CLAIMS

1. A QC inhibitor for the treatment and/or prevention of an inflammatory disease or condition, selected from mild cognitive impairment (MCI), restenosis, and pancreatitis.

2. Use of a QC inhibitor for the treatment and/or prevention of an inflammatory disease or condition selected from mild cognitive impairment (MCI), restenosis, and pancreatitis.

3. Use of a QC inhibitor for the preparation of a medicament for treating and/or preventing an inflammatory disease or condition selected from mild cognitive impairment (MCI), restenosis, and pancreatitis.

4. The QC inhibitor or use according to any of claims 1 to 3, wherein the disease is mild cognitive impairment (MCI).

5. The QC inhibitor or use according to any of claims 1 to 4, wherein the QC inhibitor is administered in combination with a further agent, selected from the group consisting of nootropic agents, neuroptrotectants, antiparkinsonian drugs, amyloid protein deposition inhibitors, beta amyloid synthesis inhibitors, antidepressants, anxiolytic drugs, antipsychotic drugs and anti-multiple sclerosis drugs.

6. The QC inhibitor or use according to any of claims 1 to 3, wherein the disease is selected from restenosis and pancreatitis.

7. The QC inhibitor or use according to any of claims 1 to 3 or 6, wherein the disease is restenosis.

8. The QC-inhibitor or use according to any of claims 1 to 3, 6 or 7, wherein the QC inhibitor is administered in combination with a further agent, selected from the group consisting of inhibitors of the angiotensin converting enzyme (ACE); angiotensin II receptor blockers; diuretics; calcium channel blockers (CCB); beta-blockers; platelet aggregation inhibitors; cholesterol absorption modulators; HMG-Co-A reductase inhibitors; high density lipoprotein (HDL) increasing compounds; renin inhibitors; IL-6 inhibitors; antiinflammatory corticosteroids; antiproliferative agents; nitric oxide donors; inhibitors of extracellular matrix synthesis; growth factor or cytokine signal transduction inhibitors; MCP-1 antagonists and tyrosine kinase inhibitors.

9. A Method of treatment and/or prevention of an inflammatory disease or condition, selected from mild cognitive impairment (MCI), restenosis and pancreatitis, wherein an effective amount of a QC inhibitor is administered to a subject in need thereof.

10. The method of treatment and/or prevention according to claim 9, wherein the disease is mild cognitive impairment (MCI).

11. The method of treatment and/or prevention according to claim 9 or 10, wherein the QC inhibitor is administered in combination with a further agent, selected from the group consisting of nootropic agents, neuroprotectants, antiparkinsonian drugs, amyloid protein deposition inhibitors, beta amyloid synthesis inhibitors, antidepressants, anxiolytic drugs, antipsychotic drugs and anti-multiple sclerosis drugs.

12. The method of treatment and/or prevention according to claim 9, wherein the disease is selected from restenosis and pancreatitis.

13. The method of treatment and/or prevention according to claim 9 or 12, wherein the disease is restenosis.

14. The method of treatment and/or prevention according to any of claim 9 or 12, wherein the disease is pancreatitis.

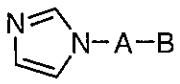
15. The method of treatment and/or prevention according to any of claims 9, or 12 to 14, wherein the QC inhibitor is administered in combination with a further agent, selected from the group consisting of inhibitors of the angiotensin converting enzyme (ACE); angiotensin II receptor blockers; diuretics; calcium channel blockers (CCB); beta-blockers; platelet aggregation inhibitors; cholesterol absorption modulators; HMG-Co-A reductase inhibitors; high density lipoprotein (HDL) increasing compounds; renin inhibitors; IL-6 inhibitors; antiinflammatory corticosteroids; antiproliferative agents; nitric oxide donors; inhibitors of extracellular matrix synthesis; growth factor or cytokine signal transduction inhibitors; MCP-1 antagonists and tyrosine kinase inhibitors.

16. The use according to any of claims 2 to 8, wherein the disease and/or condition afflict a human being.

17. The method of any of claims 9 to 15, wherein the disease and/or condition afflicts a human being.

18. The QC-inhibitor, use or method according to any one of claims 1 to 17, wherein said QC inhibitor is a compound of

formula 1 including pharmaceutically acceptable salts, solvates and stereoisomers thereof:



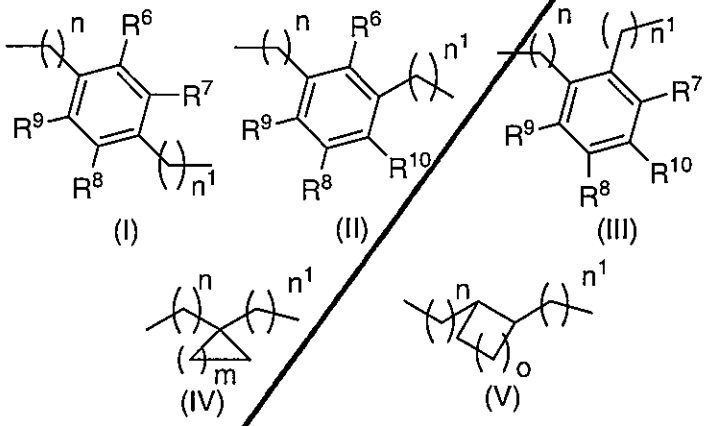
formula 1

wherein:

A is either:

an alkyl chain, alkenyl chain or alkynyl chain;

or A is a group selected from:



wherein:

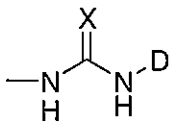
R^6, R^7, R^8, R^9 and R^{10} are independently H or an alkyl chain, alkenyl chain, alkynyl chain, cycloalkyl, a carbocycle, aryl, heteroaryl, or a heterocycle;

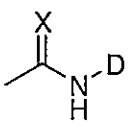
n and n^1 are independently 1 - 5;

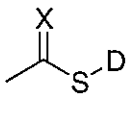
m is 1 - 5;

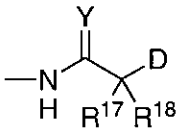
o is 0 - 4;

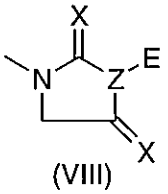
and B is a group selected from:

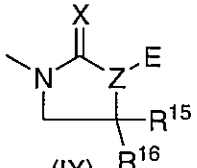

(VI)

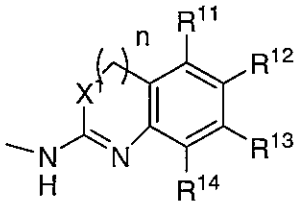

(VIa)

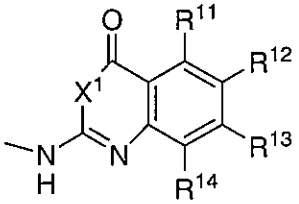

(VIb)

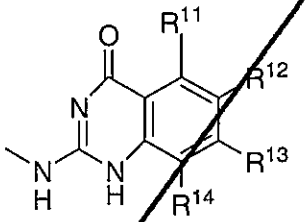

(VII)

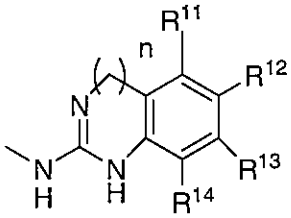

(VIII)

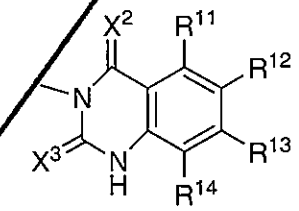

(IX)


(X)


(XI)


(XII)


(XIII)


(XIV)

wherein:

D and E independently represent an alkyl chain, alkenyl chain, alkynyl chain, a cycloalkyl, carbocycle, aryl, -alkylaryl, heteroaryl, -alkylheteroaryl, acyl or a heterocycle.

Z is CH or N;

X represents $CR^{20}R^{21}$, O, S, NR^{19}, with the proviso for formulas (VIII) and (IX) that, if Z = CH, X is O or S;

R^{19} is selected from the group consisting of H, alkyl, cycloalkyl, aryl, heteroaryl, -oxyalkyl, -oxyaryl, carbonyl, amido, hydroxy, NO_2, NH_2, CN;

R^{20} and R^{21} are independently selected from H, alkyl, cycloalkyl, heterocycle, aryl, heteroaryl, -oxyalkyl, -oxyaryl, carbonyl, amido, NO_2 , NH_2, CN, CF_3 ;

X^1, X^2 and X^3 are independently O or S provided that X^2 and X^3 are not both O;

Y is O or S, with the proviso that Y may not by O, when the carbocycle formed by R^{17} and R^{18} has 3 members in the ring;

Z is CH or N;

R^{11}, R^{12}, R^{13} and R^{14} can be independently selected from H, an alkyl chain, an alkenyl chain, an alkynyl chain, cycloalkyl, carbocycle, aryl, heteroaryl, a heterocycle, halo, alkoxy-, -thioalkyl, carboxyl, carboxylic acid ester, carbonyl, carbamide, carbimide, thiocarbamide or thiocarbonyl, NH_2, NO_2;

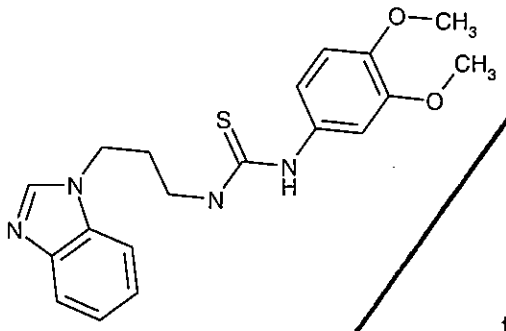
R^{15} and R^{16} are independently of each other H or a branched or unbranched alkyl chain, or a branched or unbranched alkenyl chain;

R^{17} and R^{18} are independently selected from H or an alkyl chain, alkenyl chain, a alkynyl chain, a carbocycle, aryl, heteroaryl, heteroalkyl, or can be connected to form a carbocycle with up to 6 ring atoms;

n is 0 or 1.

19. The QC-inhibitor, use or method according to any one of claims 1 to 18, wherein said QC inhibitor or a pharmaceutically acceptable salt, solvate or stereoisomer thereof is selected from

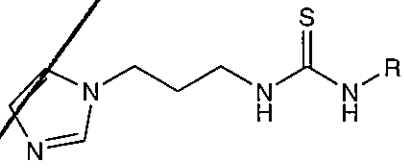
a compound of formula 1*:



formula 1*

or

a compound of of formula 1a,



(1a)

wherein R is defined in examples 1 to 53:

Example	R
1	Methyl
2	*tert*-Butyl
3	Benzyl
4	Phenyl
5	4-(fluoro)-phenyl
6	4-(chloro)-phenyl
7	4-(ethyl)-phenyl

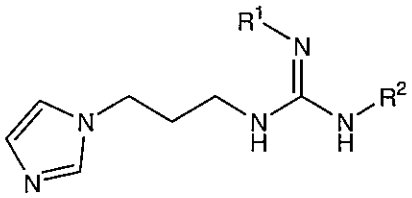
Example	R
8	4-(trifluoromethyl)-phenyl
9	4-(methoxy-carbonyl)-Phenyl
10	4-(acetyl)-phenyl
11	4-(methoxy)-phenyl
12	bicyclo[2.2.1]hept-5-en-2-yl
13	3,4-(dimethoxy)-phenyl
14	2,4-(dimethoxy)-phenyl
15	3,5-(dimethoxy)-phenyl
16	2-(methoxy-carbonyl)-Phenyl
17	4-(oxazol-5-y)-phenyl
18	4-(pyrazol-1-yl)-phenyl
19	4-(isopropyl)-phenyl
20	4-(piperidine-1-sulfonyl)-Phenyl
21	4-(morpholin-4-yl)-phenyl
22	4-(cyano)-phenyl

Example	R
23	2,3-dihydro-benzo[1,4]dioxin-6-yl
24	benzo[1,3]dioxol-5-yl
25	3,4,5(trimethoxy)-phenyl
26	3-(methoxy)-phenyl
27	4-(ethoxy)-phenyl
28	4-(benzyloxy)-phenyl
29	4-(methoxy)-benzyl
30	3,4-(dimethoxy)-benzyl
31	2-(methoxy-carbonyl)-thiophene-3-yl
32	3-(ethoxy-carbonyl)-4,5,6,7-tetrahydrobenzo[b]thio-phene2-yl
33	2-(methoxy-carbonyl)-4-(methyl)-thiophene-3-yl
34	Benzo[c][1,2,5]thiazol-4-yl
35	Benzo[c][1,2,5]thiazol-5-yl

Example	R
36	5-(methyl)-3-(phenyl)-isooxazol-4-yl
37	3,5-(dimethyl)-isooxazol-4-yl
38	4-(iodo)-phenyl
39	4-(bromo)-phenyl
40	4-(methyl)-phenyl
41	Naphthalen-1-yl
42	4-(nitro)-phenyl
43	Butyl
44	Cyclooctyl
45	Furan-2-ylmethyl
46	Tetrahydrofuran-2-ylmethyl
47	Benzo[1,3]dioxol-5-ylmethyl
48	2-(morpholin-4-yl)-ethyl
49	4-(methylsulfanyl)-phenyl
50	4-(dimethylamino)-phenyl
51	4-(trifluoromethoxy)-phenyl
52	Benzoyl
53	Pyridin-4-yl

or

a compound of of formula 1b,



(1b)

wherein R^1 and R^2 are defined in examples 54 to 95.

