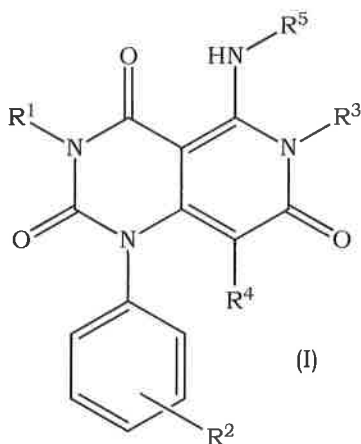


CLAIMS

1. A compound of the general formula I, its tautomeric forms, its stereoisomers, its pharmaceutically acceptable salts, their combinations with suitable medicament and pharmaceutical compositions containing them,



wherein:

R^1 is selected from the group consisting of hydrogen, substituted- or unsubstituted-alkyl, substituted- or unsubstituted- alkenyl, substituted- or unsubstituted- alkynyl, substituted- or unsubstituted- cycloalkyl, substituted- or unsubstituted- cycloalkenyl, substituted- or unsubstituted- aryl, substituted- or unsubstituted- heteroaryl, and substituted- or unsubstituted- heterocyclyl;

R^2 is selected from the group consisting of $-(C(R^c)(R^d))_m-C(=O)-N(R^6)R^7$, $-C(=O)N(R^8)R^9$ and $-O-(C(R^c)(R^d))_m-C(=O)-N(R^6)R^7$;

R^3 is selected from the group consisting of hydrogen, substituted- or unsubstituted- alkyl, and substituted- or unsubstituted- cycloalkyl;

R^4 is selected from the group consisting of hydrogen, halogen, substituted- or unsubstituted-alkyl, and substituted- or unsubstituted- cycloalkyl;

R^5 is substituted- or unsubstituted-aryl, wherein the substituents are selected from R^a and R^b ;

R^6 and R^7 are each independently selected from the group consisting of hydrogen, substituted- or unsubstituted- alkyl, substituted- or unsubstituted- cycloalkyl, and substituted- or unsubstituted- heterocyclyl; or R^6 and R^7 taken together with the nitrogen to which they are attached form a substituted- or unsubstituted- heterocycle;

R^8 and R^9 are each independently selected from the group consisting of hydrogen, substituted- or unsubstituted- cycloalkyl, and substituted- or unsubstituted- heterocyclyl, or R^8 and R^9 taken together with the nitrogen to which they are attached form a substituted- or unsubstituted- heterocycle;

with the provisos that both R^8 and R^9 cannot be hydrogen at the same time; and

when R^8 and R^9 are not a part of a heterocycle formed together with the nitrogen to which they are attached, at least one of the R^8 and R^9 is substituted- or unsubstituted- cycloalkyl or substituted- or unsubstituted- heterocyclyl;

R^a and R^b are selected from the group consisting of hydrogen, halogen, and haloalkyl;

R^c and R^d are independently selected from the group consisting of hydrogen, halogen, hydroxyl, and substituted- or unsubstituted- alkyl; or R^c and R^d taken together with the carbon to which they are attached form a substituted- or unsubstituted- cycloalkyl;

m is an integer selected from the group consisting of 1, 2, 3, and 4;

further wherein:

when the alkyl group or alkenyl group is substituted, the alkyl group or alkenyl group is substituted with 1 to 4 substituents independently selected from the group consisting of oxo, halogen, nitro, cyano, perhaloalkyl, cycloalkyl, aryl, heteroaryl, heterocyclyl, $-OR^{10b}$, $-SO_2R^{10a}$, $-C(=O)OR^{10a}$, $-OC(=O)R^{10a}$, $-C(=O)N(H)R^{10}$, $-OR^{10a}$, $-C(=O)N(alkyl)R^{10}$, $-N(H)C(=O)R^{10a}$, $-N(H)R^{10}$, $-N(alkyl)R^{10}$, $-N(H)C(=O)N(H)R^{10}$, $-N(H)C(=O)N(alkyl)R^{10}$, $-NH-SO_2-alkyl$, and $-NH-SO_2-cycloalkyl$;

when the cycloalkyl group or cycloalkenyl group is substituted, the cycloalkyl group or cycloalkenyl group is substituted with 1 to 3 substituents independently selected from the group consisting of oxo, halogen, nitro, cyano, alkyl, alkenyl, perhaloalkyl, hydroxyalkyl, aryl, heteroaryl, heterocyclyl, $-OR^{10b}$, $-SO_2R^{10a}$, $-C(=O)R^{10a}$, $-C(=O)OR^{10a}$, $-OC(=O)R^{10a}$, $-C(=O)N(H)R^{10}$, $-C(=O)N(alkyl)R^{10}$, $-N(H)C(=O)R^{10a}$, $-N(H)R^{10}$, $-N(alkyl)R^{10}$, $-N(H)C(=O)N(H)R^{10}$, and $-N(H)C(=O)N(alkyl)R^{10}$, $-NH-SO_2$ -alkyl, and $-NH-SO_2$ -cycloalkyl;

when the aryl group is substituted, the aryl group is substituted with 1 to 3 substituents independently selected from the group consisting of halogen, nitro, cyano, hydroxy, alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, heterocycle, $-O$ -alkyl, $-O$ -perhaloalkyl, $-N(alkyl)alkyl$, $-N(H)alkyl$, $-NH_2$, $-SO_2$ -alkyl, $-SO_2$ -perhaloalkyl, $-N(alkyl)C(=O)alkyl$, $-N(H)C(=O)alkyl$, $-C(=O)N(alkyl)alkyl$, $-C(=O)N(H)alkyl$, $-C(=O)NH_2$, $-SO_2N(alkyl)alkyl$, $-SO_2N(H)alkyl$, $-SO_2NH_2$, $-NH-SO_2$ -alkyl, and $-NH-SO_2$ -cycloalkyl;

when the heteroaryl group is substituted, the heteroaryl group is substituted with 1 to 3 substituents independently selected from the group consisting of halogen, nitro, cyano, hydroxy, alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, heterocycle, $-O$ -alkyl, O -perhaloalkyl, $-N(alkyl)alkyl$, $-N(H)alkyl$, $-NH_2$, $-SO_2$ -alkyl, $-SO_2$ -perhaloalkyl, $-N(alkyl)C(=O)alkyl$, $-N(H)C(=O)alkyl$, $-C(=O)N(alkyl)alkyl$, $-C(=O)N(H)alkyl$, $-C(=O)NH_2$, $-SO_2N(alkyl)alkyl$, $-SO_2N(H)alkyl$, $-SO_2NH_2$, $-NH-SO_2$ -alkyl, and $-NH-SO_2$ -cycloalkyl;

