

(19)



(11)

EP 1 414 797 B9

(12)

CORRECTED EUROPEAN PATENT SPECIFICATION

(15) Correction information:
Corrected version no 2 (W2 B1)
Corrections, see
Description Paragraph(s) 242

(51) Int Cl.:
C07D 209/00 (2006.01)

(86) International application number:
PCT/CA2002/001128

(48) Corrigendum issued on:
10.06.2009 Bulletin 2009/24

(87) International publication number:
WO 2003/010141 (06.02.2003 Gazette 2003/06)

(45) Date of publication and mention
 of the grant of the patent:
02.01.2008 Bulletin 2008/01

(21) Application number: **02752904.9**

(22) Date of filing: **18.07.2002**

(54) **HEPATITIS C VIRUS POLYMERASE INHIBITORS WITH A HETEROBICYCLIC STRUCTURE**
HEPATITIS C VIRUS POLYMERASE INHIBITOREN MIT HETEROBICYKLISCHER STRUKTUR
INHIBITEURS DE POLYMERASE VIRALE

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
IE IT LI LU MC NL PT SE SK TR
 Designated Extension States:
LT LV RO SI

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(30) Priority: **25.07.2001 US 307674 P**
07.12.2001 US 338061 P

(43) Date of publication of application:
06.05.2004 Bulletin 2004/19

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(60) Divisional application:
07117984.0 / 1 891 951

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Description**TECHNICAL FIELD OF THE INVENTION**

- 5 **[0001]** The invention relates to inhibitors of RNA dependent RNA polymerases, particularly those viral polymerases within the Flaviviridae family, more particularly to HCV polymerase.

BACKGROUND OF THE INVENTION

- 10 **[0002]** About 30,000 new cases of hepatitis C virus (HCV) infection are estimated to occur in the United States each year (Kolykhalov, A.A.; Mihalik, K.; Feinstone, S.M.; Rice, C.M.; 2000; J. Virol. 74: 2046-2051). HCV is not easily cleared by the hosts' immunological defences; as many as 85% of the people infected with HCV become chronically infected. Many of these persistent infections result in chronic liver disease, including cirrhosis and hepatocellular carcinoma (Hoofnagle, J.H.; 1997; Hepatology 26: 15S-20S*). There are an estimated 170 million HCV carriers worldwide, and
 15 HCV-associated end-stage liver disease is now the leading cause of liver transplantation. In the United States alone, hepatitis C is responsible for 8,000 to 10,000 deaths annually. Without effective intervention, the number is expected to triple in the next 10 to 20 years. There is no vaccine to prevent HCV infection. Prolonged treatment of chronically infected patients with interferon or interferon and ribavirin is the only currently approved therapy, but it achieves a sustained response in fewer than 50% of cases (Lindsay, K.L.; 1997; Hepatology 26: 71S-77S*, and Reichard, O.;
 20 Schvarcz, R.; Weiland, O.; 1997 Hepatology 26: 108S-111S*).

- [0003]** HCV belongs to the family *Flaviviridae*, genus *hepacivirus*, which comprises three genera of small enveloped positive-strand RNA viruses (Rice, C.M.; 1996; "Flaviviridae: the viruses and their replication"; pp. 931-960 in Fields Virology; Fields, B.N.; Knipe, D.M.; Howley, P.M. (eds.); Lippincott-Raven Publishers, Philadelphia Pa. *). The 9.6 kb genome of HCV consists of a long open reading frame (ORF) flanked by 5' and 3' non-translated regions (NTR's). The
 25 HCV 5' NTR is 341 nucleotides in length and functions as an internal ribosome entry site for cap-independent translation initiation (Lemon, S.H.; Honda, M.; 1997; Semin. Virol. 8: 274-288). The HCV polyprotein is cleaved co- and post-translationally into at least 10 individual polypeptides (Reed, K.E.; Rice, C.M.; 1999; Curr. Top. Microbiol. Immunol. 242: 55-84*). The structural proteins result from signal peptidases in the N-terminal portion of the polyprotein. Two viral proteases mediate downstream cleavages to produce non-structural (NS) proteins that function as components of the
 30 HCV RNA replicase. The NS2-3 protease spans the C-terminal half of the NS2 and the N-terminal one-third of NS3 and catalyses *cis* cleavage of the NS2/3 site. The same portion of NS3 also encodes the catalytic domain of the NS3-4A serine protease that cleaves at four downstream sites. The C-terminal two-thirds of NS3 is highly conserved amongst HCV Isolates, with RNA-binding, RNA-stimulated NTPase, and RNA unwinding activities. Although NS4B and the NS5A phosphoprotein are also likely components of the replicase, their specific roles are unknown. The C-terminal polyprotein
 35 cleavage product, NS5B, is the elongation subunit of the HCV replicase possessing RNA-dependent RNA polymerase (RdRp) activity (Behrens, S.E.; Tomei, L.; DeFrancesco, R.; 1996; EMBO J. 15: 12-22*; and Lohmann, V.; Körner, F.; Herian, U.; Bartenschlager, R.; 1997; J. Virol. 71: 8416-8428*). It has been recently demonstrated that mutations destroying NS5B activity abolish infectivity of RNA in a chimp model (Kolykhalov, A.A.; Mihalik, K.; Feinstone, S.M.; Rice, C.M.; 2000; J. Virol. 74: 2046-2051*).

- 40 **[0004]** The development of new and specific anti-HCV treatments is a high priority, and virus-specific functions essential for replication are the most attractive targets for drug development. The absence of RNA dependent RNA polymerases in mammals, and the fact that this enzyme appears to be essential to viral replication, would suggest that the NS5B polymerase is an ideal target for anti-HCV therapeutics.

WO 00/06529 reports inhibitors of NS5B which are α , γ -diketoacids.

- 45 WO 00/13708, WO 00/10573, WO 00/18231, and WO 01/47883 report inhibitors of NS5B proposed for treatment of HCV.

[0005] WO 01/47883 which corresponds to the EP 1 162 196 A1 relates to heterobicyclic compounds which show an anti-hepatitis C virus activity. The most preferred compounds described therein are benzimidazole derivatives. The examples 501, 502 and 503 relate to indoles which at the 5-position are substituted with a carboxy or methyl carboxylate group.

- 50 **[0006]** US 5,059,621 relates to aromatic heterocyclic compounds and their use in the treatment of dermatologic ailments linked to keratinization disorder.

[0007] US 6,069,156 is related to inhibitors of cyclic guanosine monophosphate phosphodiesterase (cGMP-PDE) and describes derivatives of indoles.

- [0008]** WO 97/48697 relates to substituted azabicyclic compounds and their use as inhibitors of the production of TNF
 55 and cyclic AMP phosphodiesterase.

[0009] JP 10 067682 relates to cyclic nucleotide phosphodiesterase (PDE) inhibitors for prevention and treatment of lupus erythematosus and nephritis, and indoles as cGMP-PDE inhibitors.

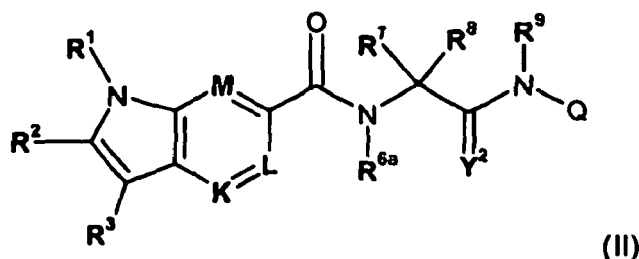
[0010] JP 10 114654 relates to therapeutic uses and formulations of blood sugar-lowering indoles.

- [0011] JP 09 124632 relates to preparations of benzoheterocycle derivatives as reductase inhibitors.
- [0012] WO 01/32653 relates to heterocyclic substituted pyrazolones and their use as kinase inhibitors.
- [0013] US 3,565,912 relates to 5-lower-alkanoyl-2,3-bis(p-methoxyphenyl)indoles and their use in the treatment of inflammatory diseases.
- [0014] JP 2001 122855 relates to preparations and activation effect of indoles to estrogen receptor.
- [0015] WO 01/30774 relates to substituted indoles and their use in the treatment of diseases, the course of which involve increased NFkB activity.
- [0016] US 5,912,260 relates to indole- and benzimidazole-derivatives which at the 5- and 6-position exhibit each a substituted amide-group. These compounds are described as potent gastrin and/or CCK antagonists.
- [0017] US 4,740,519 relates to aromatic heterocyclic derivatives and their use in veterinary or human therapy and in cosmetic formulations.
- [0018] EP 0 987 250 relates to indole dicarboxylic acid derivatives which at the 3-position of the indole scaffold possess an aminocarbonylcarbonyl-group. The compounds are described as sPLA₂ inhibitors.
- [0019] WO 99/28297 relates to substituted indoles which show a thrombin inhibiting effect.
- [0020] EP 0 242 167 relates to substituted heterocyclic carboxamides and their activity as leukotriene antagonists. Therein indole derivatives are described (see e.g. formulae Ia, II and V).
- [0021] WO 01/47922 relates to azaindole derivatives and their activity as inhibitors of protein kinases.
- [0022] The document Hishmat et al., Boll. Chem. Farmaceutico (1999), 138(6), 259-266 relates to the synthesis of pharmacologically active 2,6-diphenyl-1 H- indoles. The biological activity of these compounds was tested for antiinflammatory, ulcerogenic and antispasmodic activities.
- [0023] The document Fürstner et al., Angew. Chem. Int. Ed. Engl. 1995, 34(6), 678-681 with the title "Titanium induced zipper reactions" relates inter alia to the synthesis of substituted indoles. The indoles disclosed therein are substituted with phenyl at the 3-position of the indole scaffold.
- [0024] The document Roth and Lepke, Arch. Pharmaz. 1972, 305(3), 159-171 relates to the synthesis of indole- and carbazole-derivatives from a-hydroxyketones and aromatic amines. The 3-position of the indole derivatives disclosed therein is unsubstituted or is bearing a methyl- or phenyl-group.
- [0025] The document Youngdale et al., J. Med. Chem. 1969, 12, 948-949 relates to the synthesis and the antiinflammatory activity of 5-substituted 2,3-bis(p-methoxyphenyl)indoles.
- [0026] The document Hulme et al., Bioorganic & Medicinal Chemistry Letters 8 (1998), 1867-1872 describes the synthesis and biological evaluation of a novel series of indole PDE4 inhibitors.
- [0027] WO 02/04425 and US 2002/0065418 describe benzimidazole-derivatives. Based on their viral polymerase inhibitory activity these compounds are useful in the treatment and prevention of hepatitis C virus infection.
- [0028] US 6,358,992 describes indole derivatives and a method for inhibiting neoplasia, particularly cancerous and precancerous lesions, by exposing the affected cells to said indole derivatives.

SUMMARY OF THE INVENTION

[0029] It is therefore an object of the invention to provide a novel series of compounds having improved inhibitory activity against HCV polymerase.

[0030] In a first aspect of the invention, there is provided an enantiomer, diastereoisomer or tautomer of a compound, represented by formula II:



wherein:

R¹ is selected from the group consisting of: H, (C₁₋₆)alkyl optionally substituted with:

-halogen, OR¹¹, SR¹¹ or N(R¹²)₂, wherein **R**¹¹ and each **R**¹² is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-aryl or (C₁₋₆) alkyl-**Het**, said aryl or **Het** optionally substituted with **R**¹⁰;

or both **R**¹² are covalently bonded together and to the nitrogen to which they are both attached to form a 5, 6 or 7-membered saturated heterocycle;

R² is selected from: halogen, **R**²¹, **OR**²¹, **SR**²¹, **COOR**²¹, **SO₂N(R**²²**)₂**, **N(R**²²**)₂**, **CON(R**²²**)₂**, **NR**²²**C(O)R**²² or **NR**²²**C(O)NR**²² wherein **R**²¹ and each **R**²² is independently H, (C₁₋₆)alkyl, haloalkyl, (C₂₋₆)alkenyl, (C₃₋₇)cycloalkyl, (C₂₋₆)alkynyl, (C₅₋₇) cycloalkenyl, 6 or 10-membered aryl or **Het**, said **R**²¹ and **R**²² being optionally substituted with **R**²⁰; or both **R**²² are bonded together to form a 5, 6 or 7-membered saturated heterocycle with the nitrogen to which they are attached;

R³ is selected from (C₁₋₆)alkyl, haloalkyl, (C₃₋₇)cycloalkyl, (C₅₋₇)cycloalkenyl, (C₆₋₁₀)bicycloalkyl, (C₆₋₁₀)bicycloalkenyl, 6- or 10-membered aryl, **Het**, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-**Het**, said alkyl, cycloalkyl, cycloalkenyl, bicycloalkyl, bicycloalkenyl, aryl, **Het**, alkyl-aryl and alkyl-**Het** being optionally substituted with from 1 to 4 substituents selected from: halogen, or

a) (C₁₋₆)alkyl optionally substituted with:

- **OR**³¹ or **SR**³¹ wherein **R**³¹ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-**Het**; or
- **N(R**³²**)₂** wherein each **R**³² is independently H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-**Het**; or both **R**³² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle;

b) **OR**³³ wherein **R**³³ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-**Het**;

c) **SR**³⁴ wherein **R**³⁴ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-**Het**; and

d) **N(R**³⁵**)₂** wherein each **R**³⁵ is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-**Het**; or both **R**³⁵ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle ;

K is N or **CR**⁴, wherein **R**⁴ is H, halogen, (C₁₋₆)alkyl, haloalkyl, (C₃₋₇)cycloalkyl or (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl; or **R**⁴ is **OR**⁴¹ or **SR**⁴¹, **COR**⁴¹ or **NR**⁴¹**COR**⁴¹ wherein each **R**⁴¹ is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl;

or **R**⁴ is **NR**⁴²**R**⁴³ wherein **R**⁴² and **R**⁴³ are each independently H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, or both **R**⁴² and **R**⁴³ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle;

L is N or **CR**⁵, wherein **R**⁵ has the same definition as **R**⁴ defined above;

M is N or **CR**⁷, wherein **R**⁷ has the same definition as **R**⁴ defined above;

R^{6a} is H or C₁₋₆alkyl;

R⁷ and **R**⁸ are each independently H, (C₁₋₆)alkyl, haloalkyl, (C₃₋₇)cycloalkyl, 6- or 10-membered aryl, **Het**, (C₁₋₆)alkyl-aryl, (C₁₋₆)alkyl-**Het**, wherein said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl-aryl, (C₁₋₆)alkyl-**Het** are optionally substituted with **R**⁷⁰; or

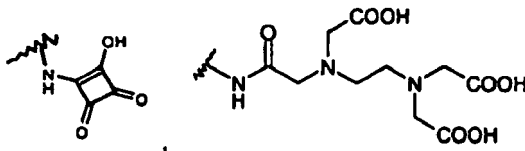
R⁷ and **R**⁸ are covalently bonded together to form second (C₃₋₇)cycloalkyl or a 4, 5- or 6-membered heterocycle having from 1 to 3 heteroatom selected from O, N, and S; or either of **R**⁷ or **R**⁸ is covalently bonded to **R**^{6a} to form a nitrogen-containing 5-or 6-membered heterocycle;

Y² is O or S;

R⁹ is H, (C₁₋₆ alkyl), (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-**Het**, all of which optionally substituted with **R**⁹⁰; or

R⁹ is covalently bonded to either of **R**⁷ or **R**⁸ to form a 5- or 6-membered heterocycle;

Q is a 6- or 10-membered aryl, **Het**, (C₁₋₆) alkyl-aryl, (C₁₋₆) alkyl-**Het**, (C₁₋₆) alkyl-CONH-aryl or (C₁₋₆) alkyl-CONH-**Het**, all of which being optionally substituted with:



or **R¹⁰⁰**;

or a salt or a derivative thereof;

wherein **Het** is defined as 5- or 6-membered heterocycle having 1 to 4 heteroatoms selected from O, N, and S, or a 9- or 10-membered heterobicycle having 1 to 5 heteroatoms selected from O, N and S; and wherein **R⁷⁰** is selected from:

- 1 to 4 substituents selected from: halogen, NO₂, cyano, azido; or
- 1 to 4 substituents selected from:

a) (C₁₋₆) alkyl or haloalkyl, (C₃₋₇)cycloalkyl, C₃₋₇ spirocycloalkyl optionally containing 1 or 2 heteroatom, (C₂₋₆) alkenyl, (C₂₋₈)alkynyl, (C₁₋₆) alkyl-(C₃₋₇) cycloalkyl, all of which optionally substituted with **R¹⁵⁰**;

b) **OR¹⁰⁴** wherein **R¹⁰⁴** is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl aryl or (C₁₋₆)alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R¹⁵⁰**;

d) **SR¹⁰⁸**, SO₂N(**R¹⁰⁸**)₂ or SO₂N(**R¹⁰⁸**)C(O)**R¹⁰⁸** wherein each **R¹⁰⁸** is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or both **R¹⁰⁸** are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or heterocycle being optionally substituted with **R¹⁵⁰**;

e) **NR¹¹¹R¹¹²** wherein **R¹¹¹** is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, and **R¹¹²** is H, CN, (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl, (C₁₋₆)alkyl)**Het**, COOR¹¹⁵ or SO₂**R¹¹⁵** wherein **R¹¹⁵** is (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or both **R¹¹¹** and **R¹¹²** are covalently bonded together and to the nitrogen to which they are attached to form a 5; 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or heterocycle being optionally substituted with **R¹⁵⁰**;

f) **NR¹¹⁶COR¹¹⁷** wherein **R¹¹⁶** and **R¹¹⁷** is each H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R¹⁵⁰**;

g) **NR¹¹⁸CONR¹¹⁹R¹²⁰**, wherein **R¹¹⁸**, **R¹¹⁹** and **R¹²⁰** is each H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or **R¹¹⁸** is covalently bonded to **R¹¹⁹** and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; or **R¹¹⁹** and **R¹²⁰** are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; said alkyl, cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or heterocycle being optionally substituted with **R¹⁵⁰**;

h) **NR¹²¹COCOR¹²²** wherein **R¹²¹** is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, a 6- or 10-membered aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R¹⁵⁰**, and **R¹²²** is **OR¹²³** or N(**R¹²⁴**)₂ wherein **R¹²³** and each **R¹²⁴** is independently H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or **R¹²⁴** is OH or O(C₁₋₆)alkyl or both **R¹²⁴** are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** and heterocycle being optionally substituted with **R¹⁵⁰**;

i) **COR¹²⁷** wherein **R¹²⁷** is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₄)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R¹⁵⁰**;

j) **COOR¹²⁸** wherein **R¹²⁸** is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl and (C₁₋₆)alkyl)**Het** being optionally substituted with **R¹⁵⁰**;

k) **CONR¹²⁹R¹³⁰** wherein **R¹²⁹** and **R¹³⁰** are independently H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)

cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or both **R**¹²⁹ and **R**¹³⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl, (C₁₋₆alkyl)**Het** and heterocycle being optionally substituted with **R**¹⁵⁰;

l) aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, all of which being optionally substituted with **R**¹⁵⁰, wherein, **R**¹⁵⁰ is selected from:

- 1 to 3 substituents selected from: halogen, NO₂, cyano, azido; or
- 1 to 3 substituents selected from:

a) (C₁₋₆) alkyl or haloalkyl, (C₃₋₇)cycloalkyl, C₃₋₇ spirocycloalkyl optionally containing 1 or 2 heteroatom, (C₂₋₆)alkenyl, (C₂₋₈)alkynyl, all of which optionally substituted with **R**¹⁶⁰;

b) **OR**¹⁰⁴ wherein **R**¹⁰⁴ is H, (C₁₋₆alkyl) or (C₃₋₇)cycloalkyl, said alkyl and cycloalkyl being optionally substituted with **R**¹⁶⁰;

d) **SR**¹⁰⁸, SO₂N(**R**¹⁰⁸)₂ wherein **R**¹⁰⁸ is H, (C₁₋₆alkyl) or (C₃₋₇)cycloalkyl, said alkyl or cycloalkyl being optionally substituted with **R**¹⁶⁰;

e) **NR**¹¹¹**R**¹¹² wherein **R**¹¹¹ is H, (C₁₋₆alkyl) or (C₃₋₇)cycloalkyl, and **R**¹¹² is H, (C₁₋₆alkyl), (C₃₋₇)cycloalkyl or (C₁₋₆alkyl)-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl, (C₁₋₆alkyl)**Het**, COOR¹¹⁵ or SO₂**R**¹¹⁵ wherein **R**¹¹⁵ is (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆alkyl)-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or both **R**¹¹¹ and **R**¹¹² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or heterocycle being optionally substituted with **R**¹⁶⁰;

f) **NR**¹¹⁶**COR**¹¹⁷ wherein **R**¹¹⁶ and **R**¹¹⁷ is each H, (C₁₋₆alkyl) or (C₃₋₇) cycloalkyl, said (C₁₋₆alkyl) or (C₃₋₇)cycloalkyl being optionally substituted with **R**¹⁶⁰;

g) **NR**¹¹⁸**CONR**¹¹⁹**R**¹²⁰, wherein **R**¹¹⁸, **R**¹¹⁹ and **R**¹²⁰ is each H, (C₁₋₆) alkyl or (C₃₋₇)cycloalkyl; or **R**¹¹⁹ and **R**¹²⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; said alkyl, cycloalkyl or heterocycle being optionally substituted with **R**¹⁶⁰;

h) **NR**¹²¹**COCOR**¹²² wherein **R**¹²¹ is H, (C₁₋₆alkyl) or (C₃₋₇)cycloalkyl, said alkyl or cycloalkyl being optionally substituted with **R**¹⁶⁰; or **R**¹²² is **OR**¹²³ or N(**R**¹²⁴)₂ wherein **R**¹²³ and each **R**¹²⁴ is independently H, (C₁₋₆alkyl) or (C₃₋₇)cycloalkyl, or **R**¹²⁴ is OH or O(C₁₋₆alkyl) or both **R**¹²⁴ are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl and heterocycle being optionally substituted with **R**¹⁶⁰;

j) tetrazole, COOR¹²⁸ wherein **R**¹²⁸ is H, (C₁₋₆alkyl) or (C₃₋₇)cycloalkyl, said (C₁₋₆alkyl) and (C₃₋₇)cycloalkyl being optionally substituted with **R**¹⁶⁰; and

k) **CONR**¹²⁹**R**¹³⁰ wherein **R**¹²⁹ and **R**¹³⁰ are independently H, (C₁₋₆) alkyl or (C₃₋₇)cycloalkyl, or both **R**¹²⁹ and **R**¹³⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl and heterocycle being optionally substituted with **R**¹⁶⁰;

wherein **R**¹⁶⁰ is defined as 1 or 2 substituents selected from:

tetrazole, halogen, CN, C₁₋₆alkyl, haloalkyl, COOR¹⁶¹, **OR**¹⁶¹, N(**R**¹⁶²)₂ or CON(**R**¹⁶²)₂, wherein **R**¹⁶¹ and each **R**¹⁶² is independently H or (C₁₋₆)alkyl;

R¹⁰, **R**²⁰, **R**⁹⁰ and **R**¹⁰⁰ is each defined as:

- 1 to 4 substituents selected from: halogen, OPO₃H, NO₂, cyano, azido, C(=NH)NH₂, C(=NH)NH(C₁₋₆)alkyl or C(=NH)NHCO(C₁₋₆)alkyl; or
- 1 to 4 substituents selected from:

a) (C₁₋₆) alkyl or haloalkyl, (C₃₋₇)cycloalkyl, C₃₋₇ spirocycloalkyl optionally containing 1 or 2 heteroatom, (C₂₋₆) alkenyl, (C₂₋₈)alkynyl, (C₁₋₆) alkyl-(C₃₋₇) cycloalkyl, all of which optionally substituted with **R**¹⁵⁰;

b) **OR**¹⁰⁴ wherein **R**¹⁰⁴ is H, (C₁₋₆alkyl), (C₃₋₇)cycloalkyl, or (C₁₋₆alkyl)-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** being optionally substituted with **R**¹⁵⁰;

c) **OCOR**¹⁰⁵ wherein **R**¹⁰⁵ is (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆alkyl)-(C₃₋₇) cycloalkyl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** being optionally substituted with **R**¹⁵⁰;

d) **SR**¹⁰⁸, SO₂N(**R**¹⁰⁸)₂ or SO₂N(**R**¹⁰⁸)C(O)**R**¹⁰⁸ wherein each **R**¹⁰⁸ is independently H, (C₁₋₆)alkyl, (C₃₋₇)cy-

cloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or both **R**¹⁰⁸ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or heterocycle being optionally substituted with **R**¹⁵⁰;

e) NR¹¹¹**R**¹¹² wherein **R**¹¹¹ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, and **R**¹¹² is H, CN, (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl, (C₁₋₆)alkyl)**Het**, COOR¹¹⁵ or SO₂**R**¹¹⁵ wherein **R**¹¹⁵ is (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or both **R**¹¹¹ and **R**¹¹² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or heterocycle being optionally substituted with **R**¹⁵⁰;

f) NR¹¹⁶**COR**¹¹⁷ wherein **R**¹¹⁶ and **R**¹¹⁷ is each H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R**¹⁵⁰;

g) NR¹¹⁸**CONR**¹¹⁹**R**¹²⁰, wherein **R**¹¹⁸, **R**¹¹⁹ and **R**¹²⁰ is each H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or **R**¹¹⁸ is covalently bonded to **R**¹¹⁹ and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; or **R**¹¹⁹ and **R**¹²⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; said alkyl, cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or heterocycle being optionally substituted with **R**¹⁵⁰;

h) NR¹²¹**COCOR**¹²² wherein **R**¹²¹ and **R**¹²² is each H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, a 6- or 10-membered aryl, **Het**, (C₁₋₆) alkyl)aryl or (C₁₋₆)alkyl)**Het**, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R**¹⁵⁰; or **R**¹²² is OR¹²³ or N(**R**¹²⁴)₂ wherein **R**¹²³ and each **R**¹²⁴ is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or **R**¹²⁴ is OH or O(C₁₋₆)alkyl) or both **R**¹²⁴ are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** and heterocycle being optionally substituted with **R**¹⁵⁰;

i) COR¹²⁷ wherein **R**¹²⁷ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R**¹⁵⁰;

j) COOR¹²⁸ wherein **R**¹²⁸ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl and (C₁₋₆)alkyl)**Het** being optionally substituted with **R**¹⁵⁰;

k) CONR¹²⁹**R**¹³⁰ wherein **R**¹²⁹ and **R**¹³⁰ are independently H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or both **R**¹²⁹ and **R**¹³⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl, (C₁₋₆)alkyl)**Het** and heterocycle being optionally substituted with **R**¹⁵⁰;

l) aryl, Het, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)Het**, all of which being optionally substituted with **R**¹⁵⁰; and wherein **R**¹⁵⁰ is defined as:**

- 1 to 3 substituents selected from: halogen, OPO₃H, NO₂, cyano, azido, C(=NH)NH₂, C(=NH)NH(C₁₋₆)alkyl or C(=NH)NHCO(C₁₋₆)alkyl; or

- 1 to 3 substituents selected from:

- a) (C₁₋₈) alkyl or haloalkyl, (C₃₋₇)cycloalkyl, C₃₋₇ spirocycloalkyl optionally containing 1 or 2 heteroatom, (C₂₋₆)alkenyl, (C₂₋₈)alkynyl, (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, all of which optionally substituted with **R**¹⁶⁰;**

- b) OR**¹⁰⁴ wherein **R**¹⁰⁴ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₈)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R**¹⁶⁰;

- c) OCOR**¹⁰⁵ wherein **R**¹⁰⁵ is (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R**¹⁶⁰;

- d) SR**¹⁰⁸, SO₂N(**R**¹⁰⁸)₂ or SO₂N(**R**¹⁰⁸)C(O)**R**¹⁰⁸ wherein each **R**¹⁰⁸ is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or both **R**¹⁰⁸ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or

heterocycle being optionally substituted with **R**¹⁶⁰;

e) NR¹¹¹R¹¹² wherein **R**¹¹¹ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, and **R**¹¹² is H, CN, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl, (C₁₋₆alkyl)**Het**, COOR¹¹⁵ or SO₂R¹¹⁵ wherein **R**¹¹⁵ is (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or both **R**¹¹¹ and **R**¹¹² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or heterocycle being optionally substituted with **R**¹⁶⁰;

f) NR¹¹⁶COR¹¹⁷ wherein **R**¹¹⁶ and **R**¹¹⁷ is each H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** being optionally substituted with **R**¹⁶⁰;

g) NR¹¹⁸OCOR¹¹⁹R¹²⁰, wherein **R**¹¹⁸, **R**¹¹⁹ and **R**¹²⁰ is each H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or **R**¹¹⁸ is covalently bonded to **R**¹¹⁹ and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, or **R**¹¹⁹ and **R**¹²⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** or heterocycle being optionally substituted with **R**¹⁶⁰;

h) NR¹²¹COCOR¹²² wherein **R**¹²¹ and **R**¹²² is each H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, a 6- or 10-membered aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** being optionally substituted with **R**¹⁶⁰, or **R**¹²² is OR¹²³ or N(R¹²⁴)₂ wherein R¹²³ and each **R**¹²⁴ is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or **R**¹²⁴ is OH or O(C₁₋₆alkyl) or both **R**¹²⁴ are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** and heterocycle being optionally substituted with **R**¹⁶⁰;

i) COR¹²⁷ wherein **R**¹²⁷ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** being optionally substituted with **R**¹⁶⁰;

j) tetrazole, COOR¹²⁸ wherein **R**¹²⁸ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl and (C₁₋₆alkyl)**Het** being optionally substituted with **R**¹⁶⁰; and

k) CONR¹²⁹R¹³⁰ wherein **R**¹²⁹ and **R**¹³⁰ are independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or both **R**¹²⁹ and **R**¹³⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl, (C₁₋₆alkyl)**Het** and heterocycle being optionally substituted with **R**¹⁶⁰;

wherein **R**¹⁶⁰ is defined as 1 or 2 substituents selected from:

tetrazole, halogen, CN, C₁₋₆alkyl, haloalkyl, COOR¹⁶¹, SO₃H, SR¹⁶¹, SO₂R¹⁶¹, OR¹⁶¹, N(R¹⁶²)₂, SO₂N(R¹⁶²)₂, NR¹⁶²COR¹⁶² or CON(R¹⁶²)₂, wherein **R**¹⁶¹ and each **R**¹⁶² is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl; or both **R**¹⁶² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle,

or a salt thereof.

[0031] Alternatively, in a first aspect of the invention, there is provided a compound as listed in claim 37.

[0032] In a third aspect of the invention, there is provided a compound according to the invention, or a pharmaceutically acceptable salt thereof, as an inhibitor of RNA dependent RNA polymerase activity of the enzyme NS5B, encoded by HCV.

[0033] In a fourth aspect of the invention, there is provided a compound according to the invention, or a pharmaceutically acceptable salt thereof, as an inhibitor of HCV replication.

[0034] In a fifth aspect of the invention, there is provided a pharmaceutical composition for the treatment or prevention of HCV infection, comprising an effective amount of a compound according to the invention, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.

[0035] According to a specific embodiment, the pharmaceutical compositions of this invention comprise an additional immunomodulatory agent. Examples of additional immunomodulatory agents include but are not limited to, α-, β-, δ- γ-, and ω-interferons.

[0036] According to an alternate embodiment, the pharmaceutical compositions of this invention may additionally comprise an antiviral agent. Examples of antiviral agents include, ribavirin and amantadine.

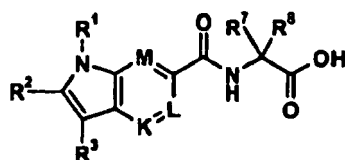
[0037] According to another alternate embodiment, the pharmaceutical compositions of this invention may additionally comprise other inhibitors of HCV protease.

[0038] According to yet another alternate embodiment, the pharmaceutical compositions of this invention may additionally comprise an inhibitor of other targets in the HCV life cycle, such as helicase, polymerase, metalloprotease or IRES.

[0039] In a sixth aspect of the invention, there is provided a use of a compound according to the invention, for the manufacture of a medicament for the treatment of HCV infection.

[0040] In a seventh aspect of the invention, there is provided a use of a compound according to the invention, as an HCV polymerase inhibitor.

[0041] In an eighth aspect of the invention, there is provided an intermediate compound represented by formula 1 c:

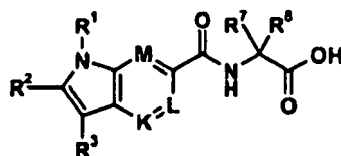


1c

wherein R^1 , R^2 , R^3 , K , L , M , R^7 and R^8 are as defined herein, or a salt, or a derivative thereof.

[0042] In a ninth aspect of the invention, there is provided a process for producing compounds according to the invention, comprising:

a) coupling, in a mixture containing an aprotic solvent, or no solvent, a coupling agent, and at a temperature of about 20°C to about 170°C, and intermediate 1c:



1c

with amine $Q-NH_2$ so as to produce compounds according to the invention, wherein R^1 , R^2 , R^3 , R^7 , R^8 , Q , K , L , and M are as defined herein.

[0043] In a tenth aspect of the invention, there is provided a use of a compound according to the invention, or a pharmaceutically acceptable salt thereof for the manufacture of a medicament for treating or preventing HCV infection in a mammal, comprising administering to the mammal an effective amount of said compound, or a pharmaceutically acceptable salt thereof in combination with another anti-HCV agent.

DETAILED DESCRIPTION OF THE INVENTION

Definitions

[0044] The following definitions apply unless otherwise noted:

[0045] As used herein, the terms "(C₁₋₃) alkyl", "(C₁₋₄) alkyl" or "(C₁₋₆) alkyl", either alone or in combination with another radical, are intended to mean acyclic straight or branched chain alkyl radicals containing up to three, four and six carbon atoms respectively. Examples of such radicals include methyl, ethyl, propyl, butyl, hexyl, 1-methylethyl, 1-methylpropyl, 2-methylpropyl, 1,1-dimethylethyl.

[0046] As used herein, the term "(C₂₋₆) alkenyl", either alone or in combination with another radical, is intended to mean an unsaturated, acyclic straight chain radical containing two to six carbon atoms.

[0047] As used herein, the term "(C₂₋₆) alkynyl" either alone or in combination with another group, is intended to mean an unsaturated, acyclic straight chain sp hybridized radical containing 2 to six carbon atoms.

[0048] As used herein the term "(C₃₋₇) cycloalkyl", either alone or in combination with another radical, means a cycloalkyl radical containing from three to seven carbon atoms and includes cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl and cycloheptyl.

[0049] As used herein, the term "(C₅₋₇)cycloalkenyl", either alone or in combination with another radical, means an

unsaturated cyclic radical containing five to seven carbon atoms.

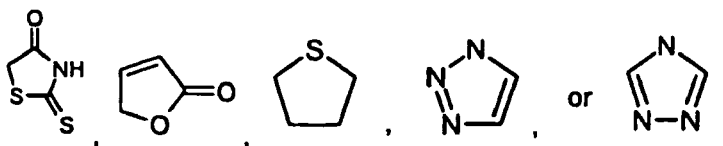
[0050] As used herein, the term "carboxy protecting group" defines protecting groups that can be used during coupling and are listed in Greene, "Protective Groups in Organic Chemistry", John Wiley & Sons, New York (1981) and "The Peptides: Analysis, Synthesis, Biology", Vol. 3, Academic Press, New York (1981).

[0051] The α -carboxyl group of the C-terminal residue is usually protected as an ester (CPG) that can be cleaved to give the carboxylic acid. Protecting groups that can be used include: 1) alkyl esters such as methyl, trimethylsilylethyl and *t*-butyl, 2) aralkyl esters such as benzyl and substituted benzyl, or 3) esters that can be cleaved by mild base treatment or mild reductive means such as trichloroethyl and phenacyl esters.

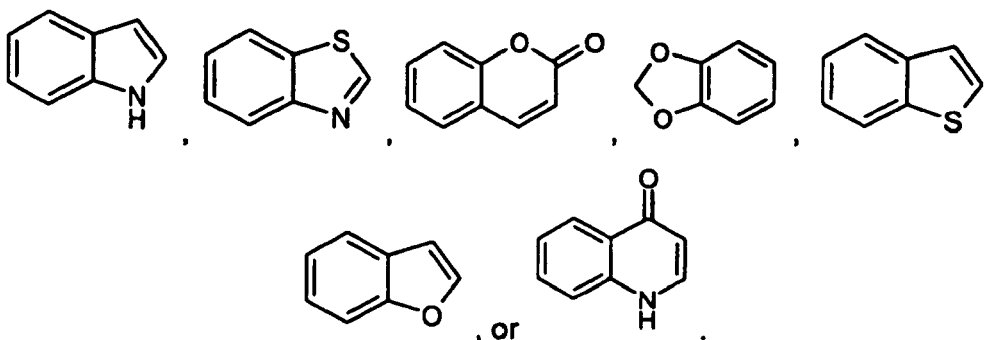
[0052] As used herein, the term "aryl", or "6- or 10-membered aryl" either alone or in combination with another radical means aromatic radical containing six or ten carbon atoms, for example phenyl or naphthyl.

[0053] As used herein the term heteroatom means O, S or N.

[0054] As used herein, the term "heterocycle", either alone or in combination with another radical, means a monovalent radical derived by removal of a hydrogen from a five-, six-, or seven-membered saturated or unsaturated (including aromatic) heterocycle containing from one to four heteroatoms selected from nitrogen, oxygen and sulfur. Furthermore, "heterobicyclic" as used herein, means a heterocycle as defined above fused to one or more other cycle, be it a heterocycle or any other cycle. Examples of such heterocycles include, but are not limited to, pyrrolidine, tetrahydrofuran, thiazolidine, pyrrole, thiophene, coumarin, hydantoin, diazepine, 1 H-imidazole, isoxazole, thiazole, tetrazole, piperidine, 1,4-dioxane, 4-morpholine, pyridine, pyridine-N-oxide, pyrimidine, thiazolo[4,5-b]-pyridine, quinoline, or indole, or the following heterocycles:



[0055] As used herein, the term "9- or 10-membered heterobicyclic" or "heterobicyclic" either alone or in combination with another radical, means a heterocycle as defined above fused to one or more other cycle, be it a heterocycle or any other cycle. Examples of such heterobicyclics include, but are not limited to, thiazolo[4,5-b]-pyridine, quinoline, or indole, or the following:



[0056] As used herein, the term "Het" defines a 5- or 6-membered heterocycle having 1 to 4 heteroatoms selected from O, N, and S, or a 9- or 10-membered heterobicyclic having 1 to 5 heteroatoms wherever possible, selected from O, N and S.

[0057] As used herein, the term "halo" means a halogen atom and includes fluorine, chlorine, bromine and iodine.

[0058] As used herein, the term "haloalkyl" is intended to mean an alkyl that is described above in which each hydrogen atom may be successively replaced by a halogen atom, for example CH_2Br or CF_3 .

[0059] As used herein, the term "metal halide" is intended to mean any metal that is bonded to a halogen atom for use in a metal-catalyzed cross-coupling reaction. Examples of such metal halides include, but are not limited to, $-\text{MgCl}$, $-\text{CuCl}$, or $-\text{ZnCl}$ and the like.

[0060] As used herein, the term "OH" refers to a hydroxyl group. It is well known to one skilled in the art that hydroxyl groups may be substituted by functional group equivalents. Examples of such functional group equivalents that are

contemplated by this invention include, but are not limited to, ethers, sulfhydryls, and primary, secondary or tertiary amines.

[0061] As used herein, the term "SH" refers to a sulfhydryl group. It is intended within the scope of the present invention that, whenever a "SH" or "SR" group is present, it can also be substituted by any other appropriate oxidation state such as SOR, SO₂R, or SO₃R.

[0062] It is intended that the term "substituted" when applied in conjunction with a radical having more than one moiety such as C₁₋₆alkyl-aryl, or C₁₋₆alkyl-**Het**, such substitution applies to both moieties i.e. both the alkyl and aryl or **Het** moieties can be substituted with the defined substituents.

[0063] As used herein, the term "COOH" refers to a carboxylic acid group. It is well known to one skilled in the art that carboxylic acid groups may be substituted by functional group equivalents. Examples of such functional group equivalents that are contemplated by this invention include, but are not limited to, esters, amides, boronic acids or tetrazole.

[0064] As used herein, the term "functional group equivalent" is intended to mean an element or a substituted derivative thereof, that is replaceable by another element that has similar electronic, hybridization or bonding properties.

[0065] As used herein, the term "metal catalyst" is intended to mean a metal such as palladium (0) or palladium (2) that is bonded to a leaving group for use in a cross-coupling reaction. Examples of such palladium catalysts include, but are not limited to, Pd(Ph₃)₄, Pd/C, Pd(OAc)₂, PdCl₂, and the like. Alternative metals that can catalyze cross-coupling reactions include, but are not limited to: Ni(acac)₂, Ni(OAc)₂, or NiCl₂.

[0066] As used herein, the term "derivative" is intended to mean "detectable label", "affinity tag" or "photoreactive group". The term "detectable label" refers to any group that may be linked to the polymerase or to a compound of the present invention such that when the compound is associated with the polymerase target, such label allows recognition either directly or indirectly of the compound such that it can be detected, measured and quantified. Examples of such "labels" are intended to include, but are not limited to, fluorescent labels, chemiluminescent labels, colorimetric labels, enzymatic markers, radioactive isotopes and affinity tags such as biotin. Such labels are attached to the compound or to the polymerase by well known methods.

The term "affinity tag" means a ligand (that is linked to the polymerase or to a compound of the present invention) whose strong affinity for a receptor can be used to extract from a solution the entity to which the ligand is attached. Examples of such ligands include biotin or a derivative thereof, a histidine polypeptide, a polyarginine, an amylose sugar moiety or a defined epitope recognizable by a specific antibody. Such affinity tags are attached to the compound or to the polymerase by well-known methods.

[0067] The term "photoreactive group" means a group that is transformed, upon activation by light, from an inert group to a reactive species, such as a free radical. Examples of such groups include, but are not limited to, benzophenones, azides, and the like.

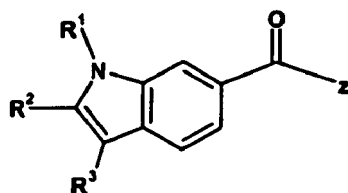
[0068] As used herein, the term "pharmaceutically acceptable salt" includes those derived from pharmaceutically acceptable bases and is non-toxic. Examples of suitable bases include choline, ethanolamine and ethylenediamine. Na⁺, K⁺, and Ca⁺⁺ salts are also contemplated to be within the scope of the invention (also see Pharmaceutical salts, Birge, S.M. et al., J. Pharm. Sci., (1977), 66, 1-19).

Preferred embodiments

Core:

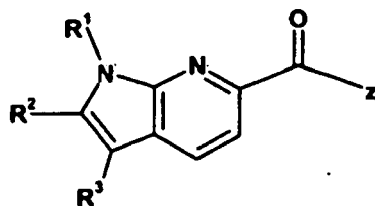
[0069] Preferably, **M**, **K** and **L** is CH or N. More preferably, **M**, **K** and **L** is CH.

[0070] More preferably, compounds of the present invention have the following formulae:



IIc

or



IId

R¹:

[0071] Preferably **R¹** is selected from the group consisting of: H or (C₁₋₆)alkyl. More preferably, **R¹** is H, CH₃, isopropyl, or isobutyl. Even more preferably, **R¹** is H or CH₃. Most preferably, **R¹** is CH₃.

R²:

[0072] Preferably, **R²** is CON(**R²²**)₂, wherein each **R²²** is independently H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₅₋₇)cycloalkenyl, 6 or 10-membered aryl or **Het**, or both **R²²** are bonded together to form a 5, 6 or 7-membered saturated heterocycle with the nitrogen to which they are attached;
or **R²** is selected from: H, halogen, (C₁₋₆)alkyl, haloalkyl, (C₂₋₆)alkenyl, (C₅₋₇) cycloalkenyl, 6 or 10-membered aryl or **Het**; wherein each of said alkyl, haloalkyl, (C₂₋₆)alkenyl, (C₅₋₇)cycloalkenyl, aryl or **Het** is optionally substituted with **R²⁰**, wherein **R²⁰** is defined as:

- 1 to 4 substituents selected from: halogen, NO₂, cyano, azido, C(=NH)NH₂, C(=NH)NH(C₁₋₆)alkyl or C(=NH)NHCO(C₁₋₆)alkyl; or
- 1 to 4 substituents selected from:

a) (C₁₋₆) alkyl or haloalkyl, (C₃₋₇)cycloalkyl, (C₂₋₆)alkenyl, (C₂₋₆)alkynyl, (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, all of which optionally substituted with **R¹⁵⁰**;

b) OR¹⁰⁴ wherein **R¹⁰⁴** is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl aryl or (C₁₋₆)alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R¹⁵⁰**;

c) OCOR¹⁰⁵ wherein **R¹⁰⁵** is (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R¹⁵⁰**;

d) SR¹⁰⁸, SO₂N(**R¹⁰⁸**)₂ or SO₂N(**R¹⁰⁸**)C(O)**R¹⁰⁸** wherein each **R¹⁰⁸** is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or both **R¹⁰⁸** are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆) alkyl)aryl or (C₁₋₆)alkyl)**Het** or heterocycle being optionally substituted with **R¹⁵⁰**;

e) NR¹¹¹R¹¹² wherein **R¹¹¹** is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, and **R¹¹²** is H, CN, (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl, (C₁₋₆)alkyl)**Het**, COOR¹¹⁵ or SO₂R¹¹⁵ wherein **R¹¹⁵** is (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or both **R¹¹¹** and **R¹¹²** are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or heterocycle being optionally substituted with **R¹⁵⁰**;

f) NR¹¹⁶COR¹¹⁷ wherein **R¹¹⁶** and **R¹¹⁷** is each H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R¹⁵⁰**;

g) NR¹¹⁸CONR¹¹⁹R¹²⁰, wherein **R¹¹⁸**, **R¹¹⁹** and **R¹²⁰** is each H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or **R¹¹⁸** is covalently bonded to **R¹¹⁹** and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; or **R¹¹⁹** and **R¹²⁰** are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; said alkyl, cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or heterocycle being optionally substituted with **R¹⁵⁰**;

h) $\text{NR}^{121}\text{COCOR}^{122}$ wherein R^{121} and R^{122} is each H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, a 6- or 10-membered aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het** being optionally substituted with R^{150} ; or R^{122} is OR^{123} or $\text{N}(\text{R}^{124})_2$ wherein R^{123} and each R^{124} is independently H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, or R^{124} is OH or O (C_{1-6}) alkyl or both R^{124} are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het** and heterocycle being optionally substituted with R^{150} ;

i) COR^{127} wherein R^{127} is H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het** being optionally substituted with R^{150} ;

j) COOR^{128} wherein R^{128} is H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, said (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl and (C_{1-6}) alkyl)**Het** being optionally substituted with R^{150} ;

k) $\text{CONR}^{129}\text{R}^{130}$ wherein R^{129} and R^{130} are independently H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, (C_{1-8}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, or both R^{129} and R^{130} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl, (C_{1-6}) alkyl)**Het** and heterocycle being optionally substituted with R^{150} ;

l) aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, all of which being optionally substituted with R^{150} , wherein R^{150} is preferably:

- 1 to 3 substituents selected from: halogen, NO_2 , cyano or azido; or
- 1 to 3 substituents selected from:

a) (C_{1-6}) alkyl or haloalkyl, (C_{3-7}) cycloalkyl, (C_{2-6}) alkenyl, (C_{2-8}) alkynyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, all of which optionally substituted with R^{160} ;

b) OR^{104} wherein R^{104} is H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, said alkyl or cycloalkyl optionally substituted with R^{160} ;

d) SR^{108} , SO_3H , $\text{SO}_2\text{N}(\text{R}^{108})_2$ or $\text{SO}_2\text{N}(\text{R}^{108})\text{C}(\text{O})\text{R}^{108}$ wherein each R^{108} is independently H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, or both R^{108} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het** and heterocycle being optionally substituted with R^{160} ;

e) $\text{NR}^{111}\text{R}^{112}$ wherein R^{111} is H, (C_{1-6}) alkyl, or (C_{3-7}) cycloalkyl, and R^{112} is H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, COOR^{115} or $\text{SO}_2\text{R}^{115}$ wherein R^{115} is (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, or both R^{111} and R^{112} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl and heterocycle being optionally substituted with R^{160} ;

f) $\text{NR}^{116}\text{COR}^{117}$ wherein R^{116} and R^{117} is each H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl said (C_{1-6}) alkyl and (C_{3-7}) cycloalkyl being optionally substituted with R^{160} ;

g) $\text{NR}^{118}\text{CONR}^{119}\text{R}^{120}$, wherein R^{118} , R^{119} and R^{120} is each H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, or R^{118} is covalently bonded to R^{119} and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, or R^{119} and R^{120} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, and heterocycle being optionally substituted with R^{160} ;

h) $\text{NR}^{121}\text{COCOR}^{122}$ wherein R^{121} is H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, said alkyl and cycloalkyl being optionally substituted with R^{160} ; or R^{122} is OR^{123} or $\text{N}(\text{R}^{124})_2$ wherein R^{123} and each R^{124} is independently H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, or both R^{124} are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl and heterocycle being optionally substituted with R^{160} ;

i) COR^{127} wherein R^{127} is H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, said alkyl and cycloalkyl being optionally substituted with R^{160} ;

j) COOR^{128} wherein R^{128} is H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, said (C_{1-6}) alkyl and (C_{3-7}) cycloalkyl being optionally substituted with R^{160} ; and

k) $\text{CONR}^{129}\text{R}^{130}$ wherein R^{129} and R^{130} are independently H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, or both R^{129} and R^{130} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl and heterocycle being optionally substituted with R^{160} ;

wherein R^{160} is defined as 1 or 2 substituents selected from:

halogen, CN, C₁₋₆alkyl, haloalkyl, COOR¹⁶¹, OR¹⁶¹, N(R¹⁶²)₂, SO₂N(R¹⁶²)₂, NR¹⁶²COR¹⁶² or CON(R¹⁶²)₂, wherein R¹⁶¹ and each R¹⁶² is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl; or both R¹⁶² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle.

[0073] More preferably, R² is selected from: aryl or Het, each optionally monosubstituted or disubstituted with substituents selected from the group consisting of: halogen, haloalkyl, N₃, or

- a) (C₁₋₆)alkyl optionally substituted with OH, O(C₁₋₆)alkyl or SO₂(C₁₋₆ alkyl);
- b) (C₁₋₆)alkoxy;
- e) NR¹¹¹R¹¹² wherein both R¹¹¹ and R¹¹² are independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or R¹¹² is 6- or 10-membered aryl, Het, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-Het; or both R¹¹¹ and R¹¹² are covalently bonded together and to the nitrogen to which they are attached to form a nitrogen-containing heterocycle, each of said alkyl, cycloalkyl, aryl, Het, alkyl-aryl or alkyl-Het; being optionally substituted with halogen or:

- OR^{2h} or N(R^{2h})₂, wherein each R^{2h} is independently H, (C₁₋₆) alkyl, or both R^{2h} are covalently bonded together and to the nitrogen to which they are attached to form a nitrogen-containing heterocycle;

- f) NHCOR¹¹⁷ wherein R¹¹⁷ is (C₁₋₆)alkyl, O(C₁₋₆)alkyl or O(C₃₋₇)cycloalkyl;

- i) CO-aryl; and

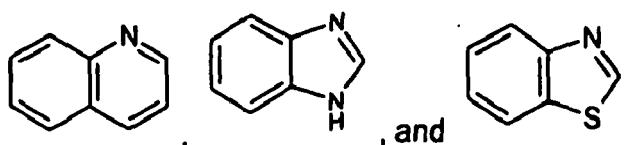
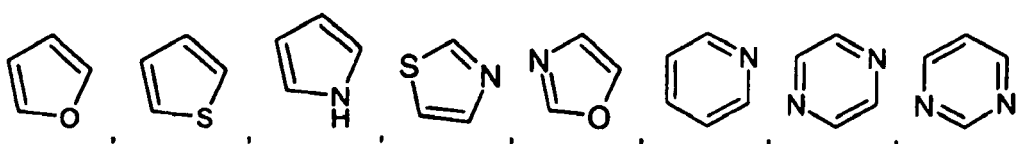
- k) CONH₂, CONH(C₁₋₆alkyl), CON(C₁₋₆alkyl)₂, CONH-aryl, or CONHC₁₋₆ alkyl aryl.

[0074] Still, more preferably, R² is aryl or Het, each optionally monosubstituted or disubstituted with substituents selected from the group consisting of: halogen, haloalkyl, or

- a) (C₁₋₆)alkyl optionally substituted with OH, O(C₁₋₆)alkyl or SO₂(C₁₋₆ alkyl);
- b) (C₁₋₆)alkoxy; and
- e) NR¹¹¹R¹¹² wherein both R¹¹¹ and R¹¹² are independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or R¹¹² is 6- or 10-membered aryl, Het, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-Het; or both R¹¹¹ and R¹¹² are covalently bonded together and to the nitrogen to which they are attached to form a nitrogen-containing heterocycle, each of said alkyl, cycloalkyl, aryl, Het, alkyl-aryl or alkyl-Het ; or being optionally substituted with halogen or:

- OR^{2h} or N(R^{2h})₂, wherein each R^{2h} is independently H, (C₁₋₆) alkyl, or both R^{2h} are covalently bonded together and to the nitrogen to which they are attached to form a nitrogen-containing heterocycle.

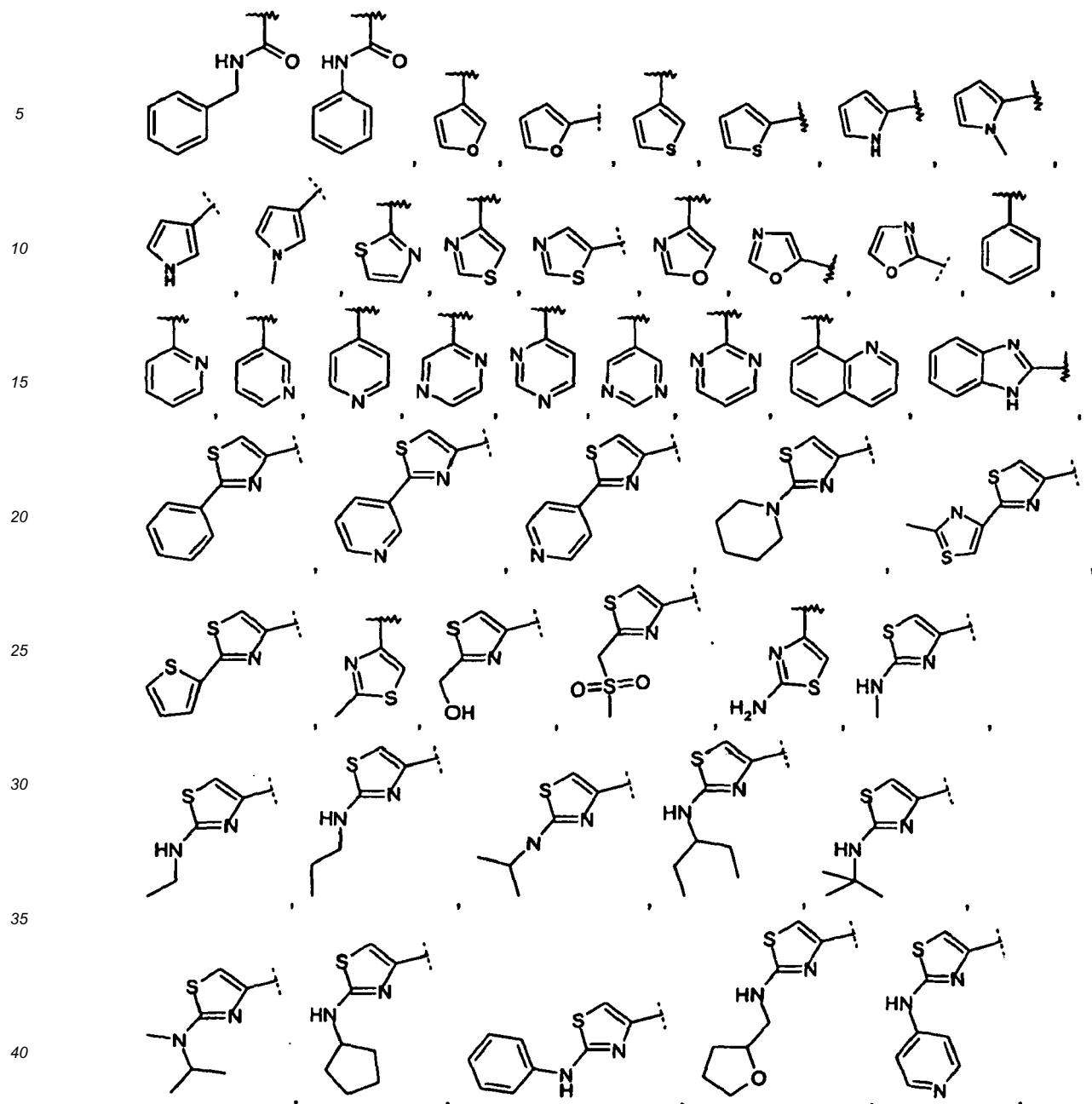
[0075] Even more preferably, R² is phenyl or a heterocycle selected from:

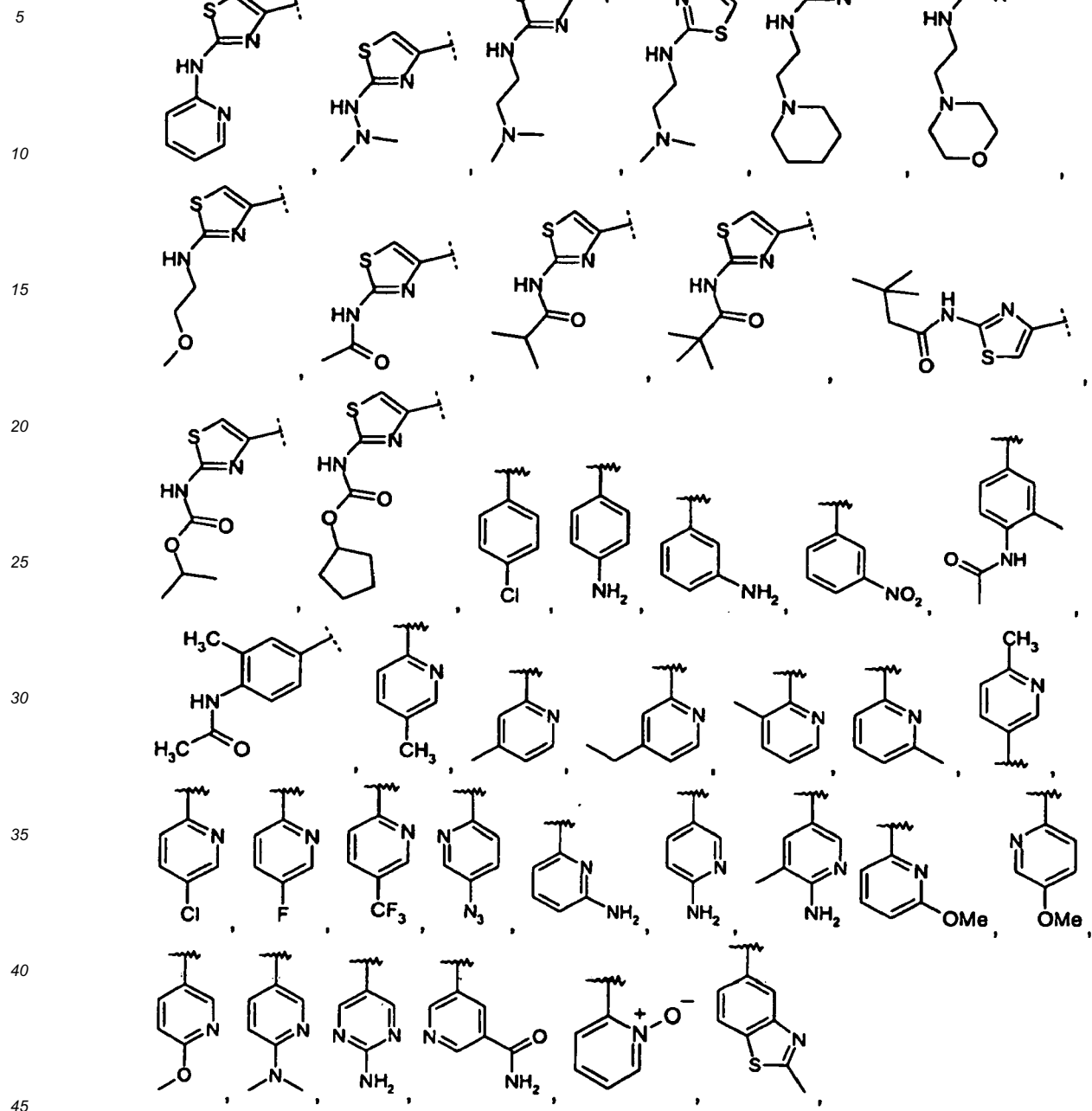


all of which optionally substituted as defined above.

[0076] Even more preferably, R² is selected from the group consisting of:

H, Br, CONHCH₃, CON(CH₃)₂, CONH₂, CH=CH₂,

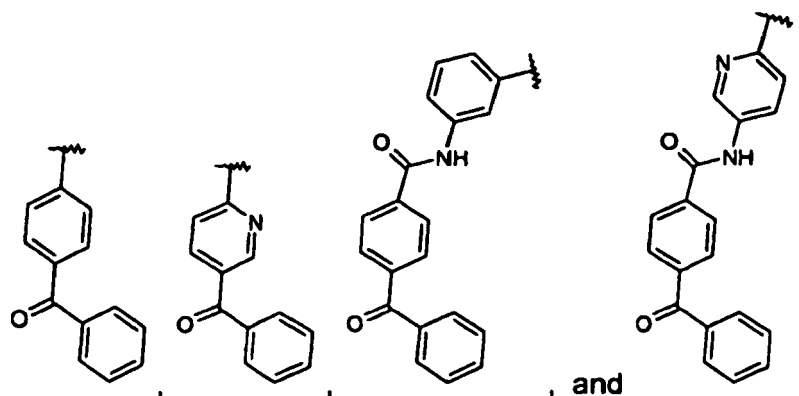




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[0077] Still more preferably, R^2 is selected from:

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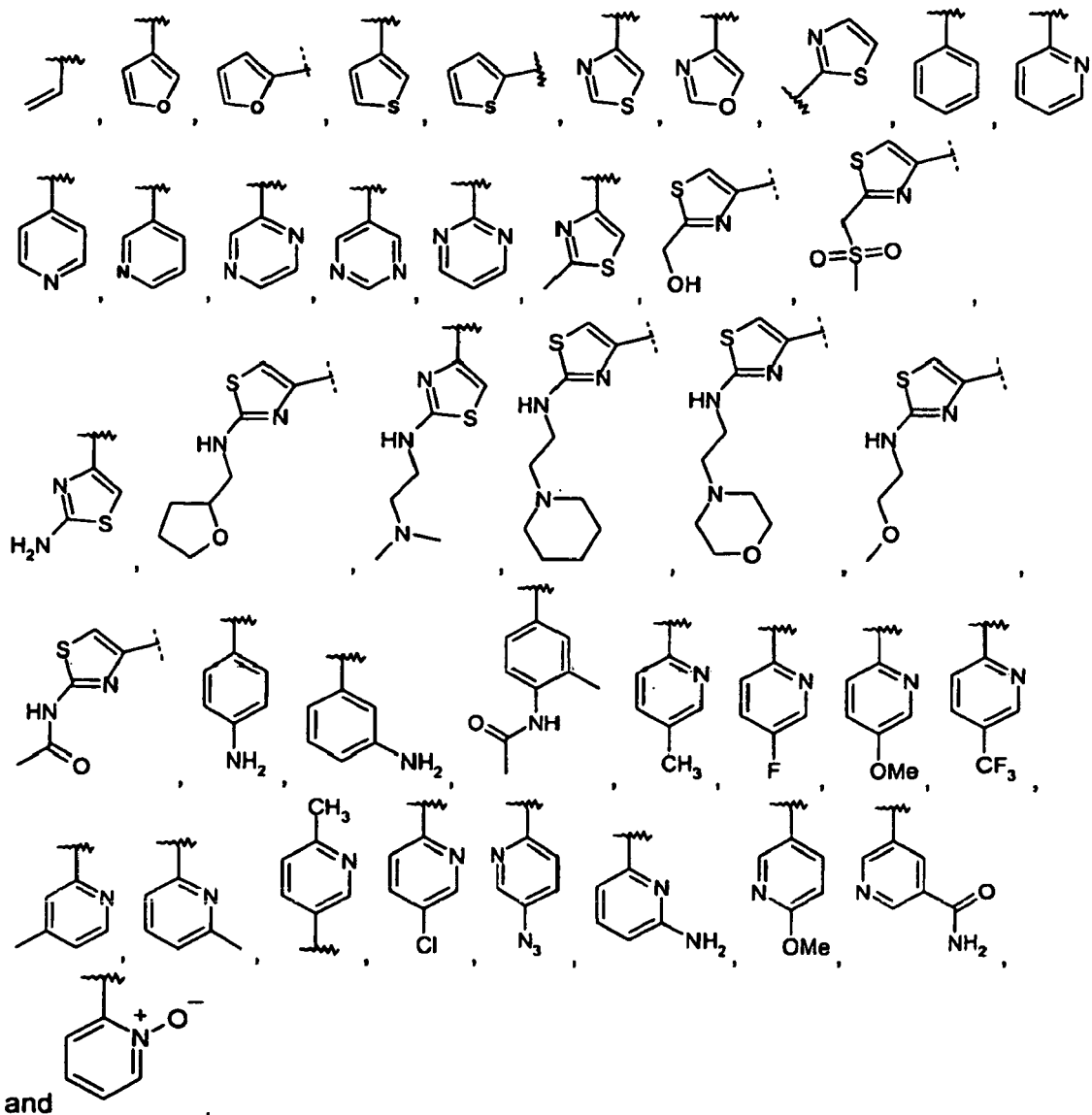
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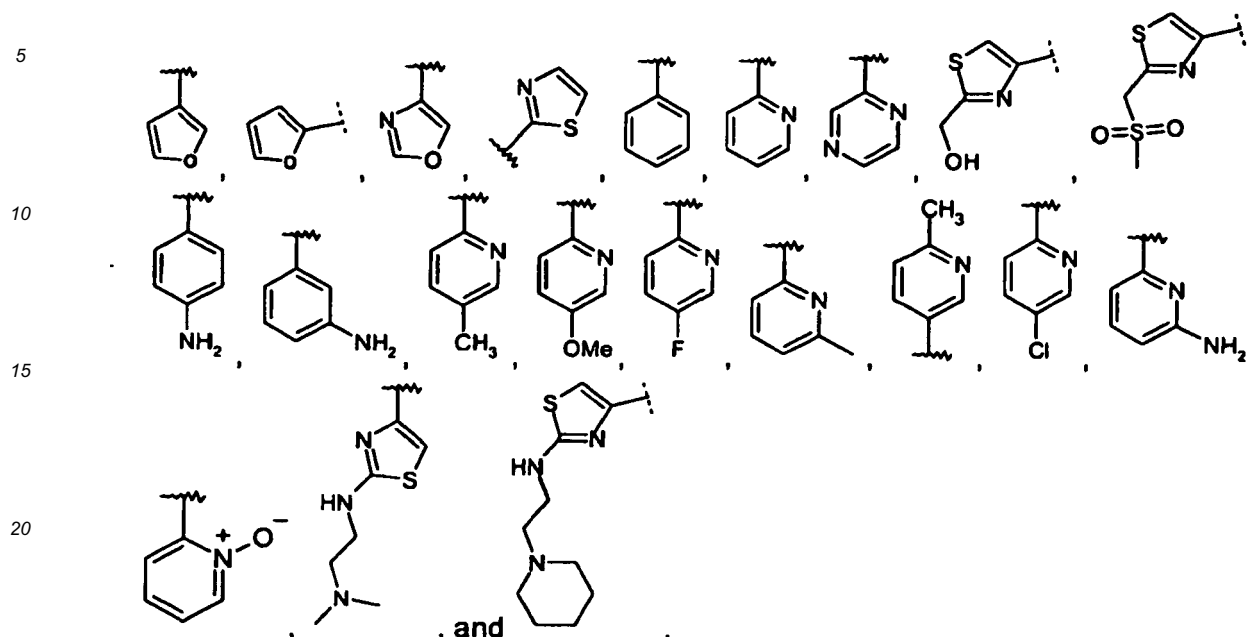
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[0078] Most preferably, R^2 is selected from:



R^3 :

[0079] Preferably, R^3 is selected from (C_{3-7}) cycloalkyl, (C_{3-7}) cycloalkenyl, (C_{6-10}) bicycloalkyl, (C_{6-10}) bicycloalkenyl, 6- or 10-membered aryl, or **Het**. More preferably, R^3 is (C_{3-7}) cycloalkyl. Most preferably, R^3 is cyclopentyl, or cyclohexyl.

[0080] Preferably, R^{6a} is H or C_{1-6} alkyl. More preferably, R^{6a} is H.

[0081] Preferably, R^7 and R^8 are each independently H, (C_{1-6}) alkyl, haloalkyl, (C_{3-7}) cycloalkyl, 6- or 10-membered aryl, **Het**, (C_{1-6}) alkyl-aryl, (C_{1-6}) alkyl-**Het**, all of which optionally substituted with from 1 to 4 substituents selected from halogen or:

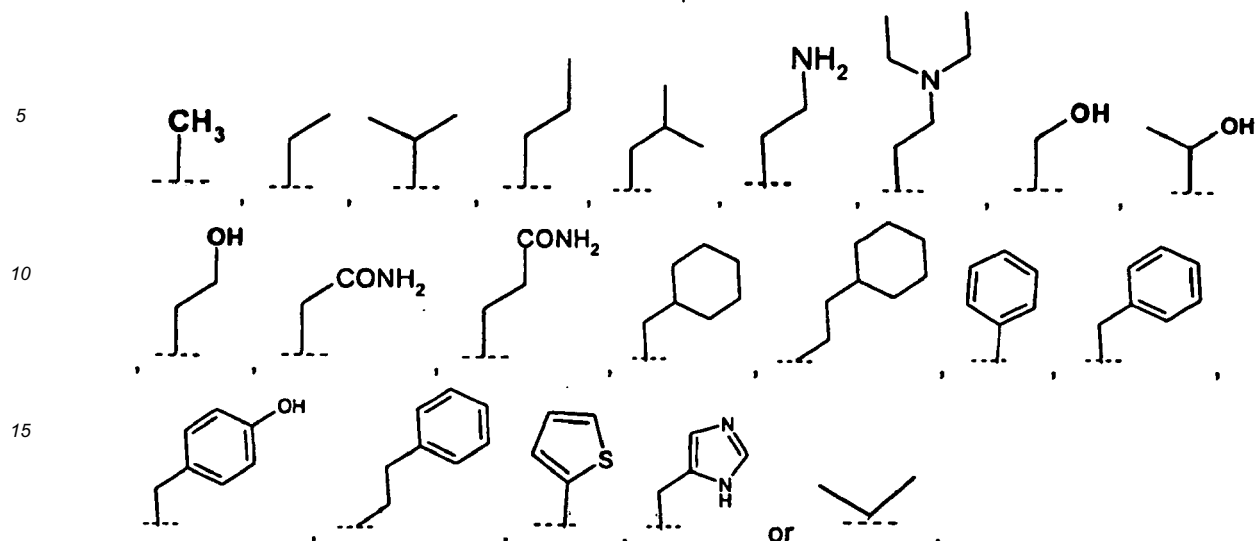
- a) (C_{1-6}) alkyl; and
- b) $N(R^{8a'})_2$, CO_2R^{8a} , or $SO_2R^{8a''}$ $COOR^{8a}$, $COCOOR^{8a}$, $CON(R^{8a'})_2$, $COCON(R^{8a'})_2$, wherein each R^{8a} or $R^{8a'}$ are independently H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl; or each $R^{8a'}$ are independently covalently bonded together and to the nitrogen to which they are both bonded to form a 5, 6 or 7-membered saturated heterocycle; or $R^{8a''}$ is independently (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl.

or R^7 and R^8 are covalently bonded together to form (C_{3-7}) cycloalkyl, 4, 5- or 6-membered heterocycle having from 1 to 3 heteroatom selected from O, N, and S.

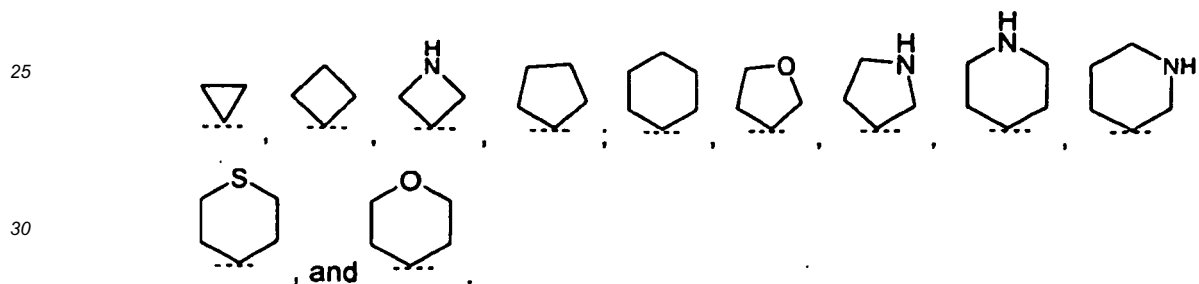
[0082] More preferably, R^7 and R^8 are each independently H, (C_{1-6}) alkyl, haloalkyl, (C_{3-7}) cycloalkyl, 6- or 10-membered aryl, **Het**, (C_{1-6}) alkyl-aryl, (C_{1-6}) alkyl-**Het**; or R^7 and R^8 are covalently bonded together to form cyclopropyl, cyclobutyl, cyclopentyl, pyrrolidine, piperidine, tetrahydrofuran, tetrahydropyran, or pentamethylene sulfide; wherein said alkyl, haloalkyl, (C_{3-7}) cycloalkyl, 6- or 10-membered aryl, **Het**, (C_{1-6}) alkyl-aryl, or (C_{1-6}) alkyl-**Het**, are optionally monosubstituted with substituents selected from:

- a) (C_{1-6}) alkyl; and
- c) NH_2 , $N(CH_2CH)_2$, $COCH_3$, or SO_2CH_3 .

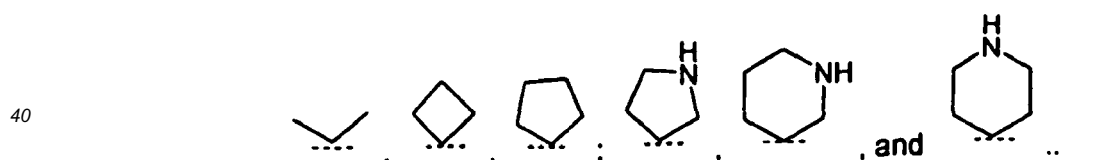
[0083] Even more preferably, R^7 and R^8 are selected from:



[0084] R^7 and R^8 together form:



[0085] Most preferably, R^7 and R^8 are selected from the group consisting of:

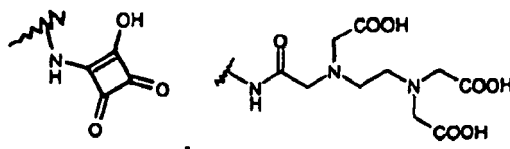


R^9 :

[0086] Preferably R^9 is H; or R^9 is covalently bonded to either of R^7 or R^8 to form a 5- or 6-membered heterocycle. More preferably, R^9 is H.

Q :

[0087] Preferably, Q is a 6- or 10-membered aryl, **Het**, (C_{1-6} alkyl)aryl or (C_{1-6} alkyl)-**Het**, all of which being optionally substituted with:



or **R¹⁰⁰**;

wherein **R¹⁰⁰** is:

- 1 to 4 substituents selected from: halogen, NO₂, cyano or azido; or
- 1 to 4 substituents selected from:

a) (C₁₋₆) alkyl or haloalkyl, (C₃₋₇)cycloalkyl, (C₂₋₆)alkenyl, (C₂₋₈)alkynyl, (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, all of which optionally substituted with **R¹⁵⁰**;

b) **OR¹⁰⁴** wherein **R¹⁰⁴** is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl aryl or (C₁₋₆)alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R¹⁵⁰**;

d) **SR¹⁰⁸** wherein **R¹⁰⁸** is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, all of which being optionally substituted with **R¹⁵⁰**;

e) **NR¹¹¹R¹¹²** wherein **R¹¹¹** is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₈)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, and **R¹¹²** is H, CN, (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl, (C₁₋₆)alkyl)**Het**, COOR¹¹⁵ or SO₂R¹¹⁵ wherein **R¹¹⁵** is (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, or (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or both **R¹¹¹** and **R¹¹²** are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₈)alkyl)aryl or (C₁₋₈)alkyl)**Het**, or heterocycle being optionally substituted with **R¹⁵⁰**;

f) **NR¹¹⁶COR¹¹⁷** wherein **R¹¹⁶** and **R¹¹⁷** is each H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R¹⁵⁰**;

g) **NR¹¹⁸CONR¹¹⁹R¹²⁰**, wherein **R¹¹⁸**, **R¹¹⁹** and **R¹²⁰** is each H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or **R¹¹⁸** is covalently bonded to **R¹¹⁹** and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; or **R¹¹⁹** and **R¹²⁰** are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; said alkyl, cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or heterocycle being optionally substituted with **R¹⁵⁰**;

h) **NR¹²¹COCOR¹²²** wherein **R¹²¹** and **R¹²²** is each H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, a 6- or 10-membered aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R¹⁵⁰**; or **R¹²²** is **OR¹²³** or **N(R¹²⁴)₂** wherein **R¹²³** and each **R¹²⁴** is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or **R¹²⁴** is OH or O(C₁₋₆)alkyl) or both **R¹²⁴** are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** and heterocycle being optionally substituted with **R¹⁵⁰**;

j) **COOR¹²⁸** wherein **R¹²⁸** is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl and (C₁₋₆)alkyl)**Het** being optionally substituted with **R¹⁵⁰**;

k) **CONR¹²⁹R¹³⁰** wherein **R¹²⁹** and **R¹³⁰** are independently H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or both **R¹²⁹** and **R¹³⁰** are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl, (C₁₋₆)alkyl)**Het** and heterocycle being optionally substituted with **R¹⁵⁰**;

l) aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, all of which being optionally substituted with **R¹⁵⁰**; wherein **R¹⁵⁰** is selected from:

- 1 to 3 substituents selected from: halogen, NO₂, cyano or azido; or
- 1 to 3 substituents selected from:

a) (C₁₋₆) alkyl or haloalkyl, (C₃₋₇)cycloalkyl, C₃₋₇ spirocycloalkyl optionally containing 1 or 2 heteroatom, (C₂₋₆)alkenyl, (C₂₋₈)alkynyl, (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, all of which optionally substituted with R¹⁶⁰;

b) OR¹⁰⁴ wherein R¹⁰⁴ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, Het, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)Het, said alkyl, cycloalkyl, aryl, Het, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)Het being optionally substituted with R¹⁶⁰;

d) SR¹⁰⁸, SO₂N(R¹⁰⁸)₂ or SO₂N(R¹⁰⁸)C(O)R¹⁰⁸ wherein each R¹⁰⁸ is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, Het, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)Het or both R¹⁰⁸ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, Het, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)Het or heterocycle being optionally substituted with R¹⁶⁰;

e) NR¹¹¹R¹¹² wherein R¹¹¹ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, aryl, Het, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)Het, and R¹¹² is H, CN, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, Het, (C₁₋₆)alkyl)aryl, (C₁₋₆)alkyl)Het or SO₂R¹¹⁵ wherein R¹¹⁵ is (C₁₋₆) alkyl, (C₃₋₇)cy- cloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, Het, (C₁₋₆) alkyl)aryl or (C₁₋₆)alkyl)Het, or both R¹¹¹ and R¹¹² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, Het, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)Het, or heterocycle being optionally substituted with R¹⁶⁰;

f) NR¹¹⁶COR¹¹⁷ wherein R¹¹⁶ and R¹¹⁷ is each H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, Het, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)Het, said (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, Het, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)Het being optionally substituted with R¹⁶⁰;

g) NR¹¹⁸CONR¹¹⁹R¹²⁰, wherein R¹¹⁸, R¹¹⁹ and R¹²⁰ is each H, (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, aryl, Het, (C₁₋₆) alkyl)aryl or (C₁₋₆)alkyl)Het, or R¹¹⁸ is covalently bonded to R¹¹⁹ and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, or R¹¹⁹ and R¹²⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, aryl, Het, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)Het or heterocycle being optionally substituted with R¹⁶⁰;

h) NR¹²¹COCOR¹²² wherein R¹²¹ is H, (C₁₋₆)alkyl optionally substituted with R¹⁶⁰, and R¹²² is OR¹²³ or N(R¹²⁴)₂ wherein R¹²³ and each R¹²⁴ is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, aryl, Het, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)Het, or R¹²⁴ is OH or O(C₁₋₆)alkyl or both R¹²⁴ are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, Het, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)Het and heterocycle being optionally substituted with R¹⁶⁰;

i) tetrazole, COOR¹²⁸ wherein R¹²⁸ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, Het, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)Het, said (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cy- cloalkyl, aryl, Het, (C₁₋₆)alkyl)aryl and (C₁₋₆)alkyl)Het being optionally substituted with R¹⁶⁰; and

k) CONR¹²⁹R¹³⁰ wherein R¹²⁹ and R¹³⁰ are independently H, (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, aryl, Het, (C₁₋₆) alkyl)aryl or (C₁₋₆)alkyl)Het, or both R¹²⁹ and R¹³⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, Het, (C₁₋₆)alkyl)aryl, (C₁₋₆)alkyl)Het and hete- rocycle being optionally substituted with R¹⁶⁰;

wherein R¹⁶⁰ is defined as 1 or 2 substituents selected from:
tetrazole, halogen, CN, C₁₋₆alkyl, haloalkyl, COOR¹⁶¹, SO₃H, SR¹⁶¹, SO₂R¹⁶¹, OR¹⁶¹, N(R¹⁶²)₂, SO₂N (R¹⁶²)₂, NR¹⁶²COR¹⁶² or CON(R¹⁶²)₂, wherein R¹⁶¹ and each R¹⁶² is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl; or both R¹⁶² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle.

[0088] More preferably. Q is a 6- or 10-membered aryl, Het, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)-Het, all of which being optionally substituted with:

- 1 to 4 substituents selected from: halogen, NO₂, cyano or azido ; or
- 1 to 4 substituents selected from:

a) (C₁₋₆) alkyl or haloalkyl, (C₃₋₇)cycloalkyl, (C₂₋₆)alkenyl, (C₂₋₈)alkynyl, (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, all of which optionally substituted with R¹⁵⁰;

b) OR¹⁰⁴ wherein R¹⁰⁴ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, Het, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)Het, said alkyl, cycloalkyl, aryl, Het, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)Het being optionally substituted with R¹⁵⁰;

d) SR¹⁰⁸, SO₂N(R¹⁰⁸)₂ or SO₂N(R¹⁰⁸)C(O)R¹⁰⁸ wherein each R¹⁰⁸ is independently H, (C₁₋₆)alkyl, (C₃₋₇)cy-

cloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or both **R**¹⁰⁸ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or heterocycle being optionally substituted with **R**¹⁵⁰;

e) NR¹¹¹**R**¹¹² wherein **R**¹¹¹ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, and **R**¹¹² is H, CN, (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl, (C₁₋₆)alkyl)**Het**, COOR¹¹⁵ or SO₂**R**¹¹⁵ wherein **R**¹¹⁵ is (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or both **R**¹¹¹ and **R**¹¹² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or heterocycle being optionally substituted with **R**¹⁵⁰;

f) NR¹¹⁶**COR**¹¹⁷ wherein **R**¹¹⁶ and **R**¹¹⁷ is each H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R**¹⁵⁰;

g) NR¹¹⁸**CONR**¹¹⁹**R**¹²⁰, wherein **R**¹¹⁸, **R**¹¹⁹ and **R**¹²⁰ is each H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or **R**¹¹⁹ and **R**¹²⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; said alkyl, cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or heterocycle being optionally substituted with **R**¹⁵⁰;

h) NR¹²¹**COCOR**¹²² wherein **R**¹²¹ is H, (C₁₋₆)alkyl optionally substituted with **R**¹⁵⁰, and **R**¹²² is OR¹²³ or N(**R**¹²⁴)₂ wherein **R**¹²³ and each **R**¹²⁴ is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or **R**¹²⁴ is OH or O(C₁₋₆)alkyl or both **R**¹²⁴ are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** and heterocycle being optionally substituted with **R**¹⁵⁰;

j) COOR¹²⁸ wherein **R**¹²⁸ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl and (C₁₋₆)alkyl)**Het** being optionally substituted with **R**¹⁵⁰;

k) CONR¹²⁹**R**¹³⁰ wherein **R**¹²⁹ and **R**¹³⁰ are independently H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or both **R**¹²⁹ and **R**¹³⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl, (C₁₋₆)alkyl)**Het** and heterocycle being optionally substituted with **R**¹⁵⁰;

l) aryl, Het, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)Het**, all of which being optionally substituted with **R**¹⁵⁰, wherein **R**¹⁵⁰ is preferably selected from :**

- 1 to 3 substituents selected from: halogen, NO₂, cyano or azido; or
- 1 to 3 substituents selected from:

a) (C₁₋₆) alkyl or haloalkyl, (C₃₋₇)cycloalkyl, (C₂₋₆)alkenyl, (C₂₋₈)alkynyl, (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, all of which optionally substituted with **R¹⁶⁰;**

b) OR¹⁰⁴ wherein **R**¹⁰⁴ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, said alkyl, cycloalkyl, aryl and **Het** being optionally substituted with **R**¹⁶⁰;

c) OCOR¹⁰⁵ wherein **R**¹⁰⁵ is (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R**¹⁶⁰;

d) SR¹⁰⁸, SO₂N(**R**¹⁰⁸)₂ or SO₂N(**R**¹⁰⁸)C(O)**R**¹⁰⁸ wherein each **R**¹⁰⁸ is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or both **R**¹⁰⁸ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl or heterocycle being optionally substituted with **R**¹⁶⁰;

e) NR¹¹¹**R**¹¹² wherein **R**¹¹¹ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, and **R**¹¹² is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, COOR¹¹⁵ or SO₂**R**¹¹⁵ wherein **R**¹¹⁵ is (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or both **R**¹¹¹ and **R**¹¹² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or heterocycle being optionally substituted with **R**¹⁶⁰;

f) NR¹¹⁶**COR**¹¹⁷ wherein **R**¹¹⁶ and **R**¹¹⁷ is each H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R**¹⁶⁰;

g) NR¹¹⁸**CONR**¹¹⁹**R**¹²⁰, wherein **R**¹¹⁸, **R**¹¹⁹ and **R**¹²⁰ is each H, (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, or **R**¹¹⁹

and R^{120} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; said alkyl, cycloalkyl or heterocycle being optionally substituted with R^{160} ;

h) $NR^{121}COR^{122}$ wherein R^{121} is H, (C_{1-6}) alkyl optionally substituted with R^{160} ; and R^{122} is OR^{123} or $N(R^{124})_2$ wherein R^{123} and each R^{124} is independently H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, or R^{124} is OH or $O(C_{1-6})$ alkyl, or both R^{124} are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl and heterocycle being optionally substituted with R^{160} ;

j) tetrazole, $COOR^{128}$ wherein R^{128} is H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, said (C_{1-6}) alkyl and (C_{3-7}) cycloalkyl being optionally substituted with R^{160} ; and

k) $CONR^{129}R^{130}$ wherein R^{129} and R^{130} are independently H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, or both R^{129} and R^{130} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl and heterocycle being optionally substituted with R^{160} ;

wherein R^{160} is defined as 1 or 2 substituents selected from:

tetrazole, halogen, CN, C_{1-6} alkyl, haloalkyl, $COOR^{161}$, SO_3H , SO_2R^{161} , OR^{161} , $N(R^{162})_2$, $SO_2N(R^{162})_2$, $NR^{162}COR^{162}$ or $CON(R^{162})_2$, wherein R^{161} and each R^{162} is independently H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl; or both R^{162} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle.

[0089] Most preferably, **Q** is a 6- or 10-membered aryl or **Het**, both being optionally substituted with:

- 1 to 3 halogen, NO_2 , cyano, azido ; or
- 1 to 3 substituents selected from:

a) first (C_{1-6}) alkyl or haloalkyl, first (C_{3-7}) cycloalkyl, (C_{2-6}) alkenyl, (C_{2-8}) alkynyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, all of which are optionally substituted with R^{150} ;

b) OR^{104} wherein R^{104} is H, (C_{1-6}) alkyl;

d) SO_2NHR^{108} wherein R^{108} is H or (C_{1-6}) alkyl;

e) $NR^{111}R^{112}$ wherein both R^{111} and R^{112} are independently H or (C_{1-6}) alkyl;

f) $NHCOR^{117}$ wherein R^{116} is H or (C_{1-6}) alkyl;

g) $NHCONR^{119}R^{120}$, wherein R^{119} and R^{120} is each independently H or (C_{1-6}) alkyl;

h) $NHCOCOR^{122}$ wherein R^{122} is OR^{123} or $N(R^{124})_2$ wherein R^{123} and each R^{124} is independently H or (C_{1-6}) alkyl;

j) $COOR^{128}$ wherein R^{128} is H, (C_{1-6}) alkyl;

k) $CONHR^{130}$ wherein R^{130} is H, (C_{1-6}) alkyl;

l) 6- or 10-membered aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, said aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het** being optionally substituted with R^{150} ; and wherein, preferably, R^{150} is selected from:

- 1 to 3 halogens; or
- 1 to 3 substituents selected from:

a) first (C_{1-6}) alkyl or haloalkyl, first (C_{3-7}) cycloalkyl, (C_{2-6}) alkenyl, (C_{2-8}) alkynyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, all of which are optionally substituted with tetrazole, OR^{102} , $COOR^{102}$, wherein R^{102} is H or (C_{1-6}) alkyl;

b) OR^{104} wherein R^{104} is H, (C_{1-6}) alkyl;

d) SO_2NHR^{108} wherein R^{108} is H or (C_{1-6}) alkyl;

e) $NR^{111}R^{112}$ wherein both R^{111} and R^{112} are independently H or (C_{1-6}) alkyl;

f) $NHCOR^{117}$ wherein R^{116} is H or (C_{1-6}) alkyl; and

h) $NHCOCOR^{122}$ wherein R^{122} is OR^{123} or $N(R^{124})_2$ wherein R^{123} and each R^{124} is independently H or (C_{1-6}) alkyl;

j) $COOR^{128}$ wherein R^{128} is H, (C_{1-6}) alkyl; and

k) $CONHR^{130}$ wherein R^{130} is H, (C_{1-6}) alkyl.

[0090] More preferably **Q** is selected from:



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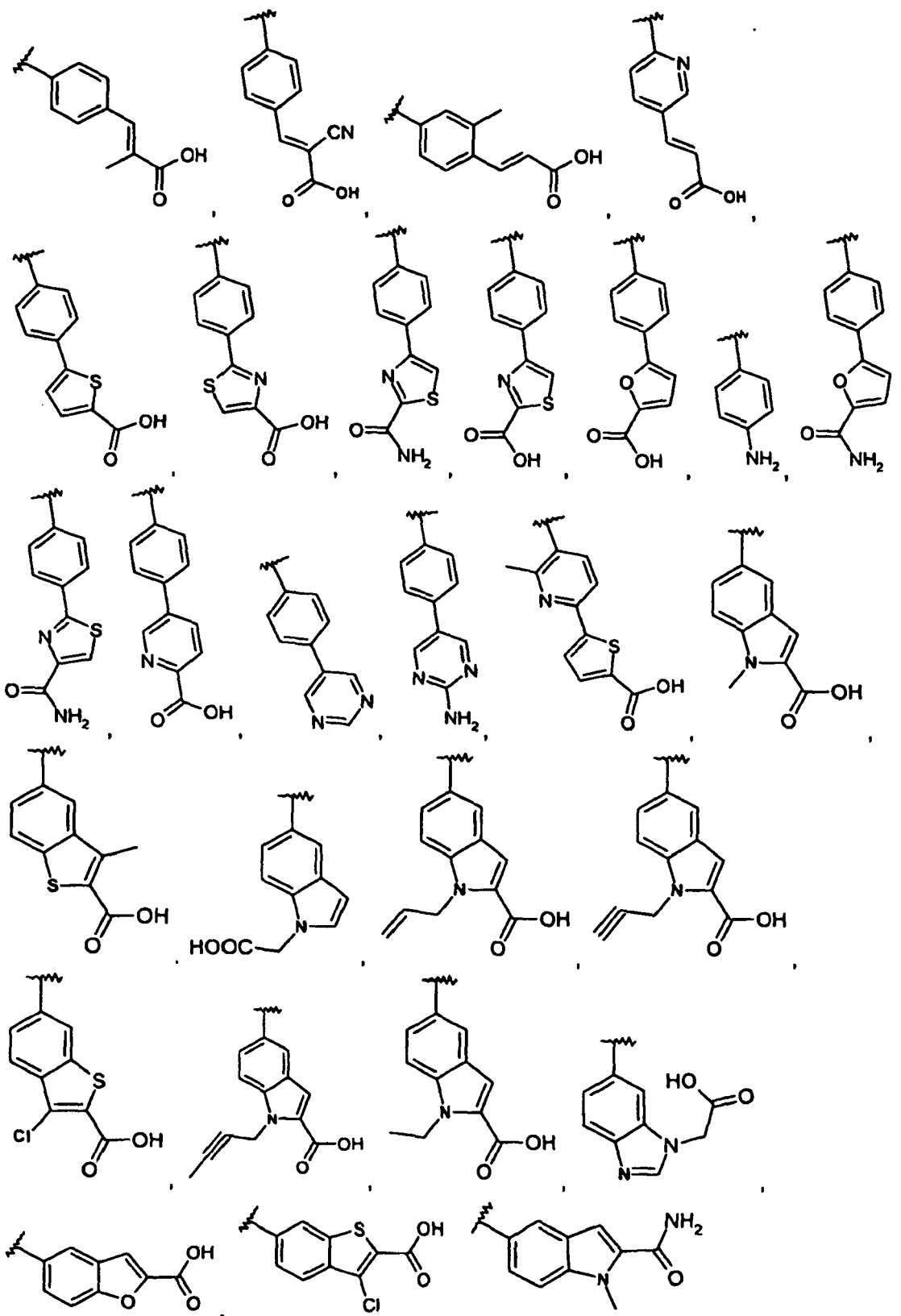
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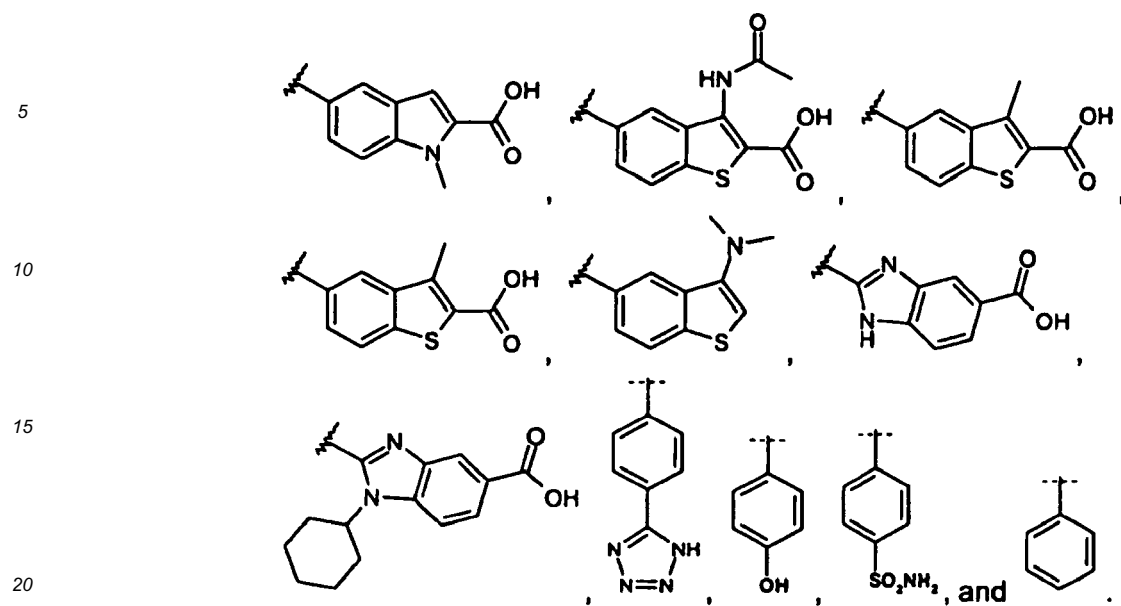
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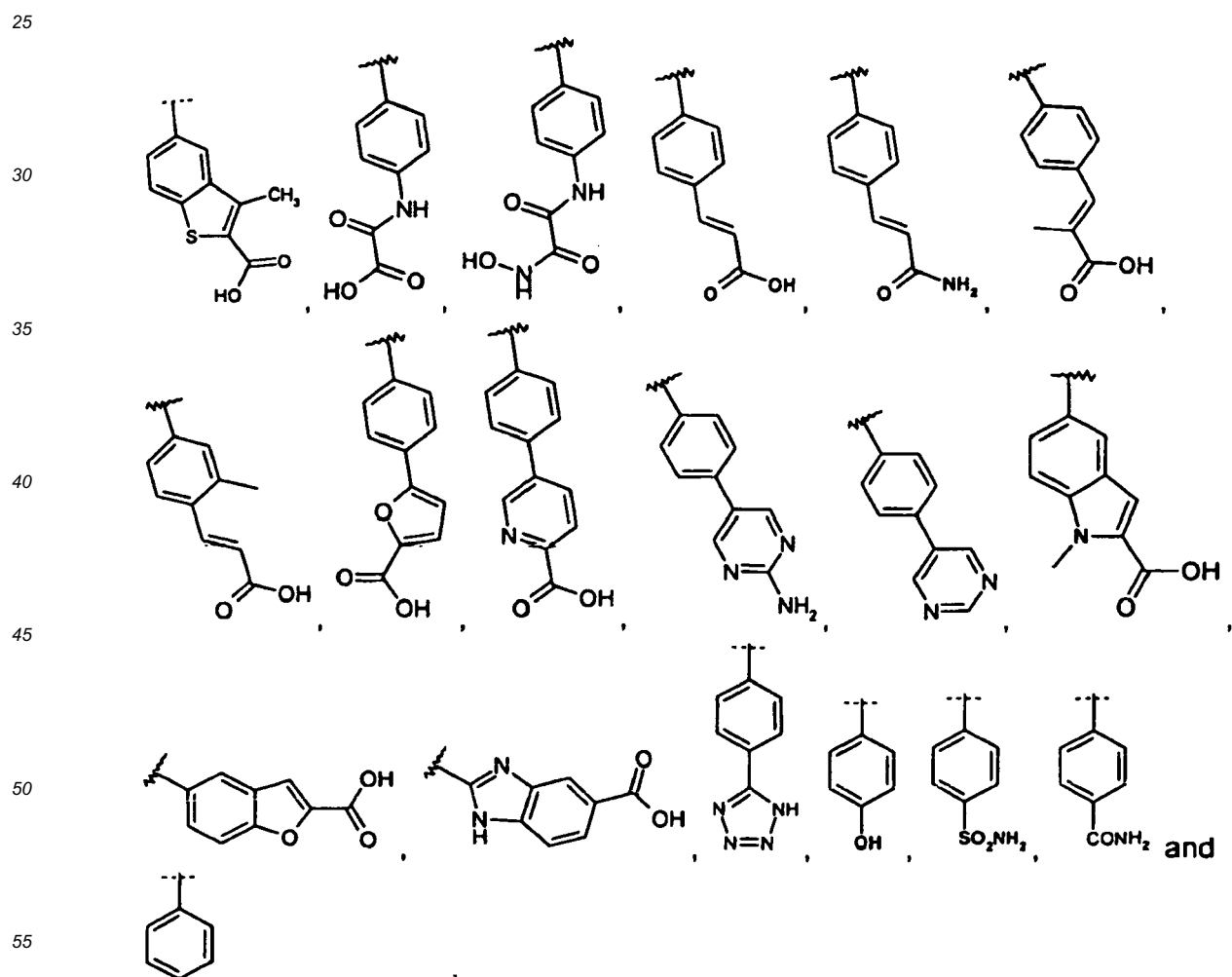
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[0091] Most preferably, Q is selected from:



Specific embodiments

[0092] Included within the scope of this invention are all compounds as presented in Tables 1 to 3 and 5 to 9.

