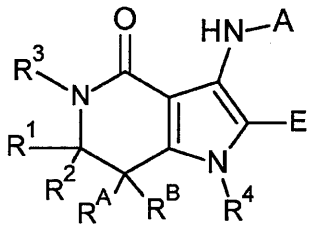
Claims

1. A compound of formula (I)



(I)

in which:

R^1 represents hydrogen, C_1-C_6-alkyl or C_1-C_6-haloalkyl;

R^2 represents hydrogen, C_1-C_6-alkyl or C_1-C_6-haloalkyl; or

R^1 and R^2 together with the carbon atom to which they are attached form a 3- to 6-membered cycloalkyl ring;

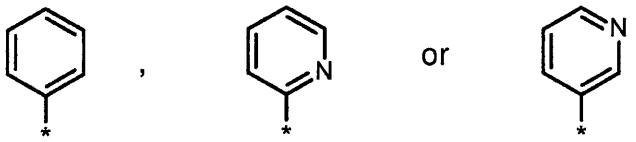
R^3 represents hydrogen, C_1-C_4-alkyl, C_1-C_4-haloalkyl, R^{11}-C(O)-, R^{11}O-C(O)- or phenyl-C_1-C_3-alkyl-, wherein said phenyl group is optionally substituted, one or more times, independently of each other, with R^5;

R^4 represents hydrogen, C_1-C_4-alkyl or C_1-C_4-alkoxy-C_2-C_4-alkyl-;

R^A represents hydrogen, hydroxy or C_1-C_4-alkyl;

R^B represents hydrogen; or

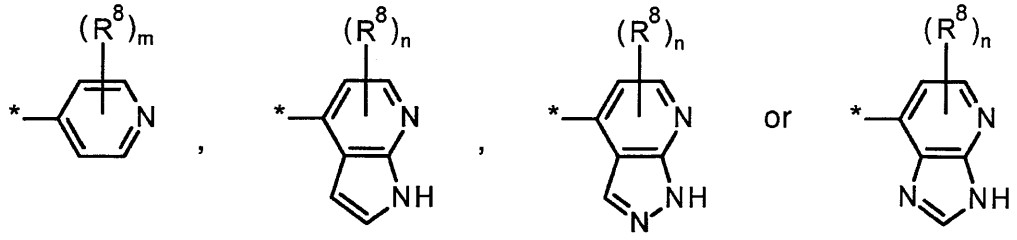
R^B and R^2 together form an additional bond; A represents a group selected from:



wherein * indicates the point of attachment of said group with the rest of the molecule and said group is optionally substituted, one or more times, independently of each other, with R^5;

R^5 represents hydroxy, halogen, cyano, C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_4-haloalkyl or C_1-C_4-haloalkoxy;

E represents a group selected from:



wherein * indicates the point of attachment of said group with the rest of the molecule;

R^8 represents, independently of each other, halogen, hydroxy, nitro, cyano, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_6-alkoxy, C_3-C_6-cycloalkyl, C_3-C_6-halocycloalkyl, $R^9R^{10}N$-, R^{11}-C(O)-NH-, $R^{11}O$-C(O)-NH- or $R^9R^{10}N$-C(O)-NH-,

wherein said C_1-C_6-alkoxy is optionally substituted one, two or three times, independently of each other, with halogen and is optionally substituted one time with hydroxy, C_1-C_4-alkoxy, $R^9R^{10}N$-, C_3-C_6-cycloalkyl, 4- to 7-membered heterocycloalkyl or phenyl, which is optionally substituted one or more times, independently of each other, with R^5;

R^9, R^{10} represent, independently of each other, hydrogen, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_1-C_4-haloalkyl, C_3-C_6-halocycloalkyl or phenyl, wherein said phenyl group is optionally substituted, one or more times, independently of each other, with R^5, or

R^9 and R^{10} together with the nitrogen atom to which they are attached form a 3- to 6-membered nitrogen containing heterocyclic ring, optionally containing one additional heteroatom or heteroatom containing group selected from O, NH and S, and which may be optionally substituted, one or more times, independently of each other, with R^5;

R^{11} represents, independently of each other, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_1-C_4-haloalkyl or C_3-C_6-halocycloalkyl;

m represents 0, 1, 2 or 3;

n represents 0, 1, or 2;

or an N-oxide, a pharmaceutically acceptable salt, a tautomer or a stereoisomer of said compound, or a pharmaceutically acceptable salt of said N-oxide, tautomer or stereoisomer.

