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# (54) NPYY5 ANTAGONISTS

NPYY5-ANTAGONISTEN

ANTAGONISTES NPYY5

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## Description

Technical Field

**[0001]** The present invention relates to a pharmaceutical composition for use as an NPY Y5 receptor antagonist, specifically, anti-obestic agent and novel compounds having an anti-obestic activity.

Background Art

**[0002]** Neuropeptide Y (hereinafter referred to as NPY) is a peptide which consists of 36 amino acid residues and was isolated from porcine brain in 1982. NPY is widely distributed in the central nervous system and peripheral tissues of humans and animals.

**[0003]** It has been reported that NPY possesses a stimulating activity of food intake, an anti-seizure activity, a learning-promoting activity, an anti-anxiety activity, an antistress activity etc. in central nervous system, and it may be pivotally involved in the central nervous system diseases such as depression, Alzheimer's disease and Parkinson's disease. NPY is thought to be associated with the cardiovascular diseases, since it induces a contraction of smooth muscles such as blood vessels or cardiac muscles in the peripheral tissues. Furthermore, NPY is also known to be involved in the metabolic diseases such as obesity, diabetes, and hormone abnormalities (Trends in Pharmacological Sciences, Vol.15, and 153 (1994)). Therefore, an NPY receptor antagonist is expected as a medicine for preventing or treating various diseases involved in the NPY receptor.

**[0004]** Subtypes of Y1, Y2, Y3, Y4, Y5, and Y6 have now been identified as the NPY receptor (Trends in Pharmacological Sciences, Vol. 18, and 372 (1997)). It has been suggested that the Y5 receptor is at least involved in the feeding behavior and its antagonist is expected as an anti-obestic agent (Peptides, Vol. 18, and 445 (1997)).

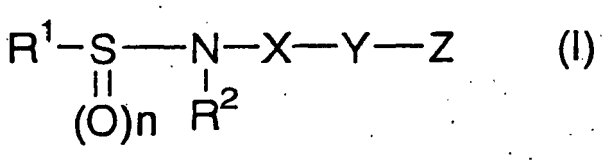
**[0005]** Quinazoline compounds having similar structures to those of the compounds of the present invention and exhibiting an NPY receptor antagonistic activity are described in WO97/20820, WO97/20821, WO97/20823 and the like. In addition, it is described that urea derivatives having a sulfonamide group and amide derivatives having a sulfonyl group in WO 99/64349 and benzyl sulfonamide derivatives in EP1010691-A, have an NPY antagonistic activity. Substituted sulfonamide derivatives, pharmaceutical composition comprising those and theircne in the treatment of obesity and related disorders are disclosed in WO 99/32466. Compounds having similar structures to those of the compounds of the present invention are described in JP59-16871-A and WO97/15567. Their activities are quite different from that of the present invention and these documents do not suggest the present invention.

Disclosure of Invention

**[0006]** The object of the present invention is to provide a superior pharmaceutical composition for use as an NPY Y5 receptor antagonist and novel compounds having the activity.

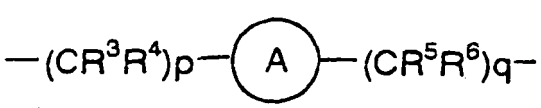
**[0007]** The present invention provides

[1] The use of a compound of the formula (I):

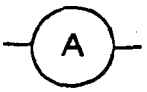


(I)

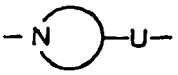
wherein $R^1$ is optionally substituted lower alkyl, or optionally substituted cycloalkyl
$R^2$ is hydrogen or lower alkyl, and $R^1$ and $R^2$ taken together may form lower alkylene, n is 1 or 2,
X is optionally substituted lower alkylene,
optionally substituted lower alkenylene,
optionally substituted -CO-lower alkylene,
optionally substituted -CO-lower alkenylene or



wherein $R^3$, $R^4$, $R^5$ and $R^6$ are each independently hydrogen or lower alkyl,




is optionally substituted cycloalkylene, optionally substituted cycloalkenylene, optionally substituted bicycloalkylene, optionally substituted arylene or optionally substituted heterocyclediyl and p and q are each independently 0 or 1, $-NR^2-X-$ may be

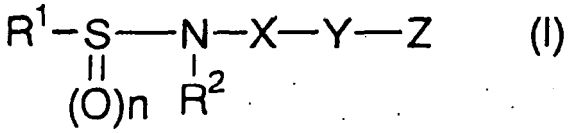



wherein

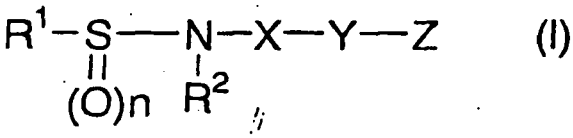

is piperidinediyl, piperazinediyl, pyridinediyl, pyrazinediyl, pyrrolidinediyl or pyrrolediyl and U is single bond, lower alkylene or lower alkenylene,
Y is $OCONR^7$, $CONR^7$, $CSNR^7$, $NR^7CO$ or $NR^7CS$,
$R^7$ is hydrogen or lower alkyl, and
Z is optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted amino, optionally substituted lower alkoxy, optionally substituted carbocyclyle or optionally substituted heterocyclyl,
, pharmaceutically acceptable salt or solvate thereof, for the preparation of a pharmaceutical composition as an NPY Y5 receptor antagonist ist.
[2] The use as described in [1] wherein $R^2$ is hydrogen or lower alkyl and Z is optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkoxy, optionally substituted carbocyclyl, optionally substituted heterocyclyl or optionally substituted amino, provided that $R^1$ is optionally substituted C3 to C10 alkyl when Z is optionally substituted amino,
[3] The use as
described in [1] wherein $R^1$ is optionally substituted lower alkyl or optionally substituted cycloalkyl, X is optionally substituted lower alkylene, optionally substituted lower alkenylene or


wherein

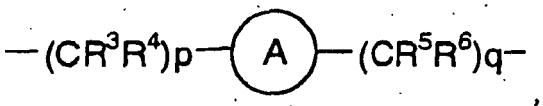

is the same as defined in [1], and
Z is optionally substituted lower alkyl, optionally substituted carbocyclyl or optionally substituted heterocyclyl,
[4] The use as described in any one of [1] to [3] wherein $R^1$ is optionally substituted C3 to C10 alkyl,
[5] The use as described in any one of [1] to [4] as an anti-obestic agent,
[6] The use as described in any one of [1] to [4] as an anorectic agent,
[7] A compound of the formula (I):



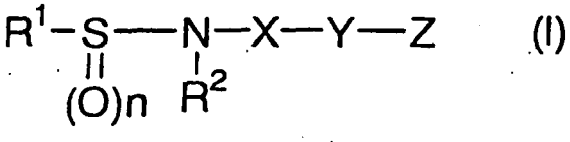
wherein X is C2 to C6 alkylene or C3 to C6 alkenylene, $R^1$ is optionally substituted C3 to C10 alkyl or optionally substituted C5 to C6 cycloalkyl and the other symbols are the same as defined in [1], provided that Z is not lower alkylphenylamino,
hydroxy(lower)alkylphenylamino and acylphenylamino when Y is $NR^7CO$, pharmaceutically acceptable salt or solvate thereof,
[8] The compound described in [7] wherein Z is optionally substituted lower alkyl or optionally substituted phenyl, pharmaceutically acceptable salt or solvate thereof,
[9] A compound of the formula (I):



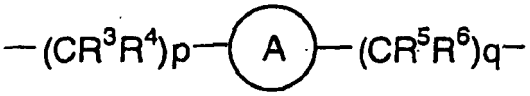
wherein X is

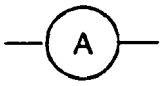


is optionally substituted cycloalkylene, optionally substituted cycloalkenylene, optionally substituted bicycloalkylene or optionally substituted piperidinylene, $R^1$ is optionally substituted C3 to C10 alkyl or optionally substituted C5 to C6 cycloalkyl and the other symbols are the same as defined in [1], prodrug, pharmaceutically acceptable salt or solvate thereof,
[10] The compound described in [9] wherein is optionally substituted cyclohexylene or optionally substituted piperidinylene and p and q are simultaneously 0, prodrug, pharmaceutically acceptable salt or solvate thereof,
[11] The compound described in [9] or [10] wherein Y is CONH, prodrug, pharmaceutically acceptable salt or solvate thereof,
[12] The compound described in any one of [9] to [11] wherein Z is optionally substituted lower alkyl, optionally substituted phenyl, optionally substituted pyridyl or optionally substituted benzopyranyl, prodrug, pharmaceutically acceptable salt or solvate thereof,
[13] A compound of the formula (I):



wherein X is





is heteroarylene, $R^1$ is optionally substituted C3 to C10 alkyl or optionally substituted C5 to C6 cycloalkyl and the other symbols are the same as defined in [1], , pharmaceutically acceptable salt or solvate thereof,
[14] The compound described in [13] wherein

is thiophenediyl or furandiyl, pharmaceutically acceptable salt or solvate thereof and
[15] A pharmaceutical composition comprising the compound described in any one of [7] to [14], pharmaceutically acceptable salt or solvate thereof.

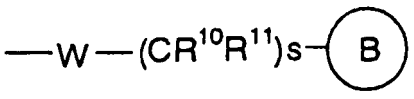
Best Mode for Carrying out the Invention

**[0008]** In the present specification, the term "halogen" includes fluorine, chlorine, bromine and iodine. Fluorine or chlorine is preferable.
**[0009]** The term "protective group" in "optionally protected hydroxy" and "optionally protected hydroxy(lower)alkyl" includes all of hydroxy protecting groups usually used. For example, acyl such as acetyl, trichloroacetyl and benzoyl, lower alkoxycarbonyl such as t-butoxycarbonyl, lower alkylsulfonyl such as methane sulfonyl, lower alkoxy(lower)alkyl such as methoxymethyl, trialkylsilyl such as t-butyldimethylsilyl are included.
**[0010]** The term "lower alkyl" includes C1 to C10 straight or branched alkyl. The examples of "lower alkyl" are methyl, ethyl, n-propyl, isopropyl, n-butyl, isobutyl, sec-butyl, tert-butyl, n-pentyl, isopentyl, neopentyl, hexyl, isohexyl, n-heptyl, isoheptyl, n-octyl, isooctyl, n-nonyl and n-decyl.
**[0011]** "Lower alkyl" represented by $R^1$ is preferably C3 to C10 alkyl, more preferably C3 to C6 alkyl and most preferably isopropyl or t-butyl..
**[0012]** "Lower alkyl" in other cases is preferably C1 to C6 alkyl and more preferably C1 to C4 alkyl.
**[0013]** The examples of substituents of "optionally substituted lower alkyl" represented by Z are, (1) halogen; (2) cyano;

(3) the following groups (i) to (xvi), which are optionally substituted with one or more substituents selected from "a substituents group β" defined below,

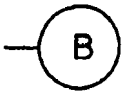
(i) hydroxy, (ii) lower alkoxy, (iii) mercapto, (iv) lower alkylthio. (v) acyl, (vi) acyloxy, (vii) carboxy, (viii) lower alkoxycarbonyl, (ix) imino, (x) carbamoyl, (xi) thiocarbamoyl, (xii) lower alkylcarbamoyl, (xiii) lower alkylthiocarbamoyl, (xiv) amino, (xv) lower alkylamino or (xvi) heterocyclylcarbonyl;
or

(4) a group of the formula:



wherein $R^{10}$ and $R^{11}$ are each independently hydrogen or lower alkyl and when this group has two or more of $R^{10}$ and/or two or more of $R^{11}$, each $R^{10}$ and/or each $R^{11}$ may be different,

W is single bond, O, S or $NR^{12}$,
$R^{12}$ is hydrogen, lower alkyl or phenyl,




is cycloalkyl, bicycloalkyl, cycloalkenyl, aryl or heterocyclyl, each of which is optionally substituted with one or more of substituents selected from "a substituents group α" defined below and
s is an integer of 0 to 4.
In the present specification, "a substituents group α" is a group constituting of (1) halogen; (2) oxo; (3) cyano; (4) nitro; (5) imino optionally substituted with lower alkyl or hydroxy;

(6) the following groups (i) to (xxi), which are optionally substituted with one or more of groups selected from the substituents group β,

(i) hydroxy, (ii) lower alkyl, (iii) lower alkenyl, (iv) lower alkoxy, (v) carboxy, (vi) lower alkoxycarbonyl, (vii) acyl, (viii) acyloxy, (ix) imino, (x) mercapto, (xi) lower alkylthio, (xii) carbamoyl, (xiii) lower alkylcarbamoyl, (xiv) cycloalkylcarbamoyl, (xv) thiocarbamoyl, (xvi) lower alkylthiocarbamoyl, (xvii) lower alkylsulfinyl, (xviii) lower alkylsulfonyl, (xix) sulfamoyl, (xx) lower alkylsulfamoyl and (xxi) cycloalkylsulfamoyl;

(7) the following groups (i) to (v), which are optionally substituted with the substituents group β, lower alkyl, lower alkoxy(lower)alkyl, optionally protected hydroxy(lower)alkyl, halogeno(lower)alkyl, lower alkylsulfonyl and/or arylsulfonyl,

(i) cycloalkyl, (ii) cycloalkenyl, (iii)cycloalkyloxy, (iv) amino and (v) alkylenedioxy;

and

(8) the following groups (i) to (xii), which are optionally substituted with the substituents group β, lower alkyl, halogeno(lower)alkyl and/or oxo,

(i) phenyl, (ii) naphthyl, (iii) phenoxy, (iv) phenyl(lower)alkoxy, (v) phenylthio, (vi) phenyl(lower)alkylthio, (vii) phenylazo, (viii) heterocyclyl, (ix) heterocyclyloxy, (x) heterocyclylthio, (xi) heterocyclylcarbonyl and (xii) heterocyclylsulfonyl.