Polymerase activity

[0093] The ability of the compounds of the present invention to inhibit RNA synthesis by the RNA dependent RNA polymerase of HCV can be demonstrated by any assay capable of measuring RNA dependent RNA polymerase activity. A suitable assay is described in the examples.

Specificity for RNA dependent RNA polymerase activity

[0094] To demonstrate that the compounds of the invention act by specific inhibition of HCV polymerase, the compounds may be tested for inhibitory activity in a DNA dependent RNA polymerase assay.

[0095] When a compound of the present invention, or one of its therapeutically acceptable salts, is employed as an antiviral agent, it is administered orally, topically or systemically to mammals, e.g. humans, rabbits or mice, in a vehicle comprising one or more pharmaceutically acceptable carriers, the proportion of which is determined by the solubility and chemical nature of the compound, chosen route of administration and standard biological practice.

[0096] For oral administration, the compound or a therapeutically acceptable salt thereof can be formulated in unit dosage forms such as capsules or tablets each containing a predetermined amount of the active ingredient, ranging from about 25 to 500 mg, in a pharmaceutically acceptable carrier.

[0097] For topical administration, the compound can be formulated in pharmaceutically accepted vehicles containing 0.1 to 5 percent, preferably 0.5 to 5 percent, of the active agent. Such formulations can be in the form of a solution, cream or lotion.

[0098] For parenteral administration, the compound of the present invention is administered by either intravenous, subcutaneous or intramuscular injection, in compositions with pharmaceutically acceptable vehicles or carriers. For administration by injection, it is preferred to use the compounds in solution in a sterile aqueous vehicle which may also contain other solutes such as buffers or preservatives as well as sufficient quantities of pharmaceutically acceptable salts or of glucose to make the solution isotonic.

[0099] Suitable vehicles or carriers for the above noted formulations are described in pharmaceutical texts, e.g. in "Remington's The Science and Practice of Pharmacy", 19th ed., Mack Publishing Company, Easton, Penn., 1995, or in "Pharmaceutical Dosage Forms And Drugs Delivery Systems", 6th ed., H.C. Ansel et al., Eds., Williams & Wilkins, Baltimore, Maryland, 1995.

[0100] The dosage of the compound will vary with the form of administration and the particular active agent chosen. Furthermore, it will vary with the particular host under treatment. Generally, treatment is initiated with small increments until the optimum effect under the circumstance is reached. In general, the compound of the present invention is most desirably administered at a concentration level that will generally afford antivirally effective results without causing any harmful or deleterious side effects.

[0101] For oral administration, the compound or a therapeutically acceptable salt is administered in the range of 10 to 200 mg per kilogram of body weight per day, with a preferred range of 25 to 150 mg per kilogram.

[0102] For systemic administration, the compound of the present invention is administered at a dosage of 10 mg to 150 mg per kilogram of body weight per day, although the aforementioned variations will occur. A dosage level that is in the range of from about 10 mg to 100 mg per kilogram of body weight per day is most desirably employed in order to achieve effective results.

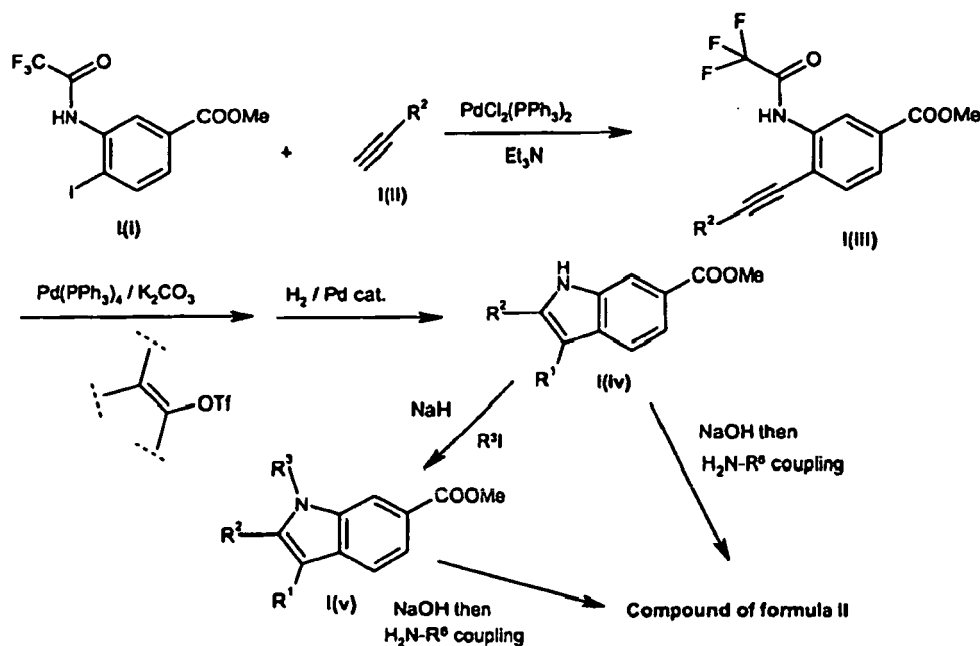
[0103] When the compositions of this invention comprise a combination of a compound of the present invention and one or more additional therapeutic or prophylactic agent, both the compound and the additional agent should be present at dosage levels of between about 10 to 100%, and more preferably between about 10 and 80% of the dosage normally administered in a monotherapy regimen.

When these compounds or their pharmaceutically acceptable salts are formulated together with a pharmaceutically acceptable carrier, the resulting composition may be administered *in vivo* to mammals, such as man, to inhibit HCV polymerase or to treat or prevent HCV virus infection. Such treatment may also be achieved using the compounds of this invention in combination with agents which include, but are not limited to: immunomodulatory agents, such as α -, β -, or γ -interferons; other antiviral agents such as ribavirin, amantadine; other inhibitors of HCV NS5B polymerase; inhibitors of other targets in the HCV life cycle, which include but not limited to, helicase, NS2/3 protease, NS3 protease, or internal ribosome entry site (IRES); or combinations thereof. The additional agents may be combined with the compounds of this invention to create a single dosage form. Alternatively these additional agents may be separately administered to a mammal as part of a multiple dosage form.

Methodology and Synthesis

[0104] Indole derivatives or analogs according to the present invention can be prepared from known monocyclic aromatic compounds by adapting known literature sequences such as those described by J.W. Ellingboe et al. (Tet. Lett. 1997, 38, 7963) and S. Cacchi et al. (Tet. Lett. 1992, 33, 3915). Scheme 1, shown below wherein R^1 , R^2 , R^3 , R^6 , K , L , and M are as described herein illustrate how these procedures can be adapted to the synthesis of compounds of formula II of this invention.

Scheme 1

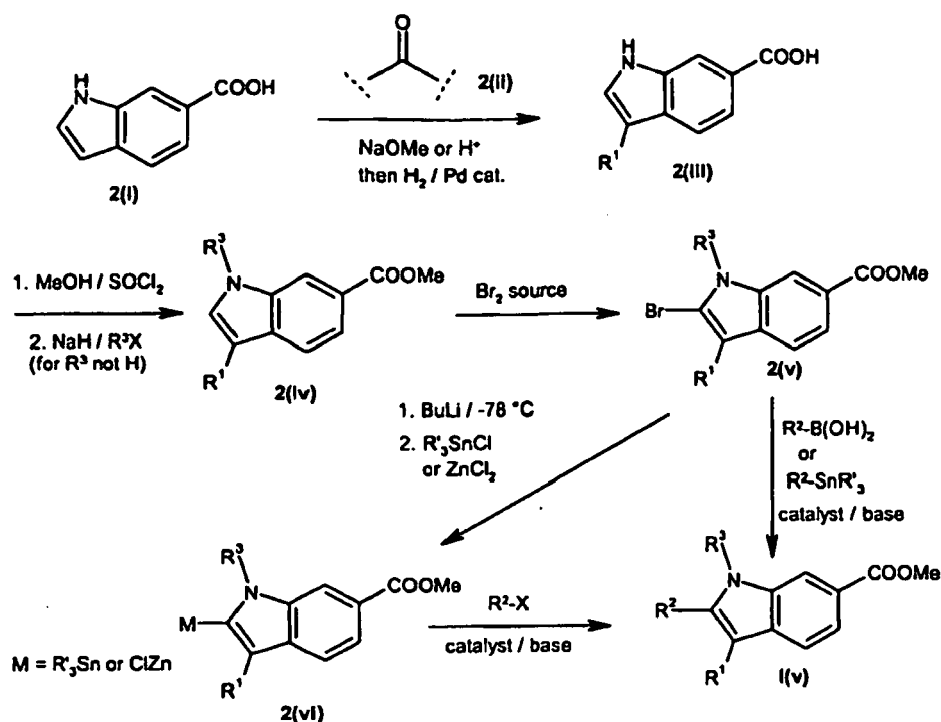


[0105] In carrying out the route illustrated in Scheme 1, a suitably protected form of 3-trifluoroacetamido-4-iodobenzoic acid **I(i)** is reacted with an alkyne **I(ii)** in the presence of a metal catalyst (e.g. a palladium metal complex such as $\text{PdCl}_2(\text{PPh}_3)_2$, Pd_2dba_3 , $\text{Pd}(\text{PPh}_3)_4$ and the like), a base (Et_3N , DIEA and the like or an inorganic basic salt including metal carbonates, fluorides and phosphates), and optionally in the presence of an additional phosphine ligand (triaryl or heteroarylphosphine, dppe , dppf , dppp and the like). Suitable solvents for this reaction include DMF, dioxane, THF, DME, toluene, MeCN, DMA and the like at temperatures ranging from 20°C to 170°C , or alternatively without solvent by heating the components together. Alternatively, the cross-coupling reaction can be carried out on a suitably protected form of 3-amino-4-iodobenzoate and the amino group can be trifluoroacetylated in the subsequent step as described by J.W. Ellingboe et al. (Tet. Lett. 1997, 38, 7963). Reaction of the above diarylalkynes **I(iii)** with an enol triflate under cross-coupling conditions similar to those described above gives after hydrogenation of the double bond, indole derivatives **I(iv)**. Enol triflates are known and can be prepared from the corresponding ketones by following known literature methods (for example, cyclohexene triflate can be prepared from cyclohexanone, triflic anhydride and a hindered organic base such as 2,6-di-*tert*-butyl-4-methylpyridine). The hydrogenation of the double bond originally present in R^1 can be carried out with hydrogen gas or a hydrogen donor (ammonium formate, formic acid and the like) in the presence of a metal catalyst (preferably Pd) in a suitable solvent (lower alkyl alcohols, THF etc.).

Finally, following hydrolysis of the ester protecting group in **I(iv)**, the resulting 6-carboxyindole derivative **I(v)** is converted to compounds of formula II by coupling with the appropriate amine of formula $\text{H}_2\text{N-R}^6$. Condensation of the 6-indole-carboxylic acid with amines $\text{H}_2\text{N-R}^6$ can be accomplished using standard amide bond forming reagents such as TBTU, HATU, BOP, BroP, EDAC, DCC, isobutyl chloroformate and the like, or by activation of the carboxyl group by conversion to the corresponding acid chloride prior to condensation with an amine. Any remaining protecting group is removed following this step to give compounds of formula II.

Alternatively, compounds of formula II can be prepared by elaboration from a pre-existing indole core by following adaptations of literature procedures as described, for example, by P. Gharagozloo et al. (Tetrahedron 1996, 52, 10185) or K. Freter (J. Org. Chem. 1975, 40, 2525). Such a methodology is illustrated in Scheme 2:

Scheme 2



[0106] In carrying the route illustrated in Scheme 2, commercially available 6-indolecarboxylic acid **2(i)**, which can also be prepared according to the method of S. Kamiya et al. (Chem. Pharm. Bull. 1995, 43, 1692) is used as the starting material. The indole **2(i)** is reacted with a ketone **2(ii)** under basic or acidic aldol-type conditions. Suitable conditions to affect this condensation include strong bases such as alkali metal hydroxides, alkoxides and hydrides in solvents such as lower alkyl alcohols (MeOH, EtOH, *tert*BuOH etc.), THF, dioxane, DMF, DMSO, DMA and the like at reaction temperature ranging from -20 °C to 120 °C. Alternatively, the condensation can be carried out under acid conditions using organic or mineral acids or both. Appropriate conditions include mixtures of AcOH and aqueous phosphoric acid at temperatures ranging from 15 °C to 120 °C.

Following protection of the carboxylic acid group in the form of an ester (usually lower alkyl) using known methods, the indole nitrogen can be alkylated with R³ if desired. Reaction conditions to alkylate the nitrogen of an indole derivative are well known to those skilled in the art and include the use of strong bases such as alkali metal hydrides, hydroxides, amides, alkoxides and alkylmetals, in the appropriate solvent (such as THF, dioxane, DME, DMF, MeCN, DMSO, alcohols and the like) at temperatures ranging from -78 °C to 140 °C. An electrophilic form of R³ is used for the alkylation of the indole anion. Such electrophilic species include iodides, bromides, chlorides and sulfonate esters (mesylates, tosylates, brosylates or triflates). Halogenation (usually bromination, but also iodination) of the 2-position of the indole **2(iv)** gives **2(v)**. Suitable halogenating agents include, for example, elemental bromine, N-bromosuccinimide, pyridine tribromide, dibromohydantoin and the corresponding iodo derivatives. Suitable solvents for this reaction are inert to reactive halogenating agents and include for example hydrocarbons, chlorinated hydrocarbons (DCM, CCl₄, CHCl₃), ethers (THF, DME, dioxane), acetic acid, ethyl acetate, IPA, and mixtures of these solvents. Reaction temperature ranges from -40 °C to 100 °C. A method of choice to carry out the bromination of indoles as shown in Scheme 2 was described by L. Chu (Tet. Lett. 1997, 38, 3871).

[0107] The 2-bromoindole derivatives **2(v)** can be converted directly to fully substituted key intermediates **I(v)** through a cross-coupling reaction with aryl or heteroaryl boronic acids, boronate esters or trialkylstannane derivatives. These boron or tin organometallic species are from commercial sources or can be prepared by standard literature procedures. Cross-coupling with organoboron reagents can be carried out by any variations of the Suzuki cross-coupling reaction reported in the literature. This usually involves the use of a transition metal catalyst (usually Pd⁰), triaryl or triheteroaryl-phosphine ligands, an additive such as an inorganic chloride (e.g. LiCl), and a base (usually an aqueous inorganic base such as sodium or potassium carbonate or phosphate). The reaction is usually carried out in an alcoholic solvent (EtOH), DME, toluene, THF and the like at temperatures ranging from 25 °C to 140 °C.

Cross-coupling with tin reagents can be carried out by any variations of the Stille cross-coupling reaction reported in

the literature. This usually involves the use of a transition metal catalyst (usually Pd⁰), triaryl or triheteroaryl phosphine ligands, and an additive such as an inorganic chloride (e.g. LiCl) or iodide (e.g. CuI). Suitable solvents for this reaction include toluene, DMF, THF, DME and the like at temperatures ranging from 25 °C to 140 °C. Intermediate **I(v)** is then converted to compounds of formula II as described for Scheme 1.

Alternatively, the 2-bromoindole intermediate **2(v)** can be trans-metallated to an organotin species (or organozinc) and used in Stille-type cross-coupling reactions under conditions described above. In this case, aromatic and heteroaromatic halides (chlorides, bromides, iodides) or triflates are used to introduce R². The conversion of 2-bromoindole derivatives **2(v)** to the corresponding organotin species **2(vi)** is carried out via initial low-temperature (usually -78 ° to -30 °C) halogen-metal exchange using an alkyllithium reagent (e.g. nBuLi or *tert*-BuLi) or using lithium metal. The transient 2-lithioindole species is then trapped with a trialkyltin halide (e.g. nBu₃SnCl or Me₃SnCl). Alternatively, the lithioindole intermediate can be trapped with zinc chloride to form the corresponding organozincate which can also undergo transition metal-catalyzed cross-coupling with aromatic and heteroaromatic halides or triflates as described, for example, by M. Rowley (J. Med. Chem. 2001, 44, 1603).

EXAMPLES

[0108] The present invention is illustrated in further detail by the following non-limiting examples. All reactions were performed in a nitrogen or argon atmosphere. Temperatures are given in degrees Celsius. Flash chromatography was performed on silica gel. Solution percentages or ratios express a volume to volume relationship, unless stated otherwise. Mass spectral analyses were recorded using electrospray mass spectrometry. Abbreviations or symbols used herein include:

DIEA: diisopropylethylamine;
 DMAP: 4-(dimethylamino)pyridine;
 DMSO: dimethylsulfoxide;
 DMF: N,N-dimethylformamide;
 Et: ethyl;
 EtOAc: ethyl acetate;
 Et₂O: diethyl ether;
 HPLC: high performance liquid chromatography;
 Pr: isopropyl
 Me: methyl;
 MeOH: Methanol;
 MeCN: acetonitrile;
 Ph: phenyl;
 TBE: tris-borate-EDTA;
 TBTU: 2-(1*H*-benzotriazol-1-yl)-N,N,N',N'-tetramethyluronium tetrafluoroborate;
 TFA: trifluoroacetic acid;
 TFAA: trifluoroacetic anhydride;
 THF: tetrahydrofuran;
 MS (ES): electrospray mass spectrometry;
 PFU: plaque forming units;
 DEPC: diethyl pyrocarbonate;
 DTT: dithiothreitol
 EDTA: ethylenediaminetetraacetate
 HATU: O-(7-azabenzotriazol-1-yl)-N,N,N',N'-tetramethyluronium hexafluorophosphate
 BOP: benzotriazole-1-yloxy-tris(dimethylamino)phosphonium hexafluorophosphate
 EDAC: see ECD
 DCC: 1,3-Dicyclohexyl carbodiimide
 HOBt: 1-Hydroxybenzotriazole
 ES⁺: electro spray (positive ionization)
 ES⁻: electro spray (negative ionization)
 DCM: dichloromethane
 TBME: *tert*-butylmethyl ether
 TLC: thin layer chromatography
 AcOH: acetic acid
 EtOH: ethanol
 DBU: 1,8-diazabicyclo[5.4.0]undec-7-ene

BOC: *tert*-butoxycarbonyl

Cbz: carbobenzyloxy carbonyl

¹PrOH: isopropanol

NMP: N-methylpyrrolidone

EDC: 1-(3-dimethylaminopropyl)-3-ethyl carbodiimide hydrochloride

RNAasin: A ribonuclease inhibitor marketed by Promega Corporation

Tris: 2-amino-2-hydroxymethyl-1,3-propanediol

UMP: uridine 5'-monophosphate

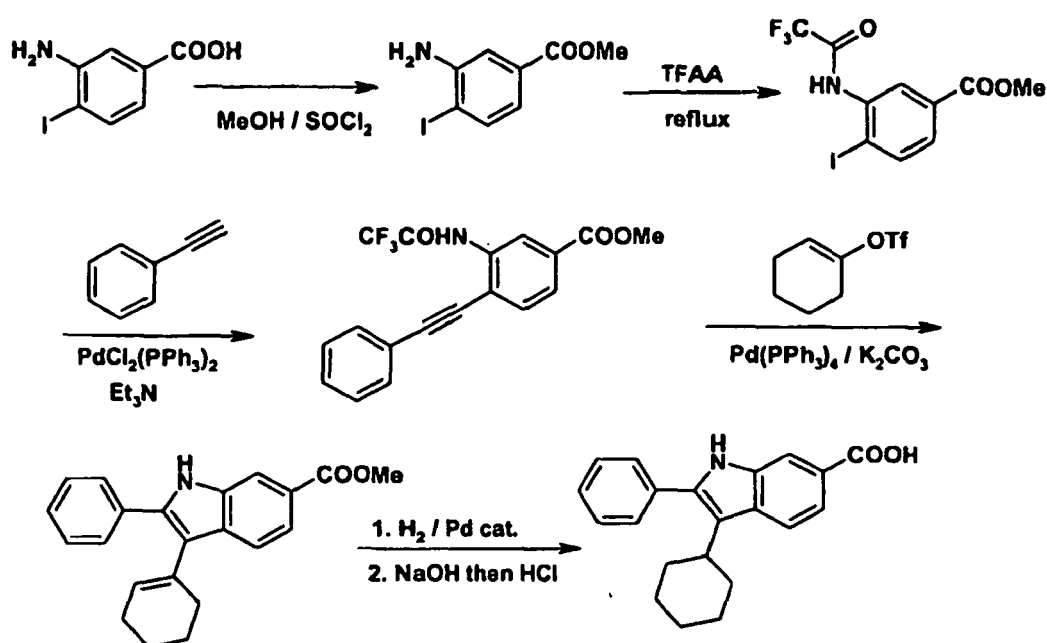
UTP: uridine 5'-triphosphate

IPA: isopropyl acetate

[0109] Examples 1-9 and 12-16 and 22-45 illustrate methods of synthesis of representative compounds of this invention.

EXAMPLE 1

[0110]



Methyl 3-amino-4-iodobenzoate:

[0111] 3-Amino-4-iodobenzoic acid (13.35 g, 50.8 mmol) was added to MeOH (150mL) and SOCl₂ (4.8 mL, 65.8 mmol, 1.3 equivalent) was added. The mixture was refluxed for 3 h and then volatiles were removed under reduced pressure. The residue was co-evaporated three times with MeOH and dried in vacuo (15.23 g).

Methyl 3-trifluoroacetamido-4-iodobenzoate:

[0112] The aniline derivative from above (14.53 g, 52 mmol) was dissolved in DCM (200 mL) and TFAA (15 mL, 104 mmol) was added. The dark purple solution was refluxed overnight. Volatiles were removed under reduced pressure and the residue was passed through a short pad of silica gel using DCM as eluent. The desired product was obtained as a pink solid (13.81 g).

4-Phenylethynyl-3-(2,2,2-trifluoro-ethanoylamino)-benzoic acid methyl ester:

[0113] The iodide from above (0.742 g, 2 mmol), phenylacetylene (0.37 mL, 3.9 mmol, 1.7 equivalent) and Et₃N (6

mL) were charged in a dry flask under argon. $\text{PdCl}_2(\text{PPh}_3)_2$ (0.241 g, 0.3 mmol) was added and the mixture was stirred at room temperature until judged complete by HPLC analysis (~5 h). The reaction mixture was concentrated to half volume under reduced pressure and diluted with water (80 mL). The mixture was extracted with EtOAc (3 x 100 mL) and the organic extract washed with 5% HCl (100 mL), after (100 mL) and brine (40 mL). After drying over MgSO_4 , the residue was purified by flash chromatography using 20% EtOAc - hexane as eluent to give the desired cross-coupled alkyne as a tan solid (0.442 g).

Methyl 3-(cyclohexenyl)-2-phenylindole 6-carboxylate:

[0114] A flame-dried flask was charged with finely powdered anhydrous K_2CO_3 (0.153 g, 1.1 mmol) and the alkyne derivative from above (0.390 g, 1.1 mmol). Dry DMF (4 mL) was added and the suspension degassed with a stream of argon. The enol triflate derived from cyclohexanone, prepared following the procedure described by A.G. Martinez, M. Hanack et al. (J. Heterocyclic Chem. 1988, 25, 1237 or equivalent methods described in the literature, (0.802 g, 3.3 mmol, 3 equivalents) was added followed by $\text{Pd}(\text{PPh}_3)_4$ (0.086 g, 0.07 mmol) and the mixture was stirred for 8 h at room temperature. DMF was removed under vacuum and the residue purified by flash chromatography using DCM as eluent (0.260 g).

Methyl 3-cyclohexyl-2-phenylindole-6-carboxylate:

[0115] The material from above was hydrogenated (1 atm H_2 gas) over 20% $\text{Pd}(\text{OH})_2$ in the usual manner, using MeOH as solvent. The desired cyclohexane indole was isolated after filtration of the catalyst.

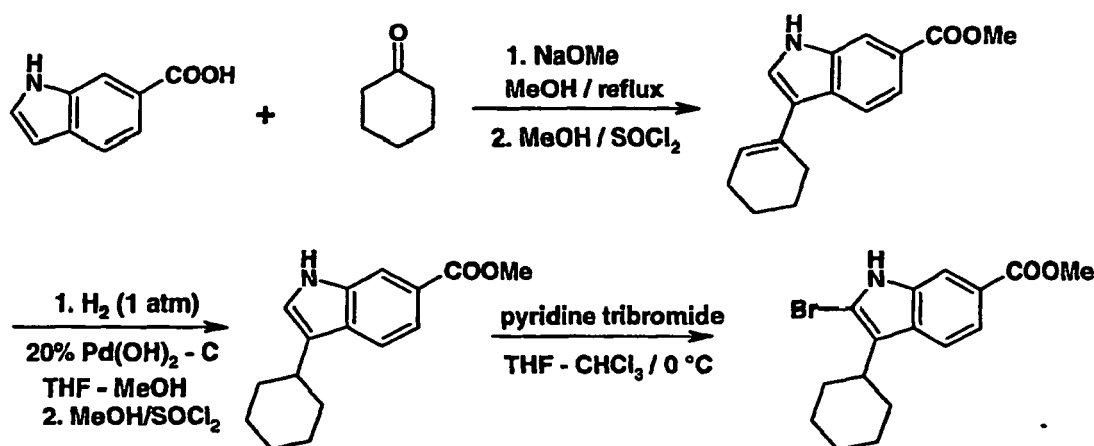
3-Cyclohexyl-2-phenylindole-6-carboxylic acid:

[0116] The methyl ester from above (0.154 g, 0.15 mmol) was refluxed overnight in a mixture of MeOH (10 mL) and 2N NaOH (6 mL) until complete hydrolysis had occurred as shown by HPLC analysis. After cooling to room temperature, 2N HCl (5 mL) was added followed by AcOH to pH 7. MeOH was removed under reduced pressure, water (50 mL) was added and the product extracted with EtOAc. The extract was washed with water and brine, and dried (MgSO_4). Removal of volatiles under reduced pressure gave the title indole carboxylic acid as a light-orange solid (0.149 g).

[0117] Following the same procedure but using 2-ethynylpyridine instead of phenylacetylene, 3-cyclohexane-2-(2-pyridyl)indole-6-carboxylic acid was obtained.

EXAMPLE 2:

[0118]



3-Cyclohexenyl-6-indole carboxylic acid:

[0119] A 12 L round-bottomed flask was equipped with a reflux condenser and a mechanical stirrer, and the system was purged with nitrogen gas. 6-indole carboxylic acid (300.00 g, 1.86 mole, 3 equivalents) was charged into the flask,

followed by MeOH (5.5 L). After stirring for 10 min at room temperature, cyclohexanone (579 mL, 5.58 mole) was added. Methanolic sodium methoxide (25% w/w, 2.6 L, 11.37 mole, 6.1 equivalents) was added in portions over 10 min. The mixture was then refluxed for 48 h. After cooling to room temperature, water (4 L) was added and methanol removed under reduced pressure. The residual aqueous phase was acidified to pH 1 with concentrated HCl (~1.2 L). The resulting yellowish precipitate was collected by filtration, washed with water and dried under vacuum at 50°C. The desired cyclohexane derivative was obtained as a beige solid (451.0g, 100% yield).

3-Cyclohexyl-6-indole carboxylic acid:

[0120] The unsaturated derivative from above was hydrogenated for 20 h under 55 psi hydrogen gas pressure over 20% Pd(OH)₂/C (10.25 g) using 1:1 THF - MeOH (2.5 L) as solvent. After filtration of the catalyst, volatiles were removed under reduced pressure and the residue was triturated with hexane. The beige solid was collected by filtration, washed with hexane and dried under vacuum (356.4 g, 78% yield).

Methyl 3-cyclohexyl-6-indole carboxylate:

[0121] A 5 L three-necked flask was equipped with a reflux condenser and a mechanical stirrer, and the system was purged with nitrogen gas. The indole carboxylic acid from above (300.00 g, 1.233 mole) was charged into the flask and suspended in MeOH (2 L). Thionyl chloride (5 mL, 0.0685 mole, 0.05 equivalent) was added dropwise and the mixture was refluxed for 48 h. Volatiles were removed under reduced pressure and the residue was triturated with hexane to give a beige solid that was washed with hexane and dried under vacuum (279.6 g, 88% yield).

Methyl-2-bromo-3-cyclohexyl-6-indole carboxylate:

[0122] Adapting the procedure of L. Chu (Tet. Lett. 1997, 38, 3871) methyl 3-cyclohexyl-6-indole carboxylate (4.65 g, 18.07 mmol) was dissolved in a mixture of THF (80 mL) and CHCl₃ (80 mL). The solution was cooled in an ice bath and pyridinium bromide perbromide (pyridine tribromide, 7.22 g, 22.6 mmol, 1.25 equivalent) was added. After stirring for 1.5 h at 0 °C, the reaction was judged complete by TLC. It was diluted with CHCl₃ (200 mL), washed with 1M NaHSO₃ (2 x 50 mL), saturated aqueous NaHCO₃ (2 x 50 mL) and brine (50 mL). After drying over Na₂SO₄, the solvent was removed under reduced pressure and the residue crystallized from TBME - hexane. The desired 2-bromoindole derivative was collected by filtration, washed with hexane and dried (3.45 g). Evaporation of mother liquors gave a red solid that was purified by flash chromatography using 15% EtOAc in hexane yielding an additional 3.62 g of pure material. Total yield was 5.17 g (85% yield).

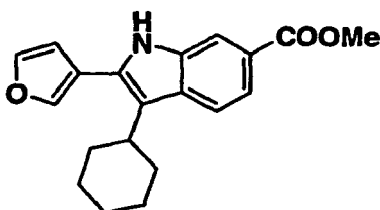
EXAMPLE 3:

General procedure for the Suzuki cross-coupling of aryl and heteroarylboronic acids with 2-bromoindole derivatives:

[0123] Cross-coupling of aromatic/heteroaromatic boronic acid or ester derivatives with 2 bromoindoles such as the one described in example 2 can be performed using any variations of the standard metal-catalyzed Suzuki cross-coupling reaction as described in the literature and well known to those skilled in the art. The following example serves to illustrate such a process and is non-limiting.

3-Cyclohexyl-2-furan-3-yl-1H-indole-6-carboxylic acid methyl ester:

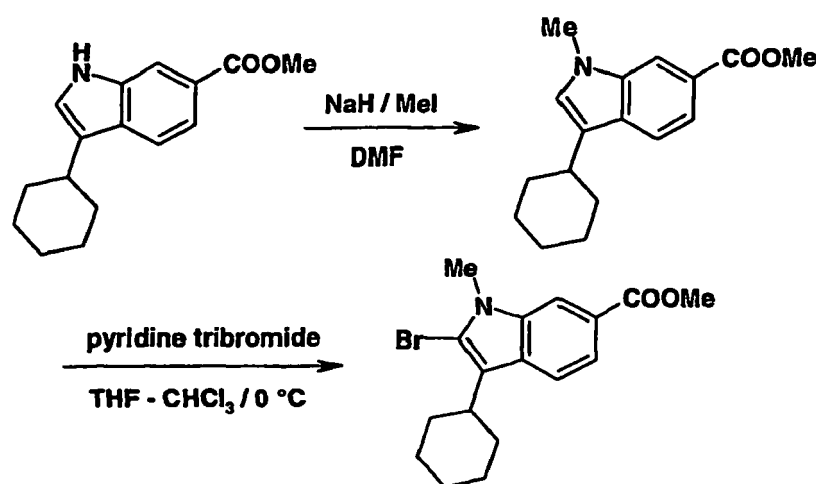
[0124]



[0125] The 2-bromoindole of example 2 (8.92 g, 26.5 mmol), 3-furanboronic acid (B.P. Roques et al. J. Heterocycl. Chem. 1975, 12, 195; 4.45 g, 39.79 mmol, 1.5 equivalent) and LiCl (2.25 g, 53 mmol, 2 equivalents) were dissolved in a mixture of EtOH (100 mL) and toluene (100 mL). A 1M aqueous Na₂CO₃ solution (66 mL, 66 mmol) was added and the mixture was degassed with argon for 45 min. Pd(PPh₃)₄ (3.06 g, 2.65 mmol, 0.1 equivalent) was added and the mixture stirred overnight at 75-85 °C under argon. Volatiles were removed under reduced pressure and the residue redissolved in EtOAc (500 mL). The solution was washed with water, saturated NaHCO₃ (100 mL) and brine (100 mL). After drying over a mixture of MgSO₄ and decolorizing charcoal, the mixture was filtered and concentrated under reduced pressure. The residual oil was triturated with a mixture of TBME (20 mL) and hexane (40 mL), cooled in ice and the precipitated solid collected by filtration, washed with cold 25% TBME in hexane, and dried (3.09 g). The filtrate and washings from the above trituration were combined, concentrated and purified by flash chromatography using 10-25% EtOAc in hexane to give an additional 4.36 g of product. The total yield of the 2-(3-furyl)indole of example 3 was 8.25 g.

EXAMPLE 4:

[0126]



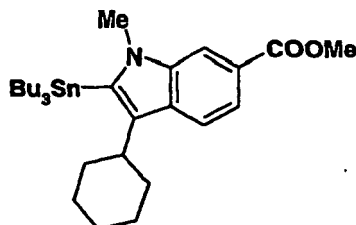
Methyl 3-cyclohexyl-1-methyl-6-indole carboxylate:

[0127] Methyl 3-cyclohexyl-6-indole carboxylate from example 2 (150.00 g, 0.583 mole) was charged into a 3 L three-necked flask equipped with a mechanical stirrer and purged with nitrogen gas. DMF (1 L) was added and the solution was cooled in an ice-bath. NaH (60% oil dispersion, 30.35 g, 0.759 mole, 1.3 equivalent) was added in small portions (15 min) and the mixture was stirred for 1 h in the cold. Iodomethane (54.5 mL, 0.876 mole, 1.5 equivalent) was added in small portions, maintaining an internal temperature between 5 - 10 °C. The reaction mixture was then stirred overnight at room temperature. The reaction was quenched by pouring into ice-water (3 L), resulting in the formation of a cream-colored precipitate. The material was collected by filtration, washed with water and dried in vacuum at 45 °C (137.3 g, 86% yield).

Methyl 2-bromo-3-cyclohexyl-1-methyl-6-indole carboxylate:

[0128] The 1-methylindole derivative from above (136.40 g, 0.503 mole) was charged into a 5 L three-necked flask equipped with a mechanical stirrer and purged with nitrogen gas. CHCl₃ (750 mL) and THF (750 mL) were added and the solution was cooled to 0 °C. Pyridine tribromide (pyridinium bromide perbromide, 185.13 g, 0.579 mole, 1.15 equivalent) was added in small portions and the mixture was stirred for 1 h at 0 °C. The solvent was removed under reduced pressure at room temperature and the residue dissolved in EtOAc (3 L). The solution was washed with water and brine, dried (decolourising charcoal / MgSO₄) and concentrated under reduced pressure.

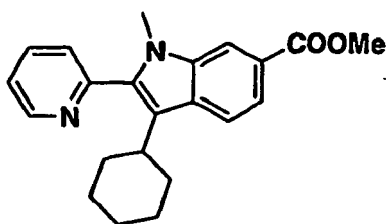
[0129] The residue was suspended in TBME and heated to 50 °C. The suspension was stored overnight in the refrigerator and the cream-coloured crystalline product was collected by filtration. It was washed with TBME and dried in vacuum (134.3 g, 76% yield).

EXAMPLE 5:***Cyclohexyl-methyl-tributylstannanyl-1H-indole-6-carboxylic acid methyl ester:*****[0130]**

[0131] The bromoindole derivative of example 4 (2.70 g, 7.71 mmol) was dissolved in dry THF (40 mL) and the solution was cooled to -78 °C under an argon atmosphere. A solution of nBuLi in hexane (1.4 M, 6.90 mL, 9.64 mmol, 1.25 equivalent) was added dropwise over 15 min and stirring at low temperature was continued for 75 min. To the resulting suspension was added nBu₃SnCl (2.93 mL, 10.8 mmol, 1.4 equivalent) over 5 min. The suspension dissolved and the solution was stirred for 1 h at -78 °C. The reaction mixture was warmed to room temperature and THF removed under reduced pressure. The residue was dissolved in TBME (150 mL), washed with 1:1 brine - water and dried over MgSO₄. The material was purified by chromatography on silica gel that was previously deactivated by mixing with a solution of 5% Et₃N in hexane. The same solvent was used as eluent for the chromatography: The title stannane was isolated as a yellow oil (3.42 g, 79 % yield).

EXAMPLE 6:**General procedure for Stille cross-coupling of the 2-stannane indole of example 5 with aromatic/heteroaromatic halides:**

[0132] Cross-coupling of aromatic/heteroaromatic halides or pseudohalides (preferably bromides, iodides and triflates) with the stannane derivative of example 5 can be performed using any variations of the standard metal-catalyzed Stille cross-coupling reaction as described in the literature. The following example serves to illustrate such a process.

3-Cyclohexyl-1-methyl-2-pyridin-2-yl-1H-indole-6-carboxylic acid methyl ester:**[0133]**

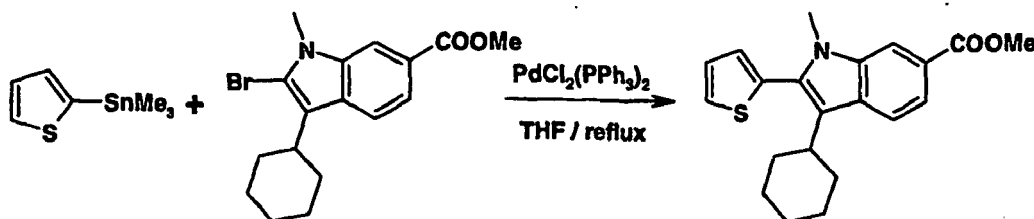
[0134] The stannane derivative of example 5 (3.42 g, 6.1 mmol) was dissolved in DMF (10 mL) and CuI (0.116 g, 0.61 mmol, 0.1 equivalent), LiCl (0.517 g, 12.21 mmol, 2 equivalent), triphenylphosphine (0.320 g, 1.22 mmol, 0.2 equivalent) and 2-bromopyridine (0.757 mL, 7.94 mmol, 1.3 equivalent) were added. The solution was degassed with a stream of argon (30 min) and Pd(PPh₃)₄ (0.352 g, 0.31 mmol, 0.05 equivalent) was added. After purging with argon for an additional 10 min, the solution was heated and stirred at 100 °C overnight under argon. The DMF was then removed under vacuum and the residue dissolved in EtOAc (150 mL). The solution was washed with 1N NaOH (25 mL) and brine (25 mL) and dried over MgSO₄. The solvent was removed under reduced pressure and the residue purified by flash chromatography eluting with CHCl₃ then 5-10% EtOAc in CHCl₃ (1.516 g, 71% yield).

EXAMPLE 7:

General procedure for Stille cross-coupling of 2-bromoindoles with aryl or heteroaryl stannanes:

3-Cyclohexyl-1-methyl-2-pyridin-2-yl-1H-indole-6-carboxylic acid methyl ester:

[0135]



[0136] The 2-bromoindole derivative of example 4 (0.150 g, 0.428 mmol) and 2-trimethylstannylthiophene (S.F. Thames et al. J. Organometal. Chem. 1972, 38, 29; 0.150 g, 0.61 mmol, 1.4 equivalent) were dissolved in dry THF (7 mL) in a sealed tube, and the solution was degassed with a stream of argon for 30 min. $\text{Pd}(\text{Cl})_2(\text{PPh}_3)_2$ (0.018 g, 0.026 mmol, 0.06 equivalent) was added and the tube sealed. The solution was heated to 80 °C for 40 h. The reaction mixture was cooled to room temperature, EtOAc (10 mL) was added and the suspension filtered. After evaporation of the solvent, the residue was re-submitted to the reaction conditions for an additional 20 h, with fresh 2-stannylthiophene (0.150 g, 0.61 mmol) and catalyst (0.020 g). After cooling to room temperature and filtration of solids, the solvent was evaporated and the residue purified by flash chromatography using 15-100% CHCl_3 in hexane as eluent (0.133 g, 88% yield).

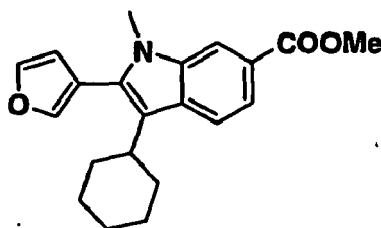
[0137] The same procedure can be used to couple stannane derivatives to the 2-bromoindole of Example 2.

EXAMPLE 8:

General procedure for the N-alkylation of 2-aryl and 2-heteroaryl-6-indole carboxylates:

3-Cyclohexyl-1-methyl-2-pyridin-2-yl-1H-indole-6-carboxylic acid methyl ester:

[0138]



[0139] NaH (60% oil dispersion, 0.186 g, 4.64 mmol, 1.5 equivalent) was washed with hexane (20 mL) to remove the oil and then re-suspended in DMF (5 mL). After cooling to 0 °C in an ice bath, the indole derivative of example 3 (1.000 g, 3.09 mmol) was added dropwise as a solution in DMF (3 mL + 2 mL rinse). After stirring for 15 min, iodomethane (0.385 mL, 6.18 mmol, 2 equivalents) was added in one portion and the mixture was stirred for 2 h in the cold and an additional 2 h at room temperature. The reaction was then quenched by addition of 1N HCl (1 mL) and diluted with TBME (100 mL). The solution was washed with 1N HCl (25 mL) and dried (MgSO_4). After removal of volatiles under reduced pressure, the residue was purified by flash chromatography using 5-10% EtOAc in hexane as eluent to give the title compound as a white solid (0.903 g, 86% yield).

Other N-alkylindole derivatives within the scope of this invention could be prepared from the appropriate electrophiles (e.g. EtI, iPrI, iBuI, BnBr) using a similar procedure.

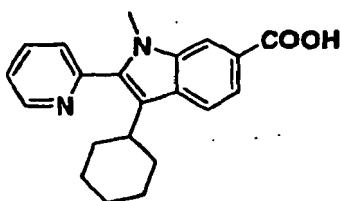
EXAMPLE 9:

General procedure for the saponification of 6-indolecarboxylates to the corresponding free carboxylic acids:

[0140] This procedure applies to both indole and *N*-methylindole carboxylates.

3-Cyclohexyl-1-methyl-2-pyridin-2-yl-1H-indole-6-carboxylic acid:

[0141]

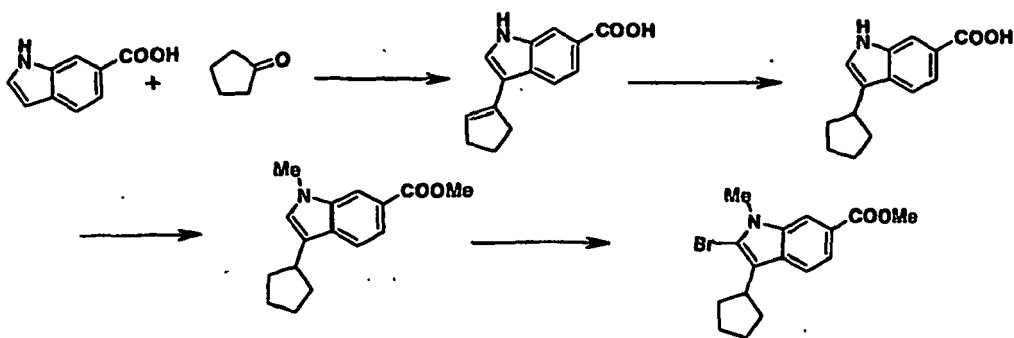


[0142] The 6-indole carboxylate of example 6 (1.517 g, 4.35 mmol) was dissolved in DMSO (8 mL) and 5N NaOH (4.4 mL) was added. The mixture was stirred at 50 °C for 30 min. The solution was then cooled to room temperature and added dropwise to water (15 mL). Insoluble black impurities were removed by filtration and AcOH (2 mL) was added dropwise to the filtrate. The white precipitate that formed was collected by filtration, washed with water and dried (1.37 g, 94% yield).

EXAMPLE 12:

2-Bromo-3-cyclopentyl-1-methyl-1H-indole-6-carboxylic acid methyl ester:

[0143]



[0144] A 3 L three-necked flask equipped with a mechanical stirrer was charged with indole 6-carboxylic acid (220 g, 1.365 mole) and KOH pellets (764.45 g, 13.65 mole, 10 equivalents). Water (660 mL) and MeOH (660 mL) were added and the mixture heated to 75 °C. Cyclopentanone (603.7 mL, 6.825 mole, 5 equivalents) was added dropwise over 18 h using a pump. The reaction mixture was heated for an additional 3 h (after which the reaction was judged complete by HPLC) and cooled to 0 °C for 1 h. The precipitated potassium salt is collected by filtration, and washed with TBME (2 X 500 mL) to remove cyclopentanone self-condensation products. The brown solid was re-dissolved in water (2.5 L) and the solution washed with TBME (2 X 1 L). Following acidification to pH 3 with conc. HCl (425 mL), the beige precipitate was collected by filtration, washed with water (2 X 1 L) and dried under vacuum at 70 °C. The crude product weighed 275.9 g (88.9 % mass recovery) and had an homogeneity of 85% (HPLC).

[0145] The crude product from above (159.56 g, 0.70 mole) was dissolved in MeOH (750 mL) and 20% Pd(OH)₂ on charcoal (8.00 g) was added. The mixture was hydrogenated in a Parr apparatus under 50 psi hydrogen gas for 18 h. After completion, the catalyst was removed by filtration through celite and the solvent removed under reduced pressure. The resulting brown solid was dried at 70 °C under vacuum for 12 h. The crude product (153.2 g) was obtained as a

brown solid and was 77% homogeneous by HPLC.

[0146] The crude 3-cyclopentylindole-8-carboxylic acid (74.00 g, 0.323 mole) was charged in a 3 L three-necked flask equipped with a mechanical stirrer and a thermometer. The system was purged with nitrogen gas and anhydrous DMF (740 mL) was added. After dissolution on the starting material, anhydrous potassium carbonate (66.91 g, 0.484 mole, 1.5 equivalent) was added and the mixture stirred for 5 minutes. Iodomethane (50 mL, 0.807 mole, 2.5 equivalents) was added and the mixture stirred for 5 h after which HPLC analysis of the reaction mixture indicated 97% conversion to the methyl ester.

The reaction mixture was cooled in an ice bath and sodium hydride (95%, oil-free, 10.10 g, 0.420 mole, 1.3 equivalent) was added in small portions over 3 min (exothermic: 8 °C to 30 °C internal temperature raise). After stirring for an additional 15 min, the cooling bath was removed and stirring continued for 1.5 h at room temperature after which no further progression was observed (HPLC). Additional NaH (1.55 g, 65 mmol, 0.2 equivalent) and iodomethane (1.0 mL, 16 mmol, 0.05 equivalent) were added and after stirring for 15 min, the reaction was judged complete by HPLC (96% N-methylated).

The reaction mixture was slowly (2 min) poured into water (4 L) with vigorous stirring and after 10 min, acidified to pH <2 with conc. HCl (85 mL). The mixture was stirred for 5 min to allow complete conversion of any remaining potassium carbonate and bicarbonate to the more soluble chloride. The pH was adjusted to -7 with 4N NaOH (40 mL) and the mixture stirred overnight at room temperature. The precipitated material was collected by filtration, washed with water (600 mL) and dried at 60 °C under vacuum. The crude product (79% homogeneity by HPLC) was obtained as a brown solid (72.9 g).

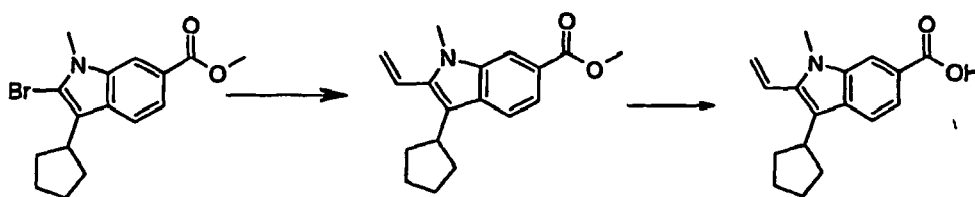
The crude material from above is triturated with a minimal amount of MeOH to remove a series of minor impurities. The solid was then collected by filtration and dissolved in a minimal amount of hot EtOAc. After cooling to room temperature, hexane was added (5 X volume) and the mixture cooled in ice and filtered. The filtrate was then evaporated to dryness to give the desired product.

[0147] The N-methylindole from above (10.60 g, 41.2 mmol) was dissolved in isopropyl acetate (150 mL) and sodium acetate (5.07 g, 62 mmol, 1.5 equivalent) was added. The suspension was cooled in an ice bath and bromine (2.217 mL, 43.3 mmol, 1.05 equivalent) was added dropwise over 2 min. The pale amber suspension turned dark red (exotherm from 5 °C to 13 °C). It was stirred for 1 h at 0 °C. The reaction was completed by adding additional bromine (0.21 mL, 4.2 mmol, 0.10 equivalent) as shown by HPLC analysis. The reaction was then quenched by addition of 10% aqueous sodium sulfite solution (15 mL), followed by water (50 mL) and K₂CO₃ (10.6 g, 1.8 equivalent) to neutralize HBr. The organic layer was separated, washed with 10% aqueous sodium sulfite and aqueous K₂CO₃ and dried (MgSO₄). The solvent was removed under reduced pressure and the residue co-evaporated with TBME (75 mL) to give a beige solid that was dried under vacuum overnight (13.80 g). The crude material was triturated with boiling MeOH (80 mL) for 30 min, cooled in ice and the beige solid collected by filtration. The product was dried at 60 °C under vacuum (10.53 g, 76% recovery).

EXAMPLE 13

3-Cyclopentyl-1-methyl-2-vinyl-1H-indole-6-carboxylic acid:

[0148]



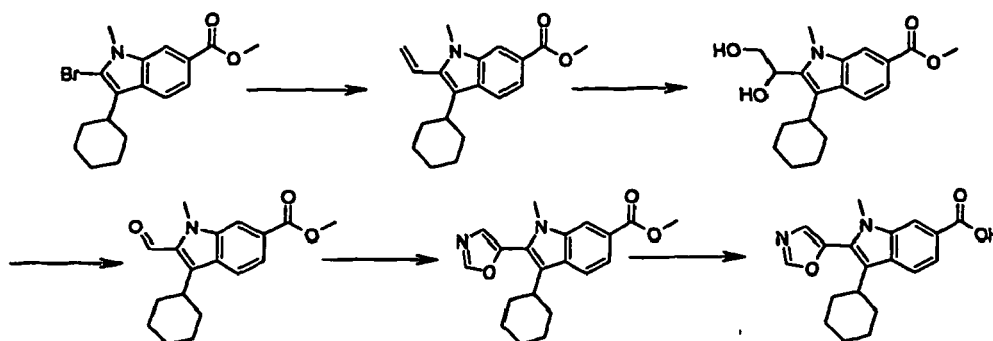
[0149] To the 2-bromoindole derivative of example 12 (2.044 g, 6.08 mmol) in dry dioxane (20 mL) was added vinyl-tributyltin (1.954 mL, 6.69 mmol). The solution was degassed by bubbling nitrogen for 15 min. Then bis(triphenylphosphine) palladium (II) chloride (213.4 mg, 0.304 mmol) was added and the reaction mixture was heated at 100 °C overnight. The reaction mixture was diluted with ether and successively washed with water and brine. After the usual treatment (MgSO₄, filtration and concentration) the residue was flash chromatographed (5 cm, 10% AcOEt-hexane) to afford the desired compound (1.32 g, 4.70 mmol, 77 % yield) as a white solid. To the ester from above (153 mg, 0.54 mmol) in a mixture of THF (2.8 mL) and methanol (1.4 mL) was added an aqueous solution of lithium hydroxide (226.6 mg, 5.40 mmol in 1.6 mL of water). The reaction mixture was stirred at 50 °C for 1.5 h and diluted with water. The aqueous layer

was acidified with 1M aq. HCl and extracted three times with CH₂Cl₂. The combined organic layers were successively washed with water (2X) and brine. After the usual treatment (MgSO₄, filtration and concentration) the desired crude acid was isolated (150 mg).

EXAMPLE 14

3-Cyclohexyl-1-methyl-2-oxazol-5-yl-1H-indole-6-carboxylic acid:

[0150]



[0151] To the bromide of example 4 (1.00 g, 2.855 mmol) in dry dioxane (10 mL) was added vinyltributyltin (917.8 μ L, 3.141 mmol). The solution was degassed by bubbling nitrogen through for 15 min. Then bis(triphenylphosphine) palladium (II) chloride (101 mg, 0.144 mmol) was added and the solution was refluxed for 7 hrs. The reaction mixture was diluted with ether and successively washed with water and brine. After the usual treatment (MgSO₄, filtration and concentration) the residue was flash chromatographed (5 cm, hexane to 2.5% AcOEt to 5% AcOEt to 10% AcOEt-hexane) to afford the desired compound (773 mg, 2.60 mmol, 91 % yield) as a pale yellow solid.

[0152] To the olefinic derivative from above (100 mg, 0.336 mmol) in a mixture of acetone (690 μ L), *tert*-butanol (690 μ L) and water (690 μ L) were successively added N-methylmorpholine *N*-oxide (NMMO; 48 mg, 0.410 mmol) and a 2.5 % solution of osmium tetroxide in *tert*-butanol (33 μ L). The reaction mixture was stirred at room temperature for three days and then concentrated. The residue was dissolved in EtOAc and successively washed with water (2X) and brine. After the usual treatment (MgSO₄, filtration and concentration) the crude diol (117 mg) was isolated.

[0153] To the crude diol obtained above (ca. 0.336 mmol) in a mixture of THF (3.2 mL) and water (3.2 mL) at 0 °C was added sodium periodate (86.2 mg, 0.403 mmol). The cooling bath was then removed and the reaction mixture was stirred at room temperature for 1 h 45 min, AcOEt was then added. The resulting solution was successively washed with 10% aq. citric acid, water, satd aq. NaHCO₃, water (2X) and brine. After the usual treatment (MgSO₄, filtration and concentration) the crude desired aldehyde was isolated (92 mg, 0.307 mmol, 91 % yield).

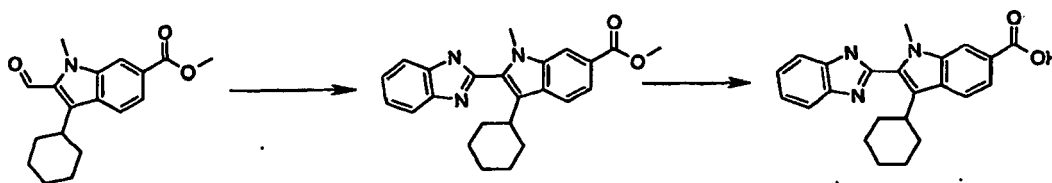
[0154] A mixture of the aldehyde from above (25.8 mg, 0.086 mmol), anhydrous potassium carbonate (12.4 mg, 0.090 mmol) and Tosmic (17.57 mg, 0.090 mmol) in absolute MeOH (500 μ L) was refluxed for 2 h. AcOEt was then added and the mixture was successively washed with water (2X) and brine. After the usual treatment (MgSO₄, filtration and concentration) the crude desired oxazole was isolated (28 mg, 0.083 mmol, 96 % yield).

[0155] To the ester from above (28 mg, 0.083 mmol) in a mixture of THF (425 μ L), MeOH (210 μ L) and water (250 μ L) was added lithium hydroxide (34.8 mg, 0.830 mmol). The reaction mixture was stirred overnight at room temperature, then diluted with water and acidified with a 1N aq. HCl solution. The aqueous layer was extracted with dichloromethane (3X) and successively washed with water (2X) and brine. After the usual treatment (MgSO₄, filtration and concentration) the title crude acid was isolated (30 mg).

EXAMPLE 15

2-(1H-Benzimidazol-2-yl)-3-cyclohexyl-1-methyl-1H-indole-6-carboxylic acid:

[0156]



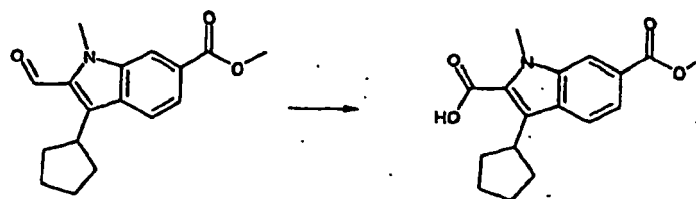
[0157] To a mixture of the aldehyde from example 14 (28 mg, 0.094 mmol) and 1,2-diaminobenzene (10.9 mg, 0.101 mmol) in acetonitrile (500 μ L) and DMF (200 μ L) was added chloranil (24.8 mg, 0.101 mmol). The reaction mixture was stirred at room temperature for three days. AcOEt was added and the reaction mixture was successively washed with a 1N aq. NaOH solution (2X), water (4X) and brine. After the usual treatment (MgSO_4 , filtration and concentration) the residue was flash chromatographed (1 cm, 30% AcOEt-hexane) to afford the desired benzimidazole ester derivative (11 mg, 0.028 mmol, 30 % yield).

[0158] To the ester from above (11 mg, 0.028 mmol) in a mixture of THF (240 μ L), MeOH (120 μ L) and water (140 μ L) was added lithium hydroxide (11.7 mg, 0.280 mmol). The reaction mixture was stirred overnight at room temperature, then diluted with water and acidified with a 1N aq. HCl solution. The aqueous layer was extracted with dichloromethane (3X) and successively washed with water (2X) and brine. After the usual treatment (MgSO_4 , filtration and concentration) the title crude acid was isolated (9 mg, 0.0241 mmol, 86 % yield).

EXAMPLE 16

3-Cyclopentyl-1-methyl-1H-indole-2,6-dicarboxylic acid 6-methyl ester:

[0159]

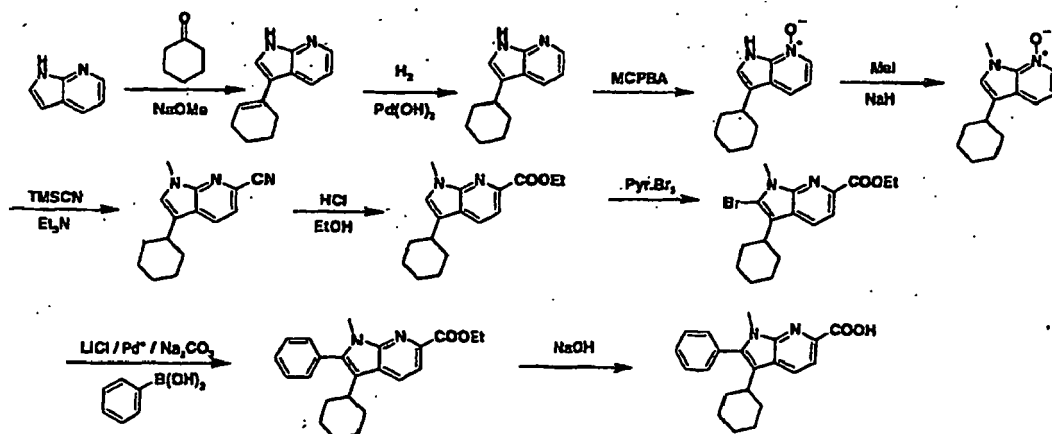


[0160] To the 3-cyclopentyl aldehyde prepared in a similar fashion to that described in example 15 (20 mg, 0.07 mmol) and 2-methyl-2-butene (541 μ L, 5.11 mmol) in tert-butanol (500 μ L) at 0 °C was added a freshly prepared solution of sodium chlorite (64.2 mg, 0.711 mmol) in phosphate buffer (98 mg of NaH_2PO_4 in 150 μ L of water). The reaction mixture was stirred for 45 min. at room temperature then brine was added. The aqueous layer was extracted twice with EtOAc. The combined organic layer was successively washed with a 0.5 N aq. HCl solution and brine. After the usual treatment (MgSO_4 , filtration and concentration) 23.1 mg of the desired crude acid were isolated as a yellow solid.

EXAMPLE 22

3-Cyclohexyl-1-methyl-2-phenyl-1H-pyrrolo[2,3,b]pyridine-6-carboxylic acid:

[0161]



[0162] 7-Azaindole (15.00 g, 127 mmol) was dissolved in MeOH (330 mL) and sodium methoxide (25% w/w in MeOH, 172 mL, 0.753 mole) and cyclohexanone (52.86 mL, 0.51 mole) were added. The mixture was refluxed for 60 h and then concentrated under reduced pressure. After cooling in ice-water, the reaction mixture was acidified to pH 8 with 3N HCl and the precipitated solid was collected by filtration. The product was washed with water, triturated with TBME-hexane and dried by azeotrope with toluene (19.8 g).

The material from above (15.00 g, 75.65 mmol) was dissolved in a mixture of EtOH (130 mL) and THF (30 mL) and 20% Pd(OH)₂ on carbon (1.30 g) was added. The mixture was hydrogenated under 1 atm of H₂ gas for 24 h, after which point additional catalyst (1.30 g) was added. After stirring under H₂ gas for an additional 16 h, the catalyst was removed by filtration and the solution evaporated under reduced pressure to give a residue that was triturated with TBME to give an amber solid (13.9 g).

The azaindole derivative from above (7.50 g, 37.45 mmol) was dissolved in DME (130 mL) and *meta*-chloroperbenzoic acid (12.943 g, 60.0 mmol) was added. After stirring for 2 h, volatiles were removed under reduced pressure and the residue suspended in water (100 mL). The mixture was basified to pH 10 by addition of saturated aqueous Na₂CO₃ solution under vigorous stirring. The solid was then collected by filtration, washed with water and a small amount of TBME, and dried (7.90 g).

The crude N-oxide from above (4.00 g, 18.49 mmol) was dissolved in DMF (350 mL) and NaH (60% dispersion, 1.52 g, 38 mmol) was added in small portions over 5 min. The mixture was stirred for 30 min and iodomethane (1.183 mL, 19 mmol) was added dropwise over 20 min to the suspension. After stirring for 3 h at room temperature, no more progress was measured by HPLC analysis. The reaction mixture was poured into water and extracted 3 times with EtOAc. The extract was washed with brine, dried (MgSO₄) and evaporated to give an amber solid (3.65 g, 60% homogeneity by NMR) that was used immediately without purification.

The crude product from above (0.80 g, 3.47 mmol) was dissolved in MeCN (10 mL). Triethylamine (1.13 mL, 8.1 mmol) was added followed by trimethylsilyl cyanide (2.13 mL, 16 mmol). The solution was then refluxed for 19 h. After cooling to room temperature, the reaction was quenched by slow addition of aqueous NaHCO₃ and the product extracted with EtOAc. The extract was washed with brine, dried (MgSO₄) and concentrated to a residue that was purified by flash chromatography on silica gel using 15% EtOAc-hexane (0.285 g).

The nitrile (0.300 g, 1.254 mmol) was suspended in EtOH (15 mL) and hydrogen chloride gas was bubbled through for 15 min to give a clear solution. The solution was then refluxed for 1.5 h until TLC showed complete conversion of starting material. After cooling to room temperature, volatiles were removed under reduced pressure and the residue was dissolved in EtOAc. The solution was washed with brine, dried (MgSO₄) and concentrated. The residue was purified by flash chromatography on silica gel (15-20% EtOAc-hexane) to give the desired ethyl ester as a pale yellow gum (0.227 g).

The ester from above (0.100 g, 0.35 mmol) was dissolved in THF (4 mL) and pyridinium hydrobromide perbromide (0.200 g, 0.532 mmol) was added. The mixture was stirred at 65 °C in a sealed vial for 16 h (>80% conversion). The solution was evaporated and the residue taken up into EtOAc. The solution was washed with water and brine, dried (MgSO₄) and concentrated. The crude material was purified by flash chromatography on silica gel (15% EtOAc-hexane). The bromide from above (0.100 g, 0.274 mmol), phenylboronic acid (0.049 g, 0.4 mmol) and lithium chloride (0.019 g, 0.45 mmol) were dissolved in a mixture of toluene (2 mL), EtOH (2 mL) and 1M Na₂CO₃ (0.43 mL). The mixture was degassed by passing argon gas through the solution for 30 min, and tetrakis(triphenyl)phosphine palladium (0.035 g, 0.03 mmol) was added. The mixture was refluxed for 18 h after which point more catalyst (0.035 g, 0.03 mmol) was added. After refluxing for an additional 2 h, the EtOH was removed under reduced pressure. The residue was dissolved in EtOAc and the solution washed with 10% aqueous HCl and brine, and dried (MgSO₄). Removal of volatiles under reduced pressure gave an orange gum that was purified by flash chromatography on silica gel using 20% EtOAc-hexane

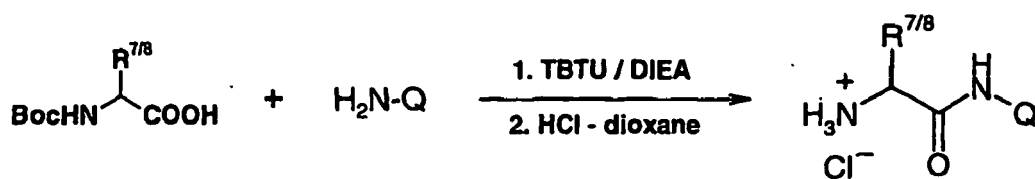
(0.105 g, crude).

The partially purified ester from above (0.100 g, 0.276 mmol) was dissolved in a mixture of THF (2 mL) and EtOH (2 mL). 1N NaOH (2.8 mL) was added and the mixture stirred for 4 h at room temperature. Volatiles were removed under reduced pressure and the residue diluted with 10% aqueous HCl. The product was extracted with EtOAc (3 X), dried (MgSO₄), evaporated and purified by reversed-phase : preparative HPLC to give the title compound.

EXAMPLE 23:

General procedure for the preparation of aromatic amide derivatives from α -monosubstituted *N*-Boc-amino acids:

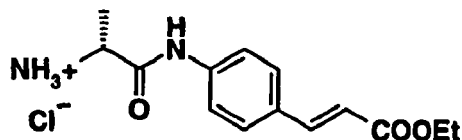
[0163]



[0164] *N*-Boc protected α -monosubstituted amino acids were coupled to aromatic amine derivatives using standard amide bond coupling reagents. The *N*-Boc protecting group was then cleaved under acidic conditions and the appropriate amine derivatives were isolated as hydrochloride salts. The following procedure for coupling *N*-Boc-D-alanine to ethyl 4-aminocinnamate is representative:

(*R*)-1-[4-((*E*)-2-Ethoxycarbonyl-vinyl)-phenylcarbamoyl]-ethyl-ammonium chloride:

[0165]

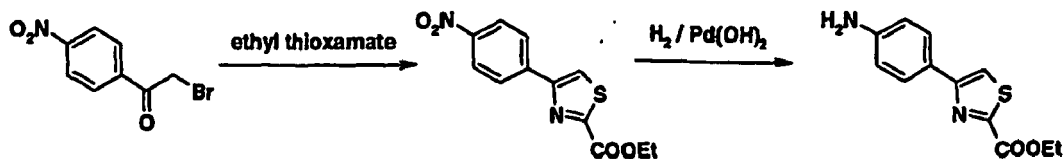


[0166] *N*-Boc-D-alanine (0.284 g, 1.5 mmol) was dissolved in DMSO (2 mL) and DIEA (1.04 mL, 6 mmol, 4 equivalents) was added. Ethyl 4-aminocinnamate (0.287 g, 1.5 mmol) was added followed by TBTU (0.578 g, 1.80 mmol) and the mixture was stirred for 24 h at room temperature. The reaction mixture was diluted with EtOAc (75 mL) and the solution washed with water (40 mL), 1N NaOH (3 x 25 mL), 1M KHSO₄ (2 x 25 mL) and 5% NaHCO₃ (25 mL). The extract was dried (MgSO₄) and concentrated to give the desired *N*-Boc-protected anilide as a yellow solid (0.411 g). The material from above was stirred for 1 h with 4N HCl in dioxane (10 mL). Removal of volatiles under reduced pressure and trituration of the residue with TBME gave the title hydrochloride salt as a brown solid.

EXAMPLE 24:

4-(4-Amino-phenyl)-thiazole-2-carboxylic acid ethyl ester:

[0167]



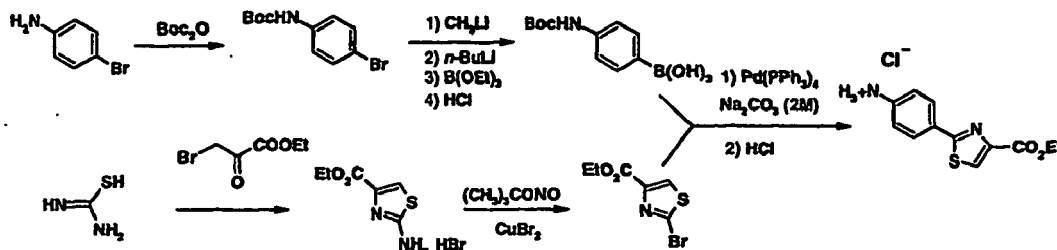
[0168] 4'-Nitro-2-bromoacetophenone (6.100 g, 25 mmol) and ethyl thioxamate (3.460 g, 26 mmol) were dissolved in MeOH (20 mL) and the solution was refluxed for 1 h. After cooling to room temperature, the precipitated solid was collected by filtration, washed with cold MeOH and dried under vacuum (5.15 g, 75% yield).

A suspension of the nitroester from above (2.50 g, 8.98 mmol) and 20% Pd(OH)₂ on carbon (200 mg) in 2:1 EtOH - THF (60 mL) was stirred for 3 h under 1 atm of hydrogen gas. The suspension was filtered to remove the catalyst and volatiles removed under reduced pressure to give the title compound as a reddish foam (2.05 g, 92% yield).

EXAMPLE 25:

4-(4-Ethoxycarbonylthiazol-2-yl)-phenyl-ammonium chloride:

[0169]



[0170] *p*-Bromoaniline (13.0 g, 76 mmol) and Boc₂O (19.8 g, 91 mmol) were dissolved in toluene (380 mL) and stirred at 70 °C for 15 h. The reaction mixture was cooled to RT, evaporated to dryness, re-dissolved in EtOAc and washed with 0.1M HCl and brine. The organic solution was dried over anhydrous MgSO₄, evaporated to dryness and purified by flash column chromatography, using 5% to 10% EtOAc in hexane as the eluent, to obtain the Boc-protected aniline (23 g). The Boc-protected bromoaniline (10.7 g, 39.2 mmol) was dissolved in anhydrous THF (75 mL) in a flask equipped with an overhead stirrer. The solution was cooled to 0 °C and MeLi (1.2 M in Et₂O, 33 mL, 39.2 mmol) was added drop wise while maintaining the internal temperature below 7 °C. The reaction mixture was stirred at 0 °C for 15 min and then cooled to -78 °C before *N*-BuLi (2.4 M in hexane, 17 mL, 39.2 mmol) was added drop wise, maintaining the internal temperature below -70 °C. The reaction mixture was stirred at -78 °C for 1h, B(OEt)₃ (17 mL, 98 mmol) was added drop wise (internal temperature < -65 °C) and stirring was continued for 45 min at -78 °C and at 0 °C for 1 h. The reaction mixture was then treated with 5% aqueous HCl (~100 mL, to pH ~1) for 15 min and NaCl(s) was added to saturate the aqueous layer. The aqueous layer was extracted with 0.5 M NaOH (4 x 100 mL) and the combined aqueous layers were acidified with 5% HCl (150 mL, to pH ~1) and extracted with Et₂O (3 x 200 mL). The combined organic layers were dried over anhydrous MgSO₄, filtered and concentrated to give the *N*-Boc carbamate of 4-aminophenylboronic acid as a solid (7.5 g).

Thiourea (7.60 g, 100 mmol) and ethyl bromopyruvate (12.6 mL, 100 mmol) were mixed and heated to 100 °C for 45 min. After cooling of the reaction mixture, the solid obtained was triturated with acetone, filtered and recrystallized from EtOH to obtain the desired aminothiazole product (10.6 g, 40 mmol). The aminothiazole was then added slowly (over a period of 20 min) to a solution of *t*-butylnitrite (6.2 g, 60 mmol) and CuBr₂ (10.7 g, 48 mmol) in MeCN (160 mL) at 0 °C. The reaction mixture was allowed to warm-up to RT and to stirred for 2.5 h. The mixture was then added to an aqueous HCl solution (20%) and extracted with Et₂O (2 x 400 mL). The organic layer was washed with aqueous HCl (10%), dried over anhydrous MgSO₄ and evaporated to dryness. The desired bromothiazole product was isolated in ~85% yield (4.3 g) after flash column chromatography using 15% EtOAc in hexane as the eluent.

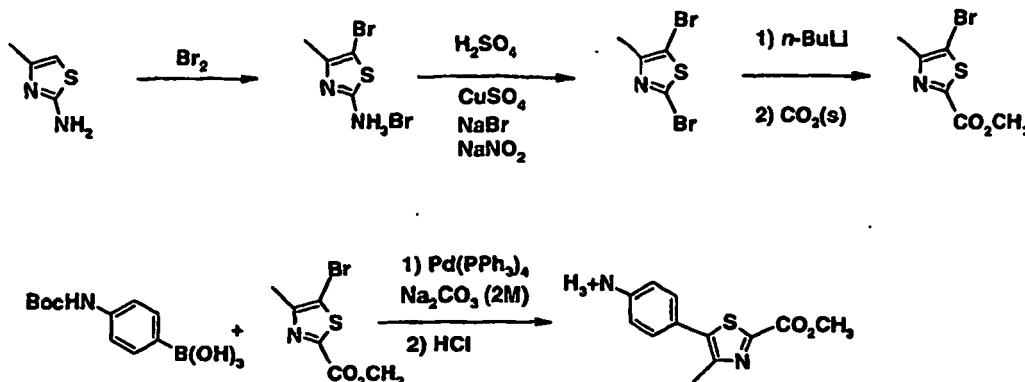
To a de-gassed solution of the bromothiazole product (230 mg, 0.97 mmol), the boronic acid derivative from above (230 mg, 0.97 mmol) and aqueous Na₂CO₃ (2M, 3 mL) in DME (3mL), a catalytic amount of Pd(PPh₃)₄ (56 mg, 0.049 mmol) was added and the reaction mixture was stirred at 80 °C under argon for 20 h. The reaction mixture was then cooled to

RT, diluted with EtOAc and extracted with brine, aqueous NaHCO₃ (2 x) and brine. The organic layer was dried over anhydrous MgSO₄ and concentrated to dryness. The carbamate-ester product was isolated after flash column chromatography using 20% to 30% EtOAc in hexane: 180 mg. The aniline hydrochloride was isolated after removal of the Boc protecting group with 4N HCl in dioxane for 30 min.

EXAMPLE 26:

4-(2-Methoxycarbonyl-4-methyl-thiazol-5-yl)-phenyl-ammonium chloride:

[0171]



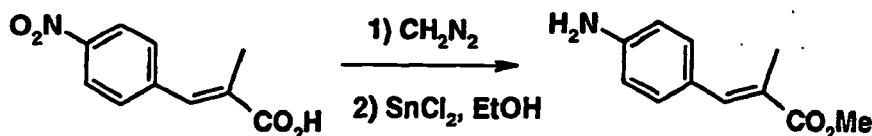
[0172] To a solution of 2-amino-4-methylthiazole (7.90 g, 69 mmol) in Et₂O (70 mL) at 15 °C, Br₂ was added slowly over a period of 30 min while stirring vigorously. The solid material formed was filtered and recrystallized from EtOH. The crystalline product was filtered and dried under vacuum to give the 5-bromo derivative as the HBr salt (10.3 g). This product was then dissolved in a solution of CuSO₄ (11.4 g) and NaBr (9.9 g) in H₂O (115 mL) and H₂SO₄ (5M, 360 mL) was added at 0 °C. An aqueous solution of NaNO₂ (6.10 g in 20 mL of H₂O) was then added drop wise to the reaction mixture over a period of 25 min, maintaining the temperature below 3 °C. The reaction mixture was stirred at 3 °C for 20 min and then at RT for 1 h. The reaction mixture was diluted with brine (280 mL) and extracted with Et₂O (3 x 300 mL). The ether layers were combined, washed with a saturated, aqueous solution of sodium thiosulfate to eliminate any unreacted Br₂, dried over anhydrous MgSO₄ and filtered through a pad of silica gel (~200 mL). The solvent was evaporated and the desired product isolated by distillation (bp = 80-81 °C at 15mm Hg).

A solution of the dibromo intermediate (500 mg, 1.94 mmol) in hexane (5 mL) was added to a cooled solution (-70 °C) of *n*-BuLi (870 µL of 2.2M in hexane), diluted with 10 mL of hexane. The reaction was stirred at -70 °C for 1 h and then added to CO₂(s). The mixture was partitioned between H₂O and Et₂O. The aqueous layer was acidified with 1N HCl (pH ~2) and extracted with EtOAc (2 x), dried over anhydrous MgSO₄, filtered and evaporated to dryness. The residue was re-dissolved in MeOH / DCM, treated with CH₂N₂ (until the solution remained yellow) and evaporated to dryness to give the desired 5-bromo-4-methylthiazole-2-carboxylate ester as a yellow solid (230 mg). Suzuki cross-coupling of this product with the *N*-Boc protected 4-aminophenylboronic acid, as previously described (example 25), gave the building block 5-(4-amino-phenyl)-4-methyl-thiazole-2-carboxylate methyl ester. This product was treated with 4N HCl in dioxane for 30 min to remove the Boc protecting group and obtain the desired compound.

EXAMPLE 27:

(E)-3-(4-Amino-phenyl)-2-methyl-acrylic acid methyl ester:

[0173]

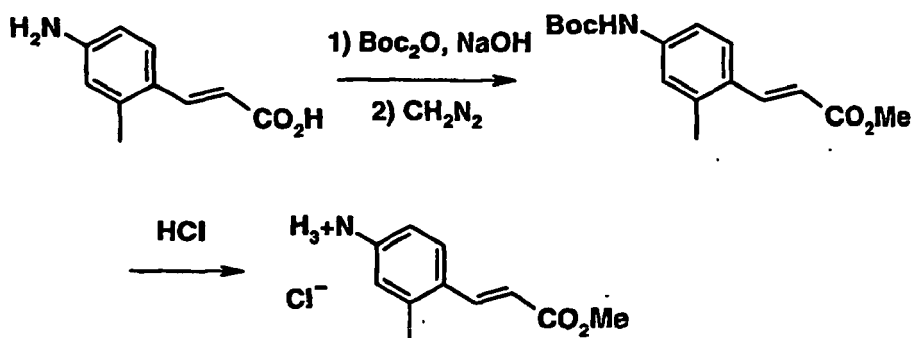


[0174] α -Methyl-4-nitrocinnamic acid (53 mg, 0.25 mmol) was dissolved in EtOAc and MeOH and a solution of CH_2N_2 in Et_2O was added until a persistent yellow color was observed. A couple of drops of AcOH were added to destroy the excess CH_2N_2 . The mixture was diluted with EtOAc and the organic layer was washed with H_2O , aqueous NaOH (1N) and brine, dried over anhydrous MgSO_4 and concentrated to dryness. The residue was re-dissolved in EtOH (2 mL), $\text{SnCl}_2 \cdot \text{H}_2\text{O}$ (289 mg, 1.28 mmol) was added and the reaction mixture was heated to reflux for 1h. The mixture was cooled to RT, diluted with EtOAc and quenched by the addition of aqueous, saturated NaHCO_3 . The organic layer was separated, washed with brine, dried over anhydrous MgSO_4 and concentrated to dryness to give the title compound (40 mg) as a yellow solid.

EXAMPLE 28:

4-((E)-2-Methoxycarbonyl-vinyl)-3-methyl-phenyl-ammonium chloride:

[0175]

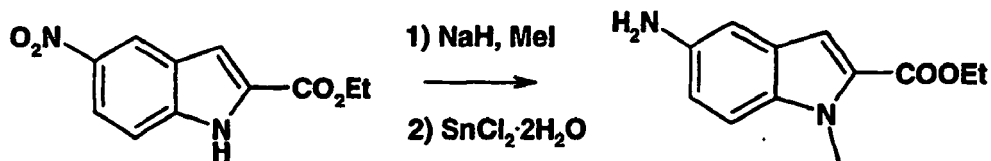


[0176] 4-Amino-2-methyl cinnamic acid (0.090 g, 0.51 mmol) and NaOH (1M, 1.1 mL, 1.1 mmol) were dissolved in dioxane (4 mL), Boc_2O (117 mg, 0.53 mmol) was added and the mixture was stirred at RT for 15 h. The reaction mixture was partitioned between EtOAc and H_2O , the pH of the aqueous layer was adjusted to be basic using 1N NaOH, and extracted with EtOAc (3 x). The aqueous layer was then acidified to pH -2 and extracted with EtOAc (3 x). The new organic layers were combined, washed with brine, dried over anhydrous MgSO_4 , filtered and concentrated to give an orange gum (118 mg). The crude Boc-protected 4-amino-2-methyl cinnamic acid was re-dissolved in EtOAc and a solution of CH_2N_2 in Et_2O was added until a persistent yellow color was observed. A few drops of AcOH were added to destroy the excess CH_2N_2 and the reaction mixture was washed with 10% aqueous HCl, saturated NaHCO_3 and brine, dried over anhydrous MgSO_4 , filtered and concentrated to dryness. Purification by flash column chromatography, using 10% EtOAc in hexane as the eluent, led to the isolation of the Boc-protected methyl ester as a yellow solid (36 mg). Finally, the Boc protecting group was removed after acid treatment with HCl in dioxane (as described previously) to give the title compound.

EXAMPLE 29:

5-Amino-1-methyl-1H-indole-2-carboxylic acid ethyl ester

[0177]



10 **[0178]** The ethyl ester of 5-nitroindole-2-carboxylic acid (0.300 g, 1.28 mmol) was dissolved in anhydrous DMF (6 mL) and NaH (0.078 g, 60%, 1.92 mmol) was added. The reaction was stirred at RT for 20 min, then MeI (160 μ L, 2.56 mmol) was added and stirring was continued for 3 h. The reaction was quenched with the addition of aqueous NaHCO₃ (~1%) while stirring vigorously. The brown solid formed (0.096 g) was filtered and dried in air overnight.

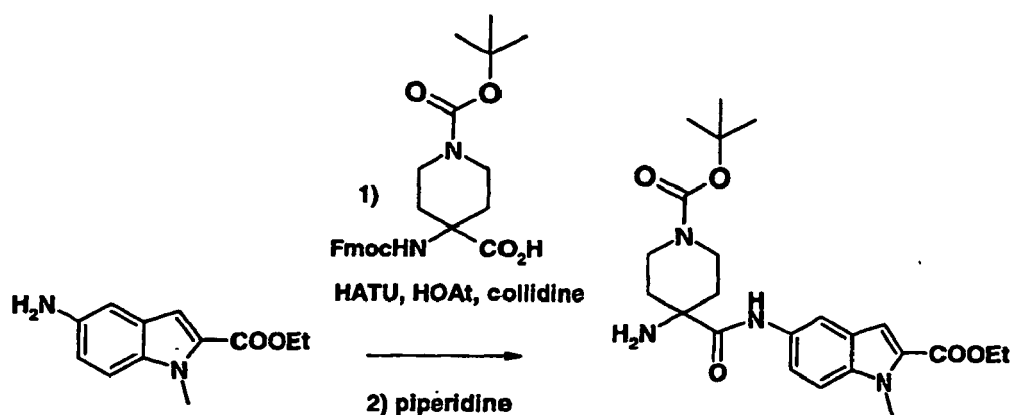
15 The *N*-methyl nitro derivative (196 mg, 0.79 mmol) was then dissolved in DMF (4 mL), H₂O (400 μ L) and SnCl₂·2H₂O (888 mg, 3.95 mmol) were added, and the mixture was stirred at 60°C for 3 h. The mixture was then partitioned between 10% aqueous NaHCO₃ and EtOAc and stirred vigorously. The aqueous layer was reextracted with EtOAc and the combined EtOAc layers were washed with brine, dried over anhydrous MgSO₄ and concentrated to dryness. The residue was purified by flash column chromatography, using 1:1 ratio EtOAc/hexane as the eluent, to obtain the pure 5-aminoindole derivative (118 mg).

20 **[0179]** *N*-Alkylation of 5-nitroindole-2-carboxylate with other alkylating agents (such as EtI, propargyl bromide, benzyl bromide) under the conditions described above gave the corresponding 5-amino-1-alkyl-1*H*-indole-2-carboxylates.

EXAMPLE 30:

25 **5-[[1-(4-Amino-1-*t*-butoxycarbonyl-piperidin-4-yl)-methanoyl]-amino]-1-methyl-1*H*-indole-2-carboxylic acid ethyl ester:**

[0180]

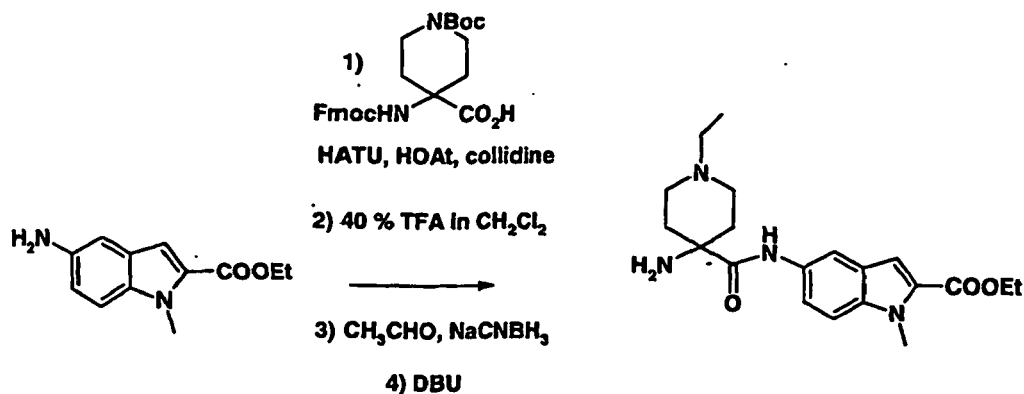


45 **[0181]** A solution of amine from example 29 (70 mg, 0.32 mmol), *N*-Fmoc-amino-(4-*N*-Boc-piperidinyl)carboxylic acid (150 mg, 0.32 mmol), HATU (139 mg, 0.35 mmol), HOAt (48 mg, 0.35 mmol) and collidine (155 mg, 1.28 mmol) in DMF (2 mL) was stirred at RT for 15 h. The reaction mixture was diluted with EtOAc, washed with 1% aqueous citric acid (2 x), saturated NaHCO₃ (2 x) and brine, dried over anhydrous MgSO₄ and concentrated to dryness to give an orange solid (210 mg) which was used in the next reaction without purification. A solution of the crude solid (210 mg) in DMF (3 mL) and piperidine (95 mL, 0.95 mmol) was stirred at RT for 3 h. The reaction mixture was concentrated to dryness and purified by flash column chromatography, using a solvent gradient from 50% EtOAc in hexane to 100% EtOAc as the eluent, to give the compound as a brown solid (110 mg).

EXAMPLE 31:

5-[[1-(4-Amino-1-ethyl-piperidin-4-yl)-methanoyl]-amino]-1-methyl-1H-indole-2-carboxylic acid ethyl ester:

[0182]



[0183] The 5-aminoindole derivative of example 29 was coupled to N-Fmoc-amino-(4-N-Boc-piperidinyl)carboxylic acid as described in example 30.

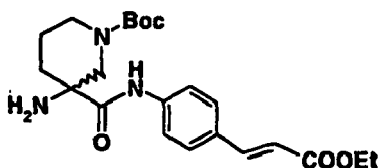
The Boc protecting group was removed with 25% TFA in CH_2Cl_2 in the usual way, and the product was then dissolved in EtOH (6 mL). AcOH (133 mg), acetaldehyde (33 mg, 0.74 mmol) and NaCNBH_3 (23mg, 0.37 mmol) were added and the reaction mixture was stirred at room temperature for 2 h. The reaction mixture was concentrated to remove most of the solvent, the residue was re-dissolved in EtOAc and washed with saturated NaHCO_3 and brine. The organic layer was dried over anhydrous MgSO_4 and concentrated to give the N-ethyl derivative as an orange solid.

This solid was dissolved in THF (2.5 mL), DBU (113 mg, 0.74 mmol) was added and the mixture was stirred at room temperature for 30 min. The solvent was evaporated, the remaining residue was dissolved in EtOAc and the organic layer was washed with saturated NaHCO_3 and brine. The organic layer was further extracted with 1N HCl and H_2O (2 x), and the pH of the combined aqueous layers was adjusted to pH ~10 with 1N NaOH. The aqueous layer was then extracted with EtOAc (3 x), the combined organic layers were washed with brine, dried over anhydrous MgSO_4 and concentrated to dryness to give the title amine derivative (44 mg).

EXAMPLE 32:

(E)-3-(4-[[1-(3-Amino-piperidin-3-yl)-methanoyl]-amino]-phenyl)-acrylic acid ethyl ester.

[0184]



[0185] Following a similar procedure to that described in example 31, commercially available N-Fmoc-amino-(3-N-Boc-piperidinyl)carboxylic acid was coupled to the ethyl ester of 4-aminocinnamic acid and the Fmoc protecting group was removed to give the title compound of example 32 in racemic form.

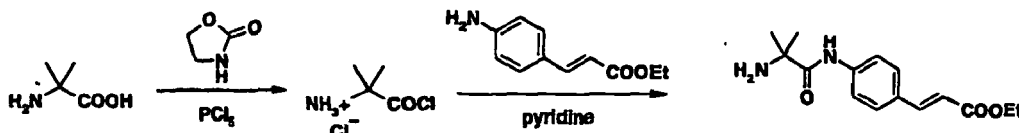
The racemic starting material, N-Fmoc-amino-(3-N-Boc-piperidinyl)carboxylic acid, could also be resolved into its two enantiomers by preparative HPLC on a chiral support (Chiralcel OD, 10 micron, 2.00 cm I.D. x 25 cm), using 35% H_2O in MeCN as the eluent.

EXAMPLE 33:

General procedure for coupling α,α -disubstituted amino acids to aromatic amines:

(E)-3-[4-(2-Amino-2-methyl-propanoylamino)-phenyl]-acrylic acid ethyl ester:

[0186]



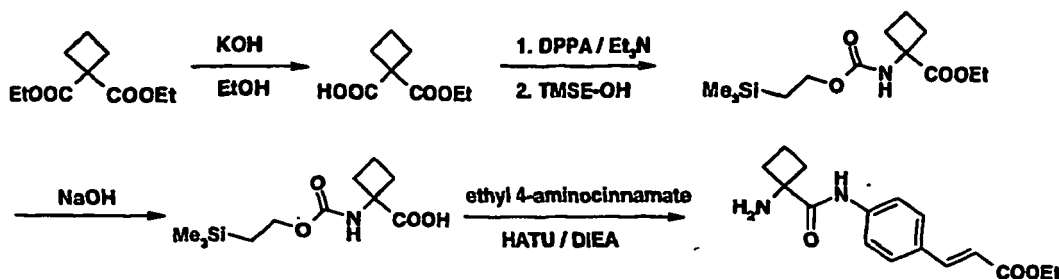
[0187] Adapting the procedure described by E. S. Uffelman et al. (Org. Lett. 1999, 1, 1157), 2-aminoisobutyric acid was converted to the corresponding amino acid chloride hydrochloride: 2-oxazolidinone (12.30 g, 0.141 mole) was dissolved in MeCN (150 mL) and phosphorous pentachloride (49.02 g, 0.235 mole, 1.7 equivalent) was added in one portion. The homogeneous mixture was stirred for 24 h at room temperature. 2-Aminoisobutyric acid (14.55 g, 0.141 mole) was added and the suspension was stirred for 48 h at room temperature. The desired acid chloride hydrochloride was collected by filtration, washed with MeCN and dried under vacuum.

The acid chloride (12.778 g, 80 mmol, 1.4 equivalent) was suspended in DCM (200 mL) and ethyl 4-aminocinnamate (11.045 g, 57.7 mmol, 1 equivalent) was added. Pyridine (7.01 mL, 86.6 mmol, 1.5 equivalent) was added drop wise and the mixture was stirred for 3.5 h at room temperature. The reaction was then poured into a mixture of 1N NaOH (25 mL) and saturated aqueous NaHCO_3 (100 mL) and extracted with EtOAc. The organic phase was washed with aqueous NaHCO_3 , water and brine, and dried over MgSO_4 . Removal of solvent under reduced pressure gave the title compound as a white solid (15.96 g, 101% yield).

EXAMPLE 34:

(E)-3-(4-([1-(1-Amino-cyclobutyl)-methanoyl]-amino)-phenyl)-acrylic acid ethyl ester:

[0188]



[0189] Diethyl 1,1-cyclobutanedicarboxylate (20.00 g, 100 mmol) and KOH (6.60 g, 100 mmol) were refluxed in EtOH (100 mL) for 2 h. After cooling to room temperature, volatiles were removed under reduced pressure and the residue partitioned between Et_2O and 4N HCl. The organic extract was washed with water and brine, and dried over MgSO_4 . Removal of the solvent under reduced pressure gave the monoester as a clear oil (14.45 g, 84% yield).

The monoester from above (14.45 g, 84 mmol), Et_3N (14.1 mL, 100 mmol) and diphenylphosphoryl azide (24.05 g, 87.4 mmol) were dissolved in dry toluene (114 mL) and the mixture heated at 80°C for 1 h and 110°C for an additional hour. Trimethylsilylethanol (9.94 g, 100 mmol) was added in one portion and the mixture refluxed for 48 h. Toluene was then removed under reduced pressure and the residue dissolved in DCM. The solution was washed with water and brine and dried over MgSO_4 . Concentration under reduced pressure gave a dark oil which was purified by passage through a pad of silica gel using 30% EtOAc in hexane as eluent. The desired carbamate was obtained as a clear yellow liquid (21.0 g).

The carbamate from above (1.50 g, 5.22 mmol) was dissolved in THF (5 mL) and 2N NaOH (5 mL) was added. The

mixture was stirred at 70 °C for 1 h. Following dilution with water, the aqueous phase was washed with Et₂O to remove unreacted starting material. The aqueous phase was then acidified with KHSO₄ and the product extracted with EtOAc. The desired free carboxylic acid was obtained as an oil (1.25 g).

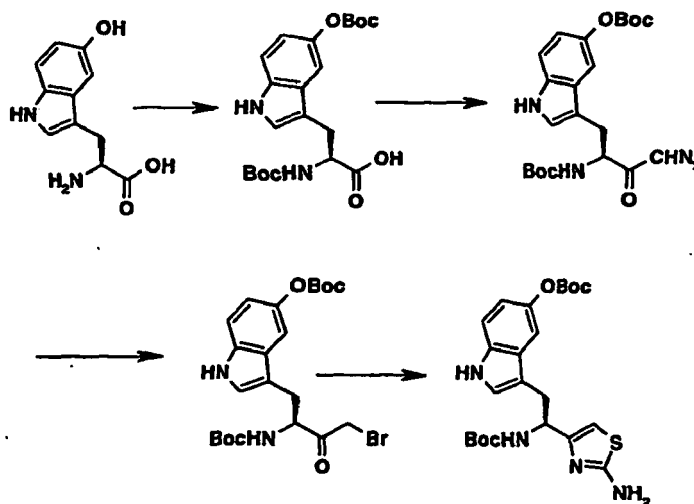
[0190] The acid from above (0.519 g, 2.0 mmol) was dissolved in DCM (10 mL). DIEA (1.39 mL, 8.0 mmol, 4 equivalents) was added, followed by ethyl 4-aminocinnamate (0.573 g, 3.0 mmol, 1.5 equivalent) and HATU (1.143 g, 3.0 mmol, 1.5 equivalents).

[0191] The mixture was stirred at room temperature for 3 days. The reaction was poured into TBME (100 mL) and the solution washed successively with 10% aqueous citric acid (2 x 25 mL) and saturated aqueous NaHCO₃ (25 mL), and dried over MgSO₄. The solvent was removed under reduced pressure and the residue stirred with TFA (10 mL) for 30 min. Volatiles were then removed under reduced pressure and the residue was co-evaporated twice with hexane. The crude product was dissolved in TBME (60 mL) and the solution washed with 1N NaOH (2 x 25 mL). After drying (Na₂SO₄), volatiles were removed in vacuum to give the title compound as a light brown solid (0.500 g).

EXAMPLE 35:

Carbonic acid 3-[(S)-2-tert-butoxycarbonylamino-2-(2-amino-thiazol-4-yl)-ethyl]-1H-indol-5-yl ester tert-butyl ester:

[0192]



[0193] (S)-5-Hydroxytryptophan was converted to the bis-Boc derivative by the method of V. F. Pozdnev, Chem. Nat. Compd. (Engl. Transl.) 1982, 18 (1), 125) which was isolated as the free carboxylic acid. This material (1.0377 g, 2.47 mmol) was dissolved in THF (5 mL), DIEA (0.645 mL, 3.7 mmol) was added and the mixture cooled in ice. Isobutyl chloroformate (0.384 mL, 2.96 mmol) was added and the mixture stirred at 0-5 °C for 18 h. Excess diazomethane in Et₂O (0.6 M, 15 mL) was then added and the mixture stirred for 1 h. Another portion of diazomethane (10 mL) was added and after 40 min, the reaction was diluted with Et₂O (75 mL). The solution was washed successively with 10% aqueous citric acid (25 mL) and saturated aqueous NaHCO₃ (25 mL), and dried (MgSO₄). Volatiles were removed under reduced pressure and the residue purified by flash chromatography with 40% EtOAc / hexane. The diazomethylketone was obtained as a yellow foam (0.783 g).