2. The compound of formula (I) according to claim 1,

wherein

R^1 represents hydrogen, C_1-C_4-alkyl or C_1-C_4-haloalkyl;

R^2 represents hydrogen, C_1-C_4-alkyl or C_1-C_4-haloalkyl; or

R^1 and R^2 together with the carbon atom to which they are attached form a 3- to 6-membered cycloalkyl ring;

R^3 represents hydrogen, C_1-C_4-alkyl, C_1-C_4-haloalkyl, R^{11}-C(O)- or R^{11}O-C(O)-;

R^4 represents hydrogen, C_1-C_4-alkyl or C_1-C_4-alkoxy-C_2-C_4-alkyl-;

R^A represents hydrogen, hydroxy or C_1-C_4-alkyl;

R^B represents hydrogen; or

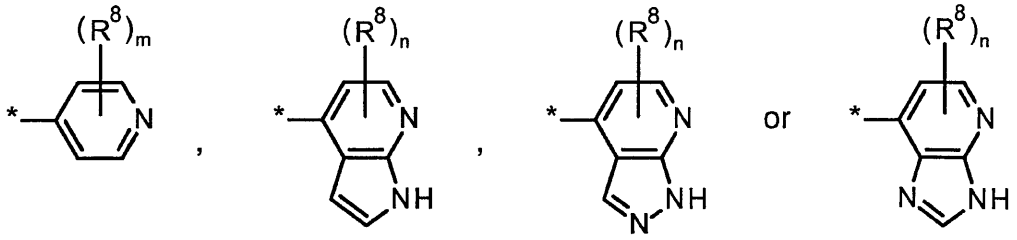
R^B and R^2 together form an additional bond;

A represents a group

wherein * indicates the point of attachment of said group with the rest of the molecule and said group is optionally substituted, one or more times, independently of each other, with R^5;

R^5 represents hydroxy, halogen, cyano, C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_4-haloalkyl or C_1-C_4-haloalkoxy;

E represents a group selected from:



wherein * indicates the point of attachment of said group with the rest of the molecule;

R^8 represents, independently of each other, halogen, hydroxy, nitro, cyano, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_6-alkoxy, C_3-C_6-cycloalkyl, C_3-C_6-halocycloalkyl, $R^9R^{10}N$-, R^{11}-C(O)-NH-, R^{11}O-C(O)-NH- or $R^9R^{10}N$-C(O)-NH-,

wherein said C_1-C_6-alkoxy is optionally substituted one, two or three times, independently of each other, with halogen or is optionally substituted one time with hydroxy, C_1-C_4-alkoxy, $R^9R^{10}N$-, C_3-C_6-cycloalkyl, 4- to 7-membered heterocycloalkyl or phenyl, which is optionally substituted one or more times, independently of each other, with R^5;

R^9, R^{10} represent, independently of each other, hydrogen, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_1-C_4-haloalkyl, C_3-C_6-halocycloalkyl or phenyl, wherein said phenyl group is optionally substituted, one or more times, independently of each other, with R^5, or

R^9 and R^{10} together with the nitrogen atom to which they are attached form a 3- to 6-membered nitrogen containing heterocyclic ring, optionally containing one additional heteroatom or heteroatom containing group selected from O, NH or S, and which may be optionally substituted, one or more times, independently of each other, with R^5;

R^{11} represents, independently of each other, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_1-C_4-haloalkyl or C_3-C_6-halocycloalkyl;

m represents 0, 1, 2 or 3;

n represents 0, or 1;

or an N-oxide, a pharmaceutically acceptable salt, a tautomer or a stereoisomer of said compound, or a pharmaceutically acceptable salt of said N-oxide, tautomer or stereoisomer.