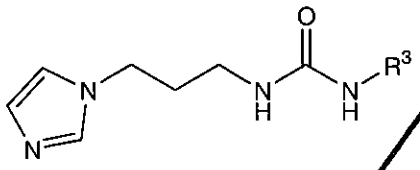
Example	R^1	R^2
54	Cyano	Methyl
55	Cyano	3,4-(dimethoxy)-phenyl
56	Cyano	2,4-(dimethoxy)-phenyl
57	Cyano	3,5-(dimethoxy)-phenyl
58	Cyano	2,3-dihydrobenzo[b][1,4]dioxin-7-yl
59	Cyano	Benzo[d][1,3]dioxol-6-yl
60	Cyano	3,4,5-(trimethoxy)-phenyl
61	Cyano	3-(methoxy)-phenyl
62	Cyano	4-(ethoxy)-phenyl
63	Cyano	4-(benzyloxy)-phenyl
64	Cyano	Phenyl
65	Cyano	4-(methoxy)-phenyl
66	Cyano	4-(acetyl)-phenyl
67	Cyano	4-(nitro)-phenyl
68	Cyano	Benzyl
69	Cyano	Naphthalen-1-yl

Example	R^1	R^2
70	Cyano	4-(fluoro)-phenyl
71	Cyano	4-(iodo)-phenyl
72	Cyano	4-(bromo)-phenyl
73	Cyano	Cyclooctyl
74	Cyano	*tert*-butyl
75	Cyano	4-(methyl)-phenyl
76	Cyano	4-(methylthio)-phenyl
77	Cyano	4-(ethyl)-phenyl
78	Cyano	4-(dimethylamino)-phenyl
79	Cyano	Butyl
80	Cyano	Trityl
81	Cyano	(Benzo[d][1,3]dioxol-6yl)methyl
82	Cyano	(tetrahydrofuran-2yl)methyl
83	Cyano	4-(trifluoromethyl)-phenyl
84	Cyano	(furan-2-yl)methyl
85	Cyano	2-(morpholin-4-yl)-ethyl
86	Cyano	4-(oxazol-5yl)-phenyl
87	Cyano	Pyridin-3-yl
88	Cyano	4-(cyano)-phenyl
89	Cyano	4-(trifluoromethoxy)-phenyl
90	Cyano	4-(piperidinosulfonyl)-phenyl

Example	R^1	R^2
91	Cyano	4-(1H-pyrazol-1-yl)phenyl
92	H	3,4-(dimethoxy)-phenyl
93	Methyl	3,4-(dimethoxy)-phenyl
94	Cyano	2,3,4-(trimethoxy)-phenyl
95	Cyano	Cycloheptyl

or

a compound of formula 1c,



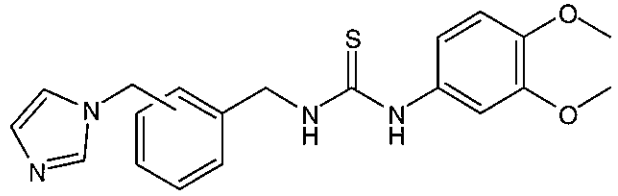
(1c)

wherein R^3 is defined in examples 96 to 102.

Example	R^3
96	Ethyl
97	6-fluoro-4H-benzo[d][1,3]dioxin-8-yl
98	3-(cylopentyloxy)-4-(methoxy)-phenyl
99	4-(heptyloxy)-phenyl
100	3,4-dihydro-2H-benzo[b][1,4]dioxepin-7-yl
101	4-(butoxy)-phenyl
102	3,4-(dimethoxy)-phenyl

or

a compound of formula 1d,

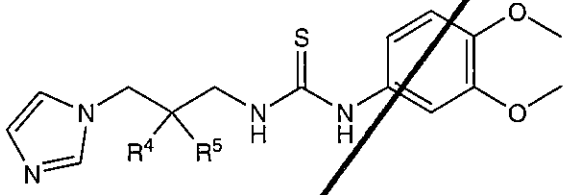


(1d)

wherein the position on the ring is defined in examples 103 to 105,

or

a compound of formula 1e,



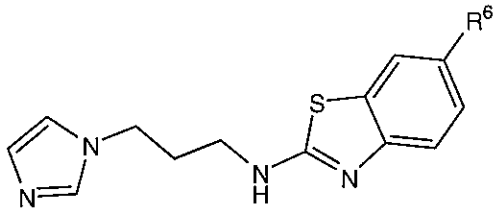
(1e)

wherein R^4 and R^5 are defined in examples 106 to 109.

Example	R^4	R^5
106(S)	H	Methyl
107(R)	Methyl	H
108	Methyl	Methyl
109	$-CH_2-CH_2-$	

or

a compound of formula 1f,



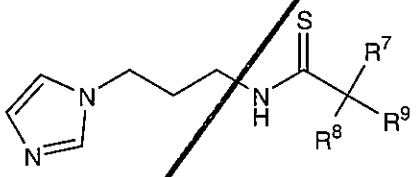
(1f)

wherein R^6 is defined in examples 110 to 112.

Example	R^6
110	H
111	Chloro
112	Methoxy

or

a compound of formula 1g,



(1g)

wherein R^7, R^8 and R^9 are defined in examples 113 to 132.

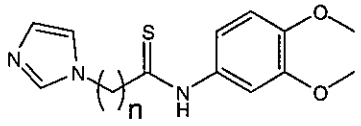
Example	R^7	R^8	R^9
113	Phenyl	H	H
114	Thiophen-2-yl	H	H
115(R)	Phenyl	Methyl	H
116(S)	Phenyl	H	Methyl
117	Phenyl	H	Ethyl
118	Phenyl	H	Phenyl
119	3,4-(dimethoxy)-Phenyl	H	H

Example	R^7	R^8	R^9
120	3,4-(dimethoxy)-Phenyl	Methyl	Methyl
121	4-(chloro)-phenyl	$-CH_2-CH_2-CH_2-$	
122	4-(chloro)-phenyl	$-CH_2-C_2H_4-CH_2-$	
123	4-(methoxy)-phenyl	$-CH_2-C_3H_6-CH_2-$	
124	4-(methoxy)-phenyl	$-CH_2-CH_2-$	
125	3,4-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	
126	3,4,5-(trimethoxy)-Phenyl	$-CH_2-CH_2-$	
127	2,3,4-(trimethoxy)-Phenyl	$-CH_2-CH_2-$	
128	2-(methoxy)-phenyl	$-CH_2-CH_2-$	
129	3-(methoxy)-phenyl	$-CH_2-CH_2-$	
130	2,3-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	
131	3,5-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	

Example	R^7	R^8	R^9
132	2,5-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	

or

a compound of formula 1h,



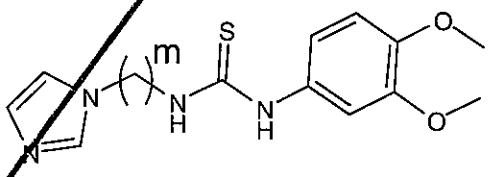
(1h)

wherein n is defined in examples 133 to 135.

Example	n
133	3
134	4
135	5

or

a compound of formula 1i,



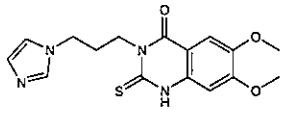
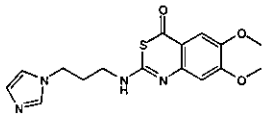
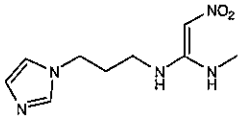
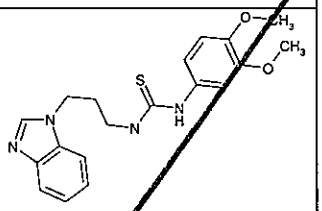
(1i)

wherein m is defined in examples 136 and 137.

Example	m
136	2
137	4

or

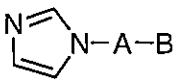
a compound selected from examples 138 to 141.

Example	Structure
138	
139	
140	
141	

20. The QC-inhibitor, use or method according to any one of claims 1 to 19, wherein said QC inhibitor is 1-(3-(1H-imidazole-1-yl)propyl)-3-(3,4-dimethoxy-phenyl) thiourea hydrochloride.

21. Diagnostic assay, comprising a QC inhibitor.

22. Diagnostic assay according to claim 21, wherein said QC inhibitor is a compound of formula 1 including pharmaceutically acceptable salts, solvates and stereoisomers thereof:

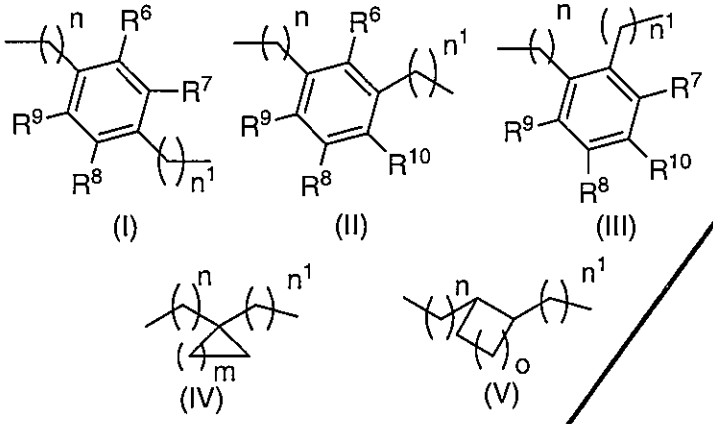
 formula 1

wherein:

A is either:

an alkyl chain, alkenyl chain or alkynyl chain;

or A is a group selected from:



wherein:

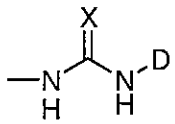
R^6, R^7, R^8, R^9 and R^{10} are independently H or an alkyl chain, alkenyl chain, alkynyl chain, cycloalkyl, a carbocycle, aryl, heteroaryl, or a heterocycle;

n and n^1 are independently 1 - 5;

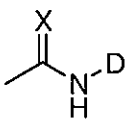
m is 1 - 5;

o is 0 - 4;

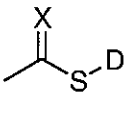
and B is a group selected from:



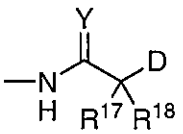
(VI)



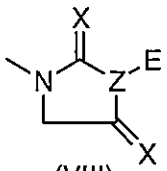
(VIa)



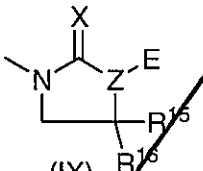
(VIb)



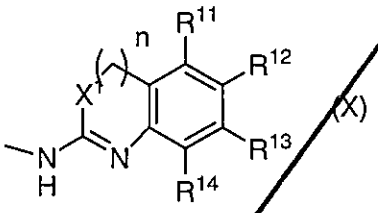
(VII)



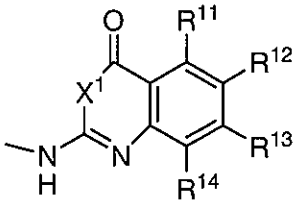
(VIII)



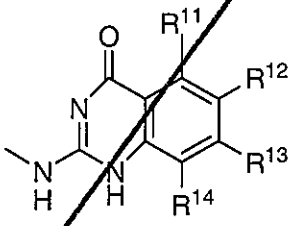
(IX)



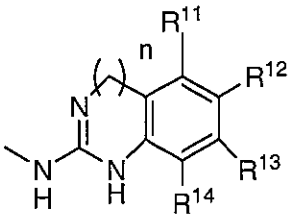
(X)



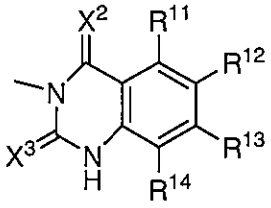
(XI)



(XII)



(XIII)



(XIV)

wherein:

D and E independently represent an alkyl chain, alkenyl chain, alkynyl chain, a cycloalkyl, carbocycle, aryl, -alkylaryl, heteroaryl, -alkylheteroaryl, acyl or a heterocycle.