[0194] The diazomethylketone from above was dissolved in EtOAc (10 mL) and the solution cooled to -30 °C. A solution of HBr in AcOH (48% w/w, 0.384 mL) was added dropwise over 60 min. The cold reaction mixture was then diluted with Et₂O (100 mL) and washed successively with 10% aqueous citric acid (2 X 25 mL) and saturated aqueous NaHCO₃ (25 mL), and dried (MgSO₄). Volatiles were removed under reduced pressure and the residue coevaporated with hexane to give the bromomethylketone as a white foam (0.870 g).

The bromomethylketone from above was reacted with thiourea (2 equivalents) in MeCN at room temperature for 18 h. The solvent was then removed under reduced pressure and the residue dissolved in minimal DMSO. This solution was added dropwise with stirring to a mixture of water (15 mL) and DIEA (0.2 mL). The precipitate that formed was collected by filtration, washed with water and dried to give the title compound.

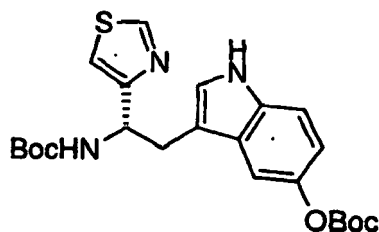
This method is general and can be applied to the preparation of other 2-alkyl and 2-alkylaminothiazole derivatives by

reacting the appropriate thioamide or thiourea derivative with the bromomethylketone compound described above.

EXAMPLE 36:

Carbonic acid 3-((S)-2-tert-butoxycarbonylamino-2-thiazol-4-yl-ethyl)-1H-indol-5-yl ester tert-butyl ester:

[0195]



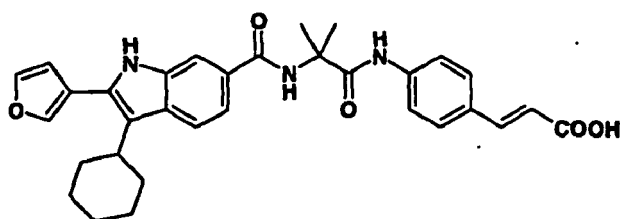
[0196] To a stirred suspension of P_2S_5 (0.89 g, 2.0 mmol) in dry dioxane (5 mL) was added dry formamide (433 μ L, 10.9 mmol). The mixture was heated at 90 °C for 2.5 h (to maintain a free suspension occasional trituration was needed). The suspension was allowed to cool to room temperature, the solid filtered off and the bromoketone from example 29 (0.5 mmol) was added to the filtrate. The solution was heated to 80 °C for 2 h then diluted with EtOAc (25 mL), washed with 5% aqueous citric acid (2 X 20 mL), 5% aqueous sodium bicarbonate (2 X 20 mL) and brine. After drying ($MgSO_4$) and removal of the solvent under reduced pressure, the title compound was obtained.

EXAMPLE 37 (ENTRY 2050):

General procedure for coupling 5- or 6-indolecarboxylic acids to α,α -disubstituted amino amides:

(E)-3-[4-(2-[[1-(3-Cyclohexyl-2-furan-3-yl)-1H-indol-6-yl]-methanoyl]-amino)-2-methyl-propanoylamino]-phenyl]-acrylic acid:

[0197]

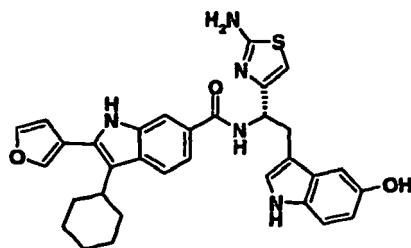


[0198] The indole carboxylic acid derived from the methyl ester of example 3 (0.050 g, 0.16 mmol), the amino amide derivative of example 33 (0.053 g, 0.019 mmol, 1.2 equivalent) and HATU (0.122 g, 0.32 mmol, 2 equivalents) were dissolved in DMSO (1 mL). DIEA (0.14 mL, 0.8 mmol, 5 equivalents) was added. The mixture was stirred for 1 h at room temperature then treated with 2.5N NaOH (0.3 mL) for 1 h at 50 °C to affect hydrolysis of the cinnamate ester function. The mixture was then acidified to pH 1 with TFA and the title compound was isolated by preparative reversed-phase HPLC (0.033 g).

EXAMPLE 38 (ENTRY 1010):

General procedure for coupling thiazole derivatives (Examples 35, 36) to 6-indolecarboxylic acids:

[0199]

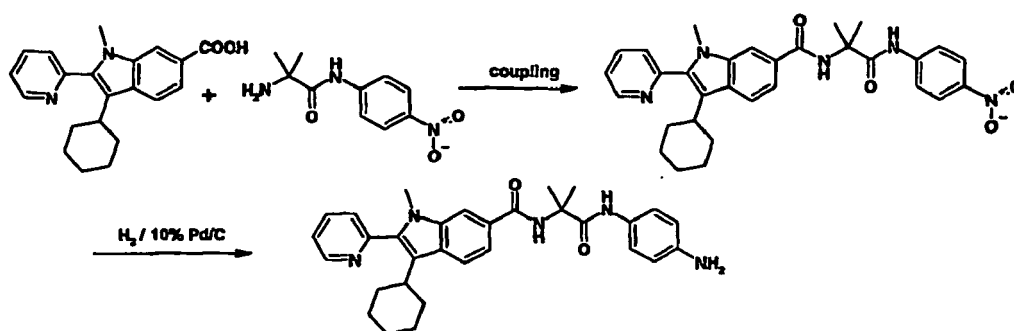


[0200] The thiazole derivative of example 35 was deprotected by stirring with 4 N HCl in dioxane and coupled to the 6-indole carboxylic acid derived from the methyl ester of example 3 using TBTU/DIEA in DMSO as described in example 37. Following coupling, the title compound was isolated directly by preparative reversed-phase HPLC.

EXAMPLE 39

3-Cyclohexyl-1-methyl-2-pyridin-2-yl-1H-indole-6-carboxylic acid [1-(4-aminophenylcarbonyl)-1-methylethyl]-amide (Entry 2072):

[0201]

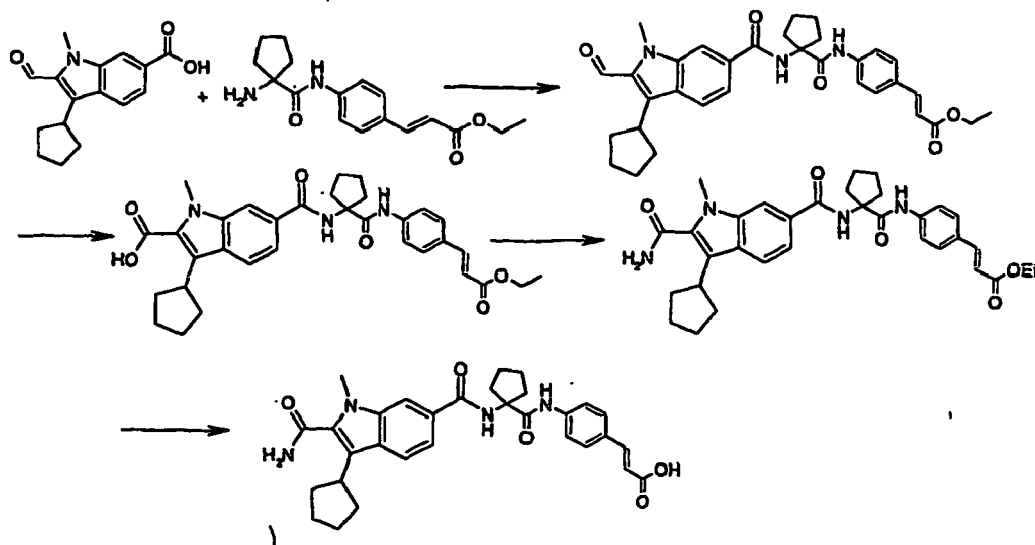


[0202] The amino amide derivative prepared from α -aminoisobutyryl chloride and 4-nitroaniline following the procedure of example 33 was coupled in the usual way (example 37) to the indole derivative of example 9. The nitro derivative was hydrogenolyzed (1 atm H_2 gas, 10% Pd/C) in MeOH for 5 h to give the title compound after purification by preparative reversed-phase HPLC.

EXAMPLE 40

(E)-3-(4-([1-(1-([1-(2-Carbamoyl-3-cyclopentyl-1-methyl-1H-indol-6-yl)-methanoyl]-amino)-cyclopentyl)-methanoyl]-amino)-phenyl)-acrylic acid:

[0203]



[0204] To a mixture of the acid aldehyde, derived by saponification of the ester aldehyde of example 16, (50 mg, 0.184 mmol) and an amine, prepared adapting the procedure described in example 33, (55.7 mg, 0.184 mmol) in CH_2Cl_2 were successively added HATU (84 mg, 0.221 mmol) and DIEA (128 μL , 0.736 mmol). The reaction mixture was stirred overnight at room temperature and then concentrated. The residue was dissolved in EtOAc and successively washed with a 10 % aq. citric acid solution (2X), a satd aq. NaHCO_3 solution, water and then with brine. After the usual treatment (MgSO_4 , filtration and concentration) the residue was flash chromatographed (2 cm, 35 % AcOEt-hexane) to afford the desired amide-aldehyde derivative (83.5 mg, 0.150 mmol, 81.5 % yield).

To the aldehyde from above (87 mg, 0.157 mmol) in a mixture of *tert*-butanol (2 mL) and 2-methyl-2-butene (1.2 mL) at 0 °C was added a freshly prepared solution of sodium chlorite (141.6 mg, 1.57 mmol) in phosphate buffer (216 mg of NaH_2PO_4 , 1.57 mmol, in 600 μL of water). The reaction mixture was stirred for 10 min. at room temperature then brine was added. The mixture was extracted with EtOAc (2X) and the combined organic layers were successively washed with a 0.5 N aq. solution and brine. After the usual treatment (MgSO_4 , filtration and concentration) the crude desired acid was isolated as a white solid (82.6 mg, 92.3 % yield).

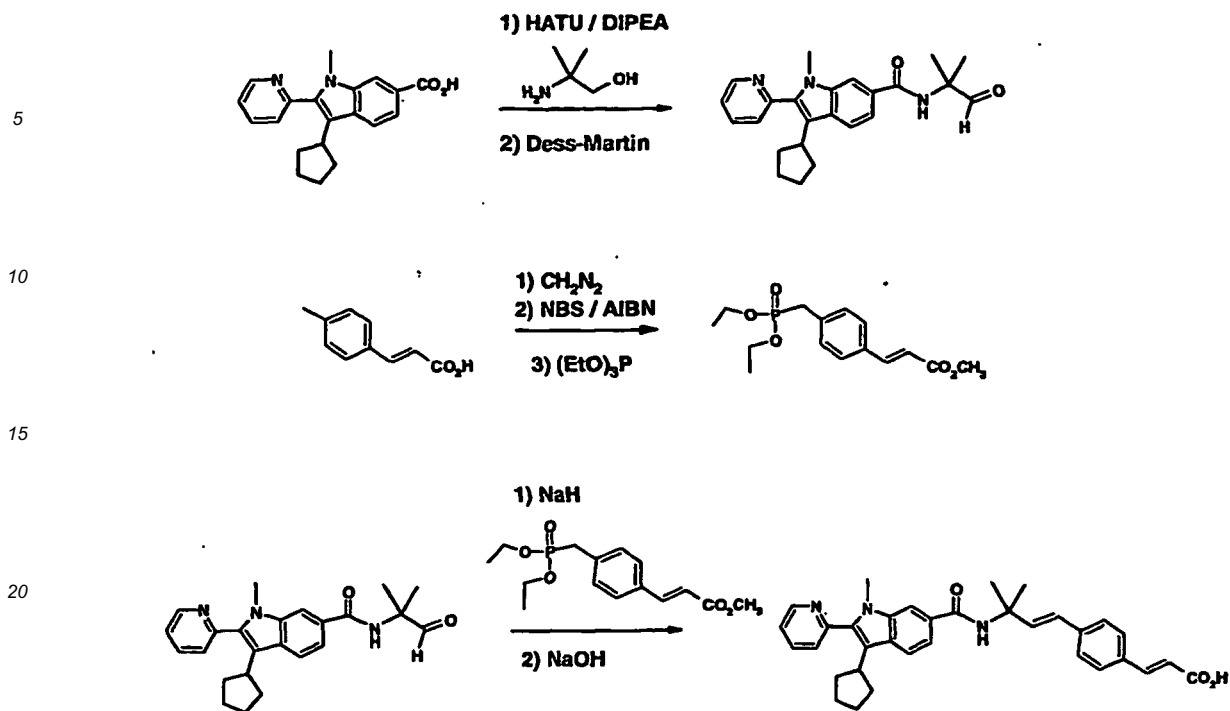
To the acid (15 mg, 0.0275 mmol) in DMF at 0 °C were successively added DIEA (7.2 μL , 0.0413 mmol) and isobutyl chloroformate (10.7 μL , 0.0413 mmol). The reaction mixture was stirred for 30 min at this temperature then ammonium hydroxide (7.5 μL , 0.056 mmol) was added. After the addition the mixture was slowly allowed to warm to room temperature and stirred overnight. 1N aq. NaOH was added (275 μL , 0.275 mmol) and the reaction mixture was heated at 60 °C for 1.5 h. Glacial acetic acid was finally added to destroy the excess hydroxide and the mixture was HPLC purified. After lyophilization the desired amide was isolated (2.6 mg, 0.005 mmol, 18 % yield) as a white solid.

Other 2-carboxamide derivatives were prepared in a similar fashion by replacing ammonia with the desired amine.

EXAMPLE 41

(E)-3-[4-((E)-3-[[1-(3-Cyclopentyl-1-methyl-2-pyridin-2-yl-1-H-indol-6-yl)-methanoyl]-amino]-3-methyl-but-1-enyl)-phenyl]-acrylic acid:

[0205]



[0206] 3-Cyclopentyl-1-methyl-2-pyridin-2-yl-1H-indole-6-carboxylic acid (0.100 g, 0.31 mmol), 2-amino-2-methyl-1-propanol (0.028 g, 0.31 mmol) and HATU (0.154 g, 0.41 mmol) were dissolved in DMSO (5 mL). To this mixture, DIEA (0.22 mL, 1.2 mmol) was added and the solution was stirred at room temperature for 3 h. The reaction mixture was poured into EtOAc (100 mL) and the solution washed successively with saturated aqueous NaHCO₃ (2 x 25 mL) and brine (25 mL), and dried over anhydrous MgSO₄. The solvent was removed under reduced pressure and the residue was purified by flash column chromatography (using 60-70% EtOAc in hexane) to give the primary alcohol intermediate as a yellow oil (0.048 g). This product was dissolved in CH₂Cl₂ (2 mL), Dess-Martin periodinane (0.063 g, 0.15 mmol) was added and the mixture was stirred at room temperature for 30 min. The reaction mixture was extracted with CH₂Cl₂ (100 mL), the organic layer was dried over anhydrous MgSO₄ and the solvent was removed under reduced pressure. The residue was purified by flash column chromatography (using 60% EtOAc in hexane) to give the aldehyde intermediate (0.011 g).

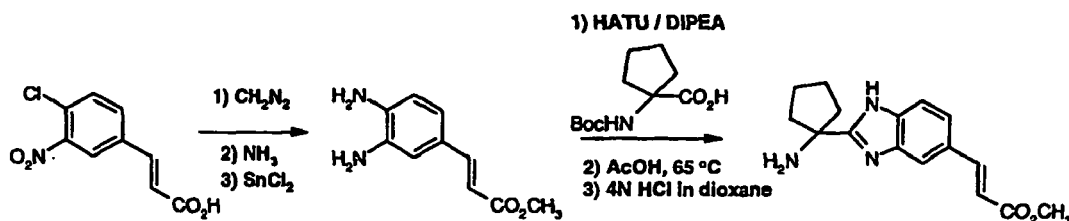
Diazomethane was slowly added to a solution of 4-methylcinnamic acid (3.0 g, 18.5 mmol) in CH₃OH/CH₂Cl₂ (5 mL/15 mL) until the yellow color persisted, indicating the presence of excess diazomethane. The solution was evaporated to dryness under reduced pressure and the residue was re-dissolved in CCl₄ (15 mL). *N*-Bromosuccinimide (3.62 g, 20.4 mmol) and AIBN (0.304 g, 1.85 mmol) were added and the mixture was stirred at reflux for 3 hours. The solution was then cooled to room temperature and filtered. The organic layer was washed with aqueous NaOH (0.5 N, 2 x 50 mL) and water (50 mL), dried over anhydrous MgSO₄ and filtered. The solvent was removed under vacuum and the residue was purified by flash column chromatography (0-40% EtOAc in hexane) to obtain the bromide intermediate as a white solid (2.4 g). This product was dissolved in (EtO)₃P (37.7 mL, 220 mmol) and heated to reflux at 160 °C. The ethyl bromide formed was collected in a Dean-Stark distillation apparatus over a period of 2.5 hours. The reaction mixture was condensed under vacuum to a yellow solid, which was then purified by flash column chromatography (70-100% EtOAc in hexane) to give the phosphonate as a white solid (1.9 g).

A solution of phosphonate (20 mg, 0.06 mmol) and NaH (60%, 3.5 mg, 0.087 mmol) in anhydrous THF (300 µL) was stirred at RT for 30 min. A solution of the aldehyde intermediate (11 mg, 0.029 mmol) in THF was added and stirring was continued for 4 hours. After that period, aqueous NaOH (2.5 N, 50 µL) was added and the mixture was stirred at 40 °C for 15 hours. The mixture was acidified with glacial acetic acid (~1 mL), concentrated and purified by reversed HPLC to obtain the title compound (3.7 mg) as a yellow solid.

EXAMPLE 42:

(Z)-3-[2-(1-Amino-cyclopentyl)-1H-benzimidazol-5-yl]-acrylic acid methyl ester:

[0207]



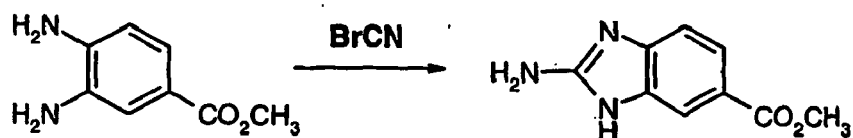
[0208] Diazomethane was slowly added to a solution of 4-chloro-3-nitrocinnamic acid in $\text{CH}_3\text{OH}/\text{CH}_2\text{Cl}_2$ until the yellow color persisted, indicating the presence of excess diazomethane. The solution was evaporated to dryness under reduced pressure and the residue was dissolved in DMSO. The solution was heated to 140°C and ammonia gas was bubbled through for a period of 4 hours. The mixture was cooled to room temperature and degassed with N_2 , and poured onto ice. The precipitate formed was filtered, washed with cold water and dried under vacuum for 16 hours to give the crude 4-amino-3-nitrocinnamic ester as a yellow solid (2.05 g). The solid was dissolved in ethanol (40 mL), $\text{SnCl}_2 \cdot \text{dihydrate}$ (9.91 g, 43.9 mmol) was added and the reaction mixture was heated to reflux for 4 hours. The solution was concentrated to remove most of the ethanol, diluted with EtOAc and saturated aqueous NaHCO_3 was added slowly. The mixture was stirred for 20 min, the organic layer was extracted with brine, dried over anhydrous Na_2SO_4 and evaporated to dryness under reduced pressure. The residue was purified by flash column chromatography (using 50% to 70% EtOAc in hexane) to give the diamino intermediate as a yellow solid (1.03 g).

A portion of the 3,4-diaminocinnamate ester (186 mg, 0.970 mmol) and N-Boc-1-aminocyclopentane-1-carboxylic acid (222 mg, 0.970 mmol) were coupled in the presence of HATU / DIEA (in the usual way) and the amide product formed was dehydrated by heating at 65°C in a solution of acetic acid (4 mL). The reaction residue was purified by reversed HPLC to give the N-Boc protected (Z)-3-[2-(1-amino-cyclopentyl)-1H-benzoimidazol-5-yl]-acrylic acid ethyl ester. The Boc protecting group was removed with 4N HCl in dioxane in the usual way to give (Z)-3-[2-(1-amino-cyclopentyl)-1H-benzoimidazol-5-yl]-acrylic acid ethyl ester as yellow foam (200 mg).

EXAMPLE 43:

2-Amino-3H-benzoimidazole-5-carboxylic acid:

[0209]

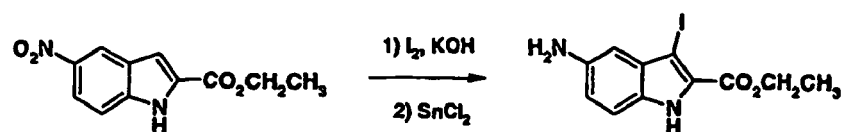


[0210] A solution of cyanogen bromide (5M, 1.44 mL, 7.22 mmol) was slowly added to a suspension of 3,4-diaminobenzoate (1.0 g, 6.02 mmol) in water (10 mL). The mixture was stirred at room temperature for 24 hours. An aqueous solution of Na_2CO_3 (10%) was added slowly until the product had precipitated as a brown solid (890 mg).

EXAMPLE 44:

5-Amino-3-iodo-1H-indole-2-carboxylic acid ethyl ester:

[0211]

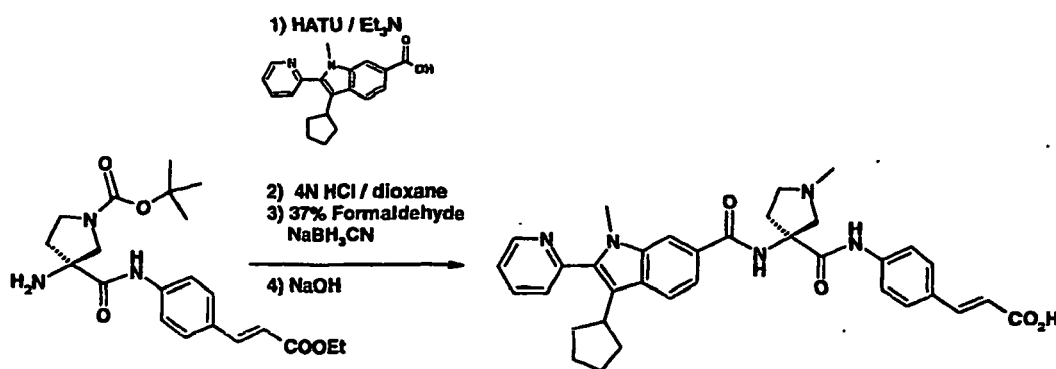


[0212] Ethyl 5-nitroindole-2-carboxylate (1.00 g, 4.27 mmol) was dissolved in DMF (15 mL), KOH (0.84 g, 14.9 mmol) was added and the mixture was stirred at room temperature for 10 min. Iodine (1.084 g, 4.27 mmol) was added and stirring was continued for 3 hours. The reaction mixture was poured into a solution of water (150 mL) containing NaHSO₃ (1 g) and concentrated NH₄OH (2.5 mL). The precipitate formed was filtered, washed with water and dried to give the 3-iodo intermediate as a beige solid (1.49 g). A portion of this solid (503 mg, ~1.4 mmol) was dissolved in ethanol (15 mL), SnCl₂.dihydrate (1.58 g, 6.99 mmol) was added and the reaction mixture was heated to reflux for 4 hours. The solution was concentrated to remove most of the ethanol, diluted with EtOAc and saturated aqueous NaHCO₃ was added slowly to pH=8-9. The mixture was stirred for 20 min, the organic layer was extracted with brine, dried over anhydrous Na₂SO₄ and evaporated to dryness under reduced pressure. The residue (431 mg of brown solid) contained the desired product 5-amino-3-iodo-1*H*-indole-2-carboxylic acid ethyl ester in reasonable purity to be used in the synthesis of inhibitors without further purification.

EXAMPLE 45:

(*E*)-3-(4-([1-((*S*)-3-([1-(3-Cyclopentyl-1-methyl-2-pyridin-2-yl-1*H*-indol-6-yl)-methanoyl]amino)-1-methyl-pyrrolidin-3-yl)-methanoyl]-amino)-phenyl)-acrylic acid:

[0213]



[0214] 3-Cyclopentyl-1-methyl-2-pyridin-2-yl-1*H*-indole-6-carboxylic acid (0.197 mg, 0.589 mmol), the appropriate amine (0.170 g, 0.420 mmol) and HATU (0.320 g, 0.840 mmol) were dissolved in DMSO (4 mL). To this mixture, Et₃N (0.300 mL, 2.15 mmol) was added and the solution was stirred at room temperature for 5 hours. The reaction mixture was poured into EtOAc (100 mL) and the solution washed successively with 1% aqueous citric acid (2 x 25 mL), saturated aqueous NaHCO₃ (2 x 25 mL) and brine (25 mL), and dried over anhydrous MgSO₄. The solvent was removed under reduced pressure and the residue was purified by flash column chromatography (using hexane/EtOAc in 1:1 ratio) to give the intermediate product as a slightly colored foam (280 mg). This product was stirred in 4N HCl in dioxane (3.0 mL) for 1 hour (to remove the Boc protecting group) and then all volatile components were removed under reduced pressure.

A portion of the residue (41 mg, 0.060 mmol) was dissolved in ethanol (2 mL), acetic acid (31 mg, 0.530 mmol) was added, 37% aqueous formaldehyde (15 µL, ~0.2 mmol) and NaBH₃CN (5.6 mg, 0.090 mmol) and the mixture was stirred at room temperature for 30 min. The solvent was removed under reduced pressure and the residue was re-dissolved in DMSO (1 mL), aqueous NaOH (2.5 N, 230 µL, 0.58 mmol) was added and the mixture was stirred at room temperature for 2 hours. The reaction mixture was acidified by the addition of acetic acid (~1 mL) and purified by C18 reversed phase preparative HPLC to give the final product as a light yellow solid (11 mg).

EXAMPLE 46: INHIBITION OF NS5B RNA DEPENDENT RNA POLYMERASE ACTIVITY

[0215] The compounds of the invention were tested for inhibitory activity against the hepatitis C virus RNA dependant polymerase (NS5B), according to the following assay:
The substrates are:

- a 12 nucleotide RNA oligo-uridyate (or oligo-uridine-monophosphate) (oligo-U) primer modified with biotin at the free 5'C position;
- a complementary poly-adenylate (or adenosine monophosphate) (polyA) template of heterogeneous length

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(1000-10000 nucleotides); and
UTP-[5,6 ³H].

Polymerase activity is measured as the incorporation of UMP-[5,6 ³H] into the chain elongated from the oligo-U primer. The ³H-labelled reaction product is captured by SPA-beads coated with streptavidin and quantified on the TopCount.

[0216] All solutions were made from DEPC treated MilliQ water [2 ml of DEPC is added to 1 L of MilliQ water, the mixture is shaken vigorously to dissolve the DEPC, then autoclaved at 121 °C for 30 minutes].

[0217] Enzyme: The full length HCV NS5B (**SEQ ID NO.1**) was purified as an N-terminal hexa-histidine fusion protein from baculovirus infected insect cells. The enzyme can be stored at -20 °C in storage buffer (see below). Under these conditions, it was found to maintain activity for at least 6 months.

Substrates: The biotinylated oligo-U₁₂ primer, the Poly(A) template, and the UTP-[5,6 ³H] were dissolved in water. The solutions can be stored at -80 °C.

Assay buffer: 20 mM Tris-HCl pH 7.5
5 mM MgCl₂
25 mM KCl
1 mM EDTA
1 mM DTT

NSSB storage buffer: 0.1 μM NS5B
25 mM Tris-HCl pH 7.5
300 mM NaCl
5 mM DTT
1 mM EDTA
0.1 % n-Dodecyl maltoside
30 % glycerol

[0218] Test compound cocktail: Just prior to assay, test compounds of the invention were dissolved in assay buffer containing 15% DMSO.

[0219] Substrate cocktail: Just prior to assay, the substrates were mixed in assay buffer to the following concentrations:

Component	Concentration in substrate cocktail	Final Concentration in assay
RNAasin™	0.5 U/μL	1.67 U/μL
Biotin-oligo-U ₁₂ primer	3 ng/μL	1 ng/ μL
PolyA template	30 ng/ μL	10 ng/ μL
UTP-[5,6- ³ H] 35 Ci/mmol	0.025 μCi/ μL	0.0083 μCi/ μL 0.25 μM
UTP	2.25 μM	0.75 μM

[0220] Enzyme cocktail: Just prior to assay, the RNA polymerase (NS5B) cocktail was prepared in assay buffer to the following specifications:

Component	Concentration in cocktail
Tris-HCl at pH 7.5	20 mM
MgCl ₂	5 mM
KCl	25 mM
EDTA	1 mM
DTT	1 mM

(continued)

Component	Concentration in cocktail
n- Dodecyl maltoside	1%
NS5B	30 nM

Protocol:

[0221] The assay reaction was performed in a Microfluor™ white "U" bottom plate (Dynatech™ #7105), by successively adding:

20 µL of test compound cocktail;

20 µL of substrate cocktail; and

20 µL of enzyme cocktail

(final [NS5B] in assay = 10 nM; final [n-dodecyl maltoside] in assay = 0.33%; final DMSO in assay = 5%).

The reaction was incubated at room temperature for 1.5 hours. STOP solution (20 µL; 0.5 M EDTA, 150 ng/ µl tRNA) was added, followed by 30 µl streptavidin coated PVT beads (8mg/ml in 20 mM Tris-HCl, pH 7.5, 25 mM KCl, 0.025% NaN₃). The plate was then shaken for 30 minutes. A solution of CsCl was added (70 µL, 5 M), to bring the CsCl concentration to 1.95 M. The mixture was then allowed to stand for 1 hour. The beads were then counted on a Hewlett Packard TopCount™ instrument using the following protocol:

Data mode: counts per minute

Scintillator: liq/plast

Energy range: low

Efficiency mode: normal

Region: 0-50

Count delay: 5 minutes

Count time: 1 minute

Expected results: 6000 cpm/well

200 cpm/well no enzyme control.

[0222] Based on the results at ten different concentrations of test compound, standard concentration-% inhibition curves were plotted and analysed to determine IC₅₀'s for the compounds of the invention. For some compounds the IC₅₀ was estimated from two points.

EXAMPLE 47: SPECIFICITY OF NS5B RNA DEPENDENT RNA POLYMERASE INHIBITION

[0223] The compounds of the invention were tested for inhibitory activity against polio virus RNA dependent RNA polymerase and calf thymus DNA dependent RNA polymerase II in the format that is described for the HCV polymerase with the exception that another polymerase was used in place of the HCV NS5B polymerase.

EXAMPLE 48: CELL BASED HCV RNA REPLICATION ASSAY

Cell Culture

[0224] Huh7 cells that stably maintain a subgenomic HCV replicon were established as previously described (Lohman et al., 1999. Science 285: 110-113) and designated as the S22.3 cell-line. S22.3 cells are maintained in Dulbecco's Modified Earle Medium (DMEM) supplemented with 10% FBS and 1 mg/mL neomycin (Standard Medium). During the assay, DMEM medium supplemented with 10% FBS, containing 0.5% DMSO and lacking neomycin was used (Assay Medium). 16 hours prior to compound addition, S22.3 cells are trypsinized and diluted to 50 000 cells/ml in Standard Medium. 200µL (10 000 cells) are distributed into each well of a 96-well plate. The plate was then incubated at 37°C with 5% CO₂ until the next day.

Reagents and Materials:

[0225]

Product	Company	Catalog #	Storage
DMEM	Wisent Inc.	10013CV	4°C
DMSO	Sigma	D-2650	RT
Dulbecco's PBS	Gibco-BRL	14190-136	RT
Fetal Bovine Serum	Bio-Whittaker	14-901F	-20°C/4°C
Neomycin (G418)	Gibco-BRL	10131-027	-20°C/4°C
Trypsin-EDTA	Gibco-BRL	25300-054	-20°C/4°C
96-well plates	Costar	3997	RT
PVDF 0.22µm Filter Unit	Millipore	SLGV025LS	RT
Deep-Well Titer Plate Polypropylene	Beckman	267007	RT

Preparation of Test Compound

[0226] 10µL of test compound (in 100% DMSO) was added to 2 ml of Assay Medium for a final DMSO concentration of 0.5% and the solution was sonicated for 15 min and filtered through a 0.22µm Millipore Filter Unit 900µl was transferred into row A of a Polypropylene Deep-Well Titer Plate. Rows B to H, contain 400µL aliquots of Assay Medium (containing 0.5% DMSO), and are used to prepare serial dilutions (1/2) by transferring 400µl from row to row (no compound was included in row H).

Application of test compound to cells

[0227] Cell culture medium was aspirated from the 96-well plate containing the S22.3 cells. 175µL of assay medium with the appropriate dilution of test compound was transferred from each well of the compound plate to the corresponding well of the cell culture plate (row H was used as the "No inhibition control"). The cell culture plate was incubated at 37°C with 5% CO₂ for 72 hours.

Extraction of Total Cellular RNA

[0228] Following the 72 hour incubation period, the total cellular RNA was extracted from the S22.3 cells of the 96-well plate using the RNeasy 96 kit (Qiagen®, RNeasy Handbook. 1999.). Briefly, assay medium was completely removed from cells and 100 µL of RLT buffer (Qiagen®) containing 143 mM β-mercaptoethanol was added to each well of the 96-well cell-culture plate. The microplate was gently shaken for 20 sec. 100 µL of 70% ethanol was then added to each microplate well, and mixed by pipetting. The lysate was removed and applied to the wells of a RNeasy 96 (Qiagen®) plate that was placed on top of a Qiagen® Square-Well Block. The RNeasy 96 plate was sealed with tape and the Square-Well Block with the RNeasy 96 plate was loaded into the holder and placed in a rotor bucket of a 4K15C centrifuge. The sample was centrifuged at 6000 rpm (~5600 x g) for 4 min at room temperature. The tape was removed from the plate and 0.8 ml of Buffer RW1 (Qiagen® RNeasy 96 kit) was added to each well of the RNeasy 96 plate. The RNeasy 96 plate was sealed with a new piece of tape and centrifuged at 6000 rpm for 4 min at room temperature. The RNeasy 96 plate was placed on top of another clean Square-Well Block, the tape removed and 0.8 ml of Buffer RPE (Qiagen® RNeasy 96 kit) was added to each well of the RNeasy 96 plate. The RNeasy 96 plate was sealed with a new piece of tape and centrifuged at 6000 rpm for 4 min at room temperature. The tape was removed and another 0.8 ml of Buffer RPE (Qiagen® RNeasy 96 kit) was added to each well of the RNeasy 96 plate. The RNeasy 96 plate was sealed with a new piece of tape and centrifuged at 6000 rpm for 10 min at room temperature. Tape was removed, the RNeasy 96 plate was placed on top of a rack containing 1.2-mL collection microtubes. The RNA was eluted by adding 50 µL of RNase-free water to each well, sealing plate with a new piece of tape and incubated for 1 min at room temperature. The plate was then centrifuged at 6000 rpm for 4 min at room temperature. The elution step was repeated with a second volume of 50 µl RNase-free water. The microtubes with total cellular RNA are stored at -70°C.

Quantification of Total Cellular RNA

[0229] RNA was quantified on the STORM® system (Molecular Dynamics®) using the RiboGreen® RNA Quantification Kit (Molecular Probes®). Briefly, the RiboGreen reagent was diluted 200-fold in TE (10mM Tris-HCl pH =7.5, 1mM EDTA). Generally, 50µL of reagent was diluted in 10mL TE. A Standard Curve of ribosomal RNA was diluted in TE to 2µg/mL and pre-determined amounts (100, 50, 40, 20, 10, 5, 2 and 0µL) of the ribosomal RNA solution are then transferred in a new 96-well plate (COSTAR # 3997) and the volume was completed to 100µL with TE. Generally, column 1 of the 96-well plate was used for the standard curve and the other wells are used for the RNA samples to be quantified. 10µL of each RNA sample that was to be quantified, was transferred to the corresponding well of the 96-well plate and 90µL of TE was added. One volume (100µL) of diluted RiboGreen reagent was added to each well of the 96-well plate and incubated for 2 to 5 minutes at room temperature, protected from light (a 10 µL RNA sample in a 200 µL final volume generates a 20 X dilution). The fluorescence intensity of each well was measured on the STORM® system (Molecular Dynamics®). A standard curve was created on the basis of the known quantities of the ribosomal RNA and the resulting fluorescent intensities. The RNA concentration in the experimental samples was determined from the standard curve and corrected for the 20X dilution.

Reagents and Materials:

[0230]

Product	Company	Catalog #	Storage
DEPC	Sigma	D5758	4°C
EDTA	Sigma	E5134	RT
Trizma-Base	Sigma	T8524	RT
Trizma-HCl	Sigma	T7149	RT
Collection Tube Strips	Qiagen	19562	RT
Ribogreen RNA Quantitation Kit	Molecular Probe	R11490	-20°C
Rneasy 96 Kit	Qiagen	74183	RT
Square-Well Blocks	Qiagen	19573	RT

Real-Time RT-PCR

[0231] The Real-Time RT-PCR was performed on the ABI Prism 7700 Sequence Detection System using the TaqMan EZ RT-PCR Kit from (Perkin-Elmer Applied Biosystems®). RT-PCR was optimized for the quantification of the 5' IRES of HCV RNA by using the Taqman technology (Roche Molecular Diagnostics Systems) similar to the technique previously described (Martell et al., 1999. J. Clin. Microbiol. 37: 327-332). The system exploits the 5'-3' nucleolytic activity of AmpliTaq DNA polymerase. Briefly, the method utilizes a dual-labeled fluorogenic hybridization probe (PUTR Probe) that specifically anneals to the template between the PCR primers (primers 8125 and 7028). The 5' end of the probe contains a fluorescent reporter (6-carboxyfluorescein [FAM]) and the 3' end contains a fluorescent quencher (6-carboxytetramethylrhodamine [TAMRA]). The FAM reporter's emission spectrum was suppressed by the quencher on the intact hybridization probe. Nuclease degradation of the hybridization probe releases the reporter, resulting in an increase in fluorescence emission. The ABI Prism 7700 sequence detector measures the increase in fluorescence emission continuously during the PCR amplification such that the amplified product was directly proportion to the signal. The amplification plot was analysed early in the reaction at a point that represents the logarithmic phase of product accumulation. A point representing a defined detection threshold of the increase in the fluorescent signal associated with the exponential growth of the PCR product for the sequence detector was defined as the cycle threshold (C_T). C_T values are inversely proportional to the quantity of input HCV RNA; such that under identical PCR conditions, the larger the starting concentration of HCV RNA, the lower the C_T . A standard curve was created automatically by the ABI Prism 7700 detection system by plotting the C_T against each standard dilution of known HCV RNA concentration. Reference samples for the standard curve are included on each RT-PCR plate. HCV Replicon RNA was synthesized (by T7 transcription) *in vitro*, purified and quantified by OD₂₆₀. Considering that 1µg of this RNA = 2.15×10^{11} RNA copies, dilutions are made in order to have 10^8 , 10^7 , 10^6 , 10^5 , 10^4 , 10^3 or 10^2 genomic RNA copies / 5µL. Total cellular Huh-7 RNA was also incorporated with each dilution (50ng / 5µL). 5µL of each reference standard (HCV Replicon + Huh-7 RNA) was combined

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with 45µL of Reagent Mix, and used in the Real-Time RT-PCR reaction.

The Real-Time RT-PCR reaction was set-up for the experimental samples that were purified on RNeasy 96 -well plates by combining 5µl of each total cellular RNA sample with 45µL of Reagent Mix.

Reagents and Materials:

[0232]

Product	Company	Catalog #	Storage
TaqMan EZ RT-PCR Kit	PE Applied Biosystems	N808-0236	-20°C
MicroAmp Optical Caps	PE Applied Biosystems	N801-0935	RT
MicroAmp Optical 96-Well Reaction Plate	PE Applied Biosystems	N801-0560	RT

Reagent Mix preparation:

[0233]

Component	Volume for one sample (µL)	Volume for One Plate (µL) (91 samples + Dead Volume)	Final conc.
Rnase-free water	16.5	1617	
5X TaqMan EZ buffer	10	980	1X
Mn(OAc) ₂ (25mM)	6	588	3mM
dATP (10mM)	1.5	147	300µM
dCTP (10mM)	1.5	147	300µM
dGTP (10mM)	1.5	147	300µM
dUTP (20mM)	1.5	147	600µM
Forward Primer (10µM)	1	98	200nM
Reverse Primer (10µM)	1	98	200nM
PUTR probe (5µM)	2	196	200nM
rTth DNA polymerase (2.5 U/µL)	2	196	0.1 U/µL
AmpErase UNG (1U/µL)	0.5	49	0.01 U/µL
Total Volume	45	4410	

[0234] Forward Primer Sequence (SEQ ID. 2): 5' - ACG CAG AAA GCG TCT AGC CAT GGC GTT AGT - 3'

[0235] Reverse Primer Sequence (SEQ ID NO. 3): 5' - TCC CGG GGC ACT CGC AAG CAC CCT ATC AGG - 3'

[0236] Note: Those primers amplify a region of 256-nt present within the 5' untranslated region of HCV.

[0237] PUTR Probe Sequence (SEQ ID NO. 4):

[6FAM] - TGG TCT GCG GAA CCG GTG

AGT ACA CC - **[TAMRA]**

[0238] No Template Controls (NTC): On each plate, 4 wells are used as "NTC". For these controls, 5µl of water are added to the well in place of RNA.

Thermal Cycling Conditions:

50°C 2 min
 60°C 30 min
 95°C 5 min

95°C 15 sec
 60°C 1 min } for 2 cycles

90°C 15 sec
 60°C 1 min } for 40 cycles

[0239] Following the termination of the RT-PCR reaction the data analysis requires setting of threshold fluorescence signal for the PCR plate and a standard curve was constructed by plotting the Ct value versus RNA copy number used in each reference reaction. The Ct values obtained for the assay samples are used to interpolate an RNA copy number based on the standard curve. Finally, the RNA copy number was normalized (based on the RiboGreen RNA quantification of the total RNA extracted from the cell culture well) and expressed as genome equivalents / μg of total RNA [ge/ μg].

[0240] The RNA copy number [g.e./ μg] from each well of the cell culture plate was a measure of the amount of replicating HCV RNA in the presence of various concentrations of inhibitor. The % inhibition was calculated with the following equation:

$$100 - [(g.e./\mu g \text{ inh}) / (g.e./\mu g \text{ ctrl}) \times 100].$$

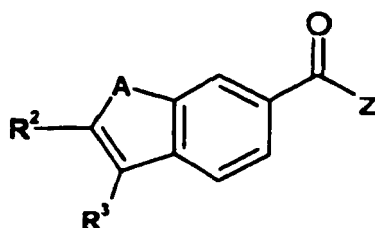
[0241] A non-linear curve fit with the Hill model was applied to the inhibition-concentration data, and the 50% effective concentration (EC_{50}) was calculated by the use of SAS software (Statistical Software System; SAS Institute, Inc. Cary, N.C.).

[0242] In Tables 1 to 9 below, the following ranges apply:

IC_{50} : A = 10 μM -1 μM ; B = 1 μM -500nM; and C < 500nM.

EC_{50} : A = 5 μM -500nM; and B = $\leq$ 500nM

TABLE 1



(continued)

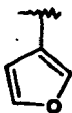
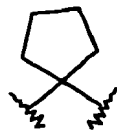
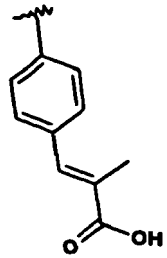
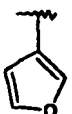
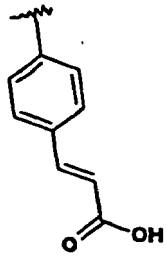
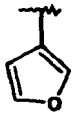
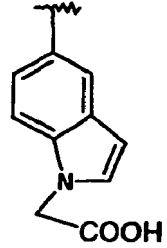
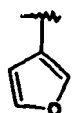
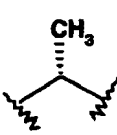
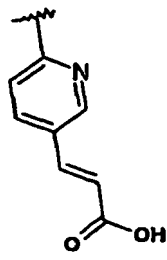
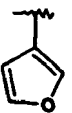
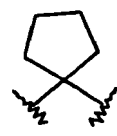
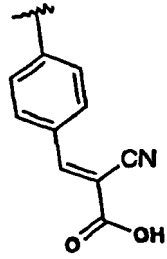
Cpd. #	A	R ²	R ³	Z	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
1006	NMe				C	B	648.3
1013	NMe				C	B	636.3
1031	NMe				C 0.197	--	604.5
1032	NMe				C	C	575.5
1033	NMe				B		561.3

TABLE 2

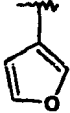
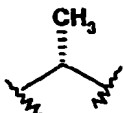
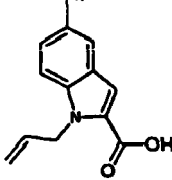
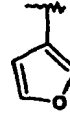
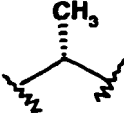
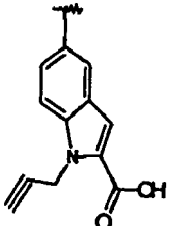
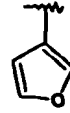
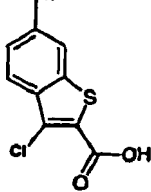
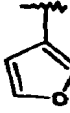
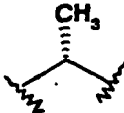
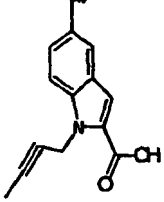
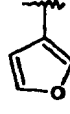
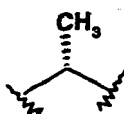
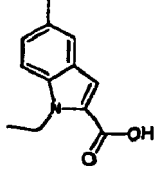
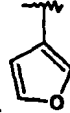
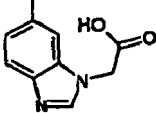
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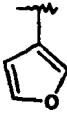
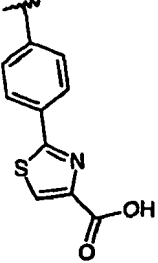
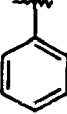
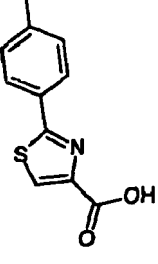
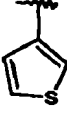
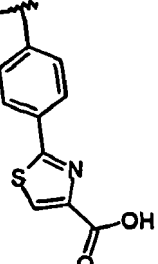
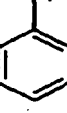
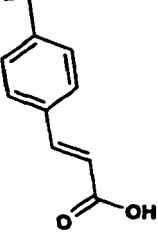
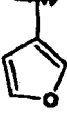
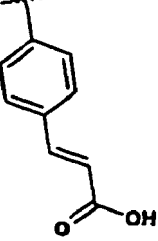
Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2005	H				B	B	580.3
2006	Me				B	B	580.3
2008	H				B	A	593.2
2009	H				B	A	527.2
2010	H				B	A	589.3

(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2011	H				B	A	579.3
2012	H				B	A	577.2
2013	H				B	B	630.2
2014	H				A	A	591.3
2015	H				B	B	567.2
2016	H				A	--	594.2

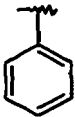
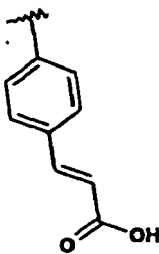
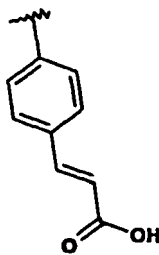
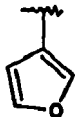
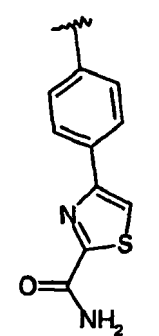
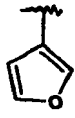
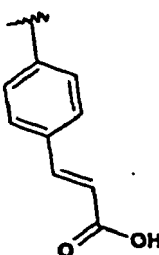
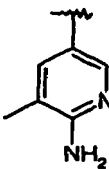
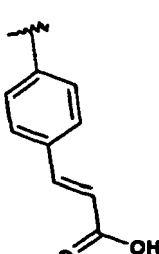
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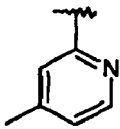
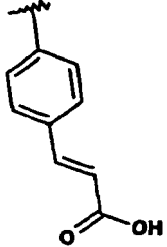
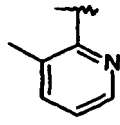
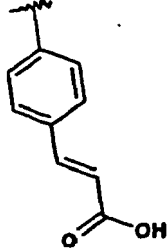
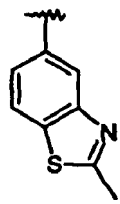
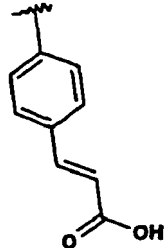
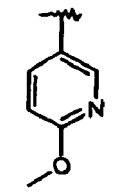
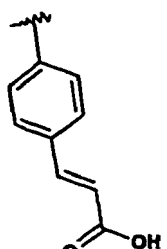
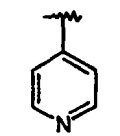
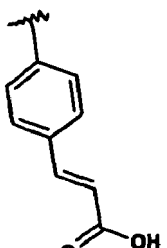
Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2017	H				B	B	597.2
2018	H				B	B	607.2
2019	H				B	A	613.1
2020	Et				B	B	578.2
2021					B	A	596.4

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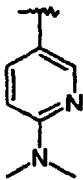
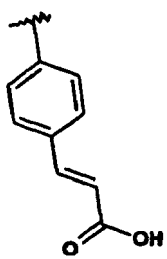
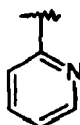
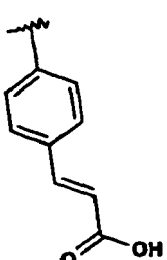
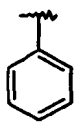
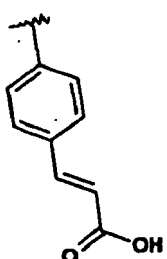
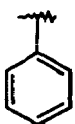
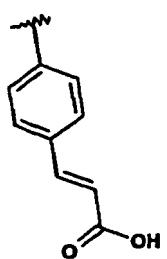
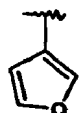
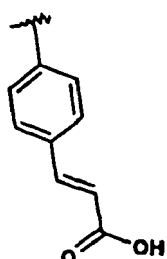
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Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2022					A	--	592.3
2023	Me	H			A	--	488.2
2024	H				B	B	596.3
2025	H				B	B	596.3 (M-H)
2026	Me				B	--	594.4

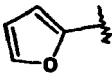
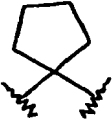
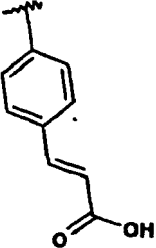
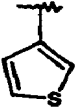
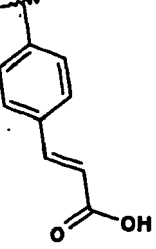
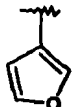
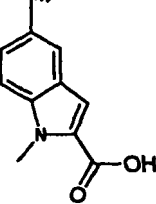
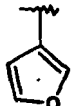
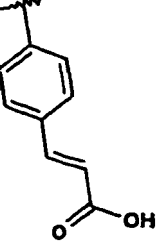
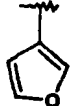
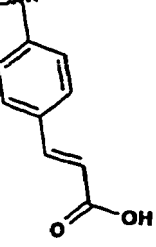
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Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2027	Me				B	--	579.3
2028	Me				A	--	579.3
2029	Me				B	--	635.3
2030	Me				C	B	565.3
2031	Me				C	B	595.3

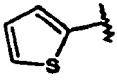
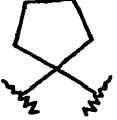
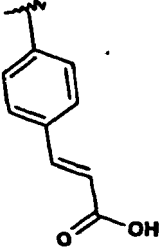
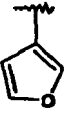
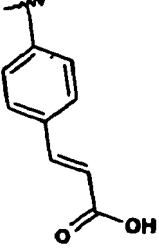
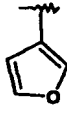
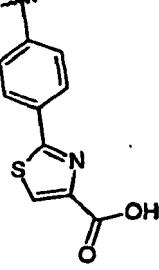
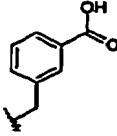
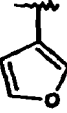
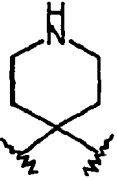
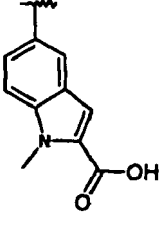
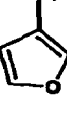
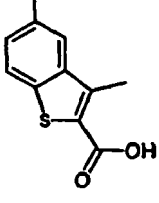
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Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2032	Me				B	B	608.4
2033	H				B	B	577.2
2034	Me				C	B	590.2
2035	H				C	B	576.2
2036	H				C	B	566.3

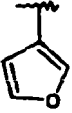
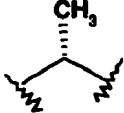
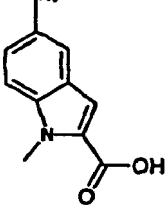
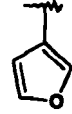
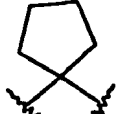
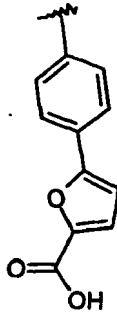
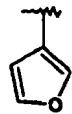
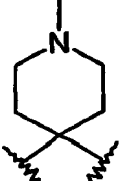
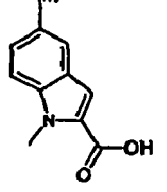
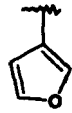
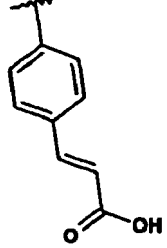
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Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2037	H				C	B	566.2
2038	H				C	B	582.2
2039	H				C	B	593.3
2040					C	B	656.3
2041	Me				B	B	580.3

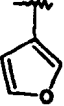
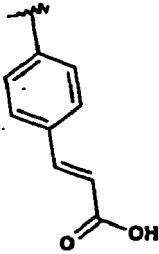
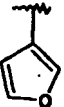
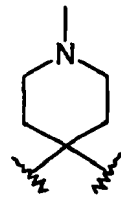
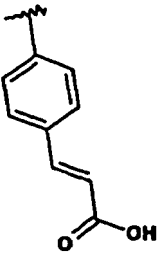
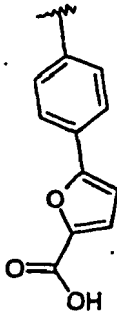
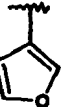
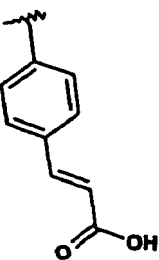
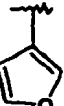
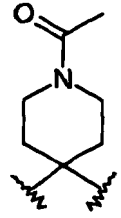
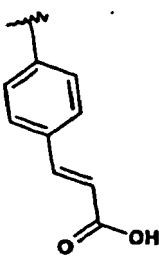
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Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2042	H				C	B	582.3
2043					C	B	657.3
2044	H				C	B	621.2
2045					C	--	742.3
2046	H				C	B	610.2

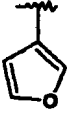
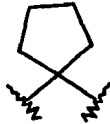
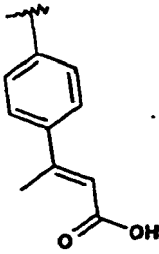
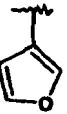
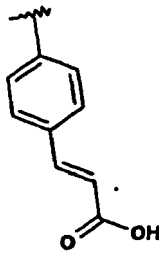
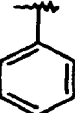
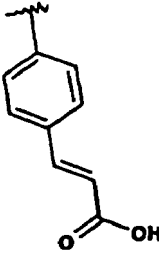
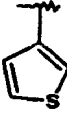
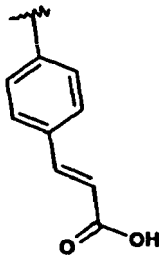
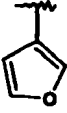
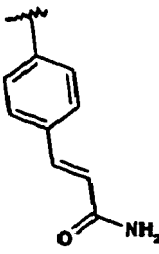
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Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2047	H				C	B	553.2
2048	H				C	B	606.2
2049	H				C	A	620.3 (M-H)
2050	H				C	B	540.3

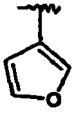
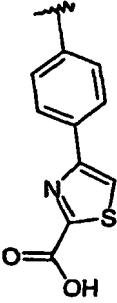
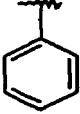
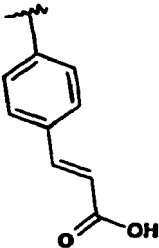
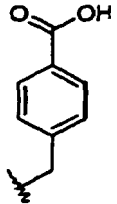
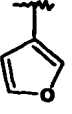
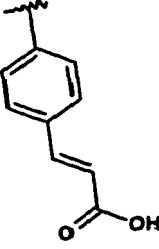
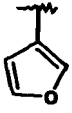
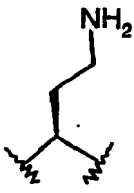
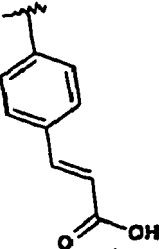
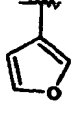
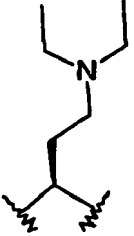
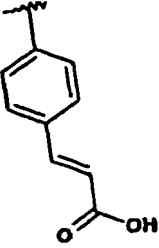
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2051	Me				C	B	554.3
2052	H				C	B	595.4
2053	H				C	B	580.2
2054	Et				C	B	568.2
2055	H				C	B	623.2

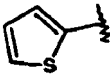
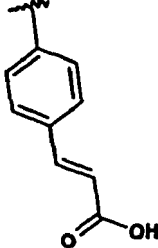
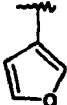
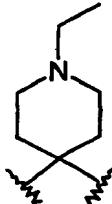
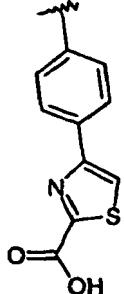
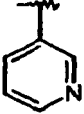
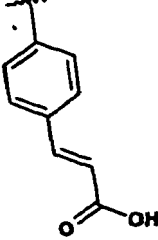
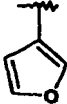
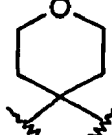
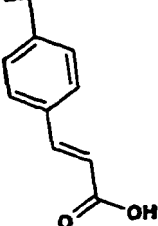
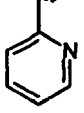
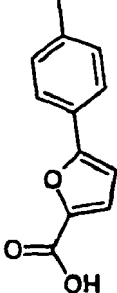
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Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2056	H				C	B	580.2
2057	H				C	B	552.2
2058	H				C	B	550.2
2059	H				C	B	556.2
2060	H				C	B	565.2

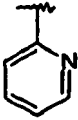
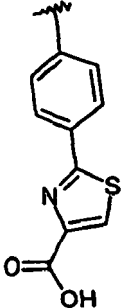
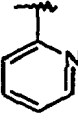
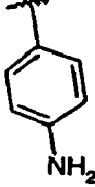
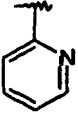
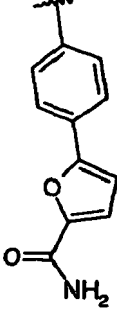
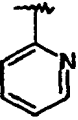
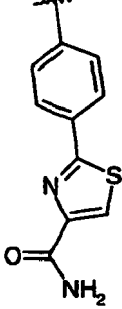
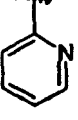
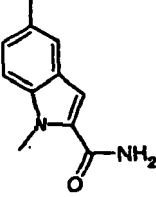
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2061	H				C	A	597.1
2062	Me				C	B	564.2
2063					C	--	674.3
2064	H				C	--	555.2
2065	H				C	--	611.3

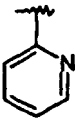
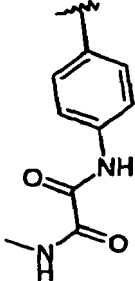
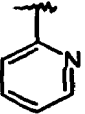
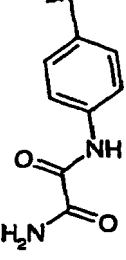
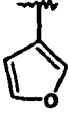
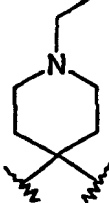
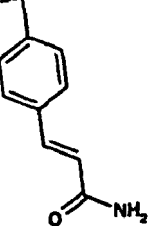
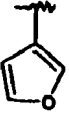
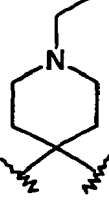
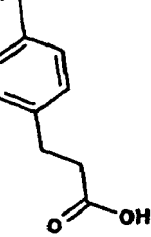
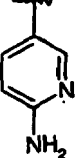
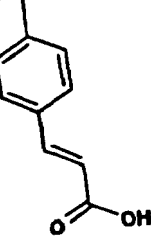
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Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2066	Me				C	B	570.2
2067	H				C	A	666.2
2068	Me				C	B	565.3
2069	H				C	B	582.3
2070	Me				C	B	605.2

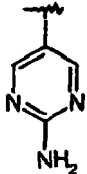
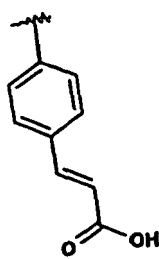
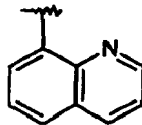
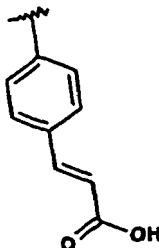
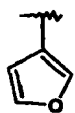
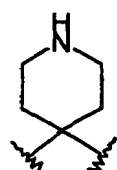
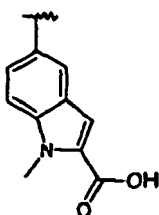
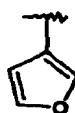
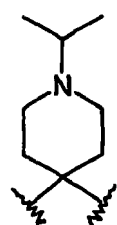
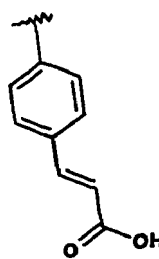
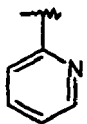
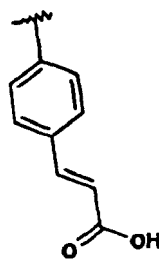
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Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2071	Me				C	B	622.2
2072	Me				C	B	510.2
2073	Me				C	B	604.2
2074	Me				C	B	621.2
2075	Me				C	B	591.3

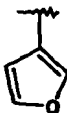
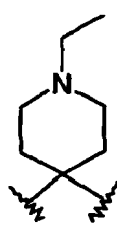
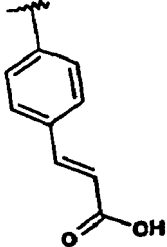
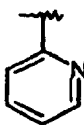
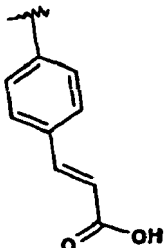
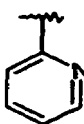
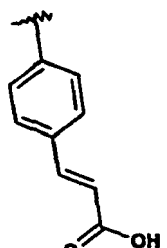
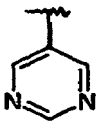
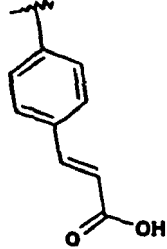
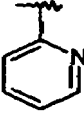
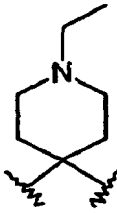
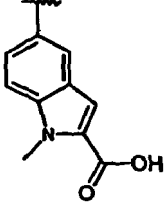
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Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2076	Me				C	B	595.3
2077	Me				C	B	581.3
2078	H				C	A	608.4
2079	H				C	A	611.4
2080	Me				C	B	580.3

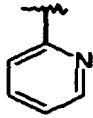
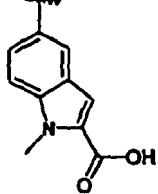
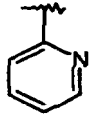
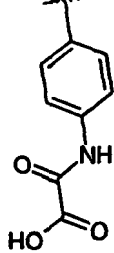
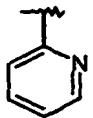
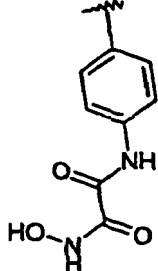
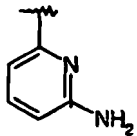
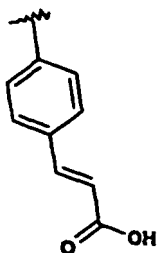
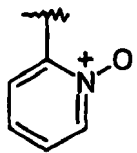
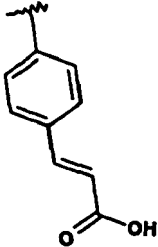
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2081	Me				C	B	581.3
2082	Me				C	B	615.3
2084	H				C	A	608.2
2086	H				C	B	623.3
2087	Me				C	B	565.2

(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2088	H				C	B	609.3
2089	H				C	B	551.2
2090	Me				C	B	577.2
2091	Me				C	B	566.3
2092	Me				C	B	661.3

(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2093	Me				C	B	592.3
2094	Me				C	A	582.2
2095.	Me				C	B	597.3
2096	Me				C	B	580.3
2097	Me				C	A	581.3

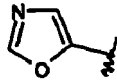
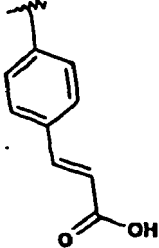
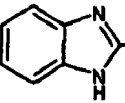
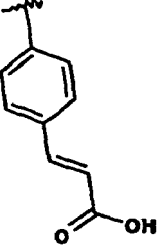
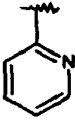
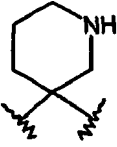
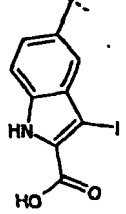
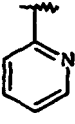
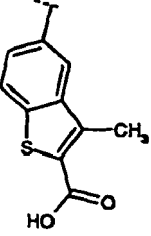
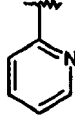
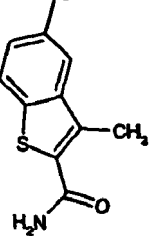
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2098	Me				C	B	579.3
2099	Me				C	B	678.4
2100	H				A	B	610.4
2101	Me				C	B	685.4
2102	Me				C	B	609.3

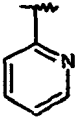
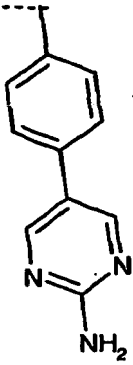
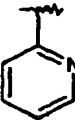
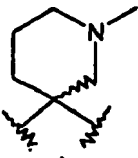
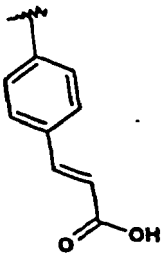
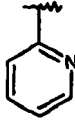
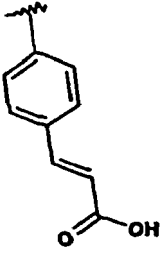
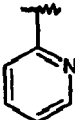
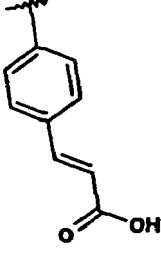
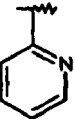
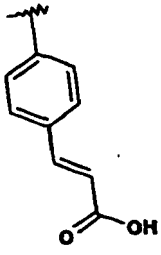
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2103	Me				C	B	608.3
2104	Me				C	B	635.4
2105	Me				C	B	648.3
2106	Me				C	B	634.3
2107	Me				C	B	648.2

(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2108	Me				C	B	555.4
2109	Me				B	A	604.4
2110	Me				C	B	745.2
2111	Me				C	B	621.3
2112	Me				C	B	620.3

(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2113	Me				B	B	600.5
2114	Me				C	B	620.3
2115	Me				C	B	592.3
2116	Me				C	B	606.3
2117	Me				C	B	592.3

(continued)

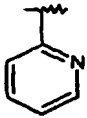
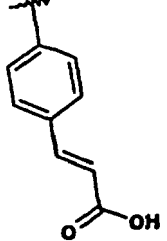
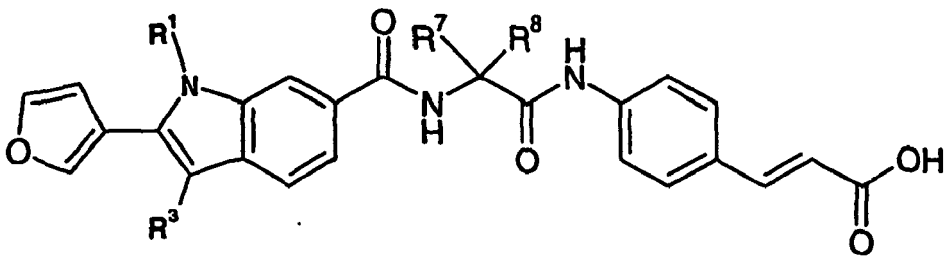
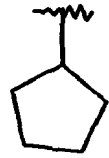
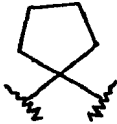
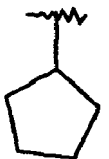
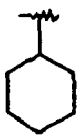
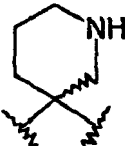
Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
2118	Me				C	B	606

TABLE 3

							
cpd. #	R ¹	R ³	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺	
3001	H			C	B	567.3	
3002	H			C	B	552.2	
3003	Me			C	B	526.2	

(continued)

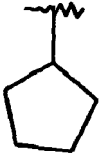
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3004	Me			C	C	538.3

TABLE 5

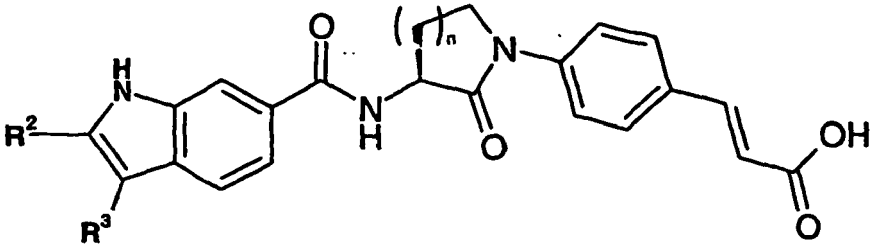
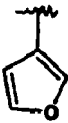
						
cpd. #	R ²	R ³	n	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
5001			1	A	--	538.2

TABLE 6

cpd. #	R ¹	R ²		IC ₅₀	EC ₅₀	m/z (M+H) ⁺
6001	CH ₃			C	B	634.3
6002	CH ₃			C	B	634.3
6003	CH ₃			C	B	634.2
6004	CH ₃			B	--	648.2
6005	CH ₃			C	B	621.3

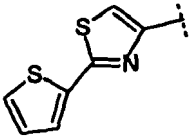
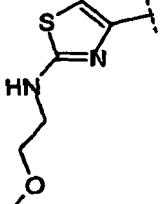
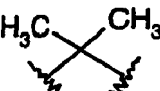
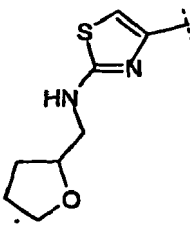
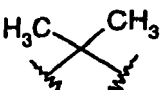
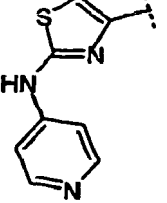
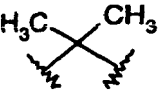
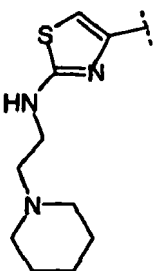
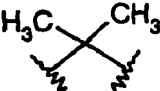
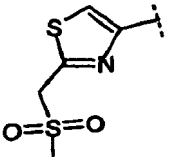
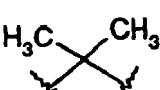
(continued)

cpd. #	R ¹	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
6006	CH ₃			C	B	633.3
6007	CH ₃			C	B	670.3
6008	CH ₃			C	B	614.3
6009	CH ₃			C	B	586.3
6010	CH ₃			C	B	600.3
6011	CH ₃			C	B	634.3
6012	CH ₃			B	B	633.3

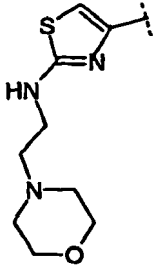
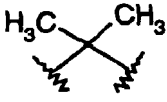
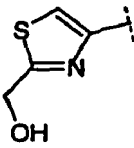
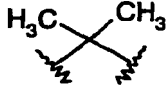
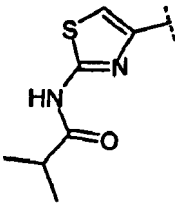
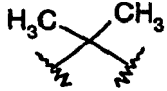
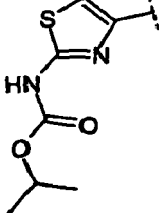
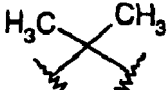
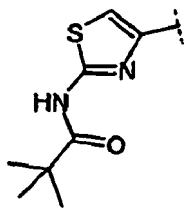
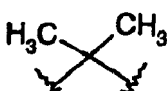
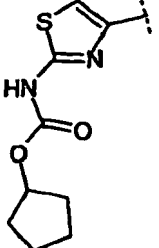
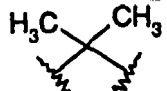
(continued)

cpd. #	R ¹	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
6013	CH ₃			C	B	649.3
6013	CH ₃			C	B	628.3
6014	CH ₃			C	B	614.3
6015	CH ₃			B	B	649.3
6016	CH ₃			C	B	640.4
6017	CH ₃			C	B	614.3
6018	CH ₃			C	B	654.3

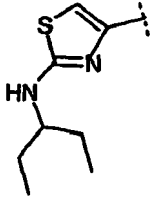
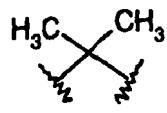
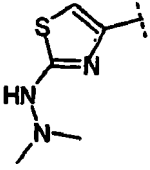
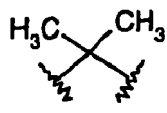
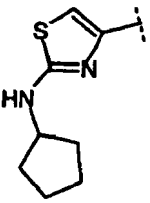
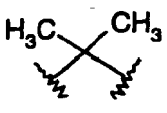
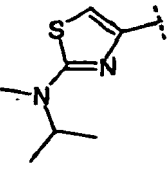
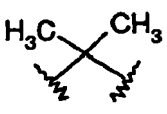
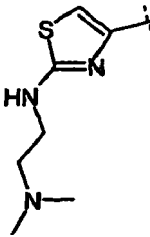
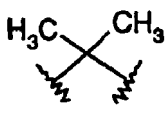
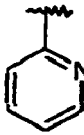
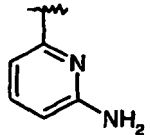
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cpd. #	R ¹	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
6019	CH ₃			B	B	639.3
6020	CH ₃			C	B	630.3
6021	CH ₃			C	B	656.4
6022	CH ₃			B	B	649.3
6023	CH ₃			C	B	683.4
6024	CH ₃			C	B	649.3

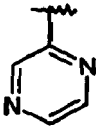
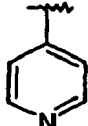
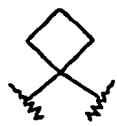
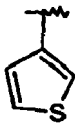
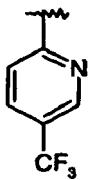
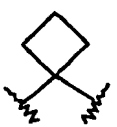
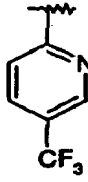
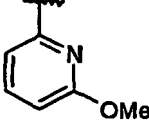
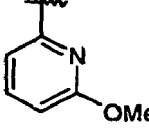
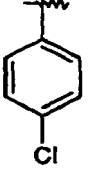
(continued)

cpd. #	R ¹	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
6025	CH ₃			C	B	685.4
6026	CH ₃			C	B	587.3
6027	CH ₃			C	B	642.3
6028	CH ₃			C	B	658.3
6029	CH ₃			C	B	656.4
6030	CH ₃			B	B	684.4

(continued)

cpd. #	R ¹	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
6031	CH ₃			B	B	642.4
6032	CH ₃			C	B	615.3
6033	CH ₃			B	B	640.4
6034	CH ₃			C	B	628.4
6035	CH ₃			C	B	643.4
6036	CH ₃			C	B	549.3
6037	CH ₃			C	B	564.3

(continued)

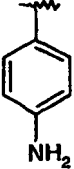
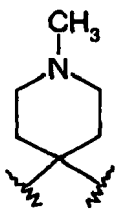
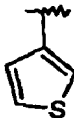
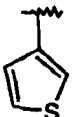
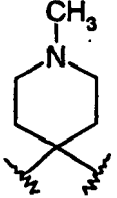
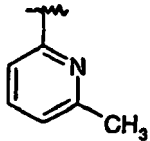
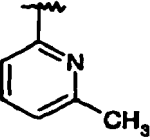
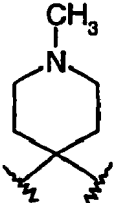
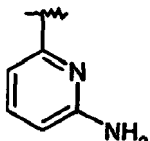
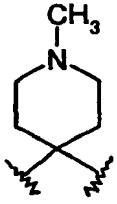
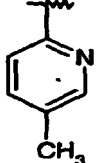
cpd. #	R ¹	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
6038	CH ₃			C	B	564.3
6039	CH ₃			C	B	563.3
6040	CH ₃			C	B	568.3
6041	CH ₃			C	B	631.3
6042	CH ₃			C	B	645.3
6043	CH ₃			C	B	593.3
6044	CH ₃			C	B	607.3
6045	CH ₃			B	B	596.3
6046	CH ₃			C	B	500.2

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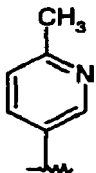
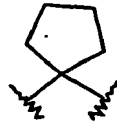
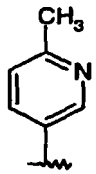
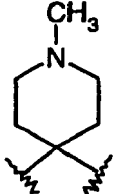
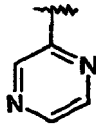
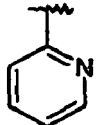
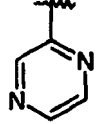
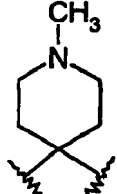
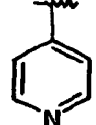
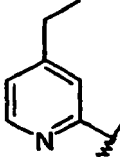
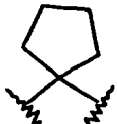
(continued)

cpd. #	R ¹	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
5						
10	6047	CH ₃		C	B	285.2
15	6048	CH ₃		C	B	597/2
20	6049	CH ₃		C	B	611.2
25	6050	CH ₃		C	B	640.3
30	6051	CH ₃		C	B	583.3
35	6052	CH ₃		C	B	591.3
40	6053	CH ₃		C	B	591.3
45						
50						
55						

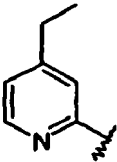
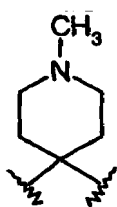
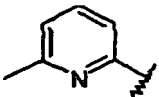
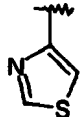
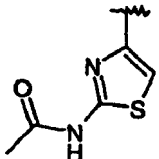
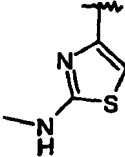
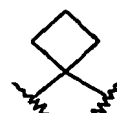
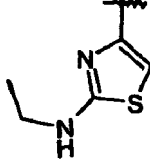
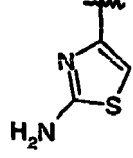
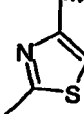
(continued)

cpd. #	R ¹	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
6054	CH ₃			C	B	620.4
6055	CH ₃			C	B	582.3
6056	CH ₃			C	B	611.3
6057	CH ₃			C	B	591.4
6058	CH ₃			C	B	620.4
6059	CH ₃			C	B	621.4
6060	CH ₃			C	B	591.4

(continued)

cpd. #	R ¹	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
6061	CH ₃			C	B	591.3
6062	CH ₃			C	B	620.4
6063	CH ₃			C	B	578.3
6064	CH ₃			C	B	563.3
6065	CH ₃			C	A	607.3
6066	CH ₃			C	B	577.3
6067	CH ₃			A	A	605.4

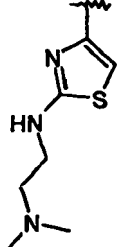
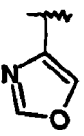
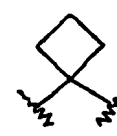
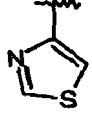
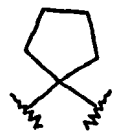
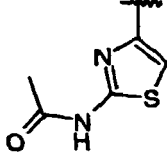
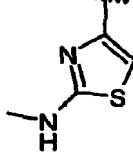
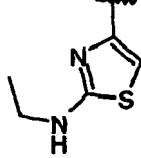
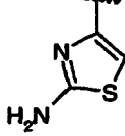
(continued)

cpd. #	R ¹	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
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6069	CH ₃			C	B	577.3
6070	CH ₃			C	B	569.2
6071	CH ₃			C	B	626.2
6072	CH ₃			C	B	598.3
6073	CH ₃			C	B	612.3
6074	CH ₃			C	B	584.3
6075	CH ₃			C	B	583.3

(continued)

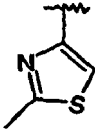
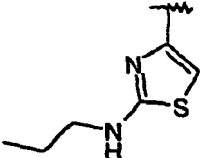
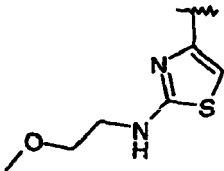
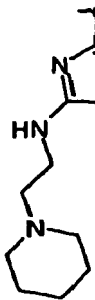
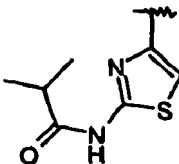
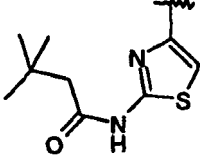
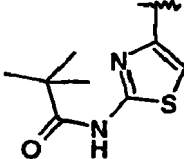
cpd. #	R ¹	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
6076	CH ₃			C	B	626.3
6077	CH ₃			C	B	642.3
6078	CH ₃			C	B	695.4
6079	CH ₃			C	B	654.3
6080	CH ₃			C	B	682.4
6081	CH ₃			C	B	668.4

(continued)

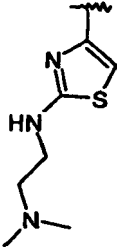
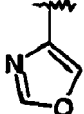
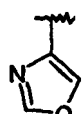
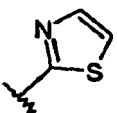
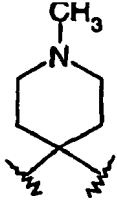
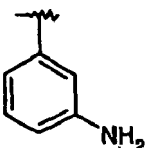
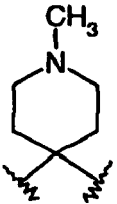
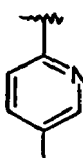
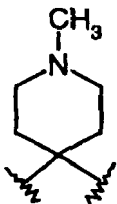
cpd. #	R ¹	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
6082	CH ₃			C	B	655.4
6083	CH ₃			C	B	553.3
6084	CH ₃			C	B	512.3
6085	CH ₃			C	B	583.3
6086	CH ₃			C	B	640.3
6087	CH ₃			C	B	612.3
6088	CH ₃			C	B	626.3
6089	CH ₃			C	B	598.3

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(continued)

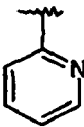
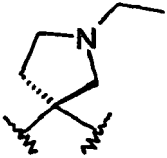
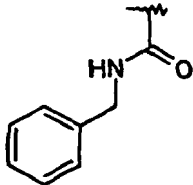
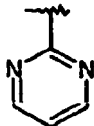
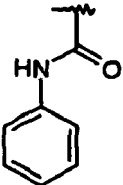
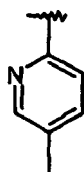
cpd. #	R ¹	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
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6091	CH ₃			C	B	640.4
6092	CH ₃			C	B	656.4
6093	CH ₃			C	B	709.4
6094	CH ₃			C	B	668.4
6095	CH ₃			C	B	696.4
6096	CH ₃			C	B	682.4

(continued)

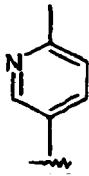
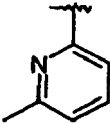
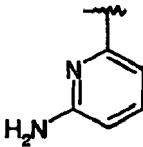
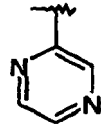
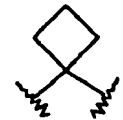
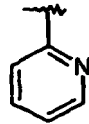
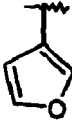
cpd. #	R ¹	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
6097	CH ₃			C	B	669.4
6098	CH ₃			C	B	567.3
6099	CH ₃			C	B	526.4
6100	CH ₃			C	B	541.3
6101	CH ₃			C	B 0.165	612.3
6102	CH ₃			C	B	620.4
6103	CH ₃			C	B	620.4

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(continued)

cpd. #	R ¹	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
6105	CH ₃			C	B	620.4
6106	CH ₃	CONHCH ₃		B	--	557.3
6107	CH ₃	CON(CH ₃) ₂		A	--	571.3
6110	CH ₃			A	--	633.3
6111	CH ₃			C	B	564.3
6112	CH ₃			B	--	593.3
6113	CH ₃	CONH ₂		B	--	517.3
6114	CH ₃			C	B	606.3

(continued)

cpd. #	R ¹	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
6115	CH ₃			C	B	606.3
6116	CH ₃			C	B	606.3
6117	CH ₃			C	B	607.3
6118	CH ₃			C	B	593.3
6119	CH ₃	H		A	--	486.3
6120	CH ₃	Br		B	--	566.2
6121	H			B	B	549.3
6122	CH ₃			C	B	581.3

(continued)

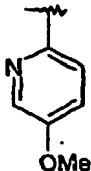
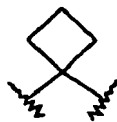
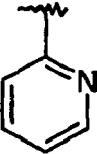
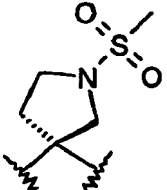
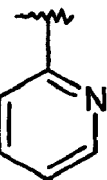
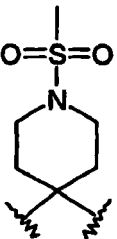
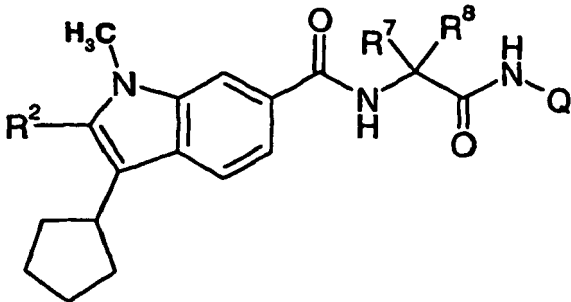
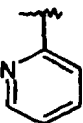
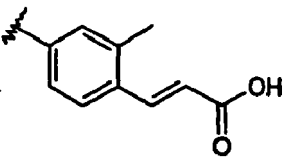
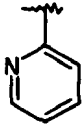
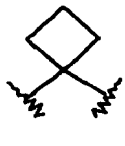
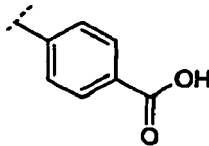
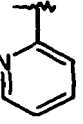
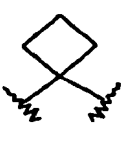
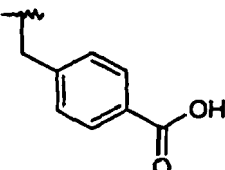
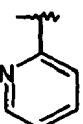
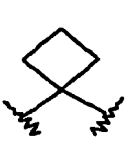
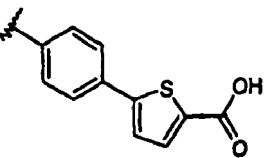
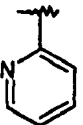
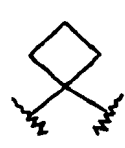
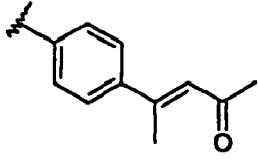
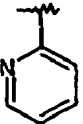
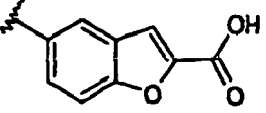
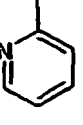
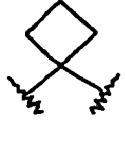
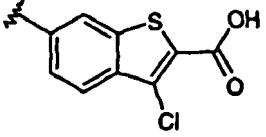
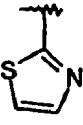
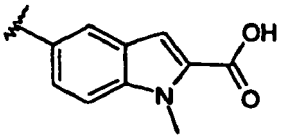
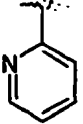
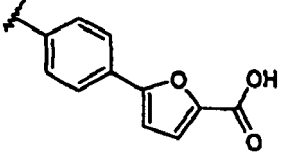
cpd. #	R ¹	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
6123	CH ₃			C	B	593.4
6124	CH ₃			C	B	656.4
6125	CH ₃			C	B	670.4

TABLE 7

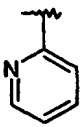
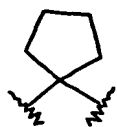
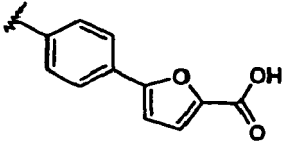
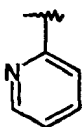
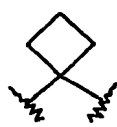
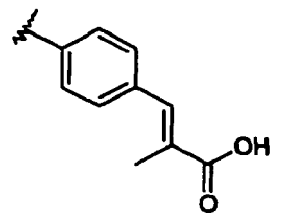
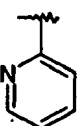
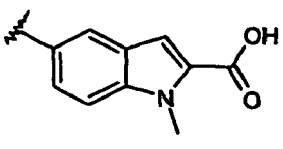
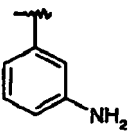
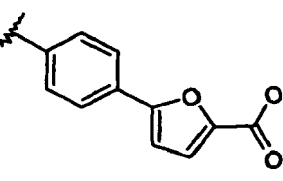
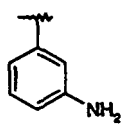
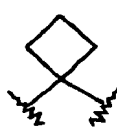
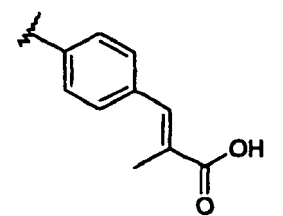
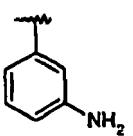
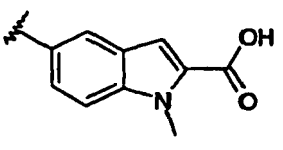
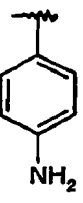
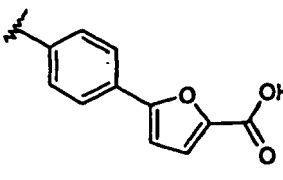
						
cpd #	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
7001				C	B	577.3

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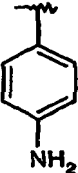
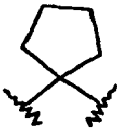
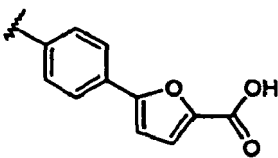
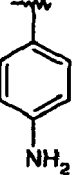
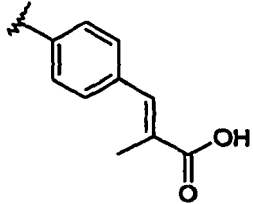
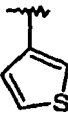
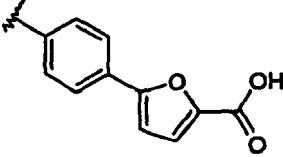
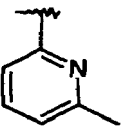
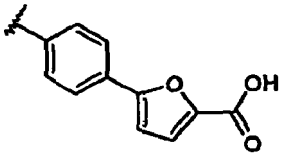
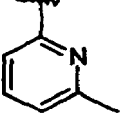
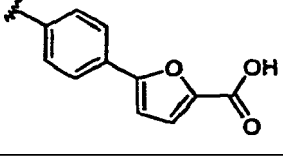
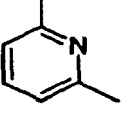
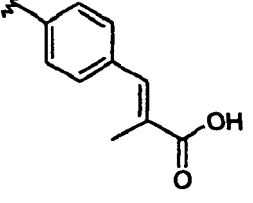
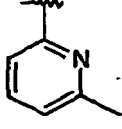
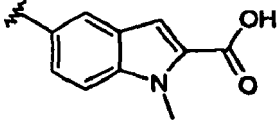
(continued)

cpd #	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
7002				A	A	552.3
7003				A	A	551.3
7004				B	B	619.2
7005				C	B	577.3
7006				C	B	577.2
7007				C	B	627.2
7008				C	B	596.2
7009				C	B	603.3

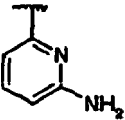
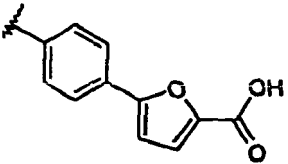
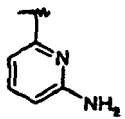
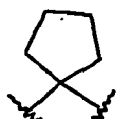
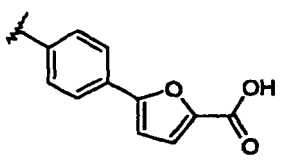
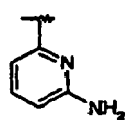
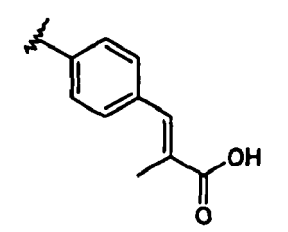
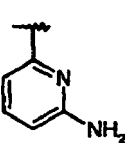
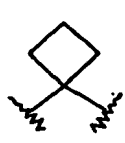
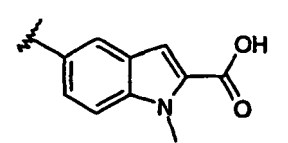
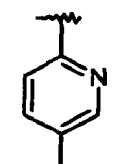
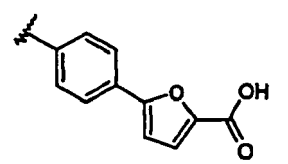
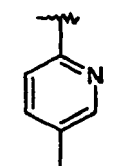
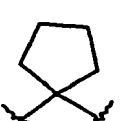
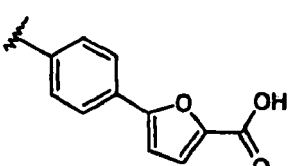
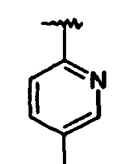
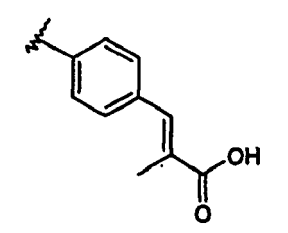
(continued)

cpd #	R ²		Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
7010				C	B	617.3
7011				C	B	577.3
7012				C	B	590.3
7013				C	B	631.3
7014				C	B	591.3
7015				C	B	604.3
7016				C	B	617.3

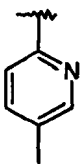
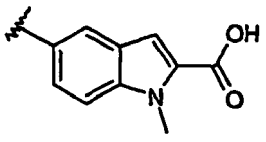
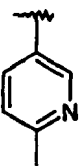
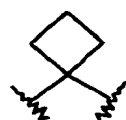
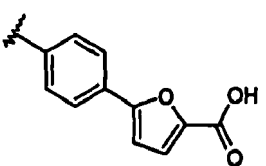
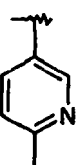
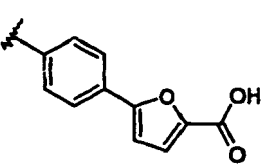
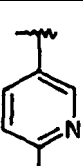
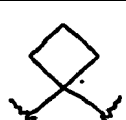
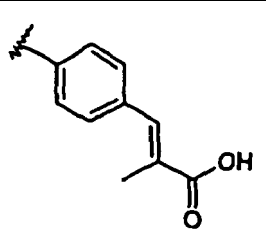
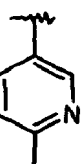
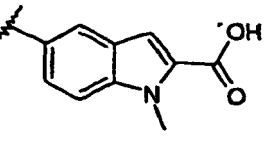
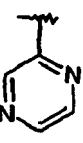
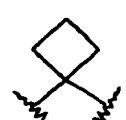
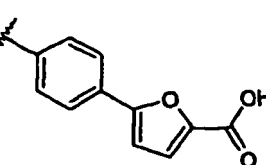
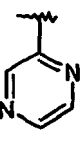
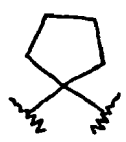
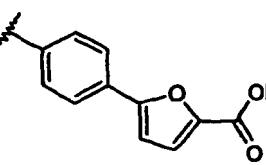
(continued)

cpd #	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
7017				C	B	631.3
7018				C	B	591.4
7019				C	B	608.3
7020				C	B	617.3
7021				C	B	631.3
7022				C	B	591.3
7023				C	B	604.4

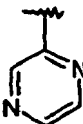
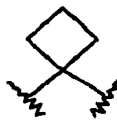
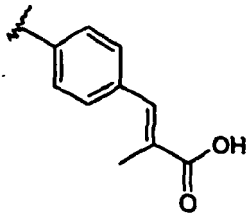
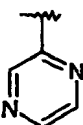
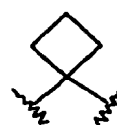
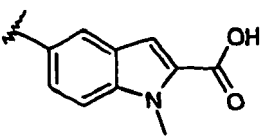
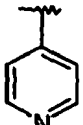
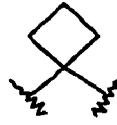
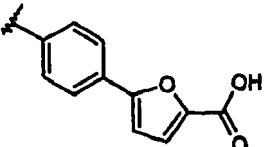
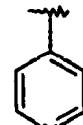
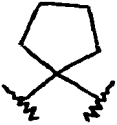
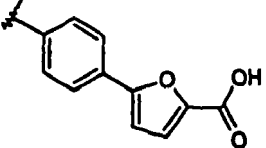
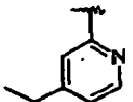
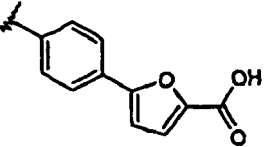
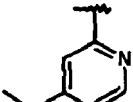
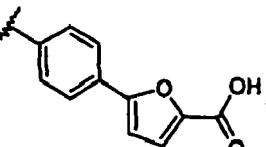
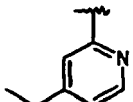
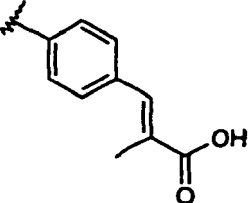
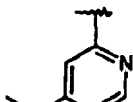
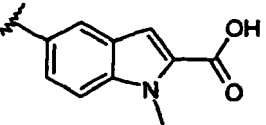
(continued)

cpd #	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
7024				C	B	618.3
7025				C	B	632.3
7026				C	B	592.3
7027				C	B	605.3
7028				C	B	617.3
7029				C	B	631.3
7030				C	B	591.4

(continued)