3. The compound of formula (I) according to claim 1 or 2, wherein :

R^1 represents hydrogen, C_1-C_4-alkyl or C_1-C_4-haloalkyl;

R^2 represents hydrogen, C_1-C_4-alkyl or C_1-C_4-haloalkyl; or

R^1 and R^2 together with the carbon atom to which they are attached form a 3- to 6-membered cycloalkyl ring;

R^3 represents hydrogen, C_1-C_4-alkyl, C_1-C_4-haloalkyl, R^{11}-C(O)- or R^{11}O-C(O)-;

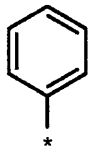
R^4 represents hydrogen, C_1-C_4-alkyl or C_1-C_4-alkoxy-C_2-C_4-alkyl;

R^A represents hydrogen, hydroxy or C_1-C_4-alkyl;

R^B represents hydrogen; or

R^B and R^2 together form an additional bond;

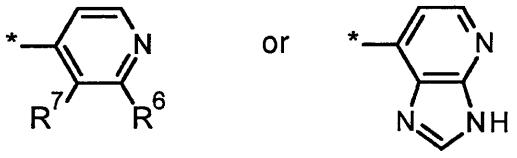
A represents a group



wherein * indicates the point of attachment of said group with the rest of the molecule and said group is optionally substituted, one or more times, independently of each other, with R^5;

R^5 represents hydroxy, halogen, cyano, C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_4-haloalkyl or C_1-C_4-haloalkoxy;

E represents a group selected from:



wherein * indicates the point of attachment of said group with the rest of the molecule;

R^6, R^7 represents, independently of each other, hydrogen, halogen, hydroxy, cyano, C_1-C_4-alkyl, C_1-C_6-alkoxy, C_3-C_6-cycloalkyl, C_3-C_6-halocycloalkyl, $R^9R^{10}N$-, R^{11}-C(O)-NH-, $R^{11}O$-C(O)-NH- or $R^9R^{10}N$-C(O)-NH-,

wherein said C_1-C_6-alkoxy is optionally substituted one, two or three times, independently of each other, with halogen or is optionally substituted one time with hydroxy, C_1-C_4-alkoxy, $R^9R^{10}N$-, C_3-C_6-cycloalkyl, 5- to 6-membered heterocycloalkyl or phenyl, which is optionally substituted, one or more times, independently of each other, with R^5;

R^9, R^{10} represent, independently of each other, hydrogen or C_1-C_4-alkyl;

R^{11} represents, independently of each other, C_1-C_4-alkyl, C_3-C_6-cycloalkyl or C_3-C_6-halocycloalkyl;

or an N-oxide, a pharmaceutically acceptable salt, a tautomer or a stereoisomer of said compound, or a pharmaceutically acceptable salt of said N-oxide, tautomer or stereoisomer.

4. The compound of formula (I) according to any one of claims 1 to 3, wherein,

R^1 represents hydrogen or C_1-C_4-alkyl;

R^2 represents hydrogen or C_1-C_4-alkyl; or

R^1 and R^2 together with the carbon atom to which they are attached form a 3- to 6-membered cycloalkyl ring;

R^3 represents hydrogen, C_1-C_4-alkyl, R^{11}-C(O)- or $R^{11}O$-C(O)-;

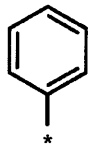
R^4 represents hydrogen, C_1-C_4-alkyl or C_1-C_4-alkoxy-C_2-C_4-alkyl;

R^A represents hydrogen;

R^B represents hydrogen; or

R^B and R^2 together form an additional bond;

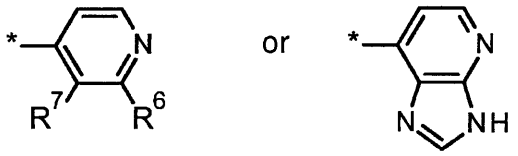
A represents a group



wherein * indicates the point of attachment of said group with the rest of the molecule and said group is optionally substituted, one or more times, independently of each other, with R^5;

