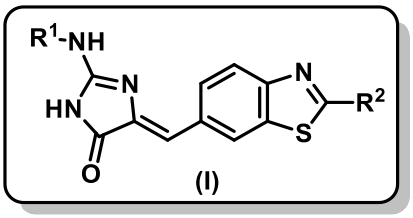
CLAIMS

1. A compound of formula (I)



(I)

wherein R^1 represents:

(i). a (C_1-C_6)alkyl group substituted by one or two groups selected from a -$COOR^a$ group, a hydroxy group, a halogen atom, a (C_1-C_4)alkoxy group and a benzyloxy group, said benzyloxy being optionally substituted on its phenyl group by one to three halogen atoms,

(ii). a spiro(C_5-C_{11})bicyclic ring,

(iii). a fused phenyl group, selected from phenyl groups fused with a (C_5-C_6)cycloalkyl or (C_5-C_6)heterocycloalkyl, which (C_5-C_6)cycloalkyl and (C_5-C_6)heterocycloalkyl ring optionally comprise an insaturation and is optionally substituted by a (C_1-C_4) alkyl group, a hydroxy group, a halogen atom, a (C_1-C_3)alkoxy group or a -COR^a group,

(iv). a phenyl group, substituted by one or two groups selected from a (C_1-C_8)alkyl, a (C_1-C_3)fluoroalkyl, a fluoro(C_1-C_4)alkoxy group, a halogen atom, and a (C_4-C_7)heterocycloalkyl group, said (C_4-C_7)heterocycloalkyl group being itself optionally substituted by a (C_1-C_4) alkyl group, or

(v). a R'-L- group, wherein L is either a single bond or a (C_1-C_3)alkanediyl group, optionnally susbstituted by a group selected from a hydroxy group and a (C_1-C_3)alkoxy group, and

R' represents:

(v.1) a (C_3-C_8)cycloalkyl group, optionally substituted by one, two or three groups selected from a (C_1-C_4)alkyl group, a hydroxy group, a halogen atom and a (C_1-C_3) alkoxy group,

(v.2) a bridged (C_6-C_{10})cycloalkyl group, optionally substituted by one to three groups selected from a (C_1-C_4)alkyl group, a (C_1-C_4)alkoxy group, a halogen atom, a hydroxy group, a -O-C(O)-R^d group, a -O-C(O)-NHR^d group, a -NH-C(O)-R^d group, a -SO_2-R^d group, a -$N(R^e)_2$ group and a -$COOR^a$ group,

(v.3) a (C_3-C_8)heterocycloalkyl group, optionally substituted by one to three groups selected from a -$COOR^a$ group, a hydroxy group, a halogen atom, a (C_1-C_4)alkyl group and an oxo group,

(v.4) a (C_3-C_8)heteroaryl group, optionally substituted by one to three groups selected from a halogen atom, a (C_1-C_4)alkyl group, a (C_1-C_4)alkoxy group and a *N*-methylpiperazinyl group, or

(v.5) a bridged (C_6-C_{10})heterocycloalkyl group, or

(vi). a R'-L- group wherein L is a (C_1-C_3)alkanediyl group, optionally substituted by a group selected from a -NR^bR^c group, a (C_1-C_4)alkoxy group, a hydroxy group, a -$COOR^a$ group and a halogen atom, and

R' is a phenyl group, optionally substituted by one to three groups selected from the group consisting of (C_1-C_6)alkyl group, a fluoro(C_1-C_4)alkyl group and a fluoro(C_1-C_4)alkoxy group, a halogen atom and a hydroxy group,

R^a represents a (C_1-C_4)alkyl group or a hydrogen atom,

R^b and R^c independently represent a (C_1-C_6)alkyl group or a hydrogen atom,

R^d represents a (C_1-C_4)alkyl group or a cyclopropyl group,

R^e represents a (C_1-C_3)alkyl group, and

R^2 represents a hydrogen atom or a (C_1-C_3)alkyl group,

or any of its pharmaceutically acceptable salt.

2. A compound of formula (I) according to claim 1, wherein R^1 represents:

(i). a (C_2-C_6)alkyl group substituted by one or two groups selected from a -$COOR^a$ group, a hydroxy group, a halogen atom, a (C_1-C_4)alkoxy group and a benzyloxy group, said

benzyloxy being optionally substituted on its phenyl group by one to three halogen atoms,

(ii). a spiro(C_7-C_9)bicyclic ring,

(iii). a fused phenyl group, selected from phenyl groups fused with a cyclopentyl or a heterocyclopentyl, which cyclopentyl and heterocyclopentyl group optionally comprise an insaturation and is optionally substituted by a (C_1-C_4) alkyl group, a hydroxy group, a halogen atom, a (C_1-C_3)alkoxy group or a -COR^a group,

(iv). a phenyl group, substituted by one or two groups selected from (C_1-C_8)alkyl, a (C_1-C_3)fluoroalkyl, a fluoro(C_1-C_4)alkoxy group a halogen atom, and a (C_4-C_7)heterocycloalkyl group, said (C_4-C_7)heterocycloalkyl group being itself optionally substituted by a (C_1-C_4) alkyl group, or

(v). a R'-L- group wherein

- L is either a single bond or a (C_1-C_3)alkanediyl group, optionnally susbstituted by a group selected from a hydroxy group and a (C_1-C_3)alkoxy group, and
- R' represents:

(v.1) a (C_3-C_8)cycloalkyl group, optionally substituted by one, two or three groups selected from a (C_1-C_4)alkyl group, a hydroxy group, a fluor atom and a (C_1-C_3) alkoxy group,

(v.2) a bridged (C_7-C_{10})cycloalkyl group, optionally substituted by one to three groups selected from a (C_1-C_4)alkyl group, a (C_1-C_4)alkoxy group, a hydroxy group, a halogen atom, a -O-C(O)-R^d group, a -O-C(O)-NHR^d group, a -NH-C(O)-R^d group, a -SO_2-R^d group, a -$N(R^e)_2$ group and a -$COOR^a$ group,

(v.3) a (C_4-C_7)heterocycloalkyl group, optionally substituted by one to three groups selected from a -$COOR^a$ group, a hydroxy group, a halogen atom, a (C_1-C_4)alkyl group and a oxo group,