Z is CH or N;

X represents $CR^{20}R^{21}$, O, S, NR^{19}, with the proviso for formulas (VIII) and (IX) that, if Z = CH, X is O or S;

R^{19} is selected from the group consisting of H, alkyl, cycloalkyl, aryl, heteroaryl, -oxyalkyl, -oxyaryl, carbonyl, amido, hydroxy, NO_2, NH_2, CN;

R^{20} and R^{21} are independently selected from H, alkyl, cycloalkyl, heterocycle, aryl, heteroaryl, -oxyalkyl, -oxyaryl, carbonyl, amido, NO_2 , NH_2, CN, CF_3 ;

X^1, X^2 and X^3 are independently O or S provided that X^2 and X^3 are not both O;

Y is O or S, with the proviso that Y may not by O, when the carbocycle formed by R^{17} and R^{18} has 3 members in the ring;

Z is CH or N;

R^{11}, R^{12}, R^{13} and R^{14} can be independently selected from H, an alkyl chain, an alkenyl chain, an alkynyl chain, cycloalkyl, carbocycle, aryl, heteroaryl, a heterocycle, halo, alkoxy-, -thioalkyl, carboxyl, carboxylic acid ester, carbonyl, carbamide, carbimide, thiocarbamide or thiocarbonyl, NH_2, NO_2;

R^{15} and R^{16} are independently of each other H or a branched or unbranched alkyl chain, or a branched or unbranched alkenyl chain;

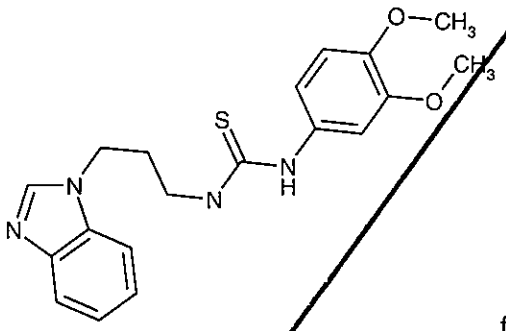
R^{17} and R^{18} are independently selected from H or an alkyl chain, alkenyl chain, a alkynyl chain, a carbocycle, aryl,

heteroaryl, heteroalkyl, or can be connected to form a carbocycle with up to 6 ring atoms;

n is 0 or 1.

23. Diagnostic assay according to claim 21 or 22, wherein said QC inhibitor or a pharmaceutically acceptable salt, solvate or stereoisomer thereof is selected from

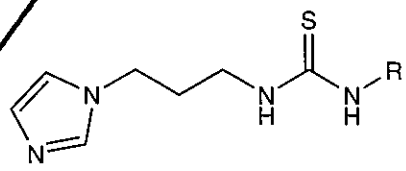
a compound of formula 1*:



formula 1*

or

a compound of of formula 1a,



(1a)

wherein R is defined in examples 1 to 53:

Example	R
1	Methyl
2	*tert*-Butyl
3	Benzyl
4	Phenyl
5	4-(fluoro)-phenyl

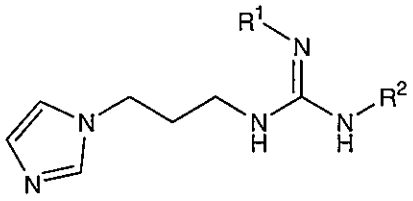
Example	R
6	4-(chloro)-phenyl
7	4-(ethyl)-phenyl
8	4-(trifluoromethyl)-phenyl
9	4-(methoxy-carbonyl)-Phenyl
10	4-(acetyl)-phenyl
11	4-(methoxy)-phenyl
12	bicyclo[2.2.1]hept-5-en-2-yl
13	3,4-(dimethoxy)-phenyl
14	2,4-(dimethoxy)-phenyl
15	3,5-(dimethoxy)-phenyl
16	2-(methoxy-carbonyl)-Phenyl
17	4-(oxazol-5-y)-phenyl
18	4-(pyrazol-1-yl)-phenyl
19	4-(isopropyl)-phenyl
20	4-(piperidine-1-sulfonyl)-Phenyl
21	4-(morpholin-4-yl)-phenyl
22	4-(cyano)-phenyl

Example	R
23	2,3-dihydro-benzo[1,4]dioxin-6-yl
24	benzo[1,3]dioxol-5-yl
25	3,4,5(trimethoxy)-phenyl
26	3-(methoxy)-phenyl
27	4-(ethoxy)-phenyl
28	4-(benzyloxy)-phenyl
29	4-(methoxy)-benzyl
30	3,4-(dimethoxy)-benzyl
31	2-(methoxy-carbonyl)-thiophene-3-yl
32	3-(ethoxy-carbonyl)-4,5,6,7-tetrahydrobenzo[b]thio-phene2-yl
33	2-(methoxy-carbonyl)-4-(methyl)-thiophene-3-yl
34	Benzo[c][1,2,5]thiazol-4-yl
35	Benzo[c][1,2,5]thiazol-5-yl

Example	R
36	5-(methyl)-3-(phenyl)-isooxazol-4-yl
37	3,5-(dimethyl)-isooxazol-4-yl
38	4-(iodo)-phenyl
39	4-(bromo)-phenyl
40	4-(methyl)-phenyl
41	Naphthalen-1-yl
42	4-(nitro)-phenyl
43	Butyl
44	Cyclooctyl
45	Furan-2-ylmethyl
46	Tetrahydrofuran-2-ylmethyl
47	Benzo[1,3]dioxol-5-ylmethyl
48	2-(morpholin-4-yl)-ethyl
49	4-(methylsulfanyl)-phenyl
50	4-(dimethylamino)-phenyl
51	4-(trifluoromethoxy)-phenyl
52	Benzoyl
53	Pyridin-4-yl

or

a compound of of formula 1b,



(1b)

wherein R^1 and R^2 are defined in examples 54 to 95.

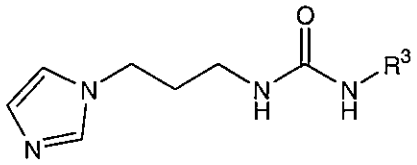
Example	R^1	R^2
54	Cyano	Methyl
55	Cyano	3,4-(dimethoxy)-phenyl
56	Cyano	2,4-(dimethoxy)-phenyl
57	Cyano	3,5-(dimethoxy)-phenyl
58	Cyano	2,3-dihydrobenzo[b][1,4]dioxin-7-yl
59	Cyano	Benzo[d][1,3]dioxol-6-yl
60	Cyano	3,4,5-(trimethoxy)-phenyl
61	Cyano	3-(methoxy)-phenyl
62	Cyano	4-(ethoxy)-phenyl
63	Cyano	4-(benzyloxy)-phenyl
64	Cyano	Phenyl
65	Cyano	4-(methoxy)-phenyl
66	Cyano	4-(acetyl)-phenyl
67	Cyano	4-(nitro)-phenyl
68	Cyano	Benzyl
69	Cyano	Naphthalen-1-yl

Example	R^1	R^2
70	Cyano	4-(fluoro)-phenyl
71	Cyano	4-(iodo)-phenyl
72	Cyano	4-(bromo)-phenyl
73	Cyano	Cyclooctyl
74	Cyano	*tert*-butyl
75	Cyano	4-(methyl)-phenyl
76	Cyano	4-(methylthio)-phenyl
77	Cyano	4-(ethyl)-phenyl
78	Cyano	4-(dimethylamino)-phenyl
79	Cyano	Butyl
80	Cyano	Trityl
81	Cyano	(Benzo[d][1,3]dioxol-6yl)methyl
82	Cyano	(tetrahydrofuran-2yl)methyl
83	Cyano	4-(trifluoromethyl)-phenyl
84	Cyano	(furan-2-yl)methyl
85	Cyano	2-(morpholin-4-yl)-ethyl
86	Cyano	4-(oxazol-5yl)-phenyl
87	Cyano	Pyridin-3-yl
88	Cyano	4-(cyano)-phenyl
89	Cyano	4-(trifluoromethoxy)-phenyl
90	Cyano	4-(piperidinosulfonyl)-phenyl
91	Cyano	4-(1H-pyrazol-1-yl)phenyl

Example	R^1	R^2
92	H	3,4-(dimethoxy)-phenyl
93	Methyl	3,4-(dimethoxy)-phenyl
94	Cyano	2,3,4-(trimethoxy)-phenyl
95	Cyano	Cycloheptyl

or

a compound of formula 1c,



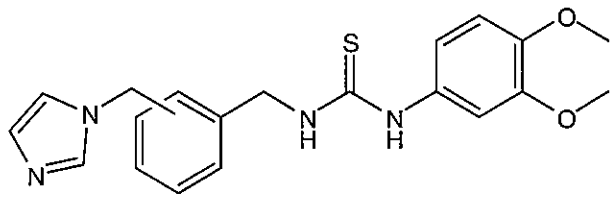
(1c)

wherein R^3 is defined in examples 96 to 102.

Example	R^3
96	Ethyl
97	6-fluoro-4H-benzo[d][1,3]dioxin-8-yl
98	3-(cylopentyloxy)-4-(methoxy)-phenyl
99	4-(heptyloxy)-phenyl
100	3,4-dihydro-2H-benzo[b][1,4]dioxepin-7-yl
101	4-(butoxy)-phenyl
102	3,4-(dimethoxy)-phenyl

or

a compound of formula 1d,

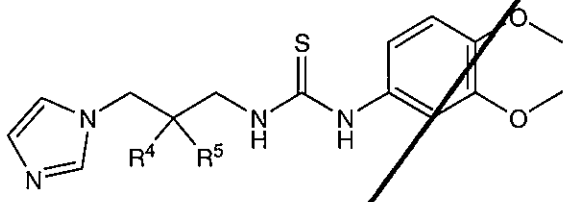


(1d)

wherein the position on the ring is defined in examples 103 to 105,

or

a compound of formula 1e,



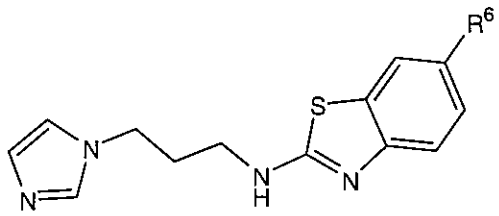
(1e)

wherein R^4 and R^5 are defined in examples 106 to 109.

Example	R^4	R^5
106(S)	H	Methyl
107(R)	Methyl	H
108	Methyl	Methyl
109	$-CH_2-CH_2-$	

or

a compound of formula 1f,



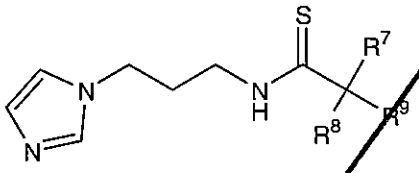
(1f)

wherein R^6 is defined in examples 110 to 112.

Example	R^6
110	H
111	Chloro
112	Methoxy

or

a compound of formula 1g,



(1g)

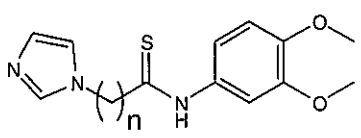
wherein R^7, R^8 and R^9 are defined in examples 113 to 132.

