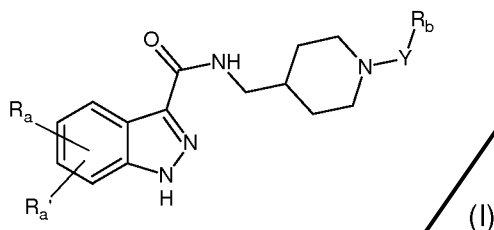


CLAIMS

1. Use of 1H-indazole-3-carboxamide compounds having the following general formula (I)



5 wherein

R_a and $R_{a'}$, equal or different each other, is a hydrogen atom; a halogen atom; a C_1 - C_6 alkyl, C_2 - C_6 alkenyl, C_2 - C_6 alkynyl and C_1 - C_6 alkoxy group, optionally substituted by one or more substituents selected from the group consisting of halogen, hydroxy, $-NH_2$, and C_1 - C_3 alkoxy; a carbocyclic or heterocyclic ring, aliphatic or aromatic, having from 3 to 12 members, optionally substituted by one or more substituents selected from the group consisting of halogen, hydroxy, C_1 - C_6 alkyl, C_1 - C_6 alkoxy, $-NR_1R_2$, $-C(O)OH$, $-C(O)OR_1$ and $-C(O)NR_1R_2$;

15 Y is a bond, a C_1 - C_6 alkyl, C_2 - C_6 alkenyl or C_2 - C_6 alkynyl group, optionally substituted by one or more substituents selected from the group consisting of halogen, hydroxy, $-NH_2$, and C_1 - C_3 alkoxy;

20 R_b is a carbocyclic or heterocyclic ring, aliphatic or aromatic, having from 3 to 12 members, substituted by one or more substituents selected from the group consisting of halogen, hydroxy, nitro, cyano, $-CF_3$, C_1 - C_6 alkoxy, benzyloxy, C_1 - C_4 alkyl, C_2 - C_4 alkenyl, and C_2 - C_4 alkynyl, $-NHSO_2CH_3$, $-SO_2NH_2$, $-Z-C(O)OH$, $-Z-C(O)OR_1$ and $-Z-C(O)NR_1R_2$, wherein Z is a σ -bond or (C_1-C_3) alkyl;

25 R_1 and R_2 are independently a hydrogen atom, a C_1 - C_4 alkyl group, a C_2 - C_4 alkenyl group, a C_2 - C_4 alkynyl group, and a phenyl group; and its salts of addition with pharmaceutically acceptable organic and inorganic acids and bases;

5 for the treatment of a disease arising from the uncontrolled activation and/or overexpression of GSK-3 β , selected from the group consisting of (i) insulin-resistance disorders; (ii) neurodegenerative diseases; (iii) mood disorders; (iv) schizophrenic disorders; (v) cancerous disorders; (vi) inflammation, (vii) substance abuse disorders; and (viii) epilepsies.

10 2. The use of a 1H-indazole-3-carboxamide according to claim 1, wherein said insulin-resistance disorders are selected from the group consisting of type-2 diabetes, syndrome X, obesity and polycystic ovary syndrome.

15 3. The use of a 1H-indazole-3-carboxamide according to claim 1, wherein said neurodegenerative diseases are selected from the group consisting of Parkinson's disease, Alzheimer's disease, Huntington's disease, and spinal neurodegenerative disorders.

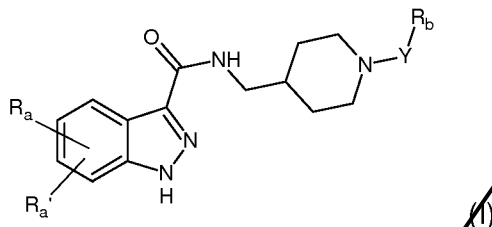
20 4. The use of a 1H-indazole-3-carboxamide according to claim 3, wherein said spinal neurodegenerative disorders are selected from the group consisting of amyotrophic lateral sclerosis, multiple sclerosis, spinal muscular atrophy and neurodegeneration due to spinal cord injury.