(v.4) a heteroaryl group, optionally substituted by one to three groups selected from a halogen atom, (C_1-C_4)alkyl group, a (C_1-C_4)alkoxy group, a *N*-methylpiperazinyl group, or

(v.5) a bridged (C_6-C_{10})heterocycloalkyl group, or

(vi). a R'-L- group wherein

- L is a (C_1-C_3)alkanediyl group, optionally substituted by a group selected from a -NR^bR^c group, a (C_1-C_4)alkoxy group, a hydroxy group, a -$COOR^a$ group and a halogen atom, and
- R' is a phenyl group, optionally substituted by one to three groups selected from the group consisting of (C_1-C_6)alkyl group, a fluoro(C_1-C_4)alkyl group and a fluoro(C_1-C_4)alkoxy group, a hydroxy group and a halogen atom,

R^a represents a (C_1-C_4)alkyl group or a hydrogen atom,

R^b and R^c independently represent a (C_1-C_6)alkyl group or a hydrogen atom,

R^d represents a (C_1-C_4)alkyl group or a cyclopropyl group,

R^e represents a (C_1-C_3)alkyl group, and

R^2 represents a hydrogen atom or a (C_1-C_3)alkyl group,

or any of its pharmaceutically acceptable salt.

3. A compound of formula (I) according to any of claims 1 or 2, wherein R^1 represents:

(i). a (C_2-C_6)alkyl group substituted by one or two groups selected from a -$COOCH_3$ group, a hydroxy group, a fluorine atom, a methoxy group, an ethoxy group, a *tert*-butoxy group, a cyclopropoxy group and a benzyloxy group, said benzyloxy being optionally substituted on its phenyl group by a fluorine atom,

(ii). a spiro(C_7-C_8)bicyclic ring, in particular a spiro[3.3]heptyl, a spiro[2.5]octanyl or a 7-azaspiro[3.5]nonyl,

(iii). a fused phenyl group, chosen from phenyl groups fused with a cyclopentyl or a heterocyclopentyl, which cyclopentyl and

heterocyclopentyl group optionally comprise an insaturation and is optionally substituted by a methyl, a hydroxy group, a methoxy group and a -$COCH_3$ group,

(iv). a phenyl group, substituted by one or two groups selected from a methyl, a hexyl, a trifluoromethyl, a difluoromethoxy group, a halogen atom, in particular a fluor atom, a morpholino group and a *N*-methylpiperazinyl group, or

(v). a R'-L- group wherein L is either a single bond or a (C_1-C_3)alkanediyl group, optionnally susbstituted by a group chosen from a hydroxy group and a (C_1-C_3)alkoxy group,

and R' is selected from the group consisting of:

(v.1). a (C_3-C_8)cycloalkyl group in particular a cyclopropyl, a cyclobutyl, a cyclopentyl, a cyclohexyl, a cycloheptyl or a cyclooctyl, optionally substituted by one, two or three groups selected from a methyl, an isopropyl, a hydroxy group and a methoxy group,

(v.2). a bridged (C_7-C_{10})cycloalkyl group, in particular an adamantyl or a bicyclo[3.1.1]heptyl, optionally substituted by one to three groups selected from a methyl group, a methoxy group, a hydroxy group, a fluorine atom, a -O-C(O)-CH_3 group, a -O-C(O)-$C(CH_3)_3$ group, a -O-C(O)-NH-$C(CH_3)_3$ group, a -NH-C(O)-CH_3 group, a -NH-C(O)-C_3H_4 group, a -$S(O)_2$-CH_3 group, a -$S(O)_2$-C_3H_4 group, a -$N(CH_3)_2$ group and a -C(O)-O-CH_3 group,

(v.3). a (C_5-C_8)heterocycloalkyl group, in particular a tetrahydropyranyl, a piperidinyl, an oxetanyl, a tetrahydrofuranyl,an oxepanyl, a tetrahydrothiopyranyl, a pyrrolidinyl, a dioxepanyl or a piperidinyl, optionally substituted by one, two or three group(s) selected from a -$COOR^f$ group, a hydroxy group, a methyl group and an oxo group, wherein R^f represents either an ethyl or an isopropyl group,

(v.4). a heteroaryl group, in particular a pyrimidinyl, a pyridinyl, a thiazolyl, a imidazolyl, a pyrazolyl, a thiadiazolyl, a

pyridazinyl, a pyrazinyl, a furyl, optionally substituted by one to three groups selected from methyl group, a methoxy group and a *N*-methylpiperazinyl group, or

(v.5). a bridged (C_7-C_{10})cycloalkyl group, in particular a quinuclidine-3-yl, or

(vi). a R'-L- group wherein L is a (C_1-C_3)alkanediyl group, optionally substituted by a group selected from the group consisting of a -NR^bR^c group, a (C_1-C_4)alkoxy group, a hydroxy group, a -$COOR^a$ group and a halogen atom, in particular a fluor atom, and

R' is a phenyl group, optionally substituted by one or two groups selected from the group consisting of methyl group, a trifluoromethyl group and a trifluromethoxy group,

R^a representing a (C_1-C_3)alkyl group,

R^b and R^c are independently chosen from a methyl group or a hydrogen atom, and

R^2 represents a hydrogen atom or a (C_1-C_3)alkyl group,

or any of its pharmaceutically acceptable salts.

4. A compound of formula (I) according to any of the preceding claims, wherein L is selected from a group consisting of a -CH_2- group, a -$CH(CH_3)$- group, a -$CH(CH_2OH)$-CH_2- group, a -$CH(CH_2OH)$- group, a -$CH(CH_2OCH_3)$- group, a -$CH(OH)$-CH_2- group, a -CH_2-$CH(CH_2OCH_3)$- group, a -$CH(OCH_3)$-CH_2- group, a -CH_2-$CH(COOCH_3)$- group, a -$CH(CH_2F)$- group, a -$CH(CH_2NH_2)$- group, a -$CH(CH_2NHCH_3)$- group, a -$CH(CH_2N(CH_3)_2)$- group, a -CH_2-$CH(CH_2OH)$- group, a -$CH(OCH_3)$-CH_2- group, a -CH_2-$CH(OCH_3)$- group, a -CH_2-$CH(OH)$-CH_2- group, a -CH_2-$CH(OCH_3)$-CH_2 group, a –$(CH_2)_3$- group, a -$(CH_2)_2$- group and a -$CH(CH_2OC(CH_3)_3)$ group, or any of its pharmaceutically acceptable salts.