**[0014]** The preferable examples of the substituents group α as substituents for B ring are halogen; nitro; hydroxy;
optionally substituted lower alkyl wherein the substituents is halogen, cyano, phenyl, carboxy and/or lower alkoxycarbonyl;
lower alkenyl; lower alkoxycarbonyl(lower)alkenyl;
optionally substituted lower alkoxy wherein the substituents is halogen, hydroxy, lower alkoxy, carboxy, lower alkoxycarbonyl, lower alkylamino and/or cyano;
acyl; hydroxyimino; lower alkylthio; lower alkylsulfinyl; sulfamoyl;
optionally substituted amino wherein the substituents is lower alkyl, optionally protected hydroxy(lower)alkyl, phenyl and/or acyl;
alkylenedioxy; cyanophenyl; heterocyclylphenyl; biphenylyl; phenoxy; phenylazo optionally substituted with lower alkyl; or optionally substituted heterocyclyl wherein the substituents is optionally protected hydroxy, mercapto, halogen, lower alkyl, cycloalkyl, lower alkoxycarbonyl, amino, lower alkoxycarbonyl amino, carbamoyl, oxo, phenyl, lower alkoxyphenyl or heterocyclyl.
More preferable examples are halogen; lower alkyl optionally substituted with halogen; or lower alkoxy optionally substituted with halogen.

**[0015]** "A substituents group β" is a group consisting of halogen, optionally protected hydroxy, mercapto, lower alkoxy, lower alkenyl, amino, lower alkylamino, lower alkoxycarbonylamino, lower alkylthio, acyl, carboxy, lower alkoxycarbonyl, carbamoyl, cyano, cycloalkyl, phenyl, phenoxy, lower alkylphenyl, lower alkoxyphenyl, halogenophenyl, naphthyl and heterocyclyl.

**[0016]** Examples of the substituents for "optionally substituted lower alkyl" represented by any other than Z (e.g., $R^1$) are one or more substituents selected from the substituents group β. The lower alkyl may be substituted with these substituents at any possible positions.

**[0017]** The lower alkyl part in "lower alkoxy", "lower alkoxycarbonyl", "lower alkoxycarbonyl(lower)alkyl", "lower alkylphenyl", "lower alkoxyphenyl", "lower alkylcarbamoyl", "lower alkylthiocarbamoyl", "lower alkylamino", "halogeno(lower)alkyl", "hydroxy(lower)alkyl", "phenyl(lower)alkoxy", "lower alkylthio", "phenyl(lower)alkylthio", "lower alkoxycarbonylamino", "lower alkoxycarbonyl(lower)alkenyl", "lower alkylsulfinyl", "lower alkylsulfonyl", "aryl(lower)alkoxycarbonyl", "lower alkylbenzoyl" and "lower alkoxybenzoyl" is the same as defined in the above "lower. alkyl".

**[0018]** Examples of substituents for "optionally substituted lower alkoxy" are one or more substituents selected from the substituents group β. Preferable examples are phenyl, lower alkylphenyl, lower alkoxyphenyl, naphthyl and heterocyclyl.

**[0019]** The term "cycloalkyl" includes C3 to C8 cyclic alkyl and preferably C5 to C6 cyclic alkyl. Examples are cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl and cyclooctyl.

**[0020]** Examples of substituents for "optionally substituted cycloalkyl" are one or more substituents selected from the substituents group α and the cycloalkyl may be substituted with these substituents at any possible positions.

**[0021]** The term "bicycloalkyl" includes a group which is formed by excluding one hydrogen from a C5 to C8 aliphatic cycle containing two rings which possess two or more of atoms in common. Examples are bicyclo[2.1.0]pentyl, bicyclo [2.2.1]heptyl, bicyclo[2.2.2]octyl and bicyclo[3.2.1]octyl.

**[0022]** The term "lower alkenyl" includes C2 to C10, preferably C2 to C8 and more preferably C3 to C6 straight or branched alkenyl having one or more double bonds at any possible positions. Examples are vinyl, propenyl, isopropenyl, butenyl, isobutenyl, prenyl, butadienyl, pentenyl, isopentenyl, pentadienyl, hexenyl, isohexenyl, hexadienyl, heptenyl, octenyl, nonenyl and decenyl.

**[0023]** The "lower alkenyl" part in "lower alkoxycarbonyl(lower)alkenyl" is the same as the above "lower alkenyl".

**[0024]** Examples of the substituents for "optionally substituted lower alkenyl" are halogen, lower alkoxy, lower alkenyl, amino, lower alkylamino, lower alkoxycarbonylamino, lower alkylthio, acyl, carboxy, lower alkoxycarbonyl, carbamoyl, cyano, cycloalkyl, phenyl, lower alkylphenyl, lower alkoxyphenyl, naphthyl and/or heterocyclyl.

**[0025]** The term "acyl" includes (1) C1 to C10, preferably C1 to C6 and more preferably C1 to C4 straight or branched alkylcarbonyl or alkenylcarbonyl, (2) C4 to C9 and preferably C4 to C7 cycloalkylcarbonyl and (3) C7 to C11 arylcarbonyl. Examples are formyl, acetyl, propionyl, butyryl, isobutyryl, valeryl, pivaloyl, hexanoyl, acryloyl, propioloyl, methacryloyl, crotonoyl, cyclopropylcarbonyl, cyclohexylcarbonyl, cyclooctylcarbonyl and benzoyl.

**[0026]** The "acyl" part in "acyloxy" is the same as the above.

**[0027]** The term "cycloalkenyl" includes a group having at least one double bond at any possible positions in the above cycloalkyl. Examples are cyclopropenyl, cyclobutenyl, cyclopentenyl, cyclohexenyl and cyclohexadienyl.

**[0028]** Examples of substituents for "optionally substituted cycloalkenyl" are one or more substituents selected from the substituents group β.

**[0029]** Examples of substituents for "optionally substituted amino" are the substituents group β, optionally substituted benzoyl and/or optionally substituted heterocyclylcarbonyl wherein the substituents is hydroxy, lower alkyl, lower alkoxy and/or lower alkylthio.

**[0030]** The term "aryl" includes a monocyclic of polycyclic aromatic carbocyclyl group and examples are phenyl, naphthyl, anthryl and phenanthryl. "Aryl" includes aryl fused with other a non-aromatic carbocyclyl group, for example, indanyl, indenyl, biphenylyl, acenaphthyl, tetrahydronaphthyl and fluorenyl. Phenyl is preferable.

**[0031]** The aryl part in "aryl lower alkoxycarbonyl" is the same as the above.

**[0032]** The term "optionally substituted aryl" and "optionally substituted phenyl" represented by Z include the above "aryl" and "phenyl" respectively, which may be substituted with the substituents group α or lower alkyl which may be substituted with one or more group selected from the substituents group α.

**[0033]** Examples of the substituents for "optionally substituted aryl" and "optionally substituted phenyl" represented by any other than Z are one or more groups selected from the substituents group β.

**[0034]** The term "carbocyclyl" includes the above "cycloalkyl", "cycloalkenyl", "bicycloalkyl" and "aryl"..

**[0035]** The term "non-aromatic carbocyclyl" includes the above "cycloalkyl", "cycloalkenyl" and "bicycloalkyl".

**[0036]** The term "optionally substituted carbocyclyl" includes the above "optionally substituted cycloalkyl", "optionally substituted cycloalkenyl", "optionally substituted bicycloalkyl" and "optionally substituted aryl".

**[0037]** The term "heterocyclyl" includes a heterocyclic group containing at least one heteroatom arbitrarily selected from O, S and N. For example, 5- or 6-membered heteroaryl such as pyrrolyl, imidazolyl, pyrazolyl, pyridyl, pyridazinyl, pyrimidinyl, oxazolyl, oxadiazolyl, isothiazolyl, thiazolyl, thiadiazolyl, furyl and thienyl; fused heterocyclyl consisting of two rings such as indolyl, isoindolyl, indazolyl, indolizinyl, indolinyl, isoindolinyl, quinolyl, isoquinolyl, cinnolinyl, phthalazinyl, quinazolinyl, naphthyridinyl, quinoxalinyl, purinyl, pteridinyl, benzopyranyl, benzimidazolyl, benzisoxazolyl, benzoxazolyl benbzoxadiazolyl, benzisothiazolyl, benzothiazolyl, benzothiadiazolyl, benzofuryl, isobenzofuryl, benzothienyl, benzotriazolyl, imidazopyridyl, triazoropyridyl, imidazothiazolyl, pyrazinopyridazinyl, quinazolinyl, quinolyl, isoquinolyl, naphthyridinyl, dihydropyridyl, tetrahydroquinolyl and tetrahydrobenzothienyl; fused heterocyclyl consisting of three rings such as carbazolyl, acridinyl, xanthenyl, phenothiazinyl, phenoxathiinyl, phenoxazinyl and dibenzofuryl; and non-aromatic heterocyclyl such as dioxanyl, thiiranyl, oxiranyl, oxathiolanyl, azetidinyl, thianyl, pyrrolidinyl, pyrrolinyl, imidazolidinyl,

imidazolinyl, pyrazolidinyl, pyrazolinyl, piperidyl, piperazinyl, morpholinyl, morpholino, thiomorpholinyl, thiomorpholino, dihydropyridyl, tetrahydrofuryl, tetrahydropyranyl, tetrahydrothiazolyl and tetrahydroisothiazolyl.

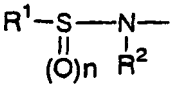
**[0038]** "Fused heterocyclyl" fused with a ring other than a heterocycle (e.g., benzothiazolyl), may connect at any possible position.

**[0039]** Substituents for "optionally substituted heterocyclyl" are the same as those for the above "optionally substituted aryl".

**[0040]** Heterocyclyl parts in "heterocyclylcarbonyl", "heterocyclyloxy", "heterocyclylthio" and "heterocyclyl substituted phenyl" are the same as the above "heterocyclyl".

**[0041]** The term "lower alkylene" includes a bivalent group comprising 1 to 6 of methylene, preferably 2 to 6 of methylene and more preferably 3 to 6 of methylene. For example, methylene, ethylene, trimethylene, tetramethylene, pentamethylene and hexamethylene are included. Tetramethylene is preferable.

**[0042]** "$R^1$ and $R^2$ taken together may form lower alkylene" includes the case



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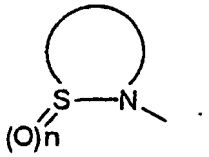
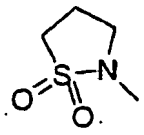


Preferable examples are



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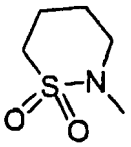


**[0043]** Lower alkylene part in "lower alkylenedioxy" is the same as the above "lower alkylene". Methylenedioxy or ethylenedioxy is preferable.

**[0044]** The term "lower alkenylene" includes a bivalent group comprising 2 to 6 of methylene, preferably 3 to 6 of methylene and more preferably 4 to 5 of methylene and including at least one double bond.

**[0045]** The term "cycloalkylene" includes a bivalent group which is formed by excluding one hydrogen from the above "cycloalkyl". A preferable example of cycloalkylene represented by X is 1, 4-cyclohexanediyl.

**[0046]** The term "cycloalkenylene" includes a group containing at least one double bonds in the above cycloalkylene.

**[0047]** The term "bicycloalkylene" includes a group which is formed by excluding one hydrogen from the above "bicycloalkyl". Examples are bicyclo[2. 1. 0]pentylene, bicyclo[2. 2. 1]heptylene, bicyclo[2. 2. 2]octylene, and bicyclo[3. 2. 1] octylene.

**[0048]** The term "heterocyclediyl" includes a bivalent group which is formed by excluding one hydrogen from the above "heterocyclyl". Piperidinediyl, piperazinediyl, pyridinediyl, pyrimidinediyl, pyrazinediyl, pyrrolidinediyl or pyrroldiyl is

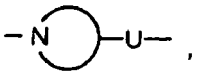
preferable and piperidindiyl is more preferable.

**[0049]** The term "arylene" includes a bivalent group which is formed by excluding one hydrogen from the above "aryl". Phenylene is preferable.

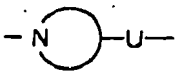
**[0050]** The term "heteroarylene" includes aromatic groups in the above "heterocyclediyl". Examples are pyrrolediyl, imidazolediyl, pyrazolediyl, pyridinediyl, pyridazinediyl, pyrimidinediyl, pyrazinediyl, triazolediyl, triazinediyl, isoxazolediyl, oxazolediyl, oxadiazolediyl, isothiazolediyl, thiazolediyl, thiadiazolediyl, furandiyl and thiophenediyl.

**[0051]** One or more groups selected from the substituents group β are examples of substituents for "optionally substituted lower alkylene", "optionally substituted lower alkenylene", "optionally substituted cycloalkylene", "optionally substituted cyclohexylene", "optionally substituted bicycloalkylene", "optionally substituted cycloalkenylene", "optionally substituted phenylene", "optionally substituted heterocyclediyl" and "optionally substituted piperidinylene". Halogen, hydroxy, lower alkyl, halogeno(lower)alkyl, lower alkoxy, amino, lower alkylamino, acyl, carboxy or lower alkoxycarbonyl is preferable. These substituents may attach to any possible positions.

**[0052]** When -$NR^2$-X- is



U is preferably single bond or methylene. More preferably,



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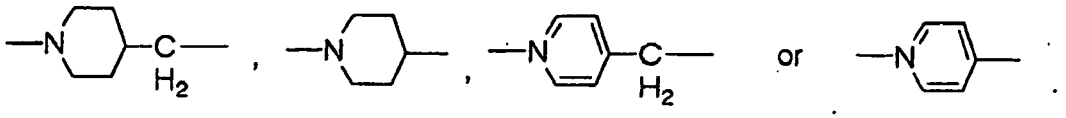


**[0053]** The compounds of the present invention include any formable and pharmaceutically acceptable salts thereof. Examples of "the pharmaceutically acceptable salt" are salts with mineral acids such as hydrochloric acid, sulfuric acid, nitric acid and phosphoric acid; salts with organic acids such as para-toluenesulfonic acid, methanesulfonic acid, oxalic acid and citric acid; salts with organic bases such as ammonium, trimethylammonium and triethylammonium; salts with alkaline metals such as sodium and potassium; and salts with alkaline earth metals such as calcium and magnesium.