25 5. The use of a 1H-indazole-3-carboxamide according to claim 1, wherein said mood disorders are selected from the group consisting of bipolar disorders and depressive disorders.

30 6. The use of a 1H-indazole-3-carboxamide according to claim 5, wherein said bipolar disorders are selected from the group consisting of bipolar I, bipolar II, cyclothymia and bipolar disorder not otherwise specified (BD-NOS).

7. The use of a 1H-indazole-3-carboxamide according to claim 5, wherein said depressive disorders are selected from the group consisting of major depressive disorder (MDD), atypical depression (AD), melancholic depression, psychotic major depression (PMD), catatonic depression, postpartum depression (PPD), seasonal affective disorder (SAD), dysthymia, and depressive disorder not otherwise specified (DD-NOS).
8. The use of a 1H-indazole-3-carboxamide according to claim 1, wherein said substance abuse disorders are selected from the group of abuse disorders due to psychostimulants.
9. The use of a 1H-indazole-3-carboxamide according to claim 1, wherein said schizophrenic disorders are selected from the group consisting of paranoid schizophrenia, disorganized schizophrenia, catatonic schizophrenia, simple schizophrenia, residual schizophrenia, and undifferentiated schizophrenia.
10. The use of a 1H-indazole-3-carboxamide according to claim 1, wherein said cancerous disorders are selected from the group consisting of prostate, pancreatic, ovarian, and colon-rectal cancer and MLL-associated leukaemia.
11. A method of treatment of a pathological state arising from the uncontrolled activation and/or overexpression of GSK-3 β , selected from the group consisting of (i) insulin-resistance disorders; (ii) neurodegenerative diseases; (iii) mood disorders; (iv) schizophrenic disorders; (v) cancerous disorders; (vi) inflammation, (vii) substance abuse disorders; and (viii) epilepsies, by the administration to a

human being in need thereof of an effective amount of a 1H-indazole-3-carboxamide having the following general formula (I):



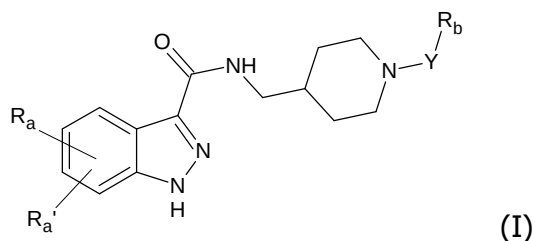
wherein

- 5 R_a and $R_{a'}$, equal or different each other, is a hydrogen atom; a halogen atom; a C_1 - C_6 alkyl, C_2 - C_6 alkenyl, C_2 - C_6 alkynyl and C_1 - C_6 alkoxy group, optionally substituted by one or more substituents selected from the group consisting of halogen, hydroxy, $-NH_2$, and C_1 - C_3 alkoxy; a carbocyclic or heterocyclic ring, aliphatic or aromatic, having from 3 to 12 members, optionally substituted by one or more substituents selected from the group consisting of halogen, hydroxy, C_1 - C_6 alkyl, C_1 - C_6 alkoxy, $-NR_1R_2$, $-C(O)OH$, $-C(O)OR_1$ and $-C(O)NR_1R_2$;
- 10 Y is a bond, a C_1 - C_6 alkyl, C_2 - C_6 alkenyl or C_2 - C_6 alkynyl group, optionally substituted by one or more substituents selected from the group consisting of halogen, hydroxy, $-NH_2$, and C_1 - C_3 alkoxy;
- 15 R_b is a carbocyclic or heterocyclic ring, aliphatic or aromatic, having from 3 to 12 members, substituted by one or more substituents selected from the group consisting of halogen, hydroxy, nitro, cyano, $-CF_3$, C_1 - C_6 alkoxy, benzyloxy, C_1 - C_4 alkyl, C_2 - C_4 alkenyl, and C_2 - C_4 alkynyl, $-NHSO_2CH_3$, $-SO_2NH_2$, $-Z-C(O)OH$, $-Z-C(O)OR_1$ and $-Z-C(O)NR_1R_2$, wherein Z is a σ -bond or $(C_1-C_3)alkyl$;
- 20 R_1 and R_2 are independently a hydrogen atom, a C_1 - C_4 alkyl group, a C_2 - C_4 alkenyl group, a C_2 - C_4 alkynyl group, and a phenyl group;
- 25 and its salts of addition with pharmaceutically acceptable organic and inorganic acids and bases;