5. A compound of formula (I) according to any of the preceding claims, wherein:

(v.1). when R' is a (C_3-C_8)cycloalkyl group, L is selected from the group consisting of a single bond, a -CH_2- group, a -$CH(CH_3)$- group, a

-CH(CH_2OH)-CH_2- group, a -CH(CH_2OH)- group, a -CH(CH_2OCH_3)- group and a -CH(OH)-CH_2- group and a -CH(OCH_3)-CH_2- group,

(v.2). when R' is a bridged (C_7-C_{10})cycloalkyl group, L is a single bond, a -CH_2- group or a -CH(CH_3)- group,

(v.3). when R' is a (C_5-C_8)heterocycloalkyl group including spiro(C_3-C_8)heterocycloalkyls, L is a single bond or a -CH_2- group,

(v.4). when R' is a phenyl, L is selected from the group consisting of a single bond, a -CH_2- group, a -CH_2-CH($COOCH_3$)- group, a -CH(CH_2F)- group, a -CH(CH_2NH_2)- group, a -CH(CH_2NHCH_3)- group, a -CH($CH_2N(CH_3)_2$)- group, a -CH_2-CH(CH_2OH)- group, a -CH(CH_2OH)- group, a -CH(CH_2OCH_3)- group, a -CH(OH)-CH_2- group, a -CH_2-CH(CH_2OCH_3)- group, a -CH_2-CH(OH)-CH_2- group and a -CH_2-CH(OCH_3)-CH_2 group,

(v.5). when R' is a heteroaryl group, L is selected from the group comprising a single bond, a -CH_2- group, a –$(CH_2)_3$- group and a -$(CH_2)_2$- group, and

(v.6). when R' is a bridged (C_7-C_{10})heterocycloalkyl group, L is a single bond.

6. A compound of formula (I) according to any of the preceding claims, wherein R^1 represents:

- an adamantyl group, optionally substituted by one to three groups, and in particular substituted by one group, selected from a methyl group, a methoxy group, a hydroxy group, a fluorine atom, a -O-C(O)-CH_3 group, a -O-C(O)-$C(CH_3)_3$ group, a -O-C(O)-NH-$C(CH_3)_3$ group, a -NH-C(O)-CH_3 group, a -NH-C(O)-C_3H_4 group, a -$S(O)_2$-CH_3 group, a -$S(O)_2$-C_3H_4 group, a -$N(CH_3)_2$ group and a -C(O)-O-CH_3 group, the adamantyl group being preferably unsubstituted; or
- a R"-O-CH_2(R"')- group, wherein:
    - R" is a (C_1-C_4)alkyl group, preferably a methyl or ethyl group, and
    - R"' is a (C_1-C_4)alkyl group, in particular a (C_3-C_4)alkyl group, and preferably an isopropylmethyl group, or

- R”’ is a phenyl group, optionally substituted by one to three groups and in particular substituted by one group, selected from the group consisting of a (C_1-C_6)alkyl group, a fluoro(C_1-C_4)alkyl group, a fluoro(C_1-C_4)alkoxy group, a halogen atom and a hydroxy group, the phenyl group being preferably unsubstituted.

7. A compound of formula (I) according to claim 1, wherein R^1 represents:

- a (C_1-C_6)alkyl group substituted by one or two groups selected from a -$COOR^a$ group, a hydroxy group, a fluorine atom, a (C_1-C_4)alkoxy group and a benzyloxy group, said benzyloxy being optionally substituted on its phenyl group by a halogen atom,
- a spiro(C_5-C_{11})bicyclic ring, or
- a R’-L- group, wherein
  - L is either a single bond or a (C_1-C_3)alkanediyl group, optionnally substituted by a group chosen from a hydroxy group and a (C_1-C_3)alkoxy group, and
  - R’ is selected from the group consisting of:
    - a (C_3-C_8)cycloalkyl group, optionally substituted by one, two or three groups selected from a halogen atom, a (C_1-C_4)alkyl group, a hydroxy group and a (C_1-C_3) alkoxy group, and
    - a bridged (C_6-C_{10})cycloalkyl group, optionally substituted by one to three groups selected from a (C_1-C_4)alkyl group, a (C_1-C_4)alkoxy group, a halogen atom, a hydroxy group, a -O-C(O)-R^d group, a -O-C(O)-NHR^d group, a -NH-C(O)-R^d group, a -SO_2-R^d group, a -$N(R^e)_2$ group and a -$COOR^a$ group,

R^a representing a (C_1-C_4)alkyl group, R^d representing a (C_1-C_4)alkyl group or a cyclopropyl group and R^e representing a (C_1-C_3)alkyl group, and
wherein R^2 represents a hydrogen atom or a (C_1-C_3)alkyl group,
or any of its pharmaceutically acceptable salt.

8. A compound of formula (I) according to claim 1, wherein R^1 represents:

- a fused phenyl group, chosen from phenyl groups fused with a (C_5-C_6)cycloalkyl or (C_5-C_6)heterocycloalkyl, which (C_5-C_6)cycloalkyl and (C_5-C_6)heterocycloalkyl group optionally comprise an insaturation and is optionally substituted by a (C_1-C_4) alkyl group, a hydroxy group, a halogen atom, a (C_1-C_3)alkoxy group and a -COR^a group,
- a phenyl group, substituted by one or two groups selected from (C_1-C_8)alkyl, a (C_1-C_3)fluoroalkyl, a fluoro(C_1-C_4)alkoxy group a halogen atom, and a (C_4-C_7)heterocycloalkyl group said (C_4-C_7)heterocycloalkyl group being itself optionally substituted by a (C_1-C_4) alkyl group, or
- a R'-L- group, wherein
    - L is a (C_1-C_3)alkanediyl group, optionnally susbstituted by a group chosen from a hydroxy group, a (C_1-C_4)alkoxy group, a -NR^bR^c group, a -$COOR^a$ group and a halogen atom, and
    - R' is a phenyl group, optionally substituted by one to three groups selected from the group consisting of (C_1-C_6)alkyl group, a fluoro(C_1-C_4)alkyl group and a fluoro(C_1-C_4)alkoxy group, a halogen atom and a hydroxy group,

      wherein R^a is a (C_1-C_4)alkyl or a hydrogen atom and R^b and R^c are independently chosen from (C_1-C_6)alkyl and a hydrogen atom, and

wherein R^2 represents a hydrogen atom or a (C_1-C_3)alkyl group,
or any pharmaceutically acceptable salt thereof.