**[0054]** The compounds of the present invention include solvates thereof. Hydrate is preferable and arbitrary numbers of water molecules may coordinate to the compound of the present invention.

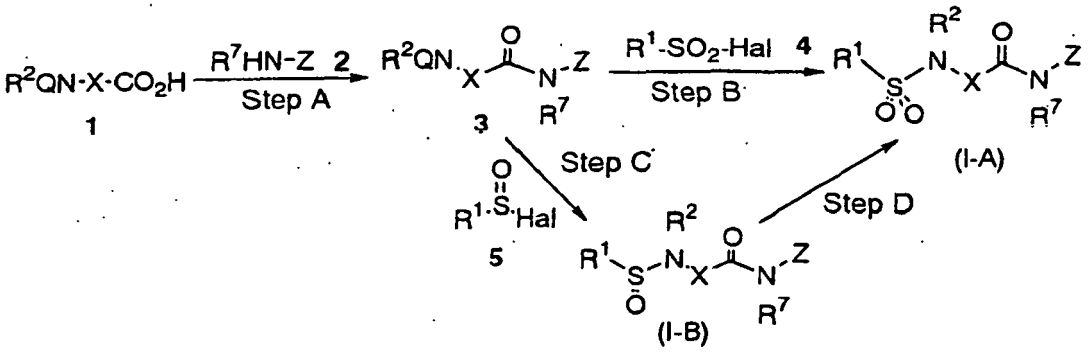
**[0055]** When the compound (I) of the present invention has an asymmetric carbon atom, it includes racemates, all of enantiomers and all of stereoisomers such as diastereomer, epimer and enantiomer thereof.

**[0056]** When the compound (I) of the present invention having one or more double bonds forms an E isomer or Z isomer, the compound (I) includes both isomers. When X is cycloalkylene, the compound (I) includes both of cis isomer and trans isomer.

**[0057]** For example, the compound (I) of the present invention can be synthesized by the following method.

(Compounds wherein Y=$CONR^7$)

**[0058]**




wherein Hal is halogen, Q is an amino protecting group and the other symbols are the same as the above.

Step A

**[0059]** Compound 1 is reacted with Amino Compound 2 having the desired substituent Z and $R^7$ in a suitable solvent at 0 °C to 50 °C for several minutes to several hours. As solvent, tetrahydrofuran, dimethylformamide, diethyl ether, dichloromethane, toluene, benzene, xylene, cyclohexane, hexane, chloroform, ethyl acetate, butyl acetate, pentane, heptane, dioxane, acetone, acetonitrile, water, a mixture thereof etc. can be used. An activator such as thionyl chloride, acid halide, acid anhydride and activated ester can be used, if necessary.

Step B

**[0060]** Compound 3 is deprotected by the usual method and reacted with Sulfonyl Halide 4 having the desired substituent $R^1$ in a suitable solvent at 0 °C to 50 °C for several minutes to several hours to give Compound (I-A) wherein n is 2. Tetrahydrofuran, dimethylformamide, diethyl ether, dichloromethane, toluene, benzene, xylene, cyclohexane, hexane, chloroform, ethyl acetate, butyl acetate, pentane, heptane, dioxane, acetone, acetonitrile, water and the mixture thereof etc. can be used as a solvent.

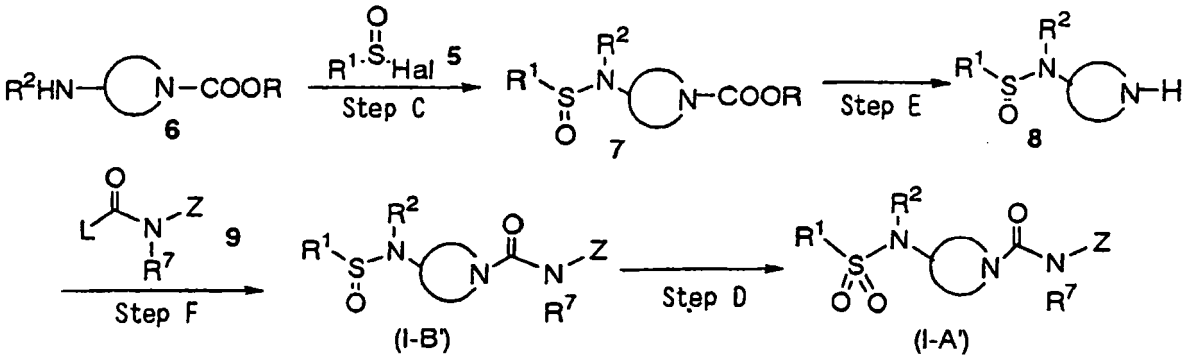
Step C

**[0061]** Compound (I-B) wherein n is 1 can be synthesized by reacting Compound 3 with Sulfinyl Halide 5 having substituent $R^1$. The conditions for the reaction are the same as those of the above Step B.

Step D

**[0062]** Compound (I-B) obtained in Step C is oxidized by the usual method to give Compound (I-A) wherein n is 2. m-Chloroperbenzoic acid, peracetic acid, hydrogen peroxide, trifluoroperacetic acid, sodium periodate, sodium hypochlorite, potassium permanganate etc. can be used as an oxidizer and the reaction may be carried out at 0 °C to 50 °C. Examples of solvents are tetrahydrofuran, dimethylformamide, diethyl ether, dichloromethane, toluene, benzene, xylene, cyclohexane, hexane, chloroform, ethyl acetate, butyl acetate, pentane, heptane, dioxane, acetone, acetonitrile, water, methanol, ethanol, isopropanol and mixture thereof.

**[0063]** In case X is heterocyclediyl containing at least one N atom and the N atom connects to $CONR^7$-Z in the compound (I), the following reaction may be employed to obtain Compound (I-A') or (I-B'). Step D may be carried out just after Step C or Step E.




wherein R is lower alkyl or aryl and L is a leaving group.

Step C

**[0064]** Compound 5 is reacted with Compound 6 in a similar manner to the above Step C to give Compound 7.

Step E

**[0065]** Thus obtained Compound 7 is treated with a base in a suitable solvent to give Compound 8. For example, barium hydroxide, sodium hydroxide, potassium hydroxide, hydrazine or lithium propane thiolate can be used as a base. As a solvent, tetrahydrofuran, dimethylformamide, dioxane, acetone, acetonitrile, methanol, ethanol, propanol, water, the mixture thereof or the like can be used. The reaction can be carried out at 0 °C to 100 °C for several minutes to several tens hours.

Step F

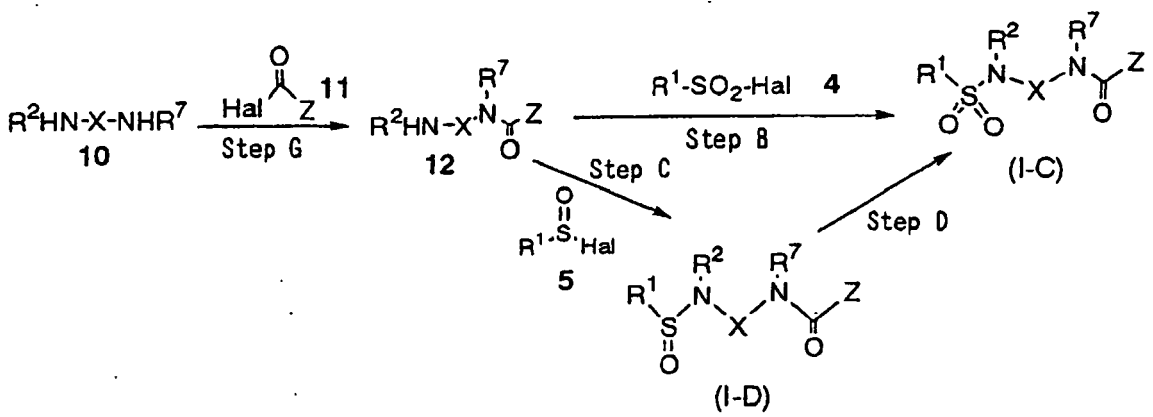
**[0066]** Compound 8 is reacted with Compound 9 having a leaving group and a desired substituent in a suitable solvent in the presence or absence of a base at 0 °C to 100 °C for several minutes to several days to give Compound (I-B'). Examples of the leaving group are phenoxy, chloro and trichloromethyl. Examples of the base are triethylamine, pyridine, diisopropylethylamine, sodium hydroxide, potassium carbonate and sodium hydrogencarbonate. Examples of the solvent are tetrahydrofuran, dimethylformamide, diethyl ether, dichloromethane, toluene, benzene, xylene, cyclohexane, hexane, chloroform, ethyl acetate, butyl acetate, pentane, heptane, dioxane, acetone, acetonitrile, methanol, ethanol and the mixture thereof.

Step D

**[0067]** Compound (I-B') is reacted in a similar manner to the above Step D to give Compound (I-A').

(Compound wherein Y=$NR^7CO$)

**[0068]**



wherein each of the symbols is the same as the above.

Step G and Step B

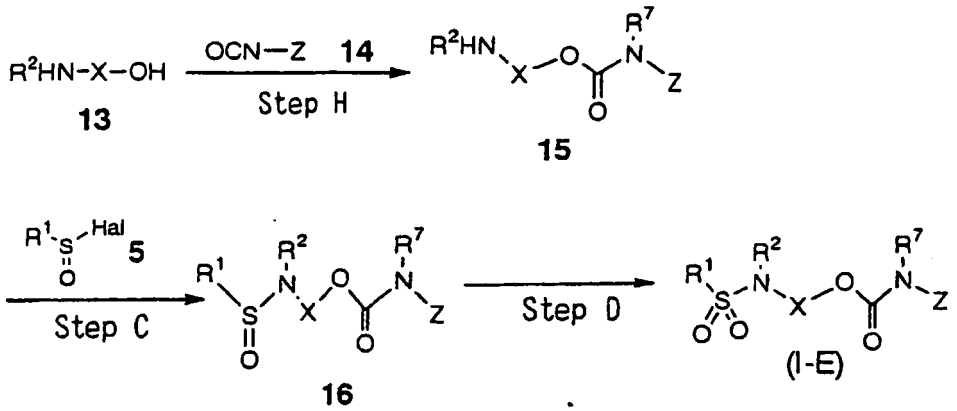
**[0069]** Compound 10 is reacted with Compound 11 under the same reaction condition as that in Step B. Thus obtained Compound 12 is reacted in a similar manner to the above Step B to give Compound (I-C) wherein n=2.

Step C and Step D

**[0070]** To synthesize Compound (I-D), Compound 12 obtained in Step G may be reacted in similar manners to the above Step C and Step D.

(Compound wherein Y=OCONR$^7$)

**[0071]**



wherein each of symbols is the same as the above.

Step H

**[0072]** Compound 13 is reacted with Isocianate Compound 14 having a substituent Z in a suitable solvent in the presence or absence of a suitable catalyst at 0 °C to 100 °C for several minutes to several days to give Compound 15. Examples of the solvent are tetrahydrofuran, dimethylformamide, diethyl ether, dichloromethane, toluene, benzene, xylene, cyclohexane, hexane, chloroform, ethyl acetate, butyl acetate, pentane, heptane, dioxane, acetone, acetonitrile and the mixture thereof.

Step C and Step D

**[0073]** Thus obtained Compound 15 is reacted in similar manners to Step C and Step D to give Compound (I-E) of the present invention.

(Compound wherein Y=CSNR$^7$ or NR$^7$CS)

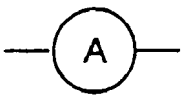
**[0074]** Compound (I) wherein Y is CSNR$^7$ or NR$^7$CS can be synthesized by reacting compound (I) wherein Y is CONR$^7$ or NR$^7$CO synthesized in any one of the above methods with the Lawesson's reagent or phosphorus pentasulfide in a suitable solvent at 30 °C to 100 °C for several minutes to several hours. Examples of the solvent are tetrahydrofuran, dimethylformamide, diethyl ether, dichloromethane, toluene, benzene, xylene, cyclohexane, hexane, chloroform, ethyl acetate, butyl acetate, pentane, heptane, dioxane, acetone, acetonitrile and the mixture thereof.

**[0075]** Amino groups may be protected with a suitable protecting group in the usual manner at a suitable step. For example, phthalimide, lower alkoxycarbonyl, lower alkenyloxycarbonyl, halogenoalkoxycarbonyl, aryl(lower)alkoxycarbonyl, trialkylsilyl, lower alkylsulfonyl, halogeno(lower)alkylsulfonyl, arylsulfonyl, lower alkylcarbonyl and arylcarbonyl can be used as the protecting group.

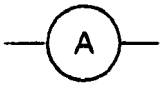
**[0076]** After protection of the amino group, the compound is subjected to the above-mentioned reactions and the obtained compound is deprotected by treatment of an acid or a base in a suitable solvent at a suitable stage. Examples of a solvent is tetrahydrofuran, dimethylformamide, diethyl ether, dichloromethane, toluene, benzene, xylene, cyclohexane, hexane, chloroform, ethyl acetate, butyl acetate, pentane, heptane, dioxane, acetone, acetonitrile and the mixture thereof. Examples of a base are hydrazine, pyridine, sodium hydroxide and potassium hydroxide and examples of an acid are hydrochloric acid, trifluoroacetic acid and hydrofluoric acid.

**[0077]** All of the compounds of the present invention have an NPY Y5 antagonistic activity and the following compounds are specifically preferable.