R^5 represents halogen;

E represents a group selected from:



wherein * indicates the point of attachment of said group with the rest of the molecule;

R^6, R^7 represents, independently of each other, hydrogen, halogen, C_1-C_4-alkyl, C_1-C_6-alkoxy, $R^9R^{10}N$-, R^{11}-C(O)-NH- or $R^9R^{10}N$-C(O)-NH-,

wherein said C_1-C_6-alkoxy is optionally substituted one, two or three times, independently of each other, with halogen or is optionally substituted one time with hydroxy, methoxy, $(CH_3)_2N$-, cyclopropyl, 5-membered heterocycloalkyl or phenyl, which is optionally substituted once with R^5;

R^9, R^{10} represent, independently of each other, hydrogen or C_1-C_4-alkyl;

R^{11} represents, independently of each other, C_1-C_4-alkyl, C_3-C_6-cycloalkyl or C_3-C_6-halocycloalkyl;

or an N-oxide, a pharmaceutically acceptable salt, a tautomer or a stereoisomer of said compound, or a pharmaceutically acceptable salt of said N-oxide, tautomer or stereoisomer.

5. The compound of formula (I) according to any one of claims 1 to 4,

wherein

R^1 represents hydrogen or methyl;

R^2 represents hydrogen or methyl;

R^3 represents hydrogen, methyl, iso-propyl-C(O)- or tert-butyl-O-C(O)-;

R^4 represents hydrogen, ethyl or 2-methoxy-ethyl;

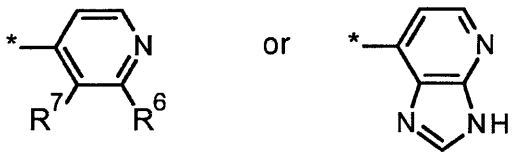
R^A represents hydrogen;

R^B represents hydrogen; or

R^B and R^2 together form an additional bond;

A represents phenyl, which is optionally substituted with one or two fluorine atoms;

E represents a group selected from:



wherein * indicates the point of attachment of said group with the rest of the molecule;

R^6 represents hydrogen, methyl, H_2N-, R^{11}-C(O)-NH- or $R^9R^{10}N$-C(O)-NH-;

R^7 represents hydrogen, fluoro, methyl, methoxy, cyclopropylmethoxy, tetrahydrofuran-3-ylmethoxy, 2-hydroxyethoxy, 2-methoxyethoxy, 2,2-difluoroethoxy, 2,2,2-trifluoroethoxy, 2-(dimethylamino)ethoxy, propoxy 3,3,3-trifluoropropoxy, butoxy, 3,3-dimethylbutoxy or benzyloxy,

R^9, R^{10} represent, independently of each other, hydrogen or ethyl;

R^{11} represents, independently of each other, methyl, iso-propyl, tert-butyl, cyclopropyl or fluorocyclopropyl;

or an N-oxide, a pharmaceutically acceptable salt, a tautomer or a stereoisomer of said compound, or a pharmaceutically acceptable salt of said N-oxide, tautomer or stereoisomer.

6. The compound of formula (I) according to any of claims 1 to 5, which is selected from the group consisting of:

6,6-dimethyl-3-(phenylamino)-2-(pyridin-4-yl)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

3-(phenylamino)-2-(pyridin-4-yl)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

2-(3-methylpyridin-4-yl)-3-(phenylamino)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

1-ethyl-6,6-dimethyl-3-(phenylamino)-2-(pyridin-4-yl)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c] pyridin-4-one

1-ethyl-3-(phenylamino)-2-(pyridin-4-yl)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

tert-butyl 4-oxo-3-(phenylamino)-2-(pyridin-4-yl)-1,4,6,7-tetrahydro-5H-pyrrolo[3,2-c] pyridine-5-carboxylate