when the heterocyclyl group is substituted, the heterocyclyl group is substituted with 1 to 3 substituents, when the heterocyclic group is substituted on a ring carbon of the 'heterocycle', the substituents are independently selected from the group consisting of halogen, nitro, cyano, oxo, alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, heterocyclyl, $-OR^{10b}$, $-C(=O)OR^{10a}$, $-OC(=O)R^{10a}$, $-C(=O)N(H)R^{10}$, $-C(=O)N(alkyl)R^{10}$, $-N(H)C(=O)R^{10a}$, $-N(H)R^{10}$, $-N(alkyl)R^{10}$, $-N(H)C(=O)N(H)R^{10}$, $-N(H)C(=O)N(alkyl)R^{10}$; when the heterocyclic group is substituted on a ring nitrogen of the 'heterocycle', the substituents are independently selected from the group consisting of alkyl, alkenyl, cycloalkyl,

cycloalkenyl, aryl, heteroaryl, $-\text{SO}_2\text{R}^{10a}$, $-\text{C}(=\text{O})\text{R}^{10a}$, $\text{C}(=\text{O})\text{OR}^{10a}$, $-\text{C}(=\text{O})\text{N}(\text{H})\text{R}^{10}$, $-\text{C}(=\text{O})\text{N}(\text{alkyl})\text{R}^{10}$, $-\text{NH}-\text{SO}_2\text{-alkyl}$ and $-\text{NH}-\text{SO}_2\text{-cycloalkyl}$; when the heterocyclic group is substituted on a ring sulphur of the 'heterocycle', the sulfur is substituted with 1 or 2 oxo groups;

R^{10} is selected from the group consisting of hydrogen, alkyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, and heterocyclyl;

R^{10a} is selected from the group consisting of alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, and heterocyclyl; and

R^{10b} is selected from the group consisting of hydrogen, alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, and heterocyclyl.

2. The compound of claim 1, wherein R^1 is selected from the group consisting of hydrogen, substituted- or unsubstituted- alkyl, substituted- or unsubstituted- alkenyl, substituted- or unsubstituted- cycloalkyl, and substituted- or unsubstituted- heterocyclyl.
3. The compound of claim 1 or 2, wherein R^1 is selected from the group consisting of hydrogen, methyl, ethyl, isopropyl, allyl, difluoromethyl, cyclopropyl, 3-oxetanyl, $-\text{CH}_2\text{COOH}$, $-\text{CH}_2\text{COOC}_2\text{H}_5$, $-\text{CH}_2\text{CH}(\text{OH})\text{CH}_2(\text{OH})$, and $-\text{C}_2\text{H}_4\text{OH}$.
4. The compound of any one of claims 1-3, wherein R^3 and R^4 are independently substituted- or unsubstituted- alkyl.
5. The compound of any one of claims 1-4, wherein R^3 and R^4 are methyl.
6. The compound of any one of claims 1-5, wherein R^a and R^b are independently hydrogen or halogen.
7. The compound of any one of claims 1-6, wherein R^a and R^b are independently fluorine or iodine.
8. The compound of any one of claims 1-7, wherein R^c and R^d are independently selected from the group consisting of hydrogen, substituted- or unsubstituted-

alkyl, halogen, and hydroxyl; or R^c and R^d taken together with the carbon to which they are attached form a substituted- or unsubstituted- cycloalkyl ring.

9. The compound of any one of claims 1-8, wherein R^c and R^d are independently selected from the group consisting of hydrogen, methyl, fluoro, and hydroxyl; or R^c and R^d taken together with the carbon to which they are attached form cyclopropyl.
10. The compound of any one of claims 1-9, wherein m is 1 or 2.
11. The compound of any one of claims 1-10, wherein R^6 and R^7 are independently selected from the group consisting of hydrogen, substituted- or unsubstituted- alkyl, substituted- or unsubstituted- cycloalkyl, and substituted- or unsubstituted- heterocyclyl; or R^6 and R^7 taken together with the nitrogen atom to which they are attached form a substituted- or unsubstituted- heterocycle.
12. The compound of any one of claims 1-11, wherein R^6 and R^7 are independently selected from the group consisting of hydrogen, methyl, cyclopropyl, and 3-oxetane; or R^6 and R^7 are taken together with the nitrogen atom to which they are attached form azetidiny1 or 3-hydroxyazetidiny1.
13. The compound of any one of claims 1-12, wherein R^8 and R^9 are independently selected from the group consisting of hydrogen, substituted- or unsubstituted- cycloalkyl and substituted- or unsubstituted- heterocyclyl; or R^8 and R^9 taken together with the nitrogen to which they are attached form a substituted- or unsubstituted- heterocycle; with the provisos that both R^8 and R^9 are not hydrogen at the same time, and when R^8 and R^9 are not a part of a heterocycle formed together with the nitrogen to which they are attached, at least one of the R^8 and R^9 is substituted- or unsubstituted- cycloalkyl or substituted- or unsubstituted- heterocyclyl.
14. The compound of any one of claims 1-13, wherein R^8 and R^9 are independently selected from the group consisting of hydrogen, cyclopropyl, cyclopropyl substituted with $-C(=O)NH_2$ or $-CH_2OH$, 3-oxetanyl, tetrahydrofuran-3-yl, and tetrahydro-2H-pyranyl, or R^8 and R^9 taken together with the nitrogen to

which they are attached form 1,1-dioxidothiazolidinyl, 1,1-dioxidothiomorpholinyl, morpholinyl, azetidiny, 1-pyrrolidinyl, piperazinyl, 4-methylpiperazinyl, 3-hydroxypyrrolidinyl or 4-hydroxypiperidinyl; with the provisos that both R^8 and R^9 are not hydrogen at the same time, and when R^8 and R^9 are not a part of a heterocycle formed together with the nitrogen to which they are attached, at least one of the R^8 and R^9 is substituted- or unsubstituted- cycloalkyl, or substituted- or unsubstituted- heterocyclyl.