Example	R^7	R^8	R^9
113	Phenyl	H	H
114	Thiophen-2-yl	H	H
115(R)	Phenyl	Methyl	H
116(S)	Phenyl	H	Methyl
117	Phenyl	H	Ethyl
118	Phenyl	H	Phenyl
119	3,4-(dimethoxy)-Phenyl	H	H
120	3,4-(dimethoxy)-Phenyl	Methyl	Methyl
121	4-(chloro)-phenyl	$-CH_2-CH_2-CH_2-$	
122	4-(chloro)-phenyl	$-CH_2-C_2H_4-CH_2-$	

Example	R^7	R^8	R^9
123	4-(methoxy)-phenyl	$-CH_2-C_3H_6-CH_2-$	
124	4-(methoxy)-phenyl	$-CH_2-CH_2-$	
125	3,4-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	
126	3,4,5-(trimethoxy)-Phenyl	$-CH_2-CH_2-$	
127	2,3,4-(trimethoxy)-Phenyl	$-CH_2-CH_2-$	
128	2-(methoxy)-phenyl	$-CH_2-CH_2-$	
129	3-(methoxy)-phenyl	$-CH_2-CH_2-$	
130	2,3-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	
131	3,5-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	
132	2,5-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	

or

a compound of formula 1h,



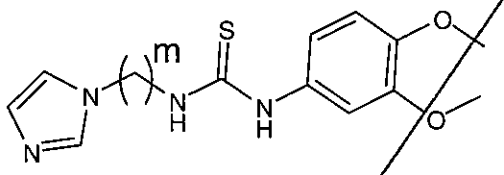
(1h)

wherein n is defined in examples 133 to 135.

Example	n
133	3
134	4
135	5

or

a compound of formula 1i,



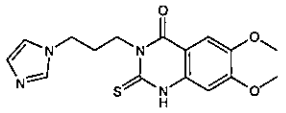
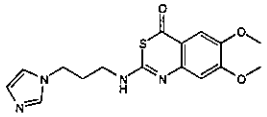
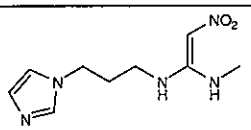
(1i)

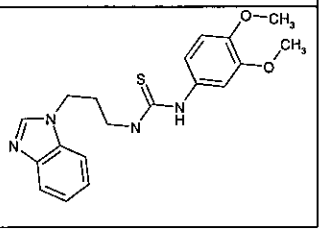
wherein m is defined in examples 136 and 137.

Example	m
136	2
137	4

or

a compound selected from examples 138 to 141.

Example	Structure
138	
139	
140	

Example	Structure
141	

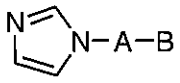
24. Diagnostic assay according to any of claims 21 to 23, wherein said QC inhibitor is 1-(3-(1H-imidazole-1-yl)propyl)-3-(3,4-dimethoxy-phenyl) thiourea hydrochloride.

25. A method of diagnosing any one of the diseases and/or conditions as defined in claim 1, comprising the steps of

- collecting a sample from a subject who is suspected to be afflicted with said disease and/or condition,
- contacting said sample with a QC inhibitor, and
- determining whether or not said subject is afflicted by said disease and/or condition.

26. The method according to claim 26, wherein said subject is a human being.

27. The method according to claim 26 or 27, wherein said QC inhibitor is a compound of formula 1 including pharmaceutically acceptable salts, solvates and stereoisomers thereof:

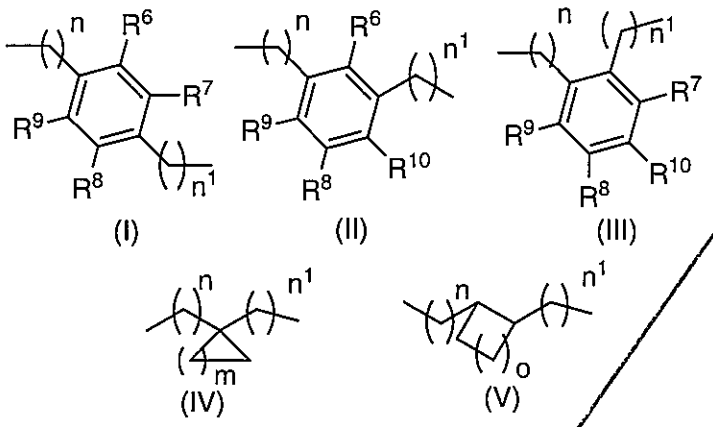

formula 1

wherein:

A is either:

an alkyl chain, alkenyl chain or alkynyl chain;

or A is a group selected from:



wherein:

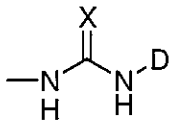
R^6, R^7, R^8, R^9 and R^{10} are independently H or an alkyl chain, alkenyl chain, alkynyl chain, cycloalkyl, a carbocycle, aryl, heteroaryl, or a heterocycle;

n and n^1 are independently 1 - 5;

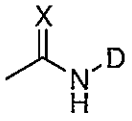
m is 1 - 5;

o is 0 - 4;

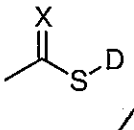
and B is a group selected from:



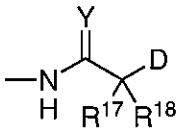
(VI)



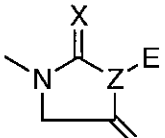
(VIa)



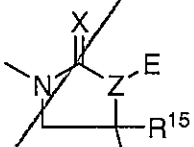
(VIb)



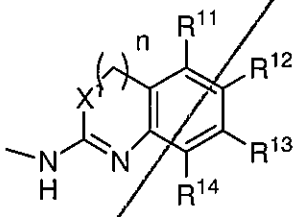
(VII)



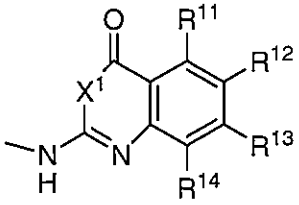
(VIII)



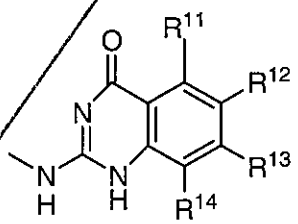
(IX)



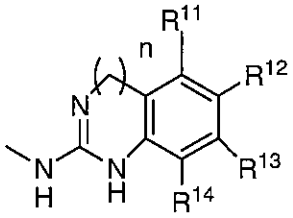
(X)



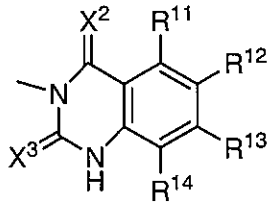
(XI)



(XII)



(XIII)



(XIV)

wherein:

D and E independently represent an alkyl chain, alkenyl chain, alkynyl chain, a cycloalkyl, carbocycle, aryl, -alkylaryl, heteroaryl, -alkylheteroaryl, acyl or a heterocycle.

Z is CH or N;

X represents $CR^{20}R^{21}$, O, S, NR^{19}, with the proviso for formulas (VIII) and (IX) that, if Z = CH, X is O or S;

R^{19} is selected from the group consisting of H, alkyl, cycloalkyl, aryl, heteroaryl, -oxyalkyl, -oxyaryl, carbonyl, amido, hydroxy, NO_2, NH_2, CN;

R^{20} and R^{21} are independently selected from H, alkyl, cycloalkyl, heterocycle, aryl, heteroaryl, -oxyalkyl, -oxyaryl, carbonyl, amido, NO_2 , NH_2, CN, CF_3 ;

X^1, X^2 and X^3 are independently O or S provided that X^2 and X^3 are not both O;

Y is O or S, with the proviso that Y may not by O, when the carbocycle formed by R^{17} and R^{18} has 3 members in the ring;

Z is CH or N;

R^{11}, R^{12}, R^{13} and R^{14} can be independently selected from H, an alkyl chain, an alkenyl chain, an alkynyl chain, cycloalkyl, carbocycle, aryl, heteroaryl, a heterocycle, halo, alkoxy-, -thioalkyl, carboxyl, carboxylic acid ester, carbonyl,

carbamide, carbimide, thiocarbamide or thiocarbonyl, NH_2, NO_2;

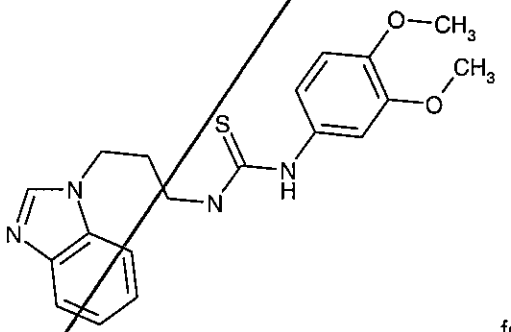
R^{15} and R^{16} are independently of each other H or a branched or unbranched alkyl chain, or a branched or unbranched alkenyl chain;

R^{17} and R^{18} are independently selected from H or an alkyl chain, alkenyl chain, a alkynyl chain, a carbocycle, aryl, heteroaryl, heteroalkyl, or can be connected to form a carbocycle with up to 6 ring atoms;

n is 0 or 1.

28. The method according to any of claims 25 to 27, wherein said QC inhibitor or a pharmaceutically acceptable salt, solvate or stereoisomer thereof is selected from

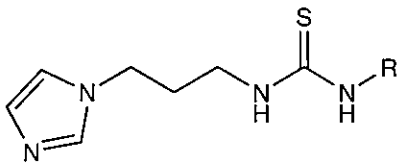
a compound of formula 1*:



formula 1*

or

a compound of of formula 1a,



(1a)

wherein R is defined in examples 1 to 53:

Example	R
1	Methyl
2	*tert*-Butyl
3	Benzyl
4	Phenyl
5	4-(fluoro)-phenyl
6	4-(chloro)-phenyl
7	4-(ethyl)-phenyl
8	4-(trifluoromethyl)-phenyl
9	4-(methoxy-carbonyl)-Phenyl
10	4-(acetyl)-phenyl
11	4-(methoxy)-phenyl
12	bicyclo[2.2.1]hept-5-en-2-yl
13	3,4-(dimethoxy)-phenyl
14	2,4-(dimethoxy)-phenyl
15	3,5-(dimethoxy)-phenyl
16	2-(methoxy-carbonyl)-Phenyl
17	4-(oxazol-5-y)-phenyl
18	4-(pyrazol-1-yl)-phenyl
19	4-(isopropyl)-phenyl

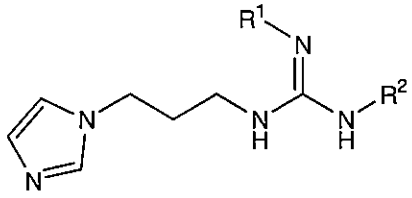
Example	R
20	4-(piperidine-1-sulfonyl)-Phenyl
21	4-(morpholin-4-yl)-phenyl
22	4-(cyano)-phenyl
23	2,3-dihydro-benzo[1,4] dioxin-6-yl
24	benzo[1,3]dioxol-5-yl
25	3,4,5(trimethoxy)-phenyl
26	3-(methoxy)-phenyl
27	4-(ethoxy)-phenyl
28	4-(benzyloxy)-phenyl
29	4-(methoxy)-benzyl
30	3,4-(dimethoxy)-benzyl
31	2-(methoxy-carbonyl)-thiophene-3-yl
32	3-(ethoxy-carbonyl)-4,5,6,7-tetrahydrobenzo[b]thio-phene2-yl
33	2-(methoxy-carbonyl)-4-(methyl)-thiophene-3-yl

Example	R
34	Benzo[c][1,2,5]thiazol-4-yl
35	Benzo[c][1,2,5]thiazol-5-yl
36	5-(methyl)-3-(phenyl)-isooxazol-4-yl
37	3,5-(dimethyl)-isooxazol-4-yl
38	4-(iodo)-phenyl
39	4-(bromo)-phenyl
40	4-(methyl)-phenyl
41	Naphthalen-1-yl
42	4-(nitro)-phenyl
43	Butyl
44	Cyclooctyl
45	Furan-2-ylmethyl
46	Tetrahydrofuran-2-ylmethyl
47	Benzo[1,3]dioxol-5-ylmethyl
48	2-(morpholin-4-yl)-ethyl
49	4-(methylsulfanyl)-phenyl
50	4-(dimethylamino)-phenyl

Example	R
51	4-(trifluoromethoxy)-phenyl
52	Benzoyl
53	Pyridin-4-yl

or

a compound of of formula 1b,



(1b)

wherein R^1 and R^2 are defined in examples 54 to 95.