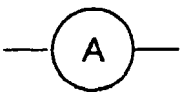
**[0078]** In the formula (I),
a compound wherein R$^1$ is optionally substituted lower alkyl or optionally substituted cycloalkyl (hereinafter referred to as "R$^1$ is R1-1"),
a compound wherein R$^1$ is C3 to C10 alkyl or C5 to C6 cycloalkyl, each of which is optionally substituted with halogen (hereinafter referred to as "R$^1$ is R1-2"),
a compound wherein R$^1$ is C3 to C10 alkyl optionally substituted with halogen (hereinafter referred to as "R$^1$ is R1-3"),
a compound wherein R$^1$ is isopropyl or t-butyl (hereinafter referred to as "R$^1$ is R1-4"),
a compound wherein R$^2$ is hydrogen or C1 to C3 alkyl (hereinafter referred to as "R$^2$ is R2-1"),
a compound wherein R$^2$ is hydrogen (hereinafter referred to as" R$^2$ is R2-2"),
a compound wherein X is optionally substituted lower alkylene, optionally substituted lower alkenylene or



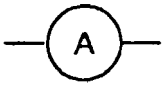

wherein




is optionally substituted cycloalkylene, optionally substituted cycloalkenylene, optionally substituted bicycloalkylene, optionally substituted phenylene or optionally substituted heterocyclediyl (hereinafter referred to as "X is X-1"), a compound wherein X is C2 to C6 alkylene, C3 to C6 alkenylene or




wherein




is optionally substituted cycloalkylene, optionally substituted cycloalkenylene, optionally substituted bicycloalkylene, optionally substituted phenylene, optionally substituted piperidinylene, optionally substituted thiophenediyl or optionally substituted furandiyl (hereinafter referred to as "X is X-2"), a compound wherein X is C2 to C6 alkylene or


wherein is optionally substituted cycloalkylene, optionally substituted phenylene, optionally substituted piperidinylene, optionally substituted thiophenediyl or optionally substituted furandiyl (hereinafter referred to as "X is X-3"),
a compound wherein X is (i) C2 to C6 alkylene or (ii) cycloalkylene or phenylene, each of which is optionally substituted with halogen, hydroxy, lower alkyl or halogeno(lower)alkyl (hereinafter referred to as "X is X-4"),
a compound wherein X is C2 to C6 alkylene or to C5 to C6 cycloalkylene (hereinafter referred to as "X is X-5"),
a compound wherein X is C3 to C6 alkylene or 1,4-cyclohexylene (hereinafter referred to as "X is X-6"),
a compound wherein Y is $CONR^7$, $CSNR^7$, $NR^7CO$ or $NR^7CS$ and $R^7$ is hydrogen or C1 to C3 alkyl (hereinafter referred to as "Y is Y-1"),
a compound wherein Y is CONH, CSNH or NHCO (hereinafter referred to as "Y is Y-2"), a compound wherein Y is CONH (hereinafter referred to as "Y is Y-3"),
a compound wherein Z is optionally substituted lower alkyl, optionally substituted carbocyclyl or optionally substituted heterocyclyl (hereinafter referred to as "Z is Z-1"),
a compound wherein Z is $-(CR^8\ R^9)_r-W-(CR^{10}R^{11})_s-V$
wherein $R^8$, $R^9$, $R^{10}$ and $R^{11}$ are each independently hydrogen or lower alkyl and when Z has two or more of $R^8$, two or more of $R^9$, two or more of $R^{10}$ and /or two or more of $R^{11}$, each of $R^8$, $R^9$, $R^{10}$ and $R^{11}$ may be different, W is single bond, O, S or $NR^{12}$, $R^{12}$ is hydrogen, lower alkyl or phenyl, V is hydrogen, optionally substituted cycloalkyl, optionally substituted bicycloalkyl, optionally substituted aryl or optionally substituted heterocyclyl, r is an integer of 1 to 4 and s is an integer of O to 4
(hereinafter referred to as "Z is Z-2"),
a compound wherein Z is $-(CH_2)_r-W-(CH_2)_s-V$
wherein W is single bond, O, S or $NR^{12}$, $R^{12}$ is hydrogen or lower alkyl, V is optionally substituted aryl or optionally substituted heterocyclyl wherein the substituents is halogen, hydroxy, lower alkyl, halogeno(lower)alkyl, lower alkoxy, lower alkenyl, amino, lower alkylamino, acyl, carboxy, lower alkoxycarbonyl, phenyl or monocyclic heteroaryl, r is an integer of 1 to 4 and s is an integer of 0 to 4
(hereinafter referred to as "Z is Z-3),
a compound wherein Z is $-(CH_2)_r-W-(CH_2)_s-V$
wherein W is single bond, O, S, NH or NMe, V is optionally substituted phenyl or optionally substituted heteroaryl wherein the substituents is halogen, lower alkyl, halogeno(lower)alkyl, lower alkoxy, amino or lower alkylamino, r is an integer of 1 to 3 and s is an integer of 0 or 1
(hereinafter referred to as "Z is Z-4"),
a compound wherein Z is optionally substituted carbocyclyl,
wherein the substituent is halogen; hydroxy;
optionally substituted lower alkyl wherein the substituents is halogen, hydroxy, carboxy, lower alkoxycarbonyl, cyano and /or phenyl;
lower alkenyl optionally substituted with lower alkoxycarbonyl;
optionally substituted lower alkoxy wherein the substituents is halogen, hydroxy, lower alkoxy, carboxy, lower alkoxy-carbonyl, lower alkylamino, cycloalkyl, cyano and /or heterocyclyl;
cycloalkyl; cycloalkyloxy; acyl; lower alkylthio; carbamoyl; lower alkylcarbamoyl; cycloalkylcarbamoyl; hydroxy imino;
optionally substituted amino wherein the substituents is lower alkyl, optionally protected hydroxy(lower)alkyl, lower alkoxy (lower)alkyl, acyl, lower alkylsulfonyl, arylsulfonyl and/or phenyl;
phenyl optionally substituted with halogen, cyano, phenyl and /or heterocyclyl;
lower alkylsulfinyl; lower alkylsulfamoyl; cycloalkylsulfamoyl;
nitro; cyano; alkylenedioxy; phenylazo optionally substituted with lower alkyl; phenoxy; oxo;
optionally substituted heterocyclyl wherein the substituents is optionally protected hydroxy, mercapto, halogen, lower

alkyl, cycloalkyl, lower alkoxycarbonyl, acyl, amino, lower alkoxycarbonylamino, carbamoyl, oxo, phenyl, lower alkoxyphenyl, halogenophenyl, heterocyclyl and /or oxo;
heterocyclylsulfonyl optionally substituted with lower alkyl: heterocyclyloxy;
heterocyclylcarbonyl optionally substituted with lower alkyl
(hereinafter referred to as "Z is Z-5),
a compound wherein Z is optionally substituted phenyl
wherein the substituents is halogen; hydroxy; lower alkyl optionally substituted with halogen, hydroxy, lower alkoxycarbonyl, cyano and /or phenyl; lower alkoxycarbonyl(lower)alkenyl; lower alkoxy optionally substituted with halogen, lower alkoxy, lower alkoxycarbonyl, cycloalkyl and /or heterocyclyl; cycloalkyl;
cycloalkyloxy; acyl; lower alkylthio; carbamoyl; lower alkycarbamoyl; amino optionally substituted with lower alkyl, hydroxy (lower)alkyl, acyl, lower alkylsulfonyl and /or phenyl; phenyl optionally substituted with halogen, cyano, phenyl and /or heterocyclyl;
lower alkyl sulfamoyl; cycloalkylsulfamoyl; nitro; alkylenedioxy; phenylazo optionally substituted with lower alkyl; phenoxy; oxo;
heterocyclyl optionally substituted with hydroxy, halogen, lower alkyl, lower alkoxycarbonyl, amino, carbamoyl, phenyl, halogenophenyl, heterocyclyl and /or oxo;
heterocyclyloxy; and/or heterocyclylsulfonyl optionally substituted with lower alkyl
(hereinafter referred to as" Z is Z-6"),
a compound wherein Z is optionally substituted phenyl
wherein the substituents is halogen; lower alkyl optionally substituted with halogen, hydroxy, lower alkoxycarbonyl and/or phenyl; lower alkoxy optionally substituted with halogen and/or cycloalkyl; cycloalkyl; cycloalkyloxy; acyl; lower alkylthio; lower alkylcarbamoyl; amino optionally substituted with lower alkyl, hydroxy(lower)alkyl, acyl and/or phenyl; phenyl optionally substituted with piperidyl; cycloalkylsulfamoyl; alkylenedioxy; phenoxy;
morpholinyl or morpholino, each of which is optionally substituted with lower alkyl;
piperidyl optionally substituted with hydroxy, lower alkyl, lower alkoxycarbonyl, phenyl, halogenophenyl and/or oxo; pyrrolidinyl optionally substituted with hydroxy, carbamoyl and/or oxo;
piperazinyl optionally substituted with phenyl or pyrimidinyl; dihydropyridyl; pyrrolyl; pyrrolinyl; imidazolyl optionally substituted with halogen and/or lower alkyl; pyrazolyl; thienyl; thiadiazolyl; furyl; oxazolyl; isoxazolyl; tetrazolyl optionally substituted with lower alkyl and/or phenyl; indolinyl; indolyl; tetrahydroquinolyl; benzothiazolyl optionally substituted with lower alkyl; tetrahydroisothiazolyl optionally substituted with oxo; benzopyranyl optionally substituted with oxo; tetrahydropyranyloxy; tetrahydrofuryloxy; morpholinosulfonyl optionally substituted with lower alkyl; and/or piperidylsulfonyl optionally substituted with lower alkyl
(hereinafter referred to as "Z is Z-7"),
a compound wherein Z is optionally substituted phenyl
wherein the substituents is halogen, lower alkyl, halogeno(lower)alkyl, lower alkoxy, cycloalkyloxy, lower alkylcarbamoyl, phenyl, lower alkyl morpholino and/or tetrahydropyranyloxy
(hereinafter referred to as "Z is Z-8"),
a compound wherein Z is optionally substituted heterocyclyl
wherein the substituents is halogen, hydroxy, lower alkyl, halogeno(lower)alkyl, lower alkoxy, mercapto, lower alkylthio, acyl, carboxy, lower alkoxycarbonyl, amino, lower alkylamino, phenyl, naphthyl, phenylthio optionally substituted with halogen, phenoxy optionally substituted with halogen, oxo, and/or heterocyclyl optionally substituted with lower alkyl
(hereinafter referred to as "Z is Z-9"),
a compound wherein Z is thienyl, pyrazolyl, thiazolyl, thiadiazolyl, pyridyl, pyrimidinyl, pyrazinyl, triazinyl, indolyl, isoindolyl, indolinyl, isoindolinyl, indazolyl, benzopyranyl, benzoxazolyl, benzothienyl, benzothiazolyl, benzothiazolinyl, benzothiadiazolyl, quinolyl, isoquinolyl, dihydrobenzofuryl, carbazolyl, acridinyl or dibenzofuryl, each of which is optionally substituted with substituents selected from the group of lower alkyl; halogeno(lower)alkyl; lower alkoxy; lower alkoxycarbonyl; acyl; lower alkoxycarbonyl(lower)alkyl; mercapto; phenyl, naphthyl, phenylthio or phenoxy, each of which is optionally substituted with halogen; furyl; nitro; oxo; and morpholino optionally substituted with lower alkyl) (hereinafter referred to as "Z is Z-10"),
a compound wherein Z is thienyl, thiazolyl, thiadiazolyl, pyridyl, pyrazinyl, indolyl, isoindolinyl, benzopyranyl, quinolyl, carbazolyl, dibenzofuryl, benzopyranyl, benzothienyl or benzothiazolyl, each of which is optionally substituted with one or more substituents selected from the group of lower alkyl, halogeno(lower)alkyl, lower alkoxy, lower alkoxycarbonyl, acyl, phenyl, naphthyl, phenylthio, lower alkyl morpholino and oxo) (hereinafter referred to as "Z is Z-11),
a compound wherein $R^1$ is R1-2, $R^2$ is R2-2, n is 2 and a combination of X, Y and Z, i.e., (X, Y, Z), is any one of the followings.
(X, Y, Z) = (X-3, Y-2, Z-1), (X-3, Y-2, Z-2), (X-3, Y-2, Z-3), (X-3, Y-2, Z-4), (X-3, Y-2, Z-5), (X-3, Y-2, Z-6), (X-3, Y-2, Z-7), (X-3, Y-2, Z-8), (X-3, Y-2, Z-9), (X-3, Y-2, Z-10), (X-3, Y-2, Z-11),
(X-3, Y-3, Z-1), (X-3, Y-3, Z-2), (X-3, Y-3, Z-3), (X-3, Y-3, Z-4), (X-3, Y-3, Z-5), (X-3, Y-3, Z-6), (X-3, Y-3, Z-7), (X-3, Y-3, Z-8), (X-3, Y-3, Z-9), (X-3, Y-3, Z-10), (X-3, Y-3, Z-11), (X-4, Y-2, Z-1), (X-4, Y-2, Z-2), (X-4, Y-2, Z-3), (X-4, Y-2, Z-

4), (X-4, Y-2, Z-5), (X-4, Y-2, Z-6), (X-4, Y-2, Z-7), (X-4, Y-2, Z-8), (X-4, Y-2, Z-9), (X-4, Y-2, Z-10), (X-4, Y-2, Z-11), (X-4, Y-3, Z-1), (X-4, Y-3, Z-2), (X-4, Y-3, Z-3), (X-4, Y-3, Z-4), (X-4, Y-3, Z-5), (X-4, Y-3, Z-6), (X-4, Y-3, Z-7), (X-4, Y-3, Z-8), (X-4, Y-3, Z-9), (X-4, Y-3, Z-10), (X-4, Y-3, Z-11), (X-5, Y-2, Z-1), (X-5, Y-2, Z-2), (X-5, Y-2, Z-3), (X-5, Y-2, Z-4), (X-5, Y-2, Z-5), (X-5, Y-2, Z-6), (X-5, Y-2, Z-7), (X-5, Y-2, Z-8), (X-5, Y-2, Z-9), (X-5, Y-2, Z-10), (X-5, Y-2, Z-11), (X-5, Y-3, Z-1), (X-5, Y-3, Z-2), (X-5, Y-3, Z-3), (X-5, Y-3, Z-4), (X-5, Y-3, Z-5), (X-5, Y-3, Z-6), (X-5, Y-3, Z-7), (X-5, Y-3, Z-8), (X-5, Y-3, Z-9), (X-5, Y-3, Z-10) or (X-5, Y-3, Z-11), the pharmaceutically acceptable salt, solvate or prodrug thereof.

