)phenyl]oxy}phenyl)-2,4-imidazolidinedione;
(5*R*)-3-(4-{[3-(ethyloxy)phenyl]oxy}phenyl)-5-methyl-2,4-imidazolidinedione;
(5*R*)-3-{4-[(3-chloro-5-fluorophenyl)oxy]phenyl}-5-methyl-2,4-imidazolidinedione;
(5*R*)-3-{4-[(3-chloro-4-fluorophenyl)oxy]phenyl}-5-methyl-2,4-imidazolidinedione;
(5*S*)-3-{4-[(3-chloro-4-fluorophenyl)oxy]phenyl}-5-methyl-2,4-imidazolidinedione;
(5*R*)-5-methyl-3-(4-{[2-methyl-5-(methyloxy)phenyl]oxy}phenyl)-2,4-imidazolidinedione;
(5*R*)-5-methyl-3-(4-{[4-methyl-3-(methyloxy)phenyl]oxy}phenyl)-2,4-imidazolidinedione;
(5*R*)-5-methyl-3-(6-{[3-(1-methylethyl)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
(5*R*)-5-methyl-3-[6-({3-[(1-methylethyl)oxy]phenyl}oxy)-3-pyridinyl]-2,4-imidazolidinedione;
(5*R*)-3-{6-[(2,5-dimethylphenyl)oxy]-3-pyridinyl}-5-methyl-2,4-imidazolidinedione;
(5*R*)-3-{6-[(2,3-dimethylphenyl)oxy]-3-pyridinyl}-5-methyl-2,4-imidazolidinedione;
(5*R*)-3-{6-[(2,6-dimethylphenyl)oxy]-3-pyridinyl}-5-methyl-2,4-imidazolidinedione;
(5*R*)-3-{6-[(2-ethylphenyl)oxy]-3-pyridinyl}-5-methyl-2,4-imidazolidinedione;
(5*R*)-5-methyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
(5*R*)-5-methyl-3-(6-{[2-methyl-5-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
(5*R*)-5-methyl-3-(6-{[2-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
(5*R*)-5-ethyl-3-(4-{[3-(methyloxy)phenyl]oxy}phenyl)-2,4-imidazolidinedione;
(5*R*)-5-ethyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
(5*S*)-5-ethyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
(5*R*)-5-ethyl-3-(6-{[3-(1-methylethyl)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
5,5-dimethyl-3-(4-{[3-(methyloxy)phenyl]oxy}phenyl)-2,4-imidazolidinedione;
3-{4-[(2,3-dimethylphenyl)oxy]phenyl}-5,5-dimethyl-2,4-imidazolidinedione;
3-{6-[(2-ethylphenyl)oxy]-3-pyridinyl}-5,5-dimethyl-2,4-imidazolidinedione;
3-{6-[(2,6-dimethylphenyl)oxy]-3-pyridinyl}-5,5-dimethyl-2,4-imidazolidinedione;
(5*R*)-5-(1-methylethyl)-3-(4-{[4-methyl-3-(methyloxy)phenyl]oxy}phenyl)-2,4-imidazolidinedione;
(5*R*)-5-methyl-3-(2-{[3-(1-methylethyl)phenyl]oxy}-5-pyrimidinyl)-2,4-imidazolidinedione;
(5*R*)-5-ethyl-3-(2-{[3-(ethyloxy)-4-methylphenyl]oxy}-5-pyrimidinyl)-2,4-imidazolidinedione;
(5*R*)-5-(1,1-dimethylethyl)-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
(5*R*)-5-ethyl-5-methyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
7-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-5,7-diazaspiro[3.4]octane-6,8-dione;
6-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-4,6-diazaspiro[2.4]heptane-5,7-dione;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-2-(1-methylethyl)benzonitrile;