9. A compound of formula (I) according to any of the preceding claims, wherein R^2 represents a hydrogen atom or a methyl group.

10. A compound of formula (I) according to claim 1, wherein R^1 represents a R'-L- group wherein

- R' is a (C_3-C_8)heteroaryl group, optionally substituted by one to three groups selected from a halogen atom, a (C_1-C_4)alkyl group, a (C_1-C_4)alkoxy group and a *N*-methylpiperazinyl group, and
- L is a (C_1-C_3)alkanediyl or a single bond, and

wherein R^2 represents a hydrogen atom,

or any pharmaceutically acceptable salt thereof.

11. A compound of formula (I) according to claim 1, wherein R^1 represents a R'-L- group wherein

- R' is a (C_3-C_5)heterocycloalkyl group, optionally substituted by one to three groups selected from a hydroxy group, a (C_1-C_4)alkyl group, an oxo group and a -$COOR^a$ group wherein R^a is as defined in claim 1, and
- L is a methylene or a single bond, and

wherein R^2 represents a hydrogen atom,
or any pharmaceutically acceptable salt thereof.

12. A compound of formula (I) according to anyone of claims 1 to 5 selected from:

(1) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(cyclopropylmethylamino)-1*H*-imidazol-5-one,
(2) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(cyclopropylamino)-1*H*-imidazol-5-one,
(3) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(cyclobutylamino)-1*H*-imidazol-5-one,
(4) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(cyclopentylamino)-1*H*-imidazol-5-one,
(5) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(cyclohexylmethylamino)-1*H*-imidazol-5-one,
(6) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(cyclohexylamino)-1*H*-imidazol-5-one,
(7) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(cycloheptylmethylamino)-1*H*-imidazol-5-one,
(8) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(cycloheptylamino)-1*H*-imidazol-5-one,
(9) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(cyclooctylamino)-1*H*-imidazol-5-one,

(10) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(3-hydroxy-2,2-dimethyl-propyl)amino]-1*H*-imidazol-5-one,

(11) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(2-benzyloxyethylamino)-1*H*-imidazol-5-one,

(12) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*cis*-2-methylcyclohexyl]amino]-1*H*-imidazol-5-one,

(13) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*)-1-cyclohexylethyl]amino]-1*H*-imidazol-5-one,

(14) (4*Z*)-2-(1-Adamantylmethylamino)-4-(1,3-benzothiazol-6-ylmethylene)-1*H*-imidazol-5-one,

(15) (±)-(4*Z*)-2-[1-(1-Adamantyl)ethylamino]-4-(1,3-benzothiazol-6-ylmethylene)-1*H*-imidazol-5-one,

(16) (4*Z*)-2-(1-Adamantylamino)-4-(1,3-benzothiazol-6-ylmethylene)-1*H*-imidazol-5-one,

(17) (4*Z*)-2-(2-Adamantylamino)-4-(1,3-benzothiazol-6-ylmethylene)-1*H*-imidazol-5-one,

(18) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[3,5-dimethyl-1-adamantyl]amino]-1*H*-imidazol-5-one,

(19) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(*trans*-5-hydroxy-2-adamantyl)amino]-1*H*-imidazol-5-one,

(20) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(3-hydroxy-1-adamantyl)amino]-1*H*-imidazol-5-one,

(21) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(3-methoxy-1-adamantyl)amino]-1*H*-imidazol-5-one,

(22) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*,2*R*,3*R*,5*S*)-2,6,6-trimethylnorpinan-3-yl]amino]-1*H*-imidazol-5-one,

(23) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*S*,2*S*,3*S*,5*R*)-2,6,6-trimethylnorpinan-3-yl]amino]-1*H*-imidazol-5-one,

(24) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*,2*R*,5*R*)-6,6-dimethylnorpinan-2-yl]methylamino]-1*H*-imidazol-5-one,

(25) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(spiro[2.5]octan-2-ylamino)-1*H*-imidazol-5-one,

(26) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(spiro[3.3]heptan-2-ylamino)-1*H*-imidazol-5-one,

(27) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(2*R*)-1,7,7-trimethylnorbornan-2-yl]amino]-1*H*-imidazol-5-one,

(28) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(norbornan-2-ylamino)-1*H*-imidazol-5-one,

(29) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*,2*S*,5*R*)-2-isopropyl-5-methyl-cyclohexyl]amino]-1*H*-imidazol-5-one,

(30) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*)-1-(cyclohexylmethyl)-2-hydroxy-ethyl]amino]-1*H*-imidazol-5-one,

(31) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*)-1-(cyclopentylmethyl)-2-hydroxy-ethyl]amino]-1*H*-imidazol-5-one,

(32) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*)-1-(cyclobutylmethyl)-2-hydroxy-ethyl]amino]-1*H*-imidazol-5-one,

(33) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*)-1-(cyclopropylmethyl)-2-hydroxy-ethyl]amino]-1*H*-imidazol-5-one,

(34) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*)-1-(hydroxymethyl)-3-methyl-butyl]amino]-1*H*-imidazol-5-one,

(35) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*)-1-(methoxymethyl)-3-methyl-butyl]amino]-1*H*-imidazol-5-one,

(36) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*S*)-1-(hydroxymethyl)-3-methyl-butyl]amino]-1H-imidazol-5-one,

(37) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*S*)-1-(methoxymethyl)-3-methyl-butyl]amino]-1*H*-imidazol-5-one,

(38) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*)-1-(hydroxymethyl)propyl]amino]-1*H*-imidazol-5-one,

(39) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*S*)-1-(hydroxymethyl)propyl]amino]-1*H*-imidazol-5-one,

(40) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[1-(fluoromethyl)-3-methyl-butyl]amino]-1*H*-imidazol-5-one,

(41) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(1-cyclohexyl-2-hydroxy-ethyl)amino]-1*H*-imidazol-5-one,

(42) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(1-cyclohexyl-2-methoxy-ethyl)amino]-1*H*-imidazol-5-one,

(43) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(2-cyclohexyl-2-hydroxy-ethyl)amino]-1*H*-imidazol-5-one,

(44) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(2-cyclohexyl-2-methoxy-ethyl)amino]-1*H*-imidazol-5-one,