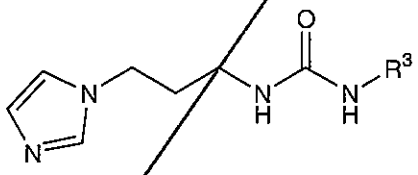
Example	R^1	R^2
54	Cyano	Methyl
55	Cyano	3,4-(dimethoxy)-phenyl
56	Cyano	2,4-(dimethoxy)-phenyl
57	Cyano	3,5-(dimethoxy)-phenyl
58	Cyano	2,3-dihydrobenzo[b][1,4]dioxin-7-yl
59	Cyano	Benzo[d][1,3]dioxol-6-yl
60	Cyano	3,4,5-(trimethoxy)-phenyl
61	Cyano	3-(methoxy)-phenyl

Example	R^1	R^2
62	Cyano	4-(ethoxy)-phenyl
63	Cyano	4-(benzyloxy)-phenyl
64	Cyano	Phenyl
65	Cyano	4-(methoxy)-phenyl
66	Cyano	4-(acetyl)-phenyl
67	Cyano	4-(nitro)-phenyl
68	Cyano	Benzyl
69	Cyano	Naphthalen-1-yl
70	Cyano	4-(fluoro)-phenyl
71	Cyano	4-(iodo)-phenyl
72	Cyano	4-(bromo)-phenyl
73	Cyano	Cyclooctyl
74	Cyano	*tert*-butyl
75	Cyano	4-(methyl)-phenyl
76	Cyano	4-(methylthio)-phenyl
77	Cyano	4-(ethyl)-phenyl
78	Cyano	4-(dimethylamino)-phenyl
79	Cyano	Butyl
80	Cyano	Trityl
81	Cyano	(Benzo[d][1,3]dioxol-6yl)methyl
82	Cyano	(tetrahydrofuran-2yl)methyl
83	Cyano	4-(trifluoromethyl)-phenyl
84	Cyano	(furan-2-yl)methyl
85	Cyano	2-(morpholin-4-yl)-ethyl
86	Cyano	4-(oxazol-5yl)-phenyl

Example	R^1	R^2
87	Cyano	Pyridin-3-yl
88	Cyano	4-(cyano)-phenyl
89	Cyano	4-(trifluoromethoxy)-phenyl
90	Cyano	4-(piperidinosulfonyl)-phenyl
91	Cyano	4-(1H-pyrazol-1-yl)phenyl
92	H	3,4-(dimethoxy)-phenyl
93	Methyl	3,4-(dimethoxy)-phenyl
94	Cyano	2,3,4-(trimethoxy)-phenyl
95	Cyano	Cycloheptyl

or

a compound of formula 1c,



(1c)

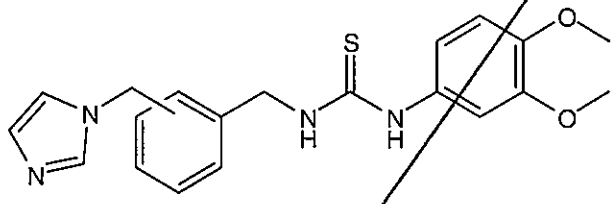
wherein R^3 is defined in examples 96 to 102.

Example	R^3
96	Ethyl
97	6-fluoro-4H-benzo[d][1,3]dioxin-8-yl
98	3-(cylopentyloxy)-4-(methoxy)-phenyl

Example	R^3
99	4-(heptyloxy)-phenyl
100	3,4-dihydro-2H-benzo[b][1,4]dioxepin-7-yl
101	4-(butoxy)-phenyl
102	3,4-(dimethoxy)-phenyl

or

a compound of formula 1d,

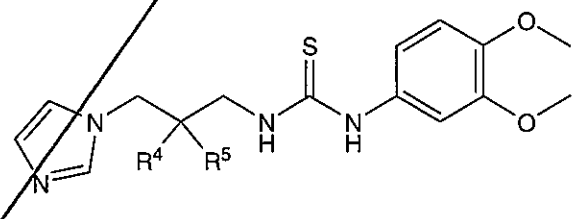


(1d)

wherein the position on the ring is defined in examples 103 to 105,

or

a compound of formula 1e,



(1e)

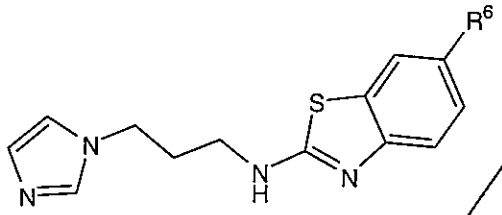
wherein R^4 and R^5 are defined in examples 106 to 109.

Example	R^4	R^5
106(S)	H	Methyl
107(R)	Methyl	H
108	Methyl	Methyl

Example	R^4	R^5
109	$-CH_2-CH_2-$	

or

a compound of formula 1f,



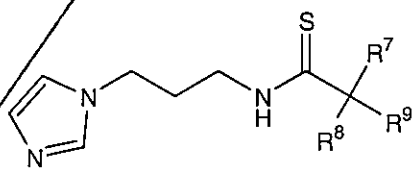
(1f)

wherein R^6 is defined in examples 110 to 112.

Example	R^6
110	H
111	Chloro
112	Methoxy

or

a compound of formula 1g,



(1g)

wherein R^7, R^8 and R^9 are defined in examples 113 to 132.

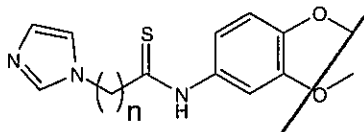
Example	R^7	R^8	R^9
113	Phenyl	H	H
114	Thiophen-2-yl	H	H
115(R)	Phenyl	Methyl	H
116(S)	Phenyl	H	Methyl

Example	R^7	R^8	R^9
117	Phenyl	H	Ethyl
118	Phenyl	H	Phenyl
119	3,4-(dimethoxy)-Phenyl	H	H
120	3,4-(dimethoxy)-Phenyl	Methyl	Methyl
121	4-(chloro)-phenyl	$-CH_2-CH_2-CH_2-$	
122	4-(chloro)-phenyl	$-CH_2-C_2H_4-CH_2-$	
123	4-(methoxy)-phenyl	$-CH_2-C_3H_6-CH_2-$	
124	4-(methoxy)-phenyl	$-CH_2-CH_2-$	
125	3,4-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	
126	3,4,5-(trimethoxy)-Phenyl	$-CH_2-CH_2-$	
127	2,3,4-(trimethoxy)-Phenyl	$-CH_2-CH_2-$	
128	2-(methoxy)-phenyl	$-CH_2-CH_2-$	
129	3-(methoxy)-phenyl	$-CH_2-CH_2-$	
130	2,3-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	

Example	R^7	R^8	R^9
131	3,5-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	
132	2,5-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	

or

a compound of formula 1h,



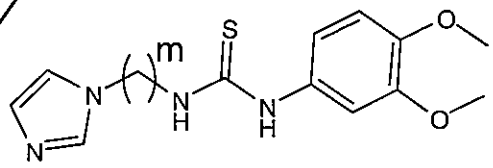
(1h)

wherein n is defined in examples 133 to 135.

Example	n
133	3
134	4
135	5

or

a compound of formula 1i,



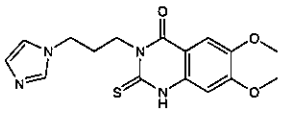
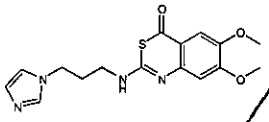
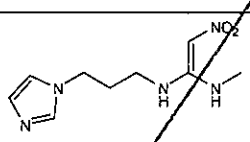
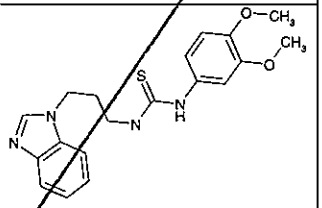
(1i)

wherein m is defined in examples 136 and 137.

Example	m
136	2
137	4

or

a compound selected from examples 138 to 141.

Example	Structure
138	
139	
140	
141	

29. The method according to any of claims 25 to 28, wherein said QC inhibitor is 1-(3-(1H-imidazole-1-yl)propyl)-3-(3,4-dimethoxy-phenyl) thiourea hydrochloride.

30. The method of any of claims 25 to 29, wherein said sample is a blood sample, a serum sample, a sample of cerebrospinal liquor or a urine sample.

31. Pharmaceutical composition, comprising the QC inhibitor according to any of claims 1, 4 to 6 or 18 to 20.

CLAIMS

1. A QC inhibitor when used in the treatment and/or prevention of an inflammatory disease or condition selected from mild cognitive impairment (MCI), restenosis, and pancreatitis.

2. Use of a QC inhibitor for the preparation of a medicament for treating and/or preventing an inflammatory disease or condition selected from mild cognitive impairment (MCI), restenosis, and pancreatitis.

3. The use according to claim 1 or 2, wherein the disease is mild cognitive impairment (MCI).

4. The use according to any of claims 1 to 3, wherein the QC inhibitor is administered in combination with a further agent, selected from the group consisting of nootropic agents, neuroptrotectants, antiparkinsonian drugs, amyloid protein deposition inhibitors, beta amyloid synthesis inhibitors, antidepressants, anxiolytic drugs, antipsychotic drugs and anti-multiple sclerosis drugs.

5. The use according to claim 1 or 2, wherein the disease is selected from restenosis and pancreatitis.

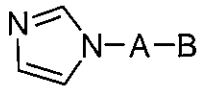
6. The use according to claim 1 or 2 or 6, wherein the disease is restenosis.

7. The use according to any of claims 1, 2 , 5 or 6, wherein the QC inhibitor is administered in combination with a further agent, selected from the group consisting of inhibitors of the angiotensin converting enzyme (ACE); angiotensin II receptor blockers; diuretics; calcium channel

blockers (CCB); beta-blockers; platelet aggregation inhibitors; cholesterol absorption modulators; HMG-Co-A reductase inhibitors; high density lipoprotein (HDL) increasing compounds; renin inhibitors; IL-6 inhibitors; antiinflammatory corticosteroids; antiproliferative agents; nitric oxide donors; inhibitors of extracellular matrix synthesis; growth factor or cytokine signal transduction inhibitors; MCP-1 antagonists and tyrosine kinase inhibitors.

8. The use according to any of claims 1 to 7, wherein the disease and/or condition afflict a human being.

9. The use according to any one of claims 1 to 8, wherein said QC inhibitor is a compound of formula 1 including pharmaceutically acceptable salts, solvates and stereoisomers thereof:



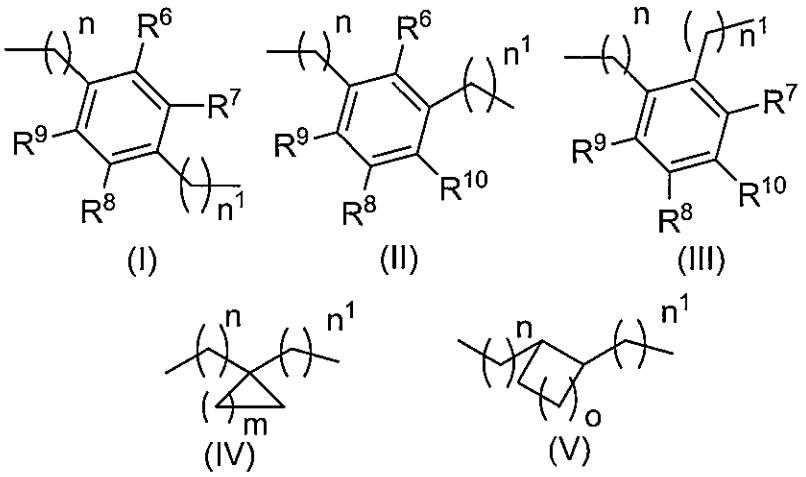
formula 1

wherein:

A is either:

an alkyl chain, alkenyl chain or alkynyl chain;

or A is a group selected from:



wherein:

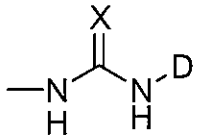
R^6, R^7, R^8, R^9 and R^{10} are independently H or an alkyl chain, alkenyl chain, alkynyl chain, cycloalkyl, a carbocycle, aryl, heteroaryl, or a heterocycle;

n and n^1 are independently 1 - 5;

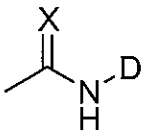
m is 1 - 5;

o is 0 - 4;

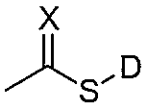
and B is a group selected from:



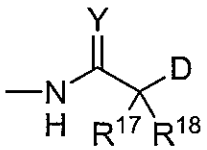
(VI)



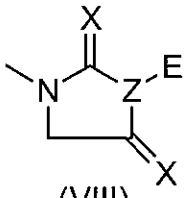
(VIa)



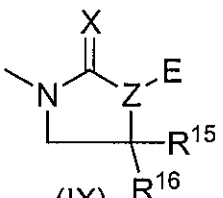
(VIb)



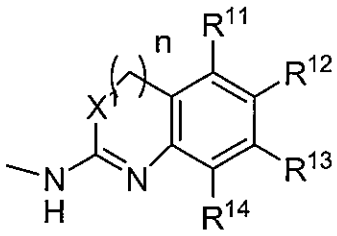
(VII)



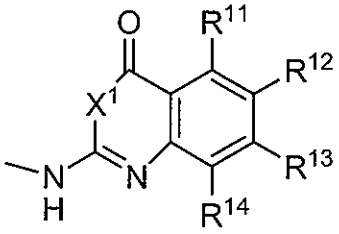
(VIII)



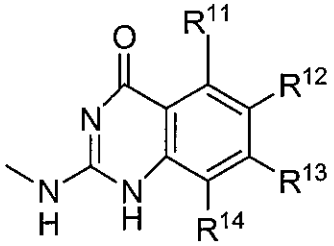
(IX)



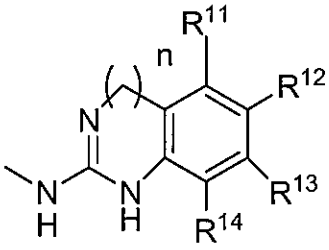
(X)



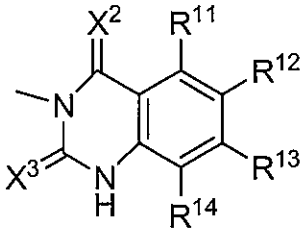
(XI)



(XII)



(XIII)



(XIV)

wherein:

D and E independently represent an alkyl chain, alkenyl chain, alkynyl chain, a cycloalkyl, carbocycle, aryl, -alkylaryl, heteroaryl, -alkylheteroaryl, acyl or a heterocycle.

Z is CH or N;

X represents $CR^{20}R^{21}$, O, S, NR^{19}, with the proviso for formulas (VIII) and (IX) that, if Z = CH, X is O or S;

R^{19} is selected from the group consisting of H, alkyl, cycloalkyl, aryl, heteroaryl, -oxyalkyl, -oxyaryl, carbonyl, amido, hydroxy, NO_2, NH_2, CN;

R^{20} and R^{21} are independently selected from H, alkyl, cycloalkyl, heterocycle, aryl, heteroaryl, -oxyalkyl, -oxyaryl, carbonyl, amido, NO_2 , NH_2, CN, CF_3 ;

X^1, X^2 and X^3 are independently O or S provided that X^2 and X^3 are not both O;

Y is O or S, with the proviso that Y may not by O, when the carbocycle formed by R^{17} and R^{18} has 3 members in the ring;

Z is CH or N;

R^{11}, R^{12}, R^{13} and R^{14} can be independently selected from H, an alkyl chain, an alkenyl chain, an alkynyl chain, cycloalkyl, carbocycle, aryl, heteroaryl, a heterocycle, halo, alkoxy-, -thioalkyl, carboxyl, carboxylic acid ester, carbonyl, carbamide, carbimide, thiocarbamide or thiocarbonyl, NH_2, NO_2;

R^{15} and R^{16} are independently of each other H or a branched or unbranched alkyl chain, or a branched or unbranched alkenyl chain;

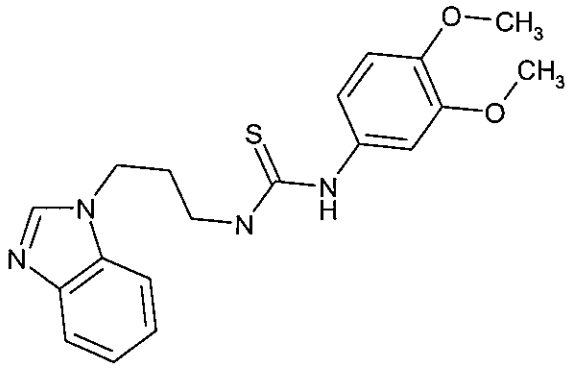
R^{17} and R^{18} are independently selected from H or an alkyl chain, alkenyl chain, a alkynyl chain, a carbocycle, aryl,

heteroaryl, heteroalkyl, or can be connected to form a carbocycle with up to 6 ring atoms;

n is 0 or 1.

10. The use according to any one of claims 1 to 9, wherein said QC inhibitor or a pharmaceutically acceptable salt, solvate or stereoisomer thereof is selected from

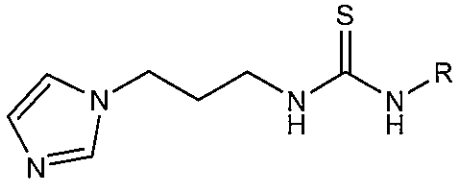
a compound of formula 1*:



formula 1*

or

a compound of of formula 1a,



(1a)

wherein R is defined in examples 1 to 53:

Example	R
1	Methyl
2	*tert*-Butyl
3	Benzyl
4	Phenyl
5	4-(fluoro)-phenyl

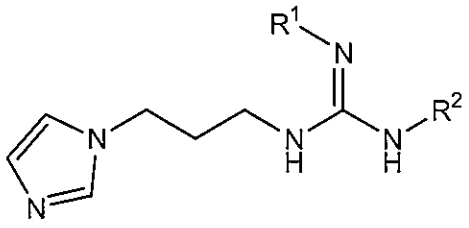
Example	R
6	4-(chloro)-phenyl
7	4-(ethyl)-phenyl
8	4-(trifluoromethyl)-phenyl
9	4-(methoxy-carbonyl)-Phenyl
10	4-(acetyl)-phenyl
11	4-(methoxy)-phenyl
12	bicyclo[2.2.1]hept-5-en-2-yl
13	3,4-(dimethoxy)-phenyl
14	2,4-(dimethoxy)-phenyl
15	3,5-(dimethoxy)-phenyl
16	2-(methoxy-carbonyl)-Phenyl
17	4-(oxazol-5-y)-phenyl
18	4-(pyrazol-1-yl)-phenyl
19	4-(isopropyl)-phenyl
20	4-(piperidine-1-sulfonyl)-Phenyl
21	4-(morpholin-4-yl)-phenyl
22	4-(cyano)-phenyl

Example	R
23	2,3-dihydro-benzo[1,4] dioxin-6-yl
24	benzo[1,3]dioxol-5-yl
25	3,4,5(trimethoxy)-phenyl
26	3-(methoxy)-phenyl
27	4-(ethoxy)-phenyl
28	4-(benzyloxy)-phenyl
29	4-(methoxy)-benzyl
30	3,4-(dimethoxy)-benzyl
31	2-(methoxy-carbonyl)-thiophene-3-yl
32	3-(ethoxy-carbonyl)-4,5,6,7-tetrahydrobenzo[b]thio-phene2-yl
33	2-(methoxy-carbonyl)-4-(methyl)-thiophene-3-yl
34	Benzo[c][1,2,5]thiazol-4-yl
35	Benzo[c][1,2,5]thiazol-5-yl

Example	R
36	5-(methyl)-3-(phenyl)-isooxazol-4-yl
37	3,5-(dimethyl)-isooxazol-4-yl
38	4-(iodo)-phenyl
39	4-(bromo)-phenyl
40	4-(methyl)-phenyl
41	Naphthalen-1-yl
42	4-(nitro)-phenyl
43	Butyl
44	Cyclooctyl
45	Furan-2-ylmethyl
46	Tetrahydrofuran-2-ylmethyl
47	Benzo[1,3]dioxol-5-ylmethyl
48	2-(morpholin-4-yl)-ethyl
49	4-(methylsulfanyl)-phenyl
50	4-(dimethylamino)-phenyl
51	4-(trifluoromethoxy)-phenyl
52	Benzoyl
53	Pyridin-4-yl

or

a compound of of formula 1b,



(1b)

wherein R^1 and R^2 are defined in examples 54 to 95.

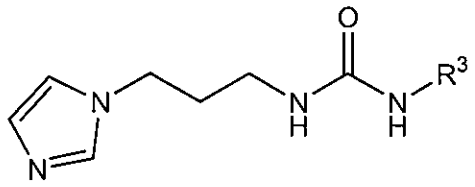
Example	R^1	R^2
54	Cyano	Methyl
55	Cyano	3,4-(dimethoxy)-phenyl
56	Cyano	2,4-(dimethoxy)-phenyl
57	Cyano	3,5-(dimethoxy)-phenyl
58	Cyano	2,3-dihydrobenzo[b][1,4]dioxin-7-yl
59	Cyano	Benzo[d][1,3]dioxol-6-yl
60	Cyano	3,4,5-(trimethoxy)-phenyl
61	Cyano	3-(methoxy)-phenyl
62	Cyano	4-(ethoxy)-phenyl
63	Cyano	4-(benzyloxy)-phenyl
64	Cyano	Phenyl
65	Cyano	4-(methoxy)-phenyl
66	Cyano	4-(acetyl)-phenyl
67	Cyano	4-(nitro)-phenyl
68	Cyano	Benzyl
69	Cyano	Naphthalen-1-yl

Example	R^1	R^2
70	Cyano	4-(fluoro)-phenyl
71	Cyano	4-(iodo)-phenyl
72	Cyano	4-(bromo)-phenyl
73	Cyano	Cyclooctyl
74	Cyano	*tert*-butyl
75	Cyano	4-(methyl)-phenyl
76	Cyano	4-(methylthio)-phenyl
77	Cyano	4-(ethyl)-phenyl
78	Cyano	4-(dimethylamino)-phenyl
79	Cyano	Butyl
80	Cyano	Trityl
81	Cyano	(Benzo[d][1,3]dioxol-6yl)methyl
82	Cyano	(tetrahydrofuran-2yl)methyl
83	Cyano	4-(trifluoromethyl)-phenyl
84	Cyano	(furan-2-yl)methyl
85	Cyano	2-(morpholin-4-yl)-ethyl
86	Cyano	4-(oxazol-5yl)-phenyl
87	Cyano	Pyridin-3-yl
88	Cyano	4-(cyano)-phenyl
89	Cyano	4-(trifluoromethoxy)-phenyl
90	Cyano	4-(piperidinosulfonyl)-phenyl
91	Cyano	4-(1H-pyrazol-1-yl)phenyl

Example	R^1	R^2
92	H	3,4-(dimethoxy)-phenyl
93	Methyl	3,4-(dimethoxy)-phenyl
94	Cyano	2,3,4-(trimethoxy)-phenyl
95	Cyano	Cycloheptyl

or

a compound of formula 1c,



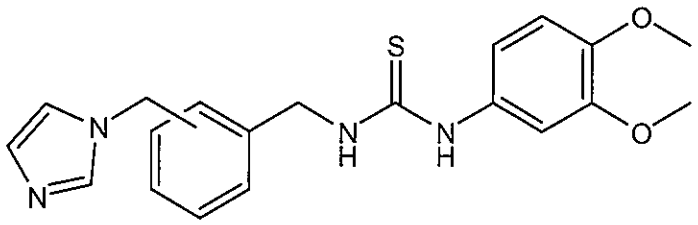
(1c)

wherein R^3 is defined in examples 96 to 102.