15. The compound of any one of claims 1-14, wherein:

R^1 is selected from the group consisting of hydrogen, substituted- or unsubstituted- alkyl, substituted- or unsubstituted- alkenyl, and substituted- or unsubstituted- heterocyclyl;

R^3 and R^4 are independently substituted- or unsubstituted- alkyl;

R^a and R^b are independently hydrogen or halogen;

R^c and R^d are independently selected from the group consisting of hydrogen, substituted- or unsubstituted- alkyl, halogen, and hydroxyl, or R^c and R^d taken together with the carbon to which they are attached form a substituted- or unsubstituted- cycloalkyl ring;

m is 1 or 2;

R^6 and R^7 are independently selected from the group consisting of hydrogen, substituted- or unsubstituted- alkyl, substituted- or unsubstituted- cycloalkyl, and substituted- or unsubstituted- heterocyclyl; or R^6 and R^7 taken together with the nitrogen atom to which they are attached form a substituted- or unsubstituted- heterocycle;

R^8 and R^9 are independently selected from the group consisting of hydrogen, substituted- or unsubstituted- cycloalkyl and substituted- or unsubstituted- heterocyclyl, or R^8 and R^9 taken together with the nitrogen to which they are attached form a substituted- or unsubstituted- heterocycle; with the provisos that

both R^8 and R^9 are not hydrogen at the same time, and when R^8 and R^9 are not a part of a heterocycle formed together with the nitrogen to which they are attached, at least one of the R^8 and R^9 is substituted- or unsubstituted- cycloalkyl or substituted- or unsubstituted- heterocyclyl.

16. The compound of any one of claims 1-15, wherein:

R^1 is selected from the group consisting of hydrogen, methyl, ethyl, isopropyl, allyl, difluoromethyl, cyclopropyl, 3-oxetanyl, $-\text{CH}_2\text{COOH}$, $-\text{CH}_2\text{COOC}_2\text{H}_5$, $-\text{CH}_2\text{CH}(\text{OH})\text{CH}_2(\text{OH})$, and $-\text{C}_2\text{H}_4\text{OH}$;

R^3 and R^4 are methyl;

R^a and R^b are independently hydrogen, fluorine or iodine;

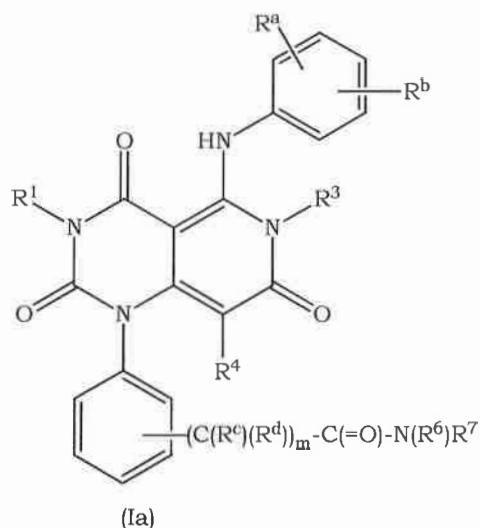
R^c and R^d are independently selected from the group consisting of hydrogen, methyl, fluoro, and hydroxyl, or R^c and R^d taken together with the carbon to which they are attached form a substituted- or unsubstituted- cyclopropyl;

m is 1 or 2;

R^6 and R^7 are independently selected from the group consisting of methyl, cyclopropyl, and 3-oxetane; or R^6 and R^7 taken together with the nitrogen atom to which they are attached form azetidinyll or 3-hydroxyazetidinyll;

R^8 and R^9 are independently selected from the group consisting of hydrogen, cyclopropyl, cyclopropyl substituted with $-\text{C}(=\text{O})\text{NH}_2$ or $-\text{CH}_2\text{OH}$, 3-oxetanyl, tetrahydrofuran-3-yl, and tetrahydro-2H-pyranyl, or R^8 and R^9 are taken together with the nitrogen to which they are attached form 1,1-dioxidothiazolidinyll, 1,1-dioxidothiomorpholinyl, morpholinyl, azetidinyll, 1-pyrrolidinyl, piperazinyl, 4-methylpiperazinyl, 3-hydroxypyrrolidinyl or 4-hydroxypiperidinyl; with the provisos that both R^8 and R^9 are not hydrogen at the same time, and when R^8 and R^9 are not a part of a heterocycle formed together with the nitrogen to which they are attached, at least one of the R^8 and R^9 is substituted- or unsubstituted- cycloalkyl or substituted- or unsubstituted- heterocyclyl.

17. A compound of the general formula Ia, its tautomeric forms, its stereoisomers, its pharmaceutically acceptable salts, their combinations with suitable medicament and pharmaceutical compositions containing them,



wherein:

R^1 is selected from the group consisting of hydrogen, substituted- or unsubstituted-alkyl, substituted- or unsubstituted- alkenyl, substituted- or unsubstituted- alkynyl, substituted- or unsubstituted- cycloalkyl, substituted- or unsubstituted- cycloalkenyl, substituted- or unsubstituted- aryl, substituted- or unsubstituted- heteroaryl, and substituted- or unsubstituted- heterocyclyl;

R^3 is selected from the group consisting of hydrogen, substituted- or unsubstituted- alkyl, and substituted- or unsubstituted- cycloalkyl;

R^4 is selected from the group consisting of hydrogen, halogen, substituted- or unsubstituted- alkyl, and substituted- or unsubstituted- cycloalkyl;

R^6 and R^7 are each independently selected from the group consisting of hydrogen, substituted- or unsubstituted- alkyl, substituted- or unsubstituted- cycloalkyl, and substituted- or unsubstituted- heterocyclyl; or R^6 and R^7 are taken together with the nitrogen to which they are attached to form a substituted- or unsubstituted- heterocycle;

R^a and R^b are independently selected from the group consisting of hydrogen, halogen and haloalkyl;