(45) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*cis*-2-hydroxycyclopentyl]amino]-1*H*-imidazol-5-one,

(46) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*trans*-2-hydroxycyclopentyl]amino]-1*H*-imidazol-5-one,

(47) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*cis*-2-methoxycyclopentyl]amino]-1*H*-imidazol-5-one,

(48) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*trans*-2-methoxycyclopentyl]amino]-1*H*-imidazol-5-one,

(49) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*cis*-2-hydroxycyclohexyl]amino]-1*H*-imidazol-5-one,

(50) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*trans*-2-hydroxycyclohexyl]amino]-1*H*-imidazol-5-one,

(51) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*,2*S*)-2-hydroxycyclohexyl]amino]-1*H*-imidazol-5-one,

(52) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*S*,2*R*)-2-hydroxycyclohexyl]amino]-1*H*-imidazol-5-one,

(53) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*,2*R*)-2-hydroxycyclohexyl]amino]-1*H*-imidazol-5-one,

(54) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*S*,2*S*)-2-hydroxycyclohexyl]amino]-1*H*-imidazol-5-one,

(55) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*cis*-3-hydroxycyclohexyl]amino]-1*H*-imidazol-5-one,

(56) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*trans*-3-hydroxycyclohexyl]amino]-1*H*-imidazol-5-one,

(57) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(*trans*-4-hydroxycyclohexyl)amino]-1*H*-imidazol-5-one,

(58) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*cis*-2-methoxycyclohexyl]amino]-1*H*-imidazol-5-one,

(59) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*trans*-2-methoxycyclohexyl]amino]-1*H*-imidazol-5-one,

(60) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(*trans*-4-methoxycyclohexyl)amino]-1*H*-imidazol-5-one,

(61) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*cis*-2-hydroxycycloheptyl]amino]-1*H*-imidazol-5-one,

(62) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*trans*-2-hydroxycycloheptyl]amino]-1*H*-imidazol-5-one,

(63) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*,2*R*)-2-hydroxycycloheptyl]amino]-1*H*-imidazol-5-one,

(64) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*S*,2*S*)-2-hydroxycycloheptyl]amino]-1*H*-imidazol-5-one,

(65) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*cis*-3-hydroxycycloheptyl]amino]-1*H*-imidazol-5-one,

(66) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*trans*-3-hydroxycycloheptyl]amino]-1*H*-imidazol-5-one,

(67) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*cis*-2-methoxycycloheptyl]amino]-1*H*-imidazol-5-one,

(68) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*trans*-2-methoxycycloheptyl]amino]-1*H*-imidazol-5-one,

(69) Methyl (2*S*)-2-[[(4*Z*)-4-(1,3-benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]-3-methyl-butanoate,

(70) Methyl (2*S*)-2-[[(4*Z*)-4-(1,3-benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]propanoate,

(71) Methyl (2*S*)-2-[[(4*Z*)-4-(1,3-benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]-4-methyl-pentanoate,

(72) Methyl (2*R*)-2-[[(4*Z*)-4-(1,3-benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]-4-methyl-pentanoate,

(73) Methyl (2*S*)-2-[[(4*Z*)-4-(1,3-benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]-3-hydroxy-butanoate,

(74) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(benzylamino)-1*H*-imidazol-5-one,

(75) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(indan-2-ylamino)-1*H*-imidazol-5-one,

(76) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(3,4-dimethylphenyl)methylamino]-1*H*-imidazol-5-one,

(77) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(2,4-dimethylphenyl)methylamino]-1*H*-imidazol-5-one,

(78) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[2-(trifluoromethyl)phenyl]methylamino]-1*H*-imidazol-5-one,

(79) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[2-(trifluoromethoxy)phenyl]methylamino]-1*H*-imidazol-5-one,

(80) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*cis*-2-hydroxyindan-1-yl]amino]-1*H*-imidazol-5-one,

(81) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*trans*-2-hydroxyindan-1-yl]amino]-1*H*-imidazol-5-one,

(82) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*,2*R*)-2-hydroxyindan-1-yl]amino]-1*H*-imidazol-5-one,

(83) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*S*,2*S*)-2-hydroxyindan-1-yl]amino]-1*H*-imidazol-5-one,

(84) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*cis*-2-methoxyindan-1-yl]amino]-1*H*-imidazol-5-one,

(85) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*trans*-2-methoxyindan-1-yl]amino]-1*H*-imidazol-5-one,

(86) Methyl (2*S*)-2-[[(4*Z*)-4-(1,3-benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]-3-phenyl-propanoate,

(87) Methyl (2*R*)-2-[[(4*Z*)-4-(1,3-benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]-3-phenyl-propanoate,

(88) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(2-fluoro-1-phenyl-ethyl)amino]-1*H*-imidazol-5-one,

(89) (±)-(4*Z*)-2-[(2-Amino-1-phenyl-ethyl)amino]-4-(1,3-benzothiazol-6-ylmethylene)-1*H*-imidazol-5-one dihydrochloride,

(90) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[2-(methylamino)-1-phenyl-ethyl]amino]-1*H*-imidazol-5-one dihydrochloride,

(91) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[2-(dimethylamino)-1-phenyl-ethyl]amino]-1*H*-imidazol-5-one,

(92) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(1-benzyl-2-hydroxy-ethyl)amino]-1*H*-imidazol-5-one,

(93) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*)-1-benzyl-2-hydroxy-ethyl]amino]-1*H*-imidazol-5-one,

(94) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(1-benzyl-2-methoxy-ethyl)amino]-1*H*-imidazol-5-one,

(95) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(2-hydroxy-1-phenyl-ethyl)amino]-1*H*-imidazol-5-one,

(96) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*)-2-hydroxy-1-phenyl-ethyl]amino]-1*H*-imidazol-5-one,

(97) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*S*)-2-hydroxy-1-phenyl-ethyl]amino]-1*H*-imidazol-5-one,

(98) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(2-methoxy-1-phenyl-ethyl)amino]-1*H*-imidazol-5-one,

(99) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(2-hydroxy-2-phenyl-ethyl)amino]-1*H*-imidazol-5-one,

(100) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(2-methoxy-2-phenyl-ethyl)amino]-1*H*-imidazol-5-one,

(101) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(2-hydroxy-3-phenyl-propyl)amino]-1*H*-imidazol-5-one,