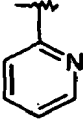
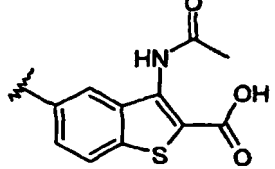
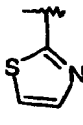
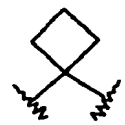
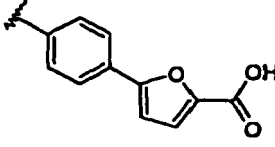
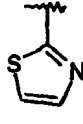
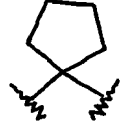
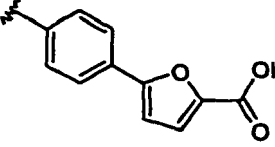
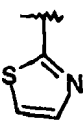
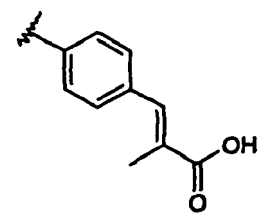
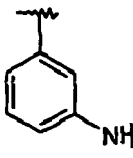
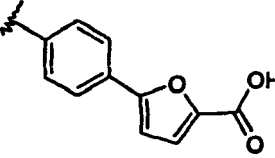
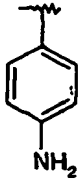
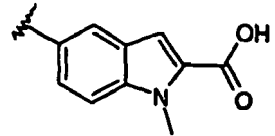
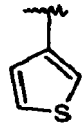
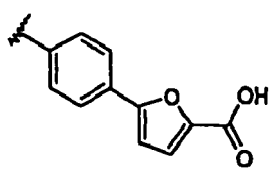
cpd #	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
7031				C	B	604.3
7032				C	B	617.3
7033				C	B	631.4
7034				C	B	591.4
7035				C	B	604.3
7036				C	B	604.3
7037				C	B	618.3

(continued)

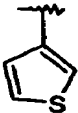
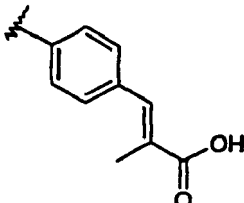
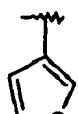
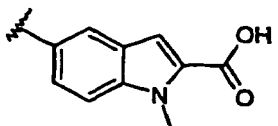
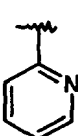
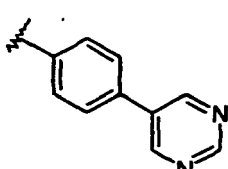
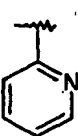
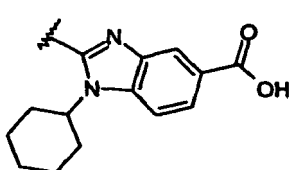
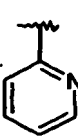
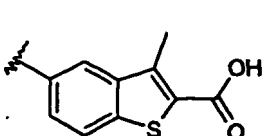
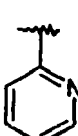
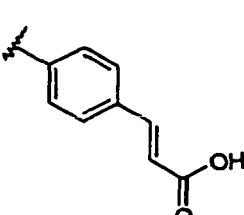
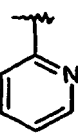
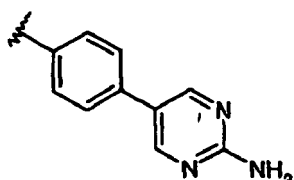
cpd #	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
7038				C	B	578.3
7039				C	B	613.3
7040				C	B	603.3
7041				C	B	617.3
7042				A	A	631.3
7043				A	A	645.4
7044				A	A	605.4
7045				A	A	618.4

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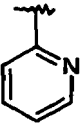
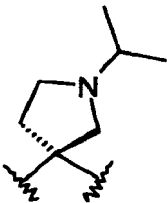
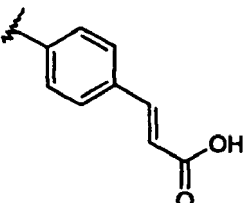
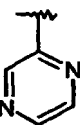
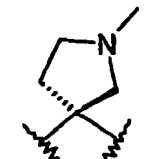
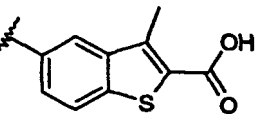
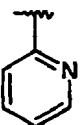
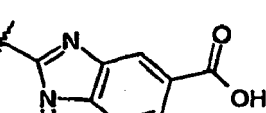
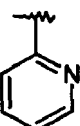
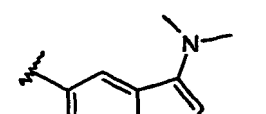
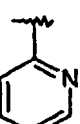
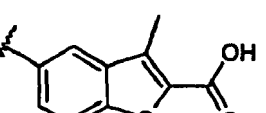
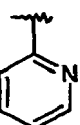
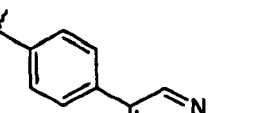
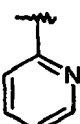
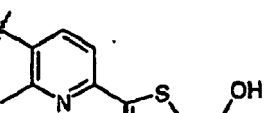
(continued)

cpd #	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
7046				C	--	650.2
7047				C	B	609.3
7048				C	B	623.3
7049				C	B	583.3
7050				C	B	617.4
7051				C	B	604.4
7052				C	B	622.3

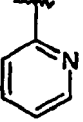
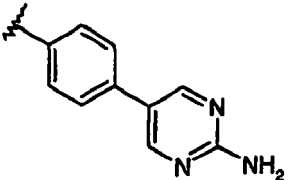
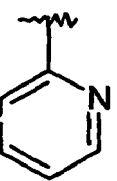
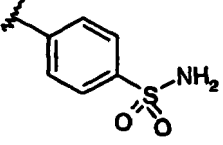
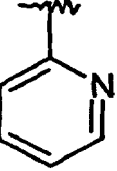
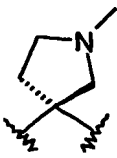
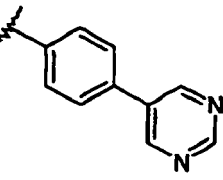
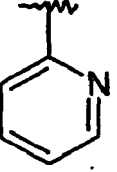
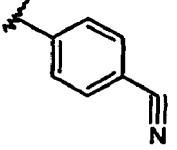
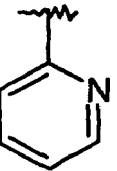
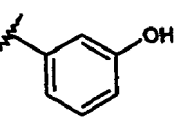
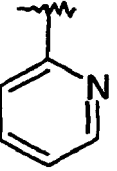
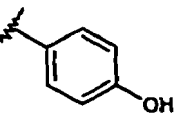
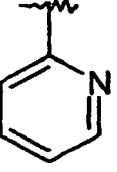
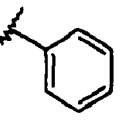
(continued)

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7053				C	B	582.3
7054				C	B	595.3
7055				B	A	571.3
7056				A	--	647.4
7057				C	B	636.3
7058				C	B	592.4
7059				C	A	601.4

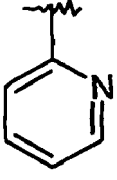
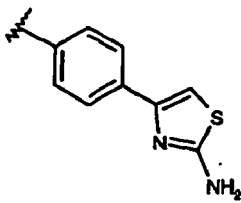
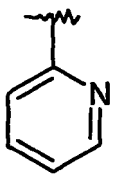
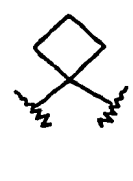
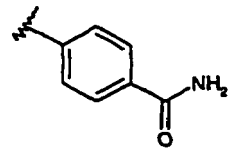
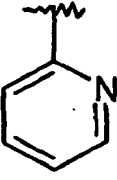
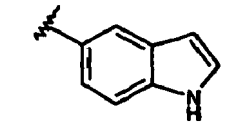
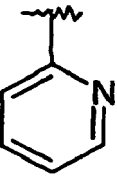
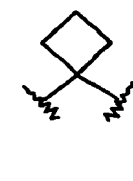
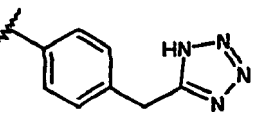
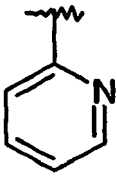
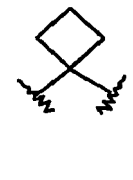
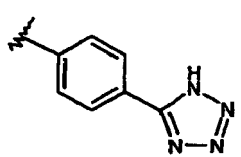
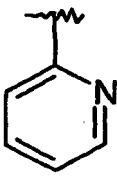
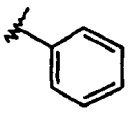
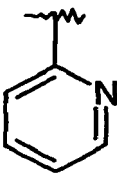
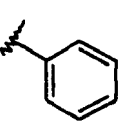
(continued)

cpd #	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
7060				C	B	620.5
7061				C	B	637.3
7062				C	--	577.4
7063				B	--	592.4
7064				C	B	607.3
7065				B	A	586.4
7066				A	A	634.4

(continued)

cpd #	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
7067				B	--	615.4
7068				C	B	572.4
7069				C	B	600.4
7070				B	--	518.4
7071				C	--	509.3
7072				C	--	509.4
7073				B	--	493.4

(continued)

cpd #	R ²	R ⁷ R ⁸	Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
7075				C	--	620.5
7076				C		536.4
7077				C	B	532.4
7078				B	--	575.3
707s				C	B	561.3
7080				C	A	508.5
7081				C	A	522.3

(continued)

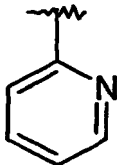
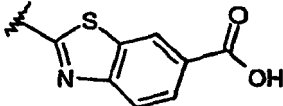
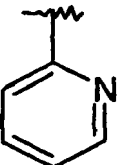
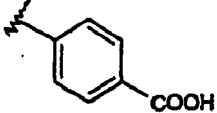
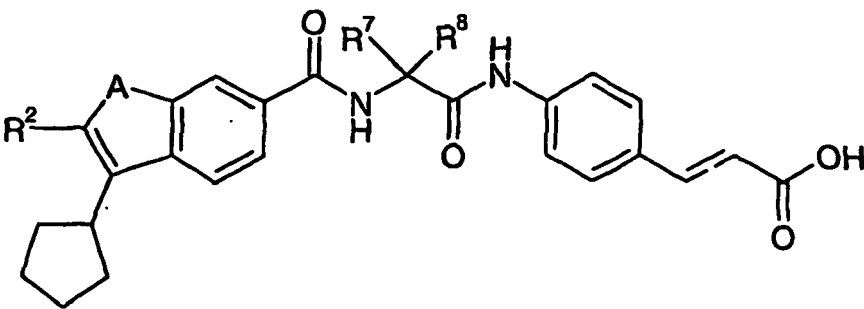
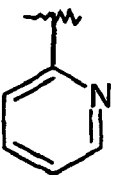
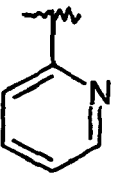
cpd #	R ²		Q	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
7082				C	--	594.2
7083				C	--	537.3

TABLE 8

						
cpd. #	A	R ²		IC ₅₀	EC ₅₀	m/z (M+H) ⁺
8001	S			A	A	566.3
8002	S			A	A	554.3

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(continued)

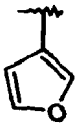
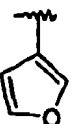
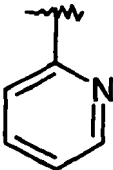
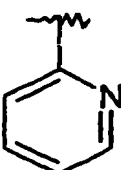
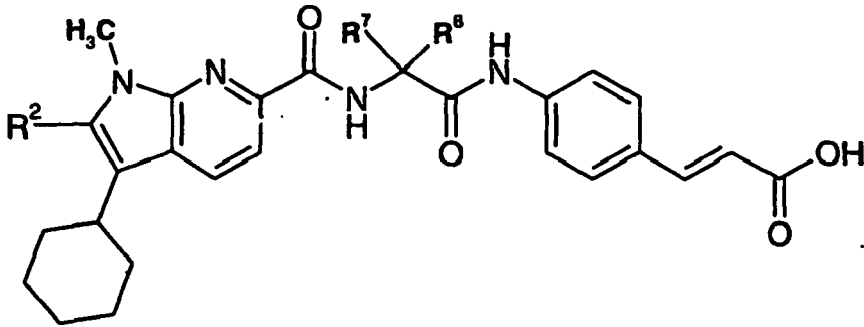
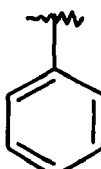
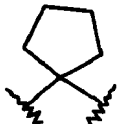
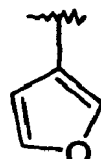
cpd. #	A	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
8003	S			B	--	555.3
8004	S			C	--	543.3
8005	O			A	--	550.3
8006	O			A	--	538.3

TABLE 9

					
cpd. #	R ²	R ⁷ R ⁸	IC ₅₀	EC ₅₀	m/z (M+H) ⁺
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9002			C	B	567.4

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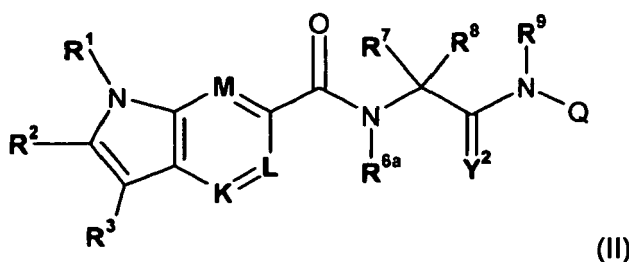
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Claims

1. An enantiomer, diastereoisomer, or tautomer of a compound, represented by formula II:



wherein:

R¹ is selected from the group consisting of: H, (C₁₋₆)alkyl optionally substituted with: -halogen, **OR¹¹**, **SR¹¹** or **N(R¹²)₂**, wherein **R¹¹** and each **R¹²** is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-**Het**, said aryl or **Het** optionally substituted with **R¹⁰**; or both **R¹²** are covalently bonded together and to the nitrogen to which they are both attached to form a 5, 6 or 7-membered saturated heterocycle;

R² is selected from: halogen, **R²¹**, **OR²¹**, **SR²¹**, **COOR²¹**, **SO₂N(R²²)₂**, **N(R²²)₂**, **CON(R²²)₂**, **NR²²C(O)R²²** or **NR²²C(O)NR²²** wherein **R²¹** and each **R²²** is independently H, (C₁₋₆)alkyl, haloalkyl, (C₂₋₆)alkenyl, (C₃₋₇)cycloalkyl, (C₂₋₆)alkynyl, (C₅₋₇)cycloalkenyl, 6 or 10-membered aryl or **Het**, said **R²¹** and **R²²** being optionally substituted with **R²⁰**;

or both **R²²** are bonded together to form a 5, 6 or 7-membered saturated heterocycle with the nitrogen to which they are attached;

R³ is selected from (C₁₋₆)alkyl, haloalkyl, (C₃₋₇)cycloalkyl, (C₅₋₇)cycloalkenyl, (C₆₋₁₀)bicycloalkyl, (C₆₋₁₀)bicycloalkenyl, 6- or 10-membered aryl, **Het**, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-**Het**, said alkyl, cycloalkyl, cycloalkenyl, bicycloalkyl, bicycloalkenyl, aryl, **Het**, alkyl-aryl and alkyl-**Het** being optionally substituted with from 1 to 4 substituents selected from: halogen, or

a) (C₁₋₆)alkyl optionally substituted with:

- **OR³¹** or **SR³¹** wherein **R³¹** is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-**Het**; or
- **N(R³²)₂** wherein each **R³²** is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-**Het**; or both **R³²** are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle;

b) **OR³³** wherein **R³³** is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-**Het**;

c) **SR³⁴** wherein **R³⁴** is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-**Het**; and

d) **N(R³⁵)₂** wherein each **R³⁵** is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-**Het**; or both **R³⁵** are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle;

K is N or CR⁴, wherein **R**⁴ is H, halogen, (C₁₋₆)alkyl, haloalkyl, (C₃₋₇)cycloalkyl or (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl; or **R**⁴ is OR⁴¹ or SR⁴¹, COR⁴¹ or NR⁴¹COR⁴¹ wherein each **R**⁴¹ is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl;

or **R**⁴ is NR⁴²R⁴³ wherein **R**⁴² and **R**⁴³ are each independently H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, or both **R**⁴² and **R**⁴³ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle;

L is N or CR⁵, wherein **R**⁵ has the same definition as **R**⁴ defined above;

M is N or CR⁷, wherein **R**⁷ has the same definition as **R**⁴ defined above;

R^{6a} is H or C₁₋₆alkyl;

R⁷ and **R**⁸ are each independently H, (C₁₋₆)alkyl, haloalkyl, (C₃₋₇)cycloalkyl, 6- or 10-membered aryl, **Het**, (C₁₋₆) alkyl-aryl, (C₁₋₆)alkyl-**Het**, wherein said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl-aryl, (C₁₋₆)alkyl-**Het** are optionally substituted with **R**⁷⁰; or

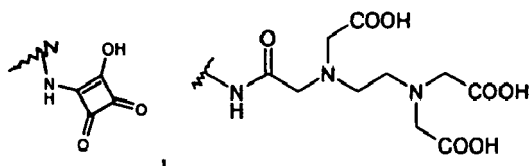
R⁷ and **R**⁸ are covalently bonded together to form second (C₃₋₇)cycloalkyl or a 4, 5- or 6-membered heterocycle having from 1 to 3 heteroatom selected from O, N, and S; or either of **R**⁷ or **R**⁸ is covalently bonded to **R**^{6a} to form a nitrogen-containing 5- or 6-membered heterocycle;

Y² is O or S;

R⁹ is H, (C₁₋₆ alkyl), (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl-aryl or (C₁₋₆)alkyl-**Het**, all of which optionally substituted with **R**⁹⁰; or

R⁹ is covalently bonded to either of **R**⁷ or **R**⁸ to form a 5- or 6-membered heterocycle;

Q is a 6- or 10-membered aryl, **Het**, (C₁₋₆) alkyl-aryl, (C₁₋₆) alkyl-**Het**, (C₁₋₆) alkyl-CONH-aryl or (C₁₋₆) alkyl-CONH-**Het**, all of which being optionally substituted with:



or **R**¹⁰⁰;

or a salt or a derivative thereof;

wherein **Het** is defined as 5- or 6-membered heterocycle having 1 to 4 heteroatoms selected from O, N, and S, or a 9- or 10-membered heterobicyclic having 1 to 5 heteroatoms selected from O, N and S; and

wherein **R**⁷⁰ is selected from:

- 1 to 4 substituents selected from: halogen, NO₂, cyano, azido; or
- 1 to 4 substituents selected from:

a) (C₁₋₆) alkyl or haloalkyl, (C₃₋₇)cycloalkyl, C₃₋₇ spirocycloalkyl optionally containing 1 or 2 heteroatom, (C₂₋₆)alkenyl, (C₂₋₈)alkynyl, (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, all of which optionally substituted with **R**¹⁵⁰;

b) OR¹⁰⁴ wherein **R**¹⁰⁴ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl) aryl or (C₁₋₆)alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R**¹⁵⁰;

d) SR¹⁰⁸, SO₂N(**R**¹⁰⁸)₂ or SO₂N(**R**¹⁰⁸)C(O)**R**¹⁰⁸ wherein each **R**¹⁰⁸ is independently H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or both **R**¹⁰⁸ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆ alkyl)aryl or (C₁₋₆)alkyl)**Het** or heterocycle being optionally substituted with **R**¹⁵⁰;

e) NR¹¹¹R¹¹² wherein **R**¹¹¹ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, and **R**¹¹² is H, CN, (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl, (C₁₋₆)alkyl)**Het**, COOR¹¹⁵ or SO₂R¹¹⁵ wherein **R**¹¹⁵ is (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or both **R**¹¹¹ and **R**¹¹² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or heterocycle being optionally substituted with **R**¹⁵⁰;

f) NR¹¹⁶COR¹¹⁷ wherein **R**¹¹⁶ and **R**¹¹⁷ is each H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl,

aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** being optionally substituted with **R**¹⁵⁰;

g) **NR**¹¹⁸**CONR**¹¹⁹**R**¹²⁰, wherein **R**¹¹⁸, **R**¹¹⁹ and **R**¹²⁰ is each H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆ alkyl)**Het**, or **R**¹¹⁸ is covalently bonded to **R**¹¹⁹ and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; or **R**¹¹⁹ and **R**¹²⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; said alkyl, cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆ alkyl)**Het** or heterocycle being optionally substituted with **R**¹⁵⁰;

h) **NR**¹²¹**COCOR**¹²² wherein **R**¹²¹ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, a 6- or 10-membered aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆ alkyl)**Het**, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** being optionally substituted with **R**¹⁵⁰, and **R**¹²² is **OR**¹²³ or **N(R**¹²⁴)₂ wherein **R**¹²³ and each **R**¹²⁴ is independently H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆ alkyl)**Het**, or **R**¹²⁴ is OH or O(C₁₋₆alkyl) or both **R**¹²⁴ are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** and heterocycle being optionally substituted with **R**¹⁵⁰;

i) **COR**¹²⁷ wherein **R**¹²⁷ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** being optionally substituted with **R**¹⁵⁰;

j) **COOR**¹²⁸ wherein **R**¹²⁸ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl and (C₁₋₆ alkyl)**Het** being optionally substituted with **R**¹⁵⁰;

k) **CONR**¹²⁹**R**¹³⁰ wherein **R**¹²⁹ and **R**¹³⁰ are independently H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆ alkyl)**Het**, or both **R**¹²⁹ and **R**¹³⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl, (C₁₋₆alkyl)**Het** and heterocycle being optionally substituted with **R**¹⁵⁰;

l) aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, all of which being optionally substituted with **R**¹⁵⁰, wherein, **R**¹⁵⁰ is selected from:

- 1 to 3 substituents selected from: halogen, NO₂, cyano, azido; or
- 1 to 3 substituents selected from:

a) (C₁₋₆) alkyl or haloalkyl, (C₃₋₇)cycloalkyl, C₃₋₇ spirocycloalkyl optionally containing 1 or 2 heteroatom, (C₂₋₆)alkenyl, (C₂₋₈)alkynyl, all of which optionally substituted with **R**¹⁶⁰;

b) **OR**¹⁰⁴ wherein **R**¹⁰⁴ is H, (C₁₋₆alkyl) or (C₃₋₇)cycloalkyl, said alkyl and cycloalkyl being optionally substituted with **R**¹⁶⁰;

d) **SR**¹⁰⁸, **SO₂N(R**¹⁰⁸)₂ wherein **R**¹⁰⁸ is H, (C₁₋₆)alkyl or (C₃₋₇)cycloalkyl, said alkyl or cycloalkyl being optionally substituted with **R**¹⁶⁰;

e) **NR**¹¹¹**R**¹¹² wherein **R**¹¹¹ is H, (C₁₋₆)alkyl or (C₃₋₇)cycloalkyl, and **R**¹¹² is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl, (C₁₋₆alkyl)**Het**, **COOR**¹¹⁵ or **SO₂R**¹¹⁵ wherein **R**¹¹⁵ is (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆) alkyl)aryl or (C₁₋₆alkyl)**Het**, or both **R**¹¹¹ and **R**¹¹² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or heterocycle being optionally substituted with **R**¹⁶⁰;

f) **NR**¹¹⁶**COR**¹¹⁷ wherein **R**¹¹⁶ and **R**¹¹⁷ is each H, (C₁₋₆)alkyl or (C₃₋₇) cycloalkyl, said (C₁₋₆)alkyl or (C₃₋₇)cycloalkyl being optionally substituted with **R**¹⁶⁰;

g) **NR**¹¹⁸**CONR**¹¹⁹**R**¹²⁰, wherein **R**¹¹⁸, **R**¹¹⁹ and **R**¹²⁰ is each H, (C₁₋₆) alkyl or (C₃₋₇)cycloalkyl ; or **R**¹¹⁹ and **R**¹²⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; said alkyl, cycloalkyl or heterocycle being optionally substituted with **R**¹⁶⁰;

h) **NR**¹²¹**COCOR**¹²² wherein **R**¹²¹ is H, (C₁₋₆)alkyl or (C₃₋₇)cycloalkyl, said alkyl or cycloalkyl being optionally substituted with **R**¹⁶⁰;

or **R**¹²² is **OR**¹²³ or **N(R**¹²⁴)₂ wherein **R**¹²³ and each **R**¹²⁴ is independently H, (C₁₋₆alkyl) or (C₃₋₇) cycloalkyl, or **R**¹²⁴ is OH or O(C₁₋₆ alkyl) or both **R**¹²⁴ are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl and heterocycle being optionally substituted with **R**¹⁶⁰;

j) tetrazole, **COOR**¹²⁸ wherein **R**¹²⁸ is H, (C₁₋₆)alkyl or (C₃₋₇)cycloalkyl, said (C₁₋₆)alkyl and (C₃₋₇)

cycloalkyl being optionally substituted with R^{160} ; and

k) $CONR^{129}R^{130}$ wherein R^{129} and R^{130} are independently H, (C₁₋₆)alkyl or (C₃₋₇)cycloalkyl, or both R^{129} and R^{130} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl and heterocycle being optionally substituted with R^{160} ;

wherein R^{160} is defined as 1 or 2 substituents selected from:

tetrazole, halogen, CN, C₁₋₆alkyl, haloalkyl, COOR¹⁶¹, OR¹⁶¹, N(R¹⁶²)₂ or CON(R¹⁶²)₂, wherein R^{161} and each R^{162} is independently H or (C₁₋₆)alkyl;

R^{10} , R^{20} , R^{90} and R^{100} is each defined as:

- 1 to 4 substituents selected from: halogen, OPO₃H, NO₂, cyano, azido, C(=NH)NH₂, C(=NH)NH(C₁₋₆)alkyl or C(=NH)NHCO(C₁₋₆)alkyl; or

- 1 to 4 substituents selected from:

a) (C₁₋₆) alkyl or haloalkyl, (C₃₋₇)cycloalkyl, C₃₋₇ spirocycloalkyl optionally containing 1 or 2 heteroatom, (C₂₋₆)alkenyl, (C₂₋₈)alkynyl, (C₁₋₆) alkyl-(C₃₋₇) cycloalkyl, all of which optionally substituted with R^{150} ;

b) OR¹⁰⁴ wherein R^{104} is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl) aryl or (C₁₋₆)alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with R^{150} ;

c) OCOR¹⁰⁵ wherein R^{105} is (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said alkyl, cycloalkyl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with R^{150} ;

d) SR¹⁰⁸, SO₂N(R¹⁰⁸)₂ or SO₂N(R¹⁰⁸)C(O)R¹⁰⁸ wherein each R^{108} is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or both R^{108} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or heterocycle being optionally substituted with R^{150} ;

e) NR¹¹¹R¹¹² wherein R^{111} is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, and R^{112} is H, CN, (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl, (C₁₋₆)alkyl)**Het**, COOR¹¹⁵ or SO₂R¹¹⁵ wherein R^{115} is (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or both R^{111} and R^{112} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or heterocycle being optionally substituted with R^{150} ;

f) NR¹¹⁶COR¹¹⁷ wherein R^{116} and R^{117} is each H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** said (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with R^{150} ;

g) NR¹¹⁸CONR¹¹⁹R¹²⁰, wherein R^{118} , R^{119} and R^{120} is each H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or R^{118} is covalently bonded to R^{119} and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; or R^{119} and R^{120} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; said alkyl, cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or heterocycle being optionally substituted with R^{150} ;

h) NR¹²¹COCOR¹²² wherein R^{121} and R^{122} is each H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, a 6- or 10-membered aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with R^{150} ; or R^{122} is OR¹²³ or N(R¹²⁴)₂ wherein R^{123} and each R^{124} is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or R^{124} is OH or O(C₁₋₆)alkyl or both R^{124} are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** and heterocycle being optionally substituted with R^{150} ;

i) COR¹²⁷ wherein R^{127} is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with R^{150} ;

j) COOR¹²⁸ wherein R^{128} is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl and (C₁₋₆)alkyl)**Het** being optionally substituted with R^{150} ;

k) $CONR^{129}R^{130}$ wherein R^{129} and R^{130} are independently H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)

cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or both **R**¹²⁹ and **R**¹³⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl, (C₁₋₆alkyl)**Het** and heterocycle being optionally substituted with **R**¹⁵⁰;

l) aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, all of which being optionally substituted with **R**¹⁵⁰, wherein **R**¹⁵⁰ is defined as:

- 1 to 3 substituents selected from: halogen, OPO₃H, NO₂, cyano, azido, C(=NH)NH₂, C(=NH)NH(C₁₋₆alkyl) or C(=NH)NHCO(C₁₋₆alkyl); or
- 1 to 3 substituents selected from:

a) (C₁₋₆alkyl) or haloalkyl, (C₃₋₇cycloalkyl, C₃₋₇ spirocycloalkyl optionally containing 1 or 2 heteroatom, (C₂₋₆alkenyl, (C₂₋₈alkynyl, (C₁₋₆alkyl-(C₃₋₇cycloalkyl, all of which optionally substituted with **R**¹⁶⁰;

b) OR¹⁰⁴ wherein **R**¹⁰⁴ is H, (C₁₋₆alkyl), (C₃₋₇cycloalkyl, or (C₁₋₆alkyl-(C₃₋₇cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** being optionally substituted with **R**¹⁶⁰;

c) OCOR¹⁰⁵ wherein **R**¹⁰⁵ is (C₁₋₆alkyl, (C₃₋₇cycloalkyl, (C₁₋₆alkyl-(C₃₋₇cycloalkyl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said alkyl, cycloalkyl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** being optionally substituted with **R**¹⁶⁰;

d) SR¹⁰⁸, SO₂N(R¹⁰⁸)₂ or SO₂N(R¹⁰⁸)C(O)R¹⁰⁸ wherein each **R**¹⁰⁸ is independently H, (C₁₋₆alkyl, (C₃₋₇cycloalkyl or (C₁₋₆alkyl-(C₃₋₇cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** or both **R**¹⁰⁸ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** or heterocycle being optionally substituted with **R**¹⁶⁰;

e) NR¹¹¹R¹¹² wherein **R**¹¹¹ is H, (C₁₋₆alkyl, (C₃₋₇cycloalkyl or (C₁₋₆alkyl-(C₃₋₇cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, and **R**¹¹² is H, CN, (C₁₋₆alkyl, (C₃₋₇cycloalkyl or (C₁₋₆alkyl-(C₃₋₇cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl, (C₁₋₆alkyl)**Het**, COOR¹¹⁵ or SO₂R¹¹⁵ wherein **R**¹¹⁵ is (C₁₋₆alkyl, (C₃₋₇cycloalkyl, or (C₁₋₆alkyl-(C₃₋₇cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or both **R**¹¹¹ and **R**¹¹² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or heterocycle being optionally substituted with **R**¹⁶⁰;

f) NR¹¹⁶COR¹¹⁷ wherein **R**¹¹⁶ and **R**¹¹⁷ is each H, (C₁₋₆alkyl, (C₃₋₇cycloalkyl, (C₁₋₆alkyl-(C₃₋₇cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said (C₁₋₆alkyl, (C₃₋₇cycloalkyl, (C₁₋₆alkyl-(C₃₋₇cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** being optionally substituted with **R**¹⁶⁰;

g) NR¹¹⁸CONR¹¹⁹R¹²⁰, wherein **R**¹¹⁸, **R**¹¹⁹ and **R**¹²⁰ is each H, (C₁₋₆alkyl, (C₃₋₇cycloalkyl, (C₁₋₆alkyl-(C₃₋₇cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or **R**¹¹⁸ is covalently bonded to **R**¹¹⁹ and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, or **R**¹¹⁹ and **R**¹²⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, (C₁₋₆alkyl-(C₃₋₇cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** or heterocycle being optionally substituted with **R**¹⁶⁰;

h) NR¹²¹COCOR¹²² wherein **R**¹²¹ and **R**¹²² is each H, (C₁₋₆alkyl, (C₃₋₇cycloalkyl, (C₁₋₆alkyl-(C₃₋₇cycloalkyl, a 6- or 10-membered aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** being optionally substituted with **R**¹⁶⁰, or **R**¹²² is OR¹²³ or N(R¹²⁴)₂ wherein **R**¹²³ and each **R**¹²⁴ is independently H, (C₁₋₆alkyl, (C₃₋₇cycloalkyl, or (C₁₋₆alkyl-(C₃₋₇cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or **R**¹²⁴ is OH or O(C₁₋₆alkyl) or both **R**¹²⁴ are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** and heterocycle being optionally substituted with **R**¹⁶⁰;

i) COR¹²⁷ wherein **R**¹²⁷ is H, (C₁₋₆alkyl, (C₃₋₇cycloalkyl or (C₁₋₆alkyl-(C₃₋₇cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** being optionally substituted with **R**¹⁶⁰;

j) tetrazole, COOR¹²⁸ wherein **R**¹²⁸ is H, (C₁₋₆alkyl, (C₃₋₇cycloalkyl, or (C₁₋₆alkyl-(C₃₋₇cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said (C₁₋₆alkyl, (C₃₋₇cycloalkyl, or (C₁₋₆alkyl-(C₃₋₇cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl and (C₁₋₆alkyl)**Het** being optionally substituted with **R**¹⁶⁰; and

k) CONR¹²⁹R¹³⁰ wherein **R**¹²⁹ and **R**¹³⁰ are independently H, (C₁₋₆alkyl, (C₃₋₇cycloalkyl, (C₁₋₆alkyl-

alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆ alkyl)aryl or (C₁₋₆alkyl)**Het**, or both **R**¹²⁹ and **R**¹³⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl, (C₁₋₆alkyl)**Het** and heterocycle being optionally substituted with **R**¹⁶⁰; and
 wherein **R**¹⁶⁰ is defined as 1 or 2 substituents selected from:
 tetrazole, halogen, CN, C₁₋₆alkyl, haloalkyl, COOR¹⁶¹, SO₃H, SR¹⁶¹ SO₂R¹⁶¹, OR¹⁶¹, N(R¹⁶²)₂, SO₂N(R¹⁶²)₂ NR¹⁶²COR¹⁶² or CON(R¹⁶²)₂, wherein **R**¹⁶¹ and each **R**¹⁶² is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl; or both **R**¹⁶² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle,

or a salt thereof.

2. The compound according to claim 1, wherein **M**, **K** and **L** is CH or N.

3. The compound according to claim 2, wherein **M**, **K** and **L** is CH.

4. The compound according to claim 1, wherein **R**¹ is selected from: H or (C₁₋₆)alkyl.

5. The compound according to claim 4, wherein **R**¹ is H, CH₃, isopropyl, or isobutyl.

6. The compound according to claim 5, wherein **R**¹ is H or CH₃.

7. The compound according to claim 6, wherein **R**¹ is CH₃.

8. The compound according to claim 1, wherein **R**² is CON(R²²)₂, wherein each **R**²² is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₅₋₇)cycloalkenyl, 6 or 10-membered aryl or **Het**, or both **R**²² are bonded together to form a 5, 6 or 7-membered saturated heterocycle with the nitrogen to which they are attached;
 or **R**² is selected from: H, halogen, (C₁₋₆)alkyl, haloalkyl, (C₂₋₆)alkenyl, (C₅₋₇) cycloalkenyl, 6 or 10-membered aryl or **Het**; wherein each of said alkyl, haloalkyl, (C₂₋₆)alkenyl, (C₅₋₇)cycloalkenyl, aryl or **Het** is optionally substituted with **R**²⁰, wherein **R**²⁰ is defined as:

- 1 to 4 substituents selected from: halogen, NO₂, cyano, azido, C(=NH)NH₂, C(=NH)NH(C₁₋₆)alkyl or C(=NH)NHCO(C₁₋₆)alkyl; or

- 1 to 4 substituents selected from:

a) (C₁₋₆) alkyl or haloalkyl, (C₃₋₇)cycloalkyl, (C₂₋₆)alkenyl, (C₂₋₈)alkynyl, (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, all of which optionally substituted with **R**¹⁵⁰;

b) OR¹⁰⁴ wherein **R**¹⁰⁴ is H, (C₁₋₆alkyl), (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₈alkyl) aryl or (C₁₋₈alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₈alkyl)aryl or (C₁₋₆alkyl)**Het** being optionally substituted with **R**¹⁵⁰;

c) OCOR¹⁰⁵ wherein **R**¹⁰⁵ is (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said alkyl, cycloalkyl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₈alkyl)**Het** being optionally substituted with **R**¹⁵⁰;

d) SR¹⁰⁸, SO₂N(R¹⁰⁸)₂ or SO₂N(R¹⁰⁸)C(O)R¹⁰⁸ wherein each **R**¹⁰⁸ is independently H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₈alkyl)**Het** or both **R**¹⁰⁸ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆ alkyl)aryl or (C₁₋₆alkyl)**Het** or heterocycle being optionally substituted with **R**¹⁵⁰;

e) NR¹¹¹R¹¹² wherein **R**¹¹¹ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, and **R**¹¹² is H, CN, (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl, (C₁₋₆alkyl)**Het**, COOR¹¹⁵ or SO₂R¹¹⁵ wherein **R**¹¹⁵ is (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆) alkyl)**Het**, or both **R**¹¹¹ and **R**¹¹² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or heterocycle being optionally substituted with **R**¹⁵⁰;

f) NR¹¹⁶COR¹¹⁷ wherein **R**¹¹⁶ and **R**¹¹⁷ is each H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** being optionally substituted with **R**¹⁵⁰;

g) $\text{NR}^{118}\text{CONR}^{119}\text{R}^{120}$, wherein R^{118} , R^{119} and R^{120} is each H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, $(\text{C}_{1-6}$ alkyl)aryl or $(\text{C}_{1-6}$ alkyl)**Het**, or R^{118} is covalently bonded to R^{119} and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; or R^{119} and R^{120} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; said alkyl, cycloalkyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl) aryl or $(\text{C}_{1-6}$ alkyl)**Het** or heterocycle being optionally substituted with R^{150} ;

h) $\text{NR}^{121}\text{COCOR}^{122}$ wherein R^{121} and R^{122} is each H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, a 6- or 10-membered aryl, **Het**, $(\text{C}_{1-6}$ alkyl)aryl or (C_{1-6}) alkyl)**Het**, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het** being optionally substituted with R^{150} ; or R^{122} is OR^{123} or $\text{N}(\text{R}^{124})_2$ wherein R^{123} and each R^{124} is independently H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, or R^{124} is OH or O (C_{1-6}) alkyl or both R^{124} are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het** and heterocycle being optionally substituted with R^{150} ;

i) COR^{127} wherein R^{127} is H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl) aryl or (C_{1-6}) alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het** being optionally substituted with R^{150} ;

j) COOR^{128} wherein R^{128} is H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, said (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl and (C_{1-6}) alkyl)**Het** being optionally substituted with R^{150} ;

k) $\text{CONR}^{129}\text{R}^{130}$ wherein R^{129} and R^{130} are independently H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, or both R^{129} and R^{130} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl, (C_{1-6}) alkyl)**Het** and heterocycle being optionally substituted with R^{150} ;

l) aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, all of which being optionally substituted with R^{150} ; wherein R^{150} is:

- 1 to 3 substituents selected from: halogen, NO_2 , cyano or azido; or
- 1 to 3 substituents selected from:

a) (C_{1-6}) alkyl or haloalkyl, (C_{3-7}) cycloalkyl, (C_{2-6}) alkenyl, (C_{2-8}) alkynyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, all of which optionally substituted with R^{160} ;

b) OR^{104} wherein R^{104} is H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, said alkyl or cycloalkyl optionally substituted with R^{160} ;

d) SR^{108} , $\text{SO}_2\text{N}(\text{R}^{108})_2$ or $\text{SO}_2\text{N}(\text{R}^{108})\text{C}(\text{O})\text{R}^{108}$ wherein each R^{108} is independently H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, or both R^{108} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het** and heterocycle being optionally substituted with R^{160} ;

e) $\text{NR}^{111}\text{R}^{112}$ wherein R^{111} , is H, (C_{1-6}) alkyl, or (C_{3-7}) cycloalkyl, and R^{112} is H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, COOR^{115} or $\text{SO}_2\text{R}^{115}$ wherein R^{115} is (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, or both R^{111} and R^{112} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl and heterocycle being optionally substituted with R^{160} ;

f) $\text{NR}^{116}\text{COR}^{117}$ wherein R^{116} and R^{117} is each H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl said (C_{1-6}) alkyl and (C_{3-7}) cycloalkyl being optionally substituted with R^{160} ;

g) $\text{NR}^{118}\text{CONR}^{119}\text{R}^{120}$, wherein R^{118} , R^{119} and R^{120} is each H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, or R^{118} is covalently bonded to R^{119} and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, or R^{119} and R^{120} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, and heterocycle being optionally substituted with R^{160} ;

h) $\text{NR}^{121}\text{COCOR}^{122}$ wherein R^{121} is H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, said alkyl and cycloalkyl being optionally substituted with R^{160} ; or R^{122} is OR^{123} or $\text{N}(\text{R}^{124})_2$ wherein R^{123} and each R^{124} is independently H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, or both R^{124} are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl and heterocycle being optionally substituted with R^{160} ;

i) COR^{127} wherein R^{127} is H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, said alkyl and cycloalkyl being optionally substituted with R^{160} ;

j) COOR^{128} wherein R^{128} is H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, said (C_{1-6}) alkyl and (C_{3-7}) cycloalkyl

being optionally substituted with R^{160} ; and

k) $CONR^{129}R^{130}$ wherein R^{129} and R^{130} are independently H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, or both R^{129} and R^{130} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl and heterocycle being optionally substituted with R^{160} ;

wherein R^{160} is defined as 1 or 2 substituents selected from:

halogen, CN, C_{1-6} alkyl, haloalkyl, $COOR^{161}$, OR^{161} , $N(R^{162})_2$, $SO_2N(R^{162})_2$, $NR^{162}COR^{162}$ or $CON(R^{162})_2$, wherein R^{161} and each R^{162} is independently H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl; or both R^{162} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle.

9. The compound according to claim 8, wherein R^2 is selected from: aryl or **Het**, each optionally monosubstituted or disubstituted with substituents selected from the group consisting of: halogen, haloalkyl, N_3 , or

a) (C_{1-6}) alkyl optionally substituted with OH or $O(C_{1-6})$ alkyl;

b) (C_{1-6}) alkoxy;

e) $NR^{111}R^{112}$ wherein both R^{111} and R^{112} are independently H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, or R^{112} is 6- or 10-membered aryl, **Het**, (C_{1-6}) alkyl-aryl or (C_{1-6}) alkyl-**Het**; or both R^{111} and R^{112} are covalently bonded together and to the nitrogen to which they are attached to form a nitrogen-containing heterocycle, each of said alkyl, cycloalkyl, aryl, **Het**, alkyl-aryl or alkyl-**Het** being optionally substituted with halogen or:

- OR^{2h} or $N(R^{2h})_2$, wherein each R^{2h} is independently H, (C_{1-6}) alkyl, or both R^{2h} are covalently bonded together and to the nitrogen to which they are attached to form a nitrogen-containing heterocycle;

f) $NHCOR^{117}$ wherein R^{117} is (C_{1-6}) alkyl;

i) CO-aryl; and

k) $CONH_2$, $CONH(C_{1-6})$ alkyl, $CON(C_{1-6})$ alkyl $_2$, CONH-aryl, or $CONHC_{1-6}$ alkyl aryl.

10. The compound according to claim 9, wherein R^2 is aryl or **Het**, each optionally monosubstituted or disubstituted with substituents selected from the group consisting of: halogen, haloalkyl, or

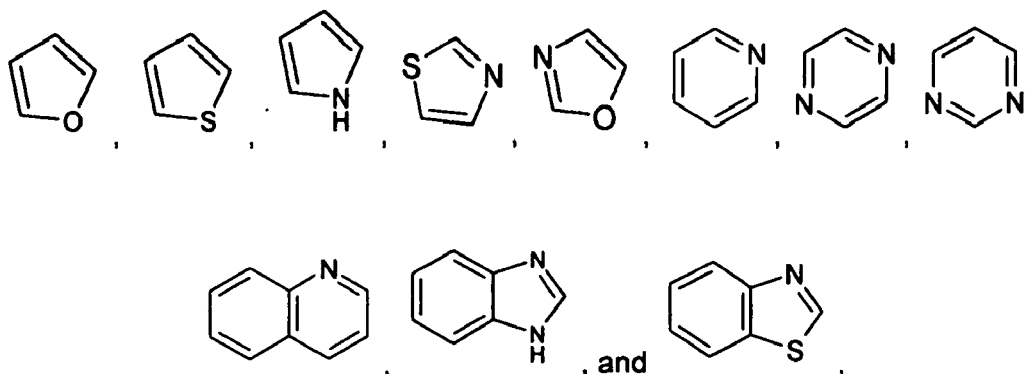
a) (C_{1-6}) alkyl optionally substituted with OH or $O(C_{1-6})$ alkyl;

b) (C_{1-6}) alkoxy; and

e) $NR^{111}R^{112}$ wherein both R^{111} and R^{112} are independently H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, or R^{112} is 6- or 10-membered aryl, **Het**, (C_{1-6}) alkyl-aryl or (C_{1-6}) alkyl-**Het**; or both R^{111} and R^{112} are covalently bonded together and to the nitrogen to which they are attached to form a nitrogen-containing heterocycle, each of said alkyl, cycloalkyl, aryl, **Het**, alkyl-aryl or alkyl-**Het** being optionally substituted with halogen or:

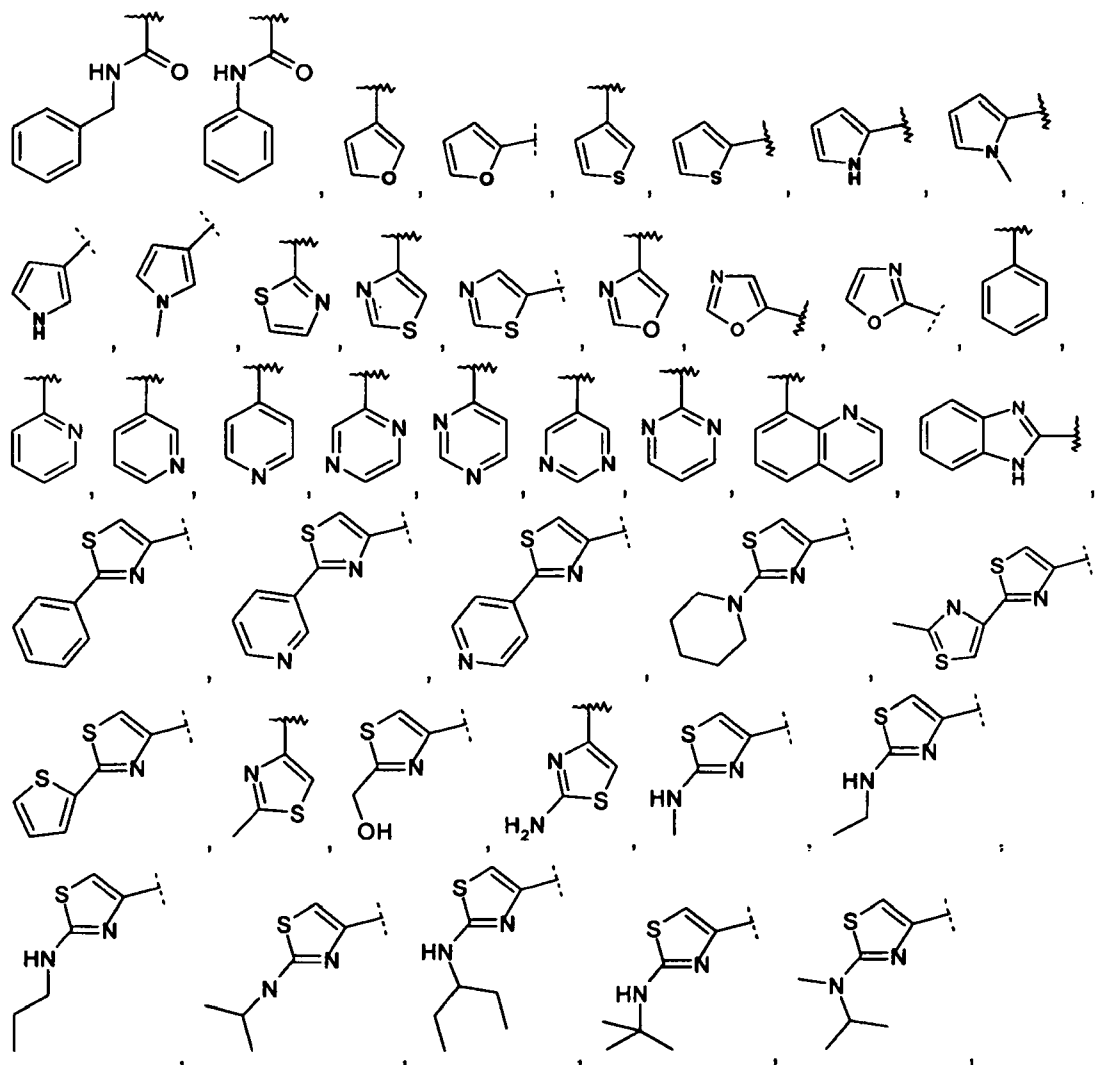
- OR^{2h} or $N(R^{2h})_2$, wherein each R^{2h} is independently H, (C_{1-6}) alkyl, or both R^{2h} are covalently bonded together and to the nitrogen to which they are attached to form a nitrogen-containing heterocycle.

11. The compound according to claim 10, wherein R^2 is phenyl or a heterocycle selected from:

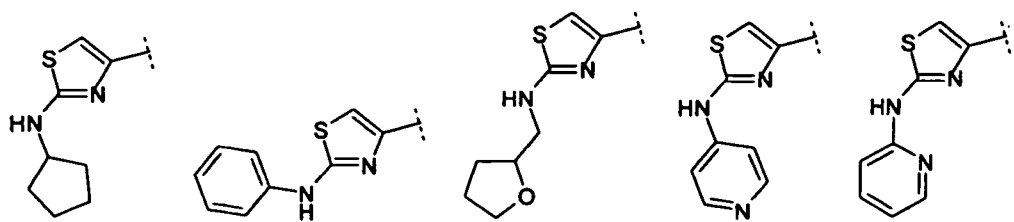


all of which optionally substituted as defined in claim 10.

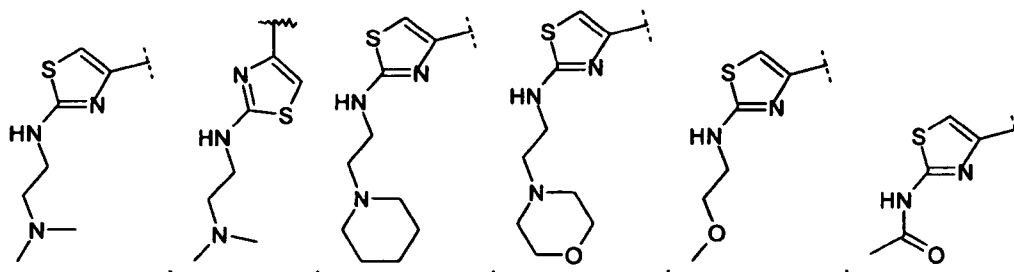
12. The compound according to claim 1 or 8, wherein R^2 is selected from the group consisting of: H, Br, CONHCH_3 , $\text{CON}(\text{CH}_3)_2$, CONH_2 , $\text{CH}=\text{CH}_2$,



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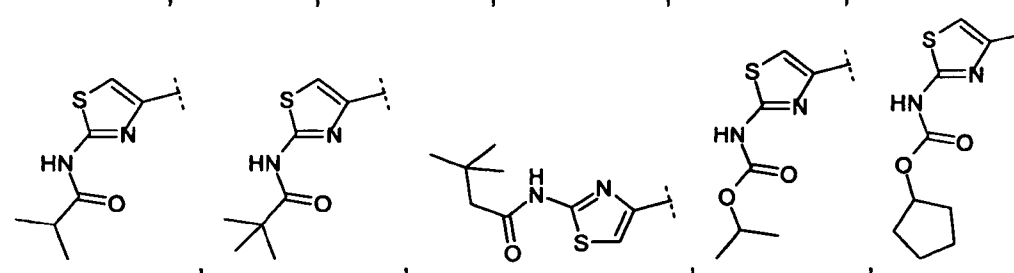


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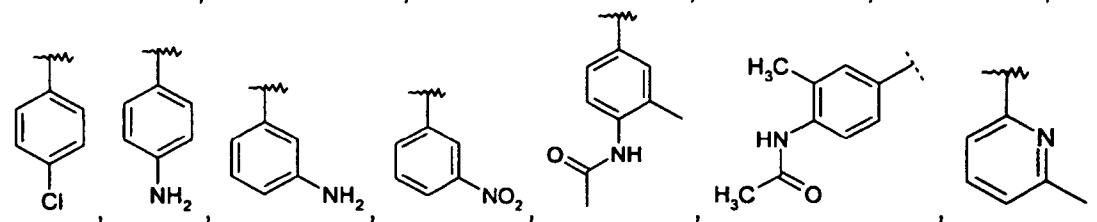
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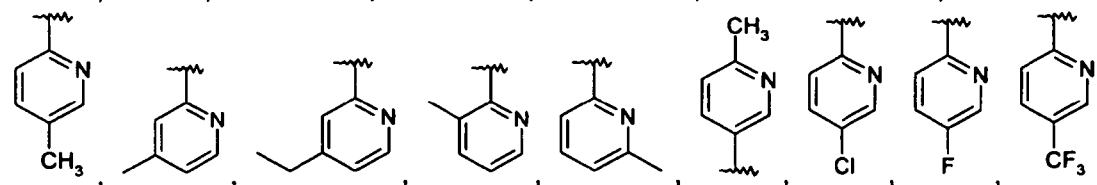


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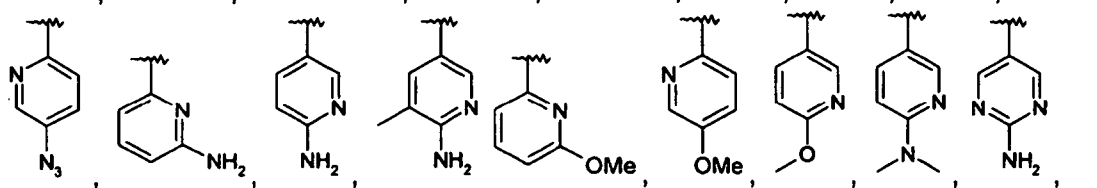
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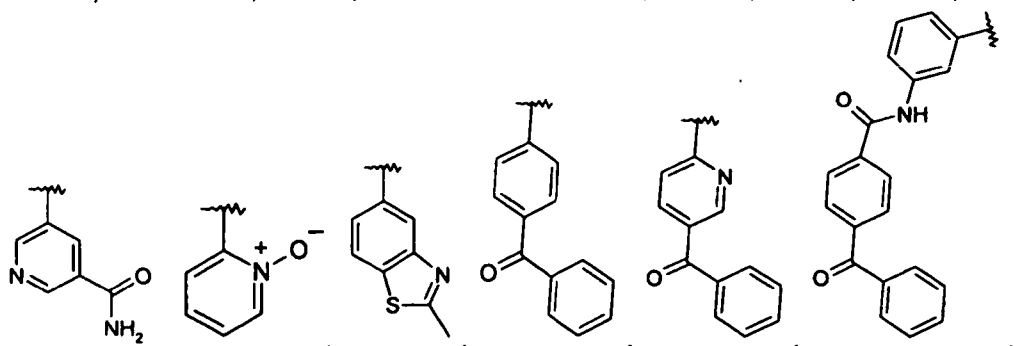


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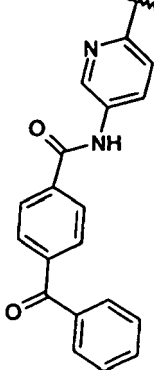


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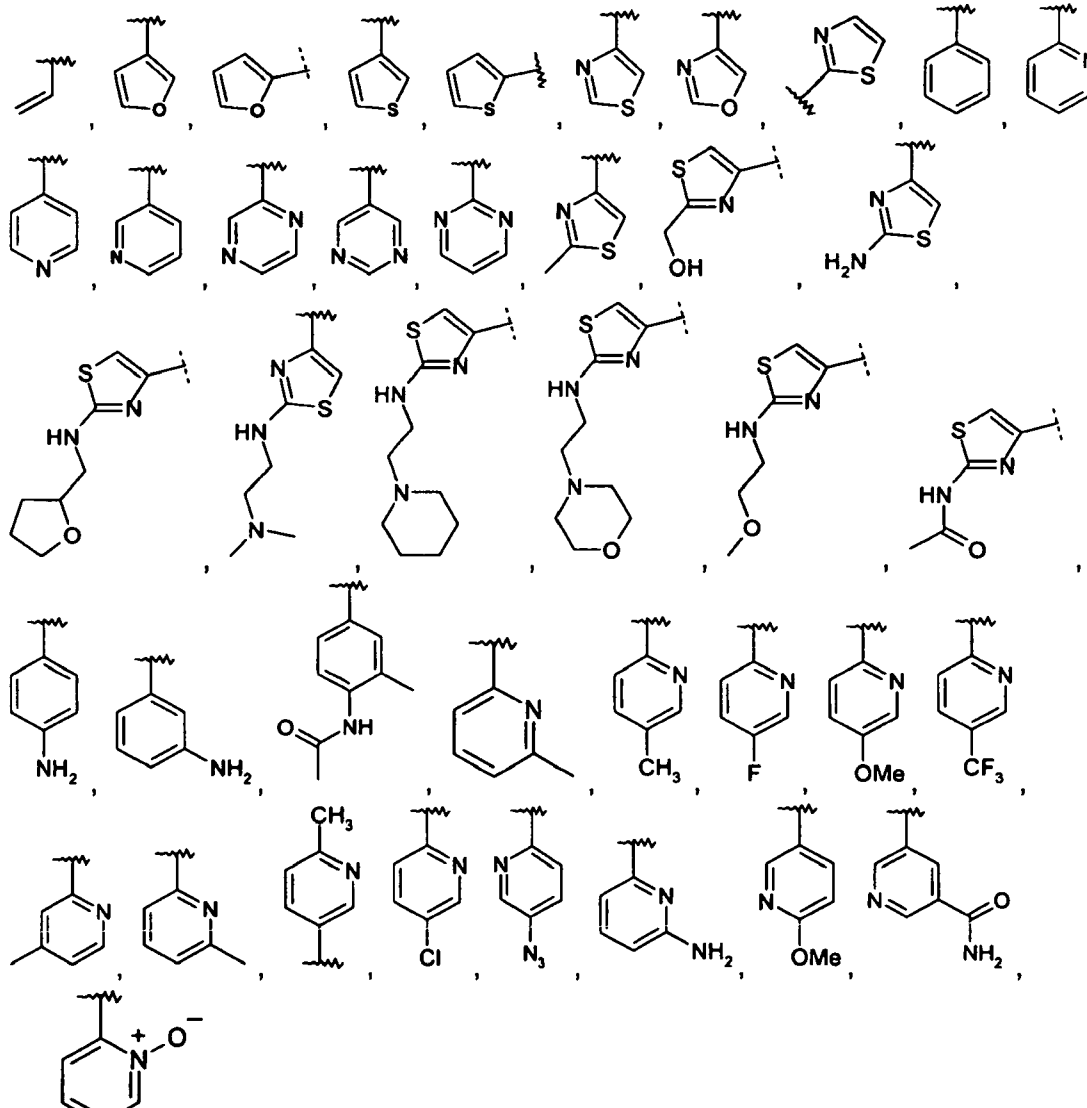
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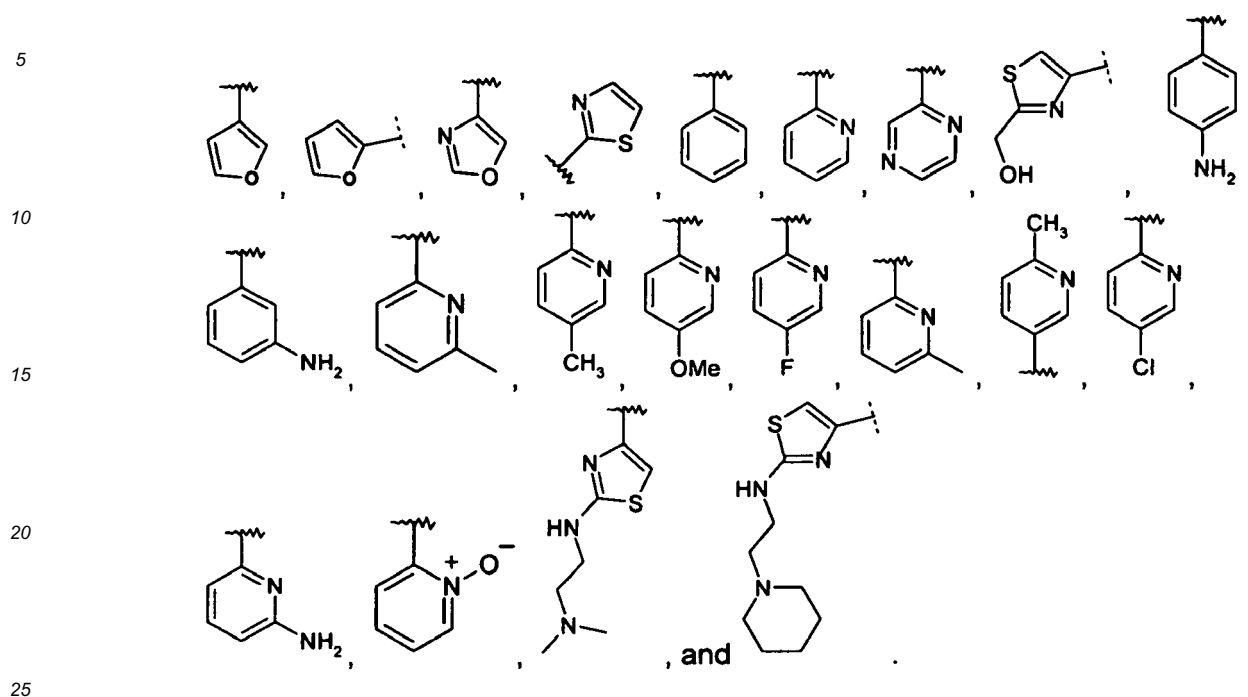


e compound according to claim 12, wherein **R²** is selected from:



and

14. The compound according to claim 13, wherein R^2 is selected from:



15. The compound according to claim 1, wherein R^3 is selected from (C_{3-7}) cycloalkyl, (C_{3-7}) cycloalkenyl, (C_{6-10}) bicycloalkyl, (C_{6-10}) bicycloalkenyl, 6- or 10-membered aryl, or **Het**.

16. The compound according to claim 15, wherein R^3 is (C_{3-7}) cycloalkyl.

17. The compound according to claim 16, wherein R^3 is cyclopentyl, or cyclohexyl.

18. The compound according to claim 1, wherein R^{6a} is H.

19. The compound according to claim 1, wherein R^7 and R^8 are each independently H, (C_{1-6}) alkyl, haloalkyl, (C_{3-7}) cycloalkyl, 6- or 10-membered aryl, **Het**, (C_{1-6}) alkyl-aryl, (C_{1-6}) alkyl-**Het**, all of which optionally substituted with from 1 to 4 substituents selected from halogen or:

a) (C_{1-6}) alkyl; and

b) $N(R^{8a'})_2$, COR^{8a} , $COOR^{8a}$, $CON(R^{8a})_2$, wherein each R^{8a} or $R^{8a'}$ are independently H, (C_{1-8}) alkyl, (C_{3-7}) cycloalkyl, or (C_{1-8}) alkyl- (C_{3-7}) cycloalkyl; or each $R^{8a'}$ are independently covalently bonded together and to the nitrogen to which they are both bonded to form a 5, 6 or 7-membered saturated heterocycle; or $R^{8a''}$ is independently (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl.

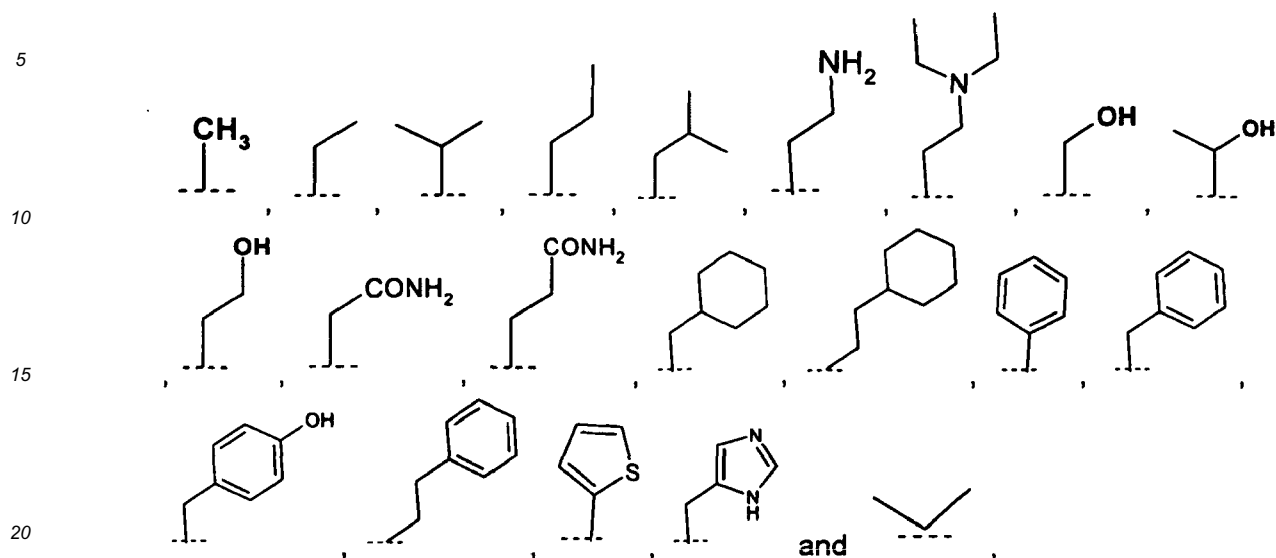
or R^7 and R^8 are covalently bonded together to form (C_{3-7}) cycloalkyl, 4, 5- or 6-membered heterocycle having from 1 to 3 heteroatom selected from O N, and S.

20. The compound according to claim 19, wherein R^7 and R^8 are each independently H, (C_{1-6}) alkyl, haloalkyl, (C_{3-7}) cycloalkyl, 6- or 10-membered aryl, **Het**, (C_{1-6}) alkyl-aryl, (C_{1-6}) alkyl-**Het**; or R^7 and R^8 are covalently bonded together to form cyclopropyl, cyclobutyl, cyclopentyl, pyrrolidine, piperidine, tetrahydrofuran, tetrahydropyran, or pentamethylene sulfide; wherein said alkyl, haloalkyl, (C_{3-7}) cycloalkyl, 6- or 10-membered aryl, **Het**, (C_{1-6}) alkyl-aryl, or (C_{1-6}) alkyl-**Het**, are optionally monosubstituted with substituents selected from:

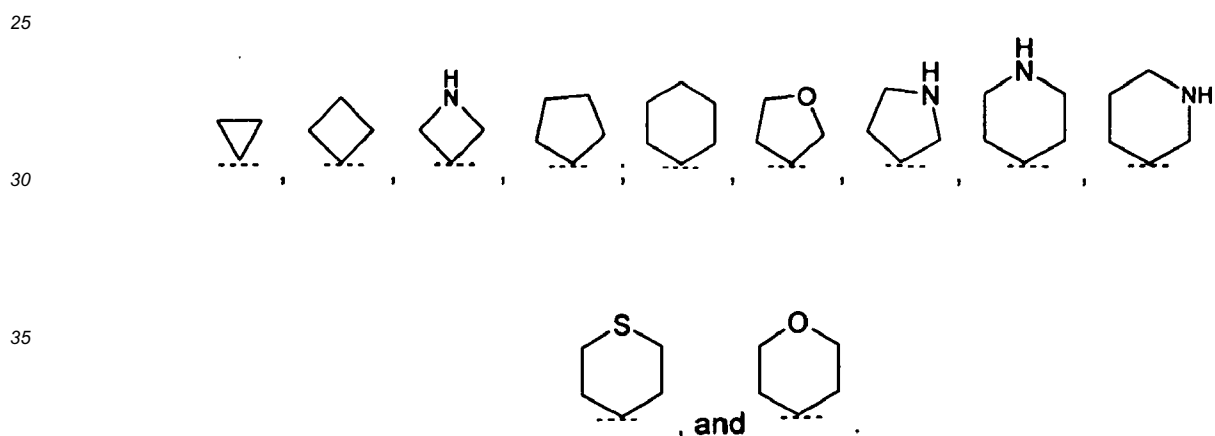
a) (C_{1-6}) alkyl; and

b) NH_2 , $N(CH_2CH)_2$, or $COCH_3$.

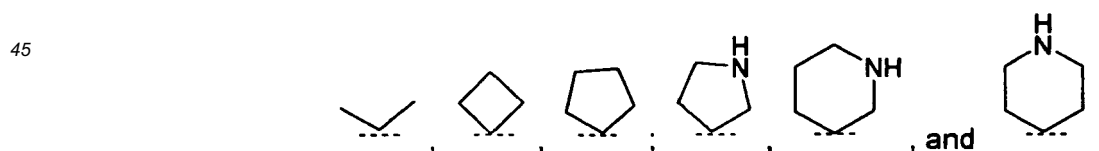
21. The compound according to claim 1, wherein R^7 and R^8 are selected from:



or R^7 and R^8 together form:



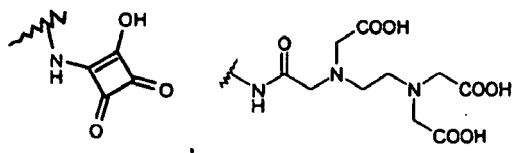
22. The compound according to claim 21, wherein R^7 and R^8 are selected from:



23. The compound according to claim 1, wherein R^9 is H, or R^9 is covalently bonded to either of R^7 or R^8 to form a 5- or 6-membered heterocycle.

24. The compound according to claim 23, wherein R^9 is H.

25. The compound according to claim 1, wherein Q is a 6- or 10-membered aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)-**Het**, all of which being optionally substituted with:



or R^{100} ;
wherein R^{100} is:

- 1 to 4 substituents selected from: halogen, NO_2 , cyano or azido; or
- 1 to 4 substituents selected from:

a) (C_{1-6}) alkyl or haloalkyl, (C_{3-7}) cycloalkyl, (C_{2-6}) alkenyl, (C_{2-8}) alkynyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, all of which optionally substituted with R^{150} ;

b) OR^{104} wherein R^{104} is H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl aryl or (C_{1-6}) alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het** being optionally substituted with R^{150} ;

d) SR^{108} wherein R^{108} is H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl aryl or (C_{1-6}) alkyl)**Het**, all of which being optionally substituted with R^{150} ;

e) $NR^{111}R^{112}$ wherein R^{111} is H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, and R^{112} is H, CN, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl, (C_{1-6}) alkyl)**Het** $COOR^{115}$ or SO_2R^{115} wherein R^{115} is (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, or both R^{111} and R^{112} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, or heterocycle being optionally substituted with R^{150} ;

f) $NR^{116}COR^{117}$ wherein R^{116} and R^{117} is each H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, said (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het** being optionally substituted with R^{150} ;

g) $NR^{118}CONR^{119}R^{120}$, wherein R^{118} , R^{119} and R^{120} is each H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, or R^{118} is covalently bonded to R^{119} and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; or R^{119} and R^{120} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; said alkyl, cycloalkyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het** or heterocycle being optionally substituted with R^{150} ;

h) $NR^{121}COCOR^{122}$ wherein R^{121} and R^{122} is each H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, a 6- or 10-membered aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het** being optionally substituted with R^{150} ; or R^{122} is OR^{123} or $N(R^{124})_2$ wherein R^{123} and each R^{124} is independently H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, or R^{124} is OH or O (C_{1-6}) alkyl) or both R^{124} are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het** and heterocycle being optionally substituted with R^{150} ;

j) $COOR^{128}$ wherein R^{128} is H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, said (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl and (C_{1-6}) alkyl)**Het** being optionally substituted with R^{150} ;

k) $CONR^{129}R^{130}$ wherein R^{129} and R^{130} are independently H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, or both R^{129} and R^{130} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl, (C_{1-6}) alkyl)**Het** and heterocycle being optionally substituted with R^{150} ;

l) aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, all of which being optionally substituted with R^{150} ; wherein R^{150} is selected from:

- 1 to 3 substituents selected from: halogen, NO_2 , cyano or azido; or
- 1 to 3 substituents selected from:

a) (C₁₋₆) alkyl or haloalkyl, (C₃₋₇)cycloalkyl, C₃₋₇ spirocycloalkyl optionally containing 1 or 2 heteroatom, (C₂₋₆)alkenyl, (C₂₋₈)alkynyl, (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, all of which optionally substituted with **R**¹⁶⁰;

b) OR¹⁰⁴ wherein **R**¹⁰⁴ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R**¹⁶⁰;

d) SR¹⁰⁸, SO₂N(**R**¹⁰⁸)₂ or SO₂N(**R**¹⁰⁸)C(O)**R**¹⁰⁸ wherein each **R**¹⁰⁸ is independently H, (C₁₋₈)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or both **R**¹⁰⁸ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or heterocycle being optionally substituted with **R**¹⁶⁰;

e) NR¹¹¹R¹¹² wherein **R**¹¹¹ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, and **R**¹¹² is H, CN, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl, (C₁₋₆)alkyl)**Het** or SO₂R¹¹⁵ wherein **R**¹¹⁵ is (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₈)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or both **R**¹¹¹ and **R**¹¹² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or heterocycle being optionally substituted with **R**¹⁶⁰;

f) NR¹¹⁶COR¹¹⁷ wherein **R**¹¹⁶ and **R**¹¹⁷ is each H, (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** being optionally substituted with **R**¹⁶⁰;

g) NR¹¹⁸CONR¹¹⁹R¹²⁰, wherein **R**¹¹⁸, **R**¹¹⁹ and **R**¹²⁰ is each H, (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or **R**¹¹⁸ is covalently bonded to **R**¹¹⁹ and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, or **R**¹¹⁹ and **R**¹²⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** or heterocycle being optionally substituted with **R**¹⁶⁰;

h) NR¹²¹COCOR¹²² wherein **R**¹²¹ is H, (C₁₋₆)alkyl optionally substituted with **R**¹⁶⁰, and **R**¹²² is OR¹²³ or N(**R**¹²⁴)₂ wherein **R**¹²³ and each **R**¹²⁴ is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or **R**¹²⁴ is OH or O (C₁₋₆)alkyl) or both **R**¹²⁴ are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het** and heterocycle being optionally substituted with **R**¹⁶⁰;

j) tetrazole, COOR¹²⁸ wherein **R**¹²⁸ is H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, said (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl, or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl and (C₁₋₆)alkyl)**Het** being optionally substituted with **R**¹⁶⁰; and

k) CONR¹²⁹R¹³⁰ wherein **R**¹²⁹ and **R**¹³⁰ are independently H, (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)**Het**, or both **R**¹²⁹ and **R**¹³⁰ are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆)alkyl)aryl, (C₁₋₆)alkyl)**Het** and heterocycle being optionally substituted with **R**¹⁶⁰;

wherein **R**¹⁶⁰ is defined as 1 or 2 substituents selected from:

tetrazole, halogen, CN, C₁₋₆alkyl, haloalkyl, COOR¹⁶¹, SO₃H, SR¹⁶¹, SO₂R¹⁶¹, OR¹⁶¹, N(**R**¹⁶²)₂, SO₂N(**R**¹⁶²)₂, NR¹⁶²COR¹⁶² or CON(**R**¹⁶²)₂, wherein **R**¹⁶¹ and each **R**¹⁶² is independently H, (C₁₋₆)alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆)alkyl-(C₃₋₇)cycloalkyl; or both **R**¹⁶² are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle.

26. The compound according to claim 1, wherein **Q** is a 6- or 10-membered aryl, **Het**, (C₁₋₆)alkyl)aryl or (C₁₋₆)alkyl)-**Het**, all of which being optionally substituted with:

- 1 to 4 substituents selected from: halogen, NO₂, cyano or azido; or
- 1 to 4 substituents selected from:

a) (C₁₋₆) alkyl or haloalkyl, (C₃₋₇)cycloalkyl, (C₂₋₆)alkenyl, (C₂₋₈)alkynyl, (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, all of which optionally substituted with **R**¹⁵⁰;

b) OR¹⁰⁴ wherein **R¹⁰⁴** is H, (C₁₋₆alkyl), (C₃₋₇)cycloalkyl, or (C₁₋₆alkyl)-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆alkyl) aryl or (C₁₋₆alkyl)**Het**, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** being optionally substituted with **R¹⁵⁰**;

d) SR¹⁰⁸, SO₂N(**R¹⁰⁸**)₂ or SO₂N(**R¹⁰⁸**)C(O)**R¹⁰⁸** wherein each **R¹⁰⁸** is independently H, (C₁₋₆alkyl), (C₃₋₇) cycloalkyl or (C₁₋₆alkyl)-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** or both **R¹⁰⁸** are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** or heterocycle being optionally substituted with **R¹⁶⁰**;

e) NR¹¹¹R¹¹² wherein **R¹¹¹** is H, (C₁₋₆alkyl), (C₃₋₇)cycloalkyl or (C₁₋₆alkyl)-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, and **R¹¹²** is H, CN, (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl or (C₁₋₆alkyl)-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl, (C₁₋₆alkyl)**Het**, COOR¹¹⁵ or SO₂R¹¹⁵ wherein **R¹¹⁵** is (C₁₋₆alkyl), (C₃₋₇) cycloalkyl, or (C₁₋₆alkyl)-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or both **R¹¹¹** and **R¹¹²** are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or heterocycle being optionally substituted with **R¹⁵⁰**;

f) NR¹¹⁶COR¹¹⁷ wherein **R¹¹⁶** and **R¹¹⁷** is each H, (C₁₋₆alkyl), (C₃₋₇)cycloalkyl, (C₁₋₆alkyl)-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said (C₁₋₆) alkyl, (C₃₋₇)cycloalkyl, (C₁₋₆alkyl)-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** being optionally substituted with **R¹⁵⁰**;

g) NR¹¹⁸CONR¹¹⁹R¹²⁰, wherein **R¹¹⁸**, **R¹¹⁹** and **R¹²⁰** is each H, (C₁₋₆alkyl), (C₃₋₇) cycloalkyl, (C₁₋₆alkyl)-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or **R¹¹⁹** and **R¹²⁰** are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; said alkyl, cycloalkyl, (C₁₋₆alkyl)-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** or heterocycle being optionally substituted with **R¹⁵⁰**;

h) NR¹²¹COCOR¹²² wherein **R¹²¹** is H, (C₁₋₆alkyl) optionally substituted with **R¹⁵⁰**, and **R¹²²** is OR¹²³ or N(**R¹²⁴**)₂ wherein **R¹²³** and each **R¹²⁴** is independently H, (C₁₋₆alkyl), (C₃₋₇)cycloalkyl, or (C₁₋₆alkyl)-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or **R¹²⁴** is OH or O(C₁₋₆alkyl) or both **R¹²⁴** are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** and heterocycle being optionally substituted with **R¹⁵⁰**;

j) COOR¹²⁸ wherein **R¹²⁸** is H, (C₁₋₆alkyl), (C₃₋₇)cycloalkyl, or (C₁₋₆alkyl)-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said (C₁₋₆)alkyl, (C₃₋₇) cycloalkyl, or (C₁₋₆alkyl)-(C₃₋₇)cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl and (C₁₋₆alkyl)**Het** being optionally substituted with **R¹⁵⁰**;

k) CONR¹²⁹R¹³⁰ wherein **R¹²⁹** and **R¹³⁰** are independently H, (C₁₋₆alkyl), (C₃₋₇) cycloalkyl, (C₁₋₆alkyl)-(C₃₋₇) cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or both **R¹²⁹** and **R¹³⁰** are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, alkyl-cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl, (C₁₋₆alkyl)**Het** and heterocycle being optionally substituted with **R¹⁵⁰**;

l) aryl, Het, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)Het, all of which being optionally substituted with **R¹⁵⁰**; wherein **R¹⁵⁰** is selected from:

- 1 to 3 substituents selected from: halogen, **NO₂**, cyano or azido; or
- 1 to 3 substituents selected from:

a) (C₁₋₆) alkyl or haloalkyl, (C₃₋₇)cycloalkyl, (C₂₋₆)alkenyl, (C₂₋₈)alkynyl, (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, all of which optionally substituted with **R¹⁶⁰;**

b) OR¹⁰⁴ wherein **R¹⁰⁴** is H, (C₁₋₆alkyl), (C₃₋₇)cycloalkyl, or (C₁₋₆alkyl)-(C₃₋₇)cycloalkyl, aryl, **Het**, said alkyl, cycloalkyl, aryl and **Het** being optionally substituted with **R¹⁶⁰**;

c) OCOR¹⁰⁵ wherein **R¹⁰⁵** is (C₁₋₆alkyl), (C₃₋₇)cycloalkyl, (C₁₋₆alkyl)-(C₃₋₇) cycloalkyl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, said alkyl, cycloalkyl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het** being optionally substituted with **R¹⁶⁰**;

d) SR¹⁰⁸, SO₂N(**R¹⁰⁸**)₂ or SO₂N(**R¹⁰⁸**)C(O)**R¹⁰⁸** wherein each **R¹⁰⁸** is independently H, (C₁₋₆alkyl), (C₃₋₇)cycloalkyl or both **R¹⁰⁸** are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl or heterocycle being optionally substituted with **R¹⁶⁰**;

e) NR¹¹¹R¹¹² wherein **R¹¹¹** is H, (C₁₋₆alkyl), (C₃₋₇)cycloalkyl or (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, and **R¹¹²** is H, (C₁₋₆alkyl), (C₃₋₇)cycloalkyl or (C₁₋₆) alkyl-(C₃₋₇)cycloalkyl, COOR¹¹⁶ or SO₂R¹¹⁵ wherein **R¹¹⁵** is (C₁₋₆alkyl), (C₃₋₇)cycloalkyl, or both **R¹¹¹** and **R¹¹²** are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl, aryl, **Het**, (C₁₋₆alkyl)aryl or (C₁₋₆alkyl)**Het**, or heterocycle being optionally substituted with **R¹⁶⁰**;

stituted with R^{160} ;

f) $NR^{116}COR^{117}$ wherein R^{116} and R^{117} is each H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, said (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het** being optionally substituted with R^{160} ;

g) $NR^{118}CONR^{119}R^{120}$, wherein R^{118} , R^{119} and R^{120} is each H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl, or R^{119} and R^{120} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle; said alkyl, cycloalkyl or heterocycle being optionally substituted with R^{160} ;

h) $NR^{121}COCOR^{122}$ wherein R^{121} is H, (C_{1-6}) alkyl optionally substituted with R^{160} , and R^{122} is OR^{123} or $N(R^{124})_2$ wherein R^{123} and each R^{124} is independently H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, or R^{124} is OH or $O(C_{1-6})$ alkyl, or both R^{124} are covalently bonded together to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl and heterocycle being optionally substituted with R^{160} ;

j) tetrazole, $COOR^{128}$ wherein R^{128} is H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, said (C_{1-6}) alkyl and (C_{3-7}) cycloalkyl being optionally substituted with R^{160} ; and

k) $CONR^{129}R^{130}$ wherein R^{129} and R^{130} are independently H, (C_{1-6}) alkyl or (C_{3-7}) cycloalkyl, or both R^{129} and R^{130} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle, said alkyl, cycloalkyl and heterocycle being optionally substituted with R^{160} ;

wherein R^{160} is defined as 1 or 2 substituents selected from:

tetrazole, halogen, CN, C_{1-6} alkyl, haloalkyl, $COOR^{161}$, SO_3H , SO_2R^{161} , OR^{161} , $N(R^{162})_2$, $SO_2N(R^{162})_2$, $NR^{162}COR^{162}$ or $CON(R^{162})_2$, wherein R^{161} and each R^{162} is independently H, (C_{1-6}) alkyl, (C_{3-7}) cycloalkyl or (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl; or both R^{162} are covalently bonded together and to the nitrogen to which they are attached to form a 5, 6 or 7-membered saturated heterocycle.

27. The compound according to claim 26, wherein **Q** is a 6- or 10-membered aryl or **Het**, both being optionally substituted with:

- 1 to 3 halogen, NO_2 , cyano, azido; or
- 1 to 3 substituents selected from:

a) (C_{1-6}) alkyl or haloalkyl, first (C_{3-7}) cycloalkyl, (C_{2-6}) alkenyl, (C_{2-8}) alkynyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, all of which are optionally substituted with R^{150} ;

b) OR^{104} wherein R^{104} is H or (C_{1-6}) alkyl);

d) SO_2NHR^{108} wherein R^{108} is H or (C_{1-6}) alkyl;

e) $NR^{111}R^{112}$ wherein both R^{111} and R^{112} are independently H or (C_{1-6}) alkyl;

f) $NHCOR^{117}$ wherein R^{117} is H or (C_{1-6}) alkyl;

g) $NHCONR^{119}R^{120}$, wherein R^{119} and R^{120} is each independently H or (C_{1-6}) alkyl;

h) $NHCOCOR^{122}$ wherein R^{122} is OR^{123} or $N(R^{124})_2$ wherein R^{123} and each R^{124} is independently H or (C_{1-6}) alkyl);

j) $COOR^{128}$ wherein R^{128} is H or (C_{1-6}) alkyl;

k) $CONHR^{130}$ wherein R^{130} is H or (C_{1-6}) alkyl;

l) 6- or 10-membered aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het**, said aryl, **Het**, (C_{1-6}) alkyl)aryl or (C_{1-6}) alkyl)**Het** being optionally substituted with R^{150} ; wherein R^{150} is selected from:

- 1 to 3 halogens; or
- 1 to 3 substituents selected from:

a) first (C_{1-6}) alkyl or haloalkyl, first (C_{3-7}) cycloalkyl, (C_{2-6}) alkenyl, (C_{2-8}) alkynyl, (C_{1-6}) alkyl- (C_{3-7}) cycloalkyl, all of which are optionally substituted with tetrazole, OR^{102} , $COOR^{102}$, wherein R^{102} is H or (C_{1-6}) alkyl;

b) OR^{104} wherein R^{104} is H or (C_{1-6}) alkyl);

d) SO_2NHR^{108} wherein R^{108} is H or (C_{1-6}) alkyl;

e) $NR^{111}R^{112}$ wherein both R^{111} and R^{112} are independently H or (C_{1-6}) alkyl;

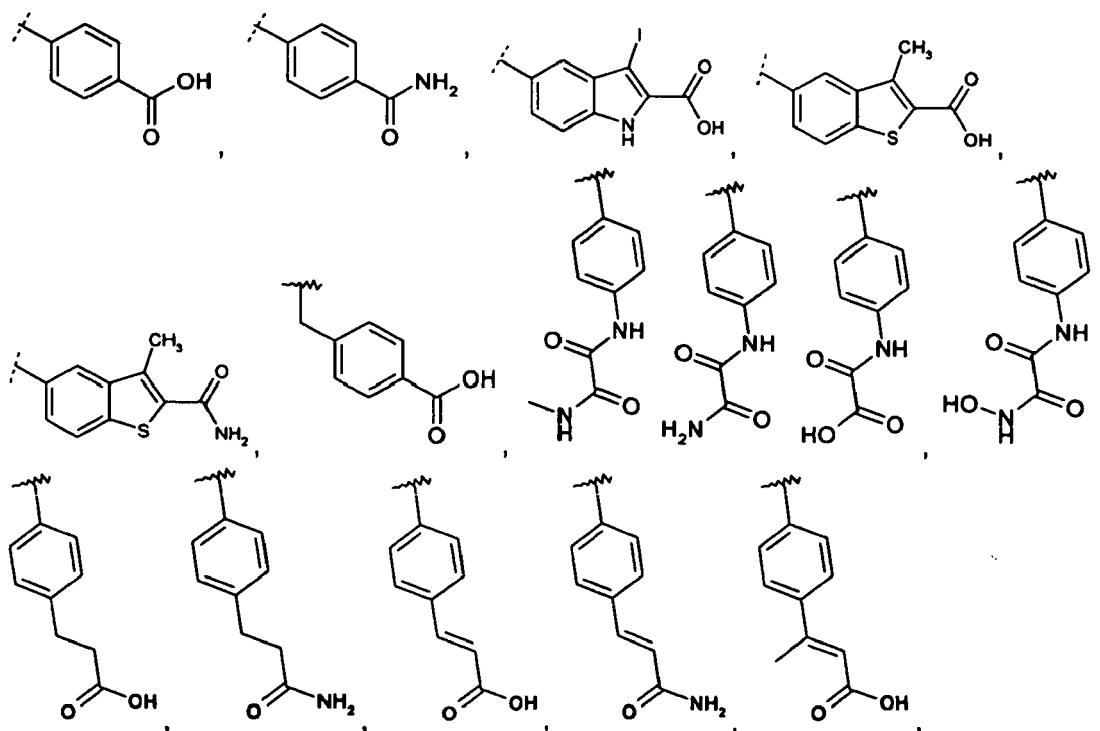
f) $NHCOR^{117}$ wherein R^{117} is H or (C_{1-6}) alkyl); and

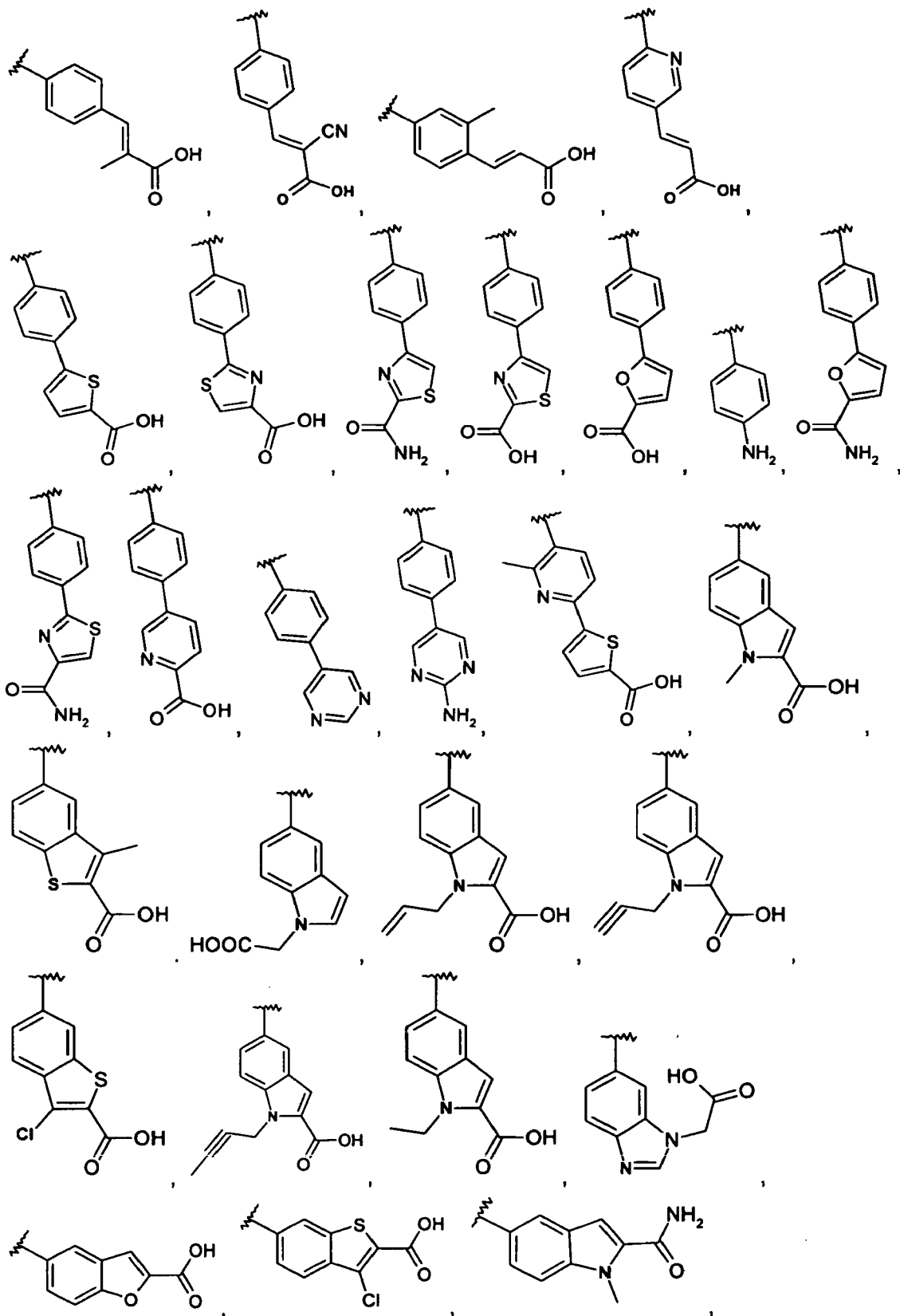
h) $NHCOCOR^{122}$ wherein R^{122} is OR^{123} or $N(R^{124})_2$ wherein R^{123} and each R^{124} is independently H or (C_{1-6}) alkyl);

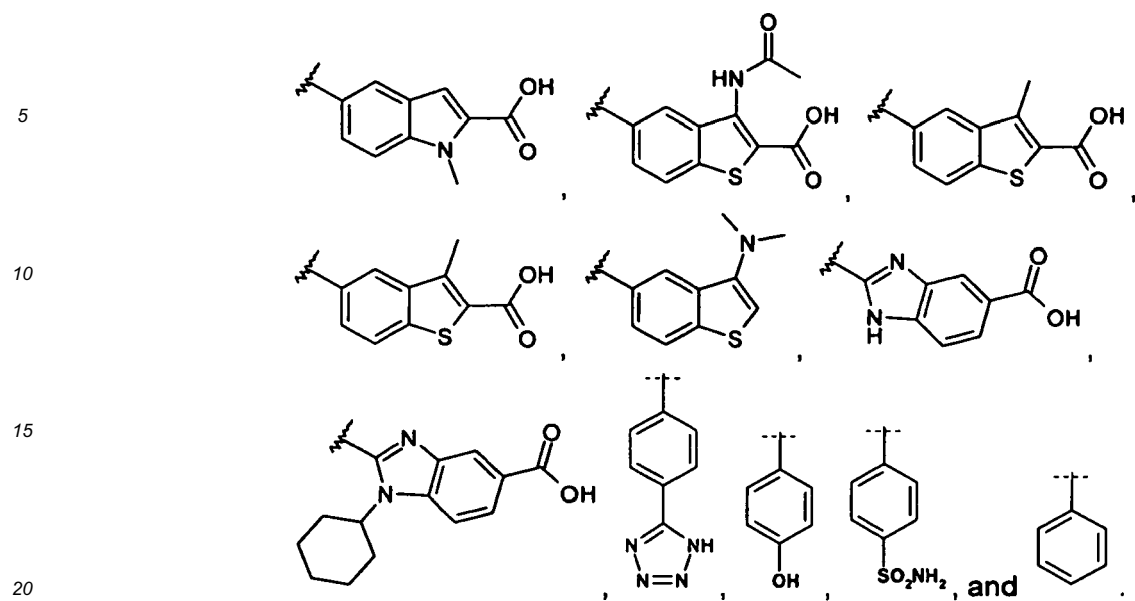
j) COOR^{128} wherein R^{128} is H or (C_{1-6}) alkyl; and

k) CONHR^{130} wherein R^{130} is H or (C_{1-6}) alkyl.

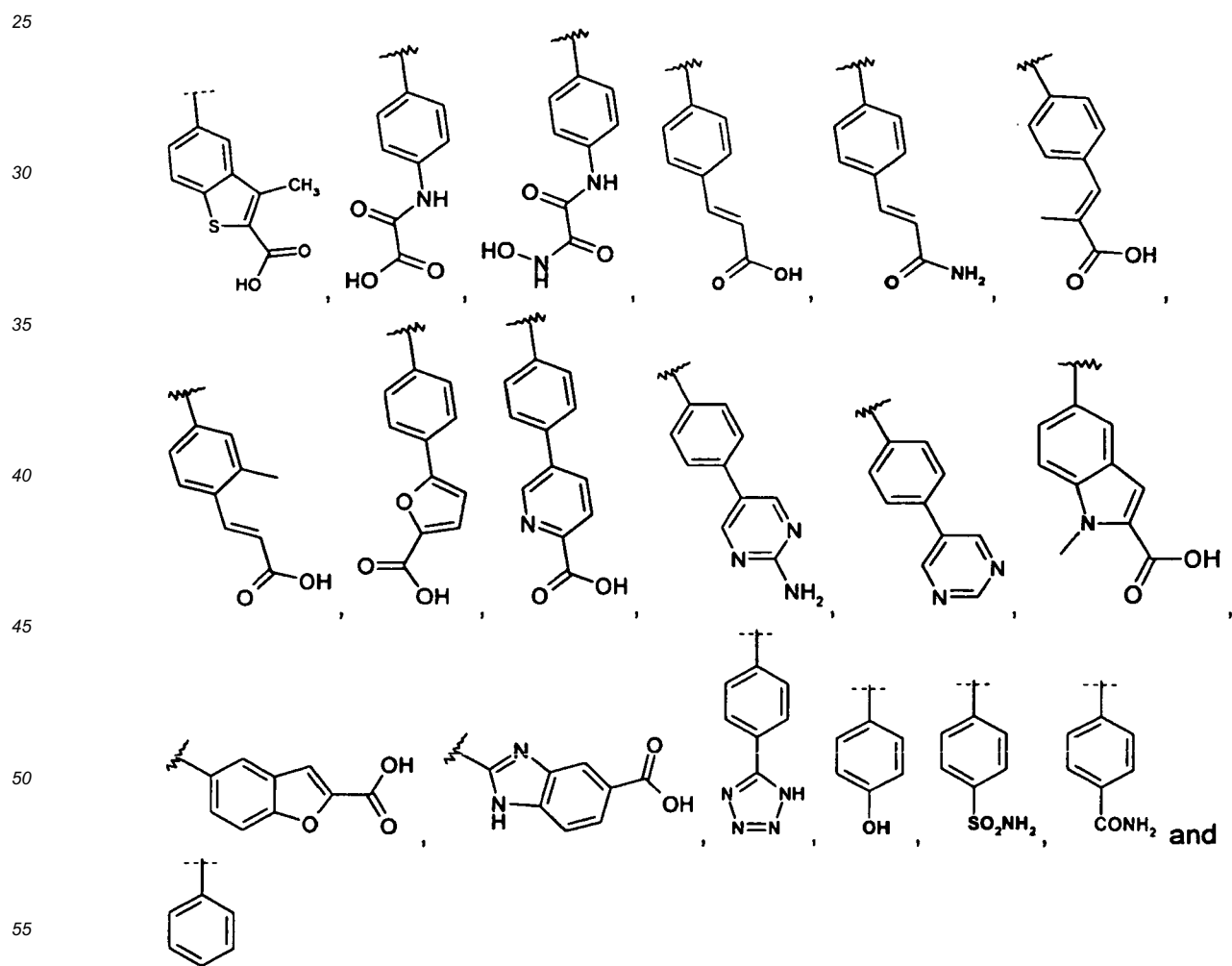
28. The compound according to claim 1 or 26, wherein **Q** is selected from:



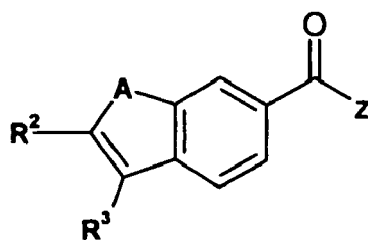




29. The compound according to claim 28, wherein Q is selected from:



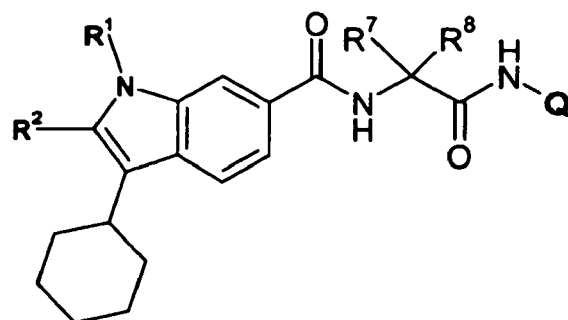
30. The compound according to claim 1 of the formula:



wherein **A**, **R²**, **R³** and **Z** are defined as follows:

Cpd. #	A	R²	R³	Z	
1006	NMe				;
1031	NMe				;
1032	NMe				; and
1033	NMe				.