R^c and R^d are independently selected from the group consisting of hydrogen, halogen, hydroxyl, and substituted- or unsubstituted- alkyl, or R^c and R^d taken together with the carbon to which they are attached form a substituted- or unsubstituted- cycloalkyl;

m is an integer selected from the group consisting of 1, 2, 3, and 4;

when the alkyl group or alkenyl group is substituted, the alkyl group or alkenyl group is substituted with 1 to 4 substituents independently selected from the group consisting of oxo, halogen, nitro, cyano, perhaloalkyl, cycloalkyl, aryl, heteroaryl, heterocyclyl, $-OR^{10b}$, $-SO_2R^{10a}$, $-C(=O)OR^{10a}$, $-OC(=O)R^{10a}$, $-C(=O)N(H)R^{10}$, $-OR^{10a}$, $-C(=O)N(alkyl)R^{10}$, $-N(H)C(=O)R^{10a}$, $-N(H)R^{10}$, $-N(alkyl)R^{10}$, $-N(H)C(=O)N(H)R^{10}$, $-N(H)C(=O)N(alkyl)R^{10}$, $-NH-SO_2-alkyl$, and $-NH-SO_2-cycloalkyl$;

when the cycloalkyl group or cycloalkenyl group is substituted, the cycloalkyl group or cycloalkenyl group is substituted with 1 to 3 substituents independently selected from the group consisting of oxo, halogen, nitro, cyano, alkyl, alkenyl, perhaloalkyl, hydroxyalkyl, aryl, heteroaryl, heterocyclyl, $-OR^{10b}$, $-SO_2R^{10a}$, $-C(=O)R^{10a}$, $-C(=O)OR^{10a}$, $-OC(=O)R^{10a}$, $-C(=O)N(H)R^{10}$, $-C(=O)N(alkyl)R^{10}$, $-N(H)C(=O)R^{10a}$, $-N(H)R^{10}$, $-N(alkyl)R^{10}$, $-N(H)C(=O)N(H)R^{10}$, and $-N(H)C(=O)N(alkyl)R^{10}$, $-NH-SO_2-alkyl$ and $-NH-SO_2-cycloalkyl$;

when the aryl group is substituted, the aryl group is substituted with 1 to 3 substituents independently selected from the group consisting of halogen, nitro, cyano, hydroxy, alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, heterocycle, $-O-alkyl$, $-O-perhaloalkyl$, $-N(alkyl)alkyl$, $-N(H)alkyl$, $-NH_2$, $-SO_2-alkyl$, $-SO_2-perhaloalkyl$, $-N(alkyl)C(=O)alkyl$, $-N(H)C(=O)alkyl$, $-C(=O)N(alkyl)alkyl$, $-C(=O)N(H)alkyl$, $-C(=O)NH_2$, $-SO_2N(alkyl)alkyl$, $-SO_2N(H)alkyl$, $-SO_2NH_2$, $-NH-SO_2-alkyl$ and $-NH-SO_2-cycloalkyl$;

when the heteroaryl group is substituted, the heteroaryl group is substituted with 1 to 3 substituents independently selected from the group consisting of halogen, nitro, cyano, hydroxy, alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, heterocycle, -O-alkyl, O-perhaloalkyl, -N(alkyl)alkyl, -N(H)alkyl, -NH₂, -SO₂-alkyl, -SO₂-perhaloalkyl, -N(alkyl)C(=O)alkyl, -N(H)C(=O)alkyl, -C(=O)N(alkyl)alkyl, -C(=O)N(H)alkyl, -C(=O)NH₂, -SO₂N(alkyl)alkyl, -SO₂N(H)alkyl, -SO₂NH₂, -NH-SO₂-alkyl and -NH-SO₂-cycloalkyl;

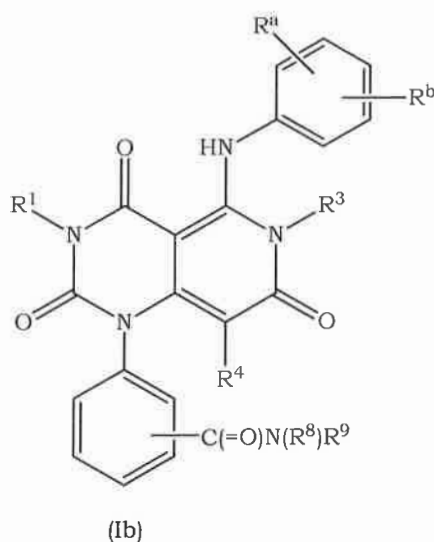
when the heterocyclyl group is substituted, the heterocyclyl group is substituted with 1 to 3 substituents, when the heterocyclic group is substituted on a ring carbon of the 'heterocycle', the substituents are independently selected from the group consisting of halogen, nitro, cyano, oxo, alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, heterocyclyl, -OR^{10b}, -C(=O)OR^{10a}, -OC(=O)R^{10a}, -C(=O)N(H)R¹⁰, -C(=O)N(alkyl)R¹⁰, -N(H)C(=O)R^{10a}, -N(H)R¹⁰, -N(alkyl)R¹⁰, -N(H)C(=O)N(H)R¹⁰, -N(H)C(=O)N(alkyl)R¹⁰; when the heterocyclic group is substituted on a ring nitrogen of 'heterocycle', the substituents are independently selected from the group consisting of alkyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, -SO₂R^{10a}, -C(=O)R^{10a}, C(=O)OR^{10a}, -C(=O)N(H)R¹⁰, -C(=O)N(alkyl)R¹⁰, -NH-SO₂-alkyl and -NH-SO₂-cycloalkyl; when the heterocyclic group is substituted on a ring sulphur of 'heterocycle', the sulfur is substituted with 1 or 2 oxo groups;

R¹⁰ is selected from the group consisting of hydrogen, alkyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, and heterocyclyl;

R^{10a} is selected from the group consisting of alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, and heterocyclyl; and

R^{10b} is selected from the group consisting of hydrogen, alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, and heterocyclyl.

18. A compound of the general formula Ib, its tautomeric forms, its stereoisomers, its pharmaceutically acceptable salts, their combinations with suitable medicament and pharmaceutical compositions containing them,



wherein:

R^1 is selected from the group consisting of hydrogen, substituted- or unsubstituted-alkyl, substituted- or unsubstituted- alkenyl, substituted- or unsubstituted- alkynyl, substituted- or unsubstituted- cycloalkyl, substituted- or unsubstituted- cycloalkenyl, substituted- or unsubstituted- aryl, substituted- or unsubstituted- heteroaryl, and substituted- or unsubstituted- heterocyclyl;

R^3 is selected from the group consisting of hydrogen, substituted- or unsubstituted- alkyl, and substituted- or unsubstituted- cycloalkyl;

R^4 is selected from the group consisting of hydrogen, halogen, substituted- or unsubstituted- alkyl, and substituted- or unsubstituted- cycloalkyl;

R^8 and R^9 are each independently selected from the group consisting of hydrogen, substituted- or unsubstituted- cycloalkyl, and substituted- or unsubstituted- heterocyclyl, or R^8 and R^9 taken together with the nitrogen to which they are attached form a substituted- or unsubstituted- heterocycle;

with the provisos that both R^8 and R^9 cannot be hydrogen at the same time,

and when R^8 and R^9 are not a part of heterocycle that is formed together with the nitrogen to which they are attached, at least one of the R^8 and R^9 is substituted- or

unsubstituted- cycloalkyl, substituted- or unsubstituted- cycloalkenyl, or substituted- or unsubstituted-heterocyclyl;