12. A pharmaceutical composition comprising an effective amount of at least one compound of formula (I) as defined in claim 1, a salt thereof with a pharmaceutically acceptable organic or inorganic acid or base, or a prodrug thereof, and at least one inert pharmaceutically acceptable excipient, for use in the treatment of a pathological state arising from the uncontrolled activation and/or over-expression of GSK-3 β , selected from the group consisting of (i) insulin-resistance disorders, such as type-2 diabetes, syndrome X, obesity and polycystic ovary syndrome; (ii) neurodegenerative diseases, such as Parkinson's disease, Alzheimer's disease, Huntington's disease, and spinal neurodegenerative disorders; (iii) mood disorders, such as bipolar disorders and depressive disorders; (iv) schizophrenic disorders; (v) cancerous disorders, such as prostate, pancreatic, ovarian, and colon-rectal cancer and MLL-associated leukaemia; (vi) inflammation, (vii) substance abuse disorders; and (viii) epilepsies.
13. 1H-indazole-3-carboxamide compounds of formula:
- N-([1-(2,4-dichlorobenzyl)piperidin-4-yl]methyl)-5-methoxy-1H-indazole-3-carboxamide, and
 - N-([1-[4-(benzyloxy)benzyl]piperidin-4-yl]methyl)-5-methoxy-1H-indazole-3-carboxamide.

CLAIMS

1. Use of 1H-indazole-3-carboxamide compounds having the following general formula (I)



wherein

R_a and $R_{a'}$, equal or different each other, is a hydrogen atom; a halogen atom; a C_1 - C_6 alkyl, C_2 - C_6 alkenyl, C_2 - C_6 alkynyl and C_1 - C_6 alkoxy group, optionally substituted by one or more substituents selected from the group consisting of halogen, hydroxy, $-NH_2$, and C_1 - C_3 alkoxy; a carbocyclic or heterocyclic ring, aliphatic or aromatic, having from 3 to 12 members, optionally substituted by one or more substituents selected from the group consisting of halogen, hydroxy, C_1 - C_6 alkyl, C_1 - C_6 alkoxy, $-NR_1R_2$, $-C(O)OH$, $-C(O)OR_1$ and $-C(O)NR_1R_2$;

Y is a bond, a C_1 - C_6 alkyl, C_2 - C_6 alkenyl or C_2 - C_6 alkynyl group, optionally substituted by one or more substituents selected from the group consisting of halogen, hydroxy, $-NH_2$, and C_1 - C_3 alkoxy;

R_b is a carbocyclic or heterocyclic ring, aliphatic or aromatic, having from 3 to 12 members, substituted by one or more substituents selected from the group consisting of halogen, hydroxy, nitro, cyano, $-CF_3$, C_1 - C_6 alkoxy, benzyloxy, C_1 - C_4 alkyl, C_2 - C_4 alkenyl, and C_2 - C_4 alkynyl, $-NHSO_2CH_3$, $-SO_2NH_2$, $-Z-C(O)OH$, $-Z-C(O)OR_1$ and $-Z-C(O)NR_1R_2$, wherein Z is a σ -bond or $(C_1-C_3)alkyl$;

R_1 and R_2 are independently a hydrogen atom, a C_1 - C_4 alkyl group, a C_2 - C_4 alkenyl group, a C_2 - C_4 alkynyl group, and a phenyl group;

and its salts of addition with pharmaceutically acceptable organic and inorganic acids and bases;

for the manufacture of a medicament the treatment of a disease arising from the uncontrolled activation and/or overexpression of GSK-3 β , selected from the group consisting of (i) insulin-resistance disorders; (ii) neurodegenerative diseases; (iii) mood disorders; (iv) schizophrenic disorders; (v) cancerous disorders; (vi) inflammation, (vii) substance abuse disorders; and (viii) epilepsies.