(102) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(2-methoxy-3-phenyl-propyl)amino]-1*H*-imidazol-5-one,

(103) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(5-methylpyrazin-2-yl)methylamino]-1*H*-imidazol-5-one,

(104) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(2-pyridylmethylamino)-1*H*-imidazol-5-one,

(105) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(3-pyridylmethylamino)-1*H*-imidazol-5-one,

(106) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(4-pyridylmethylamino)-1*H*-imidazol-5-one,

(107) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(5-methyl-2-furyl)methylamino]-1*H*-imidazol-5-one,

(108) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(4-methylthiazol-2-yl)methylamino]-1*H*-imidazol-5-one,

(109) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(3-imidazol-1-ylpropylamino)-1*H*-imidazol-5-one,

(110) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[2-(2-pyridyl)ethylamino]-1*H*-imidazol-5-one,

(111) (4*Z*)-2-(1,3-Benzothiazol-2-ylmethylamino)-4-(1,3-benzothiazol-6-ylmethylene)-1*H*-imidazol-5-one,

(112) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(1-methyl-4-piperidyl)methylamino]-1*H*-imidazol-5-one,

(113) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(tetrahydropyran-4-ylmethylamino)-1*H*-imidazol-5-one,

(114) *Tert*-butyl 4-[[[(4*Z*)-4-(1,3-benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]methyl]piperidine-1-carboxylate,

(115) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(7-methyl-7-azaspiro[3.5]nonan-2-yl)amino]-1*H*-imidazol-5-one,

(116) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(3-fluoro-4-methyl-anilino)-1*H*-imidazol-5-one,

(117) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(4-fluoroanilino)-1*H*-imidazol-5-one,

(118) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(4-hexylanilino)-1*H*-imidazol-5-one,

(119) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[4-(4-methylpiperazin-1-yl)anilino]-1*H*-imidazol-5-one,

(120) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[3-(difluoromethoxy)anilino]-1*H*-imidazol-5-one,

(121) (4*Z*)-2-[(1-Acetylindolin-6-yl)amino]-4-(1,3-benzothiazol-6-ylmethylene)-1*H*-imidazol-5-one,

(122) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[3-(trifluoromethyl)anilino]-1*H*-imidazol-5-one,

(123) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(indan-5-ylamino)-1*H*-imidazol-5-one,

(124) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(4-morpholinoanilino)-1*H*-imidazol-5-one,

(125) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(1-methylindazol-7-yl)amino]-1*H*-imidazol-5-one,

(126) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(pyrimidin-2-ylamino)-1*H*-imidazol-5-one,

(127) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(2-pyridylamino)-1*H*-imidazol-5-one,

(128) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(1-methylpyrazol-3-yl)amino]-1*H*-imidazol-5-one,

(129) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(2-methoxy-6-methyl-3-pyridyl)amino]-1*H*-imidazol-5-one,

(130) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(pyrimidin-5-ylamino)-1*H*-imidazol-5-one,

(131) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(3-pyridylamino)-1*H*-imidazol-5-one,

(132) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(1,3,4-thiadiazol-2-ylamino)-1*H*-imidazol-5-one,

(133) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[5-(4-methylpiperazin-1-yl)-2-pyridyl]amino]-1*H*-imidazol-5-one,

(134) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[6-(4-methylpiperazin-1-yl)-3-pyridyl]amino]-1*H*-imidazol-5-one,

(135) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[2-(4-methylpiperazin-1-yl)pyrimidin-5-yl]amino]-1*H*-imidazol-5-one,

(136) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[5-(4-methylpiperazin-1-yl)pyrimidin-2-yl]amino]-1*H*-imidazol-5-one,

(137) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[5-(4-methylpiperazin-1-yl)pyrazin-2-yl]amino]-1*H*-imidazol-5-one,

(138) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[6-(4-methylpiperazin-1-yl)pyridazin-3-yl]amino]-1*H*-imidazol-5-one,

(139) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(tetrahydropyran-4-ylamino)-1*H*-imidazol-5-one,

(140) *Tert*-butyl 4-[[(4Z)-4-(1,3-benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]piperidine-1-carboxylate,

(141) Ethyl 4-[[(4*Z*)-4-(1,3-benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]piperidine-1-carboxylate,

(142) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(1-methyl-4-piperidyl)amino]-1*H*-imidazol-5-one,

(143) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(1-methyl-3-piperidyl)amino]-1*H*-imidazol-5-one,

(144) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(oxetan-3-ylamino)-1*H*-imidazol-5-one,

(145) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(3*R*)-tetrahydrofuran-3-yl]amino]-1*H*-imidazol-5-one,

(146) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(3*S*)-tetrahydrofuran-3-yl]amino]-1*H*-imidazol-5-one,

(147) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(3*R*)-tetrahydropyran-3-yl]amino]-1*H*-imidazol-5-one,

(148) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(3*S*)-tetrahydropyran-3-yl]amino]-1*H*-imidazol-5-one,

(149) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(6,6-dimethyltetrahydropyran-3-yl)amino]-1*H*-imidazol-5-one,

(149A). (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(3*R*)/(3*S*)-6,6-dimethyltetrahydropyran-3-yl]amino]-1*H*-imidazol-5-one,

(149B). (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(3*R*)/(3*S*)-6,6-dimethyltetrahydropyran-3-yl]amino]-1*H*-imidazol-5-one,

(150) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(3*R*,4*R*)-4-hydroxytetrahydropyran-3-yl]amino]-1*H*-imidazol-5-one,

(151) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(oxepan-3-ylamino)-1*H*-imidazol-5-one,

(152) (±)-3-[[(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]piperidin-2-one,

(153) (3*S*)-3-[[(4Z)-4-(1,3-Benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]piperidin-2-one,

(154) (5*S*)-5-[[(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]piperidin-2-one,

(155) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(3,3-difluorocyclopentyl)amino]-1*H*-imidazol-5-one,

(156) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(4,4-difluorocyclohexyl)amino]-1*H*-imidazol-5-one,

(157) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(3,3-difluorocyclohexyl)amino]-1*H*-imidazol-5-one,

(158) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(2,2-difluorocyclohexyl)amino]-1*H*-imidazol-5-one,

(159) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(3,3-difluorocycloheptyl)amino]-1*H*-imidazol-5-one,