R^a and R^b are independently selected from the group consisting of hydrogen, halogen and haloalkyl;

when the alkyl group or alkenyl group is substituted, the alkyl group or alkenyl group is substituted with 1 to 4 substituents independently selected from the group consisting of oxo, halogen, nitro, cyano, perhaloalkyl, cycloalkyl, aryl, heteroaryl, heterocyclyl, $-OR^{10b}$, $-SO_2R^{10a}$, $-C(=O)OR^{10a}$, $-OC(=O)R^{10a}$, $-C(=O)N(H)R^{10}$, $-OR^{10a}$, $-C(=O)N(alkyl)R^{10}$, $-N(H)C(=O)R^{10a}$, $-N(H)R^{10}$, $-N(alkyl)R^{10}$, $-N(H)C(=O)N(H)R^{10}$, $-N(H)C(=O)N(alkyl)R^{10}$, $-NH-SO_2-alkyl$, and $-NH-SO_2-cycloalkyl$;

when the cycloalkyl group or cycloalkenyl group is substituted, the cycloalkyl group or cycloalkenyl group is substituted with 1 to 3 substituents independently selected from the group consisting of oxo, halogen, nitro, cyano, alkyl, alkenyl, perhaloalkyl, hydroxyalkyl, aryl, heteroaryl, heterocyclyl, $-OR^{10b}$, $-SO_2R^{10a}$, $-C(=O)R^{10a}$, $-C(=O)OR^{10a}$, $-OC(=O)R^{10a}$, $-C(=O)N(H)R^{10}$, $-C(=O)N(alkyl)R^{10}$, $-N(H)C(=O)R^{10a}$, $-N(H)R^{10}$, $-N(alkyl)R^{10}$, $-N(H)C(=O)N(H)R^{10}$, and $-N(H)C(=O)N(alkyl)R^{10}$, $-NH-SO_2-alkyl$, and $-NH-SO_2-cycloalkyl$;

when the aryl group is substituted, the aryl group is substituted with 1 to 3 substituents independently selected from the group consisting of halogen, nitro, cyano, hydroxy, alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, heterocycle, $-O-alkyl$, $-O-perhaloalkyl$, $-N(alkyl)alkyl$, $-N(H)alkyl$, $-NH_2$, $-SO_2-alkyl$, $-SO_2-perhaloalkyl$, $-N(alkyl)C(=O)alkyl$, $-N(H)C(=O)alkyl$, $-C(=O)N(alkyl)alkyl$, $-C(=O)N(H)alkyl$, $-C(=O)NH_2$, $-SO_2N(alkyl)alkyl$, $-SO_2N(H)alkyl$, $-SO_2NH_2$, $-NH-SO_2-alkyl$, and $-NH-SO_2-cycloalkyl$;

when the heteroaryl group is substituted, the heteroaryl group is substituted with 1 to 3 substituents independently selected from the group consisting of halogen, nitro, cyano, hydroxy, alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, heterocycle, $-O-alkyl$, $O-perhaloalkyl$, $-N(alkyl)alkyl$, $-N(H)alkyl$, $-NH_2$, $-SO_2-alkyl$, $-SO_2-perhaloalkyl$, $-N(alkyl)C(=O)alkyl$, $-N(H)C(=O)alkyl$, $-C(=O)N(alkyl)alkyl$, -

$C(=O)N(H)alkyl$, $-C(=O)NH_2$, $-SO_2N(alkyl)alkyl$, $-SO_2N(H)alkyl$, $-SO_2NH_2$, $-NH-SO_2-alkyl$ and $-NH-SO_2-cycloalkyl$;

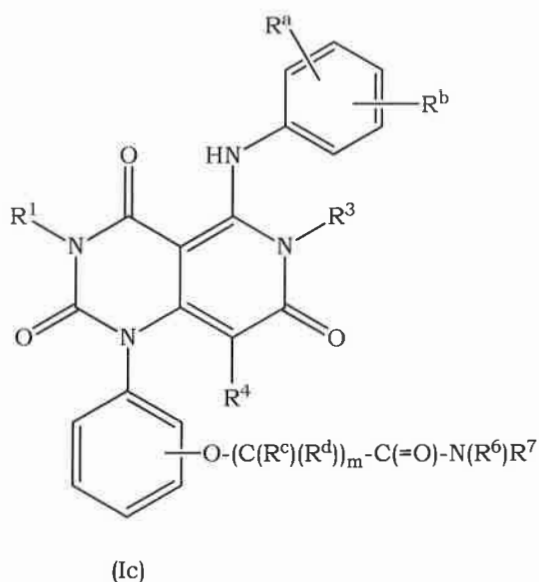
when the heterocyclyl group is substituted, the heterocyclyl group is substituted with 1 to 3 substituents, when the heterocyclic group is substituted on a ring carbon of the 'heterocycle', the substituents are independently selected from the group consisting of halogen, nitro, cyano, oxo, alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, heterocyclyl, $-OR^{10b}$, $-C(=O)OR^{10a}$, $-OC(=O)R^{10a}$, $-C(=O)N(H)R^{10}$, $-C(=O)N(alkyl)R^{10}$, $-N(H)C(=O)R^{10a}$, $-N(H)R^{10}$, $-N(alkyl)R^{10}$, $-N(H)C(=O)N(H)R^{10}$, $-N(H)C(=O)N(alkyl)R^{10}$; when the heterocyclic group is substituted on a ring nitrogen of the 'heterocycle', the substituents are independently selected from the group consisting of alkyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, $-SO_2R^{10a}$, $-C(=O)R^{10a}$, $C(=O)OR^{10a}$, $-C(=O)N(H)R^{10}$, $-C(=O)N(alkyl)R^{10}$, $-NH-SO_2-alkyl$ and $-NH-SO_2-cycloalkyl$; when the heterocyclic group is substituted on a ring sulphur of the 'heterocycle', is the sulfur substituted with 1 or 2 oxo groups;

R^{10} is selected from the group consisting of hydrogen, alkyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, and heterocyclyl;

R^{10a} is selected from the group consisting of alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, and heterocyclyl; and

R^{10b} is selected from the group consisting of hydrogen, alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, and heterocyclyl.