3-[(4-fluorophenyl)amino]-2-(pyridin-4-yl)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

2-(2-aminopyridin-4-yl)-3-(phenylamino)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

1-(2-methoxyethyl)-3-(phenylamino)-2-(pyridin-4-yl)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c] pyridin-4-one

1-ethyl-3-[(4-fluorophenyl)amino]-2-(pyridin-4-yl)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c] pyridin-4-one

2-(2-methylpyridin-4-yl)-3-(phenylamino)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

1-ethyl-2-(2-methylpyridin-4-yl)-3-(phenylamino)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c] pyridin-4-one

N-{4-[4-oxo-3-(phenylamino)-4,5,6,7-tetrahydro-1H-pyrrolo[3,2-c]pyridin-2-yl]pyridin-2-yl}acetamide

N-{4-[1-ethyl-4-oxo-3-(phenylamino)-4,5,6,7-tetrahydro-1H-pyrrolo[3,2-c]pyridin-2-yl]pyridin-2-yl}acetamide

2-(3-fluoropyridin-4-yl)-3-(phenylamino)-1,5-dihydro-4H-pyrrolo[3,2-c]pyridin-4-one

2-(3-fluoropyridin-4-yl)-3-(phenylamino)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

1-ethyl-3-{4-[4-oxo-3-(phenylamino)-4,5,6,7-tetrahydro-1H-pyrrolo[3,2-c]pyridin-2-yl]pyridin-2-yl}urea

5-methyl-3-(phenylamino)-2-(pyridin-4-yl)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

2-(2-aminopyridin-4-yl)-5-methyl-3-(phenylamino)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c] pyridin-4-one

2-methyl-N-{4-[5-(2-methylpropanoyl)-4-oxo-3-(phenylamino)-4,5,6,7-tetrahydro-1H-pyrrolo[3,2-c]pyridin-2-yl]pyridin-2-yl}propanamide,

2-(3-fluoropyridin-4-yl)-5-methyl-3-(phenylamino)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

2-(3-methoxypyridin-4-yl)-5-methyl-3-(phenylamino)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

N-{4-[5-methyl-4-oxo-3-(phenylamino)-4,5,6,7-tetrahydro-1H-pyrrolo[3,2-c]pyridin-2-yl]pyridin-2-yl}acetamide

N-{4-[5-methyl-4-oxo-3-(phenylamino)-4,5,6,7-tetrahydro-1H-pyrrolo[3,2-c]pyridin-2-yl]pyridin-2-yl}cyclopropanecarboxamide

(1R,2R)-2-fluoro-N-{4-[5-methyl-4-oxo-3-(phenylamino)-4,5,6,7-tetrahydro-1H-pyrrolo[3,2-c]pyridin-2-yl]pyridin-2-yl}cyclopropanecarboxamide

2-[3-(2-hydroxyethoxy)pyridin-4-yl]-5-methyl-3-(phenylamino)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

2-[3-(cyclopropylmethoxy)pyridin-4-yl]-5-methyl-3-(phenylamino)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

5-methyl-3-(phenylamino)-2-(3-propoxypyridin-4-yl)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

2-[3-(2,2-difluoroethoxy)pyridin-4-yl]-5-methyl-3-(phenylamino)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

5-methyl-3-(phenylamino)-2-[3-(2,2,2-trifluoroethoxy)pyridin-4-yl]-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

2-[3-(2-methoxyethoxy)pyridin-4-yl]-5-methyl-3-(phenylamino)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

2-[3-(benzyloxy)pyridin-4-yl]-5-methyl-3-(phenylamino)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

5-methyl-3-(phenylamino)-2-[3-(3,3,3-trifluoropropoxy)pyridin-4-yl]-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

5-methyl-3-(phenylamino)-2-{3-[(3S)-tetrahydrofuran-3-ylmethoxy]pyridin-4-yl}-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

2-[3-(3,3-dimethylbutoxy)pyridin-4-yl]-5-methyl-3-(phenylamino)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