Example	R^3
96	Ethyl
97	6-fluoro-4H-benzo[d][1,3]dioxin-8-yl
98	3-(cylopentyloxy)-4-(methoxy)-phenyl
99	4-(heptyloxy)-phenyl
100	3,4-dihydro-2H-benzo[b][1,4]dioxepin-7-yl
101	4-(butoxy)-phenyl
102	3,4-(dimethoxy)-phenyl

or

a compound of formula 1d,

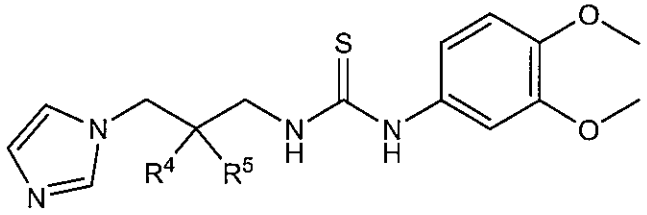


(1d)

wherein the position on the ring is defined in examples 103 to 105,

or

a compound of formula 1e,



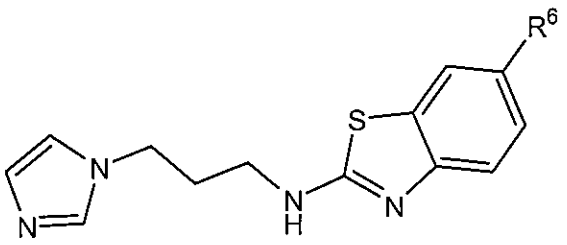
(1e)

wherein R^4 and R^5 are defined in examples 106 to 109.

Example	R^4	R^5
106(S)	H	Methyl
107(R)	Methyl	H
108	Methyl	Methyl
109	$-CH_2-CH_2-$	

or

a compound of formula 1f,



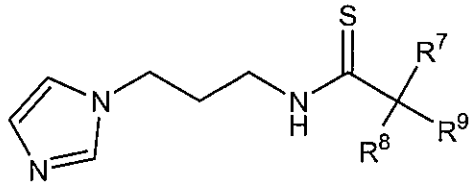
(1f)

wherein R^6 is defined in examples 110 to 112.

Example	R^6
110	H
111	Chloro
112	Methoxy

or

a compound of formula 1g,



(1g)

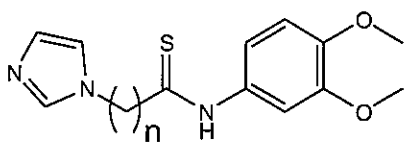
wherein R^7, R^8 and R^9 are defined in examples 113 to 132.

Example	R^7	R^8	R^9
113	Phenyl	H	H
114	Thiophen-2-yl	H	H
115(R)	Phenyl	Methyl	H
116(S)	Phenyl	H	Methyl
117	Phenyl	H	Ethyl
118	Phenyl	H	Phenyl
119	3,4-(dimethoxy)-Phenyl	H	H
120	3,4-(dimethoxy)-Phenyl	Methyl	Methyl
121	4-(chloro)-phenyl	$-CH_2-CH_2-CH_2-$	
122	4-(chloro)-phenyl	$-CH_2-C_2H_4-CH_2-$	

Example	R^7	R^8	R^9
123	4-(methoxy)-phenyl	$-CH_2-C_3H_6-CH_2-$	
124	4-(methoxy)-phenyl	$-CH_2-CH_2-$	
125	3,4-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	
126	3,4,5-(trimethoxy)-Phenyl	$-CH_2-CH_2-$	
127	2,3,4-(trimethoxy)-Phenyl	$-CH_2-CH_2-$	
128	2-(methoxy)-phenyl	$-CH_2-CH_2-$	
129	3-(methoxy)-phenyl	$-CH_2-CH_2-$	
130	2,3-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	
131	3,5-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	
132	2,5-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	

or

a compound of formula 1h,



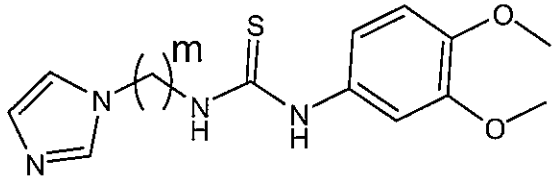
(1h)

wherein n is defined in examples 133 to 135.

Example	n
133	3
134	4
135	5

or

a compound of formula 1i,



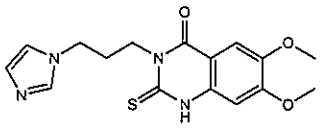
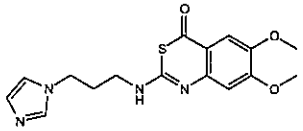
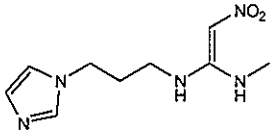
(1i)

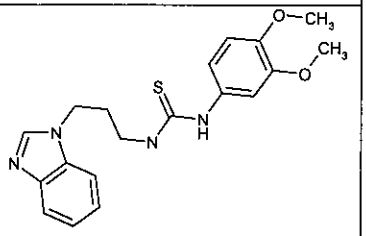
wherein m is defined in examples 136 and 137.

Example	m
136	2
137	4

or

a compound selected from examples 138 to 141.

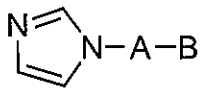
Example	Structure
138	
139	
140	

Example	Structure
141	

11. The use according to any one of claims 1 to 10, wherein said QC inhibitor is 1-(3-(1H-imidazole-1-yl)propyl)-3-(3,4-dimethoxy-phenyl) thiourea hydrochloride.

12. Diagnostic assay, comprising a QC inhibitor.

13. Diagnostic assay according to claim 12, wherein said QC inhibitor is a compound of formula 1 including pharmaceutically acceptable salts, solvates and stereoisomers thereof:

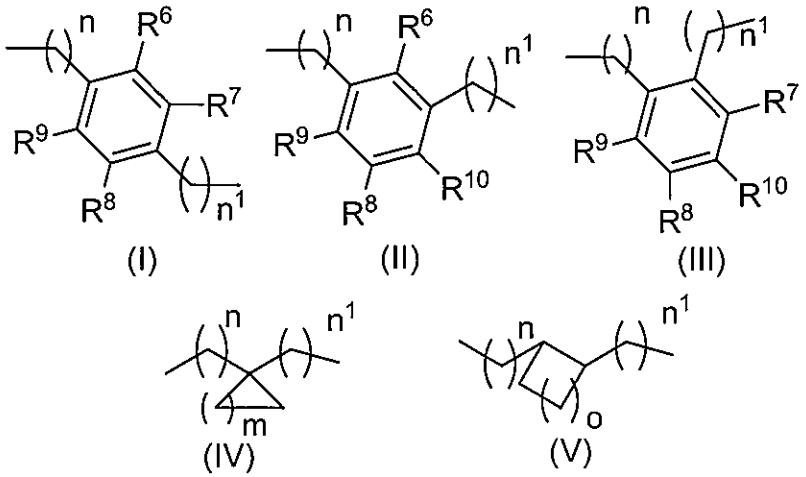

formula 1

wherein:

A is either:

an alkyl chain, alkenyl chain or alkynyl chain;

or A is a group selected from:



wherein:

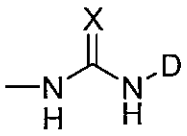
R^6, R^7, R^8, R^9 and R^{10} are independently H or an alkyl chain, alkenyl chain, alkynyl chain, cycloalkyl, a carbocycle, aryl, heteroaryl, or a heterocycle;

n and n^1 are independently 1 - 5;

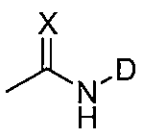
m is 1 - 5;

o is 0 - 4;

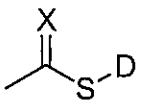
and B is a group selected from:



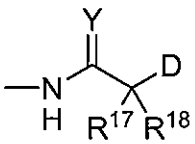
(VI)



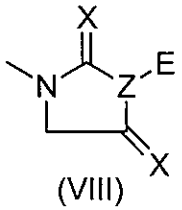
(VIa)



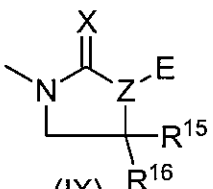
(VIb)



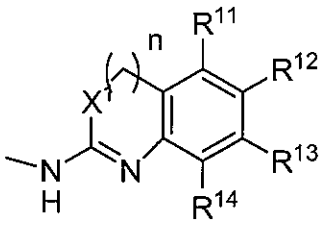
(VII)



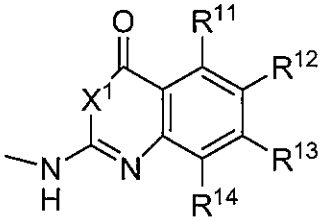
(VIII)



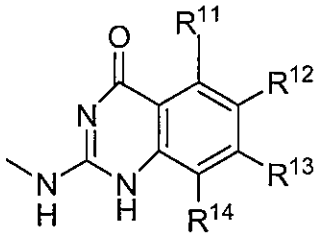
(IX)



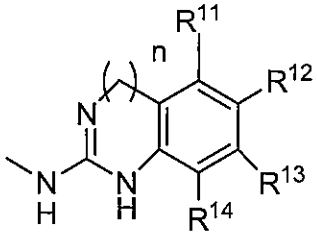
(X)



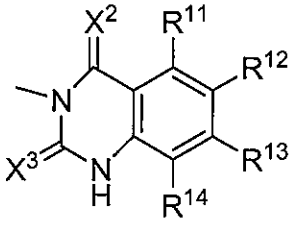
(XI)



(XII)



(XIII)



(XIV)

wherein:

D and E independently represent an alkyl chain, alkenyl chain, alkynyl chain, a cycloalkyl, carbocycle, aryl, -alkylaryl, heteroaryl, -alkylheteroaryl, acyl or a heterocycle.

Z is CH or N;

X represents $CR^{20}R^{21}$, O, S, NR^{19}, with the proviso for formulas (VIII) and (IX) that, if Z = CH, X is O or S;

R^{19} is selected from the group consisting of H, alkyl, cycloalkyl, aryl, heteroaryl, -oxyalkyl, -oxyaryl, carbonyl, amido, hydroxy, NO_2, NH_2, CN;

R^{20} and R^{21} are independently selected from H, alkyl, cycloalkyl, heterocycle, aryl, heteroaryl, -oxyalkyl, -oxyaryl, carbonyl, amido, NO_2 , NH_2, CN, CF_3 ;

X^1, X^2 and X^3 are independently O or S provided that X^2 and X^3 are not both O;

Y is O or S, with the proviso that Y may not by O, when the carbocycle formed by R^{17} and R^{18} has 3 members in the ring;

Z is CH or N;

R^{11}, R^{12}, R^{13} and R^{14} can be independently selected from H, an alkyl chain, an alkenyl chain, an alkynyl chain, cycloalkyl, carbocycle, aryl, heteroaryl, a heterocycle, halo, alkoxy-, -thioalkyl, carboxyl, carboxylic acid ester, carbonyl, carbamide, carbimide, thiocarbamide or thiocarbonyl, NH_2, NO_2;

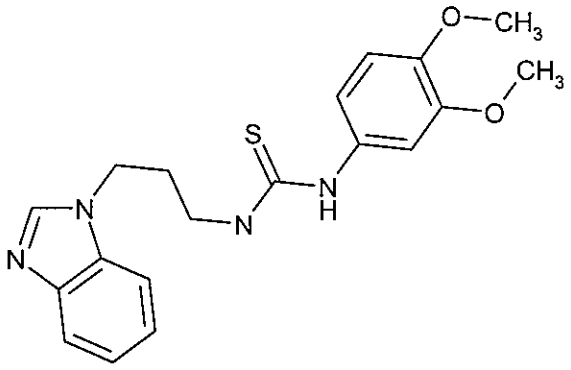
R^{15} and R^{16} are independently of each other H or a branched or unbranched alkyl chain, or a branched or unbranched alkenyl chain;

R^{17} and R^{18} are independently selected from H or an alkyl chain, alkenyl chain, a alkynyl chain, a carbocycle, aryl, heteroaryl, heteroalkyl, or can be connected to form a carbocycle with up to 6 ring atoms;

n is 0 or 1.