4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-2-[(trifluoromethyl)oxy]benzonitrile;
3-{6-[(4-fluoro-3-methylphenyl)oxy]-3-pyridinyl}-5,5-dimethyl-2,4-imidazolidinedione;
3-{6-[(4-fluoro-2-methylphenyl)oxy]-3-pyridinyl}-5,5-dimethyl-2,4-imidazolidinedione;
5,5-dimethyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
(5R)-5-(1-methylethyl)-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
3-(6-{[2-(1,1-dimethylethyl)phenyl]oxy}-3-pyridinyl)-5,5-dimethyl-2,4-imidazolidinedione;
3-(2-{[2-(1,1-dimethylethyl)phenyl]oxy}-5-pyrimidinyl)-5,5-dimethyl-2,4-imidazolidinedione;
(5R)-5-ethyl-5-methyl-3-(2-{[4-methyl-3-(methyloxy)phenyl]oxy}-5-pyrimidinyl)-2,4-imidazolidinedione;
(5R)-5-ethyl-3-(2-{[3-(ethyloxy)-4-methylphenyl]oxy}-5-pyrimidinyl)-5-methyl-2,4-imidazolidinedione;
5,5-dimethyl-3-[6-({3-[(trifluoromethyl)oxy]phenyl}oxy)-3-pyridinyl]-2,4-imidazolidinedione;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-3-ethylbenzonitrile;
2-chloro-4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}benzonitrile;
5,5-dimethyl-3-[6-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-3-pyridinyl]-2,4-imidazolidinedione;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-2-(methyloxy)benzonitrile;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-3-methylbenzonitrile;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-3-(trifluoromethyl)benzonitrile;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-2-ethylbenzonitrile;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyrimidinyl]oxy}-2-ethylbenzonitrile;
3-cyclopropyl-4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}benzonitrile;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-3-(1,1-dimethylethyl)benzonitrile;
2-[(cyclopropylmethyl)oxy]-4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}benzonitrile;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-2-(ethyloxy)benzonitrile;
2-cyclopropyl-4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}benzonitrile;
5,5-dimethyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyrimidinyl]oxy}-3-(1,1-dimethylethyl)benzonitrile;
4-{[5-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-pyridinyl]oxy}-2-[(1-methylethyl)oxy]benzonitrile;
4-({5-[(4R)-4-ethyl-4-methyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-[(1-methylethyl)oxy]benzonitrile;
3-cyclopropyl-4-({5-[(4R)-4-ethyl-4-methyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)benzonitrile;
4-({5-[(4R)-4-ethyl-4-methyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-[(trifluoromethyl)oxy]benzonitrile;

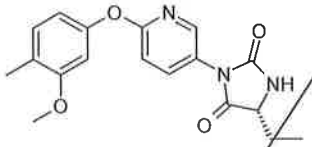
2-cyclopropyl-4-({5-[(4R)-4-ethyl-4-methyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)benzonitrile;
(5R)-5-ethyl-5-methyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione;
3-(1,1-dimethylethyl)-4-({5-[(4R)-4-ethyl-4-methyl-2,5-dioxo-1-imidazolidinyl]-2-pyrimidinyl}oxy)benzonitrile;
3-(1,1-dimethylethyl)-4-({5-[(4R)-4-ethyl-4-methyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)benzonitrile;
4-{[4-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)phenyl]oxy}-2-(methyloxy)benzonitrile;
4-{[4-(4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)phenyl]oxy}-2-(ethyloxy)benzonitrile;
4-({4-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]phenyl}oxy)-2-(ethyloxy)benzonitrile;
3-cyclopropyl-4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)benzonitrile;
3-(1,1-dimethylethyl)-4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)benzonitrile;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-(methyloxy)benzonitrile;
4-({4-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]phenyl}oxy)-2-(methyloxy)benzonitrile;
2-[(cyclopropylmethyl)oxy]-4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)benzonitrile;
(5R)-5-ethyl-3-[6-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-3-pyridinyl]-2,4-imidazolidinedione;
2-cyclopropyl-4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)benzonitrile;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-(1-methylethyl)benzonitrile;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-(1-methylethyl)benzonitrile;
(5R)-5-ethyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-[(1-methylethyl)oxy]benzonitrile;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-3-methylbenzonitrile;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-[(trifluoromethyl)oxy]benzonitrile;
3-ethyl-4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyrimidinyl}oxy)benzonitrile;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyrimidinyl}oxy)-3-methylbenzonitrile;
3-(1,1-dimethylethyl)-4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyrimidinyl}oxy)benzonitrileand
4-({5-[(4R)-4-ethyl-4-methyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-(1-methylethyl)benzonitrile;
Or a pharmaceutically acceptable salt thereof.

7) A compound accoding to claim 6, wherein the compound is selected from the group consisting of:
(5R)-5-ethyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl;

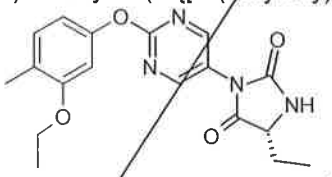
(5R)-5-ethyl-5-methyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione;
4-({5-[(4R)-4-ethyl-4-methyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-[(trifluoromethyl)oxy]benzonitrile;
(5R)-5-ethyl-5-methyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione;
3-(1,1-dimethylethyl)-4-({5-[(4R)-4-ethyl-4-methyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)benzonitrile;
(5R)-5-ethyl-3-[6-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-3-pyridinyl]-2,4-imidazolidinedione;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-(1-methylethyl)benzonitrile;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-(1-methylethyl)benzonitrile;
(5R)-5-ethyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-[(1-methylethyl)oxy]benzonitrile;
4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyridinyl}oxy)-2-[(trifluoromethyl)oxy]benzonitrile;
3-(1,1-dimethylethyl)-4-({5-[(4R)-4-ethyl-2,5-dioxo-1-imidazolidinyl]-2-pyrimidinyl}oxy)benzonitrile;
or a pharmaceutically acceptable salt thereof.