**[0079]** The NPY Y5 receptor antagonist of the present invention is effective for all of the diseases in which NPY Y5 is involved and it is especially useful for preventing and/or treating obesity and suppressing food intake. Moreover, the antagonist is effective for preventing and/or treating the diseases in which obesity acts as a risk factor, for example, diabetes, hypertension, hyperlipemia, atherosclerosis and acute coronary syndrome.

**[0080]** In addition, the NPY Y5 receptor antagonist of the present invention has a low affinity for NPY Y1 and Y2 receptors, and has a high selectivity for NPY Y5 receptor. NPY causes a sustained vasoconstrictive action in the periphery and this action is mainly via Y1 receptor. Since Y5 receptor is not involved in this action at all, the NPY Y5 receptor antagonist has a low risk of inducing side effects based on the peripheral vasoconstriction, and is expected to be suitably used as a safe medicine.

**[0081]** The NPY Y5 receptor antagonist shows an anti-obestic effect by suppressing food intake. Therefore, it is one of the features that this antagonist does not induce side effects, e.g., an indigestion caused by an anti-obestic agent which inhibits digestion and absorption, and a central side effect such as anti-depression caused by a serotonin transporter inhibitor showing an anti-obesity effect.

**[0082]** A compound of the present invention can be administered orally or parenterally as an anti-obestic agent or anorectic agent. In the case of oral administration, it may be in any usual form such as tablets, granules, powders, capsules, pills, solutions, syrups, buccal tablets and sublingual tablets. When the compound is parenterally administered, any usual form is preferable, for example, injections (e.g., intravenous, intramuscular), suppositories, endermic agents and vapors. Oral administration is particularly preferable because the compounds of the present invention show a high oral absorbability.

**[0083]** A pharmaceutical composition may be manufactured by mixing an effective amount of a compound of the present invention with various pharmaceutical additives suitable for the administration form, such as excipients, binders, moistening agents, disintegrators, lubricants and diluents. When the composition is of an injection, an active ingredient together with a suitable carrier can be sterilized to give a pharmaceutical composition.

**[0084]** Examples of the excipients include lactose, saccharose, glucose, starch, calcium carbonate and crystalline cellulose. Examples of the binders include methylcellulose, carboxymethylcellulose, hydroxypropylcellulose, gelatin and polyvinylpyrrolidone. Examples of the disintegrators include carboxymethylcellulose, sodium carboxymethylcellulose, starch, sodium alginate, agar and sodium lauryl sulfate. Examples of the lubricants include talc, magnesium stearate and macrogol. Cacao oil, macrogol, methylcellulose etc. may be used as base materials of suppositories. When the composition is manufactured as solutions, emulsified injections or suspended injections, dissolving accelerators, suspending agents, emulsifiers, stabilizers, preservatives, isotonic agents and the like may be added. For oral administration, sweetening agents, flavors and the like may be added.

**[0085]** Although the dosage of a compound of the present invention as an anti-obestic agent or anorectic agent should be determined in consideration of the patient's age and body weight, the type and degree of diseases, the administration route etc., a usual oral dosage for an adult is 0.05 to 100 mg/kg/day and preferable is 0.1 to 10 mg/kg/day. For parenteral administration, although the dosage highly varies with administration routes, a usual dosage is 0.005 to 10 mg/kg/day, preferably, 0.01 to 1 mg/kg/day. The dosage may be administered in one to several divisions per day.

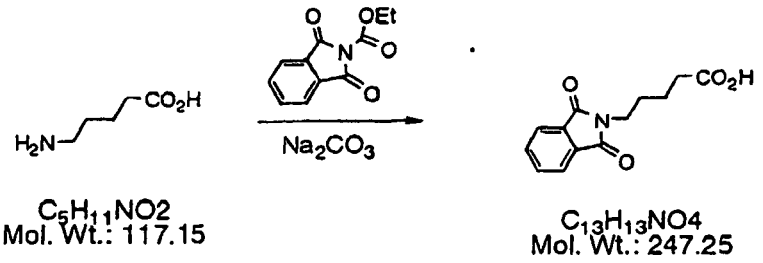
**[0086]** The present invention is further explained by the following Examples and Experiments, which are not intended to limit the scope of the present invention.

Examples

Example 1 Synthesis of Compound (I-7)

Step 1

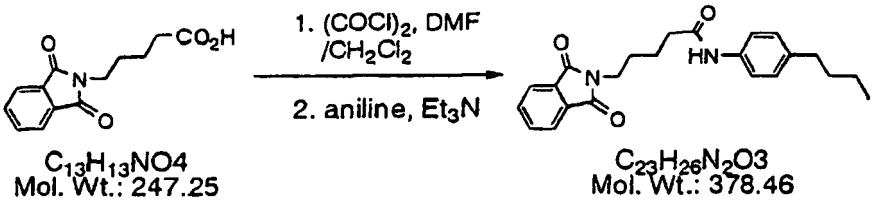
**[0087]**




**[0088]** Sodium carbonate (995 mg, 9.38 mmol) was dissolved in 30 ml of water and starting material amino acid (1.0 g, 8.53 mmol) and N-carbethoxyphthalimide (2.49 g, 11.4 mmol) were added thereto. The mixture was stirred at room temperature overnight. The pH of the mixture was adjusted to 1 by adding conc. hydrochloric acid. Precipitated crystals were washed with water and dried to give the desired compound (1.72 g, 82 % yield).
$^1$H-NMR ($CD_3OD$) δ ppm: 1.59-1.77 (m, 4H), 2.34 (t, 2H, J = 6.3 Hz), 3.69 (t, 2H, J = 6.6 Hz), 7.78-7.87 (m, 4H).

Step 2

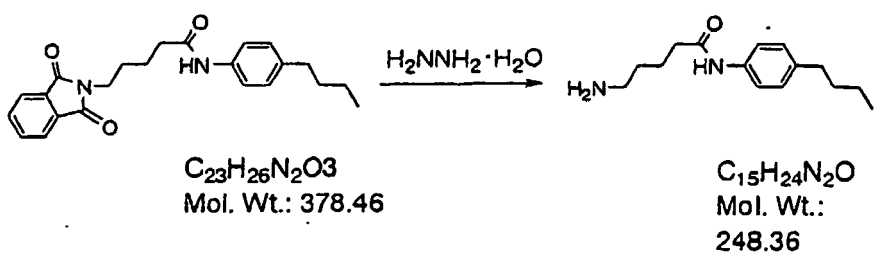
**[0089]**




**[0090]** The compound obtained in Step 1 (1.0 g, 4.0 mmol) was dissolved in 5 ml of dichloromethane at room temperature. Oxalyl chloride (0.459 ml, 5.2 mmol) and trace amounts of DMF were added to the mixture under ice-cooling and the mixture was reacted under ice-cooling and at room temperature, each for 30 min. After the solvent was removed under reduced pressure, 5 ml of dichloromethane was added. Under ice-cooling, 4-butylaniline (664 mg, 4.4 mmol) and triethylamine (0.564 ml, 4.4 mmol) were added thereto and the mixture was reacted for 30 min. at room temperature. The reactant was poured into water and extracted with chloroform. The organic layer was washed with water and dried over magnesium sulfate anhydride. The solvent was removed under reduced pressure and the residue was purified by silica gel chromatography to give the desired compound (1.49 g, 97 % yield).
$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.5 Hz), 1.27-1.39 (m, 2H), 1.51-1.62 (m, 2H), 1.72-1.84 (m, 4H), 2.40-2.46 (m, 2H), 2.56 (t, 2H, J = 7.5 Hz), 3.76 (t, 1H, J = 5.7 Hz), 7.12 (d, 2H, J = 7.8 Hz), 7.33 (s, 1H), 7.42 (d, 2H, J = 8.1 Hz), 7.71-7.73 (m, 2H), 7.83-7.86 (m,

Step 3

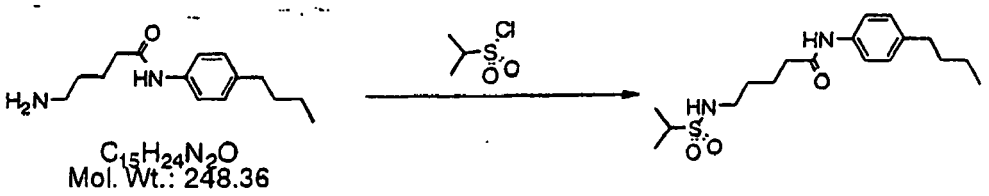
**[0091]**




**[0092]** After the compound obtained in Step 2 (1.49 g, 3.9 mmol) was dissolved in 30 ml of ethanol, hydrazine mono-

hydrate (0.591 mg, 11.8 mmol) was added and the mixture was reacted at 50 °C for 3 hours. The solvent was removed, 1 mol/l aqueous NaOH was added and the solution was extracted with ethyl acetate. The organic layer was washed with water and dried over magnesium sulfate anhydride. The solvent was removed under reduced pressure to give the desired compound (808 mg, 83 % yield)

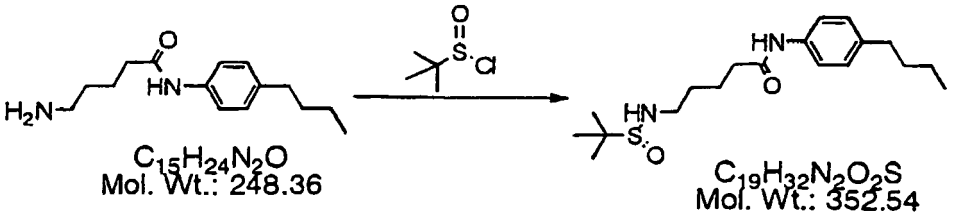
$^1$H-NMR ($CD_3OD$) δ ppm: 0.93 (t, 3H, J = 7.2 Hz), 1.28-1.40 (m, 2H), 1.50-1.62 (m, 4H), 1.67-1.77 (m, 2H), 2.37 (t, 2H, J = 7.5 Hz), 2.56 (t, 2H, J = 7.8 Hz), 2.68 (t, 2H, J = 7.2 Hz), 7.11 (d, 2H, J = 8.1 Hz), 7.42 (d, 2H, J = 8.4 Hz).




**[0093]** The compound obtained in Step 3 (808 mg, 3.25 mmol) was suspended in 5 ml of dichloromethane under ice-cooling and isopropylsulfonyl chloride (696 mg, 4.9 mmol) and triethylamine (494 mg, 4.9 mmol) were added. After the mixture was reacted under ice-cooling for an hour, the reactant was poured into water and extracted with chloroform. The organic layer was washed with water and dried over magnesium sulfate anhydride. The solvent was removed under reduced pressure and the residue was purified by silica gel chromatography to give the desired compound quantitatively. $^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.2 Hz), 1.27-1.40 (m, 2H), 1.36 (d, 6H, J = 6.6 Hz), 1.51-1.69 (m, 4H), 1.77-1.86 (m, 2H), 2.38 (t, 2H, J = 7.2 Hz), 2.56 (t, 2H, J = 7.5 Hz), 3.12-3.21 (m, 3H), 4.38 (t, 1H, J = 5.7 Hz), 7.11 (d, 2H, J = 8.4 Hz), 7.36-7.41 (m, 3H).

Example 2 Synthesis of Compound (I-10)

**[0094]**

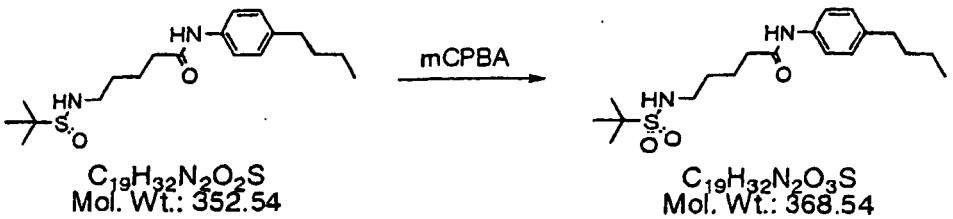



**[0095]** The desired compound was synthesized in a similar manner to Step 4 in Example 1 except that tert-butylsulfinyl chloride (689 mg, 4.9 mmol) and triethylamine (494 mg, 4.9 mmol) were added to the compound obtained in Step 3 in Example 1.

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.5 Hz), 1.22 (s, 9H), 1.30-1.37 (m, 2H), 1.51-1.68 (m, 4H), 1.76-1.86 (m, 2H), 2.31-2.40 (m, 2H), 2.56 (t, 2H, J = 7.5 Hz), 3.15-3.26 (m, 3H), 7.11 (t, 2H, J = 8.7 Hz), 7.42 (d, 2H, J = 8.1 Hz), 7.54 (s, 1H).

Example 3 Synthesis of Compound (I-11)

**[0096]**

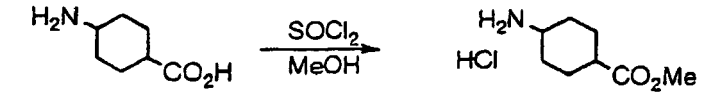


**[0097]** The compound obtained in Example 2 (352 mg, 1.0 mmol) was dissolved in 5 ml of dichloromethane under ice-cooling and mCPBA (259 mg, 1.5 mmol) was added to the solution. The solution was reacted at room temperature for an hour and the insoluble material was filtered off. The filtrate was washed with 1 mol/l NaOH, $Na_2S_2O_5$ and water, successively, and dried over magnesium sulfate anhydride. The solvent was removed under reduced pressure and the residue was purified by silica gel chromatography to give the desired compound (338 mg, 92 % yield).
$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.5 Hz), 1.29-1.39 (m, 2H), 1.39 (s, 9H), 1.51-1.68 (m, 4H), 1.76-1.84 (m, 2H), 2.37 (t, 2H, J = 7.5 Hz), 2.56 (t, 2H, J = 7.8 Hz), 3.19-3.26 (m, 2H), 4.20 (t, 1H, J = 5.7 Hz), 7.11 (t, 2H, J = 8.1 Hz), 7.42 (d, 2H, J = 8.7 Hz), 7.46 (s, 1H).