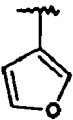
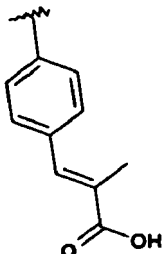
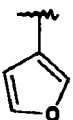
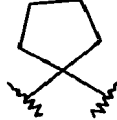
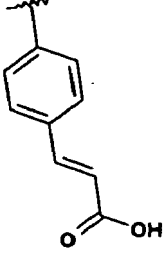
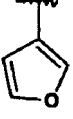
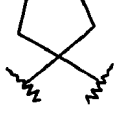
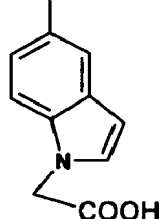
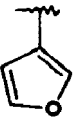
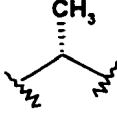
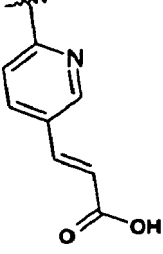
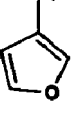
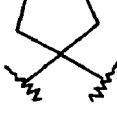
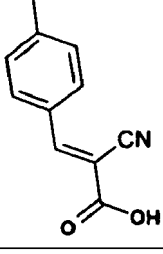
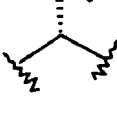
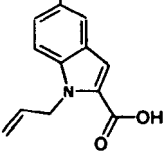
31. The compound according to claim 1 of the formula:



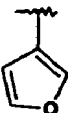
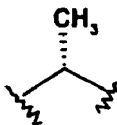
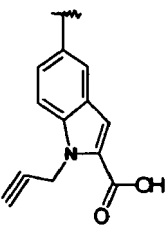
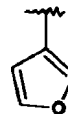
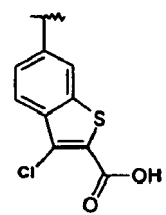
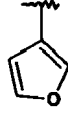
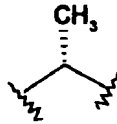
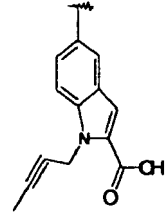
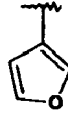
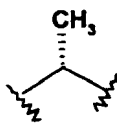
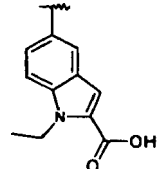
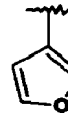
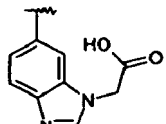
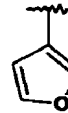
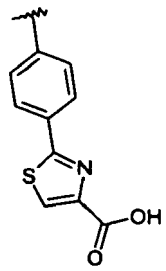
wherein **R¹**, **R²**, **R⁷**, **R⁸** and **Q** are defined as follows:

Cpd. #	R¹	R²	R⁷	R⁸	Q
2001	H				;
2002	H				;
2003	H	Br			;
2004	H				;

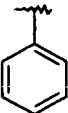
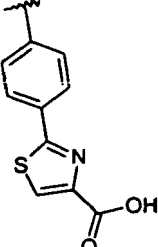
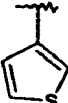
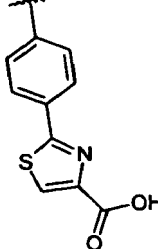
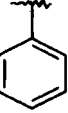
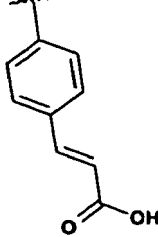
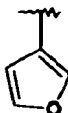
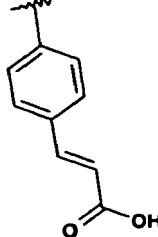
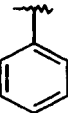
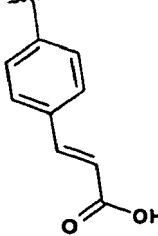
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	
2005	H				;
2006	Me				;
2008	H				;
2009	H				;
2010	H				;
2011	H				;

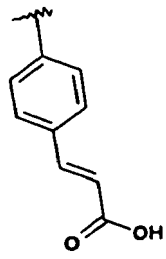
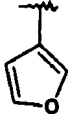
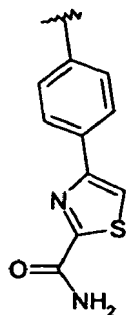
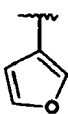
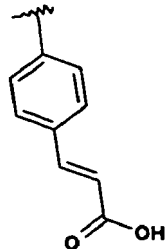
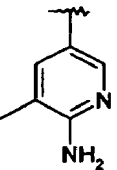
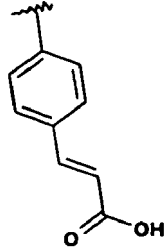
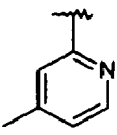
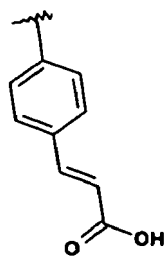
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	
2012	H				;
2013	H				;
2014	H				;
2015	H				;
2016	H				;
2017	H				;

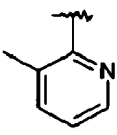
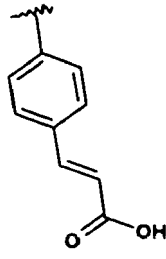
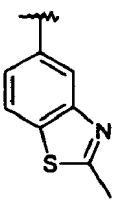
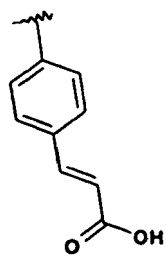
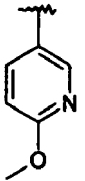
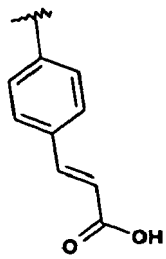
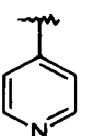
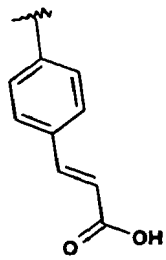
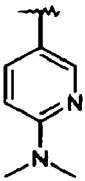
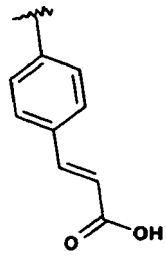
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	
2018	H				;
2019	H				;
2020	Et				;
2021					;
2022					;

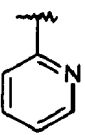
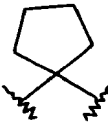
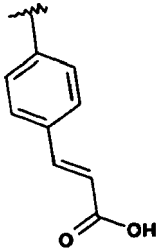
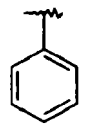
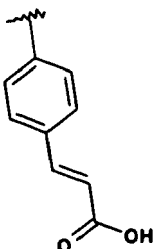
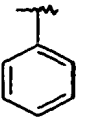
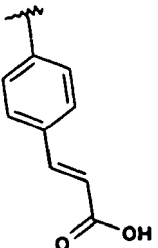
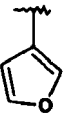
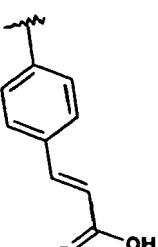
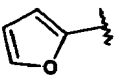
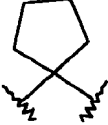
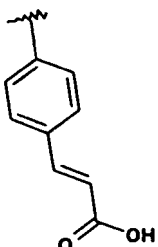
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	
2023	Me	H			;
2024	H				;
2025	H				;
2026	Me				;
2027	Me				;

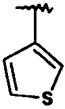
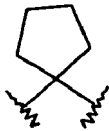
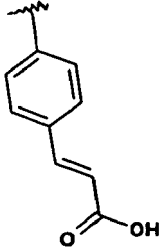
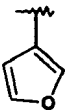
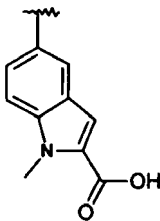
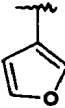
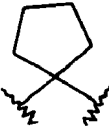
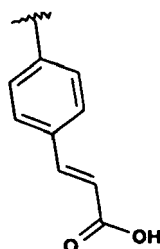
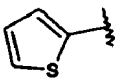
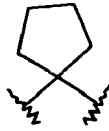
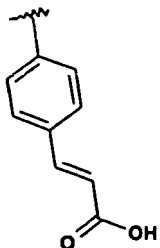
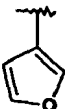
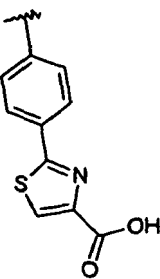
(continued)

Cpd. #	R ¹	R ²		Q	
2028	Me				;
2029	Me				;
2030	Me				;
2031	Me				;
2032	Me				;

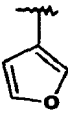
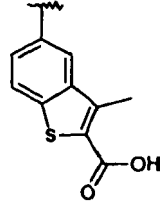
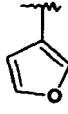
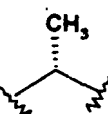
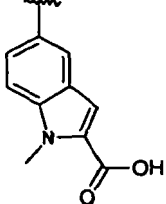
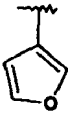
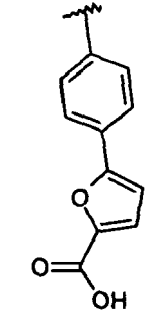
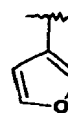
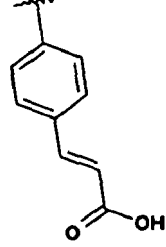
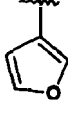
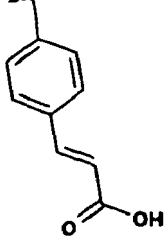
(continued)

Cpd. #	R ¹	R ²		Q	
2033	H				;
2034	Me				;
2035	H				;
2036	H				;
2037	H				;

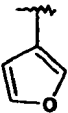
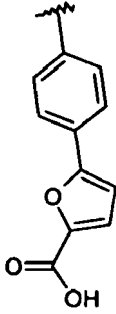
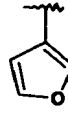
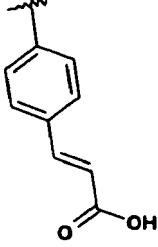
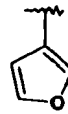
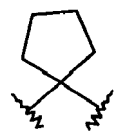
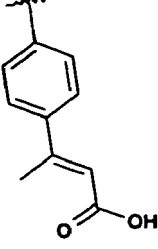
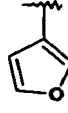
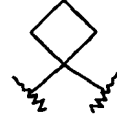
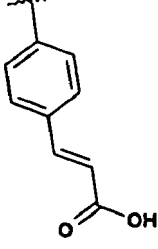
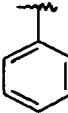
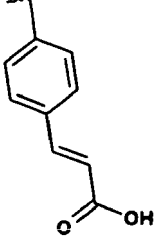
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	
2038	H				;
2039	H				;
2041	Me				;
2042	H				;
2044	H				;

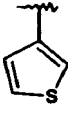
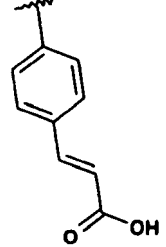
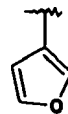
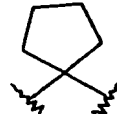
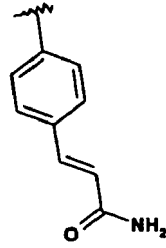
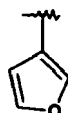
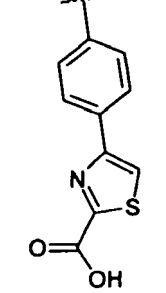
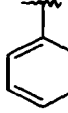
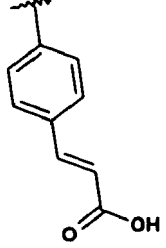
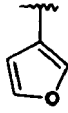
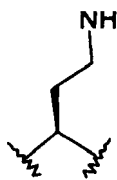
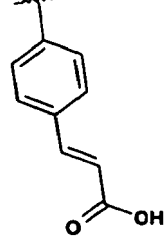
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	
2046	H				;
2047	H				;
2048	H				;
2050	H				;
2051	Me				;

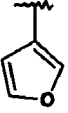
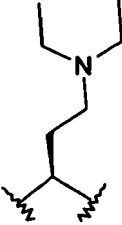
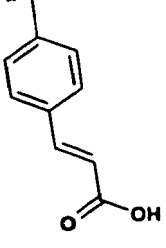
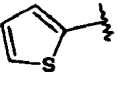
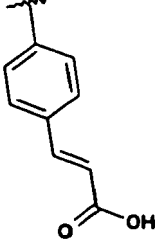
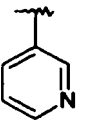
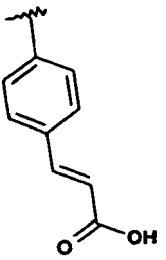
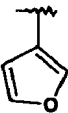
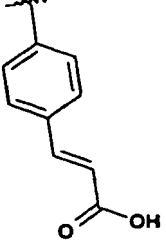
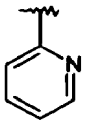
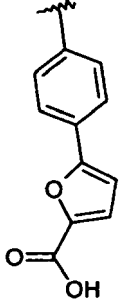
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	
2053	H				;
2054	Et				;
2056	H				;
2057	H				;
2058	H				;

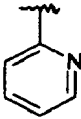
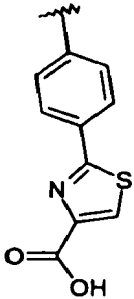
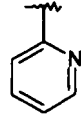
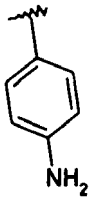
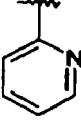
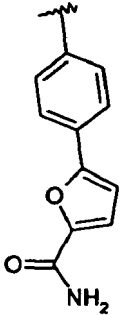
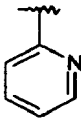
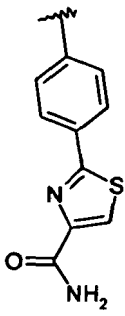
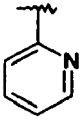
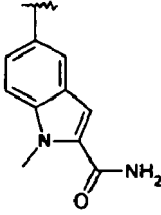
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	
2059	H				;
2060	H				;
2061	H				;
2062	Me				;
2064	H				;

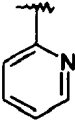
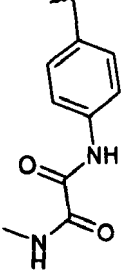
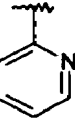
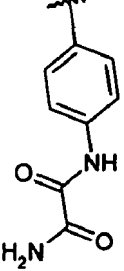
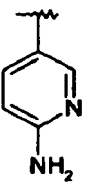
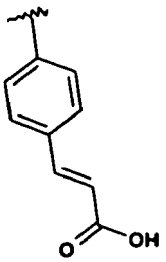
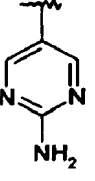
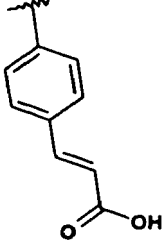
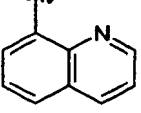
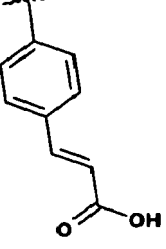
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	
2065	H				;
2066	Me				;
2068	Me				;
2069	H				;
2070	Me				;

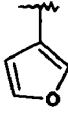
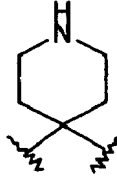
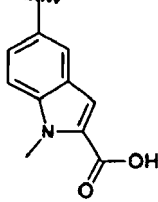
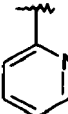
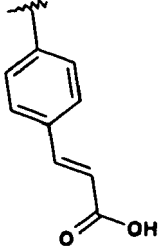
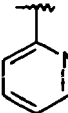
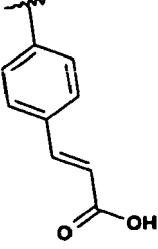
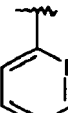
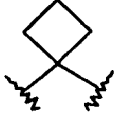
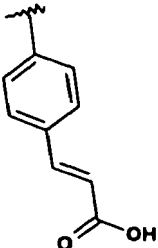
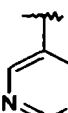
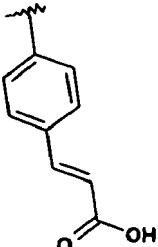
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	
2071	Me				;
2072	Me				;
2073	Me				;
2074	Me				;
2075	Me				;

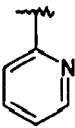
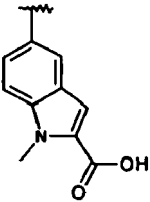
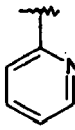
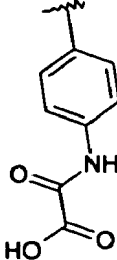
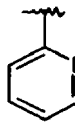
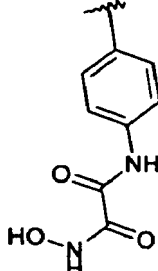
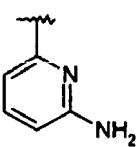
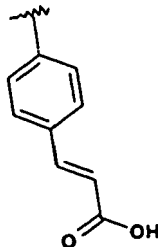
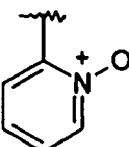
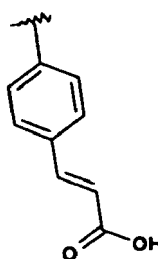
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	
2076	Me				;
2077	Me				;
2080	Me				;
2081	Me				;
2082	Me				;

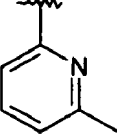
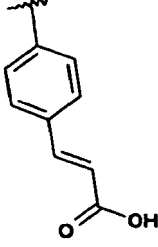
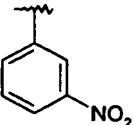
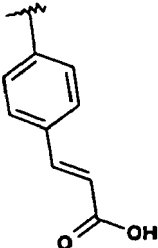
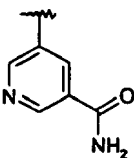
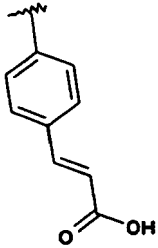
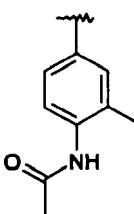
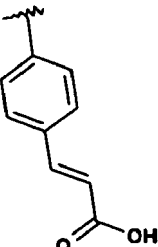
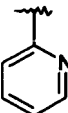
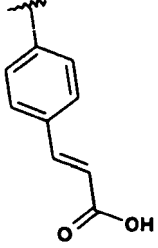
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	
2084	H				;
2087	Me				;
2089	H				;
2090	Me				;
2091	Me				;

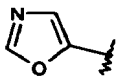
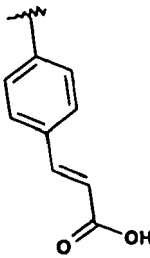
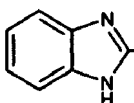
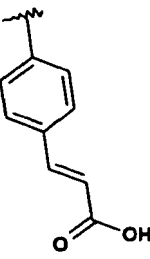
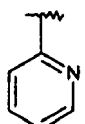
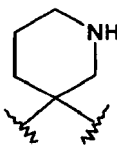
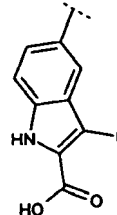
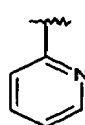
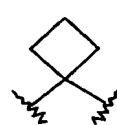
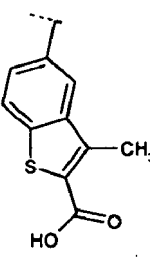
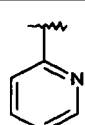
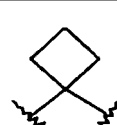
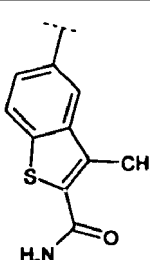
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	
2093	Me				;
2094	Me				;
2095	Me				;
2096	Me				;
2097	Me				;

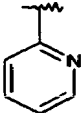
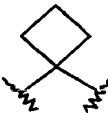
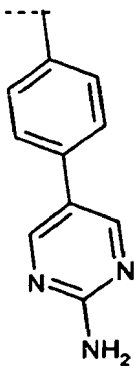
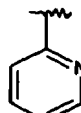
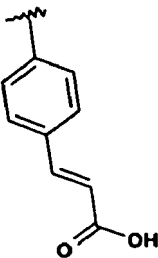
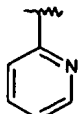
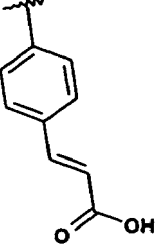
(continued)

Cpd. #	R ¹	R ²		Q	
2098	Me				;
2102	Me				;
2103	Me				;
2104	Me				;
2107	Me				;

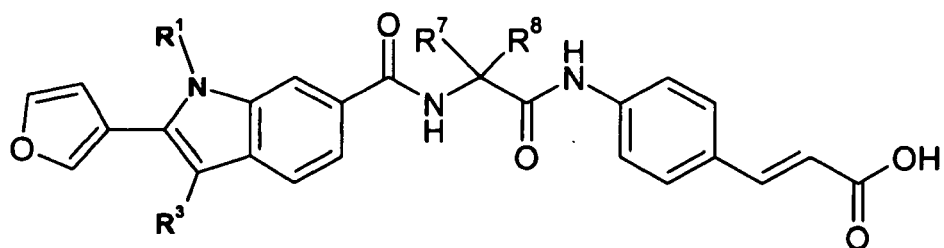
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	
2108	Me				;
2109	Me				;
2110	Me				;
2111	Me				;
2112	Me				;

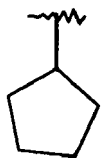
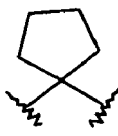
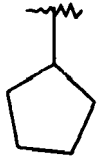
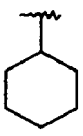
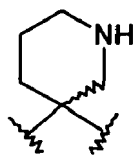
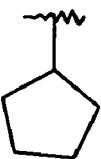
(continued)

Cpd. #	R ¹	R ²	R ⁷ R ⁸	Q	
2113	Me				;
2115	Me				; and
2117	Me				.

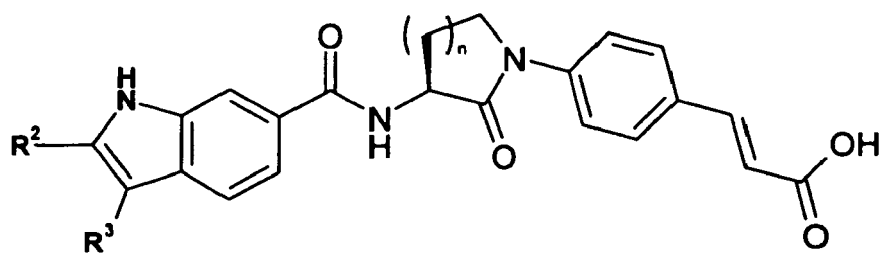
32. The compound according to claim 1 of the formula:



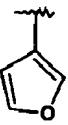
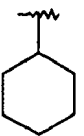
wherein R¹, R³, R⁷ and R⁸ are defined as follows:

cpd. #	R ¹	R ³	R ⁷ R ⁸	
3001	H			;
3002	H			;
3003	Me			and
3004	Me			.

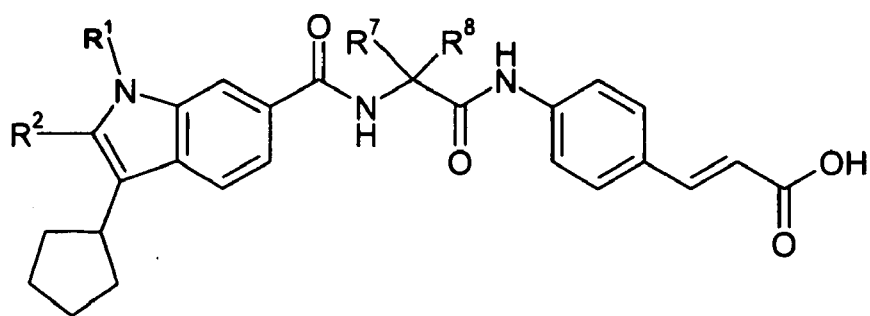
33. The compound according to claim 1 of the formula:



wherein R², R³ and n are defined as follows:

cpd. #	R ²	R ³	n	
5001			1	.

34. The compound according to claim 1 of the formula:



wherein R^1 , R^2 , R^7 and R^8 are defined as follows:

cpd. #	R^1	R^2	R^7 R^8	
6003	CH ₃			;
6004	CH ₃			;
6005	CH ₃			;
6006	CH ₃			;
6007	CH ₃			;

(continued)

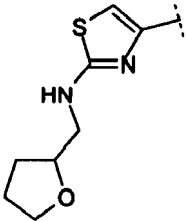
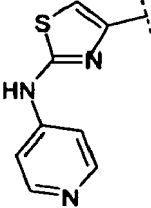
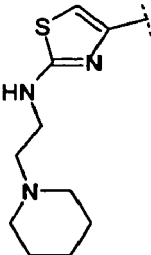
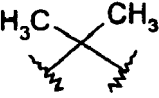
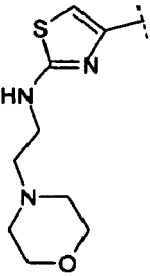
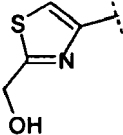
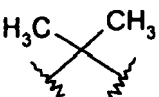
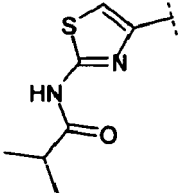
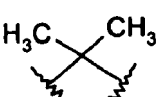
cpd. #	R ¹	R ²	R ⁷ R ⁸	
5				
10	6008	CH ₃		H ₃ C CH ₃ ;
15	6009	CH ₃		H ₃ C CH ₃ ;
20	6010	CH ₃		H ₃ C CH ₃ ;
25	6011	CH ₃		H ₃ C CH ₃ ;
30	6012	CH ₃		H ₃ C CH ₃ ;
35	6013	CH ₃		H ₃ C CH ₃ ;
40	6013	CH ₃		H ₃ C CH ₃ ;
45	6013	CH ₃		H ₃ C CH ₃ ;
50	6013	CH ₃		H ₃ C CH ₃ ;
55				

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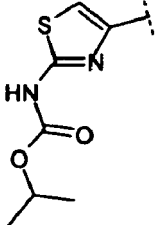
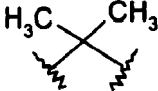
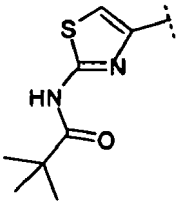
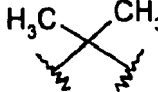
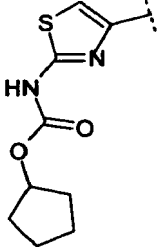
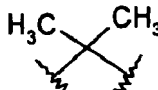
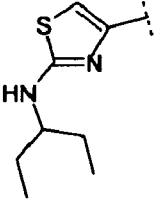
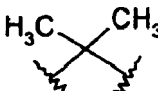
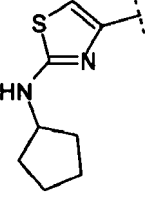
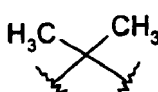
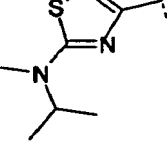
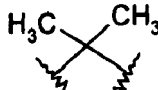
(continued)

cpd. #	R ¹	R ²	R ⁷ R ⁸	
5				
6014	CH ₃			;
6015	CH ₃			;
6016	CH ₃			;
6017	CH ₃			;
6018	CH ₃			;
6019	CH ₃			;
6020	CH ₃			;

(continued)

cpd. #	R ¹	R ²	R ⁷ R ⁸	
6021	CH ₃			;
6022	CH ₃			;
6023	CH ₃			;
6025	CH ₃			;
6026	CH ₃			;
6027	CH ₃			;

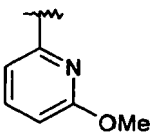
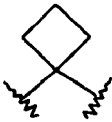
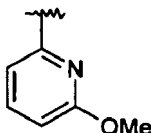
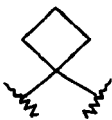
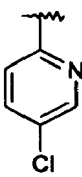
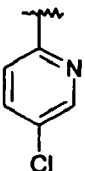
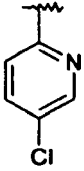
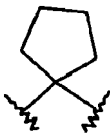
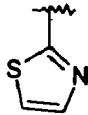
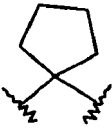
(continued)

cpd. #	R ¹	R ²		
6028	CH ₃			;
6029	CH ₃			;
6030	CH ₃			;
6031	CH ₃			;
6033	CH ₃			;
6034	CH ₃			;

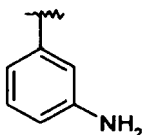
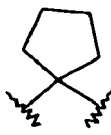
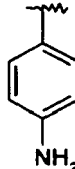
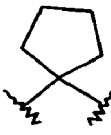
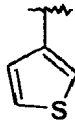
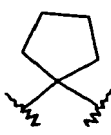
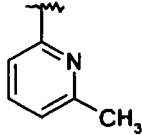
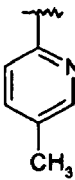
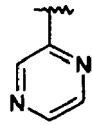
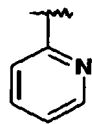
(continued)

cpd. #	R ¹	R ²	R ⁷ R ⁸	
5				
6035	CH ₃			;
6036	CH ₃			;
6037	CH ₃			;
6038	CH ₃			;
6039	CH ₃			;
6040	CH ₃			;
6041	CH ₃			;
6042	CH ₃			;

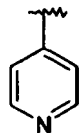
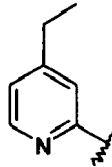
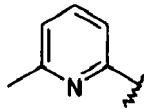
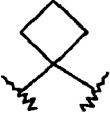
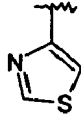
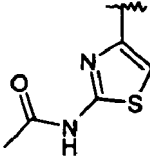
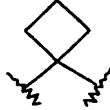
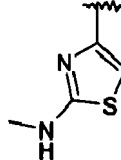
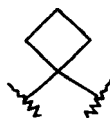
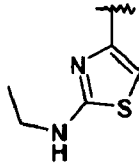
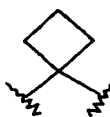
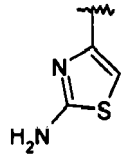
(continued)

cpd. #	R ¹	R ²		
6043	CH ₃			;
6044	CH ₃			;
6045	CH ₃			;
6046	CH ₃			;
6047	CH ₃			;
6048	CH ₃			;
6049	CH ₃			;
6051	CH ₃			;

(continued)

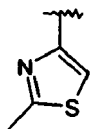
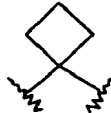
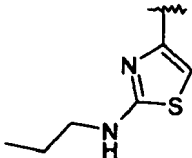
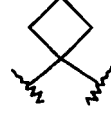
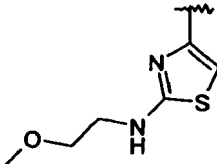
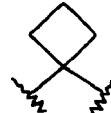
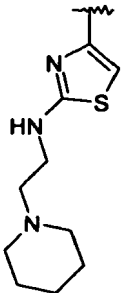
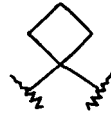
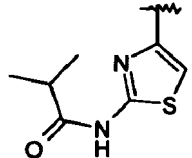
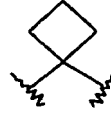
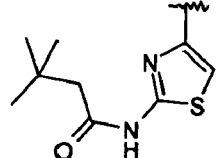
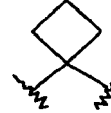
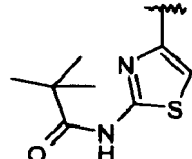
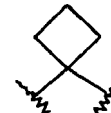
cpd. #	R ¹	R ²		
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6053	CH ₃			;
6055	CH ₃			;
6057	CH ₃			;
6060	CH ₃			;
6061	CH ₃			;
6063	CH ₃			;
6064	CH ₃			;

(continued)

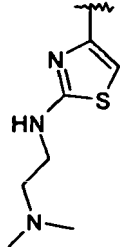
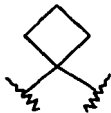
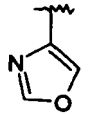
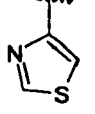
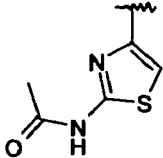
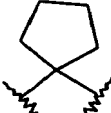
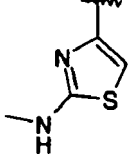
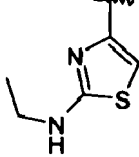
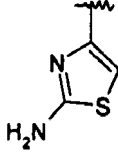
cpd. #	R ¹	R ²		
6066	CH ₃			;
6067	CH ₃			;
6069	CH ₃			;
6070	CH ₃			;
6071	CH ₃			;
6072	CH ₃			;
6073	CH ₃			;
6074	CH ₃			;

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(continued)

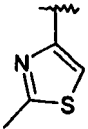
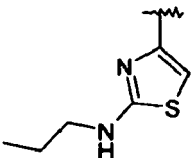
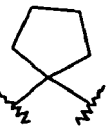
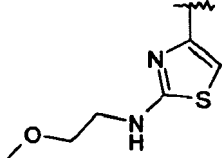
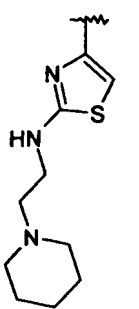
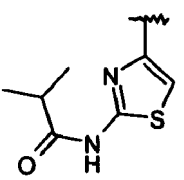
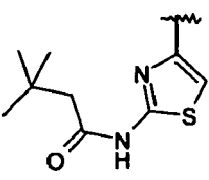
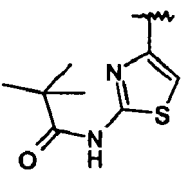
cpd. #	R ¹	R ²		
6075	CH ₃			;
6076	CH ₃			;
6077	CH ₃			;
6078	CH ₃			;
6079	CH ₃			;
6080	CH ₃			;
6081	CH ₃			;

(continued)

cpd. #	R ¹	R ²		
6082	CH ₃			;
6083	CH ₃			;
6084	CH ₃			;
6085	CH ₃			;
6086	CH ₃			;
6087	CH ₃			;
6088	CH ₃			;
6089	CH ₃			;

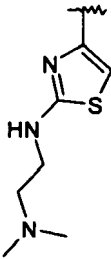
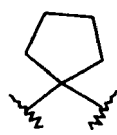
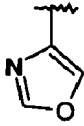
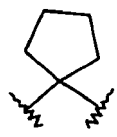
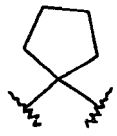
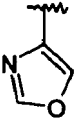
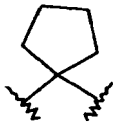
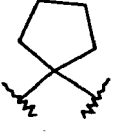
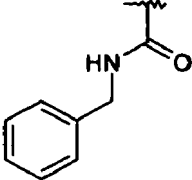
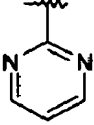
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(continued)

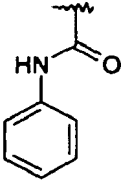
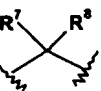
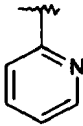
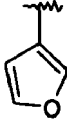
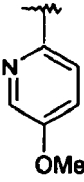
cpd. #	R ¹	R ²	R ⁷ R ⁸	
6090	CH ₃			;
6091	CH ₃			;
6092	CH ₃			;
6093	CH ₃			;
6094	CH ₃			;
6095	CH ₃			;
6096	CH ₃			;

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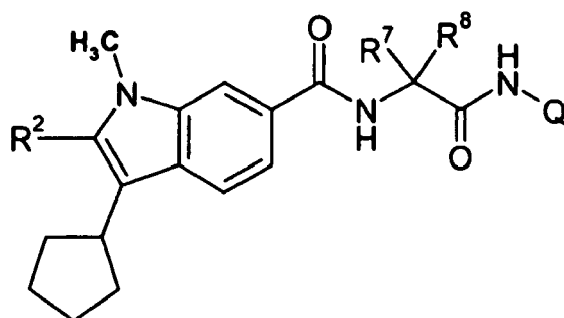
(continued)

cpd. #	R ¹	R ²	R ⁷ R ⁸	
6097	CH ₃			;
6098	CH ₃			;
6099	CH ₃			;
6100	CH ₃			;
6106	CH ₃	CONHCH ₃		;
6107	CH ₃	CON(CH ₃) ₂		;
6110	CH ₃			;
6111	CH ₃			;

(continued)

cpd. #	R ¹	R ²	R ⁷ R ⁸	
6112	CH ₃			;
6113	CH ₃	CONH ₂		;
6119	CH ₃	H		;
6120	CH ₃	Br		;
6121	H			;
6122	CH ₃			and
6123	CH ₃			.

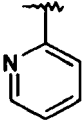
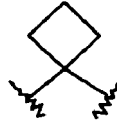
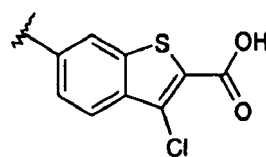
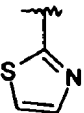
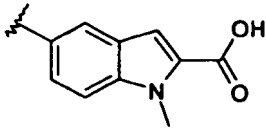
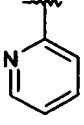
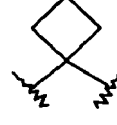
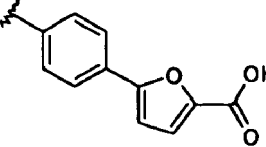
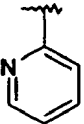
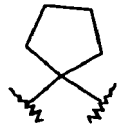
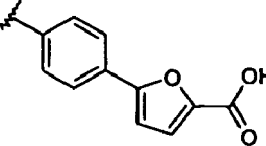
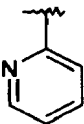
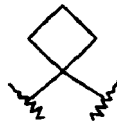
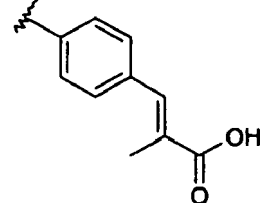
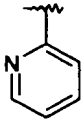
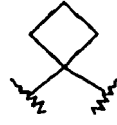
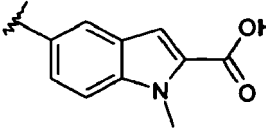
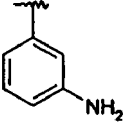
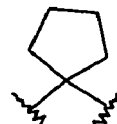
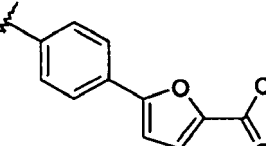
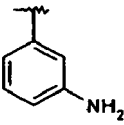
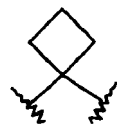
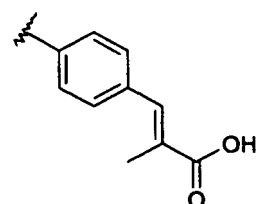
35. The compound according to claim 1 of the formula:



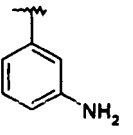
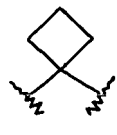
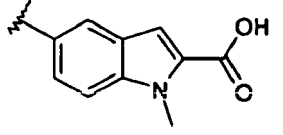
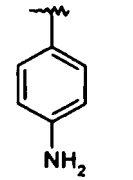
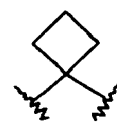
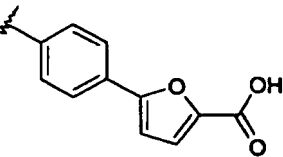
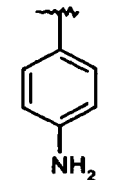
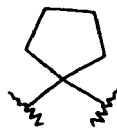
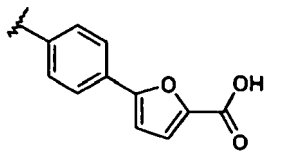
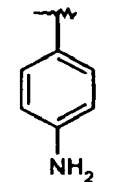
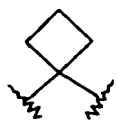
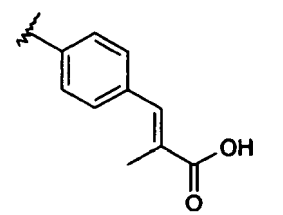
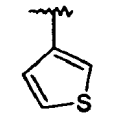
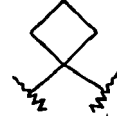
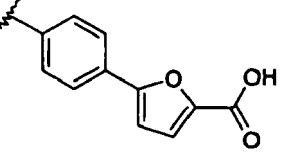
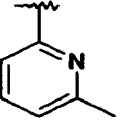
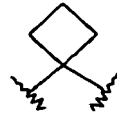
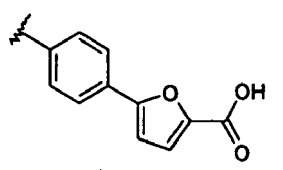
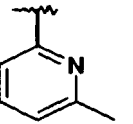
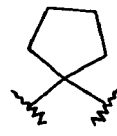
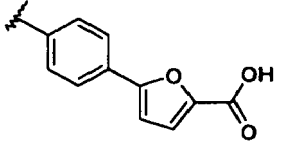
wherein R^2 , R^7 , R^8 and Q are defined as follows:

cpd #	R^2	R^7 R^8	Q	
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7002				;
7003				;
7004				;
7005				;
7006				;

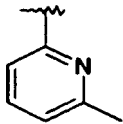
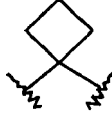
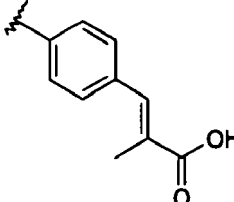
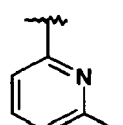
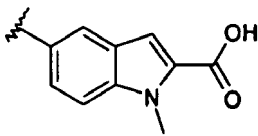
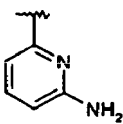
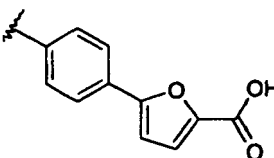
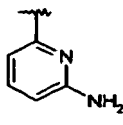
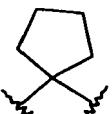
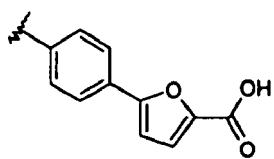
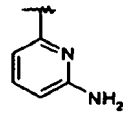
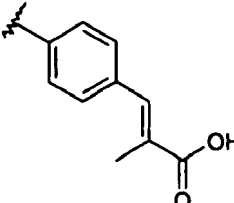
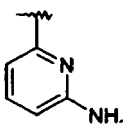
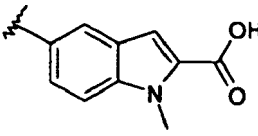
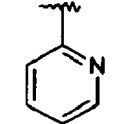
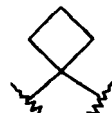
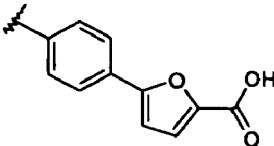
(continued)

cpd #	R ²	R ⁷ R ⁸	Q	
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7008				;
7009				;
7010				;
7011				;
7012				;
7013				;
7014				;

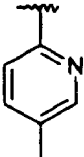
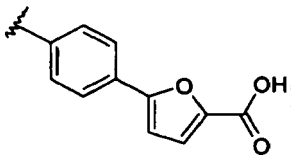
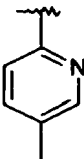
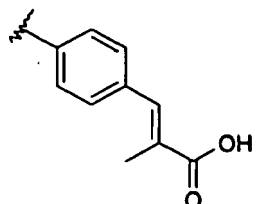
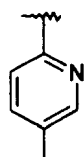
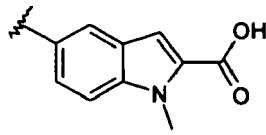
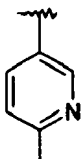
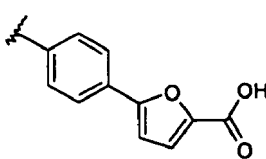
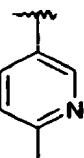
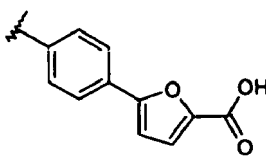
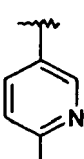
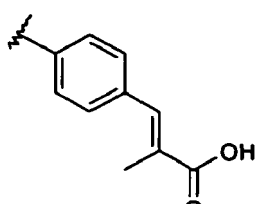
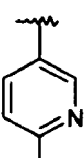
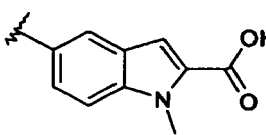
(continued)

cpd #	R ²	R ⁷ R ⁸	Q	
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7016				;
7017				;
7018				;
7019				;
7020				;
7021				;

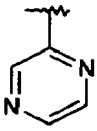
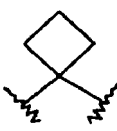
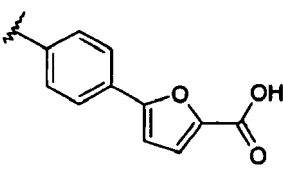
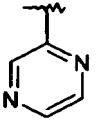
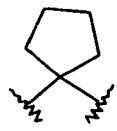
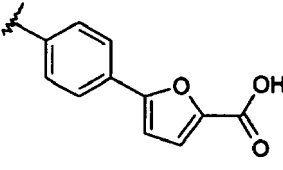
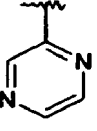
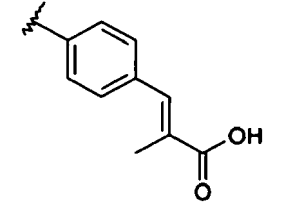
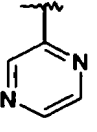
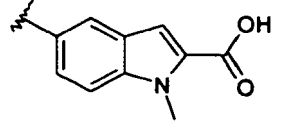
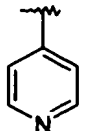
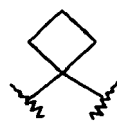
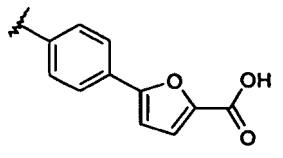
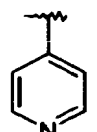
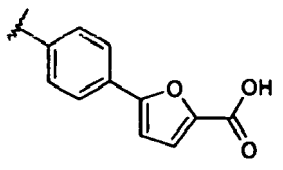
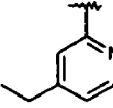
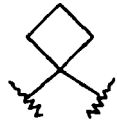
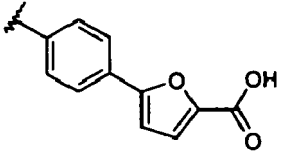
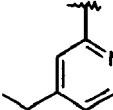
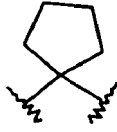
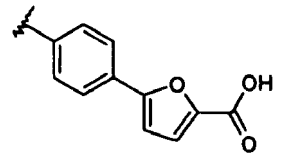
(continued)

cpd #	R ²	R ⁷ R ⁸	Q	
7022				;
7023				;
7024				;
7025				;
7026				;
7027				;
7028				;

(continued)

cpd #	R ²		Q	
7029				;
7030				;
7031				;
7032				;
7033				;
7034				;
7035				;

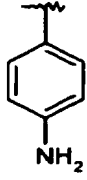
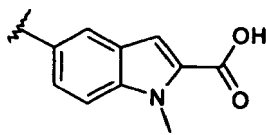
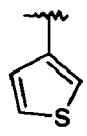
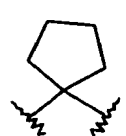
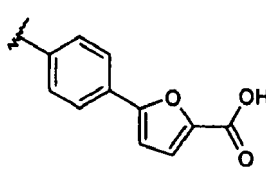
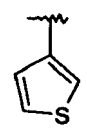
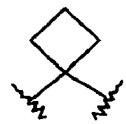
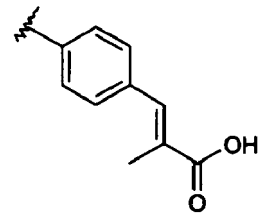
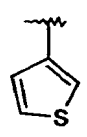
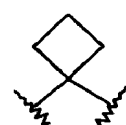
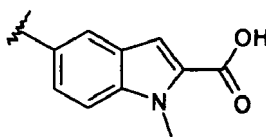
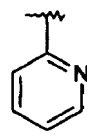
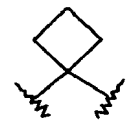
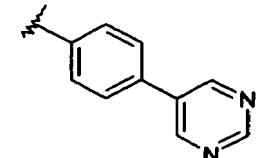
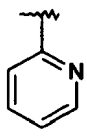
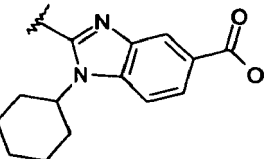
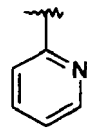
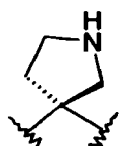
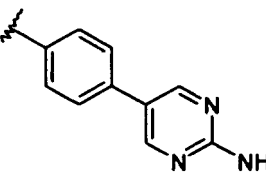
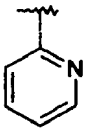
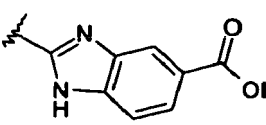
(continued)

cpd #	R ²	R ⁷ R ⁸	Q	
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7037				;
7038				;
7039				;
7040				;
7041				;
7042				;
7043				;

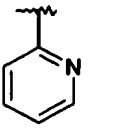
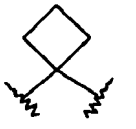
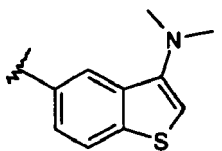
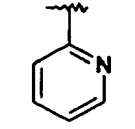
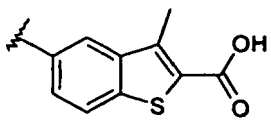
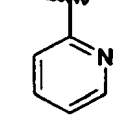
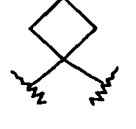
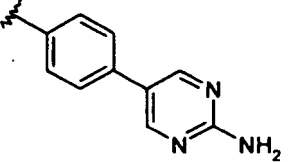
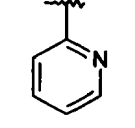
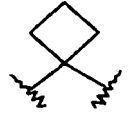
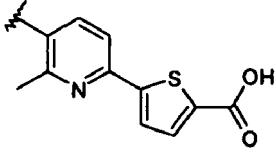
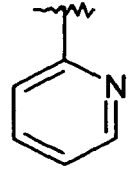
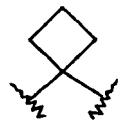
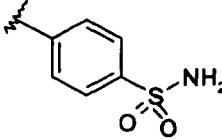
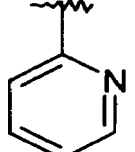
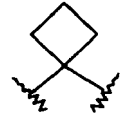
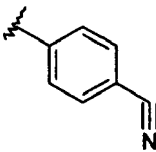
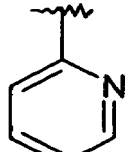
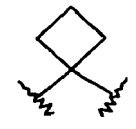
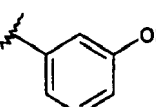
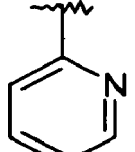
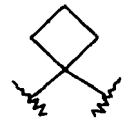
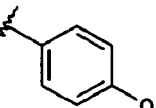
(continued)

cpd #	R ²	R ⁷ R ⁸	Q	
7044				;
7045				;
7046				;
7047				;
7048				;
7049				;
7050				;

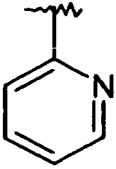
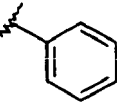
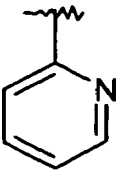
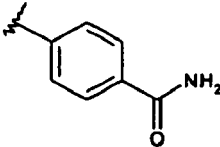
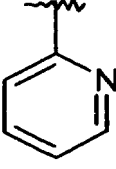
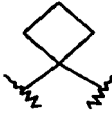
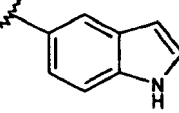
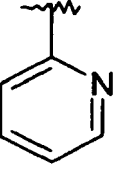
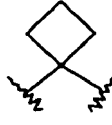
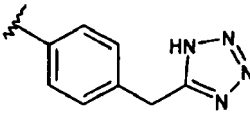
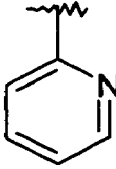
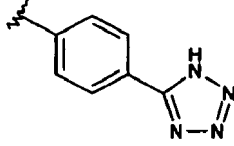
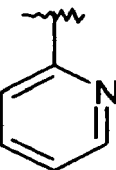
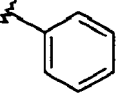
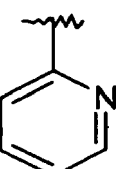
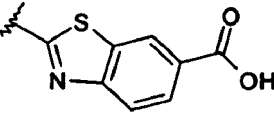
(continued)

cpd #	R ²	R ⁷ R ⁸	Q	
7051				;
7052				;
7053				;
7054				;
7055				;
7056				;
7059				;
7062				;

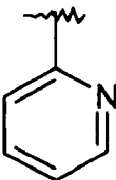
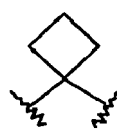
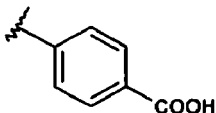
(continued)

cpd #	R^2	R^7 R^8	Q	
7063				;
7064				;
7065				;
7066				;
7068				;
7070				;
7071				;
7072				;

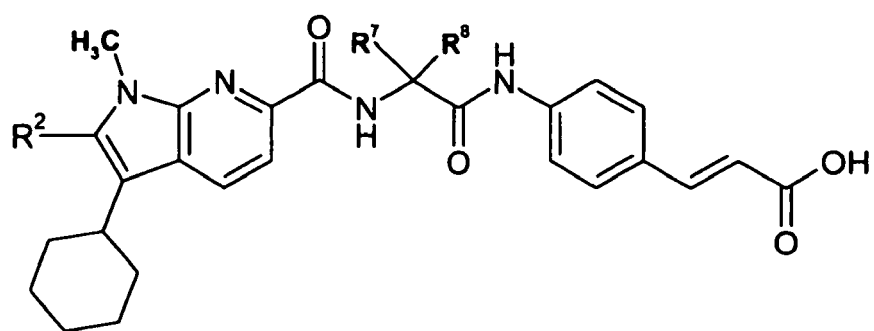
(continued)

cpd #	R ²	R ⁷ R ⁸	Q	
7073				;
7076				;
7077				;
7078				;
7079				;
7080				;
7082				; and

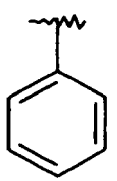
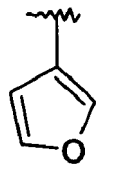
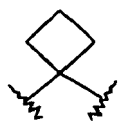
(continued)

cpd #	R ²	R ⁷ R ⁸	Q	
7083				

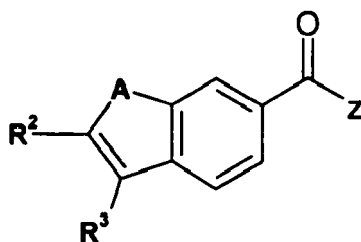
36. The compound according to claim 1 of the formula:



wherein R², R⁷ and R⁸ are defined as follows:

cpd. #	R ²	R ⁷ R ⁸	
9001			; and
9002			

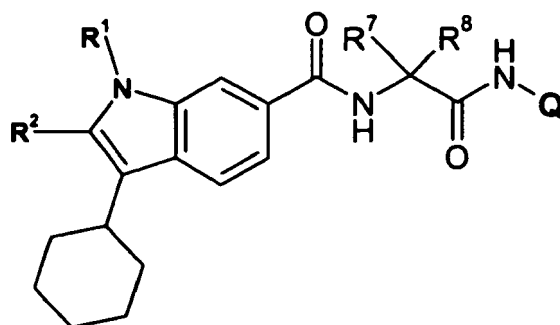
37. A compound of the formula



wherein **A**, **R²**, **R³** and **Z** are defined as follows:

Cpd. #	A	R²	R³	Z	
1013	NMe				;

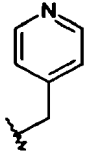
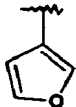
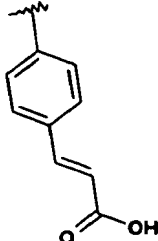
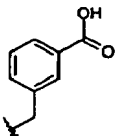
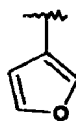
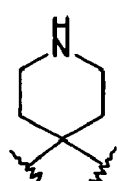
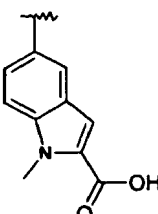
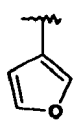
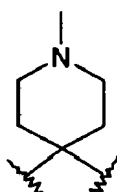
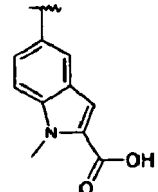
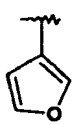
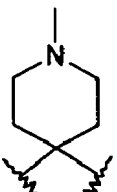
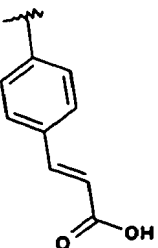
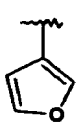
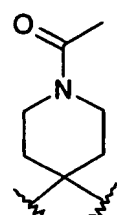
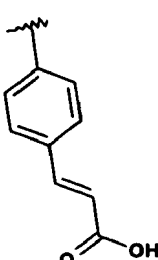
or a compound of the formula



wherein **R¹**, **R²**, **R⁷**, **R⁸** and **Q** are defined as follows:

	R¹	R²		Q	
2040					;

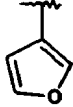
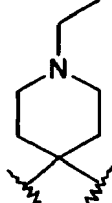
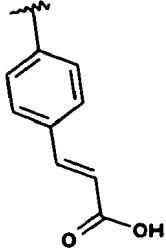
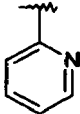
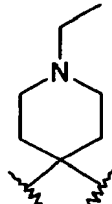
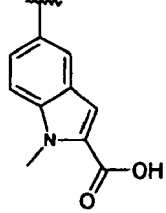
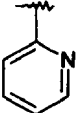
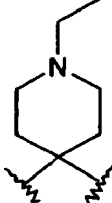
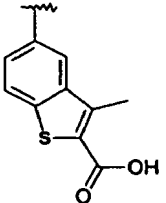
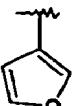
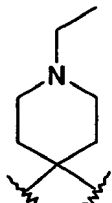
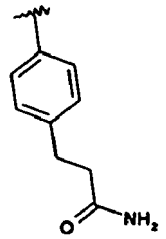
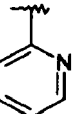
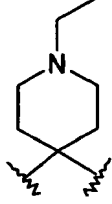
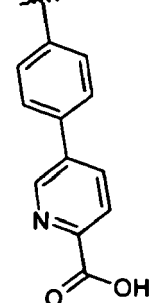
(continued)

	R ¹	R ²	R ⁷ R ⁸	Q	
2043					;
2045					;
2049	H				;
2052	H				;
2055	H				;

(continued)

	R ¹	R ²	R ⁷ R ⁸	Q	
2063					;
2067	H				;
2078	H				;
2079	H				;
2086	H				;

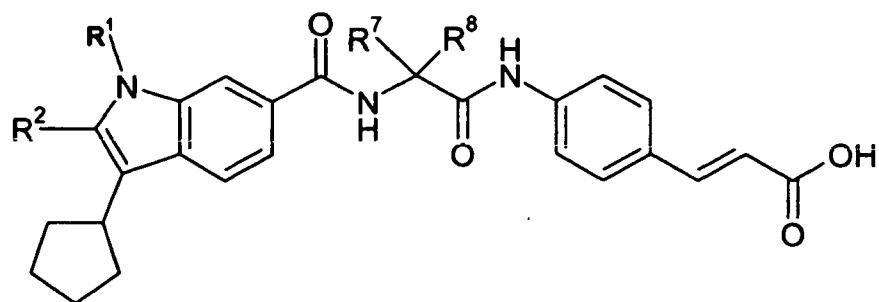
(continued)

	R ¹	R ²	R ⁷ R ⁸	Q	
2088	H				;
2092	Me				;
2099	Me				;
2100	H				;
2101	Me				;

(continued)

	R ¹	R ²	R ⁷ R ⁸	Q	
5					
10	2105	Me			;
15					
20	2106	Me			;
25					
30	2114	Me			;
35					
40	2116	Me			and
45					
50	2118	Me			;
55					

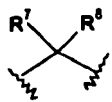
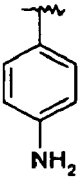
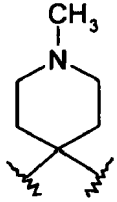
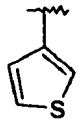
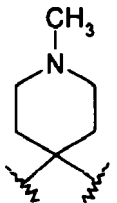
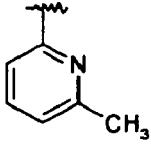
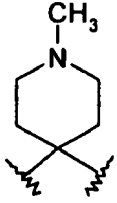
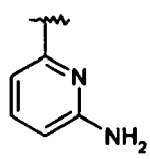
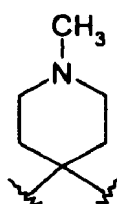
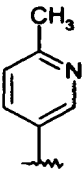
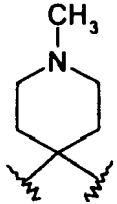
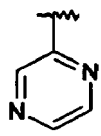
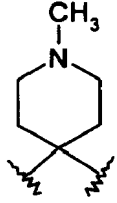
or a compound of the formula



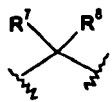
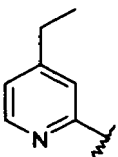
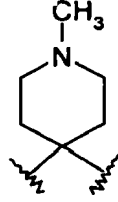
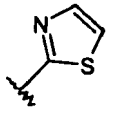
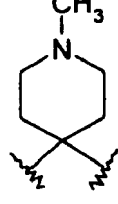
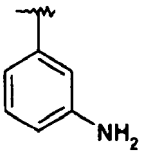
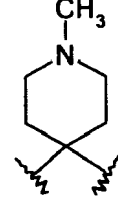
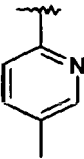
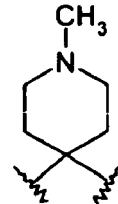
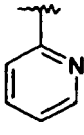
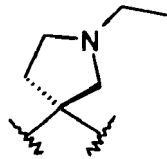
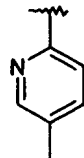
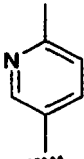
wherein R¹, R², R⁷ and R⁸ are defined as follows:

cpd. #	R ¹	R ² ;	R ⁷ R ⁸	
6001	CH ₃			;
6002	CH ₃			;
6024	CH ₃			;
6032	CH ₃			;
6050	CH ₃			;

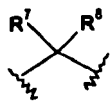
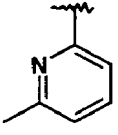
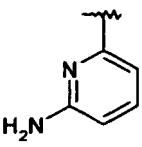
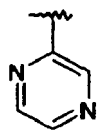
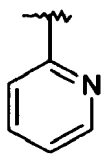
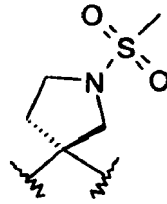
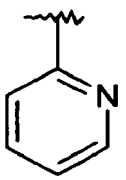
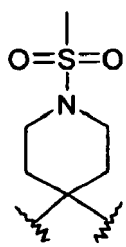
(continued)

cpd. #	R ¹	R ² ;		
6054	CH ₃			;
6056	CH ₃			;
6058	CH ₃			;
6059	CH ₃			;
6062	CH ₃			;
6065	CH ₃			;

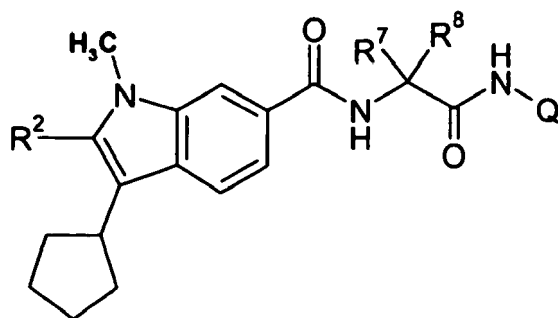
(continued)

cpd. #	R ¹	R ² ;		
6068	CH ₃			;
6101	CH ₃			;
6102	CH ₃			;
6103	CH ₃			;
6105	CH ₃			;
6114	CH ₃			;
6115	CH ₃			;

(continued)

cpd. #	R ¹	R ² ;		
6116	CH ₃			;
6117	CH ₃			;
6118	CH ₃			;
6124	CH ₃			; and
6125	CH ₃			;

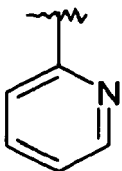
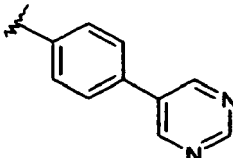
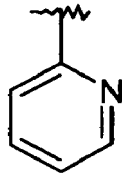
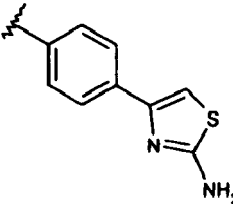
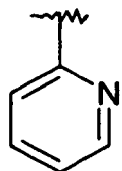
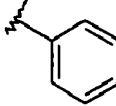
or a compound of the formula



wherein R^2 , R^7 , R^8 and Q are defined as follows:

cpd #	R^2	R^7 R^8	Q	
7057				;
7058				;
7060				;
7061				;
7067				;

(continued)

cpd #	R ²	R ⁷ R ⁸	Q	
7069				;
7075				and;
7081				.

38. A compound according to claim 1 or 37, or a pharmaceutically acceptable salt thereof, as an inhibitor of RNA dependent RNA polymerase activity of the enzyme NS5B, encoded by HCV.

39. A compound according to claim 1 or 37, or a pharmaceutically acceptable salt thereof, as an inhibitor of HCV replication.

40. A pharmaceutical composition for the treatment or prevention of HCV infection, comprising an effective amount of a compound according to claim 1 or 37, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.

41. A composition according to claim 40, further comprising an immunomodulatory agent.

42. A composition according to claim 41, wherein said immunomodulatory agents is selected from: α -, β -, δ -, γ -, and ω -interferon.

43. A composition according to claim 40, further comprising another antiviral agent.

44. A composition according to claim 43, wherein said antiviral agent is selected from: ribavirin and amantadine.

45. A composition according to claim 40, further comprising another inhibitor of HCV polymerase.

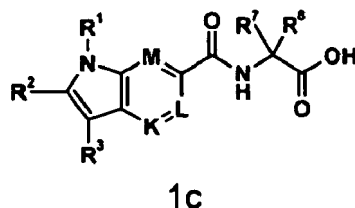
46. A composition according to claim 40 further comprising an inhibitor of: HCV helicase, HCV protease, HCV metalloprotease or HCV IRES.

47. Use of a compound according to claim 1 or 37, for the manufacture of a medicament for the treatment of HCV infection.

48. Use of a compound according to claim 1 or 37, or a pharmaceutically acceptable salt thereof, for the manufacture of a medicament for the treatment or prevention of HCV infection in a mammal, comprising administering to the mammal an effective amount of said compound, or pharmaceutically acceptable salt thereof in combination with

another anti-HCV agent.

49. An intermediate compound represented by formula 1 c:

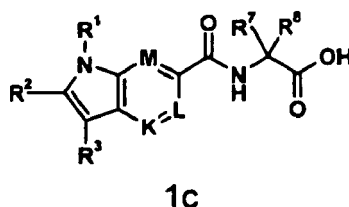


wherein

R¹, R², R³, K, L, M, R⁷ and R⁸ are as defined in claim 1 or 37, or a salt, or a derivative thereof.

50. A process for producing compounds according to claim 1 or 37, comprising:

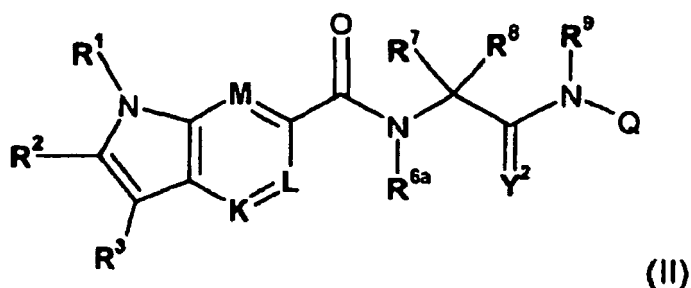
a) coupling, in a mixture containing an aprotic solvent, or no solvent, a coupling agent, and at a temperature of about 20 °C to about 170 °C. and intermediate 1 c:



with amine Q-NH₂ so as to produce compounds according to claim 1 or 37, wherein **R¹, R³, R², R⁷, R⁸, K, L, M** and **Q** are as defined in claim 1 or 37.

Patentansprüche

1. Enantiomer, Diastereoisomer oder Tautomer einer Verbindung, dargestellt durch die Formel II:



worin :

R¹ ausgewählt ist aus der Gruppe, bestehend aus: H, (C₁₋₆)-Alkyl, gegebenenfalls substituiert mit:

-Halogen, OR¹¹, SR¹¹ oder N(R¹²)₂, worin **R¹¹** und jedes **R¹²** unabhängig ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, (C₁₋₆)-Alkylaryl oder (C₁₋₆)-Alkyl-**Het**, wobei das Aryl oder **Het** gegeb-

nenfalls mit **R¹⁰** substituiert ist; oder

beide **R¹²** werden kovalent miteinander gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus an den Stickstoff, an den sie beide gebunden sind, zu bilden;

R² ist aus gewählt aus: Halogen, **R¹²**, **OR²¹**, **SR²¹**, **COOR²¹**, **SO₂N(R²²)₂**, **N(R²²)₂**, **CON(R²²)₂**, **NR²²C(O)R²²** oder **NR²²C(O)NR²²**, worin **R²¹** und jedes **R²²** unabhängig ist: H, (C₁₋₆)-Alkyl, Haloalkyl, (C₂₋₆)-Alkenyl, (C₃₋₇)-Cycloalkyl, (C₂₋₆)-Alkynyl, (C₅₋₇)-Cycloalkenyl, 6- oder 10-gliedriges Aryl oder **Het**, wobei **R²¹** und **R²²** gegebenenfalls mit **R²⁰** substituiert sind;

oder beide **R²²** sind miteinander und an den Stickstoff, an den sie beide gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden;

R³ ist ausgewählt aus (C₁₋₆)-Alkyl, Haloalkyl, (C₃₋₇)-Cycloalkyl, (C₅₋₇)-Cycloalkenyl, (C₆₋₁₀)-Bicycloalkyl, (C₆₋₁₀)-Bicycloalkenyl, 6- oder 10-gliedriges Aryl, **Het**, (C₁₋₆)-Alkylaryl oder (C₁₋₆)-Alkyl-**Het**, wobei das Alkyl, Cycloalkyl, Cycloalkenyl, Bicycloalkyl, Bicycloalkenyl, Aryl, **Het**, Alkylaryl und Alkyl-**Het** gegebenenfalls mit 1 bis 4 Substituenten substituiert sind, ausgewählt aus: Halogen oder

a) (C₁₋₆)-Alkyl, gegebenenfalls substituiert mit:

-**OR³¹** oder **SR³¹**, worin **R³¹** ist: H, (C₁₋₆-Alkyl), (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆)-Alkylaryl oder (C₁₋₆)-Alkyl-**Het**; oder

-**N(R³²)₂**, worin jedes **R³²** unabhängig ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆)-Alkylaryl oder (C₁₋₆)-Alkyl-**Het**; oder beide **R³²** sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden;

b) **OR³³**, worin **R³³** ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆)-Alkylaryl oder (C₁₋₆)-Alkyl-**Het**;

d) **SR³⁴**, worin **R³⁴** ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆)-Alkylaryl oder (C₁₋₆)-Alkyl-**Het**; und

d) **N(R³⁵)₂**, worin jedes **R³⁵** unabhängig ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆)-Alkylaryl oder (C₁₋₆)-Alkyl-**Het**; oder beide **R³⁵** sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden;

K ist N oder **CR⁴**, worin **R⁴** ist: H, Halogen, (C₁₋₆)-Alkyl, Haloalkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, oder **R⁴** ist **OR⁴¹** oder **SR⁴¹**, **COR⁴¹** oder **NR⁴¹COR⁴¹**, worin jedes **R⁴¹** unabhängig ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl; oder **R⁴** ist **NR⁴²R⁴³**, worin **R⁴²** und **R⁴³** unabhängig sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, oder beide **R⁴²** und **R⁴³** sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden;

L ist N oder **CR⁵**, worin **R⁵** dieselbe Definition wie das oben definierte **R⁴** aufweist;

M ist N oder **CR⁷**, worin **R⁷** dieselbe Definition wie das oben definierte **R⁴** aufweist;

R^{6a} ist H oder C₁₋₆-Alkyl;

R⁷ und **R⁸** sind jeweils unabhängig H, (C₁₋₆)-Alkyl, Haloalkyl, (C₃₋₇)-Cycloalkyl, 6- oder 10-gliedriges Aryl, **Het**, (C₁₋₆)-Alkylaryl, (C₁₋₆)-Alkyl-**Het**, worin das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆)-Alkylaryl, (C₁₋₆)-Alkyl-**Het** gegebenenfalls mit **R⁷⁰** substituiert sind;

oder

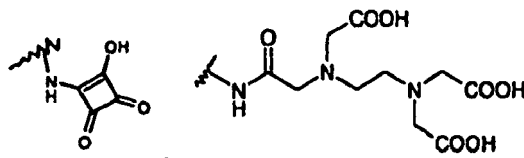
R⁷ und **R⁸** sind kovalent miteinander gebunden, um ein zweites (C₃₋₇)-Cycloalkyl oder einen 4-, 5- oder 6-gliedrigen Heterocyclus mit 1 bis 3 Heteroatomen, ausgewählt aus O, N und S, zu bilden; oder eines von **R⁷** oder **R⁸** ist kovalent an **R^{6a}** gebunden, um einen stickstoffhaltigen 5- oder 6-gliedrigen Heterocyclus zu bilden;

Y² ist O oder S;

R⁹ ist H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆)-Alkylaryl oder (C₁₋₆)-Alkyl-**Het**, wovon sämtliche gegebenenfalls mit **R⁹⁰** substituiert sind; oder

R⁹ ist kovalent an entweder **R⁷** oder **R⁸** gebunden, um einen 5- oder 6-gliedrigen Heterocyclus zu bilden;

Q ist ein 6- oder 10-gliedriges Aryl, **Het**, (C₁₋₆)-Alkylaryl, (C₁₋₆)-Alkyl-**Het**, (C₁₋₆)-Alkyl-CONH-aryl oder (C₁₋₆)-Alkyl-CONH-**Het**, wovon sämtliche gegebenenfalls substituiert sind mit:



oder R^{100} ;

oder ein Salz oder ein Derivat hiervon;

worin **Het** definiert ist als 5- oder 6-gliedriger Heterocyclus mit 1 bis 4 Heteroatomen, ausgewählt aus O, N und S, oder ein 9- oder 10-gliedriger Heterobicyclus mit 1 bis 5 Heteroatomen, ausgewählt aus O, N und S; und worin R^{70} ausgewählt ist aus:

- 1 bis 4 Substituenten, ausgewählt aus: Halogen, NO_2 , Cyano, Azido; oder
- 1 bis 4 Substituenten, ausgewählt aus:

a) (C_{1-6}) -Alkyl oder Haloalkyl, (C_{3-7}) -Cycloalkyl, C_{3-7} -Spirocycloalkyl, gegebenenfalls enthaltend 1 oder 2 Heteroatome, (C_{2-6}) -Alkenyl, (C_{2-8}) -Alkynyl, (C_{1-6}) -Alkyl- (C_{3-7}) -Cycloalkyl, von denen sämtliche gegebenenfalls mit R^{150} substituiert sind;

b) OR^{104} , worin R^{104} ist: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -Cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)-**Het**, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)-**Het** gegebenenfalls mit R^{150} substituiert ist;

d) SR^{108} , $SO_2N(R^{108})_2$ oder $SO_2N(R^{108})C(O)R^{108}$, worin jedes R^{108} unabhängig ist: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)-**Het**, oder beide R^{108} sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)-**Het** oder der Heterocyclus gegebenenfalls mit R^{150} substituiert ist;

e) $NR^{111}R^{112}$, worin R^{111} ist: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)-**Het**, und R^{112} ist: H, CN, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl, (C_{1-6}) -Alkyl)-**Het**, $COOR^{115}$ oder SO_2R^{115} , worin R^{115} ist: (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)-**Het**, oder beide R^{111} und R^{112} sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)-**Het** oder der Heterocyclus gegebenenfalls mit R^{150} substituiert ist;

f) $NR^{116}COR^{117}$, worin R^{116} und R^{117} jeweils sind: H, (C_{1-6}) -Alkyl, (C_{3-7}) -cycloalkyl, (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)-**Het**, wobei das (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl, (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)-**Het** gegebenenfalls mit R^{150} substituiert ist;

g) $NR^{118}CONR^{119}R^{120}$, worin R^{118} , R^{119} und R^{120} jeweils sind: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl, (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)-**Het**, oder R^{118} ist kovalent an R^{119} und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden; oder R^{119} und R^{120} sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden; wobei das Alkyl, Cycloalkyl, (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)-**Het** oder der Heterocyclus gegebenenfalls mit R^{150} substituiert ist;

h) $NR^{121}COCOR^{122}$, worin R^{121} ist: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl, (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, ein 6- oder 10-gliedriges Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)-**Het**, wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)-**Het** gegebenenfalls mit R^{150} substituiert ist; und R^{122} ist OR^{123} oder $N(R^{124})_2$, worin R^{123} und jedes R^{124} unabhängig ist: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)-**Het**, oder R^{124} ist OH oder O (C_{1-6}) -Alkyl) oder beide R^{124} sind kovalent miteinander gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl, (C_{1-6}) -Alkyl)-**Het** und der Heterocyclus gegebenenfalls mit R^{150} substituiert ist;

i) COR^{127} , worin R^{127} ist: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)-**Het**, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)-**Het** gegebenenfalls mit R^{150} substituiert ist;

j) COOR¹²⁸, worin **R¹²⁸** ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, wobei das (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl und (C₁₋₆-Alkyl)-**Het** gegebenenfalls mit **R¹⁵⁰** substituiert ist;

k) CONR¹²⁹R¹³⁰, worin **R¹²⁹** und **R¹³⁰** unabhängig sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, oder beide **R¹²⁹** und **R¹³⁰** sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden; wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl, (C₁₋₆-Alkyl)-**Het** und der Heterocyclus gegebenenfalls mit **R¹⁵⁰** substituiert ist;

l) Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, von denen sämtliche gegebenenfalls mit **R¹⁵⁰** substituiert sind, worin **R¹⁵⁰** ausgewählt ist aus:

- 1 bis 3 Substituenten, ausgewählt aus: Halogen, NO₂, Cyano, Azido; oder
- 1 bis 3 Substituenten, ausgewählt aus:

a) (C₁₋₆)-Alkyl oder Haloalkyl, (C₃₋₇)-Cycloalkyl, C₃₋₇-Spirocycloalkyl, gegebenenfalls enthaltend 1 oder 2 Heteroatome, (C₂₋₆)-Alkenyl, (C₂₋₈)-Alkynyl, von denen sämtliche gegebenenfalls mit **R¹⁶⁰** substituiert sind;

b) OR¹⁰⁴, worin **R¹⁰⁴** ist: H, (C₁₋₆)-Alkyl oder (C₃₋₇)-Cycloalkyl, wobei das Alkyl und Cycloalkyl gegebenenfalls mit **R¹⁶⁰** substituiert ist;

d) SR¹⁰⁸, SO₂N(R¹⁰⁸)₂, worin **R¹⁰⁸** ist: H, (C₁₋₆)-Alkyl oder (C₃₋₇)-Cycloalkyl, wobei das Alkyl oder Cycloalkyl gegebenenfalls mit **R¹⁶⁰** substituiert ist;

e) NR¹¹¹R¹¹², worin **R¹¹¹** ist: H, (C₁₋₆)-Alkyl oder (C₃₋₇)-Cycloalkyl, und **R¹¹²** ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl, (C₁₋₆-Alkyl)-**Het**, COOR¹¹⁵ oder SO₂R¹¹⁵, worin **R¹¹⁵** ist: (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, oder beide **R¹¹¹** und **R¹¹²** sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het** oder der Heterocyclus gegebenenfalls mit **R¹⁶⁰** substituiert ist;

f) NR¹¹⁶COR¹¹⁷, worin **R¹¹⁶** und **R¹¹⁷** jeweils sind: H, (C₁₋₆)-Alkyl oder (C₃₋₇)-Cycloalkyl, wobei das (C₁₋₆)-Alkyl oder (C₃₋₇)-Cycloalkyl gegebenenfalls mit **R¹⁶⁰** substituiert ist;

g) NR¹¹⁸CONR¹¹⁹R¹²⁰, worin **R¹¹⁸**, **R¹¹⁹** und **R¹²⁰** jeweils sind: H, (C₁₋₆)-Alkyl oder (C₃₋₇)-Cycloalkyl; oder **R¹¹⁹** und **R¹²⁰** sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden; wobei das Alkyl, Cycloalkyl oder der Heterocyclus gegebenenfalls mit **R¹⁶⁰** substituiert ist;

h) NR¹²¹COCOR¹²², worin **R¹²¹** ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, wobei das Alkyl oder Cycloalkyl gegebenenfalls mit **R¹⁶⁰** substituiert ist;

oder **R¹²²** ist OR¹²³ oder N(R¹²⁴)₂, worin **R¹²³** und jedes **R¹²⁴** unabhängig ist: H, (C₁₋₆)-Alkyl oder (C₃₋₇)-Cycloalkyl, oder **R¹²⁴** ist OH oder O(C₁₋₆-Alkyl) oder beide **R¹²⁴** sind kovalent miteinander gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl und der Heterocyclus gegebenenfalls mit **R¹⁶⁰** substituiert ist;

j) Tetrazol, COOR¹²⁸, worin **R¹²⁸** ist: H, (C₁₋₆)-Alkyl oder (C₃₋₇)-Cycloalkyl, wobei das (C₁₋₆)-Alkyl und (C₃₋₇)-Cycloalkyl gegebenenfalls mit **R¹⁶⁰** substituiert ist; und

k) CONR¹²⁹R¹³⁰, worin **R¹²⁹** und **R¹³⁰** unabhängig sind: H, (C₁₋₆)-Alkyl oder (C₃₋₇)-Cycloalkyl, oder beide **R¹²⁹** und **R¹³⁰** sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl und der Heterocyclus gegebenenfalls mit **R¹⁶⁰** substituiert ist;

worin **R¹⁶⁰** definiert ist als 1 oder 2 Substituenten, ausgewählt aus:

Tetrazol, Halogen, CN, C₁₋₆-Alkyl, Haloalkyl, COOR¹⁶¹, OR¹⁶¹, N(R¹⁶²)₂ oder CON(R¹⁶²)₂, worin **R¹⁶¹** und jedes **R¹⁶²** unabhängig ist: H oder (C₁₋₆)-Alkyl;

R¹⁰, **R²⁰**, **R⁹⁰** und **R¹⁰⁰** jeweils definiert sind als:

- 1 bis 4 Substituenten, ausgewählt aus: Halogen, OPO₃H, NO₂, Cyano, Azido, C(=NH)NH₂, C(=NH)NH(C₁₋₆)-Alkyl oder C(=NH)NHCO(C₁₋₆)-Alkyl; oder
- 1 bis 4 Substituenten, ausgewählt aus:

a) (C₁₋₆)-Alkyl oder Haloalkyl, (C₃₋₇)-Cycloalkyl, C₃₋₇-Spirocycloalkyl, gegebenenfalls enthaltend 1 oder 2

Heteroatome, (C₂₋₆)-Alkenyl, (C₂₋₈)-Alkynyl, (C₁₋₆)-Alkyl-(C₃₋₇)-Cycloalkyl, von denen sämtliche mit **R**¹⁵⁰ substituiert sind;

b) OR¹⁰⁴, worin **R**¹⁰⁴ ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het** gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

c) OCOR¹⁰⁵, worin **R**¹⁰⁵ ist: (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, wobei das Alkyl, Cycloalkyl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het** gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

d) SR¹⁰⁸, SO₂N(**R**¹⁰⁸)₂ oder SO₂N(**R**¹⁰⁸)C(O)**R**¹⁰⁸, worin jedes **R**¹⁰⁸ unabhängig ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, oder beide **R**¹⁰⁸ sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het** oder der Heterocyclus gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

e) NR¹¹¹**R**¹¹², worin jedes **R**¹¹¹ ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, und **R**¹¹² ist: H, CN, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl, (C₁₋₆-Alkyl)**Het**, COOR¹¹⁵ oder SO₂**R**¹¹⁵, worin **R**¹¹⁵ ist: (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, oder beide **R**¹¹¹ und **R**¹¹² sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het** oder der Heterocyclus gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

f) NR¹¹⁶**COR**¹¹⁷, worin **R**¹¹⁶ und **R**¹¹⁷ jeweils sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, wobei das (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het** gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

g) NR¹¹⁸**CONR**¹¹⁹**R**¹²⁰, worin **R**¹¹⁸, **R**¹¹⁹ und **R**¹²⁰ jeweils sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**; oder **R**¹¹⁸ ist kovalent an **R**¹¹⁹ und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden;

oder **R**¹¹⁹ und **R**¹²⁰ sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden;

wobei das Alkyl, Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het** oder der Heterocyclus gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

h) NR¹²¹**COCOR**¹²², worin **R**¹²¹ und **R**¹²² jeweils sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, ein 6- oder 10-gliedriges Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het** gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

oder **R**¹²² ist **OR**¹²³ oder N(**R**¹²⁴)₂, worin **R**¹²³ und jedes **R**¹²⁴ unabhängig ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**; oder **R**¹²⁴ ist OH oder O(C₁₋₆-Alkyl) oder beide **R**¹²⁴ sind kovalent miteinander gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** und der Heterocyclus gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

i) COR¹²⁷, worin **R**¹²⁷ ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

j) COOR¹²⁸, worin **R**¹²⁸ ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, wobei das (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl und (C₁₋₆-Alkyl)**Het** gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

k) CONR¹²⁹**R**¹³⁰, worin **R**¹²⁹ und **R**¹³⁰ unabhängig sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, oder beide **R**¹²⁹ und **R**¹³⁰ sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden; wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl, (C₁₋₆-Alkyl)-**Het** und der Heterocyclus gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

l) Aryl, Het, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)Het**, die sämtlich gegebenenfalls mit **R**¹⁵⁰ substituiert sind, wobei **R**¹⁵⁰ definiert ist als:**

- 1 bis 3 Substituenten, ausgewählt aus: Halogen, OPO₃H, NO₂, Cyano, Azido, C(=NH)NH₂, C(=NH)NH(C₁₋₆)-Alkyl oder C(=NH)NHCO(C₁₋₆)-Alkyl; oder
- 1 bis 3 Substituenten, ausgewählt aus:

a) (C₁₋₆)-Alkyl oder Haloalkyl, (C₃₋₇)-Cycloalkyl, C₃₋₇-Spirocycloalkyl, gegebenenfalls enthaltend 1 oder 2 Heteroatome, (C₂₋₆)-Alkenyl, (C₂₋₈)-Alkinyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, von denen sämtliche gegebenenfalls mit **R¹⁶⁰** substituiert sind;

b) **OR¹⁰⁴**, worin **R¹⁰⁴** ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** gegebenenfalls mit **R¹⁶⁰** substituiert ist;

c) **OCOR¹⁰⁵**, worin **R¹⁰⁵** ist: (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, wobei das Alkyl, Cycloalkyl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** gegebenenfalls mit **R¹⁶⁰** substituiert ist;

d) **SR¹⁰⁸**, **SO₂N(R¹⁰⁸)₂** oder **SO₂N(R¹⁰⁸)C(O)R¹⁰⁸**, worin jedes **R¹⁰⁸** unabhängig ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, oder beide **R¹⁰⁸** sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** oder der Heterocyclus gegebenenfalls mit **R¹⁶⁰** substituiert ist;

e) **NR¹¹¹R¹¹²**, worin **R¹¹¹** ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, und **R¹¹²** ist: H, CN, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl, (C₁₋₆-Alkyl)-**Het**, **COOR¹¹⁵** oder **SO₂R¹¹⁵**, worin **R¹¹⁵** ist: (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, oder beide **R¹¹¹** und **R¹¹²** sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** oder der Heterocyclus gegebenenfalls mit **R¹⁶⁰** substituiert ist;

f) **NR¹¹⁶COR¹¹⁷**, worin **R¹¹⁶** und **R¹¹⁷** jeweils sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, wobei das (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** gegebenenfalls mit **R¹⁶⁰** substituiert sind;

g) **NR¹¹⁸CONR¹¹⁹R¹²⁰**, worin **R¹¹⁸**, **R¹¹⁹** und **R¹²⁰** jeweils sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, oder **R¹¹⁸** ist kovalent an **R¹¹⁹** und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden; oder **R¹¹⁹** und **R¹²⁰** sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden;

wobei das Alkyl, Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** oder der Heterocyclus gegebenenfalls mit **R¹⁶⁰** substituiert ist;

h) **NR¹²¹COCOR¹²²**, worin **R¹²¹** und **R¹²²** jeweils ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₂₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, ein 6- oder 10-gliedriges Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** gegebenenfalls mit **R¹⁶⁰** substituiert ist; oder **R¹²²** ist **OR¹²³** oder **N(R¹²⁴)₂**, worin **R¹²³** und jedes **R¹²⁴** unabhängig ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, oder **R¹²⁴** ist OH oder O(C₁₋₆-Alkyl) oder beide **R¹²⁴** sind kovalent miteinander gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** und der Heterocyclus gegebenenfalls mit **R¹⁶⁰** substituiert ist;

i) **COR¹²⁷**, worin **R¹²⁷** ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** gegebenenfalls mit **R¹⁶⁰** substituiert ist;

j) Tetrazol, **COOR¹²⁸**, worin **R¹²⁸** ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, wobei das (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl und (C₁₋₆-Alkyl)-**Het** gegebenenfalls mit **R¹⁶⁰** substituiert ist; und

k) **CONR¹²⁹R¹³⁰**, worin **R¹²⁹** und **R¹³⁰** unabhängig sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, oder beide **R¹²⁹** und **R¹³⁰** sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden; wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl, (C₁₋₆-Alkyl)-**Het** und der Heterocyclus gegebenenfalls mit **R¹⁶⁰** substituiert ist; und

worin **R¹⁶⁰** definiert ist als 1 oder 2 Substituenten, ausgewählt aus:

Tetrazol, Halogen, CN, C₁₋₆-Alkyl, Haloalkyl, COOR¹⁶¹, SO₃H, SR¹⁶¹, SO₂R¹⁶¹, OR¹⁶¹, N(R¹⁶²), SO₂N(R¹⁶²)₂, NR¹⁶²COR¹⁶² oder CON(R¹⁶²)₂, worin R¹⁶¹ und jedes R¹⁶² unabhängig ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl; oder beide R¹⁶² sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden;

oder ein Salz hiervon.

2. Verbindung nach Anspruch 1, worin **M**, **K** und **L** CH oder N darstellen.

3. Verbindung nach Anspruch 2, worin **M**, **K** und **L** CH darstellen.

4. Verbindung nach Anspruch 1, worin R¹ ausgewählt ist aus: H oder (C₁₋₆)-Alkyl.

5. Verbindung nach Anspruch 4, worin R¹ H, CH₃, Isopropyl oder Isobutyl darstellt.

6. Verbindung nach Anspruch 5, worin R¹ H oder CH₃ darstellt.

7. Verbindung nach Anspruch 6, worin R¹ CH₃ darstellt.

8. Verbindung nach Anspruch 1, worin R² CON(R²²)₂ darstellt, worin jedes R²² unabhängig ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₅₋₇)-Cycloalkenyl, 6- oder 10-gliedriges Aryl oder **Het**, oder beide R²² sind miteinander gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus mit dem Stickstoff, an den sie gebunden sind, zu bilden; oder R² ist ausgewählt aus: H, Halogen, (C₁₋₆)-Alkyl, Haloalkyl, (C₂₋₆)-Alkenyl, (C₅₋₇)-Cycloalkenyl, 6- oder 10-gliedriges Aryl oder **Het**, worin jedes Alkyl, Haloalkyl, (C₂₋₆)-Alkenyl, (C₅₋₇)-Cycloalkenyl, Aryl oder **Het** gegebenenfalls mit R²⁰ substituiert ist, worin R²⁰ definiert ist als:

- 1 bis 4 Substituenten, ausgewählt aus: Halogen, NO₂, Cyano, Azido, C(=NH)NH₂, C(=NH)NH(C₁₋₆)-Alkyl oder C(=NH)NHCO(C₁₋₆)-Alkyl; oder

- 1 bis 4 Substituenten, ausgewählt aus:

a) (C₁₋₆)-Alkyl oder Haloalkyl, (C₃₋₇)-Cycloalkyl, (C₂₋₆)-Alkenyl, (C₂₋₈)-Alkinyl, (C₁₋₆)-Alkyl-(C₃₋₇)-Cycloalkyl, von denen sämtliche gegebenenfalls mit R¹⁵⁰ substituiert sind;

b) OR¹⁰⁴, worin R¹⁰⁴ ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** gegebenenfalls mit R¹⁵⁰ substituiert ist;

c) OCOR¹⁰⁵, worin R¹⁰⁵ ist: (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, wobei das Alkyl, Cycloalkyl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** gegebenenfalls mit R¹⁵⁰ substituiert ist;

d) SR¹⁰⁸, SO₂N(R¹⁰⁸)₂ oder SO₂N(R¹⁰⁸)C(O)R¹⁰⁸, worin jedes R¹⁰⁸ unabhängig ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, oder beide R¹⁰⁸ sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** oder der Heterocyclus gegebenenfalls mit R¹⁵⁰ substituiert ist;

e) NR¹¹¹R¹¹², worin R¹¹¹ ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, und R¹¹² ist: H, CN, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl, (C₁₋₆-Alkyl)-**Het**, COOR¹¹⁵ oder SO₂R¹¹⁵, worin R¹¹⁵ ist: (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, oder beide R¹¹¹ und R¹¹² sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl, (C₁₋₆-Alkyl)-**Het** oder der Heterocyclus gegebenenfalls mit R¹⁵⁰ substituiert ist;

f) NR¹¹⁶COR¹¹⁷, worin R¹¹⁶ und R¹¹⁷ jeweils sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, wobei das (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** gegebenenfalls mit R¹⁵⁰ substituiert ist;

g) NR¹¹⁸CONR¹¹⁹R¹²⁰, worin R¹¹⁸, R¹¹⁹ und R¹²⁰ jeweils sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, oder R¹¹⁸ ist kovalent an R¹¹⁹ und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Hete-

rocyclus zu bilden; oder **R**¹¹⁹ und **R**¹²⁰ sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden; wobei das Alkyl, Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het** oder der Heterocyclus gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

h) NR¹²¹**COCOR**¹²², worin **R**¹²¹ und **R**¹²² jeweils sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, ein 6- oder 10-gliedriges Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** gegebenenfalls mit **R**¹⁵⁰ substituiert ist; oder **R**¹²² ist **OR**¹²¹ oder **N(R**¹²⁴**)**₂, worin **R**¹²³ und jedes **R**¹²⁴ unabhängig ist; H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, oder **R**¹²⁴ ist OH oder O(C₁₋₆-Alkyl) oder beide **R**¹²⁴ sind kovalent miteinander gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** und der Heterocyclus gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

i) COR¹²⁷, worin **R**¹²⁷ ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

j) COOR¹²⁸, worin **R**¹²⁸ ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, wobei das (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl und (C₁₋₆-Alkyl)-**Het** gegebenenfalls substituiert mit **R**¹⁵⁰ ist;

k) CONR¹²⁹**R**¹³⁰, worin **R**¹²⁹ und **R**¹³⁰ unabhängig sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, oder beide **R**¹²⁹ und **R**¹³⁰ sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden; wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** und der Heterocyclus gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

l) Aryl, Het, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)Het**, von denen sämtliche gegebenenfalls mit **R**¹⁵⁰ substituiert sind, worin **R**¹⁵⁰ ist:**

- 1 bis 3 Substituenten, ausgewählt aus: Halogen, NO₂, Cyano oder Azido; oder
- 1 bis 3 Substituenten, ausgewählt aus:

a) (C₁₋₆)-Alkyl oder Haloalkyl, (C₃₋₇)-Cycloalkyl, (C₂₋₆)-Alkenyl, (C₂₋₈)-Alkynyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, von denen sämtliche gegebenenfalls mit **R¹⁶⁰ substituiert sind;**

b) OR¹⁰⁴, worin **R**¹⁰⁴ ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, wobei das Alkyl oder Cycloalkyl gegebenenfalls mit **R**¹⁶⁰ substituiert ist;

d) SR¹⁰⁸, SO₂**N(R**¹⁰⁸**)**₂ oder SO₂**N(R**¹⁰⁸**)C(O)****R**¹⁰⁸, worin jedes **R**¹⁰⁸ unabhängig ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, oder beide **R**¹⁰⁸ sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Aryl, **Het** und der Heterocyclus gegebenenfalls mit **R**¹⁶⁰ substituiert ist;

e) NR¹¹¹**R**¹¹², worin **R**¹¹¹ ist: H, (C₁₋₆)-Alkyl oder (C₃₋₇)-Cycloalkyl, und **R**¹¹² ist: H, (C₁₋₆)-Alkyl oder (C₃₋₇)-Cycloalkyl, COOR¹¹⁵ oder SO₂**R**¹¹⁵, worin **R**¹¹⁵ ist: (C₁₋₆)-Alkyl oder (C₃₋₇)-Cycloalkyl, oder beide **R**¹¹¹ und **R**¹¹² sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl und der Heterocyclus gegebenenfalls mit **R**¹⁶⁰ substituiert ist;

f) NR¹¹⁶**COR**¹¹⁷, worin **R**¹¹⁶ und **R**¹¹⁷ jeweils sind: H, (C₁₋₆)-Alkyl oder (C₃₋₇)-Cycloalkyl, wobei das (C₁₋₆)-Alkyl und (C₃₋₇)-Cycloalkyl gegebenenfalls mit **R**¹⁶⁰ substituiert ist;

g) NR¹¹⁸**CONR**¹¹⁹**R**¹²⁰, worin **R**¹¹⁸, **R**¹¹⁹ und **R**¹²⁰ jeweils sind: H, (C₁₋₆)-Alkyl oder (C₃₋₇)-Cycloalkyl; oder **R**¹¹⁸ kovalent an **R**¹¹⁹ und an den Stickstoff, an den sie gebunden sind, gebunden ist, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden; oder **R**¹¹⁹ und **R**¹²⁰ sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl und der Heterocyclus gegebenenfalls mit **R**¹⁶⁰ substituiert ist;

h) NR¹²¹**COCOR**¹²², worin **R**¹²¹ ist: H, (C₁₋₆)-Alkyl oder (C₃₋₇)-Cycloalkyl, wobei das Alkyl und Cycloalkyl gegebenenfalls mit **R**¹⁶⁰ substituiert ist; oder **R**¹²² ist **OR**¹²³ oder **N(R**¹²⁴**)**₂, worin **R**¹²³ und jedes **R**¹²⁴ unabhängig ist: H, (C₁₋₆)-Alkyl oder (C₃₋₇)-Cycloalkyl, oder beide **R**¹²⁴ sind kovalent miteinander gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl und der Heterocyclus gegebenenfalls mit **R**¹⁶⁰ substituiert ist;

i) COR¹²⁷, worin **R**¹²⁷ H, (C₁₋₆)-Alkyl oder (C₃₋₇)-Cycloalkyl ist, wobei das Alkyl und Cycloalkyl gegebenenfalls mit **R**¹⁶⁰ substituiert ist;

j) COOR^{128} , worin R^{128} ist: H, (C_{1-6}) -Alkyl oder (C_{3-7}) -Cycloalkyl, wobei das (C_{1-6}) -Alkyl und (C_{3-7}) -Cycloalkyl gegebenenfalls mit R^{160} substituiert ist; und

k) $\text{CONR}^{129}\text{R}^{130}$, worin R^{129} und R^{130} unabhängig sind: H, (C_{1-6}) -Alkyl oder (C_{3-7}) -Cycloalkyl, oder beide R^{129} und R^{130} sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl und der Heterocyclus gegebenenfalls mit R^{160} substituiert ist;

worin R^{160} definiert ist als 1 oder 2 Substituenten, ausgewählt aus:

Halogen, CN, C_{1-6} -Alkyl, Haloalkyl, COOR^{161} , OR^{161} , $\text{N}(\text{R}^{162})_2$, $\text{SO}_2\text{N}(\text{R}^{162})_2$, $\text{NR}^{162}\text{COR}^{162}$ oder $\text{CON}(\text{R}^{162})_2$, worin R^{161} und jedes R^{162} unabhängig ist: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl; oder beide R^{162} sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden.