2-(3H-imidazo[4,5-b]pyridin-7-yl)-5-methyl-3-(phenylamino)-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

2-[3-(cyclopropylmethoxy)pyridin-4-yl]-3-[(3,4-difluorophenyl)amino]-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

2-[3-(cyclopropylmethoxy)pyridin-4-yl]-3-[(4-fluorophenyl)amino]-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

2-[3-(cyclopropylmethoxy)pyridin-4-yl]-3-[(3-fluorophenyl)amino]-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

(1S,2S)-2-fluoro-N-{4-[5-methyl-4-oxo-3-(phenylamino)-4,5,6,7-tetrahydro-1H-pyrrolo[3,2-c]pyridin-2-yl]pyridin-2-yl}cyclopropanecarboxamide

2-[3-(2,2-difluoroethoxy)pyridin-4-yl]-3-[(3-fluorophenyl)amino]-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

2-[3-(2,2-difluoroethoxy)pyridin-4-yl]-3-[(4-fluorophenyl)amino]-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

2-[3-(2,2-difluoroethoxy)pyridin-4-yl]-3-[(3,4-difluorophenyl)amino]-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

2-{3-[2-(dimethylamino)ethoxy]pyridin-4-yl}-3-[(4-fluorophenyl)amino]-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

3-[(3,4-difluorophenyl)amino]-2-[3-(2-methoxyethoxy)pyridin-4-yl]-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

3-[(4-fluorophenyl)amino]-2-[3-(2-methoxyethoxy)pyridin-4-yl]-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

3-[(3-fluorophenyl)amino]-2-[3-(2-methoxyethoxy)pyridin-4-yl]-1,5,6,7-tetrahydro-4H-pyrrolo[3,2-c]pyridin-4-one

or an N-oxide, a pharmaceutically acceptable salt, a tautomer or a stereoisomer of said compound, or a pharmaceutically acceptable salt of said N-oxide, tautomer or stereoisomer.

7. A compound of general formula (I) according to any of claims 1 to 6 for use in the treatment or prophylaxis of diseases.

8. The compound of general formula (I) for use according to claim 7, wherein the diseases are hyperproliferative diseases and/or disorders responsive to induction of cell death.

9. The compound of general formula (I) for use according to according to claim 8, wherein the hyperproliferative diseases and/or disorders responsive to induction of cell death are haematological tumours, solid tumours and/or metastases thereof.

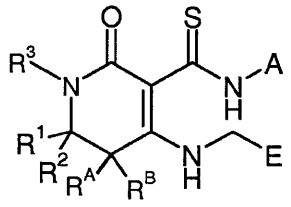
10. The compound of formula (I) for use according to claim 9, wherein the tumors are cervical -, breast -, non-small cell lung -, prostate -, colon – and melanoma tumors and/or metastases thereof.

11. A pharmaceutical composition comprising at least one compound of general formula (I) according to any of claims 1 to 6, together with at least one pharmaceutically acceptable auxiliary.

12. A composition according to claim 11 for use in the treatment of haematological tumours, solid tumours and/or metastases thereof.

13. A combination comprising one or more first active ingredients selected from a compound of general formula (I) according to any of claims 1 to 6, and one or more second active ingredients selected from chemotherapeutic anti-cancer agents and target-specific anti-cancer agents.

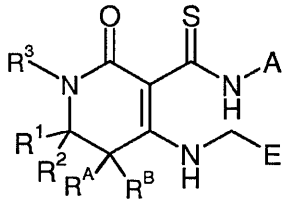
14. A compound of formula 1-2



1-2

wherein R^1, R^2, R^3, R^A, R^B, A and E have the meaning according to any of claims 1 to 6.

15. The use of a compound of formula 1-2



1-2

wherein R^1, R^2, R^3, R^A, R^B, A and E have the meaning according to any of claims 1 to 6 for preparing a compound of formula (I) according to any of claims 1 to 6, or an N-oxide, a salt, a tautomer or a stereoisomer of said compound, or a salt of said N-oxide, tautomer or stereoisomer.