Example 4. Synthesis of Compound (I-72)

Step 1

**[0098]**



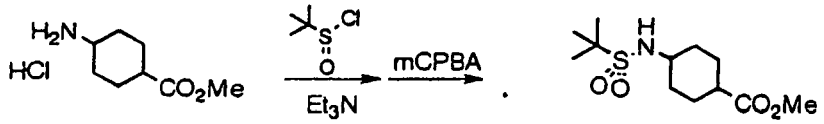

$C_7H_{13}NO2$
Mol. Wt.: 143.18

$C_8H_{16}ClNO2$
Mol. Wt.: 193.67

**[0099]** Starting material amino acid (a mixture of cis isomer and trans isomer) (1.0 g, 8.53 mmol) was dissolved in 7.5 ml of methanol. Thionyl chloride (1.0 ml, 13.7 mmol) was added to the mixture under ice-cooling and the mixture was stirred at room temperature overnight. After the mixture was concentrated under reduced pressure, diethylether was added and precipitated crystals were obtained by filtration. The crystals were washed with diethylether and dried to give the desired compound (1.25 g, 93 % yield). $^1$H-NMR ($CDCl_3$) δ ppm: 1.50-2.60 (m, 9H), 3.08-3.36 (m, 1H), 3.67 (s, 3H, $CO_2Me$ of cis isomer), 3.71 (s, 3H, $CO_2Me$ of trans isomer), 8.15-8.55 (m, 3H).

Step 2

**[0100]**



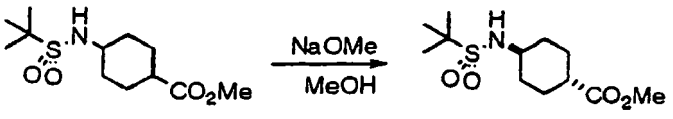

$C_8H_{16}ClNO_2$
Mol. Wt.: 193.67

$C_{12}H_{23}NO_4S$
Mol. Wt.: 277.38

**[0101]** The desired sulfonamide (a mixture of cis isomer and trans isomer) was synthesized from starting material methyl ester in similar manners to Step 3 in Example 1 and Example 2.
cis isomer
$^1$H-NMR ($CDCl_3$) δ ppm: 1.39 (s, 9H), 1.52-1.99 (m, 8H), 2.43-2.53 (m, 1H), 3.42-3.55 (m, 1H), 3.69 (s, 3H), 3.85 (d, 1H, J = 9.0 Hz).

Step 3

**[0102]**



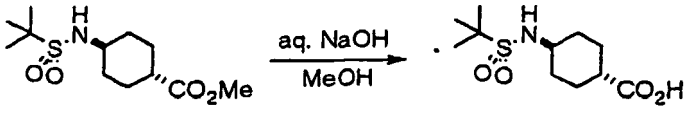

$C_{12}H_{23}NO_4S$
Mol. Wt.: 277.38

$C_{12}H_{23}NO_4S$
Mol. Wt.: 277.38

**[0103]** Starting material sulfonamide (19.4 g, 70.0 mmol, a mixture of cis isomer and trans isomer) was dissolved in 30 ml of methanol. To the mixture, 28 % sodium methoxide (284 ml, 140.0 mmol) was added and refluxed with stirring under ice-cooling. After the solvent was removed, the residue was diluted with chloroform, and 1 mol/l HCl was added with stirring under ice-cooling until pH of an aqueous layer reached 3. The aqueous layer was extracted with chloroform and the organic layer was washed with water and dried over magnesium sulfate anhydride. The obtained crude crystals were recrystallized from hexane-ethyl acetate to give the desired sulfonamide (trans isomer, 7.75 g, 40 % yield).
trans isomer
$^1$H-NMR ($CD_3OD$) δ ppm: 1.16-1.32 (m, 2H), 1.39 (s, 9H), 1.44-1.52 (m, 2H), 1.98-2.09 (m, 2H), 2.14-2.29 (m, 3H), 3.18-3.37 (m, 1H), 3.63 (d, 1H, J = 9.0 Hz), 3.67 (s, 3H).

Step 4

**[0104]**



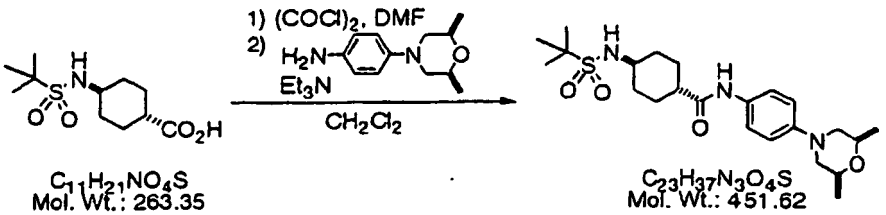

$C_{12}H_{23}NO_4S$
Mol. Wt.: 277.38

$C_{11}H_{21}NO_4S$
Mol. Wt.: 263.35

**[0105]** Starting material methyl ester (4.77 g, 17.2 mmol) was dissolved in 95 ml of methanol and 1 mol/l NaOH (43 ml, 43.0 mmol) was added with stirring under ice-cooling. The mixture was stirred at room temperature overnight and concentrated under reduced pressure. After 1 mol/l HCl was added with stirring until pH of the mixture reached 3 under ice-cooling, the precipitated crystals were collected by filtration, washed with water and dried. The obtained crude crystals were recrystallized from hexane-ethylacetate to give the desired carboxylic acid (4.20 g, 93 % yield).
$^1$H-NMR ($CDCl_3$) δ ppm: 1.18-1.35 (m, 2H), 1.39 (s, 9H), 1.46-1.63 (m, 2H), 2.01-2.14 (m, 2H), 2.14-2.32 (m, 3H), 3.18-3.35 (m, 1H), 3.80 (d, 1H, J = 9.6 Hz).

Step 5

**[0106]**




$C_{11}H_{21}NO_4S$
Mol. Wt.: 263.35

$C_{23}H_{37}N_3O_4S$
Mol. Wt.: 451.62

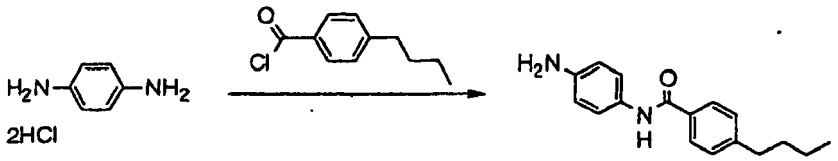
**[0107]** A starting material carboxylic acid (5.86 g, 22.3 mmol) was dissolved in 88 ml of dichloromethane at room temperature. To the mixture, oxalyl chloride (2.34 ml, 26.7 mmol) and catalytic amount of DMF were added under ice-cooling and stirred at room temperature for an hour. After the solvent was removed under reduced pressure, dichlo-

romethane (115 ml), substituted aniline (5.05 g, 24.5 mmol) and triethylamine (4.65 ml, 33.4 mmol) were added. The mixture was stirred at room temperature for 2.5 hours, the ice-cooling water was poured thereto, and the mixture was extracted with chloroform. An organic layer was washed with water and dried over magnesium sulfate anhydride. The solvent was removed under reduced pressure and ethyl acetate and hexane were added to the residue. The precipitated crystals were collected with filtration to give the desired amide (7.00 g, 70 % yield).
$^1$H-NMR ($CDCl_3$) δ ppm: 1.25 (d, 6H, J = 6.3 Hz), 1.17-1.42 (m, 2H), 1.40 (s, 9H), 1.60-1.78 (m, 2H), 1.98-2.43 (m, 7H), 3.20-3.43 (m, 3H), 3.67 (d, 1H, J = 9.6 Hz), 3.74-3.86 (m, 2H), 6.86 (d, 2H, J = 9.0 Hz), 7.04 (s, 1H), 7.38 (d, 2H, J = 9.0 Hz).

Example 5 Synthesis of Compound (I-2)

Step 1

**[0108]**



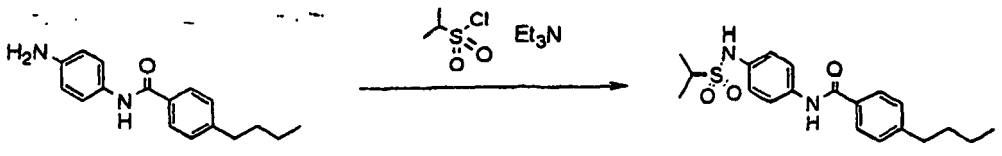

$C_6H_{10}Cl_2N2$
Mol. Wt.: 181.06

$C_{17}H_{20}N_2O$
Mol. Wt.: 268.35

**[0109]** After starting material diamine (461 mg, 2.5 mmol) was suspended in dichloromethane under ice-cooling, an acid chloride (500 mg, 2.5 mmol) and triethylamine (773 mg, 7.5 mmol) were added and the mixture was reacted for 30 min. Water and dichloromethane were added to the reactant and insoluble materials were filtered off. The organic layer was washed with water and dried over magnesium sulfate anhydride. The solvent was removed under reduced pressure to give the desired compound as a residue (100 mg, 15 % yield).
$^1$H-NMR ($CDCl_3$) δ ppm: 0.93 (t, 3H, J = 7.2 Hz), 1.30-1.42 (m, 2H), 1.57-1.67 (m, 2H), 2.66 (t, 2H, J = 7.8 Hz), 3.50 (brs, 1H), 6.57 (s, 1H), 6.68 (d, 2H, J = 8.7 Hz), 7.26 (d, 2H, J = 8.4 Hz), 7.39 (d, 2H, J = 8.7 Hz), 7.68 (s, 1H), 7.75 (d, 2H, J = 8.1 Hz).

Step 2

**[0110]**




$C_{17}H_{20}N_2O$
Mol. Wt.: 268.35

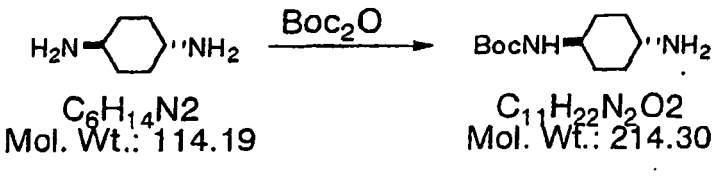
$C_{20}H_{26}N_2O_3S$
Mol. Wt.: 374.50

**[0111]** The desired compound was synthesized in a similar manner to Step 4 in Example 1.
$^1$H-NMR ($CDCl_3$) δ ppm: 0.94 (t, 3H, J = 7.5 Hz), 1.34-1.44 (m, 2H), 1.40 (d, 6H, J = 6.6 Hz), 1.59-1.68 (m, 2H), 2.69 (t, 2H, J = 7.8 Hz), 3.24-3.35 (m, 1H), 6.49 (s, 1H), 7.23-7.32 (m, 4H), 7.6 (d, 2H, J = 8.7 Hz), 7.79 (d, 2H, J = 8.1 Hz), 7.85 (s, 1H).

Example 6 Synthesis of Compound (I-31)

Step 1

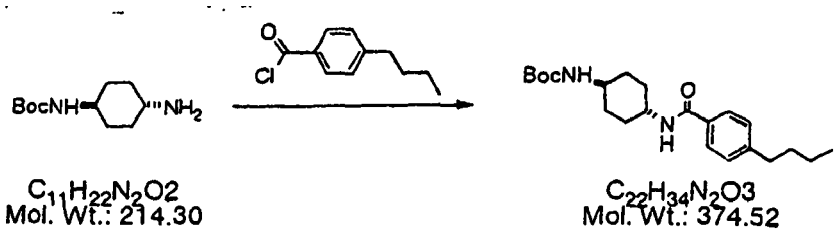
**[0112]**




**[0113]** A starting material diamine (8.37 g, 73.3 mmol) was dissolved in 30 ml of dioxane at room temperature and a solution of $Boc_2O$ (2 g, 9.2 mmol) in dioxane (30 ml) was added. The mixture was reacted at room temperature for 3 days and the solvent was removed. Water was added to the residue and the mixture was extracted with chloroform. The organic layer was washed with water and dried over magnesium sulfate anhydride. The solvent was removed under reduced pressure to give the desired compound as a residue (1.8 g, 92 % yield based on $Boc_2O$)
$^1$H-NMR ($CDCl_3$) $\delta$ ppm: 1.07-1.26 (m, 6H), 1.44 (s, 9H), 1.84-2.00 (m, 4H), 2.58-2.67 (m, 1H), 3.37 (brs, 1H), 4.43 (brs, 1H).

Step 2

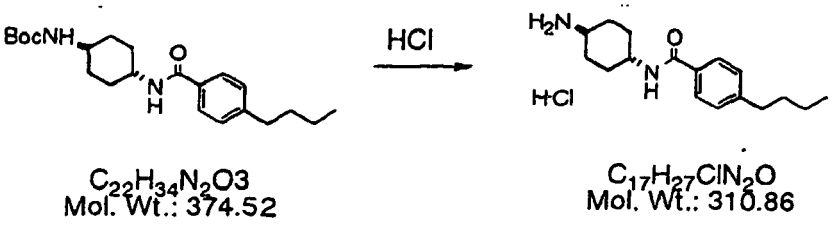
**[0114]**




**[0115]** The desired compound was synthesized in a similar manner to Step 1 in Example 5.
$^1$H-NMR ($CDCl_3$) $\delta$ ppm: 0.92 (t, 3H, J = 7.2 Hz), 1.26-1.42 (m, 6H), 1.45 (s, 9H), 1.54-1.68 (m, 2H), 1.99-2.12 (m, 4H), 2.64 (t, 2H, J = 7.8 Hz), 3.43 (brs, 1H), 3.90-4.00 (m, 1H), 4.48 (d, 1H, J = 5.7 Hz), 5.95 (d, 1H, J = 8.4 Hz), 7.21 (d, 2H, J = 8.4 Hz), 7.65 (d, 2H, J = 8.4 Hz).