9. Verbindung nach Anspruch 8, worin R^2 ausgewählt ist aus: Aryl oder **Het**, jedes gegebenenfalls monosubstituiert oder disubstituiert mit Substituenten, ausgewählt aus der Gruppe, bestehend aus: Halogen, Haloalkyl, N_3 oder

a) (C_{1-6}) -Alkyl, gegebenenfalls substituiert mit OH oder $\text{O}(\text{C}_{1-6})$ -alkyl;

b) (C_{1-6}) -Alkoxy;

e) $\text{NR}^{111}\text{R}^{112}$, worin beide R^{111} und R^{112} unabhängig sind: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder R^{112} ist ein 6- oder 10-gliedriges Aryl, **Het**, (C_{1-6}) -Alkylaryl oder (C_{1-6}) Alkyl-**Het**; oder beide R^{111} und R^{112} sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen Stickstoff-enthaltenden Heterocyclus zu bilden, wobei jedes Alkyl, Cycloalkyl, Aryl, **Het**, Alkylaryl oder Alkyl-**Het** gegebenenfalls mit Halogen substituiert ist, oder:

- OR^{2h} oder $\text{N}(\text{R}^{2h})_2$ ist, worin jedes R^{2h} unabhängig ist: H, (C_{1-6}) -Alkyl, oder beide R^{2h} sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen Stickstoff-enthaltenden Heterocyclus zu bilden;

f) NHCOR^{117} , worin R^{117} ist: (C_{1-6}) -Alkyl;

i) CO-Aryl; und

k) CONH_2 , $\text{CONH}(\text{C}_{1-6}\text{-Alkyl})$, $\text{CON}(\text{C}_{1-6}\text{-Alkyl})_2$, CONH-Aryl oder $\text{CONHC}_{1-6}\text{-Alkylaryl}$.

10. Verbindung nach Anspruch 9, worin R^2 Aryl oder **Het** darstellt, jedes gegebenenfalls monosubstituiert oder disubstituiert mit Substituenten, ausgewählt aus der Gruppe, bestehend aus: Halogen, Haloalkyl oder

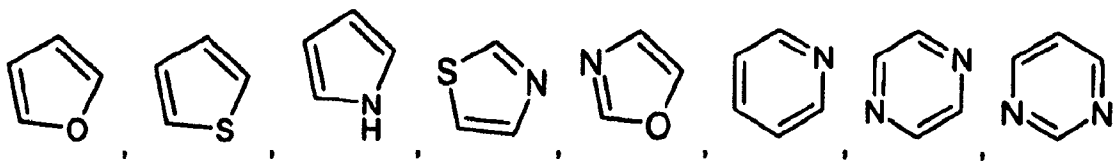
a) (C_{1-6}) -Alkyl, gegebenenfalls substituiert mit OH oder $\text{O}(\text{C}_{1-6})$ -alkyl;

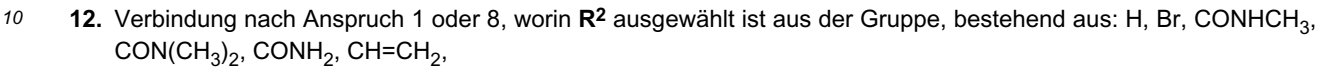
b) (C_{1-6}) -Alkoxy; und

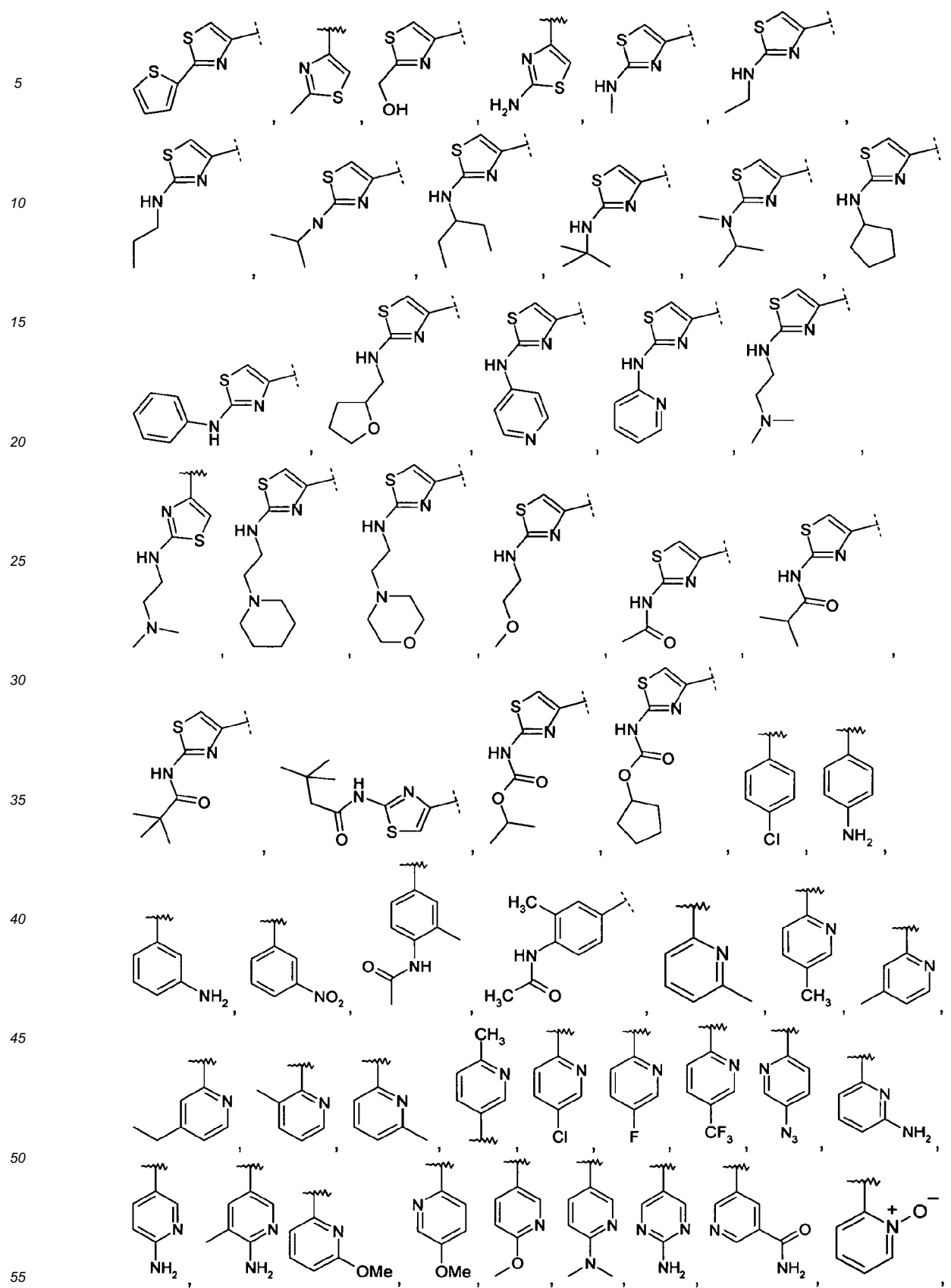
e) $\text{NR}^{111}\text{R}^{112}$, worin beide R^{111} und R^{112} unabhängig sind: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder R^{112} ist ein 6- oder 10-gliedriges Aryl, **Het**, (C_{1-6}) -Alkylaryl oder (C_{1-6}) Alkyl-**Het**; oder beide R^{111} und R^{112} sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen Stickstoff-enthaltenden Heterocyclus zu bilden, wobei jedes Alkyl, Cycloalkyl, Aryl, **Het**, Alkylaryl oder Alkyl-**Het** gegebenenfalls mit Halogen substituiert ist, oder:

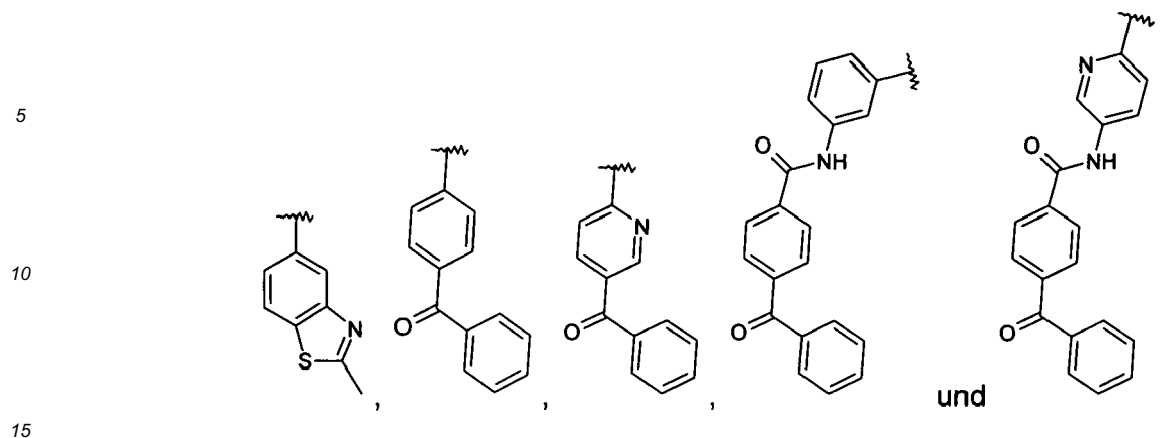
- OR^{2h} oder $\text{N}(\text{R}^{2h})_2$ ist, worin jedes R^{2h} unabhängig ist: H, (C_{1-6}) -Alkyl, oder beide R^{2h} sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen Stickstoff-enthaltenden Heterocyclus zu bilden.

11. Verbindung nach Anspruch 10, worin R^2 Phenyl darstellt oder einen Heterocyclus, ausgewählt aus:

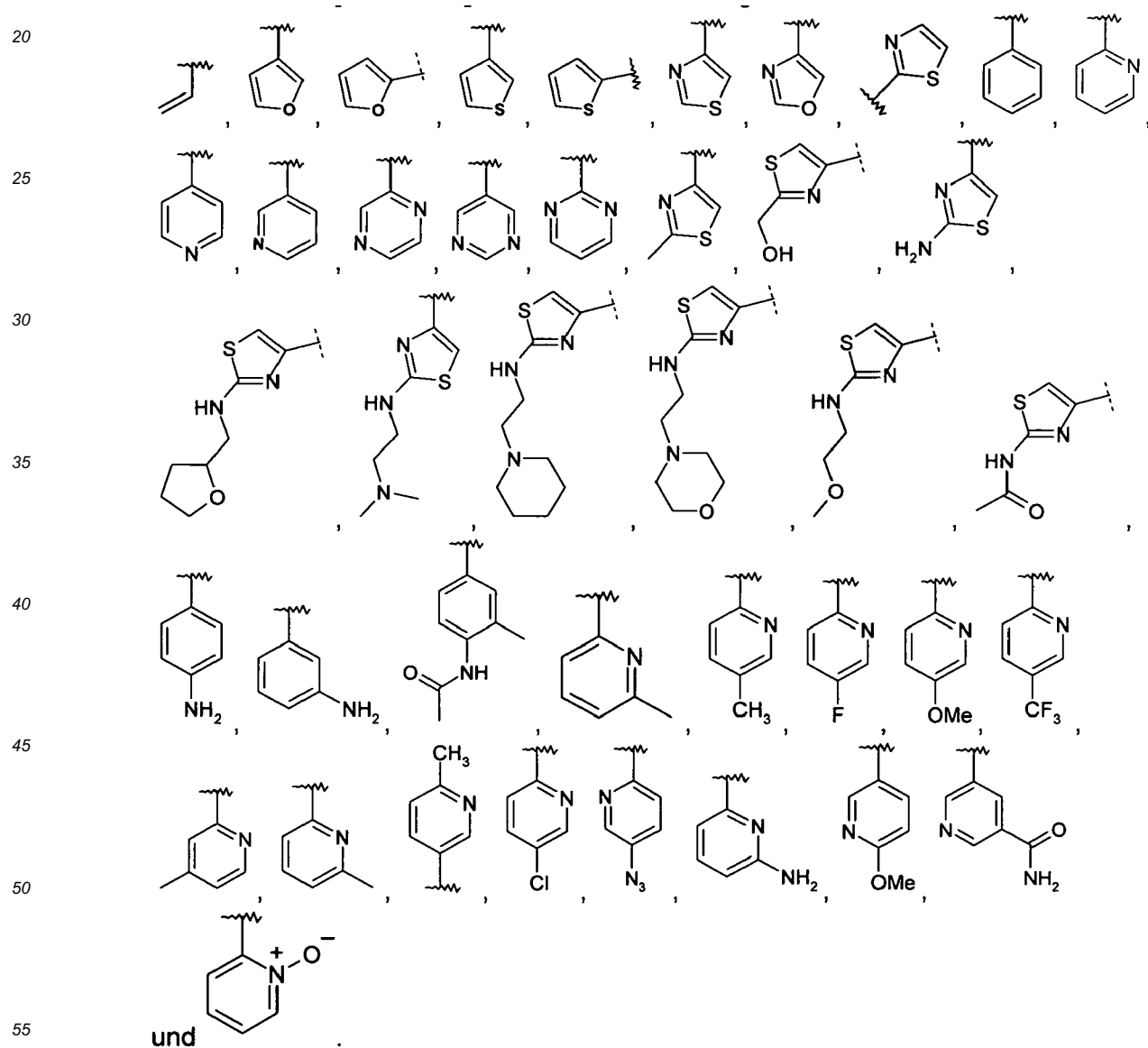




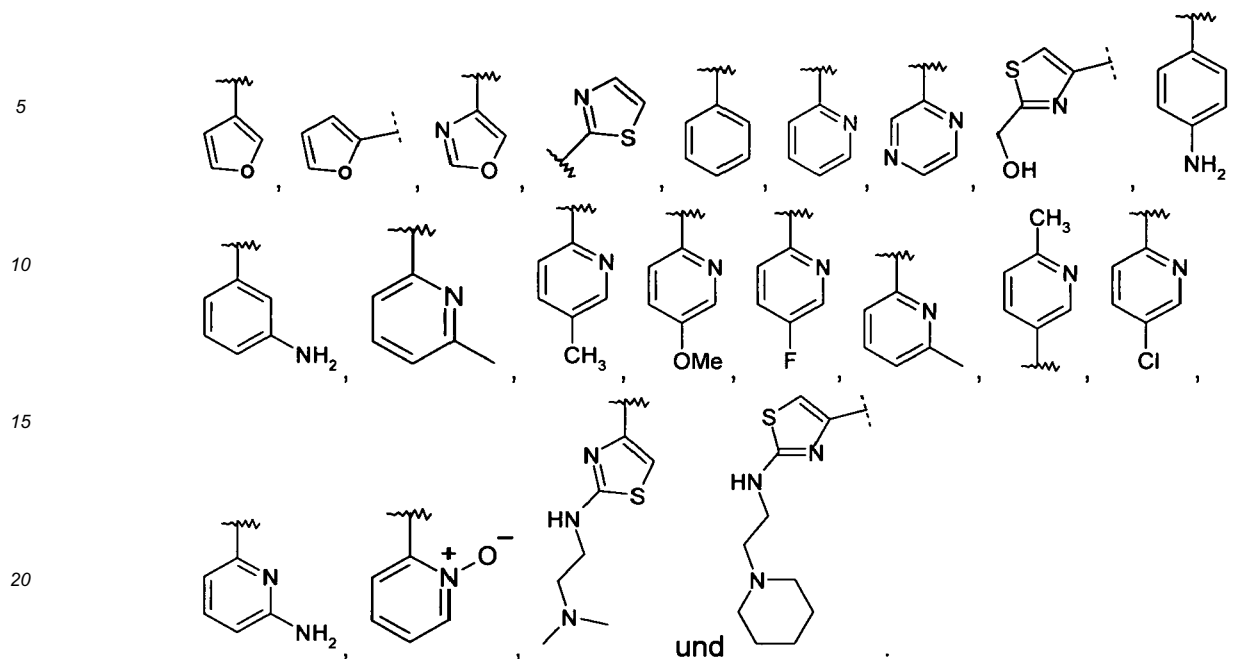




13. Verbindung nach Anspruch 12, worin $\mathbf{R}^2$ ausgewählt ist aus:



14. Verbindung nach Anspruch 13, worin R² ausgewählt ist aus:



15. Verbindung nach Anspruch 1, worin R^3 ausgewählt ist aus: (C_{3-7}) -Cycloalkyl, (C_{3-7}) -Cycloalkenyl, (C_{6-10}) -Bicycloalkyl, (C_{6-10}) -Bicycloalkenyl, 6- oder 10-gliedriges Aryl oder **Het**.

16. Verbindung nach Anspruch 15, worin R^3 (C_{3-7}) -Cycloalkyl darstellt.

17. Verbindung nach Anspruch 16, worin R^3 Cyclopentyl oder Cyclohexyl darstellt.

18. Verbindung nach Anspruch 1, worin R^{6a} H darstellt.

19. Verbindung nach Anspruch 1, worin R^7 und R^8 jeweils unabhängig sind: H, (C_{1-6}) -Alkyl, Haloalkyl, (C_{3-7}) -Cycloalkyl, 6- oder 10-gliedriges Aryl, **Het**, (C_{1-6}) -Alkylaryl, (C_{1-6}) -Alkyl-**Het**, von denen sämtliche gegebenenfalls mit 1 bis 4 Substituenten substituiert sind, ausgewählt aus Halogen oder:

a) (C_{1-6}) -Alkyl; und

b) $N(R^{8a'})_2$, COR^{8a} , $COOR^{8a}$, $CON(R^{8a'})_2$, worin jedes R^{8a} oder $R^{8a'}$ unabhängig ist: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, oder jedes $R^{8a'}$ ist unabhängig miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden; oder $R^{8a''}$ ist unabhängig: (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl;

oder R^7 und R^8 sind kovalent miteinander gebunden, um (C_{3-7}) -Cycloalkyl, einen 4-, 5- oder 6-gliedrigen Heterocyclus mit 1 bis 3 Heteroatomen, ausgewählt aus O, N und S, zu bilden.

20. Verbindung nach Anspruch 19, worin R^7 und R^8 jeweils unabhängig sind: H, (C_{1-6}) -Alkyl, Haloalkyl, (C_{3-7}) -Cycloalkyl, 6- oder 10-gliedriges Aryl, **Het**, (C_{1-6}) -Alkylaryl, (C_{1-6}) -Alkyl-**Het**, oder R^7 oder R^8 sind kovalent miteinander gebunden, um Cyclopropyl, Cyclobutyl, Cyclopentyl, Pyrrolidin, Piperidin, Tetrahydrofuran, Tetrahydropyran oder Penta-methylensulfid zu bilden;

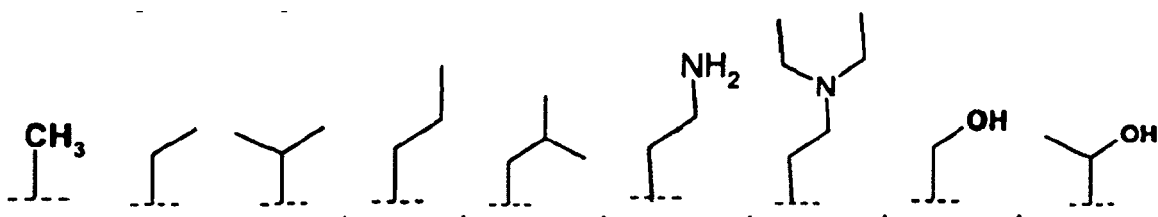
worin das Alkyl, Haloalkyl, (C_{3-7}) -Cycloalkyl, 6- oder 10-gliedriges Aryl, **Het**, (C_{1-6}) -Alkylaryl oder (C_{1-6}) -Alkyl-**Het** gegebenenfalls monosubstituiert ist mit Substituenten, ausgewählt aus:

a) (C_{1-6}) -Alkyl; und

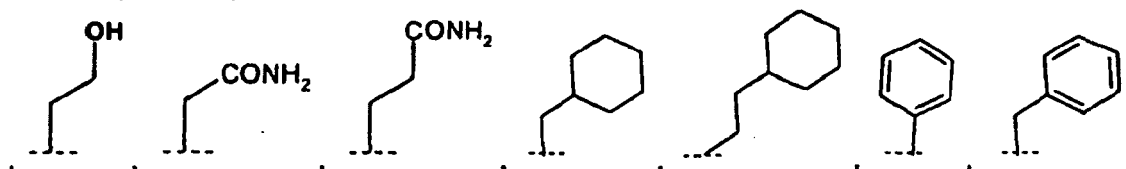
b) NH_2 , $N(CH_2CH)_2$ oder $COCH_3$.

21. Verbindung nach Anspruch 1, worin R^7 und R^8 ausgewählt sind aus:

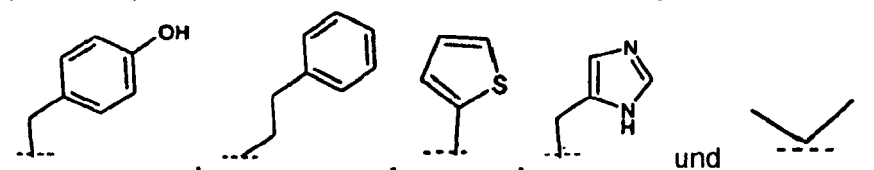
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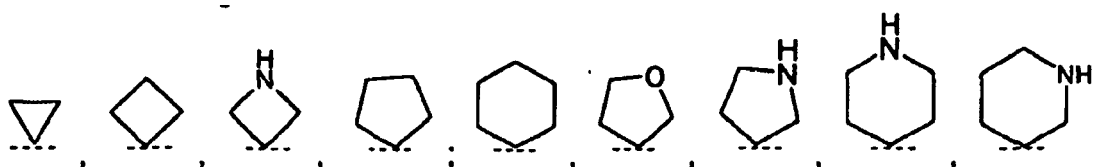
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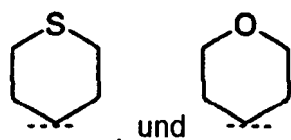
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oder R^7 und R^8 bilden zusammen:

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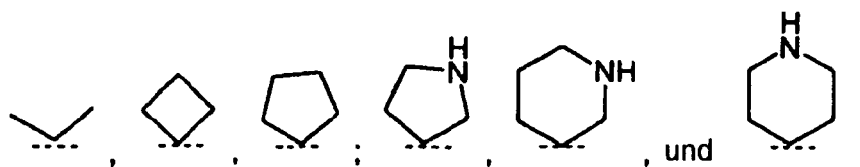
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22. Verbindung nach Anspruch 21, worin R^7 und R^8 ausgewählt sind aus:

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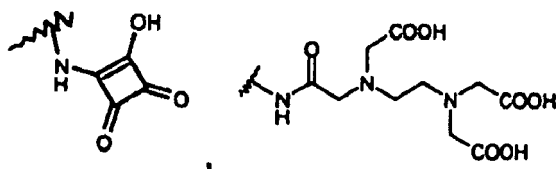
23. Verbindung nach Anspruch 21, worin R^9 H darstellt oder R^9 kovalent entweder an R^7 oder R^8 gebunden ist, um einen 5- oder 6-gliedrigen Heterocyclus zu bilden.

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24. Verbindung nach Anspruch 23, worin R^9 H darstellt.

25. Verbindung nach Anspruch 1, worin Q ein 6- oder 10-gliedriges Aryl, **Het**, (C_{1-6})-Alkylaryl oder (C_{1-6} -Alkyl)**Het** darstellt, von denen sämtliche gegebenenfalls substituiert sind mit:

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oder R^{100} ;
worin R^{100} darstellt:

- 1 bis 4 Substituenten, ausgewählt aus: Halogen, NO_2 , Cyano oder Azido; oder
- 1 bis 4 Substituenten, ausgewählt aus:

a) (C_{1-6}) -Alkyl oder Haloalkyl, (C_{3-7}) -Cycloalkyl, (C_{2-6}) -Alkenyl, (C_{2-8}) -Alkynyl, (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, von denen sämtliche gegebenenfalls mit R^{150} substituiert sind;

b) OR^{104} , worin R^{104} ist: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)**Het**, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)**Het** gegebenenfalls mit R^{150} substituiert ist;

d) SR^{108} , worin R^{108} ist: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)**Het**, die sämtlich gegebenenfalls mit R^{150} substituiert sind;

e) $NR^{111}R^{112}$, worin jedes R^{111} ist: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)**Het**, und R^{112} ist: H, CN, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl, (C_{1-6}) -Alkyl)-**Het**, $COOR^{115}$ oder SO_2R^{115} , worin R^{115} ist: (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)-**Het**, oder beide R^{111} und R^{112} sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)**Het** oder der Heterocyclus gegebenenfalls mit R^{150} substituiert ist;

f) $NR^{116}COR^{117}$, worin R^{116} und R^{117} jeweils sind: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl, (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)**Het**, wobei das (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl, (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)**Het** gegebenenfalls mit R^{150} substituiert ist;

g) $NR^{118}CONR^{119}R^{120}$, worin R^{118} , R^{119} und R^{120} jeweils sind: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl, (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)**Het**, oder R^{118} ist kovalent an R^{119} und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden;

oder R^{119} und R^{120} sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden;

wobei das Alkyl, Cycloalkyl, (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)**Het** oder der Heterocyclus gegebenenfalls mit R^{150} substituiert ist;

h) $NR^{121}COCOR^{122}$, worin R^{121} und R^{122} jeweils sind: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl, (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, ein 6- oder 10-gliedriges Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)**Het**, wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)**Het** gegebenenfalls mit R^{150} substituiert ist;

oder R^{122} ist OR^{123} oder $N(R^{124})_2$, worin R^{123} und jedes R^{124} unabhängig ist: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)**Het**; oder R^{124} ist OH oder O (C_{1-6}) -Alkyl) oder beide R^{124} sind kovalent miteinander gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)-**Het** und der Heterocyclus gegebenenfalls mit R^{150} substituiert ist;

j) $COOR^{128}$, worin R^{128} ist: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)**Het**, wobei das (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl, (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl und (C_{1-6}) -Alkyl)**Het** gegebenenfalls mit R^{150} substituiert ist;

k) $CONR^{129}R^{130}$, worin R^{129} und R^{130} unabhängig sind: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl, (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)**Het**, oder beide R^{129} und R^{130} sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden; wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl, (C_{1-6}) -Alkyl)-**Het** und der Heterocyclus gegebenenfalls mit R^{150} substituiert ist;

l) Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)**Het**, die sämtlich gegebenenfalls mit R^{150} substituiert sind, wobei R^{150} ausgewählt ist aus:

- 1 bis 3 Substituenten, ausgewählt aus: Halogen, NO₂, Cyano oder Azido; oder
- 1 bis 3 Substituenten, ausgewählt aus:

a) (C₁₋₆)-Alkyl oder Haloalkyl, (C₃₋₇)-Cycloalkyl, C₃₋₇-Spirocycloalkyl, gegebenenfalls enthaltend 1 oder 2 Heteroatome, (C₂₋₆)-Alkenyl, (C₂₋₈)-Alkinyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, von denen sämtliche gegebenenfalls mit **R**¹⁶⁰ substituiert sind;

b) **OR**¹⁰⁴, worin **R**¹⁰⁴ ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** gegebenenfalls mit **R**¹⁶⁰ substituiert ist;

d) **SR**¹⁰⁸, SO₂N(**R**¹⁰⁸)₂ oder SO₂N(**R**¹⁰⁸)C(O)**R**¹⁰⁸, worin jedes **R**¹⁰⁸ unabhängig ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, oder beide **R**¹⁰⁸ sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het** oder der Heterocyclus gegebenenfalls mit **R**¹⁶⁰ substituiert ist;

e) **NR**¹¹¹**R**¹¹², worin jedes **R**¹¹¹ ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, und **R**¹¹² ist: H, CN, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl, (C₁₋₆-Alkyl)-**Het** oder SO₂**R**¹¹⁵, worin **R**¹¹⁵ ist: (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, oder beide **R**¹¹¹ und **R**¹¹² sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het** oder der Heterocyclus gegebenenfalls mit **R**¹⁶⁰ substituiert ist;

f) **NR**¹¹⁶**COR**¹¹⁷, worin **R**¹¹⁶ und **R**¹¹⁷ jeweils sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, wobei das (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het** gegebenenfalls mit **R**¹⁶⁰ substituiert ist;

g) **NR**¹¹⁸**CONR**¹¹⁹**R**¹²⁰, worin **R**¹¹⁸, **R**¹¹⁹ und **R**¹²⁰ jeweils sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, oder **R**¹¹⁸ ist kovalent an **R**¹¹⁹ und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden; oder **R**¹¹⁹ und **R**¹²⁰ sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** oder der Heterocyclus gegebenenfalls mit **R**¹⁶⁰ substituiert ist;

h) **NR**¹²¹**COCOR**¹²², worin **R**¹²¹ ist: H, (C₁₋₆)-Alkyl, gegebenenfalls mit **R**¹⁶⁰ substituiert, und **R**¹²² ist **OR**¹²³ oder N(**R**¹²⁴)₂, worin **R**¹²³ und jedes **R**¹²⁴ unabhängig ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, oder **R**¹²⁴ ist OH oder O(C₁₋₆-Alkyl) oder beide **R**¹²⁴ sind kovalent miteinander gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het** und der Heterocyclus gegebenenfalls mit **R**¹⁶⁰ substituiert ist;

j) Tetrazol, **COOR**¹²⁸, worin **R**¹²⁸ ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, wobei das (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl und (C₁₋₆-Alkyl)**Het** gegebenenfalls mit **R**¹⁶⁰ substituiert ist; und

k) **CONR**¹²⁹**R**¹³⁰, worin **R**¹²⁹ und **R**¹³⁰ unabhängig sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)-aryl oder (C₁₋₆-Alkyl)**Het**, oder beide **R**¹²⁹ und **R**¹³⁰ sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl, (C₁₋₆-Alkyl)**Het** und der Heterocyclus gegebenenfalls mit **R**¹⁶⁰ substituiert ist;

worin **R**¹⁶⁰ definiert ist als 1 oder 2 Substituenten, ausgewählt aus:

Tetrazol, Halogen, CN, C₁₋₆-Alkyl, Haloalkyl, **COOR**¹⁶¹, SO₃H, **SR**¹⁶¹, SO₂**R**¹⁶¹, **OR**¹⁶¹, N(**R**¹⁶²)₂, SO₂N(**R**¹⁶²)₂, **NR**¹⁶²**COR**¹⁶² oder CON(**R**¹⁶²)₂, worin **R**¹⁶¹ und jedes **R**¹⁶² unabhängig ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl; oder beide **R**¹⁶² sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen Heterocyclus zu bilden.

26. Verbindung nach Anspruch 1, worin **Q** ein 6- oder 10-gliedriges Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het** darstellt, von denen sämtliche gegebenenfalls substituiert sind mit:

- 1 bis 4 Substituenten, ausgewählt aus: Halogen, NO₂, Cyano oder Azido; oder
- 1 bis 4 Substituenten, ausgewählt aus:

a) (C₁₋₆)-Alkyl oder Haloalkyl, (C₃₋₇)-Cycloalkyl, (C₂₋₆)-Alkenyl, (C₂₋₈)-Alkynyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, von denen sämtliche gegebenenfalls mit **R**¹⁵⁰ substituiert sind;

b) **OR**¹⁰⁴, worin **R**¹⁰⁴ ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het** gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

d) **SR**¹⁰⁸, SO₂N(**R**¹⁰⁸)₂ oder SO₂N(**R**¹⁰⁸)C(O)**R**¹⁰⁸, worin jedes **R**¹⁰⁸ unabhängig ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, oder beide **R**¹⁰⁸ sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** oder der Heterocyclus gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

e) **NR**¹¹¹**R**¹¹², worin **R**¹¹¹ ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, und **R**¹¹² ist: H, CN, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl, (C₁₋₆-Alkyl)-**Het**, COOR¹¹⁵ oder SO₂**R**¹¹⁵, worin **R**¹¹⁵ ist: (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, oder beide **R**¹¹¹ und **R**¹¹² sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** oder der Heterocyclus gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

f) **NR**¹¹⁶**COR**¹¹⁷, worin **R**¹¹⁶ und **R**¹¹⁷ jeweils sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, wobei das (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

g) **NR**¹¹⁸**CONR**¹¹⁹**R**¹²⁰, worin **R**¹¹⁸, **R**¹¹⁹ und **R**¹²⁰ jeweils sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, oder **R**¹¹⁹ und **R**¹²⁰ sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden; wobei das Alkyl, Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** oder der Heterocyclus gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

h) **NR**¹²¹**COCOR**¹²², worin **R**¹²¹ ist: H, (C₁₋₆)-Alkyl, gegebenenfalls mit **R**¹⁵⁰ substituiert, und **R**¹²² ist **OR**¹²³ oder N(**R**¹²⁴)₂, worin **R**¹²³ und jedes **R**¹²⁴ unabhängig ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, oder **R**¹²⁴ ist OH oder O(C₁₋₆-Alkyl) oder beide **R**¹²⁴ sind kovalent miteinander gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** und der Heterocyclus gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

j) COOR¹²⁸, worin **R**¹²⁸ ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, wobei (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl und (C₁₋₆-Alkyl)-**Het** gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

k) CONR¹²⁹**R**¹³⁰, worin **R**¹²⁹ und **R**¹³⁰ unabhängig sind: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het**, oder beide **R**¹²⁹ und **R**¹³⁰ sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden; wobei das Alkyl, Cycloalkyl, Alkylcycloalkyl, Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)-**Het** und der Heterocyclus gegebenenfalls mit **R**¹⁵⁰ substituiert ist;

l) Aryl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, die sämtlich gegebenenfalls mit **R**¹⁵⁰ substituiert sind, worin **R**¹⁵⁰ ausgewählt ist aus:

- 1 bis 3 Substituenten, ausgewählt aus: Halogen, NO₂, Cyano, Azido; oder
- 1 bis 3 Substituenten, ausgewählt aus:

a) (C₁₋₆)-Alkyl oder Haloalkyl, (C₃₋₇)-Cycloalkyl, (C₂₋₆)-Alkenyl, (C₂₋₈)-Alkynyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, von denen sämtliche gegebenenfalls mit **R**¹⁶⁰ substituiert sind;

b) **OR**¹⁰⁴, worin **R**¹⁰⁴ ist: H, (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl oder (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, Aryl, **Het**, wobei das Alkyl, Cycloalkyl, Aryl und **Het** gegebenenfalls mit **R**¹⁶⁰ substituiert ist;

c) OCOR¹⁰⁵, worin **R**¹⁰⁵ (C₁₋₆)-Alkyl, (C₃₋₇)-Cycloalkyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**, wobei das Alkyl, Cycloalkyl, **Het**, (C₁₋₆-Alkyl)aryl oder (C₁₋₆-Alkyl)**Het**

gegebenenfalls mit R^{160} substituiert ist;

d) SR^{108} , $SO_2N(R^{108})_2$ oder $SO_2N(R^{108})C(O)R^{108}$, worin jedes R^{108} unabhängig ist: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder beide R^{108} sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl oder der Heterocyclus gegebenenfalls mit R^{160} substituiert ist;

e) $NR^{111}R^{112}$, worin R^{111} ist: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl und R^{112} ist: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, $COOR^{115}$ oder SO_2R^{115} , worin R^{115} ist: (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder beide R^{111} und R^{112} sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl) aryl oder (C_{1-6}) -Alkyl)**Het** oder der Heterocyclus gegebenenfalls mit R^{160} substituiert ist;

f) $NR^{116}COR^{117}$, worin R^{116} und R^{117} jeweils sind: **H**, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl, (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)**Het**, wobei das (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl, (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)**Het** gegebenenfalls mit R^{160} substituiert ist;

g) $NR^{118}CONR^{119}R^{120}$, worin R^{118} , R^{119} und R^{120} jeweils sind: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl; oder R^{119} und R^{120} sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden; wobei das Alkyl, Cycloalkyl oder der Heterocyclus gegebenenfalls mit R^{160} substituiert ist;

h) $NR^{121}COCOR^{122}$, worin R^{121} ist: H, (C_{1-6}) -Alkyl, gegebenenfalls mit R^{160} substituiert, und R^{122} ist OR^{123} oder $N(R^{124})_2$, worin R^{123} und jedes R^{124} unabhängig ist: H, (C_{1-6}) -Alkyl oder (C_{3-7}) -Cycloalkyl, oder R^{124} ist OH oder $O(C_{1-6})$ -Alkyl) oder beide R^{124} sind kovalent miteinander gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden, wobei das Alkyl, Cycloalkyl und der Heterocyclus gegebenenfalls mit R^{160} substituiert ist;

j) Tetrazol, $COOR^{128}$, worin R^{128} ist: H, (C_{1-6}) -Alkyl oder (C_{3-7}) -Cycloalkyl, wobei (C_{1-6}) -Alkyl und (C_{3-7}) -Cycloalkyl gegebenenfalls mit R^{160} substituiert ist; und

k) $CONR^{129}R^{130}$, worin R^{129} und R^{130} unabhängig sind: H, (C_{1-6}) -Alkyl oder (C_{3-7}) -Cycloalkyl, oder beide R^{129} und R^{130} sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden; wobei das Alkyl, Cycloalkyl und der Heterocyclus gegebenenfalls mit R^{160} substituiert ist; worin R^{160} definiert ist als 1 oder 2 Substituenten, ausgewählt aus:

Tetrazol, Halogen, CN, C_{1-6} -Alkyl, Haloalkyl, $COOR^{161}$, SO_3H , SO_2R^{161} , OR^{161} , $N(R^{162})_2$, $SO_2N(R^{162})_2$, $NR^{162}COR^{162}$ oder $CON(R^{162})_2$, worin R^{161} und jedes R^{162} unabhängig ist: H, (C_{1-6}) -Alkyl, (C_{3-7}) -Cycloalkyl oder (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl; oder beide R^{162} sind kovalent miteinander und an den Stickstoff, an den sie gebunden sind, gebunden, um einen 5-, 6- oder 7-gliedrigen gesättigten Heterocyclus zu bilden.

27. Verbindung nach Anspruch 26, worin **Q** ein 6- oder 10-gliedriges Aryl oder **Het** ist, beide gegebenenfalls substituiert mit:

- 1 bis 3 Halogen, NO_2 , Cyano, Azido; oder
- 1 bis 3 Substituenten, ausgewählt aus:

a) (C_{1-6}) -Alkyl oder Haloalkyl, (C_{3-7}) -Cycloalkyl, (C_{2-6}) -Alkenyl, (C_{2-8}) -Alkynyl, (C_{1-6}) -Alkyl- (C_{3-7}) -cycloalkyl, die sämtlich gegebenenfalls mit R^{150} substituiert sind;

b) OR^{104} , worin R^{104} H oder (C_{1-6}) -Alkyl ist;

d) SO_2NHR^{108} , worin R^{108} H oder (C_{1-6}) -Alkyl ist;

e) $NR^{111}R^{112}$, worin beide R^{111} und R^{112} unabhängig H oder (C_{1-6}) -Alkyl ist;

f) $NHCOR^{117}$, worin R^{117} H oder (C_{1-6}) -Alkyl ist;

g) $NHCONR^{119}R^{120}$, worin R^{119} und R^{120} jeweils unabhängig H oder (C_{1-6}) -Alkyl sind;

h) $NHCOCOR^{122}$, worin R^{122} OR^{123} oder $N(R^{124})_2$ ist, worin R^{123} und jedes R^{124} unabhängig H oder (C_{1-6}) -Alkyl ist;

j) $COOR^{128}$, worin R^{128} H oder (C_{1-6}) -Alkyl ist;

k) $CONHR^{130}$, worin R^{130} H oder (C_{1-6}) -Alkyl ist;

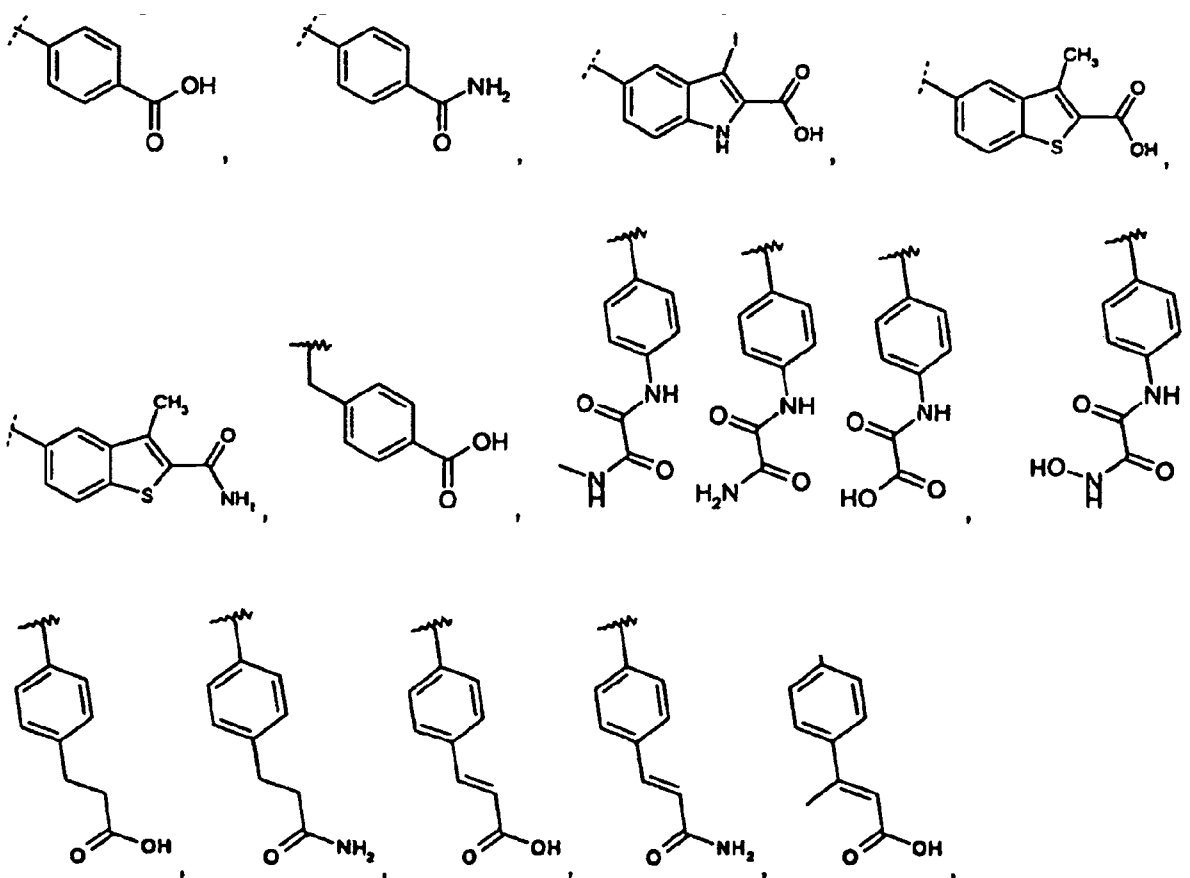
l) 6- oder 10-gliedriges Aryl, **Het**, (C_{1-6}) -Alkyl)aryl oder (C_{1-6}) -Alkyl)**Het** ist, wobei das Aryl, **Het**, (C_{1-6}) -Alkyl) aryl oder (C_{1-6}) -Alkyl)**Het** gegebenenfalls mit R^{150} substituiert ist; worin R^{150} ausgewählt ist aus:

- 1 bis 3 Halogenen; oder

- 1 bis 3 Substituenten, ausgewählt aus:

- a) (C₁₋₆)-Alkyl oder Haloalkyl, (C₃₋₇)-Cycloalkyl, (C₂₋₆)-Alkenyl, (C₂₋₈)-Alkynyl, (C₁₋₆)-Alkyl-(C₃₋₇)-cycloalkyl, die sämtlich gegebenenfalls mit Tetrazol, OR¹⁰², COOR¹⁰² substituiert sind, worin R¹⁰² H oder (C₁₋₆)-Alkyl darstellt;
 b) OR¹⁰⁴, worin R¹⁰⁴ H oder (C₁₋₆)-Alkyl ist;
 d) SO₂NHR¹⁰⁸, worin R¹⁰⁸ H oder (C₁₋₆)-Alkyl ist;
 e) NR¹¹¹R¹¹², worin beide R¹¹¹ und R¹¹² unabhängig H oder (C₁₋₆)-Alkyl darstellen;
 f) NHCOR¹¹⁷, worin R¹¹⁷ H oder (C₁₋₆)-Alkyl ist;
 h) NHCOCOR¹²², worin R¹²² OR¹²³ oder N(R¹²⁴)₂ ist, worin R¹²³ und jedes R¹²⁴ unabhängig H oder (C₁₋₆)-Alkyl sind;
 j) COOR¹²⁸, worin R¹²⁸ H oder (C₁₋₆)-Alkyl ist;
 k) CONHR¹³⁰, worin R¹³⁰ H oder (C₁₋₆)-Alkyl ist.

28. Verbindung nach Anspruch 1 oder 26, worin Q ausgewählt ist aus:



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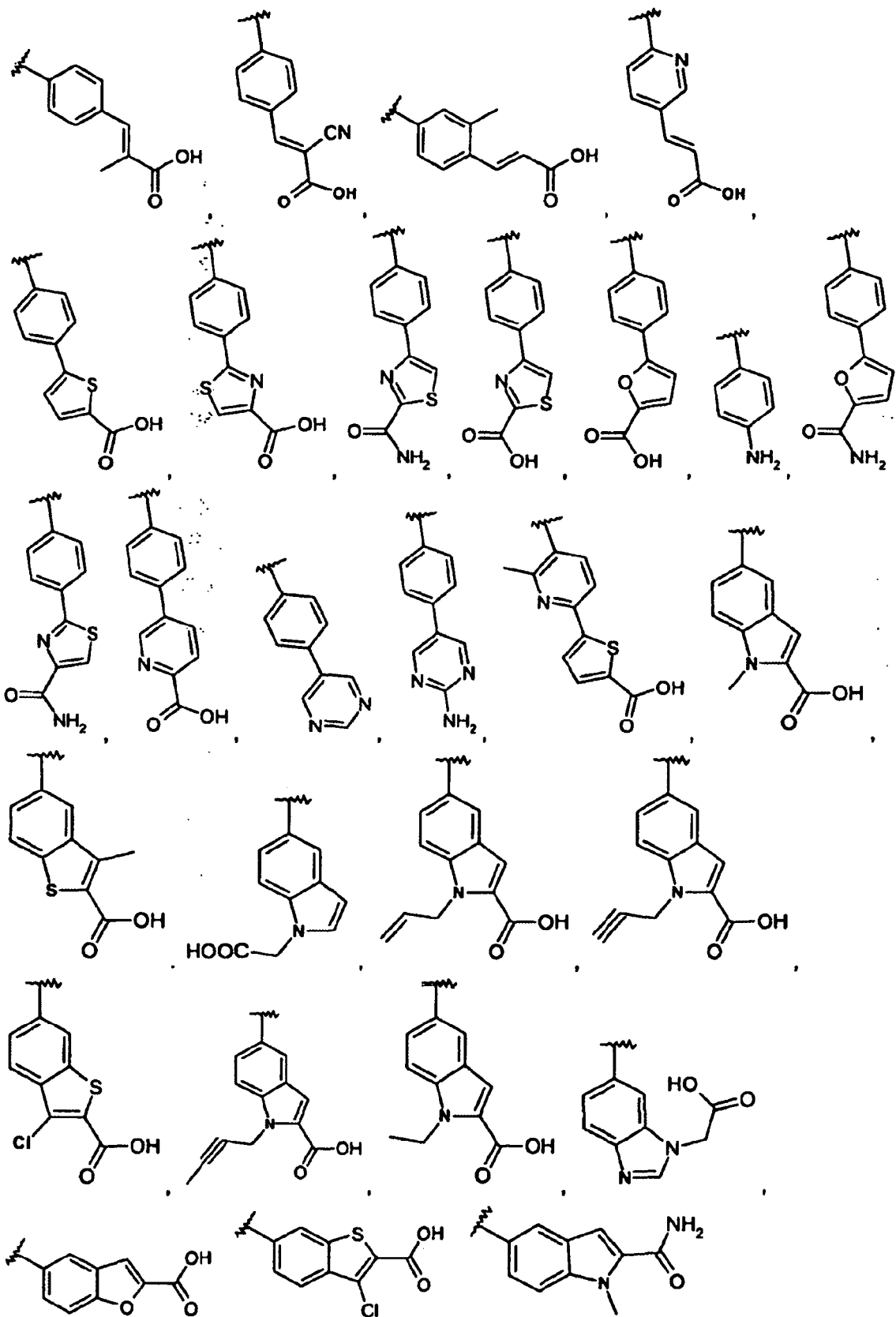
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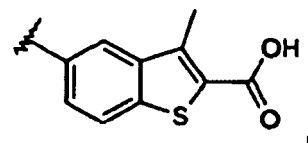
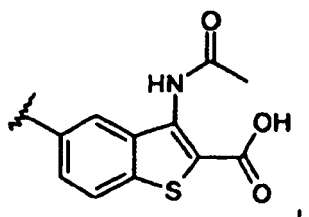
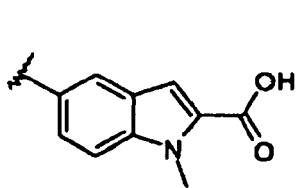
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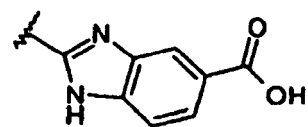
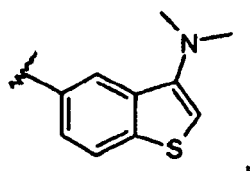
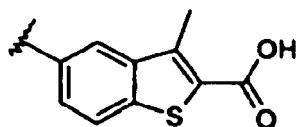
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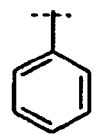
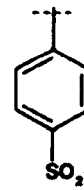
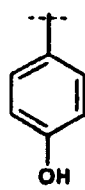
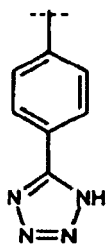
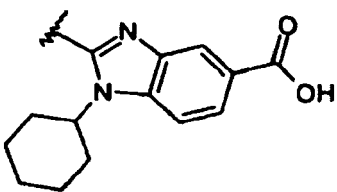




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29. Verbindung nach Anspruch 28, worin **Q** ausgewählt ist aus:

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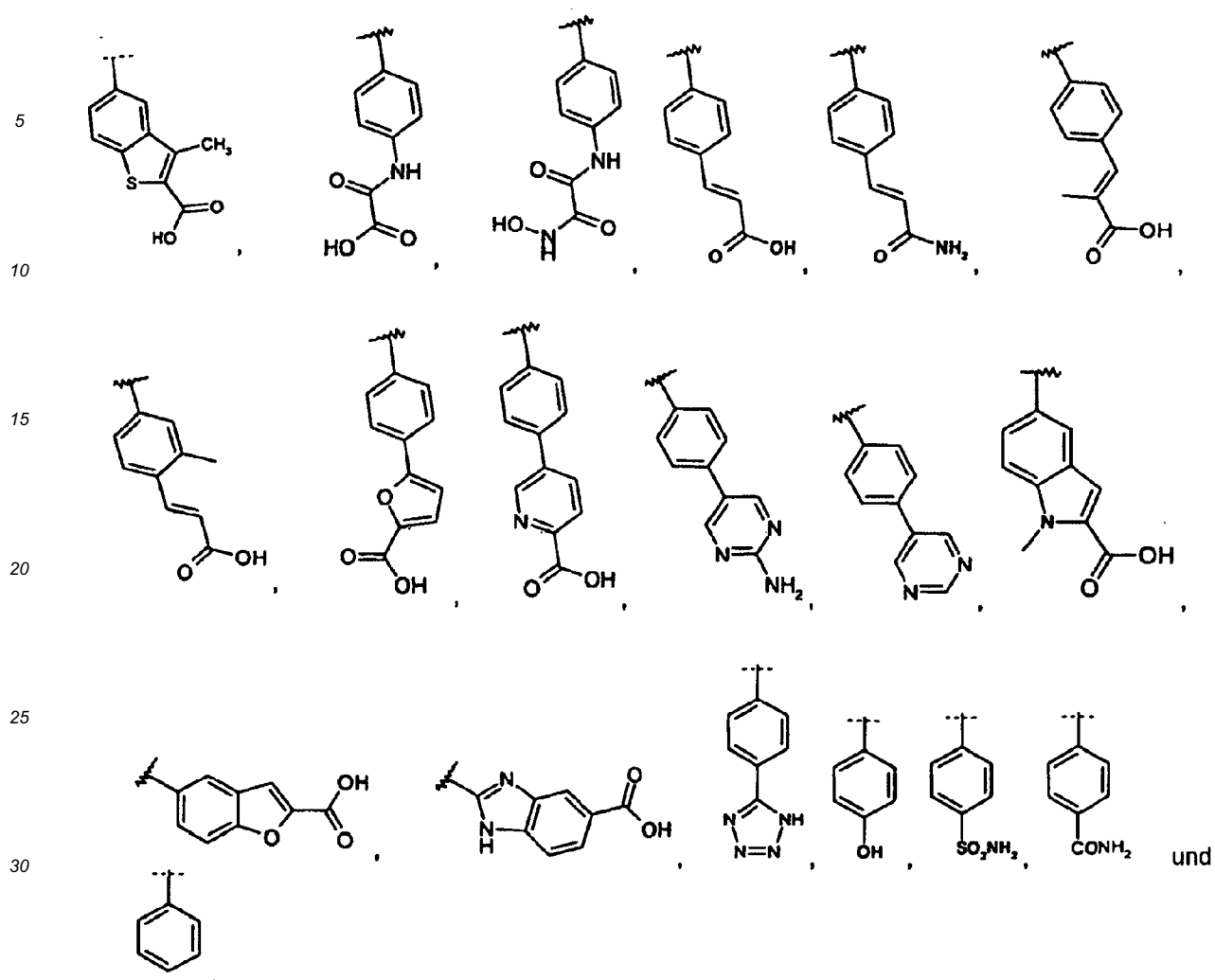
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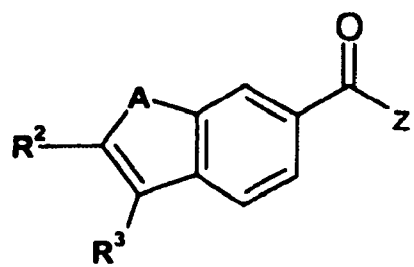
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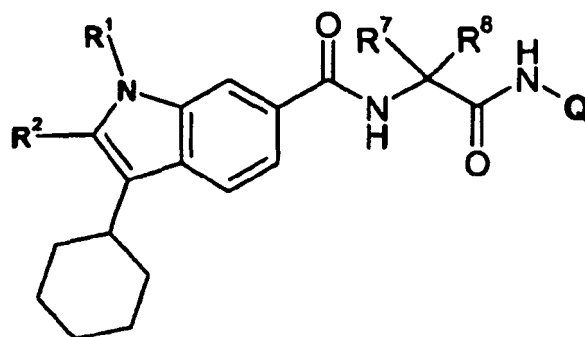
30. Verbindung nach Anspruch 1 der Formel:



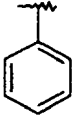
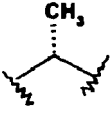
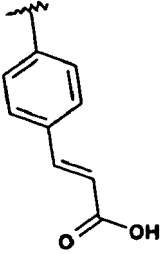
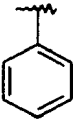
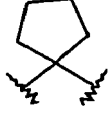
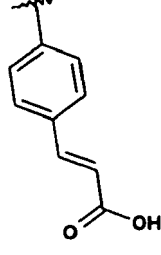
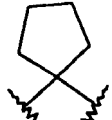
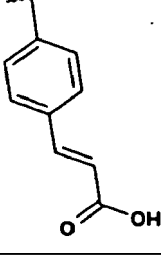
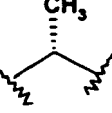
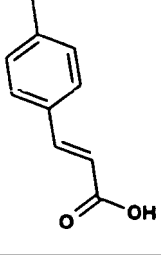
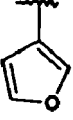
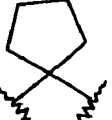
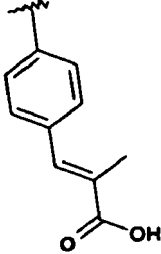
worin A, R², R³ und Z wie folgt definiert sind:

Verb. #	A	R ²	R ³	Z	
1006	NMe				;
1031	NMe				;
1032	NMe				und
1033	NMe				.

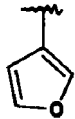
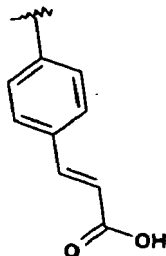
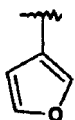
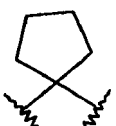
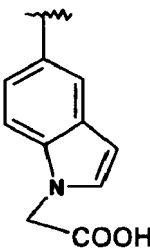
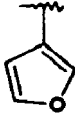
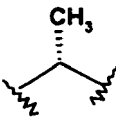
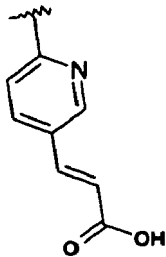
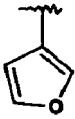
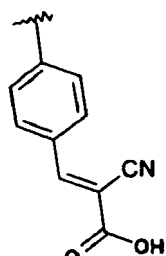
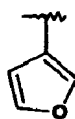
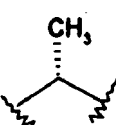
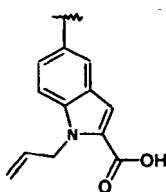
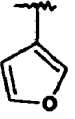
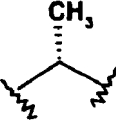
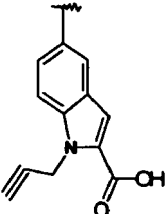
31. Verbindung nach Anspruch 1 der Formel:



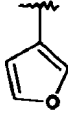
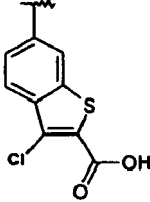
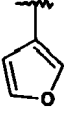
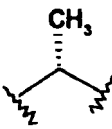
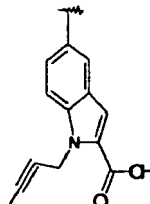
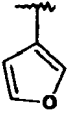
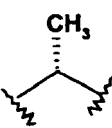
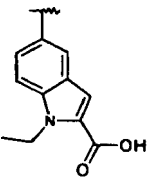
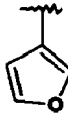
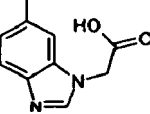
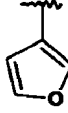
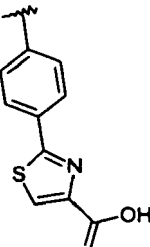
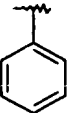
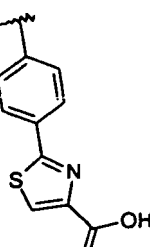
worin **R¹**, **R²**, **R⁷**, **R⁸** und **Q** wie folgt definiert sind:

Verb. #	R ¹	R ²		Q	
2001	H				;
2002	H				;
2003	H	Br			;
2004	H				;
2005	H				;

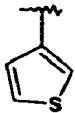
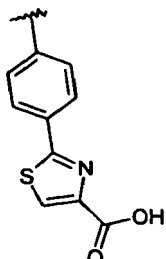
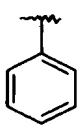
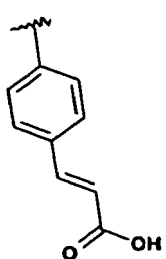
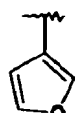
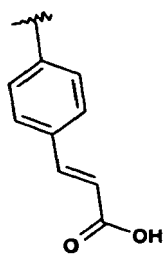
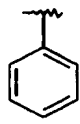
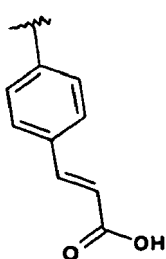
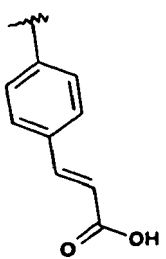
(fortgesetzt)

Verb. #	R ¹	R ²	R ⁷ R ⁸	Q	
2006	Me				;
2008	H				;
2009	H				;
2010	H				;
2011	H				;
2012	H				;

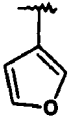
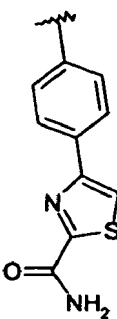
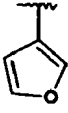
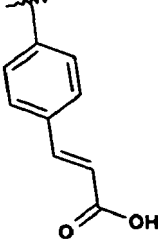
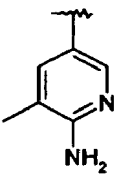
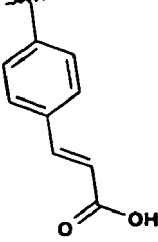
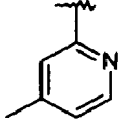
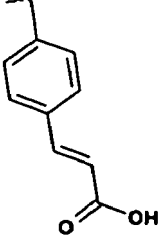
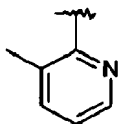
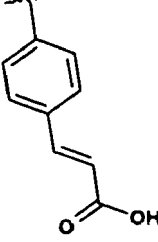
(fortgesetzt)

Verb. #	R ¹	R ²	R ⁷ R ⁸	Q	
2013	H				;
2014	H				;
2015	H				;
2016	H				;
2017	H				;
2018	H				;

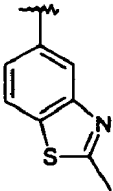
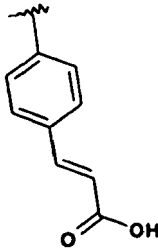
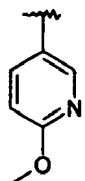
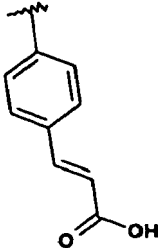
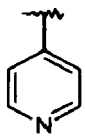
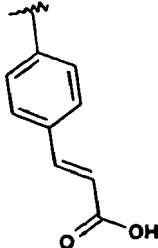
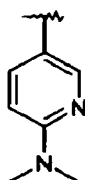
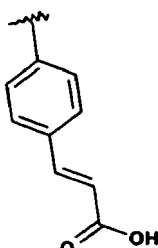
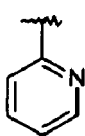
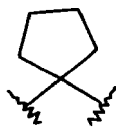
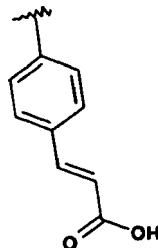
(fortgesetzt)

Verb. #	R ¹	R ²	R⁷ R⁸	Q	
2019	H				;
2020	Et				;
2021					;
2022					;
2023	Me	H			;

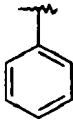
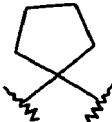
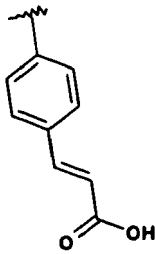
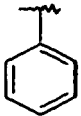
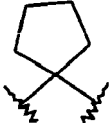
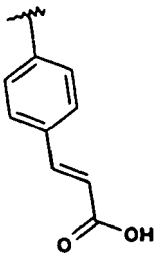
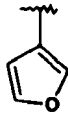
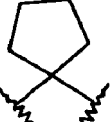
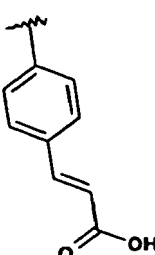
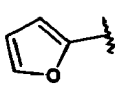
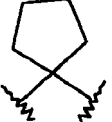
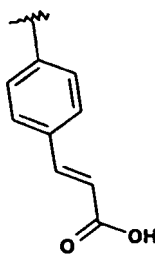
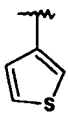
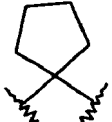
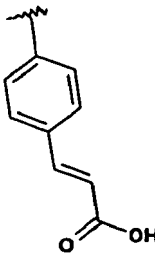
(fortgesetzt)

Verb. #	R ¹	R ²	R⁷ R⁸	Q	
2024	H				;
2025	H				;
2026	Me				;
2027	Me				;
2028	Me				;

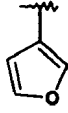
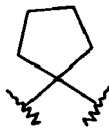
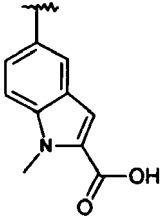
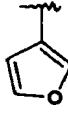
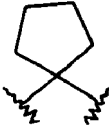
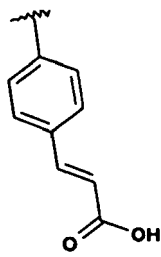
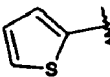
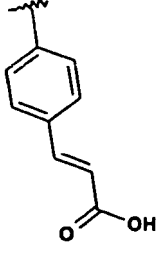
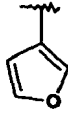
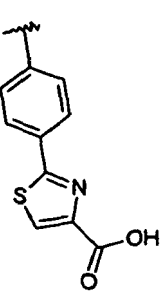
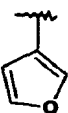
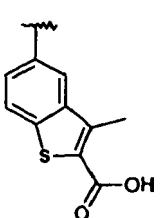
(fortgesetzt)

Verb. #	R ¹	R ²	R³ R⁴	Q	
2029	Me				;
2030	Me				;
2031	Me				;
2032	Me				;
2033	H				;

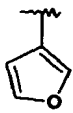
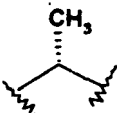
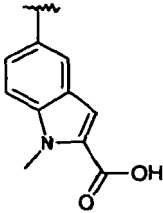
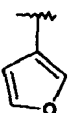
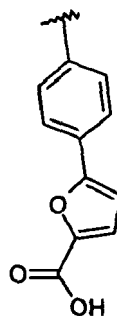
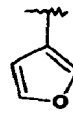
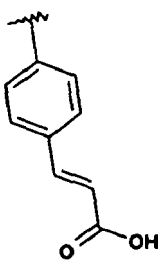
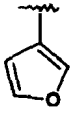
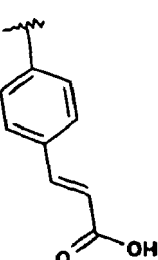
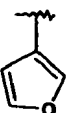
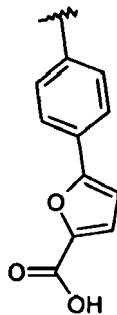
(fortgesetzt)

Verb. #	R ¹	R ²	R⁷ R⁸	Q	
2034	Me				;
2035	H				;
2036	H				;
2037	H				;
2038	H				;

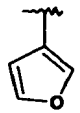
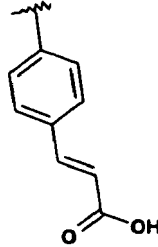
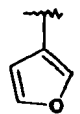
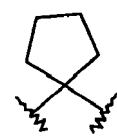
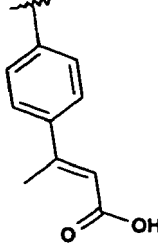
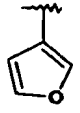
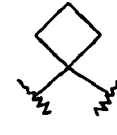
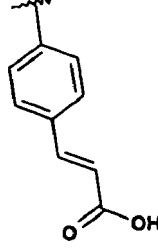
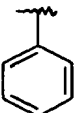
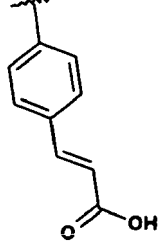
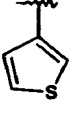
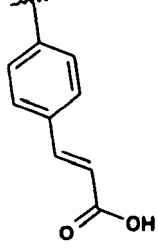
(fortgesetzt)

Verb. #	R ¹	R ²	R³ R⁴	Q	
2039	H				;
2041	Me				;
2042	H				;
2044	H				;
2046	H				;

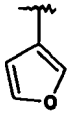
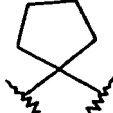
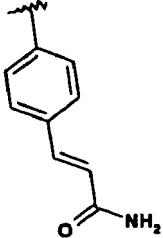
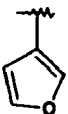
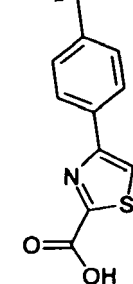
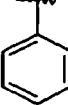
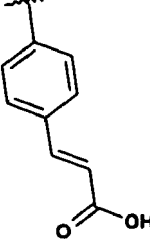
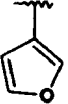
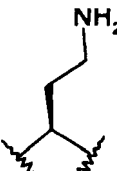
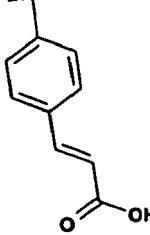
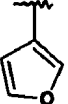
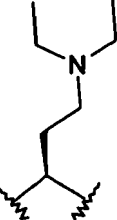
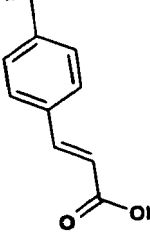
(fortgesetzt)

Verb. #	R ¹	R ²	R⁷ R⁸	Q	
2047	H				;
2048	H				;
2050	H				;
2051	Me				;
2053	H				;

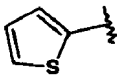
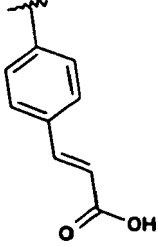
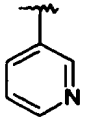
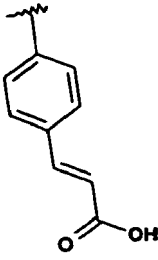
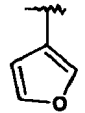
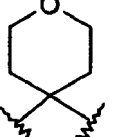
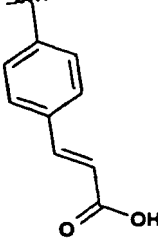
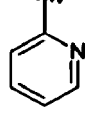
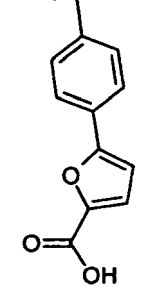
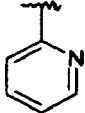
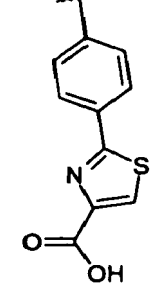
(fortgesetzt)

Verb. #	R ¹	R ²	R³ R⁴	Q	
2054	Et				;
2056	H				;
2057	H				;
2058	H				;
2059	H				;

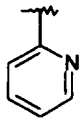
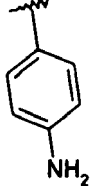
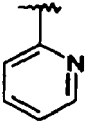
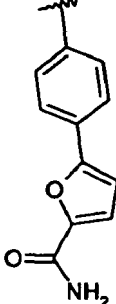
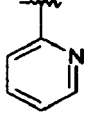
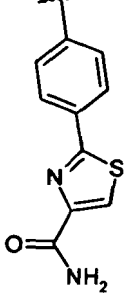
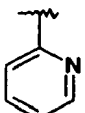
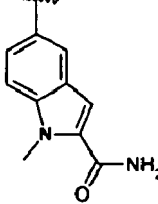
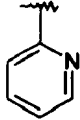
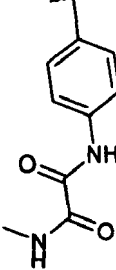
(fortgesetzt)

Verb. #	R ¹	R ²	R⁷ R⁸	Q	
2060	H				;
2061	H				;
2062	Me				;
2064	H				;
2065	H				;

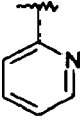
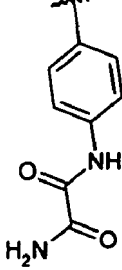
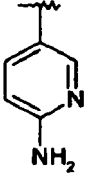
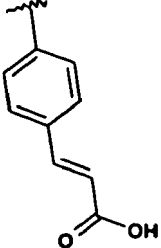
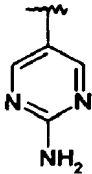
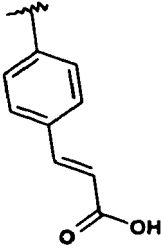
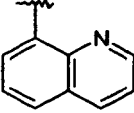
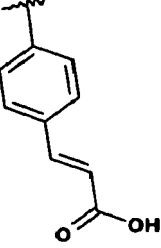
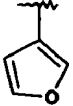
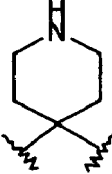
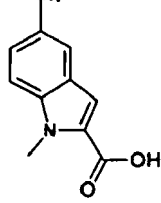
(fortgesetzt)

Verb. #	R ¹	R ²	R⁷ R⁸	Q	
2066	Me				;
2068	Me				;
2069	H				;
2070	Me				;
2071	Me				;

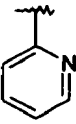
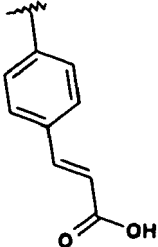
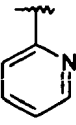
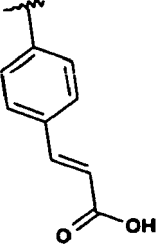
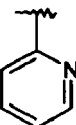
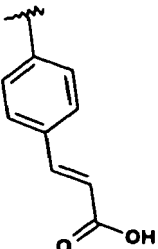
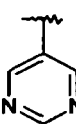
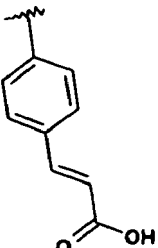
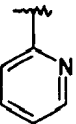
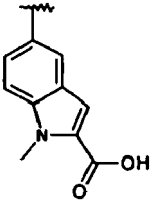
(fortgesetzt)

Verb. #	R ¹	R ²	R³ R⁴	Q	
2072	Me				;
2073	Me				;
2074	Me				;
2075	Me				;
2076	Me				;

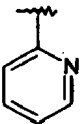
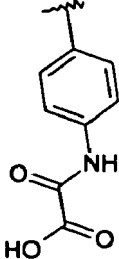
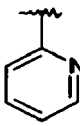
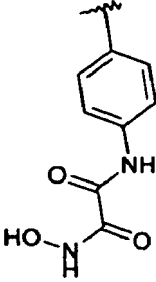
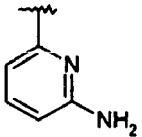
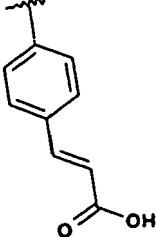
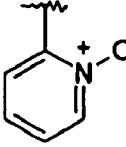
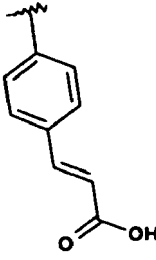
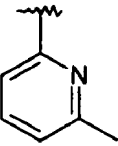
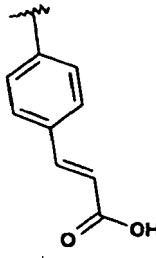
(fortgesetzt)

Verb. #	R ¹	R ²	R⁷ R⁸	Q	
2077	Me				;
2080	Me				;
2081	Me				;
2082	Me				;
2084	H				;

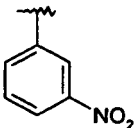
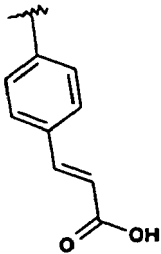
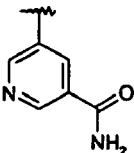
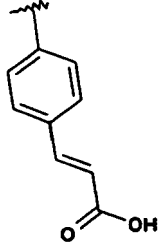
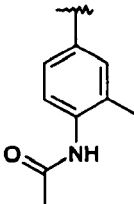
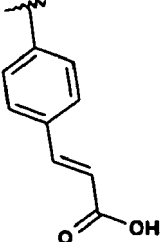
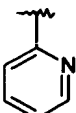
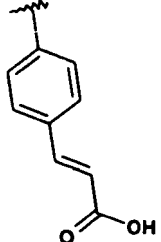
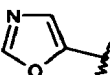
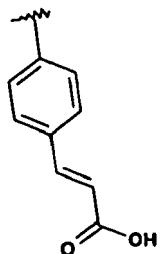
(fortgesetzt)

Verb. #	R ¹	R ²	R⁷ R⁸	Q	
2087	Me				;
2089	H				;
2090	Me				;
2091	Me				;
2093	Me				;

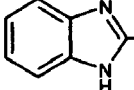
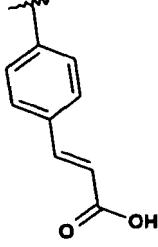
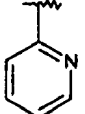
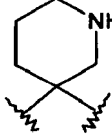
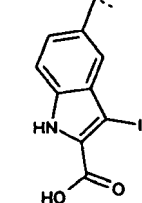
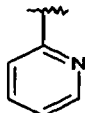
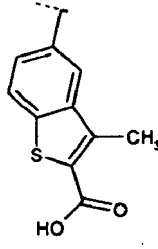
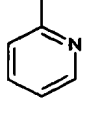
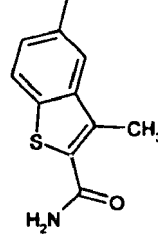
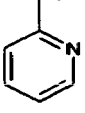
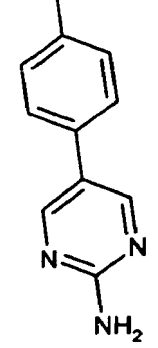
(fortgesetzt)

Verb. #	R ¹	R ²	R⁷ R⁸	Q	
2094	Me				;
2095	Me				;
2096	Me				;
2097	Me				;
2098	Me				;

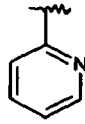
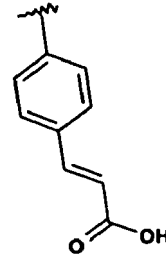
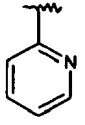
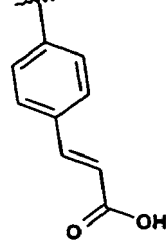
(fortgesetzt)

Verb. #	R ¹	R ²	R⁷ R⁸	Q	
2102	Me				;
2103	Me				;
2104	Me				;
2107	Me				;
2108	Me				;

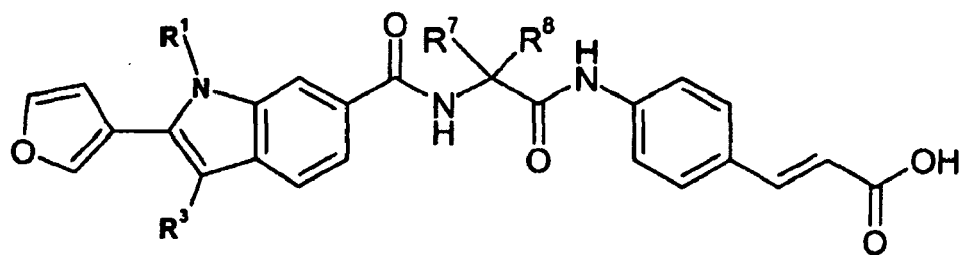
(fortgesetzt)

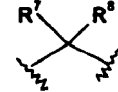
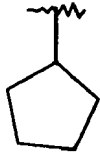
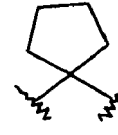
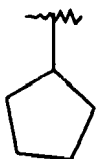
Verb. #	R ¹	R ²		Q	
2109	Me				;
2110	Me				;
2111	Me				;
2112	Me				;
2113	Me				;

(fortgesetzt)

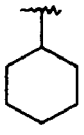
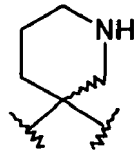
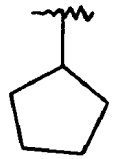
Verb. #	R ¹	R ²		Q	
2115	Me				;
2117	Me				.

32. Verbindung nach Anspruch 1 der Formel:

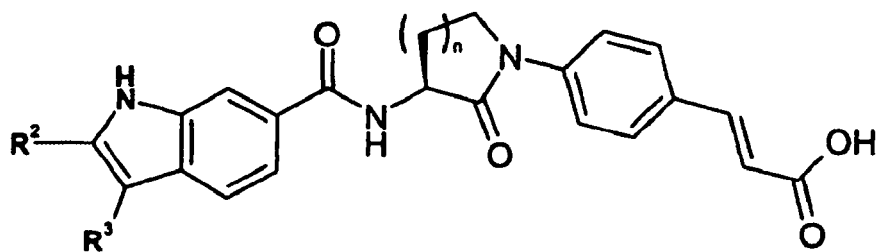
worin R¹, R³, R⁷ und R⁸ wie folgt definiert sind:

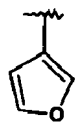
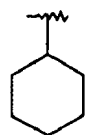
Verb. #	R ¹	R ³		
3001	H			;
3002	H			;

(fortgesetzt)

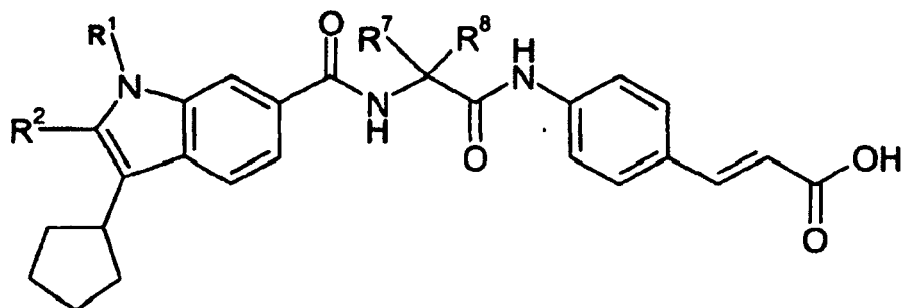
Verb. #	R ¹	R ³	R ⁷ R ⁸	
3003	Me			; und
3004	Me			.

33. Verbindung nach Anspruch 1 der Formel:

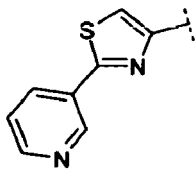
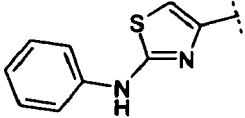
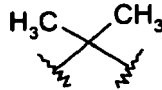
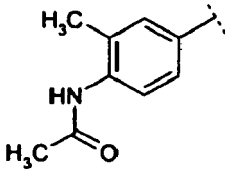
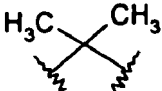
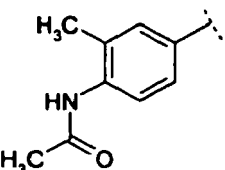
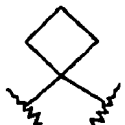
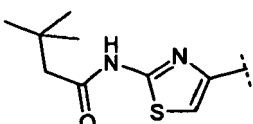
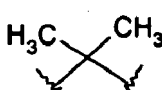
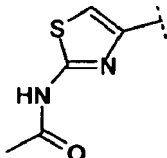
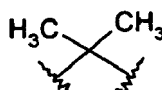
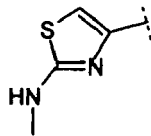
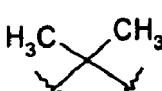
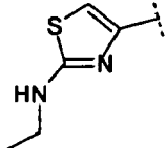
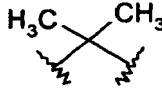
worin R², R³ und n wie folgt definiert sind:

Verb. #	R ²	R ³	n	
5001			1	.

34. Verbindung nach Anspruch 1 der Formel:



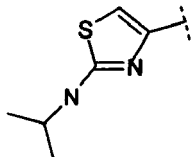
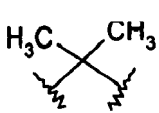
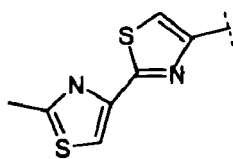
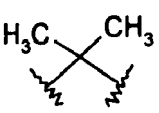
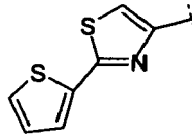
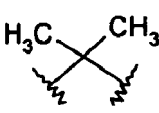
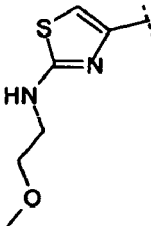
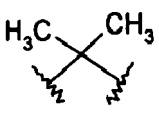
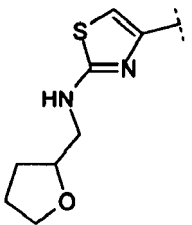
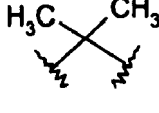
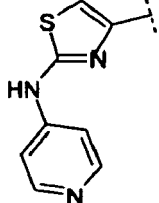
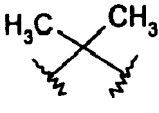
worin R^1 , R^2 , R^7 und R^8 wie folgt definiert sind:

Verb. #	R^1	R^2	R^7 R^8	
6003	CH ₃			;
6004	CH ₃			;
6005	CH ₃			;
6006	CH ₃			;
6007	CH ₃			;
6008	CH ₃			;
6009	CH ₃			;
6010	CH ₃			;

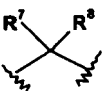
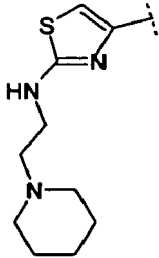
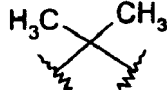
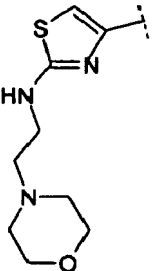
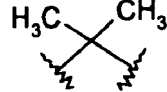
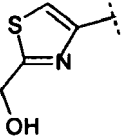
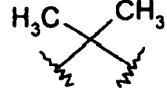
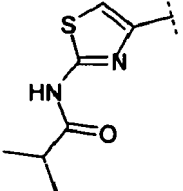
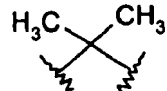
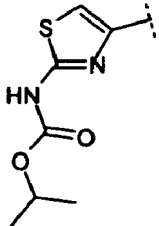
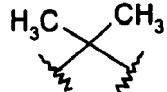
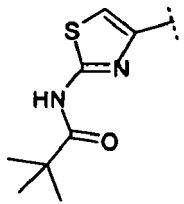
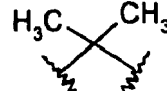
(fortgesetzt)

Verb. #	R ¹	R ²	R ⁷ R ⁸	
5				
10	6011	CH ₃		H ₃ C CH ₃ ;
15	6012	CH ₃		H ₃ C CH ₃ ;
20	6013	CH ₃		H ₃ C CH ₃ ;
25	6013	CH ₃		H ₃ C CH ₃ ;
30	6013	CH ₃		H ₃ C CH ₃ ;
35	6014	CH ₃		H ₃ C CH ₃ ;
40	6015	CH ₃		H ₃ C CH ₃ ;
45	6016	CH ₃		H ₃ C CH ₃ ;
50				
55				

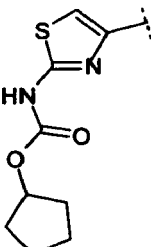
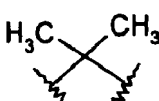
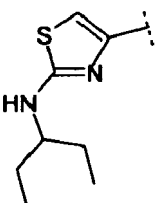
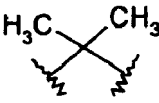
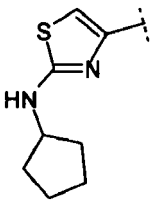
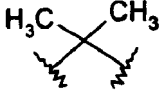
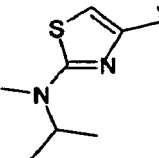
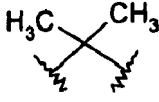
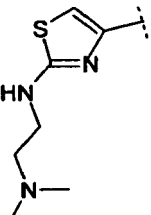
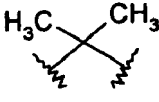
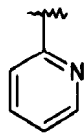
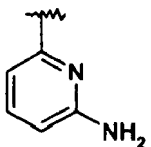
(fortgesetzt)

Verb. #	R ¹	R ²	R ⁷ R ⁸	
6017	CH ₃			;
6018	CH ₃			;
6019	CH ₃			;
6020	CH ₃			;
6021	CH ₃			;
6022	CH ₃			;

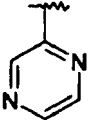
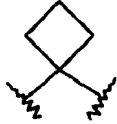
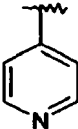
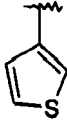
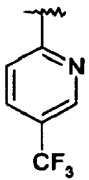
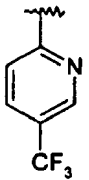
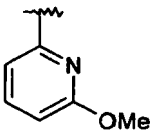
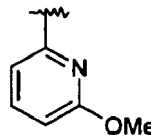
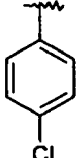
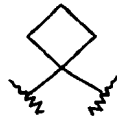
(fortgesetzt)

Verb. #	R ¹	R ²		
6023	CH ₃			;
6025	CH ₃			;
6026	CH ₃			;
6027	CH ₃			;
6028	CH ₃			;
6029	CH ₃			;

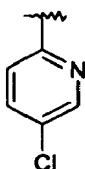
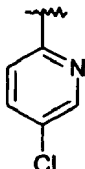
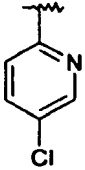
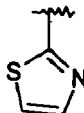
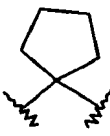
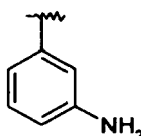
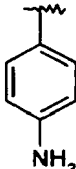
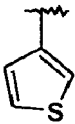
(fortgesetzt)

Verb. #	R ¹	R ²	R ⁷ R ⁸	
6030	CH ₃			;
6031	CH ₃			;
6033	CH ₃			;
6034	CH ₃			;
6035	CH ₃			;
6036	CH ₃			;
6037	CH ₃			;

(fortgesetzt)

Verb. #	R ¹	R ²	R ⁷ R ⁸	
6038	CH ₃			;
6039	CH ₃			;
6040	CH ₃			;
6041	CH ₃			;
6042	CH ₃			;
6043	CH ₃			;
6044	CH ₃			;
6045	CH ₃			;

(fortgesetzt)

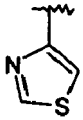
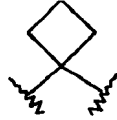
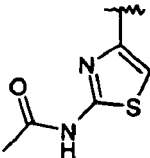
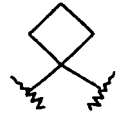
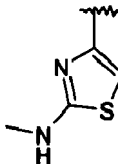
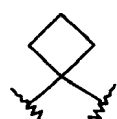
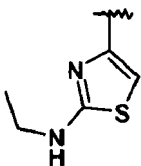
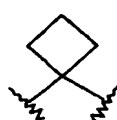
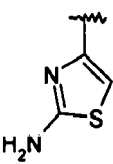
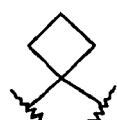
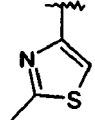
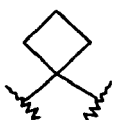
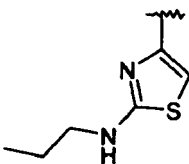
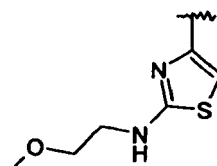
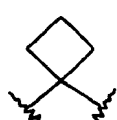
Verb. #	R ¹	R ²	R ⁷ R ⁸	
6046	CH ₃			;
6047	CH ₃			;
6048	CH ₃			;
6049	CH ₃			;
6051	CH ₃			;
6052	CH ₃			;
6053	CH ₃			;
6055	CH ₃			;

(fortgesetzt)

Verb. #	R ¹	R ²		
6057	CH ₃			;
6060	CH ₃			;
6061	CH ₃			;
6063	CH ₃			;
6064	CH ₃			;
6066	CH ₃			;
6067	CH ₃			;
6069	CH ₃			;

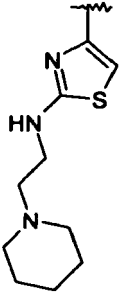
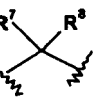
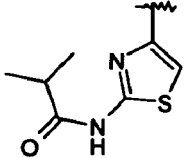
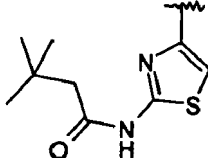
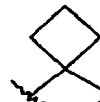
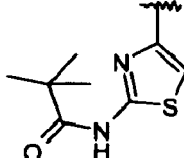
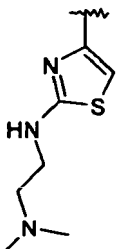
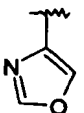
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(fortgesetzt)

Verb. #	R ¹	R ²	R ⁷ R ⁸	
6070	CH ₃			;
6071	CH ₃			;
6072	CH ₃			;
6073	CH ₃			;
6074	CH ₃			;
6075	CH ₃			;
6076	CH ₃			;
6077	CH ₃			;

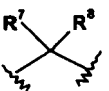
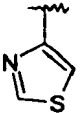
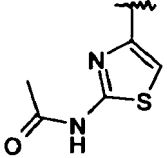
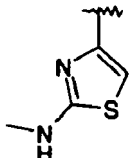
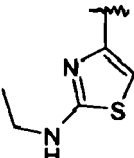
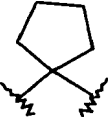
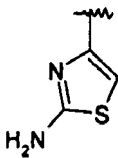
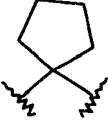
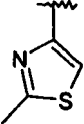
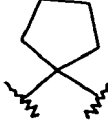
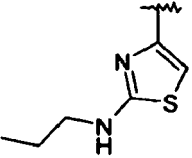
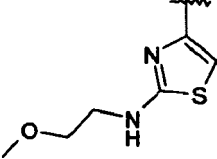
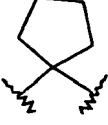
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(fortgesetzt)

Verb. #	R ¹	R ²	R ⁷ R ⁸	
6078	CH ₃			;
6079	CH ₃			;
6080	CH ₃			;
6081	CH ₃			;
6082	CH ₃			;
6083	CH ₃			;
6084	CH ₃			;

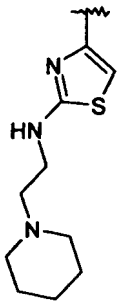
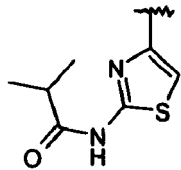
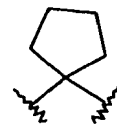
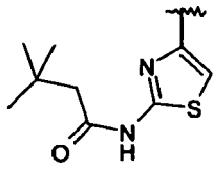
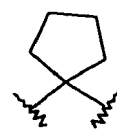
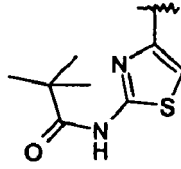
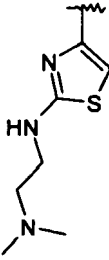
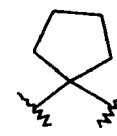
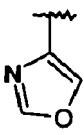
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(fortgesetzt)

Verb. #	R ¹	R ²		
6085	CH ₃			;
6086	CH ₃			;
6087	CH ₃			;
6088	CH ₃			;
6089	CH ₃			;
6090	CH ₃			;
6091	CH ₃			;
6092	CH ₃			;

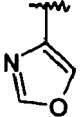
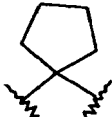
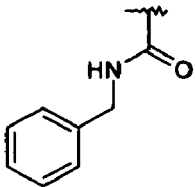
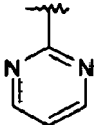
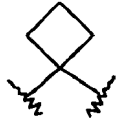
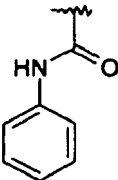
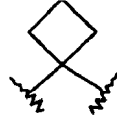
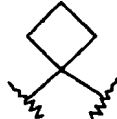
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(fortgesetzt)

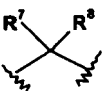
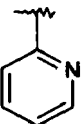
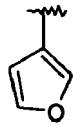
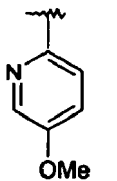
Verb. #	R ¹	R ²	R ⁷ R ⁸	
6093	CH ₃			;
6094	CH ₃			;
6095	CH ₃			;
6096	CH ₃			;
6097	CH ₃			;
6098	CH ₃			;
6099	CH ₃			;

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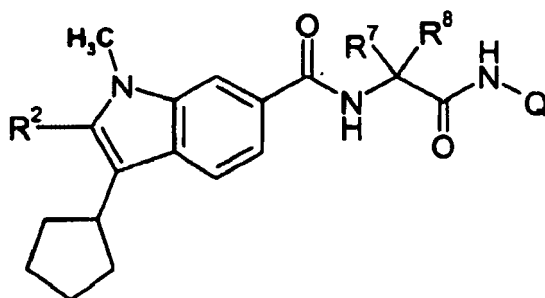
(fortgesetzt)

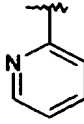
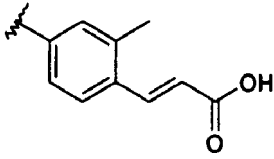
Verb. #	R ¹	R ²	R ⁷ R ⁸	
6100	CH ₃			;
6106	CH ₃	CONHCH ₃		;
6107	CH ₃	CON(CH ₃) ₂		;
6110	CH ₃			;
6111	CH ₃			;
6112	CH ₃			;
6113	CH ₃	CONH ₂		;
6119	CH ₃	H		;
6120	CH ₃	Br		;

(fortgesetzt)

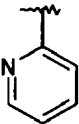
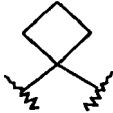
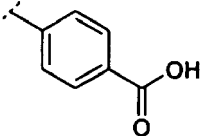
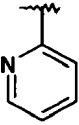
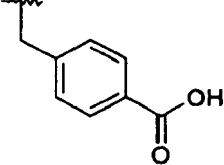
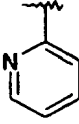
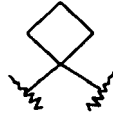
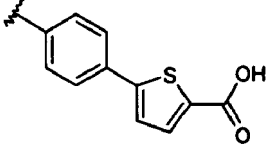
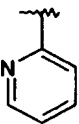
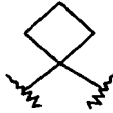
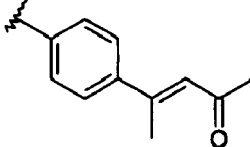
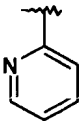
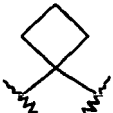
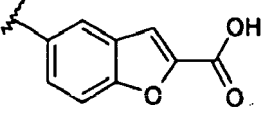
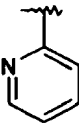
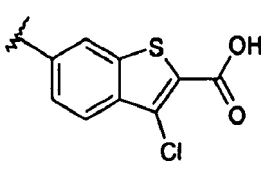
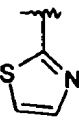
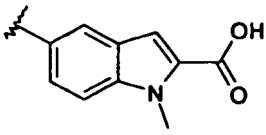
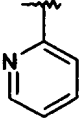
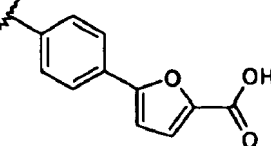
Verb. #	R ¹	R ²		
6121	H			;
6122	CH ₃			und
6123	CH ₃			.