19. A compound of the general formula Ic, its tautomeric forms, its stereoisomers, its pharmaceutically acceptable salts, their combinations with suitable medicament and pharmaceutical compositions containing them,



wherein:

R^1 is selected from the group consisting of hydrogen, substituted- or unsubstituted-alkyl, substituted- or unsubstituted- alkenyl, substituted- or unsubstituted- alkynyl, substituted- or unsubstituted- cycloalkyl, substituted- or unsubstituted- cycloalkenyl, substituted- or unsubstituted- aryl, substituted- or unsubstituted- heteroaryl, and substituted- or unsubstituted- heterocyclyl;

R^3 is selected from the group consisting of hydrogen, substituted- or unsubstituted- alkyl, and substituted- or unsubstituted- cycloalkyl;

R^4 is selected from the group consisting of hydrogen, halogen, substituted- or unsubstituted- alkyl, and substituted- or unsubstituted- cycloalkyl;

R^6 and R^7 are each independently selected from the group consisting of hydrogen, substituted- or unsubstituted- alkyl, , substituted- or unsubstituted- cycloalkyl, and substituted- or unsubstituted- heterocyclyl; or R^6 and R^7 are taken together with the nitrogen to which they are attached to form a substituted- or unsubstituted- heterocycle;

R^a and R^b are independently selected from the group consisting of hydrogen, halogen and haloalkyl;

R^c and R^d are independently selected from the group consisting of hydrogen, halogen, hydroxyl, substituted- or unsubstituted- alkyl, and substituted- or unsubstituted- cycloalkyl, or R^c and R^d taken together with the carbon to which they are attached form a substituted- or unsubstituted- cycloalkyl;

m is an integer selected from the group consisting of 1, 2, 3, and 4;

when the alkyl group or alkenyl group is substituted, the alkyl group or alkenyl group is substituted with 1 to 4 substituents independently selected from the group consisting of oxo, halogen, nitro, cyano, perhaloalkyl, cycloalkyl, aryl, heteroaryl, heterocyclyl, $-OR^{10b}$, $-SO_2R^{10a}$, $-C(=O)OR^{10a}$, $-OC(=O)R^{10a}$, $-C(=O)N(H)R^{10}$, $-OR^{10a}$, $-C(=O)N(alkyl)R^{10}$, $-N(H)C(=O)R^{10a}$, $-N(H)R^{10}$, $-N(alkyl)R^{10}$, $-N(H)C(=O)N(H)R^{10}$, $-N(H)C(=O)N(alkyl)R^{10}$, $-NH-SO_2-alkyl$, and $-NH-SO_2-cycloalkyl$;

when the cycloalkyl group or cycloalkenyl group is substituted, the cycloalkyl group or cycloalkenyl group is substituted with 1 to 3 substituents independently selected from the group consisting of oxo, halogen, nitro, cyano, alkyl, alkenyl, perhaloalkyl, hydroxyalkyl, aryl, heteroaryl, heterocyclyl, $-OR^{10b}$, $-SO_2R^{10a}$, $-C(=O)R^{10a}$, $-C(=O)OR^{10a}$, $-OC(=O)R^{10a}$, $-C(=O)N(H)R^{10}$, $-C(=O)N(alkyl)R^{10}$, $-N(H)C(=O)R^{10a}$, $-N(H)R^{10}$, $-N(alkyl)R^{10}$, $-N(H)C(=O)N(H)R^{10}$, and $-N(H)C(=O)N(alkyl)R^{10}$, $-NH-SO_2-alkyl$ and $-NH-SO_2-cycloalkyl$;

when the aryl group is substituted, the aryl group is substituted with 1 to 3 substituents independently selected from the group consisting of halogen, nitro, cyano, hydroxy, alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, heterocycle, $-O-alkyl$, $-O-perhaloalkyl$, $-N(alkyl)alkyl$, $-N(H)alkyl$, $-NH_2$, $-SO_2-alkyl$, $-SO_2-perhaloalkyl$, $-N(alkyl)C(=O)alkyl$, $-N(H)C(=O)alkyl$, $-C(=O)N(alkyl)alkyl$, $-C(=O)N(H)alkyl$, $-C(=O)NH_2$, $-SO_2N(alkyl)alkyl$, $-SO_2N(H)alkyl$, $-SO_2NH_2$, $-NH-SO_2-alkyl$, and $-NH-SO_2-cycloalkyl$;

when the heteroaryl group is substituted, the heteroaryl group is substituted with 1 to 3 substituents independently selected from the group consisting of halogen, nitro, cyano, hydroxy, alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, heterocycle, $-O-alkyl$, $O-perhaloalkyl$, $-N(alkyl)alkyl$, $-N(H)alkyl$, $-NH_2$, $-SO_2-alkyl$, -

SO₂-perhaloalkyl, -N(alkyl)C(=O)alkyl, -N(H)C(=O)alkyl, -C(=O)N(alkyl)alkyl, -C(=O)N(H)alkyl, -C(=O)NH₂, -SO₂N(alkyl)alkyl, -SO₂N(H)alkyl, -SO₂NH₂, -NH-SO₂-alkyl, and -NH-SO₂-cycloalkyl;

when the heterocyclyl group is a substituted heterocyclyl group, the heterocyclyl group is substituted with 1 to 3 substituents, when the heterocyclic group is substituted on a ring carbon of the 'heterocycle', the substituents are independently selected from the group consisting of halogen, nitro, cyano, oxo, alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, heterocyclyl, -OR^{10b}, -C(=O)OR^{10a}, -OC(=O)R^{10a}, -C(=O)N(H)R¹⁰, -C(=O)N(alkyl)R¹⁰, -N(H)C(=O)R^{10a}, -N(H)R¹⁰, -N(alkyl)R¹⁰, -N(H)C(=O)N(H)R¹⁰, and -N(H)C(=O)N(alkyl)R¹⁰; when the heterocyclic group is substituted on a ring nitrogen of the 'heterocycle', the substituents are independently selected from the group consisting of alkyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, -SO₂R^{10a}, -C(=O)R^{10a}, C(=O)OR^{10a}, -C(=O)N(H)R¹⁰, -C(=O)N(alkyl)R¹⁰, -NH-SO₂-alkyl and -NH-SO₂-cycloalkyl; when the heterocyclic group is substituted on a ring sulphur of 'heterocycle', the sulfur is substituted with 1 or 2 oxo groups;

R¹⁰ is selected from the group consisting of hydrogen, alkyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, and heterocyclyl;

R^{10a} is selected from the group consisting of alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, and heterocyclyl; and

R^{10b} is selected from the group consisting of hydrogen, alkyl, alkenyl, perhaloalkyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, and heterocyclyl.