Step 3

**[0116]**

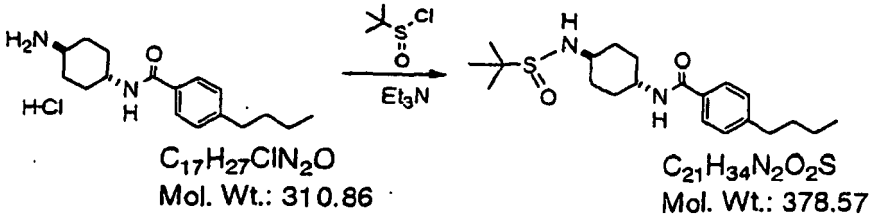



**[0117]** A starting material Boc compound (2.08 g, 5.55 mmol) was dissolved in 20 ml of ethyl acetate under ice-cooling and 20 ml of 4mol/l HCl/AcOEt was added. The mixture was reacted at room temperature for an hour and the solvent was removed under reduced pressure to give the desired compound as a residue (1.7 g, 98 % yield).

$^1$H-NMR ($CD_3OD$) δ ppm: 0.93 (t, 3H, J= 7.2 Hz), 1.29-1.41 (m, 2H), 1.50-1.66 (m, 6H), 2.02-2.18 (m, 4H), 2.66 (t, 2H, J = 7.8 Hz), 3.13 (brs, 1H), 3.82-3.94 (m, 1H), 7.26 (d, 2H, J = 8.7 Hz), 7.72 (d, 2H, J = 8.4Hz).

Step 4

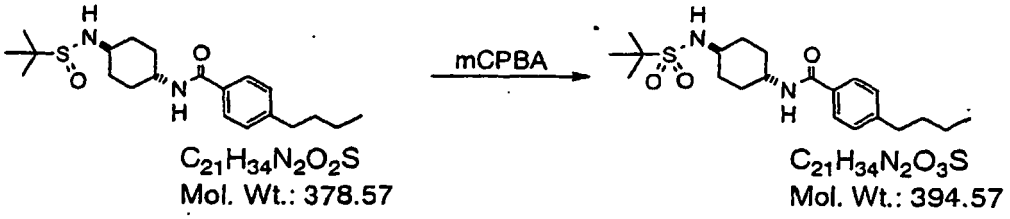
**[0118]**




**[0119]** The desired compound was synthesized in a similar manner to Step 4 in Example 1.
$^1$H-NMR ($CDCl_3$) δ ppm: 0.92 (t, 3H, J = 7.5 Hz), 1.21 (s, 9H), 1.28-1.62 (m, 8H), 2.07-2.14 (m, 4H), 2.64 (t, 2H, J = 7.8 Hz), 3.11 (d, 1H, J = 5.1 Hz), 3.20 (brs, 1H), 3.90-4.04 (m, 1H), 6.06-6.14 (m, 1H), 7.21 (t, 2H, J = 8.1 Hz), 7.67 (t, 2H, J = 8.4 Hz).

Example 7 Synthesis of Compound (I-32)

**[0120]**

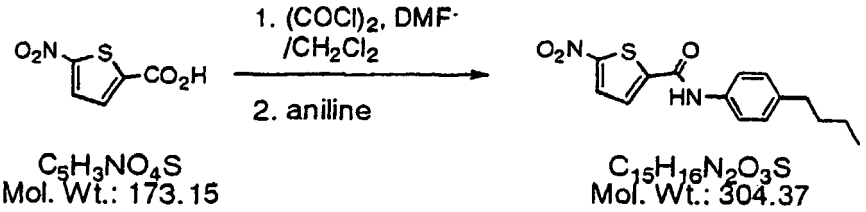



**[0121]** The desired compound was synthesized from the compound obtained in Example 6 in a similar manner to Example 3.
$^1$H-NMR ($CDCl_3$) δ ppm: 0.92 (t, 3H, J = 7.2 Hz), 1.27-1.65 (m, 8H), 1.40 (s, 9H), 2.10-2.23 (m, 4H), 2.65 (t, 2H, J = 7.5 Hz), 3.23-3.35 (m, 1H), 3.49 (s, 1H), 3.88-4.02 (m, 1H), 5.84-5.92 (m, 1H), 7.13 (t, 2H, J = 8.4 Hz), 7.65 (d, 2H, J = 8.1 Hz).

Example 8 Synthesis of Compound (I-5)

Step 1

**[0122]**

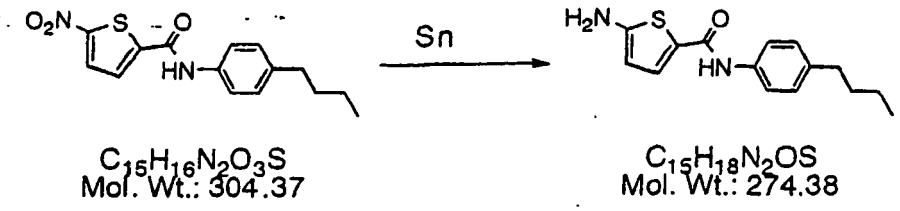



**[0123]** The desired compound was synthesized in a similar manner to Step 2 in Example 1.

$^1$H-NMR ($CDCl_3$) δ ppm: 0.94 (t, 3H, J = 7.5 Hz), 1.30-1.42 (m, 2H), 1.50-1.65 (m, 2H), 2.61 (t, 2H, J = 7.8 Hz), 7.20 (d, 2H, J = 7.2 Hz), 7.48-7.51 (m, 3H), 7.72 (s, 1H), 7.88-7.90 (m, 1H).

Step 2

**[0124]**



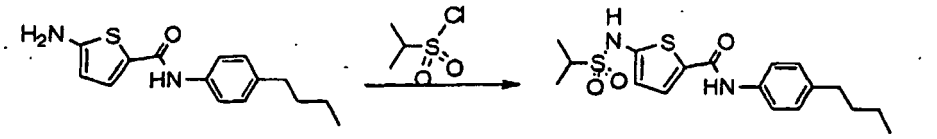

$C_{15}H_{16}N_2O_3S$
Mol. Wt.: 304.37

$C_{15}H_{18}N_2OS$
Mol. Wt.: 274.38

**[0125]** To a mixture of a starting material nitro compound (593 mg, 1.95 mmol) and tin (358 mg, 3.0 mmol), 30 ml of 6 mol/l HCl and 6 ml of THF were added and reacted at 50 °C for 3 hours. After cooling, the solvent was removed and the residue was neutralized 10 % with NaOH and extracted with chloroform. The organic layer was washed with water and dried over magnesium sulfate anhydride. The solvent was removed under reduced pressure and the residue was purified by silica gel chromatography to give the desired compound (110 mg, 21 % yield).
$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.2 Hz), 1.26-1.39 (m, 2H), 1.49-1.59 (m, 2H), 2.50 (t, 2H, J = 7.8 Hz), 4.37 (s, 1H), 6.65 (d, 2H, J = 8.4 Hz), 6.97 (d, 2H, J = 8.4 Hz), 7.14 (d, 1H, J = 8.4 Hz), 7.43 (d, 1H, J = 8.7 Hz).

Step 3

**[0126]**



$C_{15}H_{18}N_2OS$
Mol. Wt.: 274.38

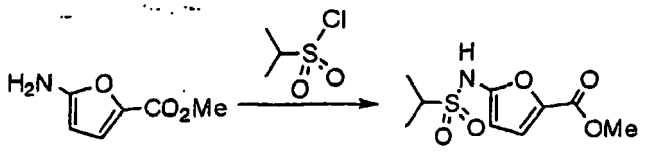
$C_{18}H_{24}N_2O_3S2$
Mol. Wt.: 380.53

**[0127]** The desired compound was synthesized in a similar manner to Step 4 in Example 1.
$^1$H-NMR ($CDCl_3$) δ ppm: 0.92 (t, 3H, J = 7.2 Hz), 1.28-1.41 (m, 2H), 1.46 (d, 6H, J = 6.9 Hz), 1.53-1.63 (m, 2H), 2.59 (t, 2H, J = 7.8 Hz), 3.35-3.44 (m, 1H), 7.15 (d, 2H, J = 8.7 Hz), 7.38 (s, 1H), 7.45 (d, 2H, J = 8.7 Hz), 7.57 (s, 1H).

Example 9 Synthesis of Compound (I-4)

Step 1

**[0128]**



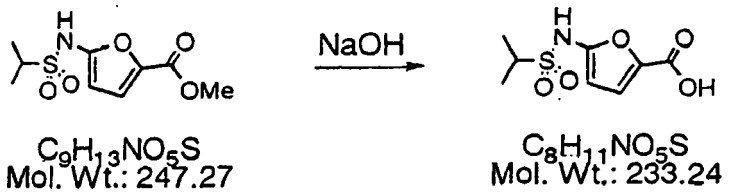
$C_6H_7NO3$
Mol. Wt.: 141.12

$C_9H_{13}NO_5S$
Mol. Wt.: 247.27

**[0129]** The desired compound was synthesized in a similar manner to Step 4 in Example 1.
$^1$H-NMR ($CDCl_3$) δ ppm: 1.44 (d, 6H, J = 6.9 Hz), 3.33-3.43 (m, 1H), 3.88 (s, 9H), 6.24-6.26 (m, 1H), 7.11-7.14 (m, 2H).

Step 2

**[0130]**



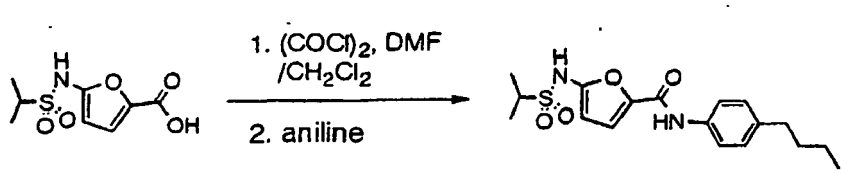

$C_9H_{13}NO_5S$
Mol. Wt.: 247.27

$C_8H_{11}NO_5S$
Mol. Wt.: 233.24

**[0131]** The desired compound was synthesized in a similar manner to Step 4 in Example 4.
$^1$H-NMR ($CDCl_3$) δ ppm: 1.44 (d, 6H, J = 6.3 Hz), 3.33-3.45 (m, 1H), 6.25-6.28 (m, 1H), 7.27-7.28 (m, 1H), 7.51 (s, 1H).

Step 3

**[0132]**




$C_8H_{11}NO_5S$
Mol. Wt.: 233.24

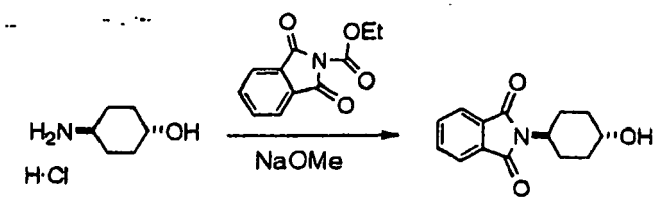
$C_{18}H_{24}N_2O_4S$
Mol. Wt.: 364.46

**[0133]** The desired compound was synthesized in a similar manner to Step 2 in Example 1.
$^1$H-NMR ($CD_3OD$) δ ppm: 0.92 (t, 3H, J = 6.9 Hz), 1.28-1.41 (m, 2H), 1.46 (d, 6H, J = 6.3 Hz), 1.53-1.63 (m, 2H), 2.58 (t, 2H, J = 7.8 Hz), 3.33-3.43 (m, 1H), 6.27-6.29 (m, 1H), 7.14-7.16 (m, 3H), 7.50 (d, 2H, J = 8.4 Hz), 7.90 (s, 1H).

Example 10 Synthesis of Compound (I-28)

Step 1

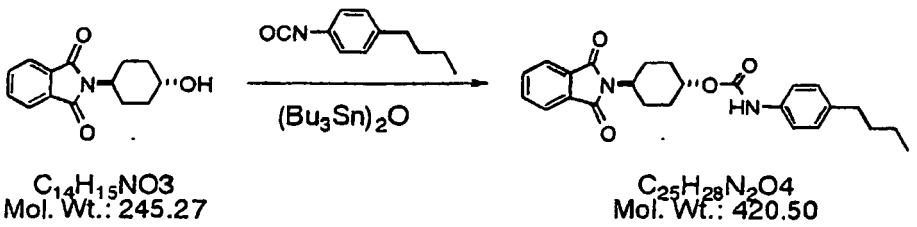
**[0134]**




$C_6H_{14}ClNO$
Mol. Wt.: 151.63

$C_{14}H_{15}NO3$
Mol. Wt.: 245.27

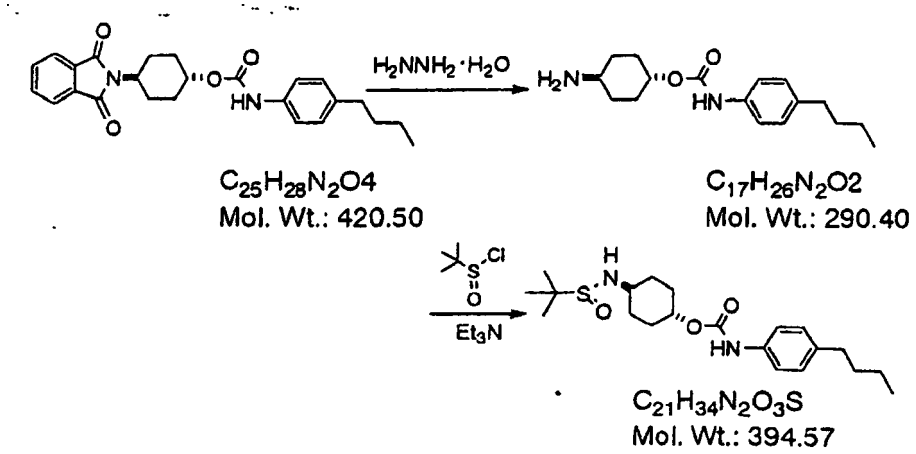
**[0135]** The desired compound was synthesized in a similar manner to Step 1 in Example 1.
$^1$H-NMR ($CDCl_3$) δ ppm: 1.37-1.52 (m, 3H), 1.74-1.79 (m, 2H), 2.07-2.13 (m, 2H), 2.28-2.42 (m, 2H), 3.72-3.81 (m, 1H), 4.09-4.20 (m, 1H), 7.68-7.73 (m, 2H), 7.81-7.85 (m, 2H). Step 2




**[0136]** 4-butylphenyl isocyanate (2.85 g, 16.3 mmol) was dissolved in 30 ml of THF, and a starting material alcohol (1.0 g, 4.08 mmol) and bis(tributyltin)oxide (972 mg, 1.63 mmol) were added. After the mixture was stirred overnight, the solvent was removed, water was added and the solution was extracted with chloroform. The organic layer was washed with water and dried over magnesium sulfate anhydride. The solvent was removed under reduced pressure and the residue was purified by silica gel chromatography to give the desired compound (332 mg, 19 % yield).
$^1$H-NMR ($CDCl_3$) δ ppm: 0.92 (t, 3H, J = 6.9 Hz), 1.30-1.40 (m, 2H), 1.48-1.62 (m, 4H), 1.79-1.83 (m, 2H), 2.21-2.25 (m, 2H), 2.37-2.50 (m, 2H), 2.57 (t, 2H, J = 7.8 Hz), 4.11-4.22 (m, 1H), 4.77-4.87 (m, 1H), 6.49 (s, 1H), 7.11 (d, 2H, J = 8.7 Hz), 7.28 (d, 2H, J = 8.7 Hz), 7.69-7.73 (m, 2H), 7.80-7.84 (m, 2H).