(160) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*)-1-(fluoromethyl)-3-methyl-butyl]amino]-1*H*-imidazol-5-one,

(161) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*S*)-1-(fluoromethyl)-3-methyl-butyl]amino]-1*H*-imidazol-5-one,

(162) [3-[[(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]-1-adamantyl] acetate,

(163) [3-[[(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]-1-adamantyl] 2,2-dimethylpropanoate,

(164) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*,2*R*)-2-methoxycyclopentyl]amino]-1*H*-imidazol-5-one,

(165) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*S*,2*S*)-2-methoxycyclopentyl]amino]-1*H*-imidazol-5-one,

(166) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*,2*R*)-2-methoxycyclohexyl]amino]-1*H*-imidazol-5-one,

(167) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*S*,2*S*)-2-methoxycyclohexyl]amino]-1*H*-imidazol-5-one,

(168) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*cis*-3-methoxycyclohexyl]amino]-1*H*-imidazol-5-one,

(169) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*trans*-3-methoxycyclohexyl]amino]-1*H*-imidazol-5-one,

(169A).(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*,3*R*)/(1*S*,3*S*)-3-methoxycyclohexyl]amino]-1*H*-imidazol-5-one,

(169B).(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*,3*R*)/(1*S*,3*S*)-3-methoxycyclohexyl]amino]-1*H*-imidazol-5-one,

(170) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*cis*-4-hydroxycycloheptyl]amino]-1*H*-imidazol-5-one,

(171) (±)-(4Z)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*trans*-4-hydroxycycloheptyl]amino]-1*H*-imidazol-5-one,

(171A).(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*,4*R*)/(1*S*,4*S*)-4-hydroxycycloheptyl]amino]-1*H*-imidazol-5-one,

(171B).(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*,4*R*)/(1*S*,4*S*)-4-hydroxycycloheptyl]amino]-1*H*-imidazol-5-one,

(172) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*cis*-3-methoxycycloheptyl]amino]-1*H*-imidazol-5-one,

(173) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*trans*-3-methoxycycloheptyl]amino]-1*H*-imidazol-5-one,

(174) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[*cis*-4-methoxycycloheptyl]amino]-1*H*-imidazol-5-one,

(175) (±)-(4*Z*)-4-(1,3-benzothiazol-6-ylmethylene)-2-[[*trans*-4-methoxycycloheptyl]amino]-1*H*-imidazol-5-one,

(176) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*)-2-methoxy-1-phenyl-ethyl]amino]-1*H*-imidazol-5-one,

(177) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*S*)-2-methoxy-1-phenyl-ethyl]amino]-1*H*-imidazol-5-one,

(178) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(2*R*)-2-hydroxy-2-phenyl-ethyl]amino]-1*H*-imidazol-5-one,

(179) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(2*S*)-2-hydroxy-2-phenyl-ethyl]amino]-1*H*-imidazol-5-one,

(180) (4*Z*)-2-[[(1*R*)-2-Amino-1-phenyl-ethyl]amino]-4-(1,3-benzothiazol-6-ylmethylene)-1*H*-imidazol-5-one dihydrochloride,

(181) (4*Z*)-2-[[(1*S*)-2-Amino-1-phenyl-ethyl]amino]-4-(1,3-benzothiazol-6-ylmethylene)-1*H*-imidazol-5-one dihydrochloride,

(182) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(3*R*)-quinuclidin-3-yl]amino]-1*H*-imidazol-5-one,

(183) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(3*S*)-quinuclidin-3-yl]amino]-1*H*-imidazol-5-one,

(184) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(tetrahydrothiopyran-3-ylamino)-1*H*-imidazol-5-one,

(185) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-(1,4-dioxepan-6-ylamino)-1*H*-imidazol-5-one,

(186) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(2-oxopyrrolidin-3-yl)amino]-1*H*-imidazol-5-one,

(187) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(1-methyl-2-oxo-pyrrolidin-3-yl)amino]-1*H*-imidazol-5-one,

(188) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(4,4-dimethyl-2-oxo-pyrrolidin-3-yl)amino]-1*H*-imidazol-5-one,

(189) (3*R*)-3-[[(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]piperidin-2-one,

(190) (±)-3-[[(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]-1-methyl-piperidin-2-one,

(191) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(3-methyl-2-oxo-pyrrolidin-3-yl)amino]-1*H*-imidazol-5-one,

(192) (±)-(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(1,3-dimethyl-2-oxo-pyrrolidin-3-yl)amino]-1*H*-imidazol-5-one,

(192A).(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(3*R*)/(3*S*)-1,3-dimethyl-2-oxo-pyrrolidin-3-yl]amino]-1*H*-imidazol-5-one,

(192B).(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(3*R*)/(3*S*)-1,3-dimethyl-2-oxo-pyrrolidin-3-yl]amino]-1*H*-imidazol-5-one,

(193) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(3*S*,4*S*)-4-hydroxytetrahydropyran-3-yl]amino]-1*H*-imidazol-5-one,

(194) (4*Z*)-2-(3-Noradamantylamino)-4-(1,3-benzothiazol-6-ylmethylene)-1*H*-imidazol-5-one,

(195) [3-[[(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]-1-adamantyl] *N*-*tert*-butylcarbamate,

(196) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(3-fluoro-1-adamantyl)amino]-1*H*-imidazol-5-one,

(197) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*)-1-(*tert*-butoxymethyl)-3-methyl-butyl]amino]-1*H*-imidazol-5-one,

(198) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*)-2-*tert*-butoxy-1-phenyl-ethyl]amino]-1*H*-imidazol-5-one,

(199) *N*-[3-[[(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]-1-adamantyl]acetamide,

(200) *N*-[3-[[(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]-1-adamantyl]cyclopropanecarboxamide,

(201) *N*-[3-[[(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]-1-adamantyl]methanesulfonamide,

(202) *N*-[3-[[(4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]-1-adamantyl]cyclopropanesulfonamide,

(203) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[3-(dimethylamino)-1-adamantyl]amino]-1*H*-imidazol-5-one,

(204) Methyl 2-[[(4*Z*)-4-(1,3-benzothiazol-6-ylmethylene)-5-oxo-1*H*-imidazol-2-yl]amino]adamantane-2-carboxylate,

(205) (4*Z*)-2-(Cyclohexylamino)-4-[(2-methyl-1,3-benzothiazol-6-yl)methylene]-1*H*-imidazol-5-one,