20. The A compounds of any one of claims 1-19, wherein the compound is selected from the group consisting of

3-(3-(5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)propanamide (Compound 1);

N-cyclopropyl-3-(5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)benzamide (Compound 2);

1-(3-(azetidine-1-carbonyl)phenyl)-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethylpyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound-3);

N-cyclopropyl-2-(3-(5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)acetamide (Compound 4);

2-(3-(5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenoxy)-N-methylacetamide (Compound 5);

N-cyclopropyl-2-(3-(5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenoxy)acetamide (Compound 6);

5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-1-(3-(morpholine-4-carbonyl)phenyl)pyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound 7);

1-(3-(1,1-dioxidothiomorpholine-4-carbonyl)phenyl)-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethylpyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound 8);

2-(3-(5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)-2-methylpropanamide (Compound 9);

2-(3-(5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)-N,N-dimethylacetamide (Compound 10);

2,2-difluoro-2-(3-(5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,7,8-tetrahydropyrido[2,3-d]pyrimidin-1(2H)-yl)phenyl)acetamide (Compound 11);

N-(1-carbamoylcyclopropyl)-3-(5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)benzamide (Compound 12);

3-(5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)-N-(tetrahydro-2H-pyran-4-yl)benzamide (Compound 13);

2-(3-(5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)-2-hydroxyacetamide (Compound 14);

3-(3-(5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)-N-methylpropanamide (Compound 15);

2-(3-(5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenoxy)acetamide (Compound 16);

1-(3-(1,1-dioxidothiazolidine-3-carbonyl)phenyl)-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethylpyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound 17);

5-((2-fluoro-4-iodophenyl)amino)-1-(3-(4-hydroxypiperidine-1-carbonyl)phenyl)-6,8-dimethylpyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound 18);

N-cyclopropyl-3-(3-(5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)propanamide (Compound 19);

2-(3-(5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenoxy)-2-methylpropanamide (Compound 20);

- 5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-1-(3-(4-methylpiperazine-1-carbonyl)phenyl)pyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound 21);
- 5-((2-fluoro-4-iodophenyl)amino)-1-(3-(3-hydroxypyrrolidine-1-carbonyl)phenyl)-6,8-dimethylpyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound 22);
- 5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-1-(3-(piperazine-1-carbonyl)phenyl)pyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound 23);
- 1-(3-(azetidine-1-carbonyl)phenyl)-3-cyclopropyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethylpyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound 24);
- N-cyclopropyl-2-(3-(3-cyclopropyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenoxy)acetamide (Compound 25);
- 2-(3-(3-cyclopropyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)acetamide (Compound 26);
- 3-cyclopropyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-1-(3-(pyrrolidine-1-carbonyl)phenyl)pyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound 27);
- 2-(3-(3-cyclopropyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)-2-methylpropanamide (Compound 28);
- 2-(3-(3-cyclopropyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)-N,N-dimethylacetamide (Compound 29);

- 2-(3-(3-cyclopropyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,7,8-tetrahydropyrido[2,3-d]pyrimidin-1(2H)-yl)phenyl)-2,2-difluoroacetamide (Compound 30);
- 2-(3-(3-cyclopropyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)-N-(oxetan-3-yl)acetamide (Compound 31);
- 2-(3-(3-cyclopropyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)-2-hydroxyacetamide (Compound 32);
- 3-cyclopropyl-5-((2-fluoro-4-iodophenyl)amino)-1-(3-(2-(3-hydroxyazetidin-1-yl)-2-oxoethyl)phenyl)-6,8-dimethylpyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound 33);
- 3-(3-(3-cyclopropyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)propanamide (Compound 34);
- 2-(3-(3-cyclopropyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenoxy)acetamide (Compound 35);
- 3-(3-(3-cyclopropyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)-N-methylpropanamide (Compound 36);
- N-cyclopropyl-3-(3-cyclopropyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)benzamide (Compound 37);
- 3-cyclopropyl-1-(3-(1,1-dioxidothiazolidine-3-carbonyl)phenyl)-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethylpyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound 38);

3-cyclopropyl-1-(3-(1,1-dioxidothiomorpholine-4-carbonyl)phenyl)-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethylpyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound 39);

N-cyclopropyl-3-(3-(3-cyclopropyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl) propanamide (Compound 40);

N-cyclopropyl-2-(3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenoxy)acetamide (Compound 41);

2-(3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)acetamide (Compound 42);

2-(3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)-2-methylpropanamide (Compound 43);

2-(3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)-N,N-dimethylacetamide (Compound 44);

2,2-difluoro-2-(3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)acetamide (Compound 45);

1-(3-(2-(azetidin-1-yl)-2-oxoethyl)phenyl)-5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethylpyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound 46);

2-(3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)-2-hydroxyacetamide (Compound 47);

5-((2-fluoro-4-iodophenyl)amino)-1-(3-(2-(3-hydroxyazetidin-1-yl)-2-oxoethyl) phenyl)-3,6,8-trimethylpyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound 48);

3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetra hydropyrido[4,3-d]pyrimidin-1(2H)-yl)-N-(oxetan-3-yl)benzamide (Compound 49);

2-(3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetra hydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)-N-(oxetan-3-yl)acetamide (Compound 50);

3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetra hydropyrido[4,3-d]pyrimidin-1(2H)-yl)-N-(tetrahydrofuran-3-yl)benzamide (Compound 51);

3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)-N-(tetrahydro-2H-pyran-4-yl)benzamide (Compound 52);

3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)-N-(1-(hydroxymethyl)cyclopropyl) benzamide (Compound 53);

N-cyclopropyl-3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)benzamide (Compound 54);

N-cyclopropyl-3-(5-((2-fluoro-4-iodophenyl)amino)-3-(2-hydroxyethyl)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)benzamide (Compound 55);

1-(3-(azetidine-1-carbonyl)phenyl)-5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethylpyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound 56);

2-(3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenoxy)acetamide (Compound 57);

N-cyclopropyl-2-(3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)acetamide (Compound 58);

N-cyclopropyl-2-(3-(3-ethyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)acetamide (Compound 59);

2-(3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenoxy)-N-methylacetamide (Compound 60);

3-(3-(3-ethyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)propanamide (Compound 61);

N-cyclopropyl-3-(3-ethyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)benzamide (Compound 62);

5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-1-(3-(morpholine-4-carbonyl)phenyl)pyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound 63);