35. Verbindung nach Anspruch 1 der Formel:

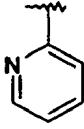
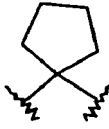
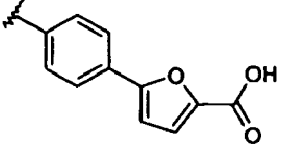
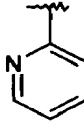
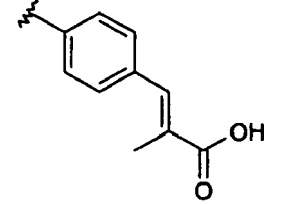
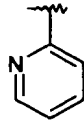
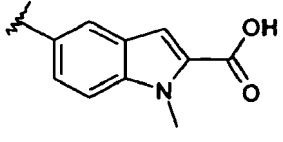
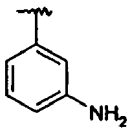
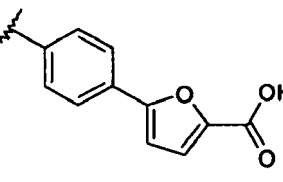
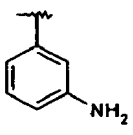
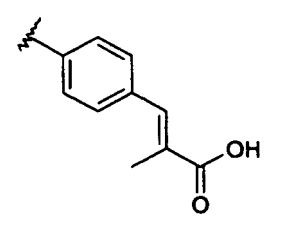
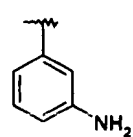
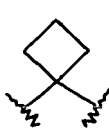
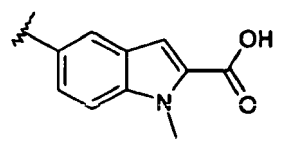
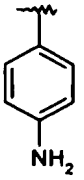
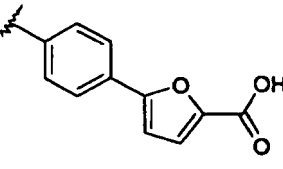
worin R², R⁷, R⁸ und Q wie folgt definiert sind:

Verb. #	R ²		Q	
7001				;

(fortgesetzt)

Verb. #	R ²	R ⁷ R ⁸	Q	
7002				;
7003				;
7004				;
7005				;
7006				;
7007				;
7008				;
7009				;

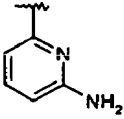
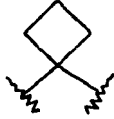
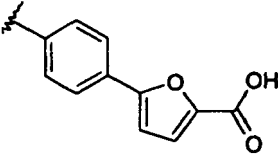
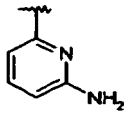
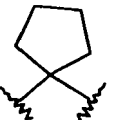
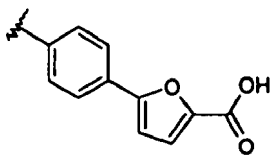
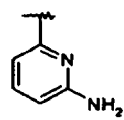
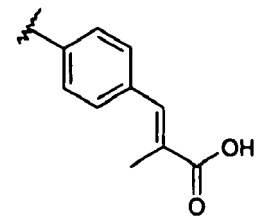
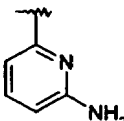
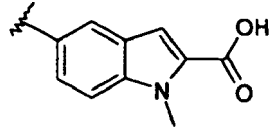
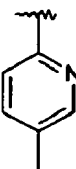
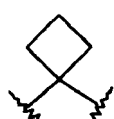
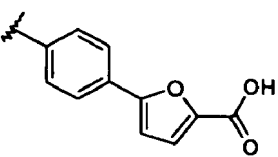
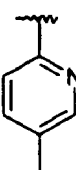
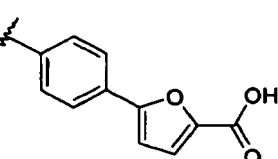
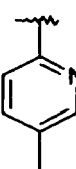
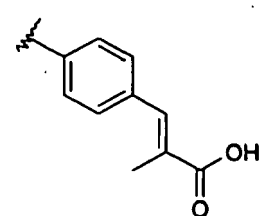
(fortgesetzt)

Verb. #	R ²	R ⁷ R ⁸	Q	
7010				;
7011				;
7012				;
7013				;
7014				;
7015				;
7016				;

(fortgesetzt)

Verb. #	R ²	R ⁷ R ⁸	Q	
7017				;
7018				;
7019				;
7020				;
7021				;
7022				;
7023				;

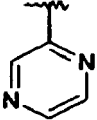
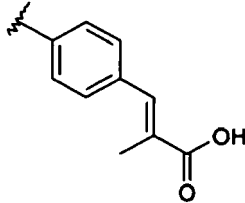
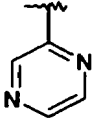
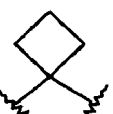
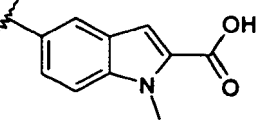
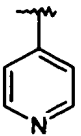
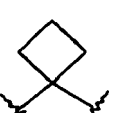
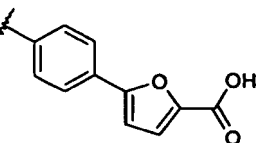
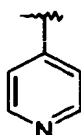
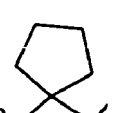
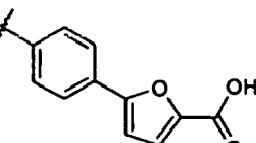
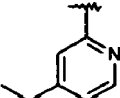
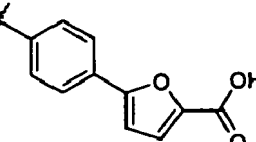
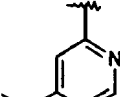
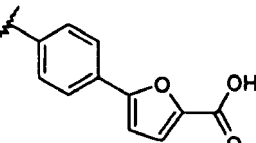
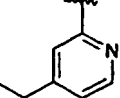
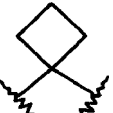
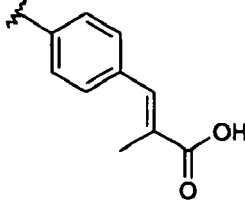
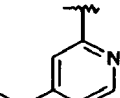
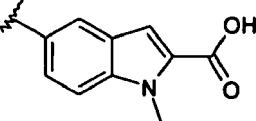
(fortgesetzt)

Verb. #	R ²	R ⁷ R ⁸	Q	
7024				;
7025				;
7026				;
7027				;
7028				;
7029				;
7030				;

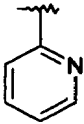
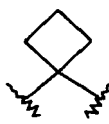
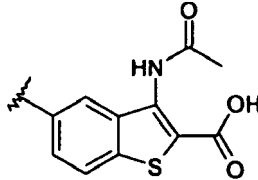
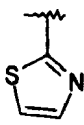
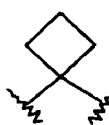
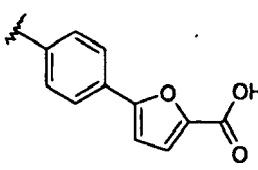
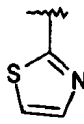
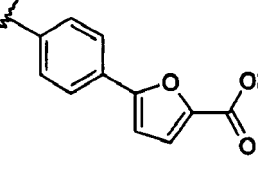
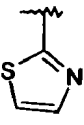
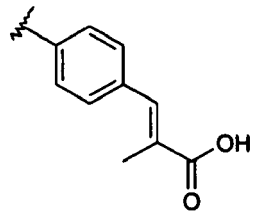
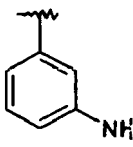
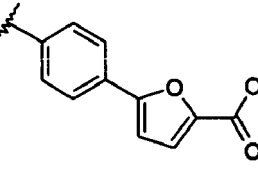
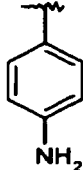
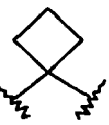
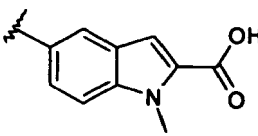
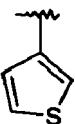
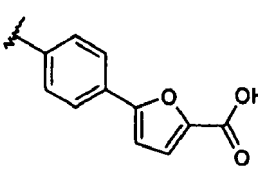
(fortgesetzt)

Verb. #	R ²	R ⁷ R ⁸	Q	
7031				;
7032				;
7033				;
7034				;
7035				;
7036				;
7037				;

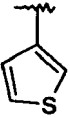
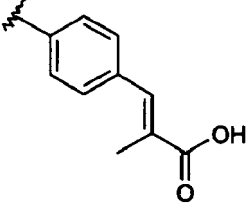
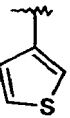
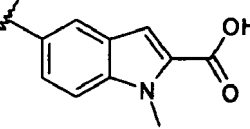
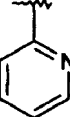
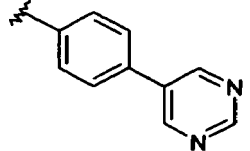
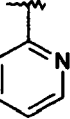
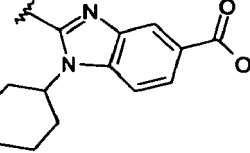
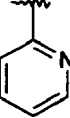
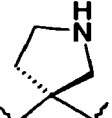
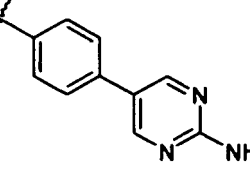
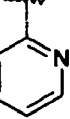
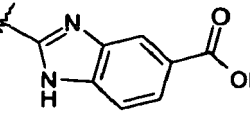
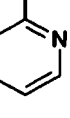
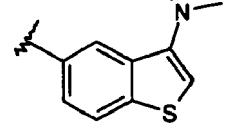
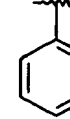
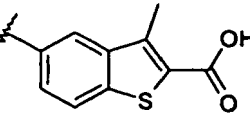
(fortgesetzt)

Verb. #	R ²	R ⁷ R ⁸	Q	
7038				;
7039				;
7040				;
7041				;
7042				;
7043				;
7044				;
7045				;

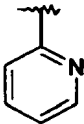
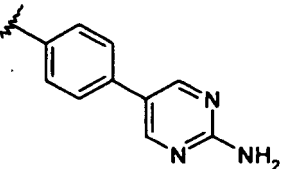
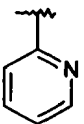
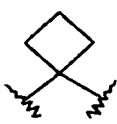
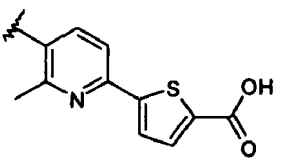
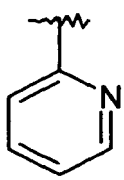
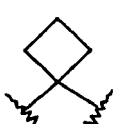
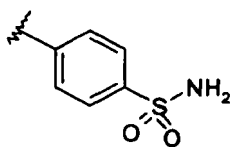
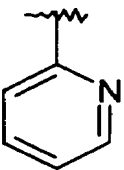
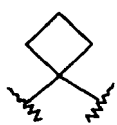
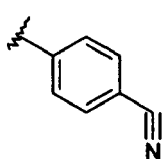
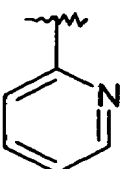
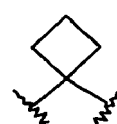
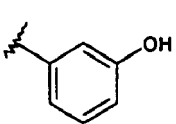
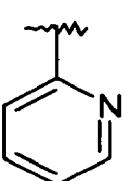
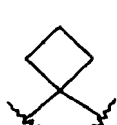
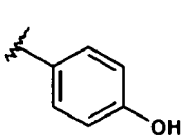
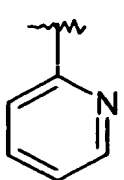
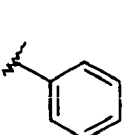
(fortgesetzt)

Verb. #	R ²	R ⁷ R ⁸	Q	
7046				;
7047				;
7048				;
7049				;
7050				;
7051				;
7052				;

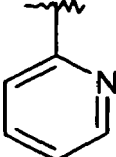
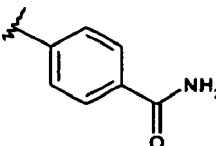
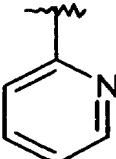
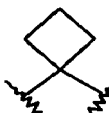
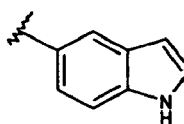
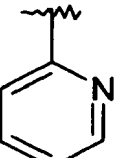
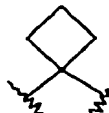
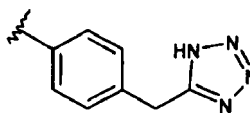
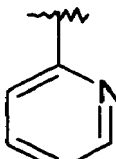
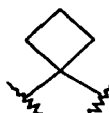
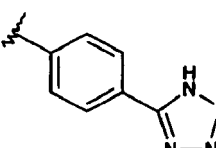
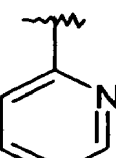
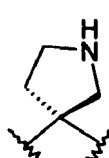
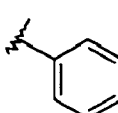
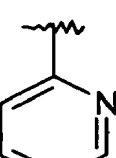
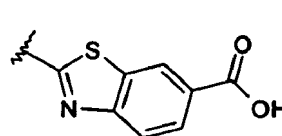
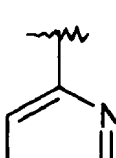
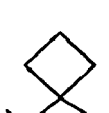
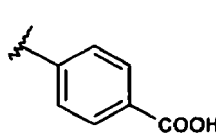
(fortgesetzt)

Verb. #	R ²	R ⁷ R ⁸	Q	
7053				;
7054				;
7055				;
7056				;
7059				;
7062				;
7063				;
7064				;

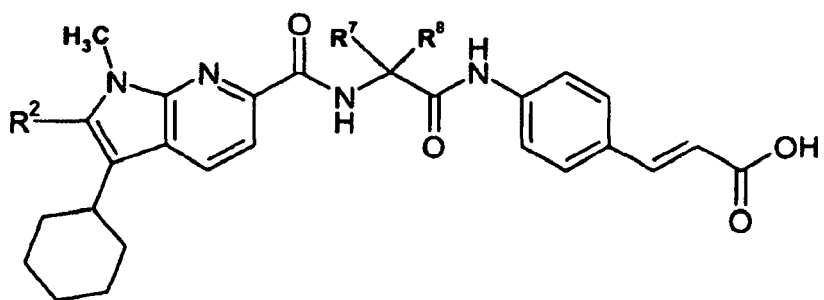
(fortgesetzt)

Verb. #	R ²	R ⁷ R ⁸	Q	
7065				;
7066				;
7068				;
7070				;
7071				;
7072				;
7073				;

(fortgesetzt)

Verb. #	R ²	R ⁷ R ⁸	Q	
7076				;
7077				;
7078				;
7079				;
7080				;
7082				; und
7083				.

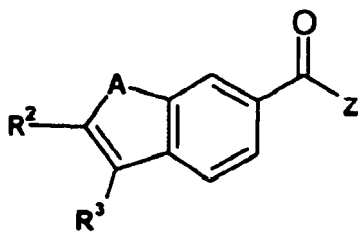
36. Verbindung nach Anspruch 1 der Formel:



worin R^2 , R^7 und R^8 wie folgt definiert sind:

Verb. #	R^2	R^7 R^8	
9001			; und
9002			.

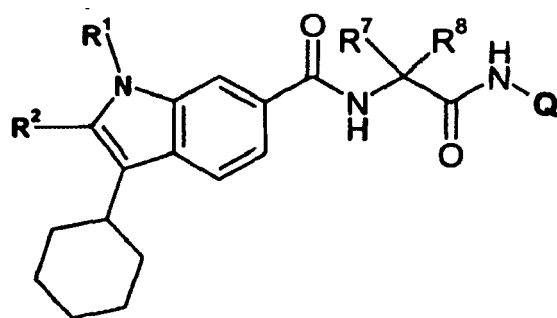
37. Verbindung der Formel :



worin A , R^2 , R^3 und Z wie folgt definiert sind:

Verb. #	A	R^2	R^3	Z	
1013	NMe				;

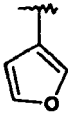
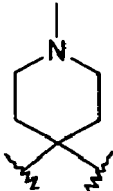
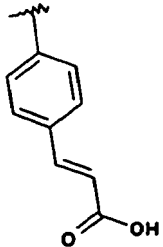
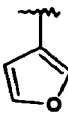
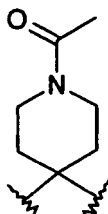
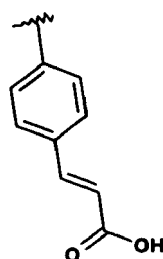
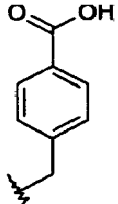
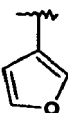
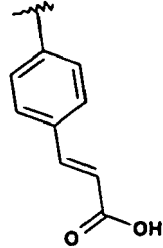
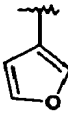
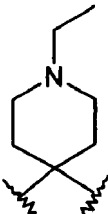
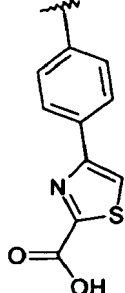
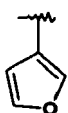
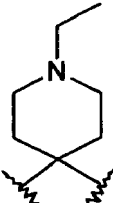
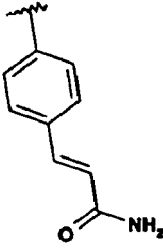
oder eine Verbindung der Formel:



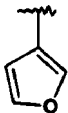
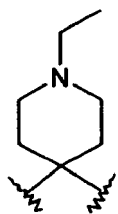
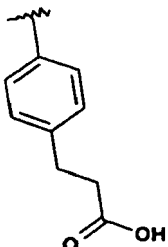
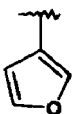
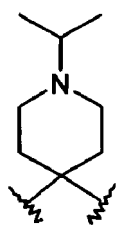
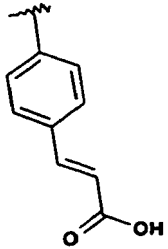
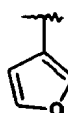
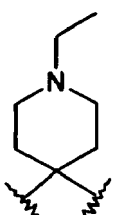
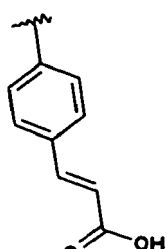
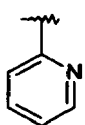
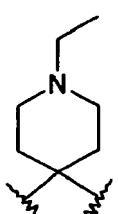
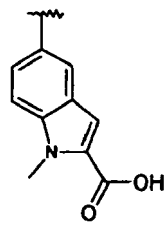
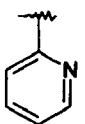
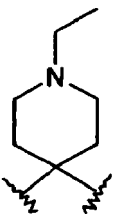
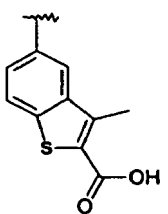
worin **R¹**, **R²**, **R⁷**, **R⁸** und **Q** wie folgt definiert sind:

Verb. #	R ¹	R ²	R ⁷ R ⁸	Q	
2040					;
2043					;
2045					;
2049	H				;

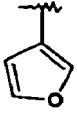
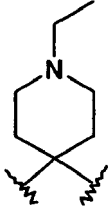
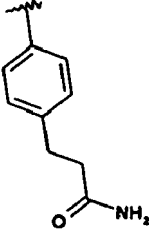
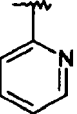
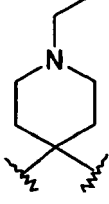
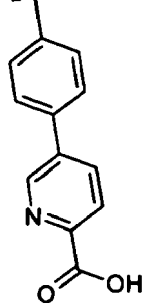
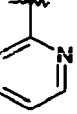
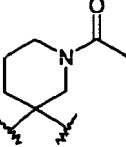
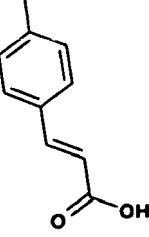
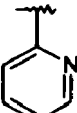
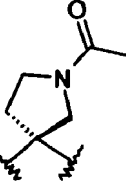
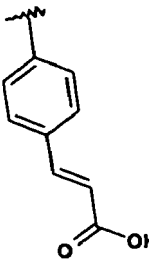
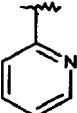
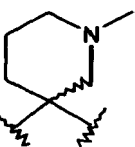
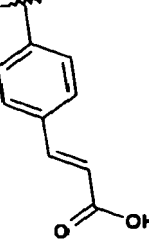
(fortgesetzt)

Verb. #	R ¹	R ²	R ⁷ R ⁸	Q	
2052	H				;
2055	H				;
2063					;
2067	H				;
2078	H				;

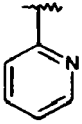
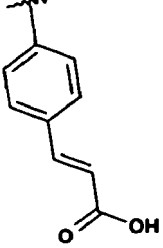
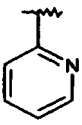
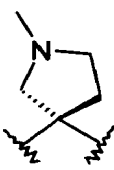
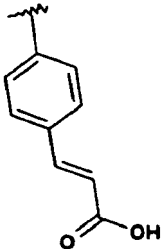
(fortgesetzt)

Verb. #	R ¹	R ²	R ⁷ R ⁸	Q	
2079	H				;
2086	H				;
2088	H				;
2092	Me				;
2099	Me				;

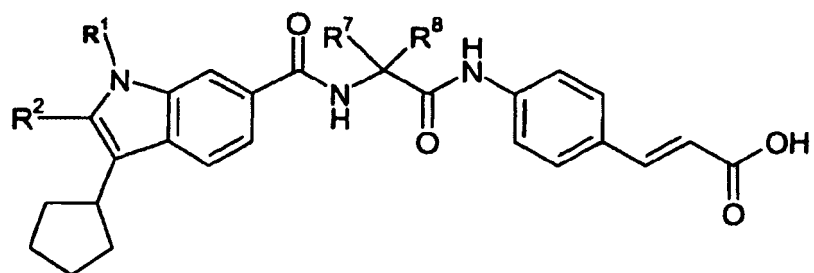
(fortgesetzt)

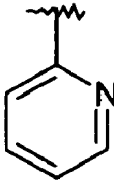
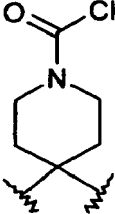
Verb. #	R ¹	R ²	R ⁷ R ⁸	Q	
2100	H				;
2101	Me				;
2105	Me				;
2106	Me				;
2114	Me				;

(fortgesetzt)

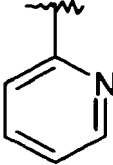
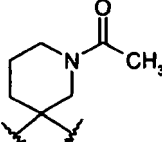
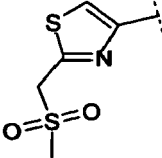
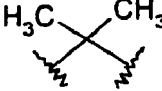
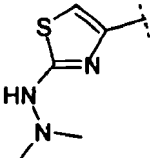
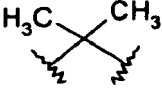
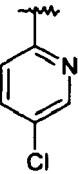
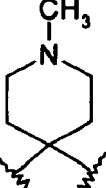
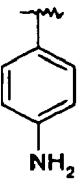
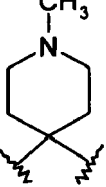
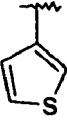
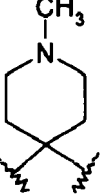
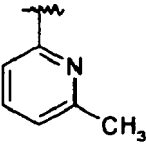
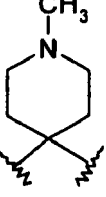
Verb. #	R ¹	R ²	R ⁷ R ⁸	Q	
2116	Me				und
2118	Me				;

oder eine Verbindung der Formel:

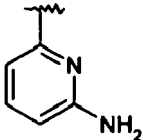
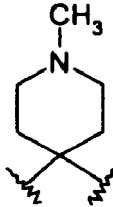
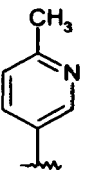
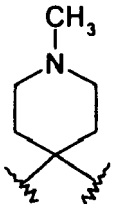
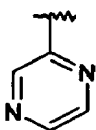
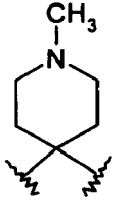
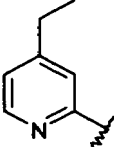
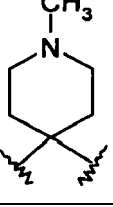
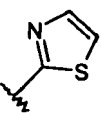
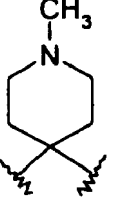
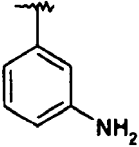
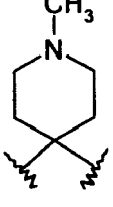
worin R¹, R², R⁷ und R⁸ wie folgt definiert sind:

Verb. #	R ¹	R ² ;	R ⁷ R ⁸	
6001	CH ₃			;

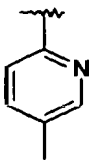
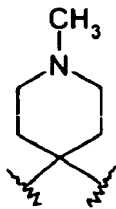
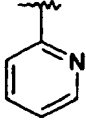
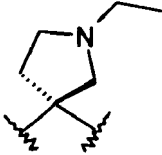
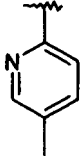
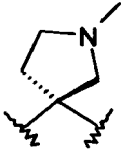
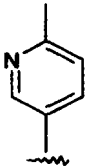
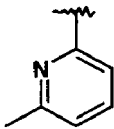
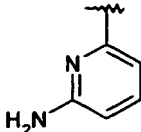
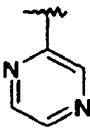
(fortgesetzt)

Verb. #	R ¹	R ² ;		
6002	CH ₃			;
6024	CH ₃			;
6032	CH ₃			;
6050	CH ₃			;
6054	CH ₃			;
6056	CH ₃			;
6058	CH ₃			;

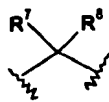
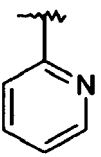
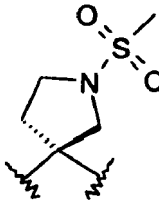
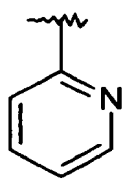
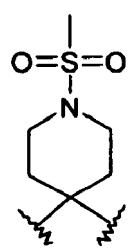
(fortgesetzt)

Verb. #	R ¹	R ² ;		
6059	CH ₃			;
6062	CH ₃			;
6065	CH ₃			;
6068	CH ₃			;
6101	CH ₃			;
6102	CH ₃			;

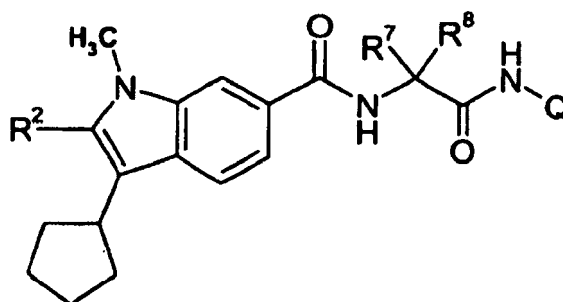
(fortgesetzt)

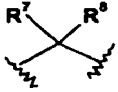
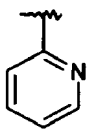
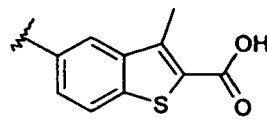
Verb. #	R ¹	R ² ;		
6103	CH ₃			;
6105	CH ₃			;
6114	CH ₃			;
6115	CH ₃			;
6116	CH ₃			;
6117	CH ₃			;
6118	CH ₃			;

(fortgesetzt)

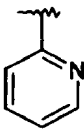
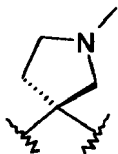
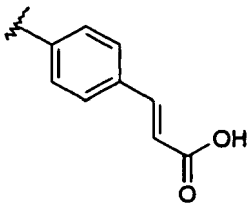
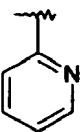
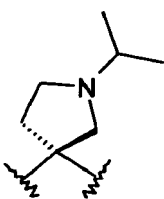
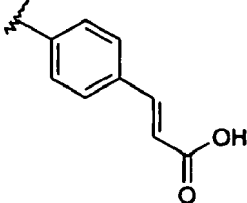
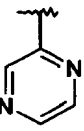
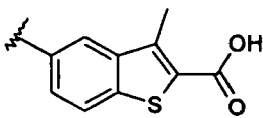
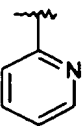
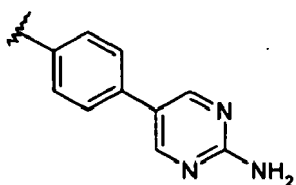
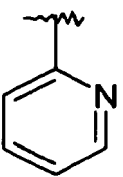
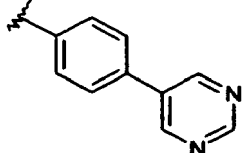
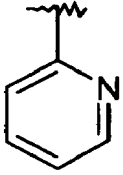
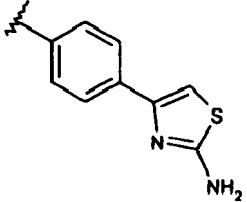
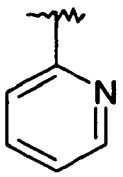
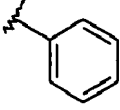
Verb. #	R ¹	R ² ;		
6124	CH ₃			; und
6125	CH ₃			;

oder eine Verbindung der Formel

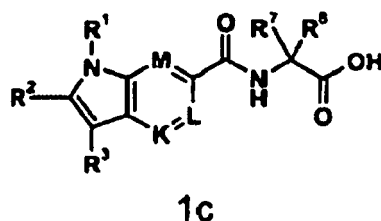
worin R², R⁷, R⁸ und Q wie folgt definiert sind:

Verb. #	R ²		Q	
7057				;

(fortgesetzt)

Verb. #	R ²	R ⁷ R ⁸	Q	
7058				;
7060				;
7061				;
7067				;
7069				;
7075				und;
7081				.

38. Verbindung nach Anspruch 1 oder 37 oder ein pharmazeutisch akzeptables Salz hiervon als ein Inhibitor der RNA-abhängigen RNA-Polymerase-Aktivität des Enzyms NS5B, kodiert durch HCV.
39. Verbindung nach Anspruch 1 oder 37 oder ein pharmazeutisch akzeptables Salz hiervon als Inhibitor der HCV-Replikation.
40. Pharmazeutische Zusammensetzung zur Behandlung oder Vorbeugung einer HCV-Infektion, umfassend eine wirksame Menge einer Verbindung gemäß Anspruch 1 oder 37 oder ein pharmazeutisch akzeptables Salz hiervon sowie einen pharmazeutisch akzeptablen Träger.
41. Zusammensetzung nach Anspruch 40, weiterhin umfassend ein immunmodulatorisches Mittel.
42. Zusammensetzung nach Anspruch 41, worin die immunmodulatorischen Mittel ausgewählt sind aus: α -, β -, δ -, γ - und ω -Interferon.
43. Zusammensetzung nach Anspruch 40, weiterhin umfassend ein weiteres antivirales Mittel.
44. Zusammensetzung nach Anspruch 43, worin das antivirale Mittel ausgewählt ist aus: Ribavirin und Amantadin.
45. Zusammensetzung nach Anspruch 40, weiterhin umfassend einen weiteren Inhibitor der HCV-Polymerase.
46. Zusammensetzung nach Anspruch 40, weiterhin umfassend einen Inhibitor von HCV-Helikase, HCV-Protease, HCV-Metalloprotease oder HCV-IRES.
47. Verwendung einer Verbindung nach Anspruch 1 oder 37 zur Herstellung eines Arzneimittels zur Behandlung der HCV-Infektion.
48. Verwendung einer Verbindung nach Anspruch 1 oder 37 oder ein pharmazeutisch akzeptables Salz hiervon zur Herstellung eines Arzneimittels zur Behandlung oder Vorbeugung der HCV-Infektion in einem Säuger, umfassend die Verabreichung einer wirksamen Menge der Verbindung oder eines pharmazeutisch akzeptablen Salzes hiervon in Kombination mit einem weiteren anti-HCV-Mittel an den Säuger.
49. Zwischenproduktverbindung, dargestellt durch die Formel 1c:

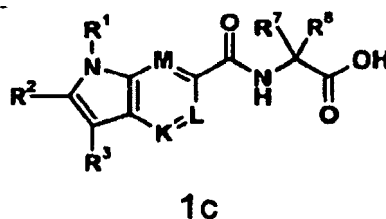


worin

R¹, R², R³, K, L, M, R⁷ und R⁸ wie in Anspruch 1 oder 37 definiert sind, oder ein Salz oder ein Derivat hiervon.

50. Verfahren zur Herstellung von Verbindungen nach Anspruch 1 oder 37, umfassend:

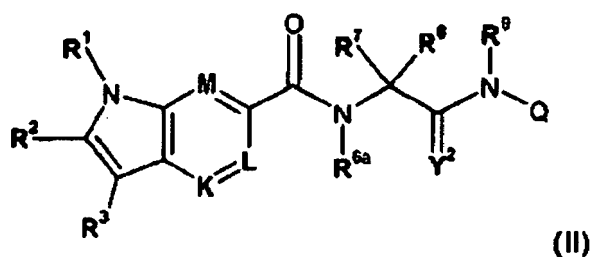
a) Koppeln in einer Mischung, enthaltend ein aprotisches Lösungsmittel oder kein Lösungsmittel, und bei einer Temperatur von etwa 20 bis etwa 170°C, eines Koppplungsmittels und eines Zwischenprodukts 1c:



mit dem Amin Q-NH₂, um Verbindungen nach Anspruch 1 oder 37 herzustellen, worin R¹, R³, R², R⁷, R⁸, K, L, M und Q wie in Anspruch 1 oder 37 definiert sind.

Revendications

1. Enantiomère, diastéréoisomère, ou tautomère d'un composé, représenté par la formule II :



dans laquelle :

R¹ est choisi dans le groupe constitué par : H, un groupe alkyle en C₁ à 6 facultativement substitué par :

- un atome d'halogène, OR¹¹, SR¹¹ ou N(R¹²)₂, dans lesquels R¹¹ et chaque R¹² est indépendamment H, un groupe alkyle en C₁ à 6, cycloalkyle en C₃ à 7, alkyl en C₁ à 6-cycloalkyle en C₃ à 7, alkyl en C₁ à 6-aryle ou alkyl en C₁ à 6-Het, ledit groupe aryle ou Het étant facultativement substitué par R¹⁰ ; ou

les deux R¹² sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont tous deux attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons ;

R² est choisi parmi : un atome d'halogène, R²¹, OR²¹, SR²¹, COOR²¹, SO₂N(R²²)₂, N(R²²)₂, CON(R²²)₂, NR²²C(O)R²² ou NR²²C(O)NR²² où R²¹ et chaque R²² est indépendamment H, un groupe alkyle en C₁ à 6, halogénoalkyle, alcényle en C₂ à 6, cycloalkyle en C₃ à 7, alcynyle en C₂ à 6, cycloalcényle en C₅ à 7, aryle à 6 ou 10 chaînons ou Het, lesdits R²¹ et R²² étant facultativement substitués par R²⁰ ;

ou les deux R²² sont liés ensemble pour former un hétérocycle saturé à 5, 6 ou 7 chaînons avec l'atome d'azote auquel ils sont attachés ;

R³ est choisi parmi un groupe alkyle en C₁ à 6, halogénoalkyle, cycloalkyle en C₃ à 7, cycloalcényle en C₅ à 7, bicycloalkyle en C₆ à 10, bicycloalcényle en C₆ à 10, aryle à 6 ou 10 chaînons, Het, alkyl en C₁ à 6-aryle ou alkyl en C₁ à 6-Het,

lesdits groupes alkyle, cycloalkyle, cycloalcényle, bicycloalkyle, bicycloalcényle, aryle, Het, alkyl-aryle et alkyl-Het étant facultativement substitués par 1 à 4 substituants choisis parmi : un atome d'halogène, ou

a) un groupe alkyle en C₁ à 6 facultativement substitué par :

-OR³¹ ou SR³¹ dans lesquels R³¹ est H, un groupe alkyle en C₁ à 6, cycloalkyle en C₃ à 7, alkyl en C₁ à 6-cycloalkyle en C₃ à 7, aryle, Het, alkyl en C₁ à 6-aryle ou alkyl en C₁ à 6-Het ; ou

-N(R³²)₂ dans lequel chaque R³² est indépendamment H, un groupe alkyle en C₁ à 6, cycloalkyle en C₃ à 7, alkyl en C₁ à 6-cycloalkyle en C₃ à 7, aryle, Het, alkyl en C₁ à 6-aryle ou alkyl en C₁ à 6-Het ; ou les deux R³² sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons ;

b) OR³³ dans lequel R³³ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het ;
 c) SR³⁴ dans lequel R³⁴ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het ; et
 d) N(R³⁵)₂ dans lequel chaque R³⁵ est indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het ; ou les deux R³⁵ sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons ;

K est N ou CR⁴, où R⁴ est H, un atome d'halogène, un groupe alkyle en C_{1 à 6}, halogénoalkyle, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7} ; ou R⁴ est OR⁴¹ ou SR⁴¹, COR⁴¹ ou N⁴¹COR⁴¹ où chaque R⁴¹ est indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7} ; ou R⁴ est NR⁴²R⁴³ où R⁴² et R⁴³ sont chacun indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7} ou à la fois R⁴² et R⁴³ sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons ;

L est N ou CR⁵, où R⁵ a la même définition que R⁴ défini ci-dessus ;

M est N ou CR⁷, où R⁷ a la même définition que R⁴ défini ci-dessus ;

R^{6a} est H ou un groupe alkyle en C_{1 à 6} ;

R⁷ et R⁸ sont chacun indépendamment H, un groupe alkyle en C_{1 à 6}, halogénoalkyle, cycloalkyle en C_{3 à 7}, aryle à 6 ou 10 chaînons, Het, alkyl en C_{1 à 6}-aryle, alkyl en C_{1 à 6}-Het, où lesdits groupes alkyle, cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle, alkyl en C_{1 à 6}-Het sont facultativement substitués par R⁷⁰ ; ou

R⁷ et R⁸ sont liés de manière covalente ensemble pour former un second groupe cycloalkyle en C_{3 à 7} ou un hétérocycle à 4, 5 ou 6 chaînons ayant de 1 à 3 hétéroatomes choisis parmi O, N et S ;

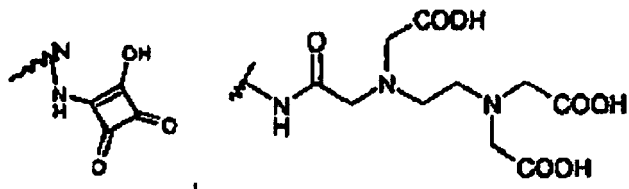
ou l'un ou l'autre de R⁷ ou R⁸ est lié de manière covalente à R^{6a} pour former un hétérocycle à 5 ou 6 chaînons contenant un atome d'azote ;

Y² est O ou S ;

R⁹ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, dont tous sont facultativement substitués par R⁹⁰ ; ou

R⁹ est lié de manière covalente à l'un ou l'autre parmi R⁷ ou R⁸ pour former un hétérocycle à 5 ou 6 chaînons ;

Q est un groupe aryle à 6 ou 10 chaînons, Het, alkyl en C_{1 à 6}-aryle, alkyl en C_{1 à 6}-Het, alkyl en C_{1 à 6}-CONH-aryle ou alkyl en C_{1 à 6}-CONH-Het, dont tous sont facultativement substitués par :



ou R¹⁰⁰;

ou un sel ou un dérivé de celui-ci ;

dans lequel Het est défini comme un hétérocycle à 5 ou 6 chaînons ayant 1 à 4 hétéroatomes choisis parmi O, N et S, ou un hétérobicyclic à 9 ou 10 chaînons ayant 1 à 5 hétéroatomes choisis parmi O, N et S ; et

dans lequel R⁷⁰ est choisi parmi :

- 1 à 4 substituants choisis parmi : un atome d'halogène, NO₂, un groupe cyano, azido ; ou

- 1 à 4 substituants choisis parmi :

a) un groupe alkyle ou halogénoalkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, spirocycloalkyle en C_{3 à 7} contenant facultativement 1 ou 2 hétéroatomes, alcényle en C_{2 à 6}, alcynyle en C_{2 à 8}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, dont tous sont facultativement substitués par R¹⁵⁰ ;

b) OR¹⁰⁴ où R¹⁰⁴ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁵⁰ ;

d) SR^{108} , $\text{SO}_2\text{N}(\text{R}^{108})_2$ ou $\text{SO}_2\text{N}(\text{R}^{108})\text{C}(\text{O})\text{R}^{108}$ où chaque R^{108} est indépendamment H, un groupe alkyle en $\text{C}_{1\text{ à }6}$, cycloalkyle en $\text{C}_{3\text{ à }7}$ ou alkyl en $\text{C}_{1\text{ à }6}$ -cycloalkyle en $\text{C}_{3\text{ à }7}$, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle ou alkyl en $\text{C}_{1\text{ à }6}$ -Het ou les deux R^{108} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle ou alkyl en $\text{C}_{1\text{ à }6}$ -Het ou hétérocycle étant facultativement substitué par R^{150} ;

e) $\text{NR}^{111}\text{R}^{112}$ où R^{111} est H, un groupe alkyle en $\text{C}_{1\text{ à }6}$, cycloalkyle en $\text{C}_{3\text{ à }7}$ ou alkyl en $\text{C}_{1\text{ à }6}$ -cycloalkyle en $\text{C}_{3\text{ à }7}$, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle ou alkyl en $\text{C}_{1\text{ à }6}$ -Het, et R^{112} est H, CN, un groupe alkyle en $\text{C}_{1\text{ à }6}$, cycloalkyle en $\text{C}_{3\text{ à }7}$ ou alkyl en $\text{C}_{1\text{ à }6}$ -cycloalkyle en $\text{C}_{3\text{ à }7}$, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle, alkyl en $\text{C}_{1\text{ à }6}$ -Het, COOR^{115} ou $\text{SO}_2\text{R}^{115}$ où R^{115} est un groupe alkyle en $\text{C}_{1\text{ à }6}$, cycloalkyle en $\text{C}_{3\text{ à }7}$ ou alkyl en $\text{C}_{1\text{ à }6}$ -cycloalkyle en $\text{C}_{3\text{ à }7}$, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle ou alkyl en $\text{C}_{1\text{ à }6}$ -Het, ou à la fois R^{111} et R^{112} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle ou alkyl en $\text{C}_{1\text{ à }6}$ -Het, ou hétérocycle étant facultativement substitué par R^{150} ;

f) $\text{NR}^{116}\text{COR}^{117}$ où R^{116} et R^{117} sont chacun H, un groupe alkyle en $\text{C}_{1\text{ à }6}$, cycloalkyle en $\text{C}_{3\text{ à }7}$, alkyl en $\text{C}_{1\text{ à }6}$ -cycloalkyle en $\text{C}_{3\text{ à }7}$, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle ou alkyl en $\text{C}_{1\text{ à }6}$ -Het, ledit groupe alkyle en $\text{C}_{1\text{ à }6}$, cycloalkyle en $\text{C}_{3\text{ à }7}$, alkyl en $\text{C}_{1\text{ à }6}$ -cycloalkyle en $\text{C}_{3\text{ à }7}$, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle ou alkyl en $\text{C}_{1\text{ à }6}$ -Het étant facultativement substitué par R^{150} ;

g) $\text{NR}^{118}\text{CONR}^{119}\text{R}^{120}$, où R^{118} , R^{119} et R^{120} sont chacun H, un groupe alkyle en $\text{C}_{1\text{ à }6}$, cycloalkyle en $\text{C}_{3\text{ à }7}$, alkyl en $\text{C}_{1\text{ à }6}$ -cycloalkyle en $\text{C}_{3\text{ à }7}$, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle ou alkyl en $\text{C}_{1\text{ à }6}$ -Het, ou R^{118} est lié de manière covalente à R^{119} et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons ;

ou R^{119} et R^{120} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons ;

ledit groupe alkyle, cycloalkyle, alkyl en $\text{C}_{1\text{ à }6}$ -cycloalkyle en $\text{C}_{3\text{ à }7}$, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle ou alkyl en $\text{C}_{1\text{ à }6}$ -Het ou hétérocycle étant facultativement substitué par R^{150} ;

h) $\text{NR}^{121}\text{COCOR}^{122}$ où R^{121} est H, un groupe alkyle en $\text{C}_{1\text{ à }6}$, cycloalkyle en $\text{C}_{3\text{ à }7}$, alkyl en $\text{C}_{1\text{ à }6}$ -cycloalkyle en $\text{C}_{3\text{ à }7}$, un groupe aryle à 6 ou 10 chaînons, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle ou alkyl en $\text{C}_{1\text{ à }6}$ -Het, ledit groupe alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle ou alkyl en $\text{C}_{1\text{ à }6}$ -Het étant facultativement substitué par R^{150} ; et R^{122} est OR^{123} ou $\text{N}(\text{R}^{124})_2$ où R^{123} et chaque R^{124} sont indépendamment H, un groupe alkyle en $\text{C}_{1\text{ à }6}$, cycloalkyle en $\text{C}_{3\text{ à }7}$ ou alkyl en $\text{C}_{1\text{ à }6}$ -cycloalkyle en $\text{C}_{3\text{ à }7}$, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle ou alkyl en $\text{C}_{1\text{ à }6}$ -Het, ou R^{124} est OH ou O(alkyle en $\text{C}_{1\text{ à }6}$) ou les deux R^{124} sont liés de manière covalente ensemble pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle ou alkyl en $\text{C}_{1\text{ à }6}$ -Het et hétérocycle étant facultativement substitué par R^{150} ;

i) COR^{127} où R^{127} est H, un groupe alkyle en $\text{C}_{1\text{ à }6}$, cycloalkyle en $\text{C}_{3\text{ à }7}$ ou alkyl en $\text{C}_{1\text{ à }6}$ -cycloalkyle en $\text{C}_{3\text{ à }7}$, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle ou alkyl en $\text{C}_{1\text{ à }6}$ -Het, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle ou alkyl en $\text{C}_{1\text{ à }6}$ -Het étant facultativement substitué par R^{150} ;

j) COOR^{128} où R^{128} est H, un groupe alkyle en $\text{C}_{1\text{ à }6}$, cycloalkyle en $\text{C}_{3\text{ à }7}$ ou alkyl en $\text{C}_{1\text{ à }6}$ -cycloalkyle en $\text{C}_{3\text{ à }7}$, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle ou alkyl en $\text{C}_{1\text{ à }6}$ -Het, ledit groupe alkyle en $\text{C}_{1\text{ à }6}$, cycloalkyle en $\text{C}_{3\text{ à }7}$ ou alkyl en $\text{C}_{1\text{ à }6}$ -cycloalkyle en $\text{C}_{3\text{ à }7}$, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle et alkyl en $\text{C}_{1\text{ à }6}$ -Het étant facultativement substitué par R^{150} ;

k) $\text{CONR}^{129}\text{R}^{130}$ où R^{129} et R^{130} sont indépendamment H, un groupe alkyle en $\text{C}_{1\text{ à }6}$, cycloalkyle en $\text{C}_{3\text{ à }7}$, alkyl en $\text{C}_{1\text{ à }6}$ -cycloalkyle en $\text{C}_{3\text{ à }7}$, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle ou alkyl en $\text{C}_{1\text{ à }6}$ -Het, ou les deux R^{129} et R^{130} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle, alkyl en $\text{C}_{1\text{ à }6}$ -Het et hétérocycle étant facultativement substitués par R^{150} ;

1) un groupe aryle, Het, alkyl en $\text{C}_{1\text{ à }6}$ -aryle ou alkyl en $\text{C}_{1\text{ à }6}$ -Het, dont tous sont facultativement substitués par R^{150} , où R^{150} est choisi parmi :

- 1 à 3 substituants choisis parmi : un atome d'halogène, NO_2 , un groupe cyano ou azido ; ou
- 1 à 3 substituants choisis parmi :

- a) un groupe alkyle ou halogénoalkyle en $\text{C}_{1\text{ à }6}$, cycloalkyle en $\text{C}_{3\text{ à }7}$, spirocycloalkyle en $\text{C}_{3\text{ à }7}$ contenant facultativement 1 ou 2 hétéroatomes, alcényle en $\text{C}_{2\text{ à }6}$, alcynyle en $\text{C}_{2\text{ à }8}$, dont tous sont facultativement substitués par R^{160} ;
- b) OR^{104} où R^{104} est H, un groupe alkyle en $\text{C}_{1\text{ à }6}$ ou cycloalkyle en $\text{C}_{3\text{ à }7}$, ledit groupe alkyle ou cycloalkyle étant facultativement substitué par R^{160} ;
- d) SR^{108} , $\text{SO}_2\text{N}(\text{R}^{108})_2$ où chaque R^{108} est H, un groupe alkyle en $\text{C}_{1\text{ à }6}$ ou cycloalkyle en $\text{C}_{3\text{ à }7}$,

ledit groupe alkyle ou cycloalkyle étant facultativement substitué par R^{160} ;

e) $NR^{111}R^{112}$ où R^{111} est H, un groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle en $C_{3\text{ à }7}$ et R^{112} est H, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle, alkyl en $C_{1\text{ à }6}$ -Het, $COOR^{115}$ ou SO_2R^{115} où R^{115} est un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$, alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, ou à la fois R^{111} et R^{112} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het ou hétérocycle étant facultativement substitué par R^{160} ;

f) $NR^{116}COR^{117}$ où R^{116} et R^{117} sont chacun H, un groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle en $C_{3\text{ à }7}$, ledit groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle en $C_{3\text{ à }7}$ étant facultativement substitué par R^{160} ;

g) $NR^{118}CONR^{119}R^{120}$, où R^{118} , R^{119} et R^{120} sont chacun H, un groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle en $C_{3\text{ à }7}$; ou R^{119} et R^{120} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons ; ledit groupe alkyle, cycloalkyle ou hétérocycle étant facultativement substitué par R^{160} ;

h) $NR^{121}COCOR^{122}$ où R^{121} est H, un groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle en $C_{3\text{ à }7}$, ledit groupe alkyle ou cycloalkyle étant facultativement substitué par R^{160} ;

ou R^{122} est OR^{123} ou $N(R^{121})_2$ où R^{123} et chaque R^{121} sont indépendamment H, un groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle en $C_{3\text{ à }7}$, ou R^{124} est OH ou O(alkyle en $C_{1\text{ à }6}$) ou les deux R^{124} sont liés de manière covalente ensemble pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle et hétérocycle étant facultativement substitués par R^{160} ;

j) le tétrazole, un groupe $COOR^{128}$ où R^{128} est H, un groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle en $C_{3\text{ à }7}$, lesdits groupes alkyle en $C_{1\text{ à }6}$ et cycloalkyle en $C_{3\text{ à }7}$ étant facultativement substitués par R^{160} ; et

k) $CONR^{129}R^{130}$ où R^{129} et R^{130} sont indépendamment H, un groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle en $C_{3\text{ à }7}$ ou à la fois R^{129} et R^{130} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle et hétérocycle étant facultativement substitués par R^{160} ;

où R^{160} est défini comme 1 ou 2 substituants choisis parmi :

le tétrazole, un atome d'halogène, CN, un groupe alkyle en $C_{1\text{ à }6}$, halogénoalkyle, $COOR^{161}$, OR^{161} , $N(R^{162})_2$ ou $CON(R^{162})_2$, où R^{161} et chaque R^{162} sont indépendamment H, un groupe alkyle en $C_{1\text{ à }6}$;

R^{10} , R^{20} , R^{90} et R^{100} sont chacun définis comme :

- 1 à 4 substituants choisis parmi : un atome d'halogène, un groupe OPO_3H , NO_2 , cyano, azido, $C(=NH)NH_2$, $C(=NH)NH$ -alkyle en $C_{1\text{ à }6}$ ou $C(=NH)NHCO$ -alkyle en $C_{1\text{ à }6}$; ou
- 1 à 4 substituants choisis parmi :

a) un groupe alkyle ou halogénoalkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$, spirocycloalkyle en $C_{3\text{ à }7}$ contenant facultativement 1 ou 2 hétéroatomes, alcényle en $C_{2\text{ à }6}$, alcynyle en $C_{2\text{ à }8}$, alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, dont tous sont facultativement substitués par R^{150} ;

b) OR^{104} où R^{104} est H, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het étant facultativement substitué par R^{150} ;

c) $OCOR^{105}$ où R^{105} est un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$, alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, ledit groupe alkyle, cycloalkyle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het étant facultativement substitué par R^{150} ;

d) SR^{108} , $SO_2N(R^{108})_2$ ou $SO_2N(R^{108})C(O)R^{108}$ où chaque R^{108} est indépendamment H, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het ou les deux R^{108} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het ou hétérocycle étant facultativement substitué par R^{150} ;

e) $NR^{111}R^{112}$ où R^{111} est H, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, et R^{112} est H, CN, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle, alkyl en $C_{1\text{ à }6}$ -Het, $COOR^{115}$ ou SO_2R^{115} où R^{115} est un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, ou à la fois R^{111} et R^{112}

sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou hétérocycle étant facultativement substitué par R¹⁵⁰ ;

f) NR¹¹⁶COR¹¹⁷ où R¹¹⁶ et R¹¹⁷ sont chacun H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁵⁰ ;

g) NR¹¹⁸CONR¹¹⁹R¹²⁰, où R¹¹⁸, R¹¹⁹ et R¹²⁰ sont chacun H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou R¹¹⁸ est lié de manière covalente à R¹¹⁹ et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons ;

ou R¹¹⁹ et R¹²⁰ sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons ;

ledit groupe alkyle, cycloalkyle, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het ou hétérocycle étant facultativement substitué par R¹⁵⁰ ;

h) NR¹²¹COCOR¹²² où R¹²¹ et R¹²² sont chacun H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, un groupe aryle à 6 ou 10 chaînons, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁵⁰ ;

ou R¹²² est OR¹²³ ou N(R¹²⁴)₂ où R¹²³ et chaque R¹²⁴ sont indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het,

ou R¹²⁴ est OH ou O(alkyle en C_{1 à 6}) ou les deux R¹²⁴ sont liés de manière covalente ensemble pour former un groupe hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het et hétérocycle étant facultativement substitué par R¹⁵⁰ ;

i) COR¹²⁷ où R¹²⁷ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁵⁰ ;

j) COOR¹²⁸ où R¹²⁸ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle et alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁵⁰ ;

k) CONR¹²⁹R¹³⁰ où R¹²⁹ et R¹³⁰ sont indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou à la fois R¹²⁹ et R¹³⁰ sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle, alkyl en C_{1 à 6}-Het et hétérocycle étant facultativement substitués par R¹⁵⁰ ;

1) un groupe aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, dont tous sont facultativement substitués par R¹⁵⁰, où R¹⁵⁰ est défini comme :

- 1 à 3 substituants choisis parmi : un atome d'halogène, OPO₃H, NO₂, un groupe cyano, azido, C(=NH)NH₂, C(=NH)NH-alkyle en C_{1 à 6} ou C(=NH)NHCO-alkyle en C_{1 à 6} ;

ou

- 1 à 3 substituants choisis parmi :

a) un groupe alkyle ou halogénoalkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, spirocycloalkyle en C_{3 à 7} contenant facultativement 1 ou 2 hétéroatomes, alcényle en C_{2 à 6}, alcynyle en C_{2 à 8}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, dont tous sont facultativement substitués par R¹⁶⁰ ;

b) OR¹⁰⁴ où R¹⁰⁴ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁶⁰ ;

c) OCOR¹⁰⁵ où R¹⁰⁵ est un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle, cycloalkyle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁶⁰ ;

d) SR¹⁰⁸, SO₂N(R¹⁰⁸)₂ ou SO₂N(R¹⁰⁸)C(O)R¹⁰⁸ où chaque R¹⁰⁸ est indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het ou les deux R¹⁰⁸ sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons,

ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het ou hétérocycle étant facultativement substitué par R¹⁶⁰ ;

e) NR¹¹¹R¹¹² où R¹¹¹ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, et R¹¹² est H, CN, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle, alkyl en C_{1 à 6}-Het, COOR¹¹⁵ ou SO₂R¹¹⁵ où R¹¹⁵ est un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou à la fois R¹¹¹ et R¹¹² sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou hétérocycle étant facultativement substitué par R¹⁶⁰ ;

f) NR¹¹⁶COR¹¹⁷ où R¹¹⁶ et R¹¹⁷ sont chacun H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁶⁰ ;

g) NR¹¹⁸CONR¹¹⁹R¹²⁰, où R¹¹⁸, R¹¹⁹ et R¹²⁰ sont chacun H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou R¹¹⁸ est lié de manière covalente à R¹¹⁹ et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ou R¹¹⁹ et R¹²⁰ sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het ou hétérocycle étant facultativement substitué par R¹⁶⁰ ;

h) NR¹²¹COCOR¹²² où R¹²¹ et R¹²² sont chacun H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, un groupe aryle à 6 ou 10 chaînons, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁶⁰, ou R¹²² est OR¹²³ ou N(R¹²⁴)₂ où R¹²³ et chaque R¹²⁴ sont indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou R¹²⁴ est un groupe OH ou O(alkyle en C_{1 à 6}) ou les deux R¹²⁴ sont liés de manière covalente ensemble pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het et hétérocycle étant facultativement substitués par R¹⁶⁰ ;

i) COR¹²¹ où R¹²⁷ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁶⁰ ;

j) le tétrazole, COOR¹²⁸ où R¹²⁸ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, lesdits groupes alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle et alkyl en C_{1 à 6}-Het étant facultativement substitués par R¹⁶⁰ ;
et

k) CONR¹²⁹R¹³⁰ où R¹²⁹ et R¹³⁰ sont indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou à la fois R¹²⁹ et R¹³⁰ sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle, alkyl en C_{1 à 6}-Het et hétérocycle étant facultativement substitués par R¹⁶⁰ ;

où R¹⁶⁰ est défini en tant que 1 ou 2 substituants choisis parmi : le tétrazole, un atome d'halogène, un groupe CN, alkyle en C_{1 à 6}, "halogénoalkyle, COOR¹⁶¹, SO₃H, SR¹⁶¹, SO₂R¹⁶¹, OR¹⁶¹, N(R¹⁶²)₂, SO₂N(R¹⁶²)₂, NR¹⁶²COR¹⁶² ou CON(R¹⁶²)₂, où R¹⁶¹ et chaque R¹⁶² sont indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7} ; ou les deux R¹⁶² sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons,

ou un sel de celui-ci.

2. Composé selon la revendication 1, dans lequel M, K et L sont CH ou N.

3. Composé selon la revendication 2, dans lequel M, K et L sont CH.

4. Composé selon la revendication 1, dans lequel R¹ est choisi parmi : H ou un groupe alkyle en C_{1 à 6}.

5. Composé selon la revendication 4, dans lequel R¹ est H, CH₃, un groupe isopropyle ou isobutyle.

6. Composé selon la revendication 5, dans lequel R¹ est H ou CH₃.

7. Composé selon la revendication 6, dans lequel R¹ est CH₃.

8. Composé selon la revendication 1, dans lequel R² est CON(R²²)₂, où chaque R²² est indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, cycloalcényle en C_{5 à 7}, aryle à 6 ou 10 chaînons ou Het, ou les deux R²² sont liés ensemble pour former un hétérocycle saturé à 5, 6 ou 7 chaînons avec l'atome d'azote auquel ils sont attachés ;

ou R² est choisi parmi : H, un atome d'halogène, un groupe alkyle en C_{1 à 6}, halogénoalkyle, alcényle en C_{2 à 6}, cycloalcényle en C_{5 à 7}, aryle à 6 ou 10 chaînons ou Het ; où chacun desdits groupes alkyle, halogénoalkyle, alcényle en C_{2 à 6}, cycloalcényle en C_{5 à 7}, aryle et Het est facultativement substitué par R²⁰, dans lequel R²⁰ est défini comme :

- 1 à 4 substituants choisis parmi : un atome d'halogène, NO₂, un groupe cyano, azido, C(=NH)NH₂, C(=NH)NH-alkyle en C_{1 à 6} ou C(=NH)NHCO-alkyle en C_{1 à 6}; ou
- 1 à 4 substituants choisis parmi :

a) un groupe alkyle ou halogénoalkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alcényle en C_{2 à 6}, alcynyle en C_{2 à 8}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, dont tous sont facultativement substitués par R¹⁵⁰;

b) OR¹⁰⁴ où R¹⁰⁴ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁵⁰ ;

c) OCOR¹⁰⁵ où R¹⁰⁵ est un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle, cycloalkyle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁵⁰ ;

d) SR¹⁰⁸, SO₂N(R¹⁰⁸)₂ ou SO₂N(R¹⁰⁸)C(O)R¹⁰⁸ où chaque R¹⁰⁸ est indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het ou les deux R¹⁰⁸ sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het ou hétérocycle étant facultativement substitué par R¹⁵⁰ ;

e) NR¹¹¹R¹¹² où R¹¹¹ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, et R¹¹² est H, CN, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle, alkyl en C_{1 à 6}-Het, COOR¹¹⁵ ou SO₂R¹¹⁵ où R¹¹⁵ est un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou à la fois R¹¹¹ et R¹¹² sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou hétérocycle étant facultativement substitué par R¹⁵⁰ ;

f) NR¹¹⁶COR¹¹⁷ où R¹¹⁶ et R¹¹⁷ sont chacun H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁵⁰;

g) NR¹¹⁸CONR¹¹⁹R¹²⁰, où R¹¹⁸, R¹¹⁹ et R¹²⁰ sont chacun H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou R¹¹⁸ est lié de manière covalente à R¹¹⁹ et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons ; ou R¹¹⁹ et R¹²⁰ sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons ;

ledit groupe alkyle, cycloalkyle, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het ou hétérocycle étant facultativement substitué par R¹⁵⁰ ;

h) NR¹²¹COCOR¹²² où R¹²¹ et R¹²² sont chacun H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, un groupe aryle à 6 ou 10 chaînons, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁵⁰ ;

ou R^{122} est OR^{123} ou NR^{124}_2 où R^{123} et chaque R^{124} sont indépendamment H, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, ou R^{124} est OH ou O(alkyle en $C_{1\text{ à }6}$) ou les deux R^{124} sont liés de manière covalente ensemble pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het et hétérocycle étant facultativement substitués par R^{150} ;

i) COR^{127} où R^{127} est H, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het étant facultativement substitué par R^{150} ;

j) $COOR^{128}$ où R^{128} est H, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, lesdits groupes alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle et alkyl en $C_{1\text{ à }6}$ -Het étant facultativement substitués par R^{150} ;

k) $CONR^{129}R^{130}$ où R^{129} et R^{130} sont indépendamment H, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$, alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, ou les deux R^{129} et R^{130} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle, alkyl en $C_{1\text{ à }6}$ -Het et hétérocycle étant facultativement substitués par R^{150} ;

l) un groupe aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, dont tous sont facultativement substitués par R^{150} ; où R^{150} est :

- 1 à 3 substituants choisis parmi : un atome d'halogène, NO_2 , un groupe cyano ou azido ; ou

- 1 à 3 substituants choisis parmi :

a) un groupe alkyle ou halogénoalkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$, alcényle en $C_{2\text{ à }6}$, alcynyle en $C_{2\text{ à }8}$, alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, dont tous sont facultativement substitués par R^{160} ;

b) OR^{104} où R^{104} est H, un groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle en $C_{3\text{ à }7}$, ledit groupe alkyle ou cycloalkyle étant facultativement substitué par R^{160} ;

d) SR^{108} , $SO_2N(R^{108})_2$ ou $SO_2N(R^{108})C(O)R^{108}$ où chaque R^{108} est indépendamment H, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, ou les deux R^{108} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle, aryle, Het et hétérocycle étant facultativement substitués par R^{160} ;

e) $NR^{111}R^{112}$ où R^{111} est H, un groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle en $C_{3\text{ à }7}$ et R^{112} est H, un groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle en $C_{3\text{ à }7}$, $COOR^{115}$ ou SO_2R^{115} où R^{115} est un groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle en $C_{3\text{ à }7}$, ou à la fois R^{111} et R^{112} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle et hétérocycle étant facultativement substitués par R^{160} ;

f) $NR^{116}COR^{117}$ où R^{116} et R^{117} sont chacun H, un groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle en $C_{3\text{ à }7}$, lesdits groupes alkyle en $C_{1\text{ à }6}$ et cycloalkyle en $C_{3\text{ à }7}$ étant facultativement substitués par R^{160} ;

g) $NR^{118}CONR^{119}R^{120}$, où R^{118} , R^{119} et R^{120} sont chacun H, un groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle en $C_{3\text{ à }7}$, ou R^{118} est lié de manière covalente à R^{119} et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ou R^{119} et R^{120} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle et hétérocycle étant facultativement substitués par R^{160} ;

h) $NR^{121}COCOR^{122}$ où R^{121} est H, un groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle en $C_{3\text{ à }7}$, lesdits groupes alkyle et cycloalkyle étant facultativement substitués par R^{160} ;

ou R^{122} est OR^{123} ou $N(R^{124})_2$ où R^{123} et chaque R^{124} sont indépendamment H, un groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle en $C_{3\text{ à }7}$, ou les deux R^{124} sont liés de manière covalente ensemble pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle et hétérocycle étant facultativement substitués par R^{160} ;

i) COR^{127} où R^{127} est H, un groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle en $C_{3\text{ à }7}$, lesdits groupes alkyle et cycloalkyle étant facultativement substitués par R^{160} ;

j) $COOR^{128}$ où R^{128} est H, un groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle en $C_{3\text{ à }7}$, lesdits groupes alkyle en $C_{1\text{ à }6}$ et cycloalkyle en $C_{3\text{ à }7}$ étant facultativement substitués par R^{160} ; et

k) $CONR^{129}R^{130}$ où R^{129} et R^{130} sont indépendamment H, un groupe alkyle en $C_{1\text{ à }6}$ ou cycloalkyle

en C_{3 à 7}, ou à la fois R¹²⁹ et R¹³⁰ sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle et hétérocycle étant facultativement substitués par R¹⁶⁰ ;

où R¹⁶⁰ est défini comme 1 ou 2 substituants choisis parmi :

un atome d'halogène, CN, un groupe alkyle en C_{1 à 6}, halogénoalkyle, COOR¹⁶¹, OR¹⁶¹, N(R¹⁶²)₂, SO₂N(R¹⁶²)₂, NR¹⁶²COR¹⁶² ou CON(R¹⁶²)₂, où R¹⁶¹ et chaque R¹⁶² sont indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7} ; ou les deux R¹⁶² sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons.

9. Composé selon la revendication 8, dans lequel R² est choisi parmi : un groupe aryle ou Het, chacun facultativement monosubstitué ou disubstitué par des substituants choisis dans le groupe constitué par : un atome d'halogène, un groupe halogénoalkyle, N₃ ou

a) un groupe alkyle en C_{1 à 6} facultativement substitué par un groupe OH ou O(alkyle en C_{1 à 6}) ;

b) un groupe alcoxy en C_{1 à 6} ;

e) NR¹¹¹R¹¹² où à la fois R¹¹¹ et R¹¹² sont indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, ou R¹¹² est un groupe aryle à 6 ou 10 chaînons, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het ; ou à la fois R¹¹¹ et R¹¹² sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle contenant un atome d'azote, chacun desdits groupes alkyle, cycloalkyle, aryle, Het, alkyl-aryle ou alkyl-Het étant facultativement substitué par un atome d'halogène ou :

-OR^{2h} ou N(R^{2h})₂, où chaque R^{2h} est indépendamment H, un groupe alkyle (en C_{1 à 6}), ou les deux R^{2h} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle contenant un atome d'azote ;

f) NHCOR¹¹⁷ où R¹¹⁷ est un groupe alkyle en C_{1 à 6} ;

i) CO-aryle ; et

k) CONH₂, CONH-alkyle en C_{1 à 6}, CON-(alkyle en C_{1 à 6})₂, CONH-aryle ou CONH-alkyl(en C_{1 à 6})-aryle.

10. Composé selon la revendication 9, dans lequel R² est un groupe aryle ou Het, chacun facultativement monosubstitué ou disubstitué par des substituants choisis dans le groupe constitué par : un atome d'halogène, un groupe halogénoalkyle, ou

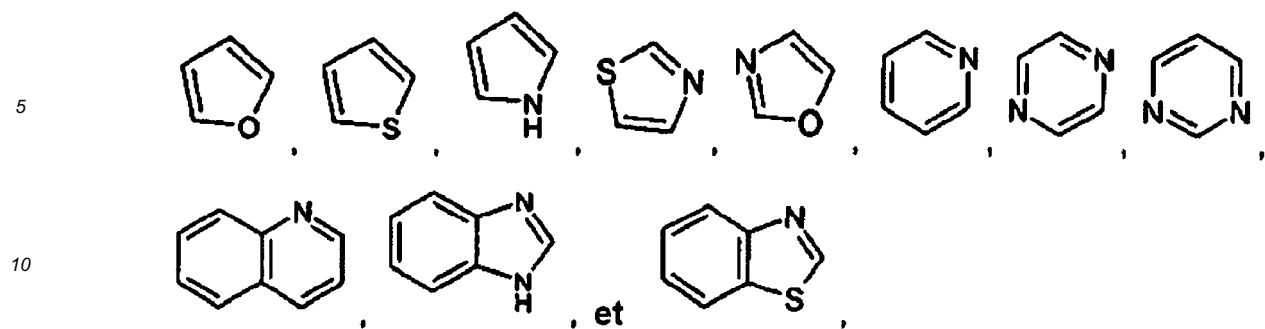
a) un groupe alkyle (en C_{1 à 6}) facultativement substitué par un groupe OH ou O-(alkyle en C_{1 à 6}) ;

b) un groupe alcoxy en C_{1 à 6} ; et

e) NR¹¹¹R¹¹² où à la fois R¹¹¹ et R¹¹² sont indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, ou R¹¹² est un groupe aryle à 6 ou 10 chaînons, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het ; ou à la fois R¹¹¹ et R¹¹² sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle contenant un atome d'azote, chacun desdits groupes alkyle, cycloalkyle, aryle, Het, alkyl-aryle ou alkyl-Het étant facultativement substitué par un atome d'halogène ou :

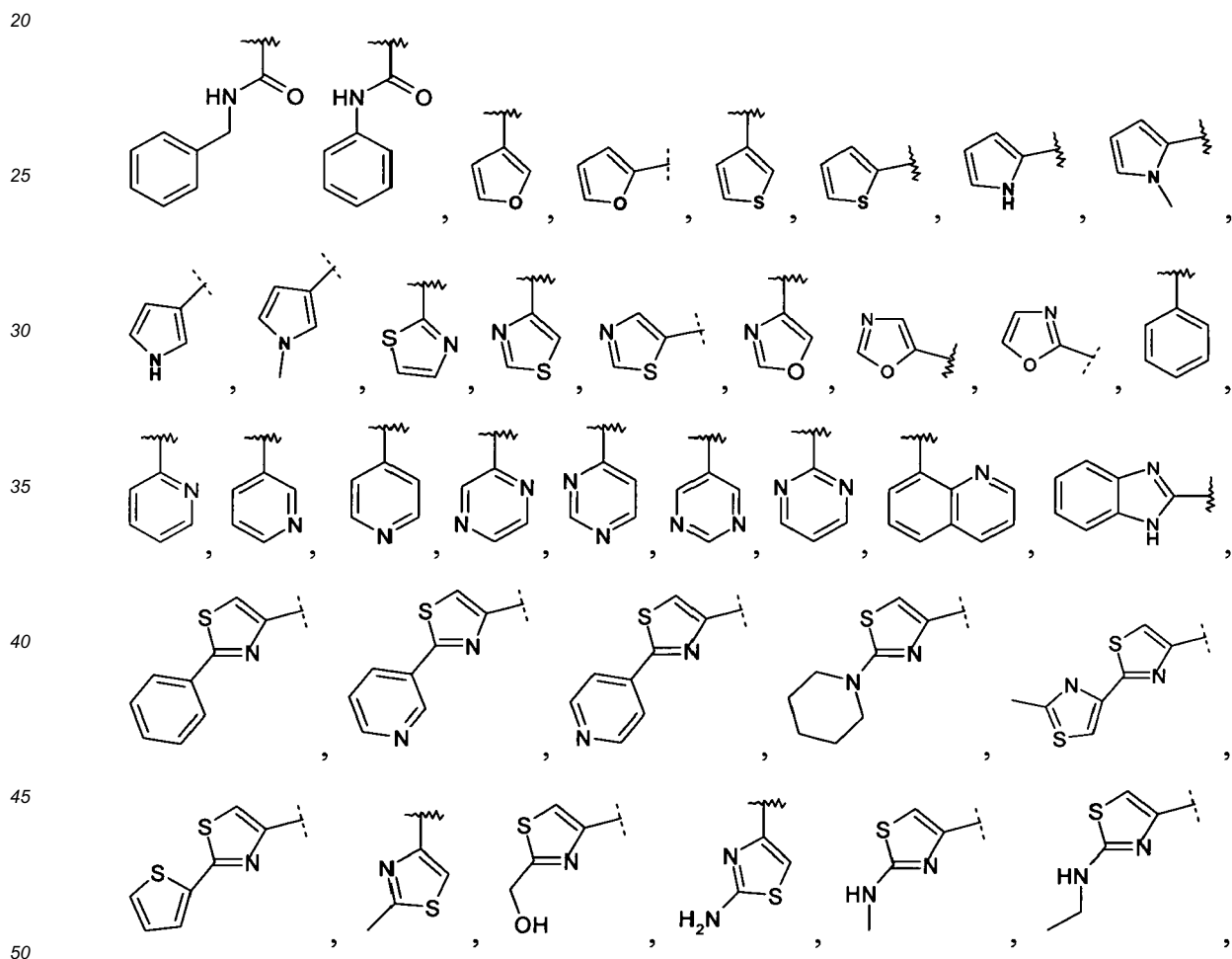
-OR^{2h} ou N(R^{2h})₂, où chaque R^{2h} est indépendamment H, un groupe alkyle en C_{1 à 6}, ou les deux R^{2h} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle contenant un atome d'azote.

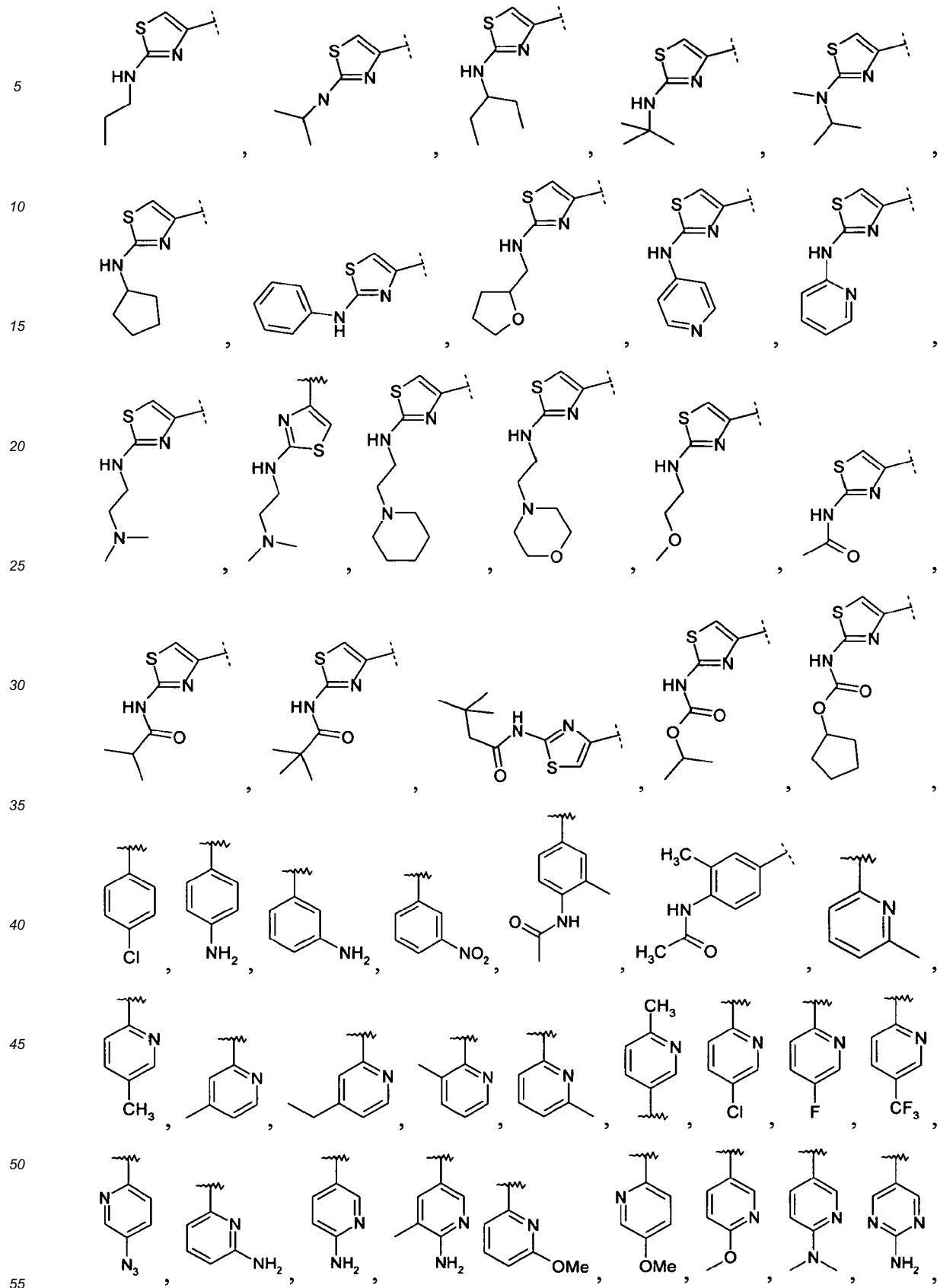
11. Composé selon la revendication 10, dans lequel R² est un groupe phényle ou un hétérocycle choisi parmi :

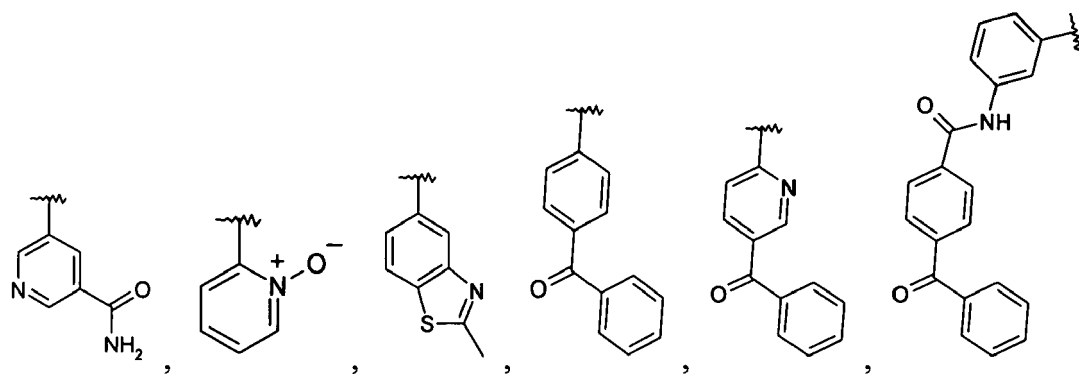


¹⁵ dont tous sont facultativement substitués comme défini dans la revendication 10.

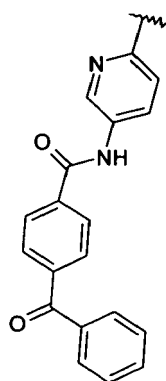
12. Composé selon la revendication 1 ou 8, dans lequel R² est choisi dans le groupe constitué par : H, Br, CONHCH₃, CON(CH₃)₂, CONH₂, CH=CH₂,



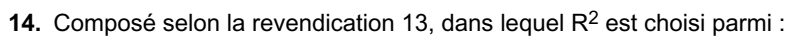


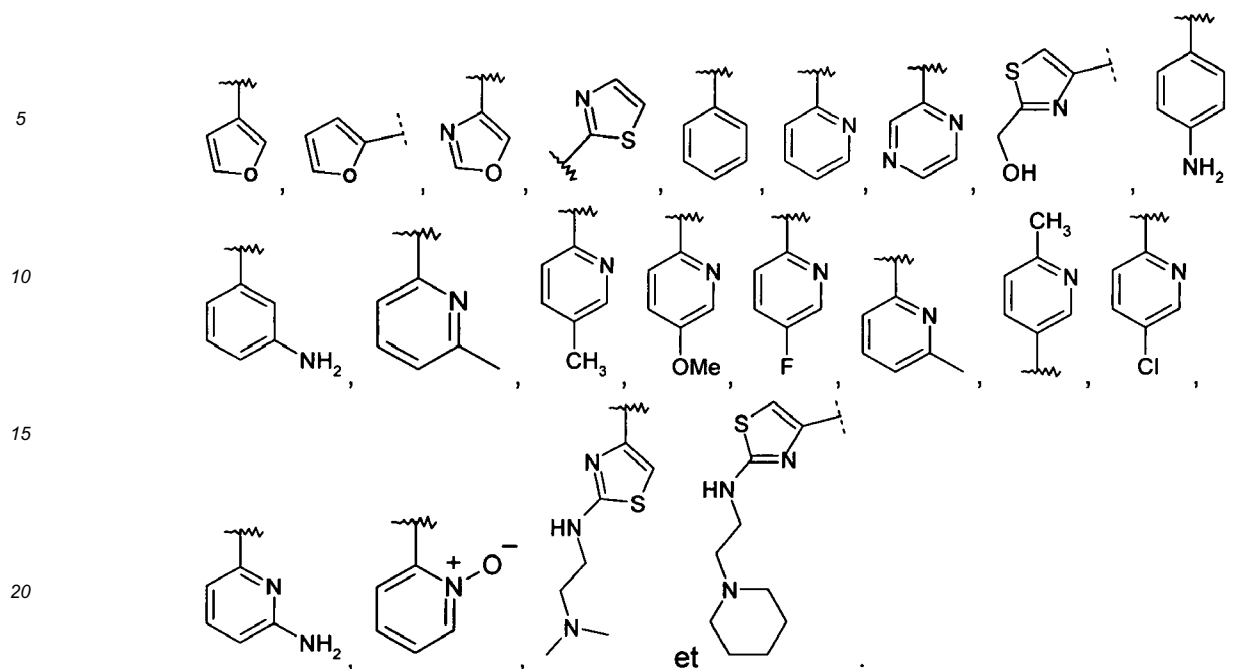


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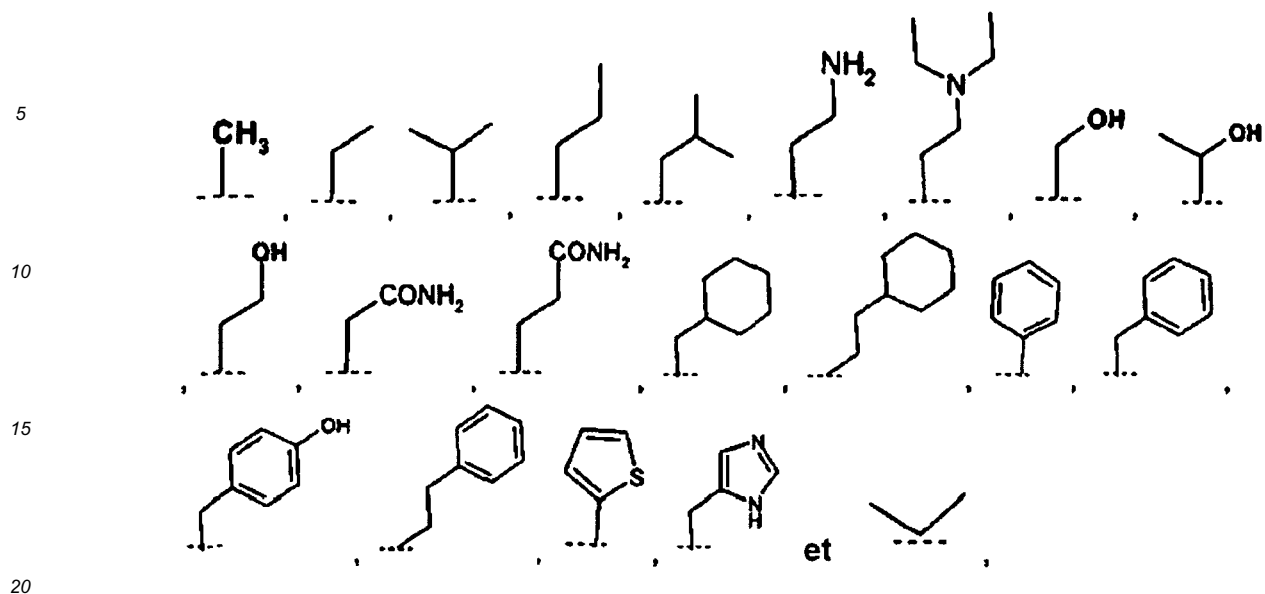


13. Composé selon la revendication 12, dans lequel R² est choisi parmi :

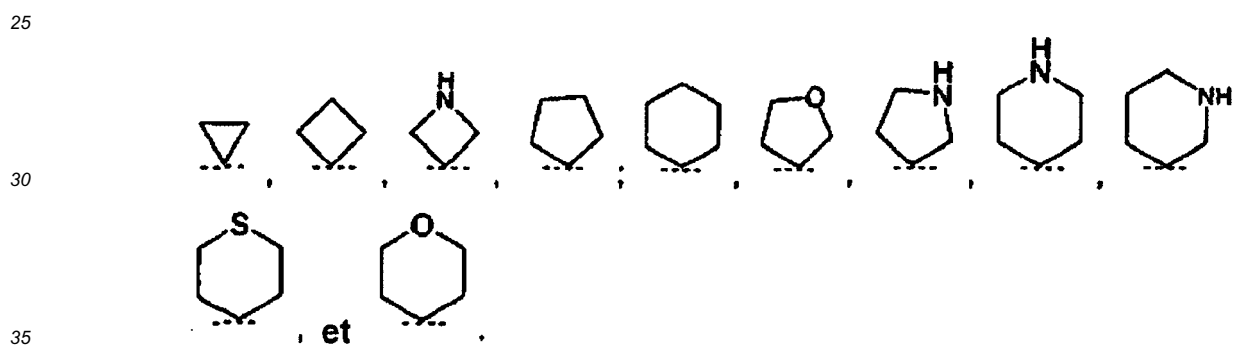




15. Composé selon la revendication 1, dans lequel R^3 est choisi parmi un groupe cycloalkyle en C_3 à 7, cycloalcényle en C_3 à 7, bicycloalkyle en C_6 à 10, bicycloalcényle en C_6 à 10, aryle à 6 ou 10 chaînons, ou Het.
16. Composé selon la revendication 15, dans lequel R^3 est un groupe cycloalkyle en C_3 à 7.
17. Composé selon la revendication 16, dans lequel R^3 est un groupe cyclopentyle, ou cyclohexyle.
18. Composé selon la revendication 1, dans lequel R^{6a} est H.
19. Composé selon la revendication 1, dans lequel R^7 et R^8 sont chacun indépendamment H, un groupe alkyle en C_1 à 6, halogénoalkyle, cycloalkyle en C_3 à 7, aryle à 6 ou 10 chaînons, Het, alkyl en C_1 à 6-aryle, alkyl en C_1 à 6-Het, dont tous sont facultativement substitués par 1 à 4 substituants choisis parmi un atome d'halogène ou :
- a) un groupe alkyle en C_1 à 6 ; et
 - b) un groupe $N(R^{8a'})_2$, $COR^{8a'}$, $COOR^{8a'}$, $CON(R^{8a'})_2$, où chaque $R^{8a'}$ ou $R^{8a'}$ est indépendamment H, un groupe alkyle en C_1 à 6, cycloalkyle en C_3 à 7, ou alkyl en C_1 à 6-cycloalkyle en C_3 à 7 ; ou les deux $R^{8a'}$ sont indépendamment liés de manière covalente ensemble et à l'atome d'azote auquel ils sont tous deux liés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons ; ou $R^{8a''}$ est indépendamment un groupe alkyle en C_1 à 6, cycloalkyle en C_3 à 7 ou alkyl en C_1 à 6-cycloalkyle en C_3 à 7 ;
- ou R^7 et R^8 sont liés de manière covalente ensemble pour former un groupe cycloalkyle en C_3 à 7, hétérocycle à 4, 5 ou 6 chaînons ayant de 1 à 3 hétéroatomes choisis parmi O, N et S.
20. Composé selon la revendication 19, dans lequel R^7 et R^8 sont chacun indépendamment H, un groupe alkyle en C_1 à 6, halogénoalkyle, cycloalkyle en C_3 à 7, aryle à 6 ou 10 chaînons, Het, alkyl en C_1 à 6-aryle, alkyl en C_1 à 6-Het ; ou R^7 et R^8 sont liés de manière covalente ensemble pour former un groupe cyclopropyle, cyclobutyle, cyclopentyle, pyrrolidine, pipéridine, tétrahydrofurane, tétrahydropyrane ou du sulfure de pentaméthylène ; dans lequel ledit groupe alkyle, halogénoalkyle, cycloalkyle en C_3 à 7, aryle à 6 ou 10 chaînons, Het, alkyl en C_1 à 6-aryle ou alkyl en C_1 à 6-Het est facultativement monosubstitué par des substituants choisis parmi :
- a) un groupe alkyle en C_1 à 6 ; et
 - b) NH_2 , $N(CH_2CH)_2$ ou $COCH_3$.
21. Composé selon la revendication 1, dans lequel R^7 et R^8 sont choisis parmi :



ou R⁷ et R⁸ forment ensemble :



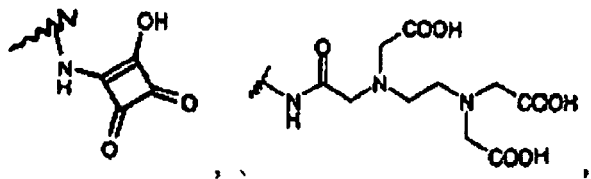
22. Composé selon la revendication 21, dans lequel R⁷ et R⁸ sont choisis parmi :



23. Composé selon la revendication 1, dans lequel R⁹ est H, ou R⁹ est lié de manière covalente à l'un ou l'autre parmi R⁷ ou R⁸ pour former un hétérocycle à 5 ou 6 chaînons.

24. Composé selon la revendication 23, dans lequel R⁹ est H.

25. Composé selon la revendication 1, dans lequel Q est un groupe aryle à 6 ou 10 chaînons, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, dont tous sont facultativement substitués par :



ou R¹⁰⁰ ;
dans lequel R¹⁰⁰ est :

- 1 à 4 substituants choisis parmi : un atome d'halogène, NO₂, un groupe cyano ou azido ; ou
- 1 à 4 substituants choisis parmi :

a) un groupe alkyle ou halogénoalkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alcényle en C_{2 à 6}, alcynyle en C_{2 à 8}, alkyl(en C_{1 à 6}-cycloalkyle en C_{3 à 7}, dont tous sont facultativement substitués par R¹⁵⁰ ;

b) OR¹⁰⁴ où R¹⁰⁴ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁵⁰ ;

d) SR¹⁰⁸ où R¹⁰⁸ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het dont tous sont facultativement substitués par R¹⁵⁰ ;

e) NR¹¹¹R¹¹² où R¹¹¹ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, et R¹¹² est H, CN, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle, alkyl en C_{1 à 6}-Het, COOR¹¹⁵ ou SO₂R¹¹⁵ où R¹¹⁵ est un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou à la fois R¹¹¹ et R¹¹² sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou hétérocycle étant facultativement substitué par R¹⁵⁰ ;

f) NR¹¹⁶COR¹¹⁷ où R¹¹⁶ et R¹¹⁷ sont chacun H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁵⁰ ;

g) NR¹¹⁸CONR¹¹⁹R¹²⁰, où R¹¹⁸, R¹¹⁹ et R¹²⁰ sont chacun H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou R¹¹⁸ est lié de manière covalente à R¹¹⁹ et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons ; ou R¹¹⁹ et R¹²⁰ sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons ;

ledit groupe alkyle, cycloalkyle, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het ou hétérocycle étant facultativement substitué par R¹⁵⁰ ;

h) NR¹²¹COCOR¹²² où R¹²¹ et R¹²² sont chacun H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, un groupe aryle à 6 ou 10 chaînons, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁵⁰ ;

ou R¹²² est OR¹²³ ou N(R¹²⁴)₂ où R¹²³ et chaque R¹²⁴ sont indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou R¹²⁴ est OH ou O(alkyle en C_{1 à 6}) ou les deux R¹²⁴ sont liés de manière covalente ensemble pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het et hétérocycle étant facultativement substitués par R¹⁵⁰ ;

j) COOR¹²⁸ où R¹²⁸ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, lesdits groupes alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle et alkyl en C_{1 à 6}-Het étant facultativement substitués par R¹⁵⁰ ;

k) CONR¹²⁹R¹³⁰ où R¹²⁹ et R¹³⁰ sont indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou à la fois R¹²⁹

et R¹³⁰ sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle, alkyl en C_{1 à 6}-Het et hétérocycle étant facultativement substitués par R¹⁵⁰ ;

1) un groupe aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, dont tous sont facultativement substitués par R¹⁵⁰, où R¹⁵⁰ est choisi parmi :

- 1 à 3 substituants choisis parmi : un atome d'halogène, NO₂, un groupe cyano ou azido ; ou

- 1 à 3 substituants choisis parmi :

a) un groupe alkyle ou halogénoalkyle en C_{1 à 6}, cycloalkyle (n C_{3 à 7}, spirocycloalkyle en C_{3 à 7} contenant facultativement 1 ou 2 hétéroatomes, alcényle en C_{2 à 6}, alcynyle en C_{2 à 8}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, dont tous sont facultativement substitués par R¹⁶⁰ ;

b) OR¹⁰⁴ où R¹⁰⁴ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁶⁰ ;

d) SR¹⁰⁸, SO₂N(R¹⁰⁸)₂ ou SO₂N(R¹⁰⁸)C(O)R¹⁰⁸ où chaque R¹⁰⁸ est indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het ou les deux R¹⁰⁸ sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het ou hétérocycle étant facultativement substitué par R¹⁶⁰ ;

e) NR¹¹¹R¹¹² où R¹¹¹ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, et R¹¹² est H, CN, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle, alkyl en C_{1 à 6}-Het, ou SO₂R¹¹⁵ où R¹¹⁵ est un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou à la fois R¹¹¹ et R¹¹² sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het ou hétérocycle étant facultativement substitué par R¹⁶⁰ ;

f) NR¹¹⁶COR¹¹⁷ où R¹¹⁶ et R¹¹⁷ sont chacun H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou (alkyl en C_{1 à 6})Het, ledit groupe alkyle (en C_{1 à 6}), cycloalkyle (en C_{3 à 7}), alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁶⁰ ;

g) NR¹¹⁸CONR¹¹⁹R¹²⁰, où R¹¹⁸, R¹¹⁹ et R¹²⁰ sont chacun H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou R¹¹⁸ est lié de manière covalente à R¹¹⁹ et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ou R¹¹⁹ et R¹²⁰ sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het ou hétérocycle étant facultativement substitué par R¹⁶⁰ ;

h) NR¹²¹COCOR¹²² où R¹²¹ est H, un groupe alkyle en C_{1 à 6}, facultativement substitué par R¹⁶⁰, et R¹²² est OR¹²³ ou N(R¹²⁴)₂ où R¹²³ et chaque R¹²⁴ sont indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou R¹²⁴ est OH ou O(alkyle en C_{1 à 6}) ou les deux R¹²⁴ sont liés de manière covalente ensemble pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupe alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het et hétérocycle étant facultativement substitués par R¹⁶⁰ ;

j) le tétrazole, COOR¹²⁸ où R¹²⁸ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, lesdits groupes alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle et alkyl en C_{1 à 6}-Het étant facultativement substitués par R¹⁶⁰ ; et

k) CONR¹²⁹R¹³⁰ où R¹²⁹ et R¹³⁰ sont indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ou à la fois R¹²⁹ et R¹³⁰ sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle, alkyl en C_{1 à 6}-Het et hétérocycle étant facultativement substitués par R¹⁶⁰ ;

où R^{160} est défini en tant que 1 ou 2 substituants choisis parmi : le tétrazole, un atome d'halogène, un groupe CN, alkyle en $C_{1\text{ à }6}$, halogénoalkyle, COOR^{161} , SO_3H , SR^{161} , $\text{SO}_2\text{R}^{161}$, OR^{161} , N $(\text{R}^{162})_2$, $\text{SO}_2\text{N}(\text{R}^{162})_2$, $\text{NR}^{162}\text{COR}^{162}$ ou $\text{CON}(\text{R}^{162})_2$, où R^{161} et chaque R^{162} sont indépendamment H, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$; ou les deux R^{162} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons.