(206) (4*Z*)-2-(Cycloheptylamino)-4-[(2-methyl-1,3-benzothiazol-6-yl)methylene]-1*H*-imidazol-5-one,

(207) (4*Z*)-2-[[(1*R*)-1-(Methoxymethyl)-3-methyl-butyl]amino]-4-[(2-methyl-1,3-benzothiazol-6-yl)methylene]-1*H*-imidazol-5-one,

(208) (4*Z*)-2-[[(1*R*)-2-Methoxy-1-phenyl-ethyl]amino]-4-[(2-methyl-1,3-benzothiazol-6-yl)methylene]-1*H*-imidazol-5-one,

(209) (4*Z*)-2-(1-Adamantylamino)-4-[(2-methyl-1,3-benzothiazol-6-yl)methylene]-1*H*-imidazol-5-one, and

(210) (4*Z*)-2-[(3-Hydroxy-1-adamantyl)amino]-4-[(2-methyl-1,3-benzothiazol-6-yl)methylene]-1*H*-imidazol-5-one,

(211) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(3,5-dihydroxy-1-adamantyl)amino]-1*H*-imidazol-5-one,

(212) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[(3,5,7-trifluoro-1-adamantyl)amino]-1*H*-imidazol-5-one,

(213) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*)-1-(ethoxymethyl)-3-methyl-butyl]amino]-1*H*-imidazol-5-one,

(214) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*)-1-(benzyloxymethyl)-3-methyl-butyl]amino]-1*H*-imidazol-5-one,

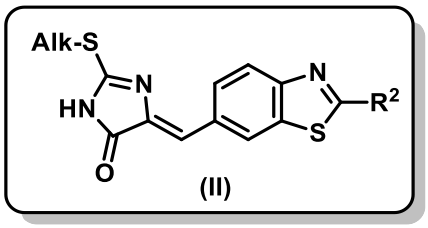
(215) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*)-1-[(4-fluorophenyl)methoxymethyl]-3-methyl-butyl]amino]-1*H*-imidazol-5-one,

(216) (4*Z*)-4-(1,3-Benzothiazol-6-ylmethylene)-2-[[(1*R*)-1-(cyclopropoxymethyl)-3-methyl-butyl]amino]-1*H*-imidazol-5-one,

or anyone of their pharmaceutically acceptable salts.

13. A pharmaceutical composition comprising at least one compound as defined in anyone of claims 1 to 11 or or any of its pharmaceutically acceptable salt or as defined in claim 12.

14. Synthesis process for manufacturing a compound of formula (I) as defined in anyone of claims 1 to 11 or or any of its pharmaceutically acceptable salt or as defined in claim 12 or any of its pharmaceutically acceptable salts, comprising at least a step of coupling a compound of formula (II) below



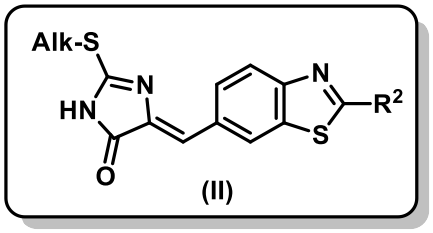
(II)

wherein Alk is a (C_1-C_5)alkyl,

with an amine of formula R^1NH_2

wherein R^1 and R^2 are as defined in anyone of claims 1 to 11.

15. A synthetic intermediate of formula (II) below



wherein Alk is a (C_1-C_5)alkyl, in particular Alk is selected from the group consisting of an ethyl and a methyl and R^2 is as defined in anyone of claims 1 to 11.

16. A compound of formula (I) as defined in anyone of claim 1 to 11 or any of its pharmaceutically acceptable salts, or at least any of compounds (1) to (216) as defined in claim 12 or any of its pharmaceutically acceptable salts, for use as a medicament.

17. Use of ~~A~~the compound of formula (I) according to anyone of claims 1 to 11 or any of its pharmaceutically acceptable salts, or at least any of compounds (1) to (216) as defined in claim 12 or any of its pharmaceutically acceptable salts ~~for use in the~~ in the manufacture of a medicament for the treatment and/or in the prevention of a disease selected from cognitive deficits associated with Down syndrome (Trisomy 21); Alzheimer's disease and related diseases; dementia; tauopathies; and other neurodegenerative diseases (Parkinson's disease; Pick disease, including Niemann-Pick Type C Disease); CDKL5 Deficiency Disorder; McDermid syndrome; autism; type 1 and type 2 diabetes; abnormal folate and methionine metabolism; osteoarthritis, in particular knee osteoarthritis; Duchenne muscular dystrophy; several cancers, such as brain cancer, including glioblastoma, leukemia, including megakaryoblastic leukemia and acute lymphoblastic leukemia, head and neck squamous cell carcinoma, pancreatic cancer, including pancreatic ductal adenocarcinoma, prostate cancer, gastrointerstinal cancer, breast cancer, such as Triple-negative breast cancer (TNBC), tissue cancer, including liposarcoma, Hedgehog/GLI-dependent cancer, liver cancer, including Hepatocellular carcinoma and viral infections, such as caused by Human immunodeficiency virus type 1 (HIV-1), Human cytomegalovirus (HCMV), Influenza A, Herpes virus, rhesus macaque cytomegalovirus, varicella-zoster virus, herpes simplex virus (HSV), Hepatitis C virus, Chikungunya virus, Dengue virus, Influenza virus and Severe acute respiratory syndrome

(SARS) coronavirus, Cytomegalovirus and Human papillomavirus; neuroinflammation; anemia; infections caused by unicellular parasites, such as malaria, Leishmaniasis, Chagas and sleeping sickness (*Trypanosoma* sp.), and cattle diseases due to unicellular pathogens,and for regulating body temperature.

18. Use of ~~A~~the compound of formula (I) ~~for use~~ according to anyone of claims 1 to 11 or any of its pharmaceutically acceptable salts, or at least any of compounds (1) to (216) as defined in claim 12 or any of its pharmaceutically acceptable salts ~~for use in~~in the manufacture of a medicament for the treatment and/or prevention of a disease selected from Down syndrome, Alzheimer's disease, dementia, tauopathies, Parkinson's disease, Niemann-Pick Type C Disease, CDKL5 Deficiency Disorder and Phelan-McDermid syndrome and their associated cognitive and motor conditions and type 1 and type 2 diabetes.