1-(3-(1,1-dioxidothiomorpholine-4-carbonyl)phenyl)-5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethylpyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound 65);

1-(3-(1,1-dioxidothiomorpholine-4-carbonyl)phenyl)-3-ethyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethylpyrido[4,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione (Compound 66);

2-(3-(3-ethyl-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)-N,N-dimethylacetamide (Compound 67);

3-(3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)propanamide (Compound 68);

N-cyclopropyl-3-(5-((2-fluoro-4-iodophenyl)amino)-3-isopropyl-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)benzamide (Compound 69);

2-(3-(5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-3-(oxetan-3-yl)-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenoxy)acetamide (Compound 71);

N-cyclopropyl-3-(3-(difluoromethyl)-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)benzamide (Compound 72);

N-cyclopropyl-3-(3-(2,3-dihydroxypropyl)-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)benzamide (Compound 73);

2-(1-(3-(cyclopropylcarbamoyl)phenyl)-5-((2-fluoro-4-iodophenyl)amino)-6,8-dimethyl-2,4,7-trioxo-1,2,6,7-tetrahydropyrido[4,3-d]pyrimidin-3(4H)-yl)acetic acid (Compound 74);

(R)-2-(3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)-2-hydroxyacetamide (Compound 75); (S)-2-(3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetrahydropyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)-2-hydroxyacetamide (Compound 76);

1-(3-(5-((2-fluoro-4-iodo phenyl)amino)-6,8-dimethyl -2,4,7-trioxo-3,4,6,7-tetra hydropyrido [4,3-d] pyrimidin-1(2H)-yl)phenyl) cyclopropanecarboxamide (Compound 77);

1-(3-(3-cyclopropyl-5-((2-fluoro-4-iodophenyl) amino)-6,8-dimethyl-2,4,7-trioxo-3,4,6,7-tetra hydropyrido[4,3-d] pyrimidin-1(2H)-yl) phenyl)cyclopropane carboxamide (Compound 78);
and

1-(3-(5-((2-fluoro-4-iodophenyl)amino)-3,6,8-trimethyl-2,4,7-trioxo-3,4,6,7-tetrahydro pyrido[4,3-d]pyrimidin-1(2H)-yl)phenyl)cyclopropanecarboxamide (Compound 79).

21. A pharmaceutical composition comprising a compound or a pharmaceutically acceptable salt of any one of claims 1-20 and one or more pharmaceutically acceptable carriers, diluents, or excipients.
22. ~~Use of a~~The compound of formula I, Ia, Ib, Ic their tautomeric forms, their stereoisomers, their pharmaceutically acceptable salts as claimed in any one of claims 1-20, ~~in the preparation of medicament for use in~~ inhibiting MEK enzymes, ~~comprising contacting said compound in an amount sufficient to inhibit said enzyme, and wherein said enzyme is inhibited.~~
23. ~~The use as claimed in claim 22, wherein said MEK enzyme is MEK kinase.~~
24. ~~The use as claimed in claim 22, wherein said contacting occurs within a cell.~~
- 25.23. ~~Use of a~~The compound of formula I, Ia, Ib, Ic their tautomeric forms, their stereoisomers, or its pharmaceutically acceptable salts, as claimed in any one of claims 1-20, for use in the preparation of medicament for treatment of a MEK mediated disorder in an individual suffering from said disorder, comprising administering to said individual an effective amount of a composition comprising said compound.
26. ~~The use as claimed in claim 25, further comprising administering an additional therapy.~~
27. ~~The use as claimed in claim 26, wherein said additional therapy is radiation therapy, chemotherapy, or a combination of both.~~
28. ~~The use as claimed in claim 25, further comprising administering at least one additional therapeutic agent.~~
- 29.24. The compound use as claimed in claim 235, wherein said MEK mediated disorder is selected from the group consisting of inflammatory diseases, infections, autoimmune disorders, stroke, ischemia, cardiac disorder, neurological disorders, fibrogenetic disorders, proliferative disorders, hyperproliferative disorders, tumors, leukemias, neoplasms, cancers, carcinomas, metabolic diseases and malignant diseases.

30. ~~The use as claimed in claim 25, wherein said MEK mediated disorder is a hyperproliferative disease.~~
31. ~~The use as claimed in claim 25, wherein said MEK mediated disorder is cancer, tumors, leukemias, neoplasms, or carcinomas.~~
32. ~~The use as claimed in claim 25, wherein said MEK mediated disorder is an inflammatory disease.~~
33. ~~The use as claimed in claim 25, wherein said individual is a mammal.~~
34. ~~Use of a compound of formula I, Ia, Ib, Ic their tautomeric forms, their stereoisomers, or its pharmaceutically acceptable salts, as claimed in any one of claims 1-20, in the preparation of medicament for the treatment or prophylaxis of a proliferative disease in an individual in need thereof comprising administering to said individual an effective amount of a composition comprising said compound.~~
35. ~~The use as claimed in claim 34, wherein said proliferative disease is cancer, psoriasis, restenosis, autoimmune disease, or atherosclerosis.~~
- 36.25. ~~The Use of a compound of formula I, Ia, Ib, Ic their tautomeric forms, their stereoisomers, or its pharmaceutically acceptable salts, as claimed in any one of claims 1-20, for use in the preparation of medicament for the treatment or prophylaxis of an inflammatory disease in an individual in need thereof comprising administering to said individual an effective amount of a composition comprising said compound.~~
37. ~~The use as claimed in claim 36, wherein said inflammatory disease is rheumatoid arthritis or multiple sclerosis.~~
- 38.26. ~~The Use of a compound of formula I, Ia, Ib, Ic their tautomeric forms, their stereoisomers, or its pharmaceutically acceptable salts, as claimed in any one of claims 1-20, for use in the preparation of medicament for degrading, inhibiting the growth of, or killing cancer cells comprising contacting the cells with an effective amount of a composition to degrade, inhibit the growth of, or kill cancer cells, wherein the composition comprises said compound.~~
- 39.27. ~~The Use of a compound of formula I, Ia, Ib, Ic their tautomeric forms, their stereoisomers, or its pharmaceutically acceptable salts, as claimed in any one of claims 1-20, for use in the preparation of medicament for inhibiting tumor size increase, reducing the size of a tumor, reducing tumor proliferation, or preventing tumor proliferation in an individual in need thereof comprising administering to said individual an effective amount of a composition to inhibit~~

tumor size increase, reduce the size of a tumor, reduce tumor proliferation or prevent tumor proliferation, wherein the composition comprises said compound.