26. Composé selon la revendication 1, dans lequel Q est un groupe aryle à 6 ou 10 chaînons, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, dont tous sont facultativement substitués par :

- 1 à 4 substituants choisis parmi : un atome d'halogène, NO_2 , un groupe cyano ou azido ; ou
- 1 à 4 substituants choisis parmi :

a) un groupe alkyle ou halogénoalkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$, alcényle en $C_{2\text{ à }6}$, alcynyle en $C_{2\text{ à }6}$, alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, dont tous sont facultativement substitués par R^{150} ;

b) OR^{104} où R^{104} est H, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het étant facultativement substitué par R^{150} ;

d) SR^{108} , $\text{SO}_2\text{N}(\text{R}^{108})_2$ ou $\text{SO}_2\text{N}(\text{R}^{108})\text{C}(\text{O})\text{R}^{108}$ où chaque R^{108} est indépendamment H, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het ou les deux R^{108} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het ou hétérocycle étant facultativement substitué par R^{150} ;

e) $\text{NR}^{111}\text{R}^{112}$ où R^{111} est H, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, et R^{112} est H, CN, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle, alkyl en $C_{1\text{ à }6}$ -Het, COOR^{115} ou $\text{SO}_2\text{R}^{115}$ où R^{115} est un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, ou à la fois R^{111} et R^{112} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, ou hétérocycle étant facultativement substitué par R^{150} ;

f) $\text{NR}^{116}\text{COR}^{117}$ où R^{116} et R^{117} sont chacun H, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$, alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, ledit groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$, alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het étant facultativement substitué par R^{150} ;

g) $\text{NR}^{118}\text{CONR}^{119}\text{R}^{120}$, où R^{118} , R^{119} et R^{120} sont chacun H, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$, alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, ou R^{119} et R^{120} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons ; ledit groupe alkyle, cycloalkyle, alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het ou hétérocycle étant facultativement substitué par R^{150} ;

h) $\text{NR}^{121}\text{COCOR}^{122}$ où R^{121} est H, un groupe alkyle en $C_{1\text{ à }6}$ étant facultativement substitué par R^{150} , et R^{122} est OR^{123} ou $\text{N}(\text{R}^{124})_2$ où R^{123} et chaque R^{124} sont indépendamment H, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, ou R^{124} est OH ou O(alkyle en $C_{1\text{ à }6}$) ou les deux R^{124} sont liés de manière covalente ensemble pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het et hétérocycle étant facultativement substitués par R^{150} ;

j) COOR^{128} où R^{128} est H, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, lesdits groupes alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$ ou alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle et alkyl en $C_{1\text{ à }6}$ -Het étant facultativement substitués par R^{150} ;

k) $\text{CONR}^{129}\text{R}^{130}$ où R^{129} et R^{130} sont indépendamment H, un groupe alkyle en $C_{1\text{ à }6}$, cycloalkyle en $C_{3\text{ à }7}$, alkyl en $C_{1\text{ à }6}$ -cycloalkyle en $C_{3\text{ à }7}$, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, ou à la fois R^{129} et R^{130} sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle, alkyl-cycloalkyle, aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle, alkyl en $C_{1\text{ à }6}$ -Het et hétérocycle étant facultativement substitués par R^{150} ;

l) un groupe aryle, Het, alkyl en $C_{1\text{ à }6}$ -aryle ou alkyl en $C_{1\text{ à }6}$ -Het, dont tous sont facultativement substitués

par R¹⁵⁰; où R¹⁵⁰ est choisi parmi :

- 1 à 3 substituants choisis parmi: un atome d'halogène, NO₂, un groupe cyano ou azido ; ou
- 1 à 3 substituants choisis parmi :

a) un groupe alkyle ou halogénoalkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alcényle en C_{2 à 6}, alcynyle en C_{2 à 8}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, dont tous sont facultativement substitués par R¹⁶⁰ ;
b) OR¹⁰⁴ où R¹⁰⁴ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, lesdits groupes alkyle, cycloalkyle, aryle et Het étant facultativement substitués par R¹⁶⁰ ;

c) OCOR¹⁰⁵ où R¹⁰⁵ est un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle, cycloalkyle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁶⁰ ;

d) SR¹⁰⁸, SO₂N(R¹⁰⁸)₂ ou SO₂N(R¹⁰⁸)C(O)R¹⁰⁸ où chaque R¹⁰⁸ est indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou les deux R¹⁰⁸ sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle ou hétérocycle étant facultativement substitué par R¹⁶⁰ ;

e) NR¹¹¹R¹¹² où R¹¹¹ est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, et R¹¹² est H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, COOR¹¹⁵ ou SO₂R¹¹⁵ où R¹¹⁵ est un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, ou les deux R¹¹¹ et R¹¹² sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, ledit groupe alkyle, cycloalkyle, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het ou hétérocycle étant facultativement substitué par R¹⁶⁰ ;

f) NR¹¹⁶COR¹¹⁷ où R¹¹⁶ et R¹¹⁷ sont chacun H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het, ledit groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, aryle, Het, alkyl en C_{1 à 6}-aryle ou alkyl en C_{1 à 6}-Het étant facultativement substitué par R¹⁶⁰ ;

g) NR¹¹⁸CONR¹¹⁹R¹²⁰, où R¹¹⁸, R¹¹⁹ et R¹²⁰ sont chacun H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7}, ou R¹¹⁹ et R¹²⁰ sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons ; ledit groupe alkyle, cycloalkyle ou hétérocycle étant facultativement substitué par R¹⁶⁰ ;

h) NR¹²¹COCOR¹²² où R¹²¹ est H, un groupe alkyle en C_{1 à 6}, facultativement substitué par R¹⁶⁰, et R¹²² est OR¹²³ ou N(R¹²⁴)₂ où R¹²³ et chaque R¹²⁴ sont indépendamment H, un groupe alkyle en C_{1 à 6} ou cycloalkyle en C_{3 à 7}, ou R¹²⁴ est OH ou O(alkyle en C_{1 à 6}) ou les deux R¹²⁴ sont liés de manière covalente ensemble pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle et hétérocycle étant facultativement substitués par R¹⁶⁰ ;

j) le tétrazole, COOR¹²⁸ où R¹²⁸ est H, un groupe alkyle en C_{1 à 6} ou cycloalkyle en C_{3 à 7}, lesdits groupes alkyle en C_{1 à 6} et cycloalkyle en C_{3 à 7} étant facultativement substitués par R¹⁶⁰; et

k) CONR¹²⁹R¹³⁰ où R¹²⁹ et R¹³⁰ sont indépendamment H, un groupe alkyle en C_{1 à 6} ou cycloalkyle en C_{3 à 7} ou les deux R¹²⁹ et R¹³⁰ sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons, lesdits groupes alkyle, cycloalkyle et hétérocycle étant facultativement substitués par R¹⁶⁰ ;

où R¹⁶⁰ est défini en tant que 1 ou 2 substituants choisis parmi : le tétrazole, un atome d'halogène, un groupe CN, alkyle (en C_{1 à 6}), halogénoalkyle, COOR¹⁶¹, SO₃H, SO₂R¹⁶¹, OR¹⁶¹, N(R¹⁶²)₂, SO₂N(R¹⁶²)₂, NR¹⁶²COR¹⁶² ou CON(R¹⁶²)₂, où R¹⁶¹ et chaque R¹⁶² sont indépendamment H, un groupe alkyle en C_{1 à 6}, cycloalkyle en C_{3 à 7} ou alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7} ; ou les deux R¹⁶² sont liés de manière covalente ensemble et à l'atome d'azote auquel ils sont attachés pour former un hétérocycle saturé à 5, 6 ou 7 chaînons.

27. Composé selon la revendication 26, dans lequel Q est un groupe aryle à 6 ou 10 chaînons ou Het, les deux étant facultativement substitués par :

- 1 à 3 atomes d'halogène, NO₂, un groupe cyano, azido ; ou
- 1 à 3 substituants choisis parmi :

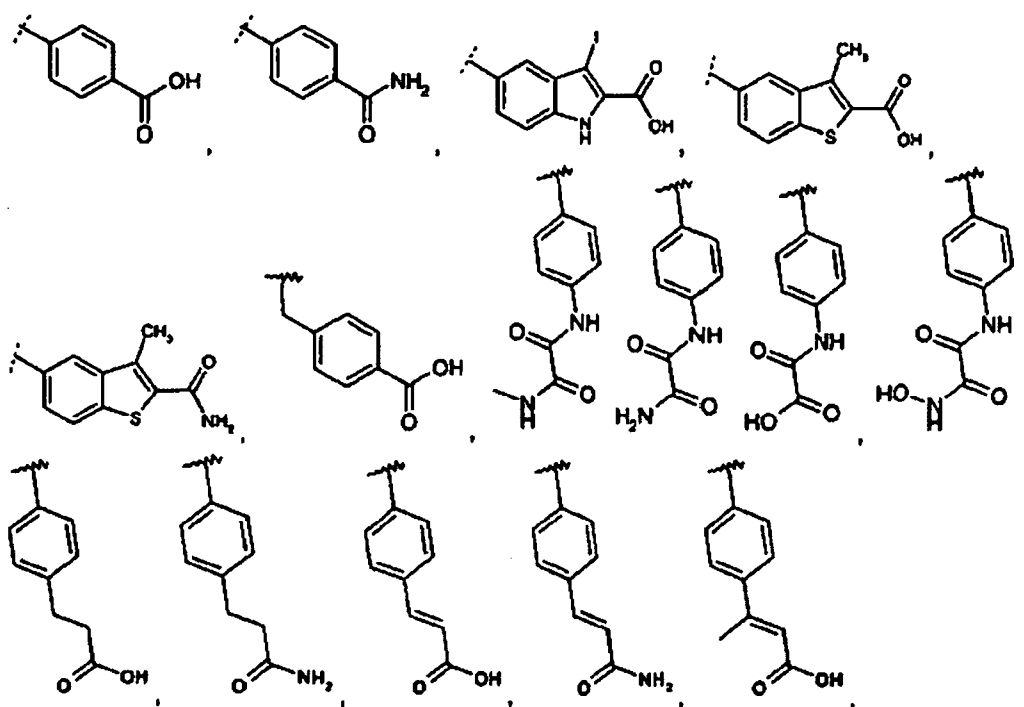
a) un groupe alkyle ou halogénoalkyle en C_{1 à 6}, premier cycloalkyle en C_{3 à 7}, alcényle en C_{2 à 6}, alcynyle en C_{2 à 8}, alkyl en C_{1 à 6}-cycloalkyle en C_{3 à 7}, dont tous sont facultativement substitués par R¹⁵⁰ ;

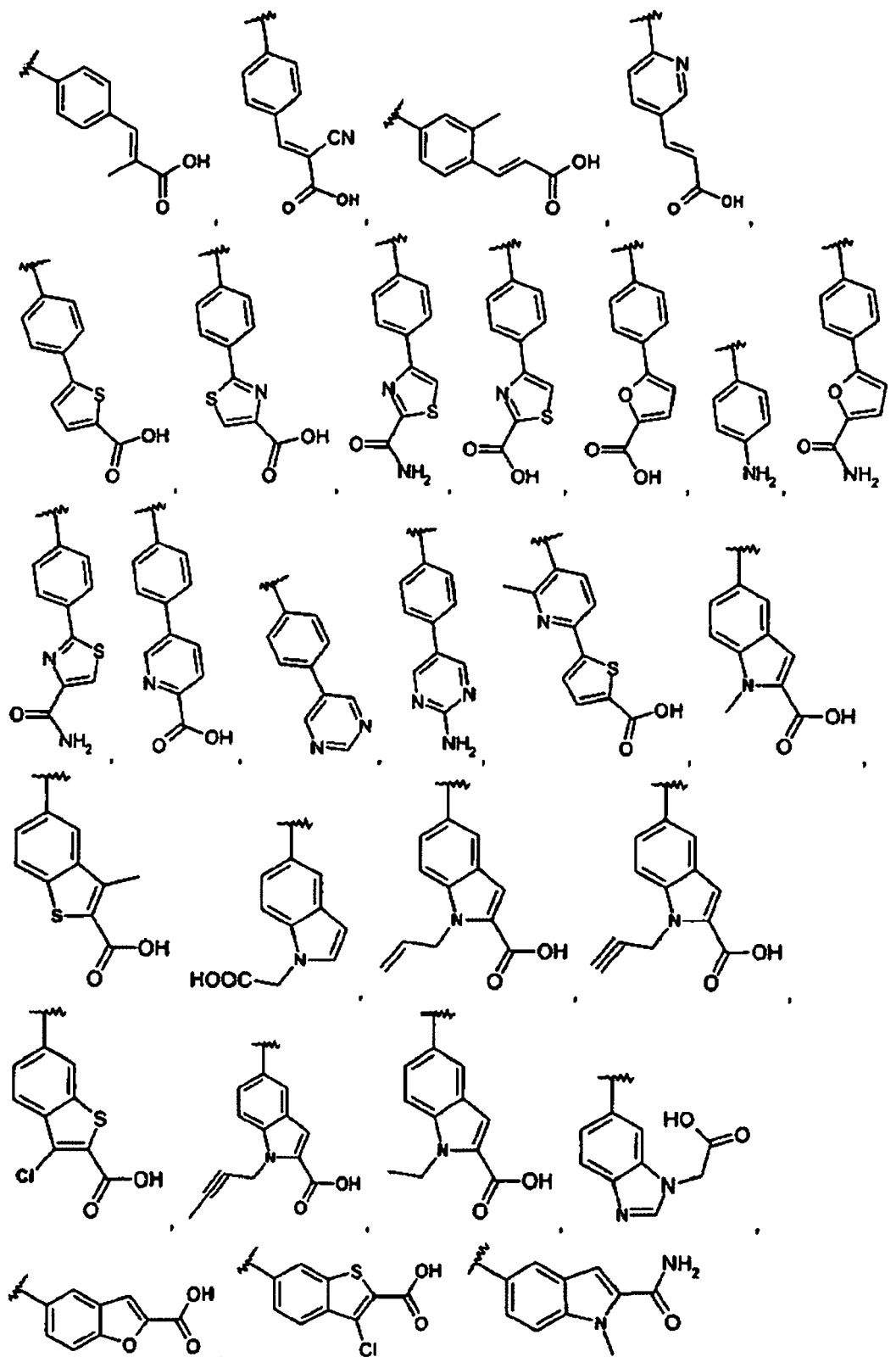
- b) OR^{104} où R^{104} est H, ou un groupe alkyle en C_1 à 6 ;
d) $\text{SO}_2\text{NHR}^{108}$ où R^{108} est H, ou un groupe alkyle en C_1 à 6 ;
e) $\text{NR}^{111}\text{R}^{112}$ où à la fois R^{111} et R^{112} sont indépendamment H ou un groupe alkyle en C_1 à 6 ;
f) NHCOR^{117} où R^{117} est H ou un groupe alkyle en C_1 à 6 ;
g) $\text{NHCONR}^{119}\text{R}^{120}$, où R^{119} et R^{120} sont chacun indépendamment H ou un groupe alkyle en C_1 à 6 ;
h) NHCOCOR^{122} où R^{122} est OR^{123} ou $\text{N}(\text{R}^{124})_2$ où R^{123} et chaque R^{124} sont indépendamment H ou un groupe alkyle en C_1 à 6 ;
j) COOR^{128} où R^{128} est H, ou un groupe alkyle en C_1 à 6 ;
k) CONHR^{130} où R^{130} est H, ou un groupe alkyle en C_1 à 6 ;
l) un groupe aryle à 6 ou 10 chaînons, Het, alkyl en C_1 à 6-aryle ou alkyl en C_1 à 6-Het, ledit groupe aryle, Het, alkyl en C_1 à 6-aryle ou alkyl en C_1 à 6-Het étant facultativement substitué par R^{150} ; où R^{150} est choisi parmi :

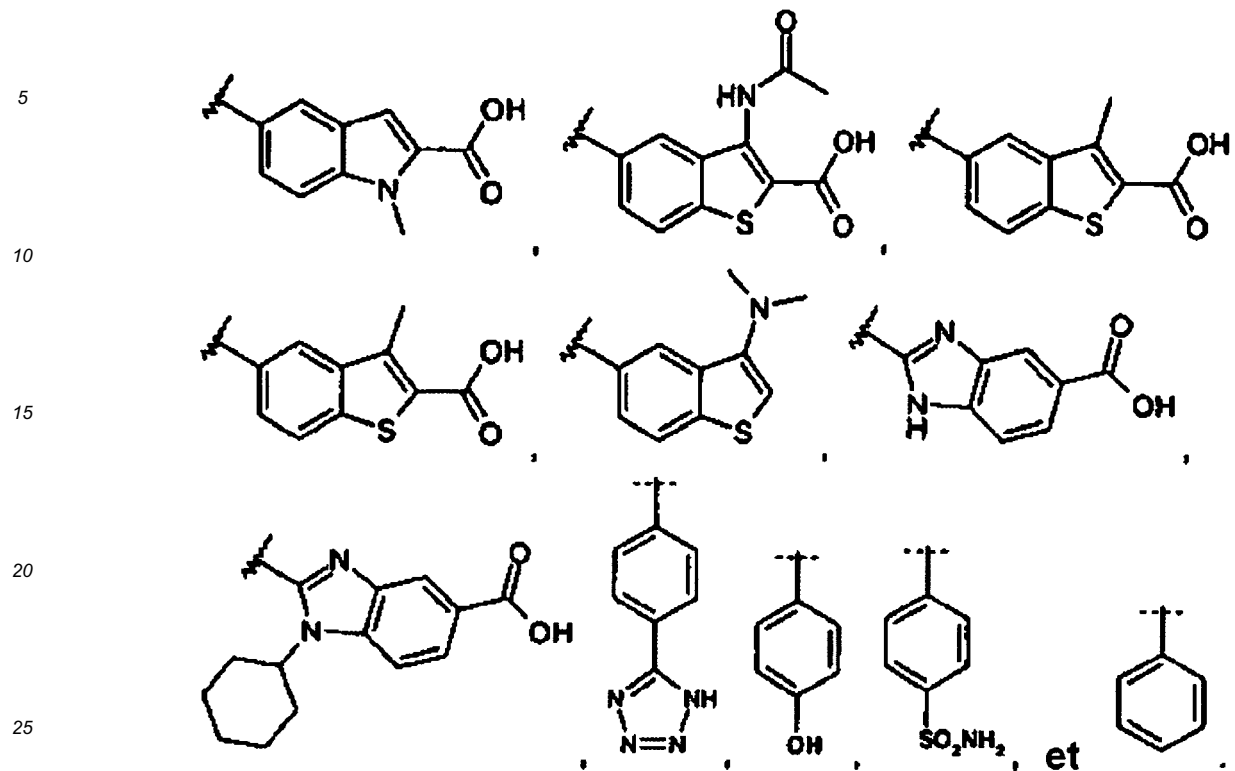
- 1 à 3 atomes d'halogène ; ou
- 1 à 3 substituants choisis parmi :

- a) un groupe premier alkyle ou halogénoalkyle en $C_1 \text{ à } 6$, premier cycloalkyle en $C_3 \text{ à } 7$, alcényle en $C_2 \text{ à } 6$, alcynyle en $C_2 \text{ à } 8$, alkyl en $C_1 \text{ à } 6$ -cycloalkyle en $C_3 \text{ à } 7$, dont tous sont facultativement substitués par un tétrazole, un groupe OR^{102} , $COOR^{102}$, où R^{102} est H ou un groupe alkyle en $C_1 \text{ à } 6$;
- b) OR^{104} où R^{104} est H, ou un groupe alkyle en $C_1 \text{ à } 6$;
- d) SO_2NHR^{108} où R^{108} est H, ou un groupe alkyle en $C_1 \text{ à } 6$;
- e) $NR^{111}R^{112}$ où à la fois R^{111} et R^{112} sont indépendamment H ou un groupe alkyle en $C_1 \text{ à } 6$;
- f) $NHCOR^{117}$ où R^{117} est H ou un groupe alkyle en $C_1 \text{ à } 6$; et
- h) $NHCOCOR^{122}$ où R^{122} est OR^{123} ou $N(R^{124})_2$ où R^{123} et chaque R^{124} sont indépendamment H ou un groupe alkyle en $C_1 \text{ à } 6$;
- j) $COOR^{128}$ où R^{128} est H, ou un groupe alkyle en $C_1 \text{ à } 6$; et
- k) $CONHR^{130}$ où R^{130} est H, ou un groupe alkyle en $C_1 \text{ à } 6$.

28. Composé selon la revendication 1 ou 26, dans lequel Q est choisi parmi :







29. Composé selon la revendication 28, dans lequel Q est choisi parmi :

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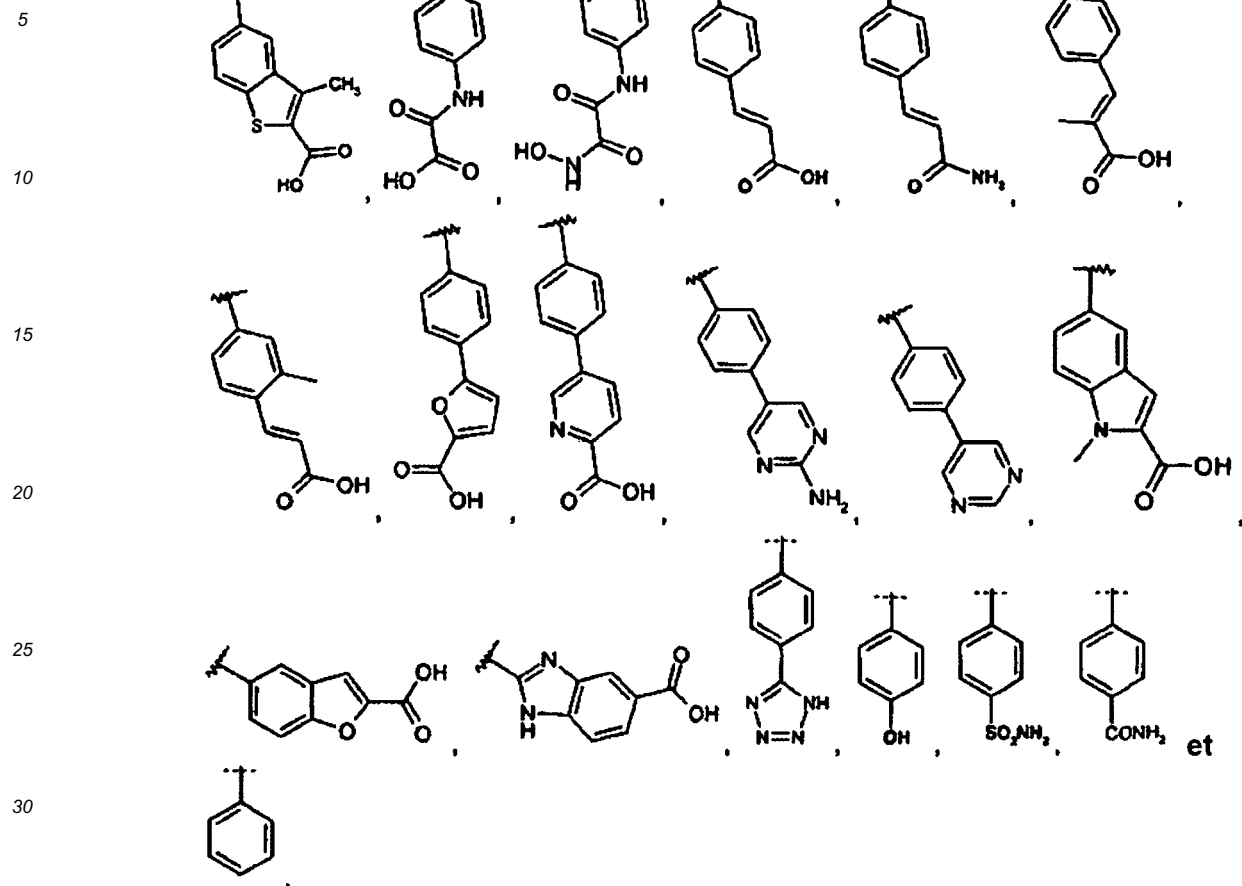
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35 **30.** Composé selon la revendication 1 de formule :



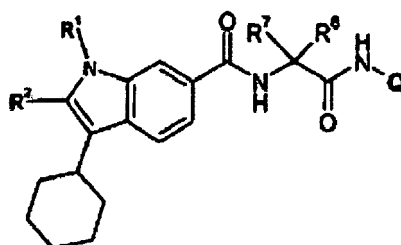
dans laquelle A, R², R³ et Z sont définis comme suit :

50

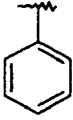
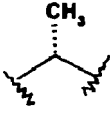
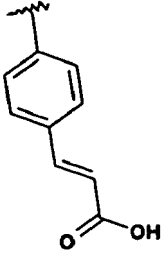
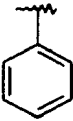
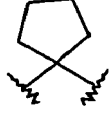
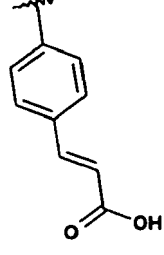
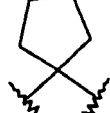
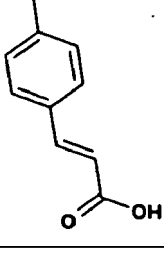
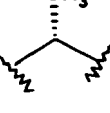
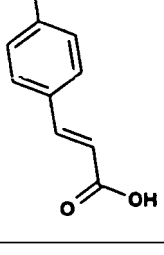
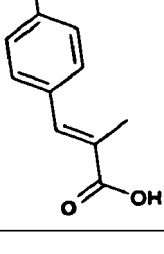
55

Cpé n°	A	R ²	R ³	Z	
1006	NMe				;
1031	NMe				;
1032	NMe				et
1033	NMe				.

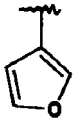
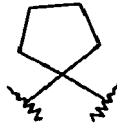
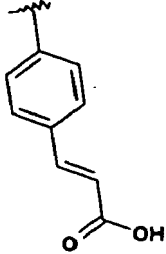
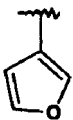
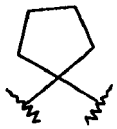
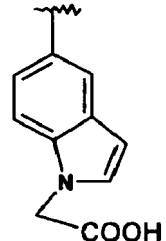
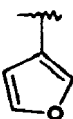
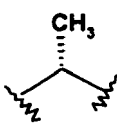
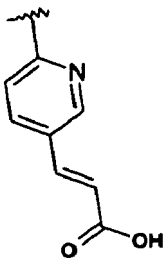
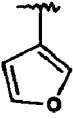
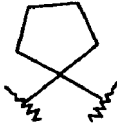
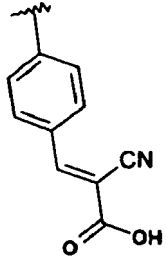
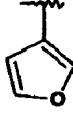
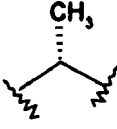
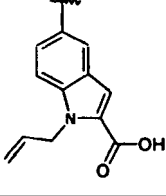
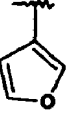
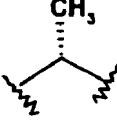
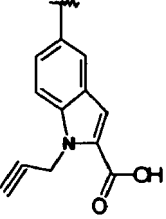
31. Composé selon la revendication 1 de formule :



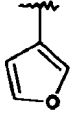
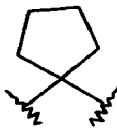
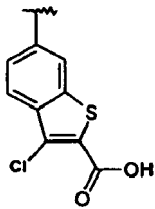
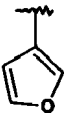
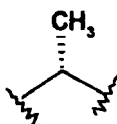
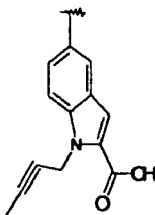
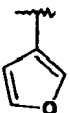
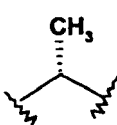
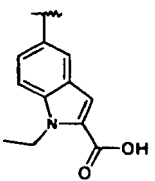
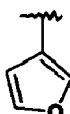
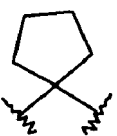
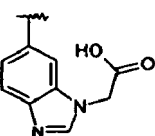
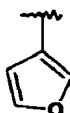
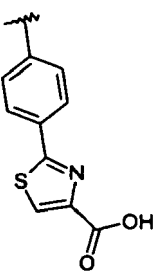
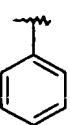
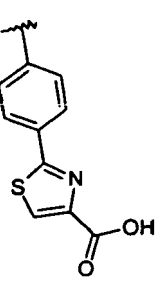
dans laquelle R¹, R², R⁷, R⁸ et Q sont définis comme suit :

Cpé n°	R ¹	R ²	R ⁷ R ⁸	Q	
2001	H				;
2002	H				;
2003	H	Br			;
2004	H				;
2005	H				;

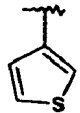
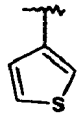
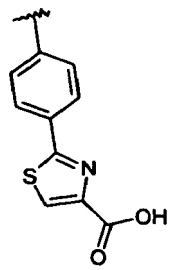
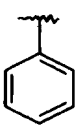
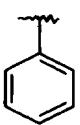
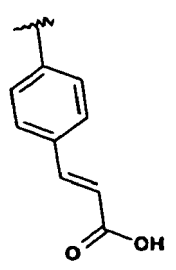
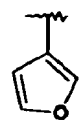
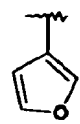
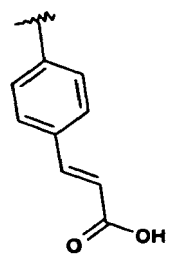
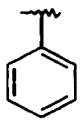
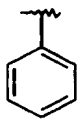
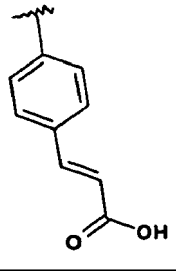
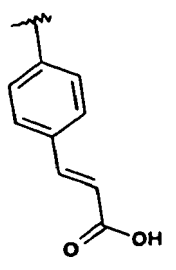
(suite)

Cpé n°	R ¹	R ²	R⁷ R⁸	Q	
2006	Me				;
2008	H				;
2009	H				;
2010	H				;
2011	H				;
2012	H				;

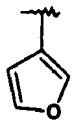
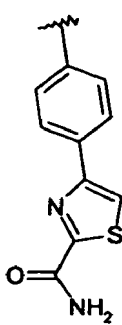
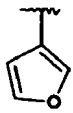
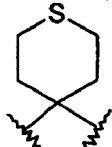
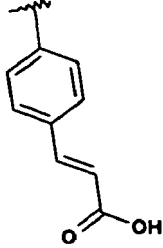
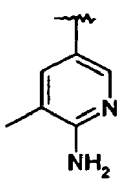
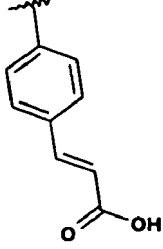
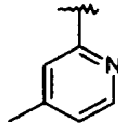
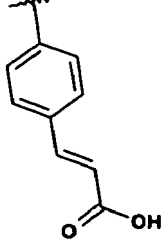
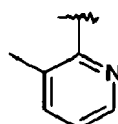
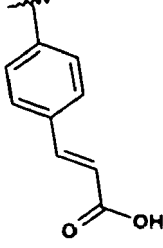
(suite)

Cpé n°	R ¹	R ²	R⁷ R⁸	Q	
2013	H				;
2014	H				;
2015	H				;
2016	H				;
2017	H				;
2018	H				;

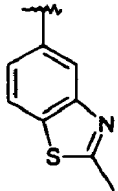
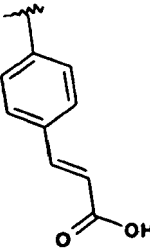
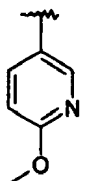
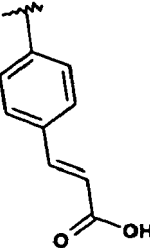
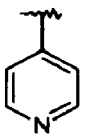
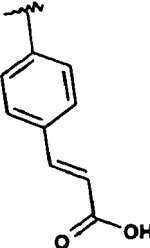
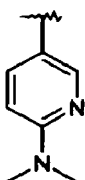
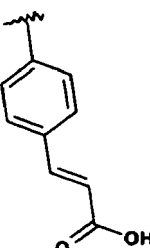
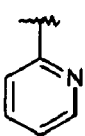
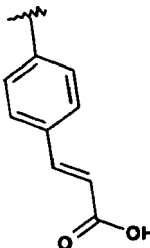
(suite)

Cpé n°	R ¹	R ²	R⁷ R⁸	Q	
2019	H				;
2020	Et				;
2021					;
2022					;
2023	Me	H			;

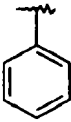
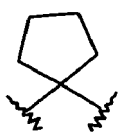
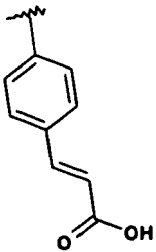
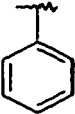
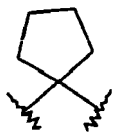
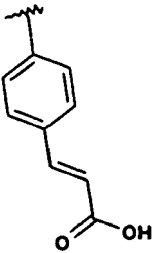
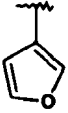
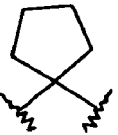
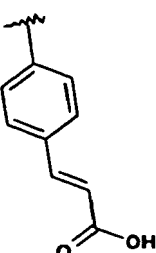
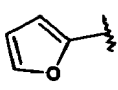
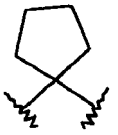
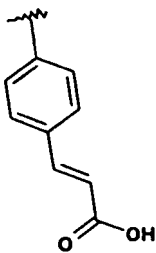
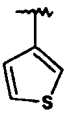
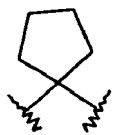
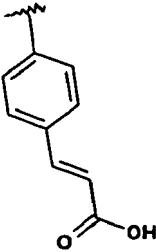
(suite)

Cpé n°	R ¹	R ²	R⁷ R⁸	Q	
2024	H				;
2025	H				;
2026	Me				;
2027	Me				;
2028	Me				;

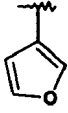
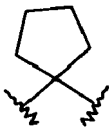
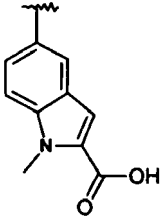
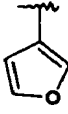
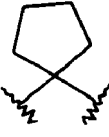
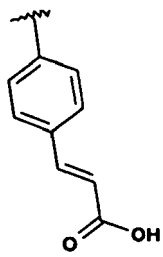
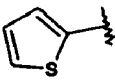
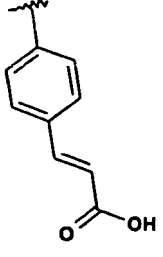
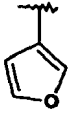
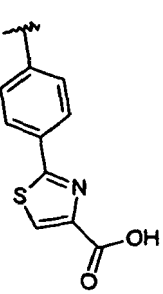
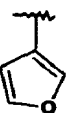
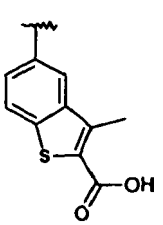
(suite)

Cpé n°	R ¹	R ²	R⁷ R⁸	Q	
2029	Me				;
2030	Me				;
2031	Me				;
2032	Me				;
2033	H				;

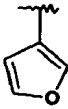
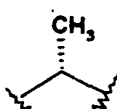
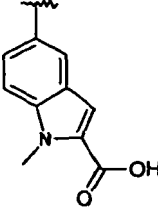
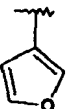
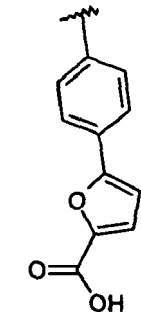
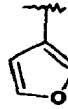
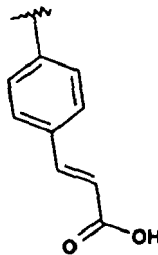
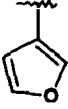
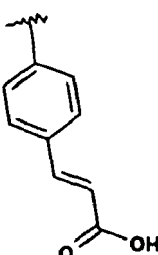
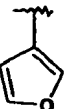
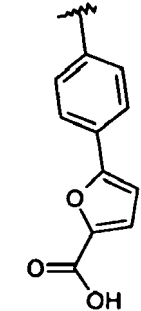
(suite)

Cpé n°	R ¹	R ²	R⁷ R⁸	Q	
2034	Me				;
2035	H				;
2036	H				;
2037	H				;
2038	H				;

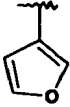
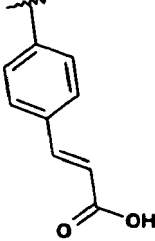
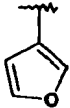
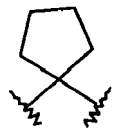
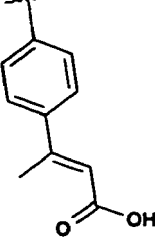
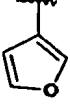
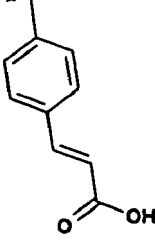
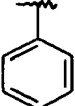
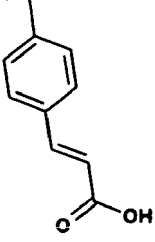
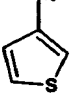
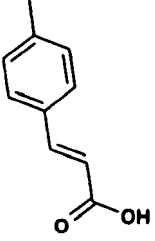
(suite)

Cpé n°	R ¹	R ²	R⁷ R⁸	Q	
2039	H				;
2041	Me				;
2042	H				;
2044	H				;
2046	H				;

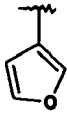
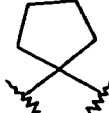
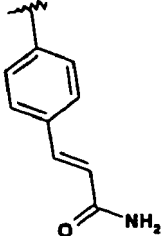
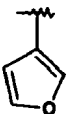
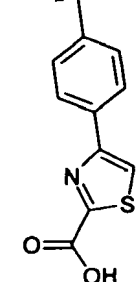
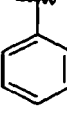
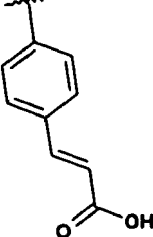
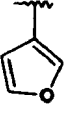
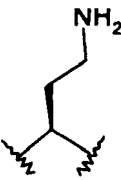
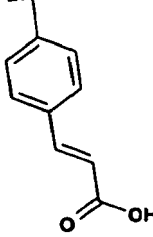
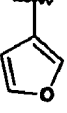
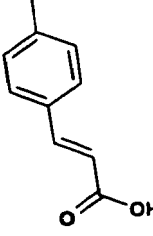
(suite)

Cpé n°	R ¹	R ²	R⁷ R⁸	Q	
2047	H				;
2048	H				;
2050	H				;
2051	Me				;
2053	H				;

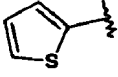
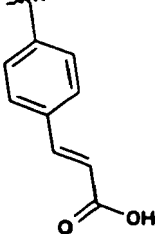
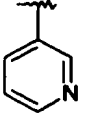
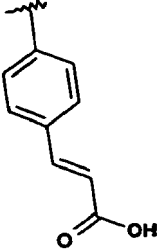
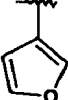
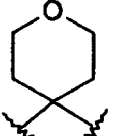
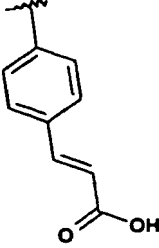
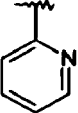
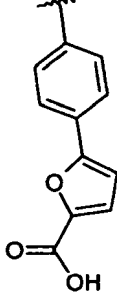
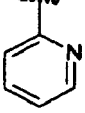
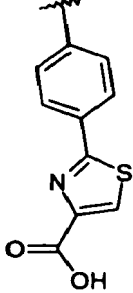
(suite)

Cpé n°	R ¹	R ²	R⁷ R⁸	Q	
2054	Et				;
2056	H				;
2057	H				;
2058	H				;
2059	H				;

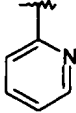
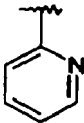
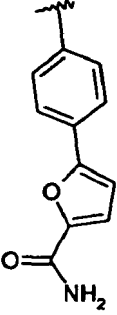
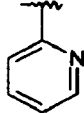
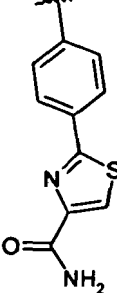
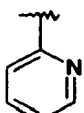
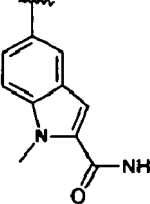
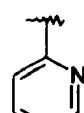
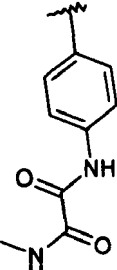
(suite)

Cpé n°	R ¹	R ²	R⁷ R⁸	Q	
2060	H				;
2061	H				;
2062	Me				;
2064	H				;
2065	H				;

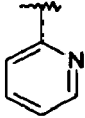
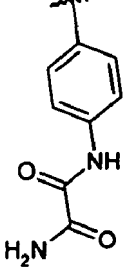
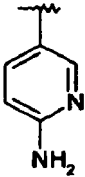
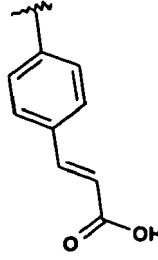
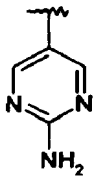
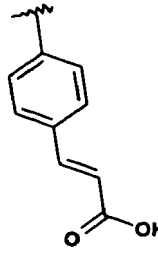
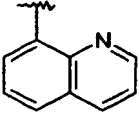
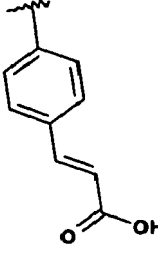
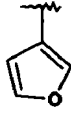
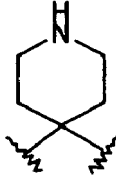
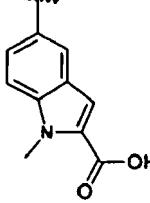
(suite)

Cpé n°	R ¹	R ²	R⁷ R⁸	Q	
2066	Me				;
2068	Me				;
2069	H				;
2070	Me				;
2071	Me				;

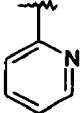
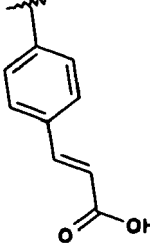
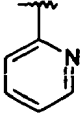
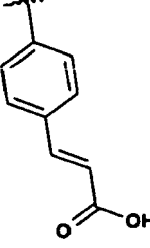
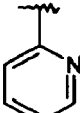
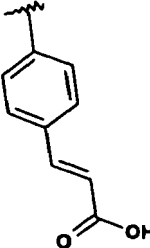
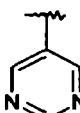
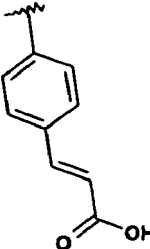
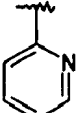
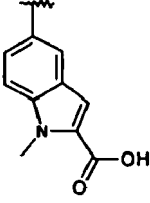
(suite)

Cpé n°	R ¹	R ²	R⁷ R⁸	Q	
2072	Me				;
2073	Me				;
2074	Me				;
2075	Me				;
2076	Me				;

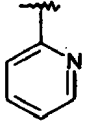
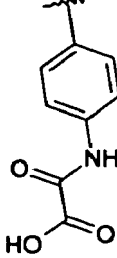
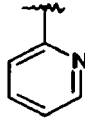
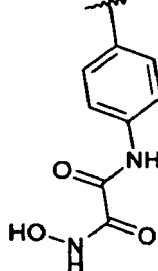
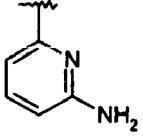
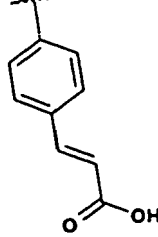
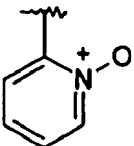
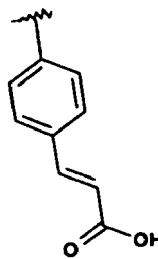
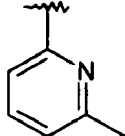
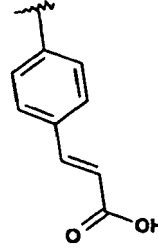
(suite)

Cpé n°	R ¹	R ²	R⁷ R⁸	Q	
2077	Me				;
2080	Me				;
2081	Me				;
2082	Me				;
2084	H				;

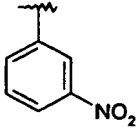
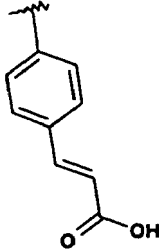
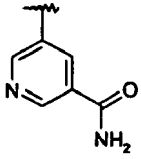
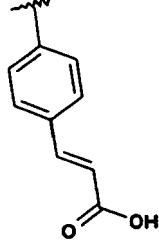
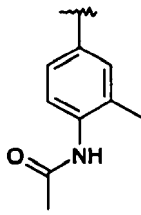
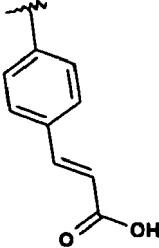
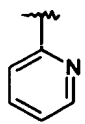
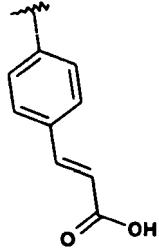
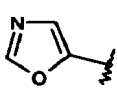
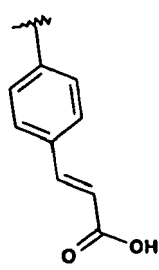
(suite)

Cpé n°	R ¹	R ²	R⁷ R⁸	Q	
2087	Me				;
2089	H				;
2090	Me				;
2091	Me				;
2093	Me				;

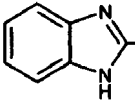
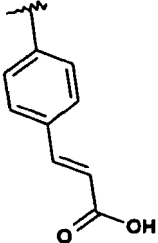
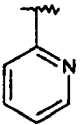
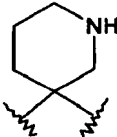
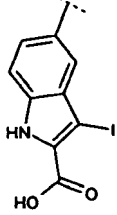
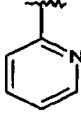
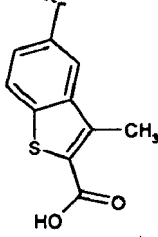
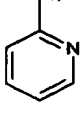
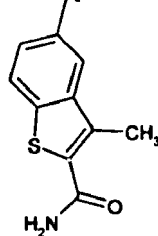
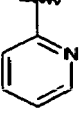
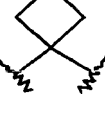
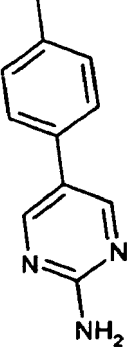
(suite)

Cpé n°	R ¹	R ²	R⁷ R⁸	Q	
2094	Me				;
2095	Me				;
2096	Me				;
2097	Me				;
2098	Me				;

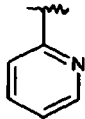
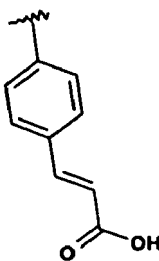
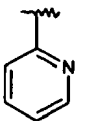
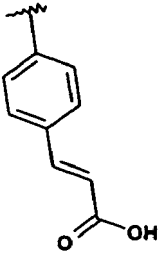
(suite)

Cpé n°	R ¹	R ²	R⁷ R⁸	Q	
2102	Me				;
2103	Me				;
2104	Me				;
2107	Me				;
2108	Me				;

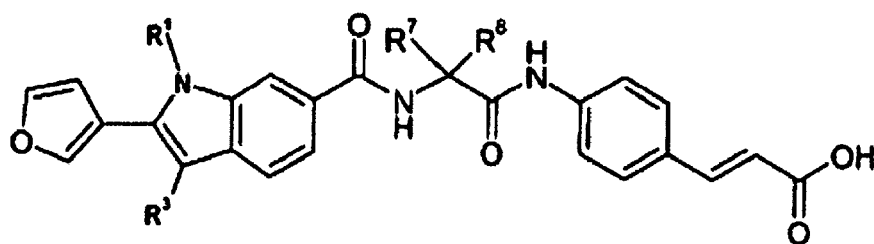
(suite)

Cpé n°	R ¹	R ²	R ⁷ R ⁸	Q	
2109	Me				;
2110	Me				;
2111	Me				;
2112	Me				;
2113	Me				;

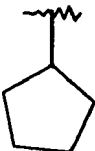
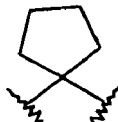
(suite)

Cpé n°	R ¹	R ²	R ⁷ R ⁸	Q	
2115	Me				;
2117	Me				.

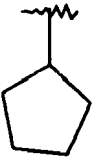
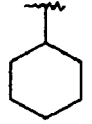
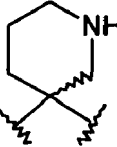
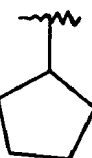
32. Composé selon la revendication 1 de formule :



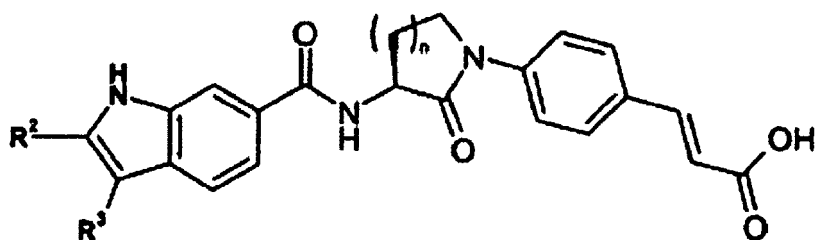
dans laquelle R¹, R³, R⁷ et R⁸ sont définis comme suit :

Cpé n°	R ¹	R ³	R ⁷ R ⁸	
3001	H			;

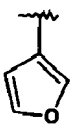
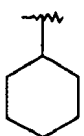
(suite)

Cpé n°	R ¹	R ³		
3002	H			;
3003	Me			; et
3004	Me			.

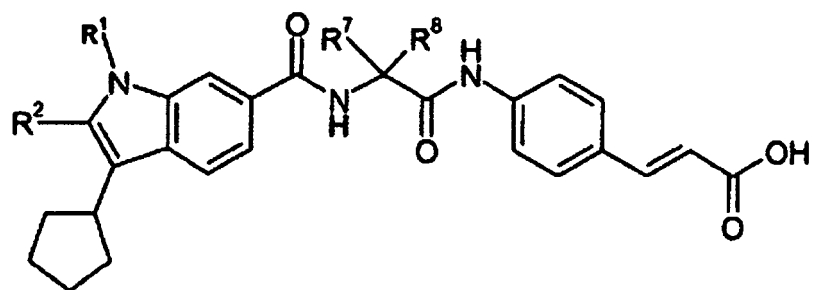
33. Composé selon la revendication 1 de formule :



dans laquelle R², R³ et n sont définis comme suit :

Cpé n°	R ²	R ³	n	
5001			1	.

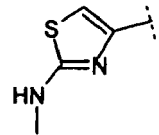
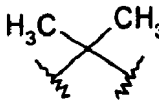
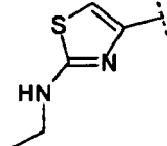
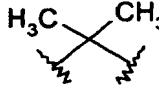
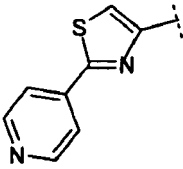
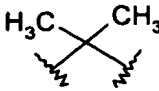
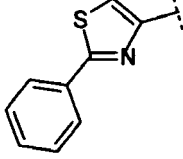
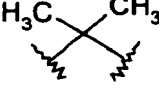
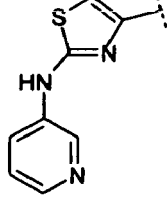
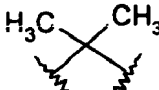
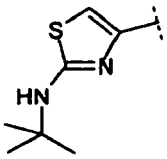
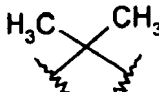
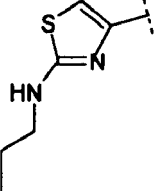
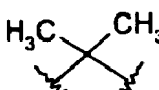
34. Composé selon la revendication 1 de formule :



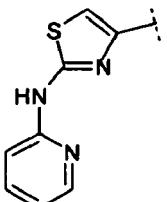
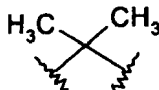
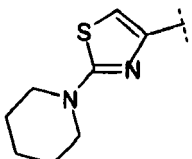
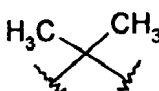
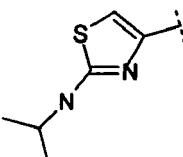
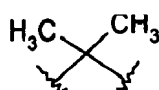
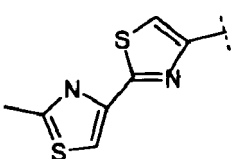
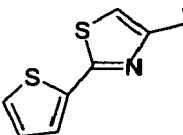
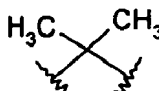
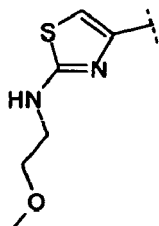
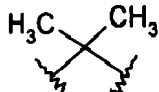
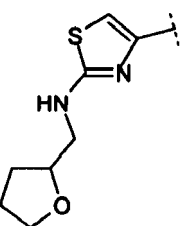
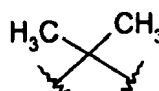
dans laquelle R¹, R², R⁷ et R⁸ sont définis comme suit :

Cpé n°	R¹	R²	R⁷ R⁸	
6003	CH₃			;
6004	CH₃			;
6005	CH₃			;
6006	CH₃			;
6007	CH₃			;
6008	CH₃			;

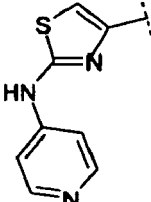
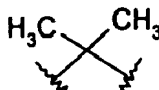
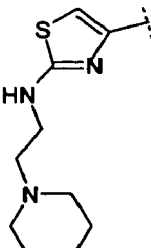
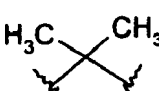
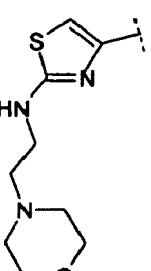
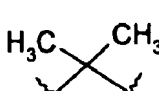
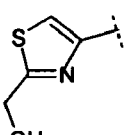
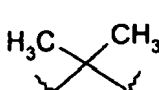
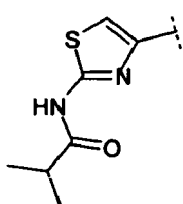
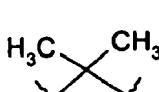
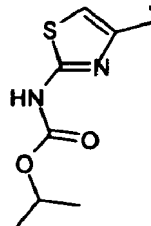
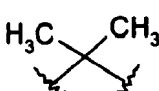
(suite)

Cpé n°	R ¹	R ²		
6009	CH ₃			;
6010	CH ₃			;
6011	CH ₃			;
6012	CH ₃			;
6013	CH ₃			;
6013	CH ₃			;
6014	CH ₃			;

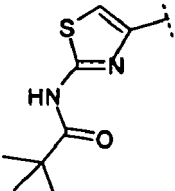
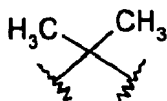
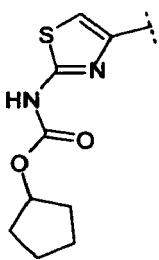
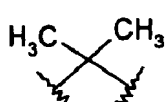
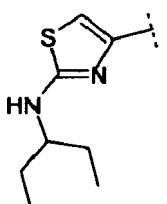
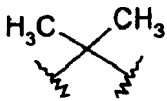
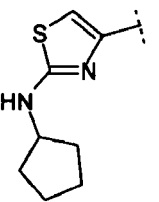
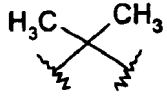
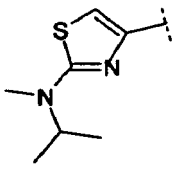
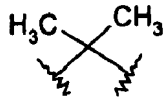
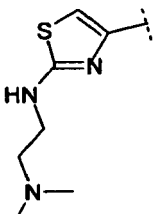
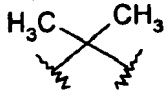
(suite)

Cpé n°	R ¹	R ²		
6015	CH ₃			;
6016	CH ₃			;
6017	CH ₃			;
6018	CH ₃			;
6019	CH ₃			;
6020	CH ₃			;
6021	CH ₃			;

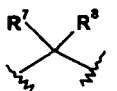
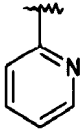
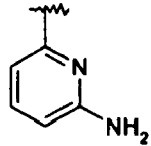
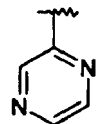
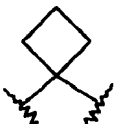
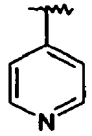
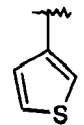
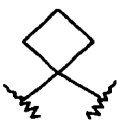
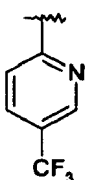
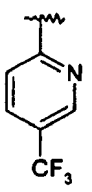
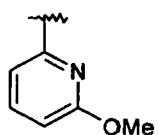
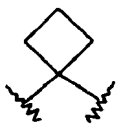
(suite)

Cpé n°	R ¹	R ²		
6022	CH ₃			;
6023	CH ₃			;
6025	CH ₃			;
6026	CH ₃			;
6027	CH ₃			;
6028	CH ₃			;

(suite)

Cpé n°	R ¹	R ²		
6029	CH ₃			;
6030	CH ₃			;
6031	CH ₃			;
6033	CH ₃			;
6034	CH ₃			;
6035	CH ₃			;

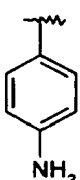
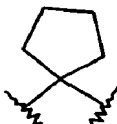
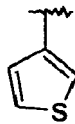
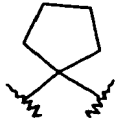
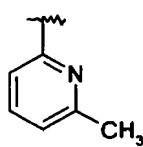
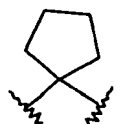
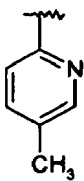
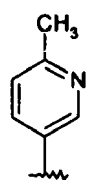
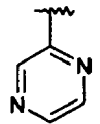
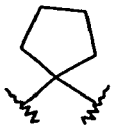
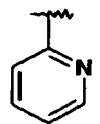
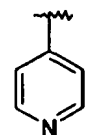
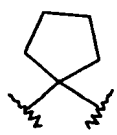
(suite)

Cpé n°	R ¹	R ²		
6036	CH ₃			;
6037	CH ₃			;
6038	CH ₃			;
6039	CH ₃			;
6040	CH ₃			;
6041	CH ₃			;
6042	CH ₃			;
6043	CH ₃			;

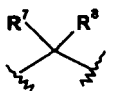
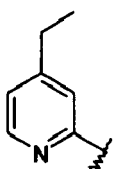
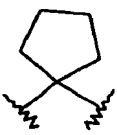
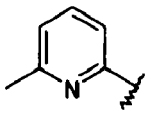
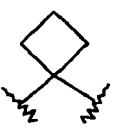
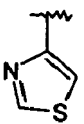
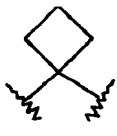
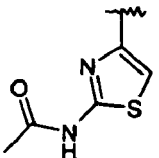
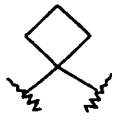
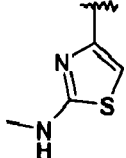
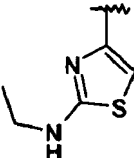
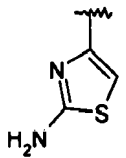
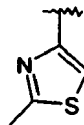
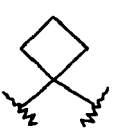
(suite)

Cpé n°	R ¹	R ²	R ⁷ R ⁸	
5 10 15 20 25 30 35 40 45 50 55				
6044	CH ₃			;
6045	CH ₃			;
6046	CH ₃			;
6047	CH ₃			;
6048	CH ₃			;
6049	CH ₃			;
6051	CH ₃			;
6052	CH ₃			;

(suite)

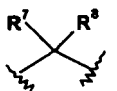
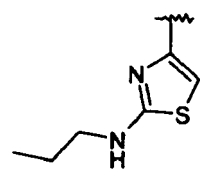
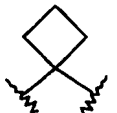
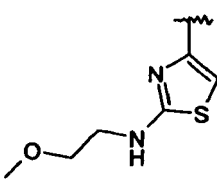
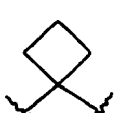
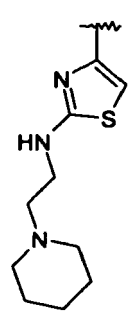
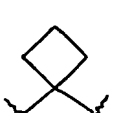
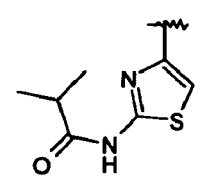
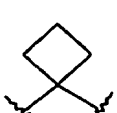
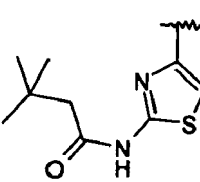
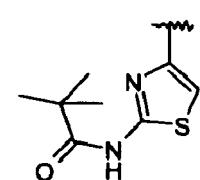
Cpé n°	R ¹	R ²		
6053	CH ₃			;
6055	CH ₃			;
6057	CH ₃			;
6060	CH ₃			;
6061	CH ₃			;
6063	CH ₃			;
6064	CH ₃			;
6066	CH ₃			;

(suite)

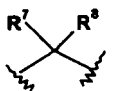
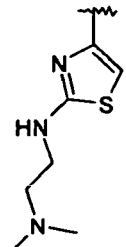
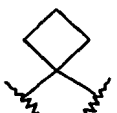
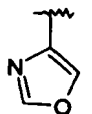
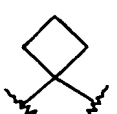
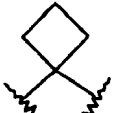
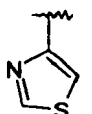
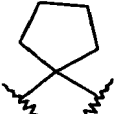
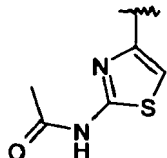
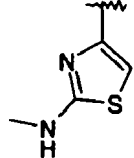
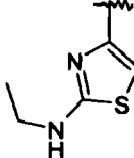
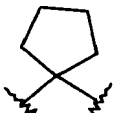
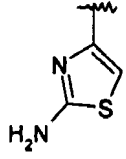
Cpé n°	R ¹	R ²		
6067	CH ₃			;
6069	CH ₃			;
6070	CH ₃			;
6071	CH ₃			;
6072	CH ₃			;
6073	CH ₃			;
6074	CH ₃			;
6075	CH ₃			;

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(suite)

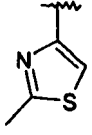
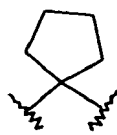
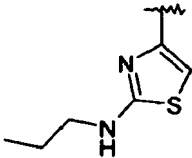
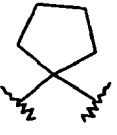
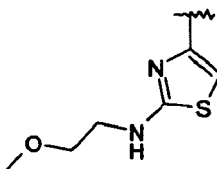
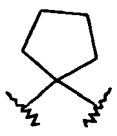
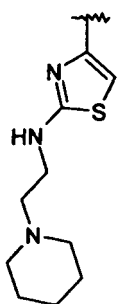
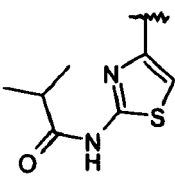
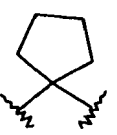
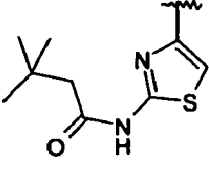
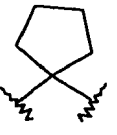
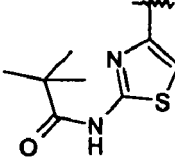
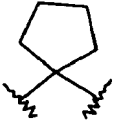
Cpé n°	R ¹	R ²		
6076	CH ₃			;
6077	CH ₃			;
6078	CH ₃			;
6079	CH ₃			;
6080	CH ₃			;
6081	CH ₃			;

(suite)

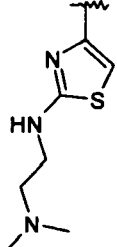
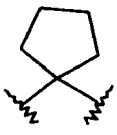
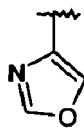
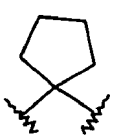
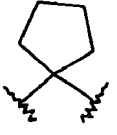
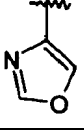
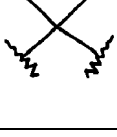
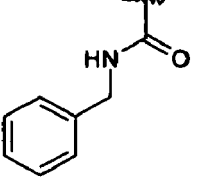
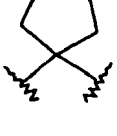
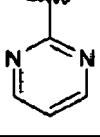
Cpé n°	R ¹	R ²		
6082	CH ₃			;
6083	CH ₃			;
6084	CH ₃			;
6085	CH ₃			;
6086	CH ₃			;
6087	CH ₃			;
6088	CH ₃			;
6089	CH ₃			;

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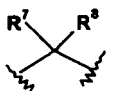
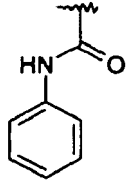
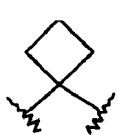
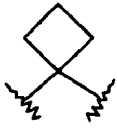
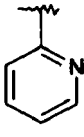
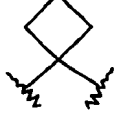
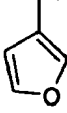
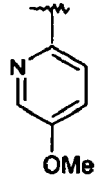
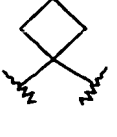
(suite)

Cpé n°	R ¹	R ²	R ⁷ R ⁸	
6090	CH ₃			;
6091	CH ₃			;
6092	CH ₃			;
6093	CH ₃			;
6094	CH ₃			;
6095	CH ₃			;
6096	CH ₃			;

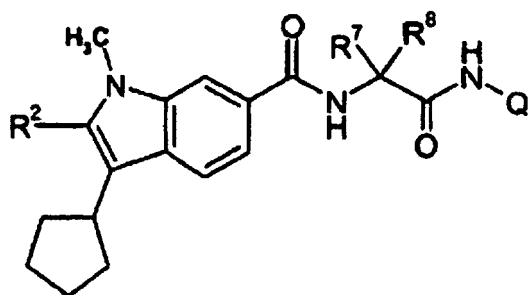
(suite)

Cpé n°	R ¹	R ²	R ⁷ R ⁸	
6097	CH ₃			;
6098	CH ₃			;
6099	CH ₃			;
6100	CH ₃			;
6106	CH ₃	CONHCH ₃		;
6107	CH ₃	CON(CH ₃) ₂		;
6110	CH ₃			;
6111	CH ₃			;

(suite)

Cpé n°	R ¹	R ²		
6112	CH ₃			;
6113	CH ₃	CONH ₂		;
6119	CH ₃	H		;
6120	CH ₃	Br		;
6121	H			;
6122	CH ₃			et
6123	CH ₃			.

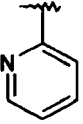
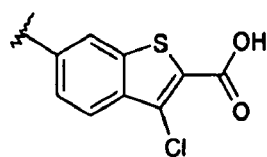
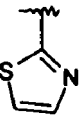
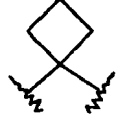
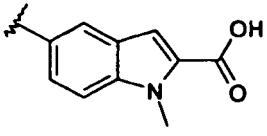
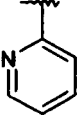
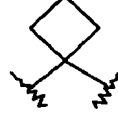
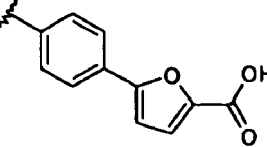
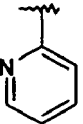
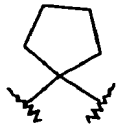
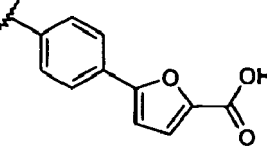
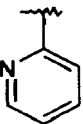
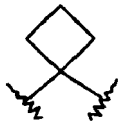
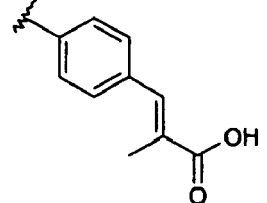
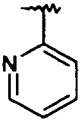
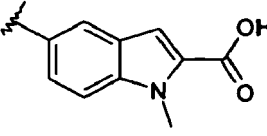
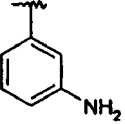
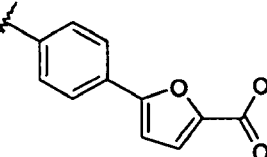
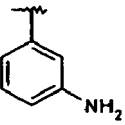
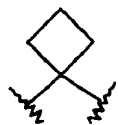
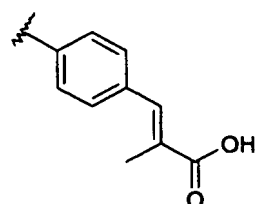
35. Composé selon la revendication 1 de formule :



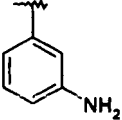
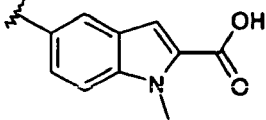
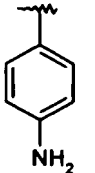
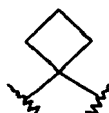
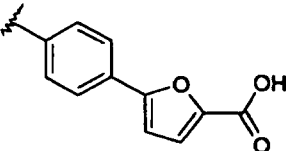
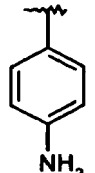
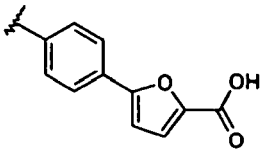
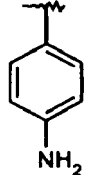
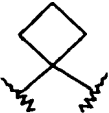
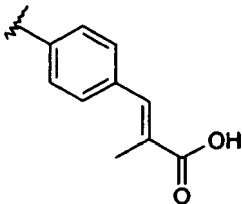
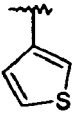
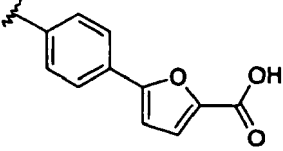
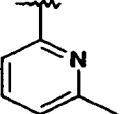
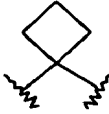
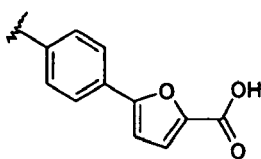
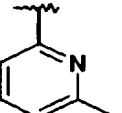
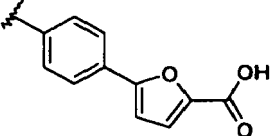
dans laquelle R^2 , R^7 , R^8 et Q sont définis comme suit :

Cpé n°	R^2	R^7 R^8	Q	
7001				;
7002				;
7003				;
7004				;
7005				;
7006				;

(suite)

Cpé n°	R ²	R ⁷ R ⁸	Q	
7007				;
7008				;
7009				;
7010				;
7011				;
7012				;
7013				;
7014				;

(suite)

Cpé n°	R ²	R ⁷ R ⁸	Q	
7015				;
7016				;
7017				;
7018				;
7019				;
7020				;
7021				;

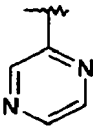
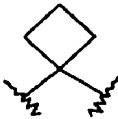
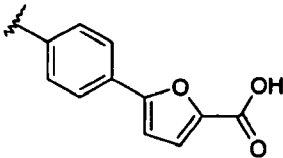
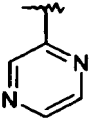
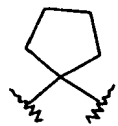
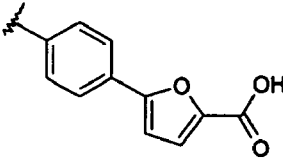
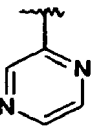
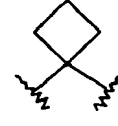
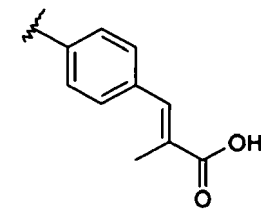
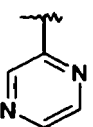
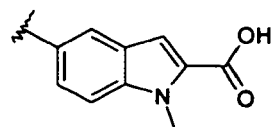
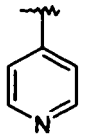
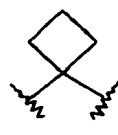
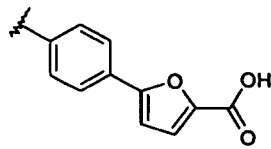
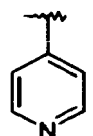
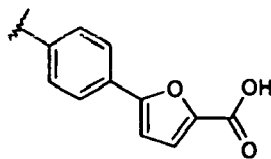
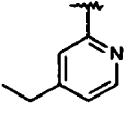
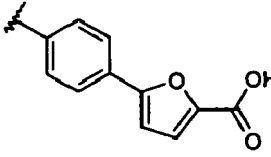
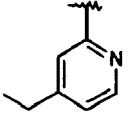
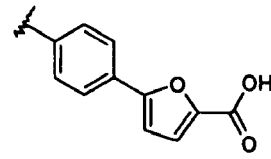
(suite)

Cpé n°	R ²	R ⁷ R ⁸	Q	
7022				;
7023				;
7024				;
7025				;
7026				;
7027				;
7028				;

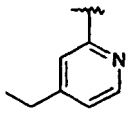
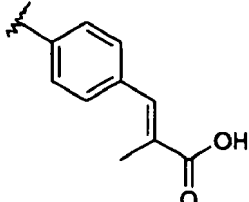
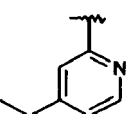
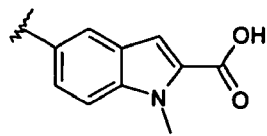
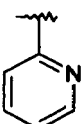
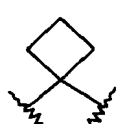
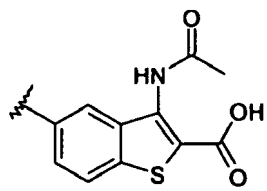
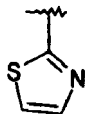
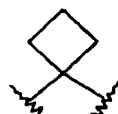
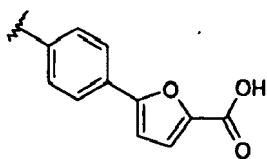
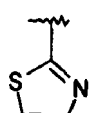
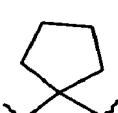
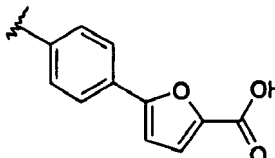
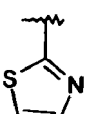
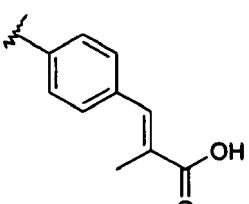
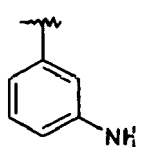
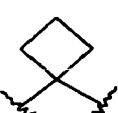
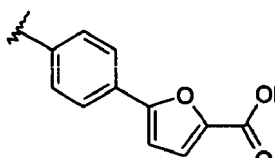
(suite)

Cpé n°	R ²	R ⁷ R ⁸	Q	
7029				;
7030				;
7031				;
7032				;
7033				;
7034				;
7035				;

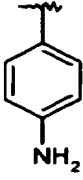
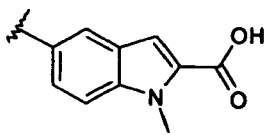
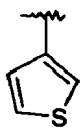
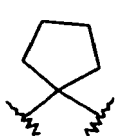
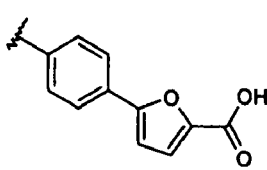
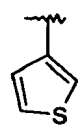
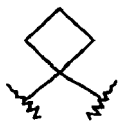
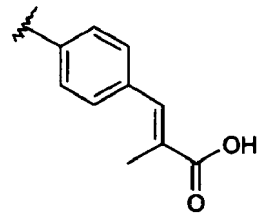
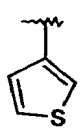
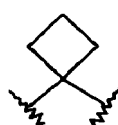
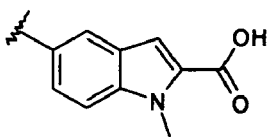
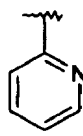
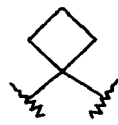
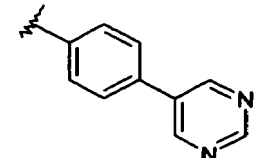
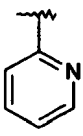
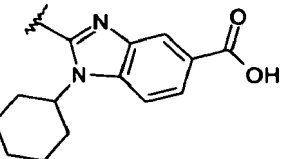
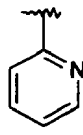
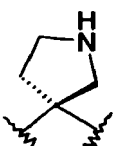
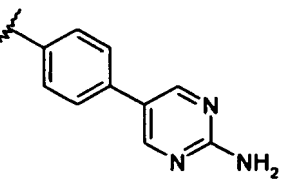
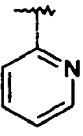
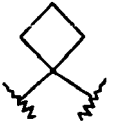
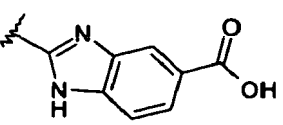
(suite)

Cpé n°	R ²	R ⁷ R ⁸	Q	
7036				;
7037				;
7038				;
7039				;
7040				;
7041				;
7042				;
7043				;

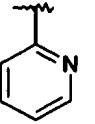
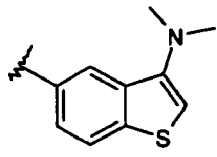
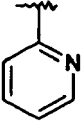
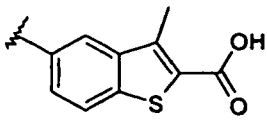
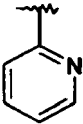
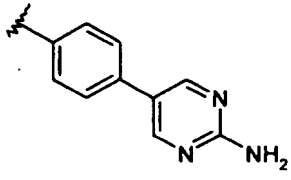
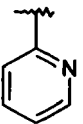
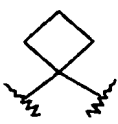
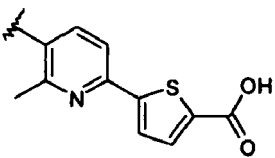
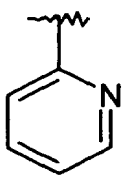
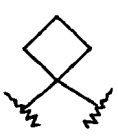
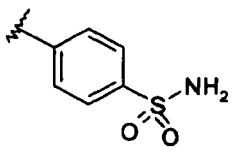
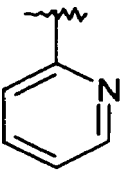
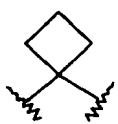
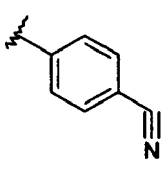
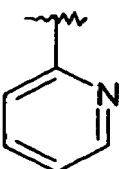
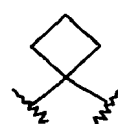
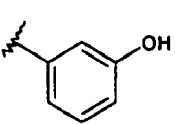
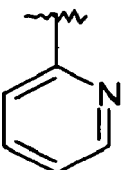
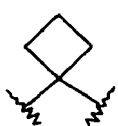
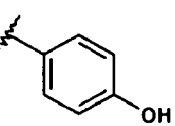
(suite)

Cpé n°	R ²	R ⁷ R ⁸	Q	
7044				;
7045				;
7046				;
7047				;
7048				;
7049				;
7050				;

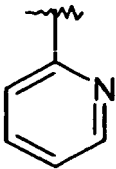
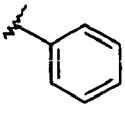
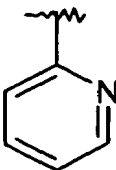
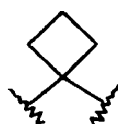
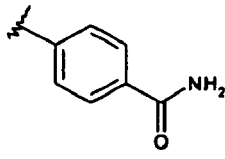
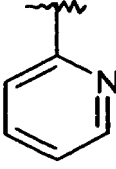
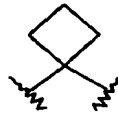
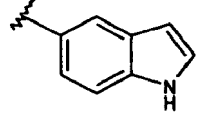
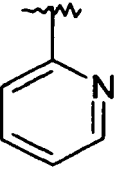
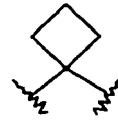
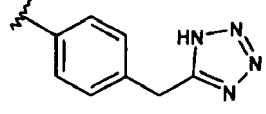
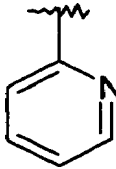
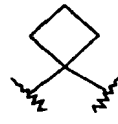
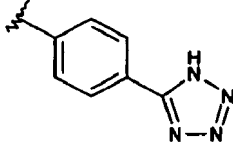
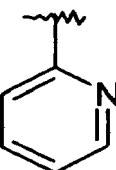
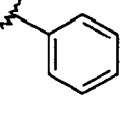
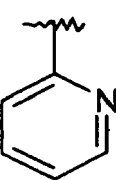
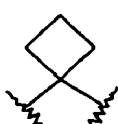
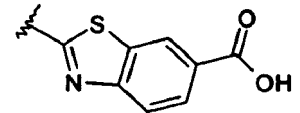
(suite)

Cpé n°	R ²	R ⁷ R ⁸	Q	
7051				;
7052				;
7053				;
7054				;
7055				;
7056				;
7059				;
7062				;

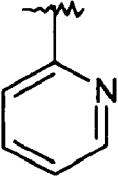
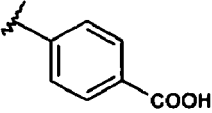
(suite)

Cpé n°	R ²	R ⁷ R ⁸	Q	
7063				;
7064				;
7065				;
7066				;
7068				;
7070				;
7071				;
7072				;

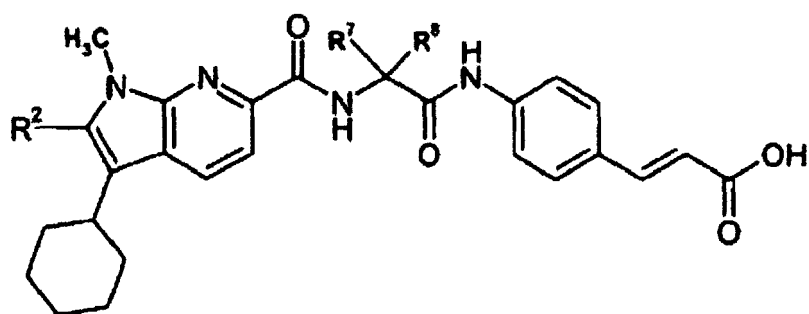
(suite)

Cpé n°	R ²	R ⁷ R ⁸	Q	
7073				;
7076				;
7077				;
7078				;
7079				;
7080				;
7082				; et

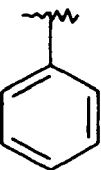
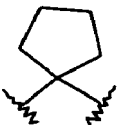
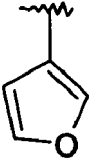
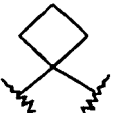
(suite)

Cpé n°	R ²	R ⁷ R ⁸	Q	
7083				.

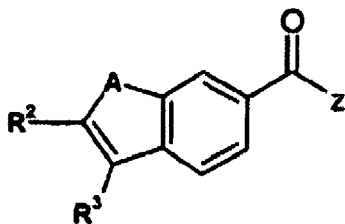
36. Composé selon la revendication 1 de formule:



dans laquelle R², R⁷ et R⁸ sont définis comme suit :

Cpé n°	R ²	R ⁷ R ⁸	
9001			; et
9002			.

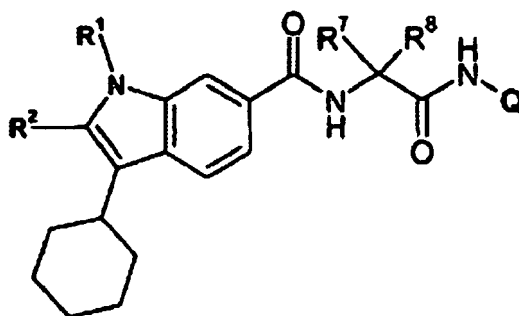
37. Composé de formule



dans laquelle A, R², R³ et Z sont définis comme suit :

Cpé n°	A	R ²	R ³	Z	
1013	NMe				;

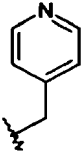
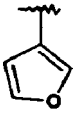
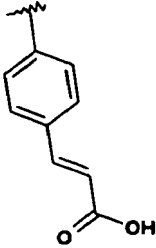
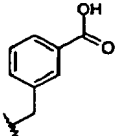
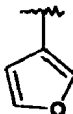
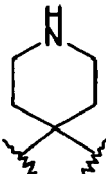
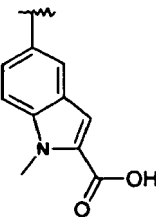
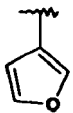
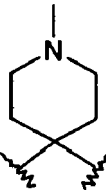
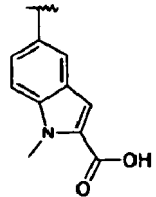
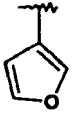
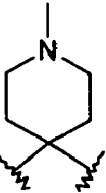
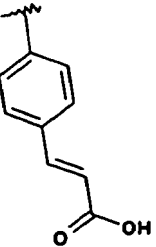
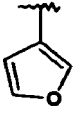
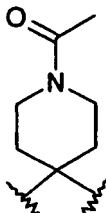
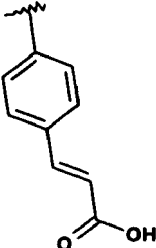
ou un composé de formule



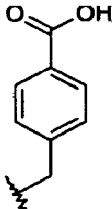
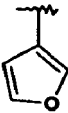
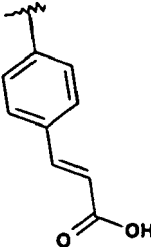
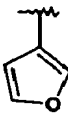
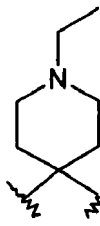
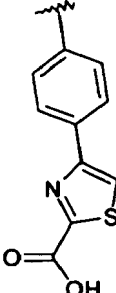
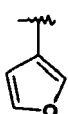
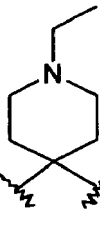
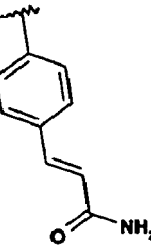
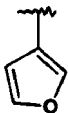
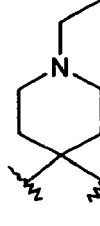
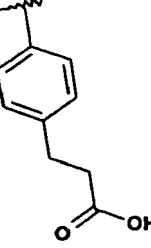
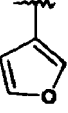
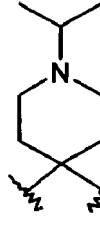
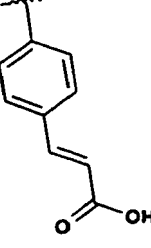
dans laquelle R¹, R², R⁷, R⁸ et Q sont définis comme suit :

Cpé n°	R ¹	R ²		Q	
2040					;

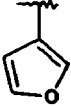
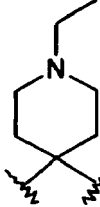
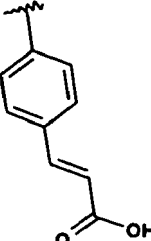
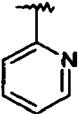
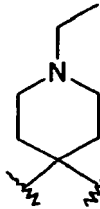
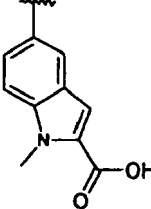
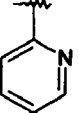
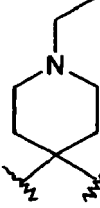
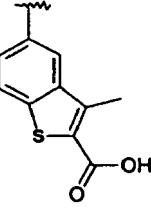
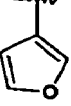
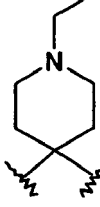
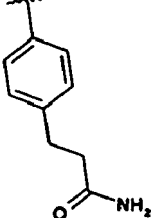
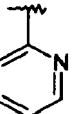
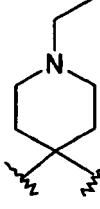
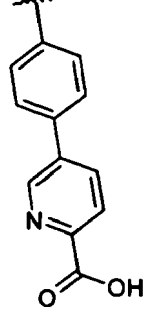
(suite)

Cpé n°	R ¹	R ²	R ⁷ R ⁸	Q	
2043					;
2045					;
2049	H				;
2052	H				;
2055	H				;

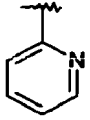
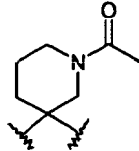
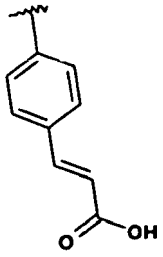
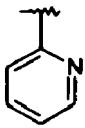
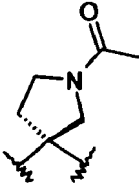
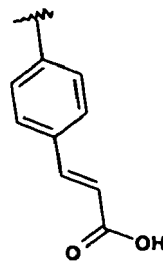
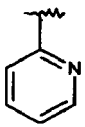
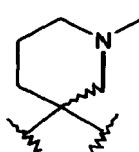
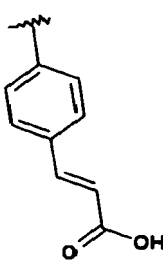
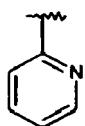
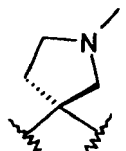
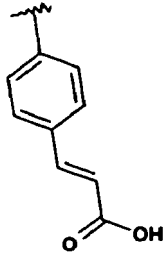
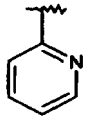
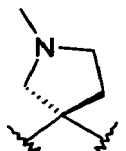
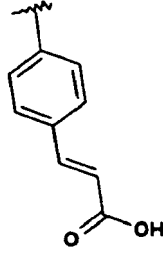
(suite)

Cpé n°	R ¹	R ²	R ⁷ R ⁸	Q	
2063					;
2067	H				;
2078	H				;
2079	H				;
2086	H				;

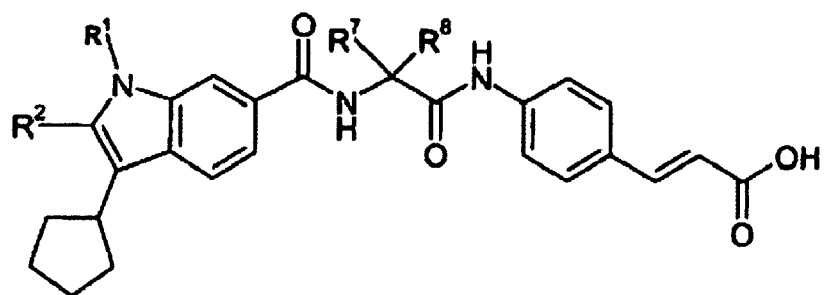
(suite)

Cpé n°	R ¹	R ²	R ⁷ R ⁸	Q	
2088	H				;
2092	Me				;
2099	Me				;
2100	H				;
2101	Me				;

(suite)

Cpé n°	R ¹	R ²	R ⁷ R ⁸	Q	
2105	Me				;
2106	Me				;
2114	Me				;
2116	Me				et
2118	Me				;

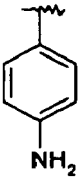
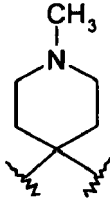
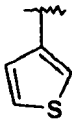
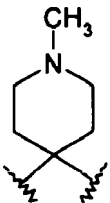
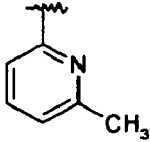
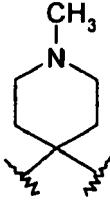
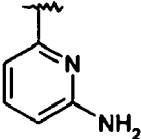
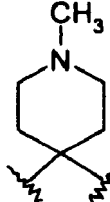
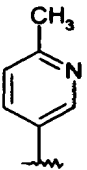
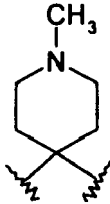
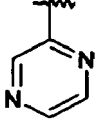
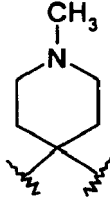
ou un composé de formule



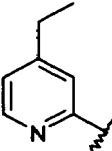
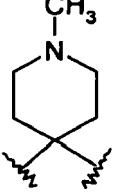
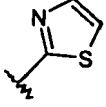
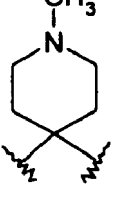
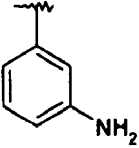
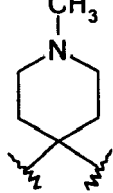
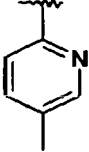
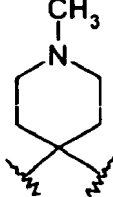
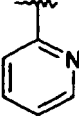
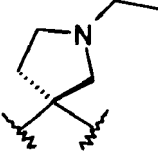
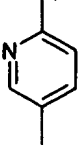
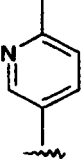
dans laquelle R¹, R², R⁷ et R⁸ sont définis comme suit :

Cpé n°	R ¹	R ² ;	R ⁷ R ⁸	
6001	CH ₃			;
6002	CH ₃			;
6024	CH ₃			;
6032	CH ₃			;
6050	CH ₃			;

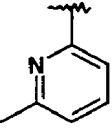
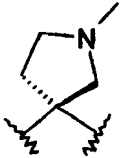
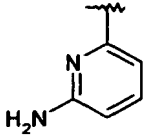
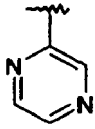
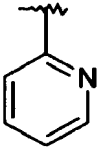
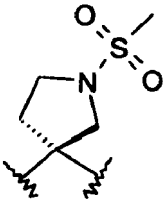
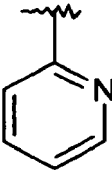
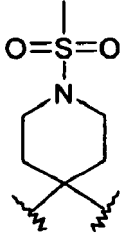
(suite)

Cpé n°	R ¹	R ² ;		
6054	CH ₃			;
6056	CH ₃			;
6058	CH ₃			;
6059	CH ₃			;
6062	CH ₃			;
6065	CH ₃			;

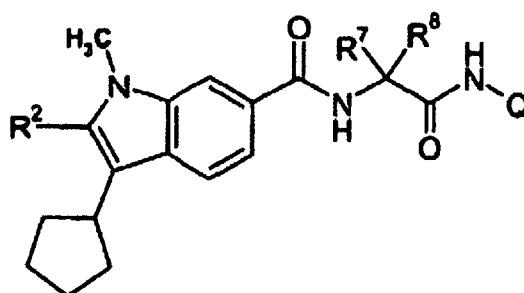
(suite)

	Cpé n°	R ¹	R ² ;		
5					
10	6068	CH ₃			;
15	6101	CH ₃			;
20					
25	6102	CH ₃			;
30	6103	CH ₃			;
35					
40	6105	CH ₃			;
45	6114	CH ₃			;
50					
55	6115	CH ₃			;

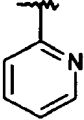
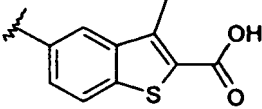
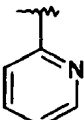
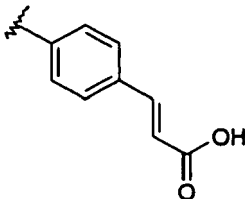
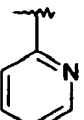
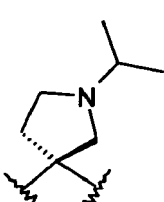
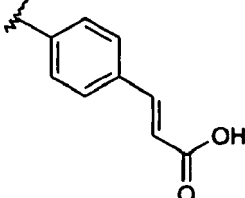
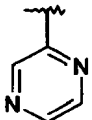
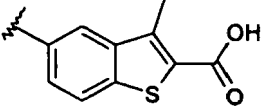
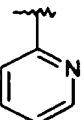
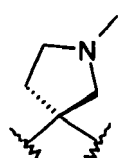
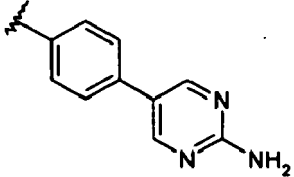
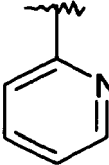
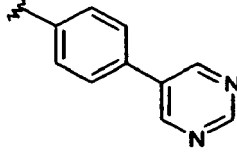
(suite)

Cpé n°	R ¹	R ² ;		
6116	CH ₃			;
6117	CH ₃			;
6118	CH ₃			;
6124	CH ₃			; et
6125	CH ₃			;

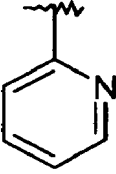
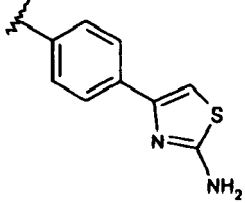
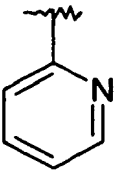
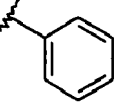
ou un composé de formule



dans laquelle R^2 , R^7 , R^8 et Q sont définis comme suit :

Cpé n°	R^2	R^7 R^8	Q	
7057				;
7058				;
7060				;
7061				;
7067				;
7069				;

(suite)

Cpé n°	R ²	R ⁷ R ⁸	Q	
7075				et;
7081				.

38. Composé selon la revendication 1 ou 37, ou un sel pharmaceutiquement acceptable de celui-ci, en tant qu'inhibiteur d'activité d'ARN polymérase ARN-dépendante de l'ARN de l'enzyme NS5B, codée par le virus de l'hépatite C.

39. Composé selon la revendication 1 ou 37, ou un sel pharmaceutiquement acceptable de celui-ci, en tant qu'inhibiteur de la réplication du virus de l'hépatite C.

40. Composition pharmaceutique destinée au traitement ou à la prévention d'une infection par le virus de l'hépatite C, comprenant une quantité efficace d'un composé selon la revendication 1 ou 37, ou un sel pharmaceutiquement acceptable de celui-ci, et un véhicule pharmaceutiquement acceptable.

41. Composition selon la revendication 40, comprenant en outre un agent immunomodulateur.

42. Composition selon la revendication 41, dans laquelle lesdits agents immunomodulateurs sont choisis parmi : les α -, β -, δ -, γ - et ω -interférons.

43. Composition selon la revendication 40, comprenant en outre un autre agent antiviral.

44. Composition selon la revendication 43, dans laquelle ledit agent antiviral est choisi parmi : la ribavirine et l'aman-tadine.

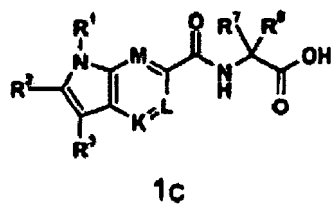
45. Composition selon la revendication 40, comprenant en outre un autre inhibiteur de la VHC (virus de l'hépatite C) polymérase.

46. Composition selon la revendication 40, comprenant en outre un inhibiteur de : la VHC hélicase, la VHC protéase, la VHC métalloprotéase ou du VHC IRES.

47. Utilisation d'un composé selon la revendication 1 ou 37, pour la fabrication d'un médicament destiné au traitement d'une infection par le VHC.

48. Utilisation d'un composé selon la revendication 1 ou 37, ou d'un sel pharmaceutiquement acceptable de celui-ci, pour la fabrication d'un médicament destiné au traitement ou à la prévention d'une infection par le VHC chez un mammifère, comprenant l'administration au mammifère d'une quantité efficace dudit composé, ou d'un sel pharmaceutiquement acceptable de celui-ci, en combinaison avec un autre agent anti-VHC.

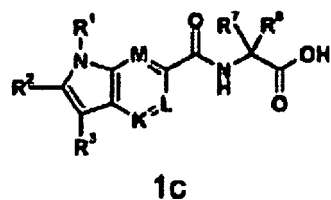
49. Composé intermédiaire représenté par la formule 1c :



dans laquelle

R^1 , R^2 , R^3 , K , L , M , R^7 et R^8 sont tels que définis dans la revendication 1 ou 37, ou un sel ou un dérivé de celui-ci.

- 50.** Procédé de production de composés selon la revendication 1 ou 37, comprenant en outre : a) le couplage, dans un mélange contenant un solvant aprotique, ou aucun solvant, d'un agent de couplage, et à une température d'environ 20 °C à environ 170 °C, et d'un intermédiaire 1c :



avec une amine $Q-NH_2$ de façon à produire des composés selon la revendication 1 ou 37, dans lesquels R^1 , R^3 , R^2 , R^7 , R^8 , K , L , M et Q sont tels que définis dans la revendication 1 ou 37.

REFERENCES CITED IN THE DESCRIPTION

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