14. Diagnostic assay according to claim 12 or 13, wherein said QC inhibitor or a pharmaceutically acceptable salt, solvate or stereoisomer thereof is selected from

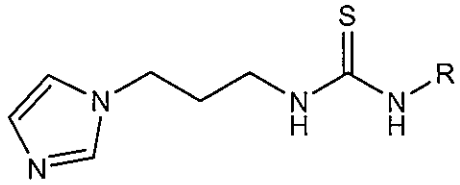
a compound of formula 1*:



formula 1*

or

a compound of of formula 1a,



(1a)

wherein R is defined in examples 1 to 53:

Example	R
1	Methyl
2	*tert*-Butyl
3	Benzyl
4	Phenyl
5	4-(fluoro)-phenyl
6	4-(chloro)-phenyl
7	4-(ethyl)-phenyl
8	4-(trifluoromethyl)-phenyl
9	4-(methoxy-carbonyl)-Phenyl
10	4-(acetyl)-phenyl
11	4-(methoxy)-phenyl
12	bicyclo[2.2.1]hept-5-en-2-yl
13	3,4-(dimethoxy)-phenyl
14	2,4-(dimethoxy)-phenyl
15	3,5-(dimethoxy)-phenyl
16	2-(methoxy-carbonyl)-Phenyl
17	4-(oxazol-5-y)-phenyl
18	4-(pyrazol-1-yl)-phenyl
19	4-(isopropyl)-phenyl

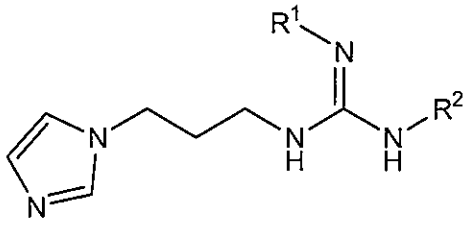
Example	R
20	4-(piperidine-1-sulfonyl)-Phenyl
21	4-(morpholin-4-yl)-phenyl
22	4-(cyano)-phenyl
23	2,3-dihydro-benzo[1,4] dioxin-6-yl
24	benzo[1,3]dioxol-5-yl
25	3,4,5(trimethoxy)-phenyl
26	3-(methoxy)-phenyl
27	4-(ethoxy)-phenyl
28	4-(benzyloxy)-phenyl
29	4-(methoxy)-benzyl
30	3,4-(dimethoxy)-benzyl
31	2-(methoxy-carbonyl)-thiophene-3-yl
32	3-(ethoxy-carbonyl)-4,5,6,7-tetrahydrobenzo[b]thio-phene2-yl
33	2-(methoxy-carbonyl)-4-(methyl)-thiophene-3-yl

Example	R
34	Benzo[c][1,2,5]thiazol-4-yl
35	Benzo[c][1,2,5]thiazol-5-yl
36	5-(methyl)-3-(phenyl)-isooxazol-4-yl
37	3,5-(dimethyl)-isooxazol-4-yl
38	4-(iodo)-phenyl
39	4-(bromo)-phenyl
40	4-(methyl)-phenyl
41	Naphthalen-1-yl
42	4-(nitro)-phenyl
43	Butyl
44	Cyclooctyl
45	Furan-2-ylmethyl
46	Tetrahydrofuran-2-ylmethyl
47	Benzo[1,3]dioxol-5-ylmethyl
48	2-(morpholin-4-yl)-ethyl
49	4-(methylsulfanyl)-phenyl
50	4-(dimethylamino)-phenyl

Example	R
51	4-(trifluoromethoxy)-phenyl
52	Benzoyl
53	Pyridin-4-yl

or

a compound of of formula 1b,



(1b)

wherein R^1 and R^2 are defined in examples 54 to 95.

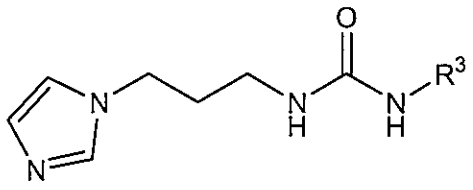
Example	R^1	R^2
54	Cyano	Methyl
55	Cyano	3,4-(dimethoxy)-phenyl
56	Cyano	2,4-(dimethoxy)-phenyl
57	Cyano	3,5-(dimethoxy)-phenyl
58	Cyano	2,3-dihydrobenzo[b][1,4]dioxin-7-yl
59	Cyano	Benzo[d][1,3]dioxol-6-yl
60	Cyano	3,4,5-(trimethoxy)-phenyl
61	Cyano	3-(methoxy)-phenyl

Example	R^1	R^2
62	Cyano	4-(ethoxy)-phenyl
63	Cyano	4-(benzyloxy)-phenyl
64	Cyano	Phenyl
65	Cyano	4-(methoxy)-phenyl
66	Cyano	4-(acetyl)-phenyl
67	Cyano	4-(nitro)-phenyl
68	Cyano	Benzyl
69	Cyano	Naphthalen-1-yl
70	Cyano	4-(fluoro)-phenyl
71	Cyano	4-(iodo)-phenyl
72	Cyano	4-(bromo)-phenyl
73	Cyano	Cyclooctyl
74	Cyano	*tert*-butyl
75	Cyano	4-(methyl)-phenyl
76	Cyano	4-(methylthio)-phenyl
77	Cyano	4-(ethyl)-phenyl
78	Cyano	4-(dimethylamino)-phenyl
79	Cyano	Butyl
80	Cyano	Trityl
81	Cyano	(Benzo[d][1,3]dioxol-6yl)methyl
82	Cyano	(tetrahydrofuran-2yl)methyl
83	Cyano	4-(trifluoromethyl)-phenyl
84	Cyano	(furan-2-yl)methyl
85	Cyano	2-(morpholin-4-yl)-ethyl
86	Cyano	4-(oxazol-5yl)-phenyl

Example	R^1	R^2
87	Cyano	Pyridin-3-yl
88	Cyano	4-(cyano)-phenyl
89	Cyano	4-(trifluoromethoxy)-phenyl
90	Cyano	4-(piperidinosulfonyl)-phenyl
91	Cyano	4-(1H-pyrazol-1-yl)phenyl
92	H	3,4-(dimethoxy)-phenyl
93	Methyl	3,4-(dimethoxy)-phenyl
94	Cyano	2,3,4-(trimethoxy)-phenyl
95	Cyano	Cycloheptyl

or

a compound of formula 1c,



(1c)

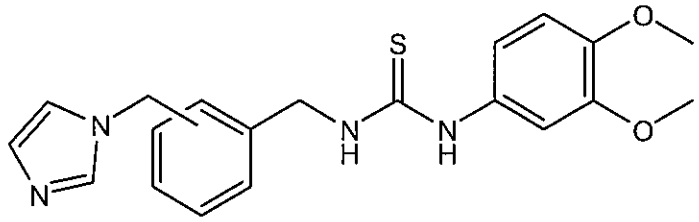
wherein R^3 is defined in examples 96 to 102.

Example	R^3
96	Ethyl
97	6-fluoro-4H-benzo[d][1,3]dioxin-8-yl
98	3-(cylopentyloxy)-4-(methoxy)-phenyl

Example	R^3
99	4-(heptyloxy)-phenyl
100	3,4-dihydro-2H-benzo[b][1,4]dioxepin-7-yl
101	4-(butoxy)-phenyl
102	3,4-(dimethoxy)-phenyl

or

a compound of formula 1d,

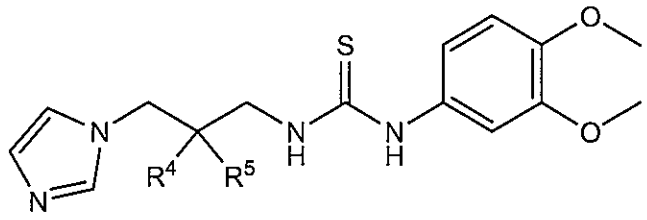


(1d)

wherein the position on the ring is defined in examples 103 to 105,

or

a compound of formula 1e,



(1e)

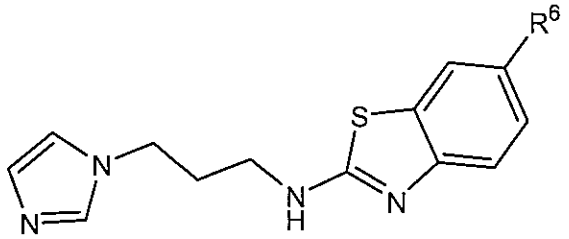
wherein R^4 and R^5 are defined in examples 106 to 109.

Example	R^4	R^5
106(S)	H	Methyl
107(R)	Methyl	H
108	Methyl	Methyl

Example	R^4	R^5
109	$-CH_2-CH_2-$	

or

a compound of formula 1f,



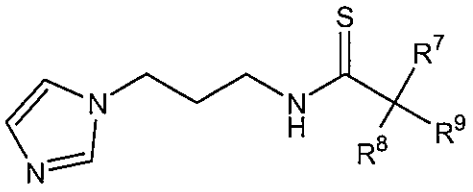
(1f)

wherein R^6 is defined in examples 110 to 112.

Example	R^6
110	H
111	Chloro
112	Methoxy

or

a compound of formula 1g,



(1g)

wherein R^7, R^8 and R^9 are defined in examples 113 to 132.

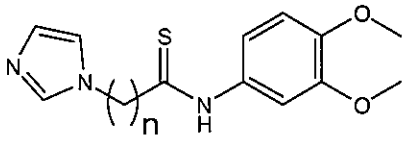
Example	R^7	R^8	R^9
113	Phenyl	H	H
114	Thiophen-2-yl	H	H
115(R)	Phenyl	Methyl	H
116(S)	Phenyl	H	Methyl

Example	R^7	R^8	R^9
117	Phenyl	H	Ethyl
118	Phenyl	H	Phenyl
119	3,4-(dimethoxy)-Phenyl	H	H
120	3,4-(dimethoxy)-Phenyl	Methyl	Methyl
121	4-(chloro)-phenyl	$-CH_2-CH_2-CH_2-$	
122	4-(chloro)-phenyl	$-CH_2-C_2H_4-CH_2-$	
123	4-(methoxy)-phenyl	$-CH_2-C_3H_6-CH_2-$	
124	4-(methoxy)-phenyl	$-CH_2-CH_2-$	
125	3,4-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	
126	3,4,5-(trimethoxy)-Phenyl	$-CH_2-CH_2-$	
127	2,3,4-(trimethoxy)-Phenyl	$-CH_2-CH_2-$	
128	2-(methoxy)-phenyl	$-CH_2-CH_2-$	
129	3-(methoxy)-phenyl	$-CH_2-CH_2-$	
130	2,3-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	

Example	R^7	R^8	R^9
131	3,5-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	
132	2,5-(dimethoxy)-Phenyl	$-CH_2-CH_2-$	

or

a compound of formula 1h,



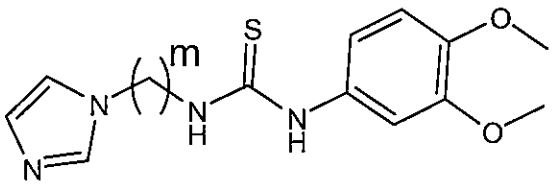
(1h)

wherein n is defined in examples 133 to 135.

Example	n
133	3
134	4
135	5

or

a compound of formula 1i,



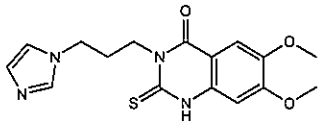
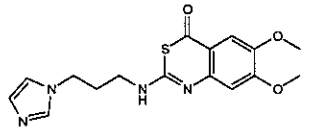
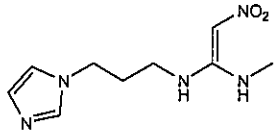
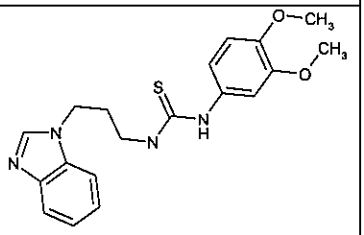
(1i)

wherein m is defined in examples 136 and 137.

Example	m
136	2
137	4

or

a compound selected from examples 138 to 141.

Example	Structure
138	
139	
140	
141	

15. Diagnostic assay according to any of claims 12 to 14, wherein said QC inhibitor is 1-(3-(1H-imidazole-1-yl)propyl)-3-(3,4-dimethoxy-phenyl) thiourea hydrochloride.

16. A pharmaceutical composition, comprising a QC inhibitor, when used in the treatment and/or prevention of an inflammatory disease or condition, selected from mild cognitive impairment (MCI), restenosis, and pancreatitis.