2. The use of a 1H-indazole-3-carboxamide according to claim 1, wherein said insulin-resistance disorders are selected from the group consisting of type-2 diabetes, syndrome X, obesity and polycystic ovary syndrome.
3. The use of a 1H-indazole-3-carboxamide according to claim 1, wherein said neurodegenerative diseases are selected from the group consisting of Parkinson's disease, Alzheimer's disease, Huntington's disease, and spinal neurodegenerative disorders.
4. The use of a 1H-indazole-3-carboxamide according to claim 3, wherein said spinal neurodegenerative disorders are selected from the group consisting of amyotrophic lateral sclerosis, multiple sclerosis, spinal muscular atrophy and neurodegeneration due to spinal cord injury.
5. The use of a 1H-indazole-3-carboxamide according to claim 1, wherein said mood disorders are selected from the group consisting of bipolar disorders and depressive disorders.
6. The use of a 1H-indazole-3-carboxamide according to claim 5, wherein said bipolar disorders are selected from the group consisting of bipolar I, bipolar II, cyclothymia and bipolar disorder not otherwise specified (BD-NOS).
7. The use of a 1H-indazole-3-carboxamide according to claim 5, wherein said depressive disorders are selected from the group consisting of major depressive disorder (MDD), atypical depression (AD), melancholic depression, psychotic major depression (PMD), catatonic depression, postpartum depression (PPD), seasonal affective disorder (SAD), dysthymia, and depressive disorder not otherwise specified (DD-NOS).
8. The use of a 1H-indazole-3-carboxamide according to claim 1, wherein said substance abuse disorders are selected from the group of abuse disorders due to psychostimulants.

9. The use of a 1H-indazole-3-carboxamide according to claim 1, wherein said schizophrenic disorders are selected from the group consisting of paranoid schizophrenia, disorganized schizophrenia, catatonic schizophrenia, simple schizophrenia, residual schizophrenia, and undifferentiated schizophrenia.
10. The use of a 1H-indazole-3-carboxamide according to claim 1, wherein said cancerous disorders are selected from the group consisting of prostate, pancreatic, ovarian, and colon-rectal cancer and MLL-associated leukaemia.
11. Use of a pharmaceutical composition comprising an effective amount of at least one compound of formula (I) as defined in claim 1, a salt thereof with a pharmaceutically acceptable organic or inorganic acid or base, or a prodrug thereof, and at least one inert pharmaceutically acceptable excipient, for the manufacture of a medicament for the treatment of a pathological state arising from the uncontrolled activation and/or over-expression of GSK-3 β , selected from the group consisting of (i) insulin-resistance disorders, such as type-2 diabetes, syndrome X, obesity and polycystic ovary syndrome; (ii) neurodegenerative diseases, such as Parkinson's disease, Alzheimer's disease, Huntington's disease, and spinal neurodegenerative disorders; (iii) mood disorders, such as bipolar disorders and depressive disorders; (iv) schizophrenic disorders; (v) cancerous disorders, such as prostate, pancreatic, ovarian, and colon-rectal cancer and MLL-associated leukaemia; (vi) inflammation, (vii) substance abuse disorders; and (viii) epilepsies.
12. 1H-indazole-3-carboxamide compounds of formula:
 - N-([1-(2,4-dichlorobenzyl)piperidin-4-yl]methyl)-5-methoxy-1H-indazole-3-carboxamide, and
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