8) A compound according to claim 1, selected from the group consisting of

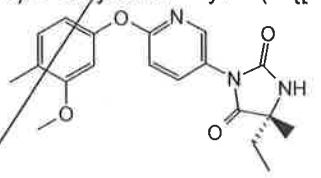
(5*R*)-5-ethyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione



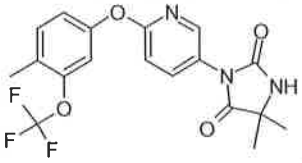
(5*R*)-5-ethyl-3-(2-{[3-(ethyloxy)-4-methylphenyl]oxy}-5-pyrimidinyl)-2,4-imidazolidinedione



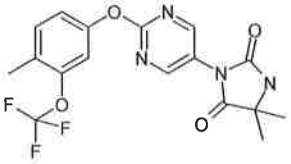
(5*R*)-5-ethyl-5-methyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione



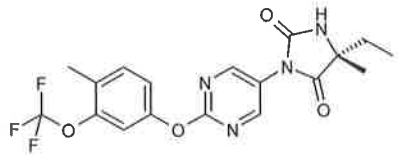
5,5-dimethyl-3-[6-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-3-pyridinyl]-2,4-imidazolidinedione



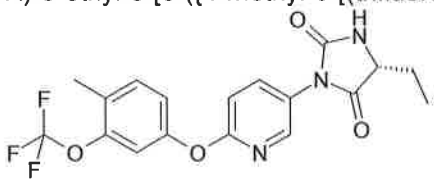
5,5-dimethyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione



(5R)-5-ethyl-5-methyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione

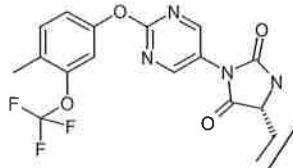


(5R)-5-ethyl-3-[6-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-3-pyridinyl]-2,4-imidazolidinedione

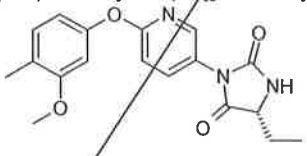


and

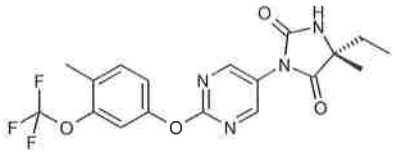
(5R)-5-ethyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione



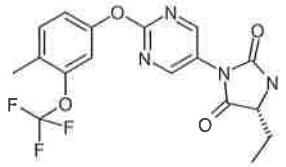
9) A compound according to claim 8, wherein the compound is:
(5*R*)-5-ethyl-3-(6-{[4-methyl-3-(methyloxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione



10) A compound according to claim 8, wherein the compound is:
(5*R*)-5-ethyl-5-methyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione



11) A compound according to claim 8, wherein the compound is:
(5R)-5-ethyl-3-[2-({4-methyl-3-[(trifluoromethyl)oxy]phenyl}oxy)-5-pyrimidinyl]-2,4-imidazolidinedione



12) A compound according to any proceeding claim, or a pharmaceutically acceptable salt thereof, for use in therapy.

13) A compound according to any one of claims 1 to 11 or a pharmaceutically acceptable salt thereof for use for the treatment or prophylaxis of a disease or disorder where a modulator of Kv3.1 and/or Kv3.2 channels is required.

14) A compound according to any one of claims 1 to 11 or a pharmaceutically acceptable salt thereof for use for the treatment or prophylaxis of a disease or disorder selected from the group consisting of depression and mood disorders, hearing disorders, schizophrenia, substance abuse disorders, sleep disorders and epilepsy.

15) The use of a compound according to any one of claims 1 to 11, or a pharmaceutically acceptable salt thereof, in the manufacture of a medicament for the treatment or prophylaxis of a disease or disorder where a modulator of Kv3 is required.

16) The use of a compound according to any one of claims 1 to 11, in the manufacture of a medicament for the treatment or prophylaxis of a disease or disorder selected from the group consisting of depression and mood

disorders, hearing disorders, schizophrenia, substance abuse disorders, sleep disorders and epilepsy.