Step 3

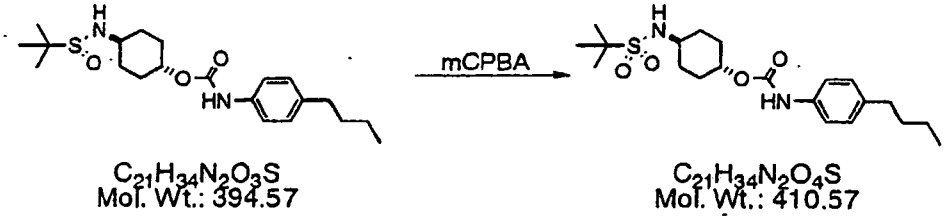
**[0137]**




**[0138]** The desired compound was synthesized in similar manners to Step 3 in Example 1 and Example 2.
$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.2 Hz), 1.21 (s, 9H), 1.30-1.62 (m, 8H), 2.08 (d, 4H, J = 11.1 Hz), 2.56 (t, 2H, J = 7.8 Hz), 3.04 (d, 1H, J = 4.8 Hz), 3.20-3.30 (m, 1H), 4.65-4.76 (m, 1H), 6.57 (s, 1H), 7.10 (d, 2H, J = 8.7 Hz), 7.26 (d, 2H, J = 8.1Hz).

Example 11 Synthesis of Compound (I-29)

**[0139]**



**[0140]** The desired compound was synthesized in a similar manner to Example 3.
$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.2 Hz), 1.23-1.62 (m, 8H), 1.40 (s, 9H), 2.12 (d, 4H, J = 14.4 Hz), 2.56 (t, 2H, J = 7.8 Hz), 3.28-3.40 (m, 1H), 3.90 (s, 1H), 4.60-4.73 (m, 1H), 6.57 (s, 1H), 7.10 (d, 2H, J = 8.4 Hz), 7.25 (d, 2H, J = 8.4Hz).

Example 12 Synthesis of Compound (I-114)

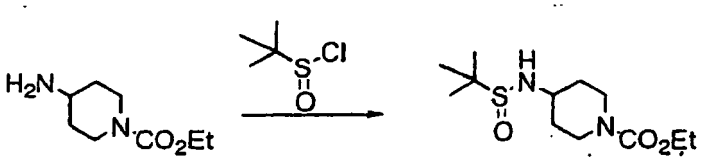
**[0141]**

**[0142]** Lawesson's reagent [2,4-bis(4-methoxyphenyl)-1,3-dithia-2,4-diphosphetane-2,4-disulfide] (132 mg) was added to a solution of 100 mg of Compound (I-110) synthesized in a similar manner to Example 1 in toluene (2.7 ml) and the mixture was stirred at 80 °C for 3 hours. The reactant was concentrated under reduced pressure and the residue was purified by silica gel chromatography (ethyl acetate: n-hexane=1:1) to give pale yellow crystals (82.3 mg, 79 %). The crystals were recrystallized from methylene chloride-diisopropyl ether to give the desired compound as colorless needles (50.5 mg, 48 %).

Example 13 Synthesis of Compound (I-120)

Step 1

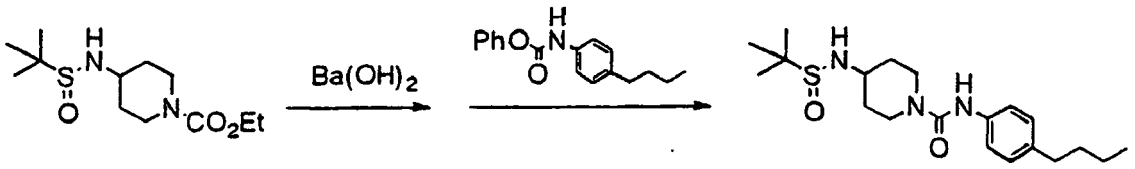
**[0143]**



**[0144]** Ethyl 4-amino-1-piperidinecarboxylate (300 mg) and triethylamine (258 mg) were dissolved in 5 ml of dichloromethane. To the mixture, 2 ml of solution of t-butylsulfinyl chloride (222 mg) in dichloromethane was added and the mixture was stirred at room temperature for 4 hours. The solution was partitioned into an aqueous solution of potassium hydrogen sulfate and ethyl acetate. The organic layer was washed with brine and dried over magnesium sulfate anhydride. The solvent was removed under reduced pressure and the residue was purified by silica gel chromatography to give 378 mg of 4-t-butylsulfiny amino-1-ethoxycarbonyl piperidine.

Step 2

**[0145]**



**[0146]** In a mixture of 5 ml of 2-propanol and 5 ml of water, 378 mg of 4-t-butylsulfinylamino-1-ethoxycarbonyl piperidine was suspended and 1.77 g of barium hydroxide was added. The mixture was refluxed with stirring and heating for 4 hours. The mixture was diluted with methanol and the insoluble material was filtered off. The solvent was removed under

reduced pressure to give 4-t-butylsulfinylaminopiperidine. Without purification, the obtained material was dissolved in 5 ml of THF, and 984 mg of N-phenoxycarbonyl-4-butyl aniline and 236 mg of diisopropyl ethylamine were added, followed by stirring at room temperature overnight. An aqueous solution of potassium hydrogen sulfate was added to the mixture and the mixture was extracted with ethyl acetate. The organic layer was washed with brine and dried over magnesium sulfate anhydride. The solvent was removed under reduced pressure and the residue was purified by silica gel chromatography to give 291 mg of 4-t-butylsulfinylaminopiperidine-1-carboxlic acid(4-t-butylphenyl)amide.

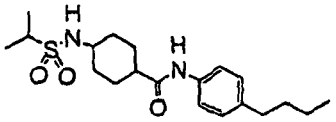
$^1$H-NMR ($CDCl_3$) δ ppm:0.89(t, 3H, J = 7.3Hz), 1.19(s, 9H), 1.25-1.38(m, 4H), 1.40-1.60(m, 4H), 1.89-2.03(m, 3H), 2.52 (t, 2H, J = 7.7Hz), 2.89-3.04(m, 2H), 3.14(d, 1H, J = 5.2 Hz), 3.37(m, 1H), 3.96(m, 2H), 6.67(s, 1H), 7.05(d, 2H, J = 8.5Hz), 7.22(d, 2H, J = 8.5Hz).

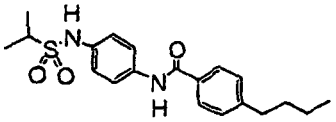
Step 3

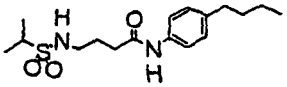
**[0147]**

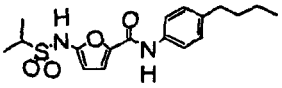

**[0148]** In a mixture of 2 ml of methanol and 2 ml of methylene chloride, 291 mg of 4-t-butylsulfinyl aminopiperidine-1-carboxlic acid(4-t-butylphenyl)amide was dissolved. To the mixture, 570 mg of 80%-MMPP (magnesium monoperoxyphthalate hexahydrate) was added and the mixture was stirred at room temperature for 2 hours. The solution was diluted with water and extracted with ethyl acetate. The organic layer was washed with brine and dried over magnesium sulfate anhydride. The solvent was removed under reduced pressure and the residue was purified by silica gel chromatography to give 130 mg of 4-t-butylsulfonylaminopiperidine-1-carboxylic acid(4-butylphenyl)amide (I-120).

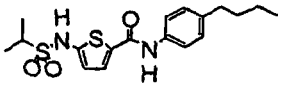
**[0149]** Other Compounds (I) are synthesized by the similar methods. The structures and physical properties are shown below.

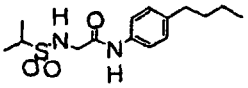
I-1 

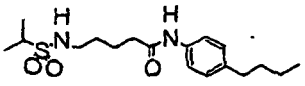
I-2 

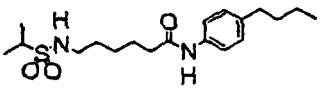
I-3 

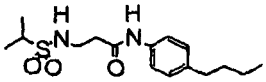
I-4 

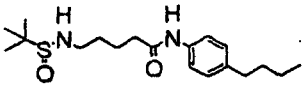
I-5 

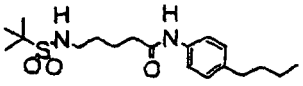
I-6 

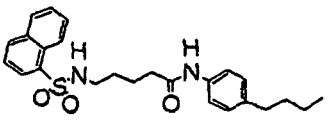
I-7 

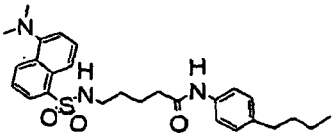
I-8 

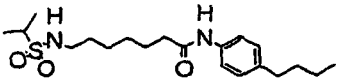
I-9 

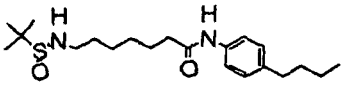
I-10 

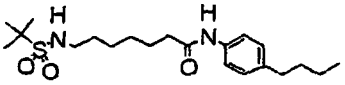
I-11 

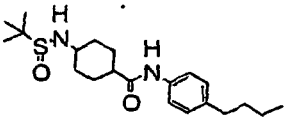
I-12 

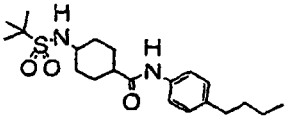
I-13 

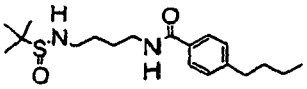
I-14 

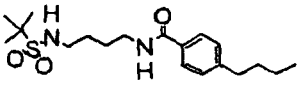
I-15 

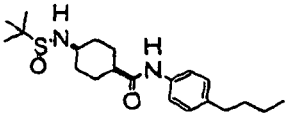
I-16 

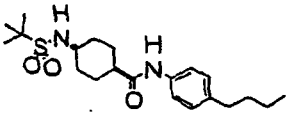
I-17 

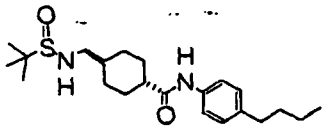
I-18 

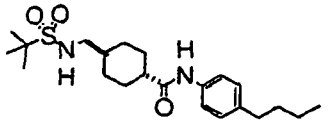
I-19 

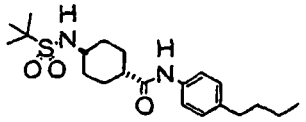
I-20 

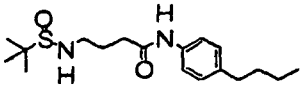
I-21 

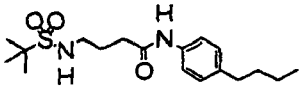
I-22 

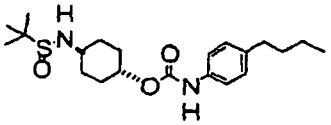
I-23 

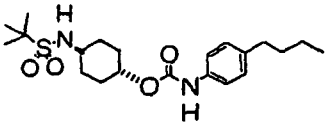
I-24 

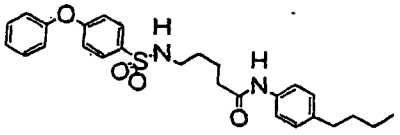
I-25 

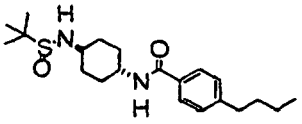
I-26 

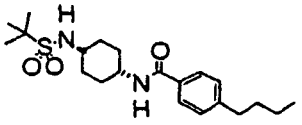
I-27 

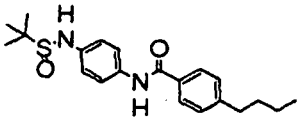
I-28 

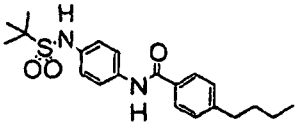
I-29 

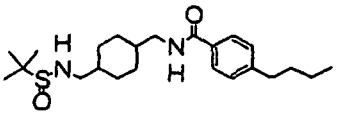
I-30 

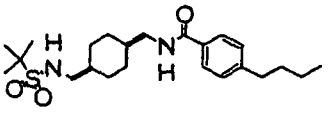
I-31 

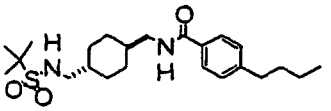
I-32 

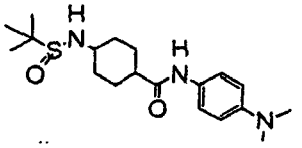
I-33 

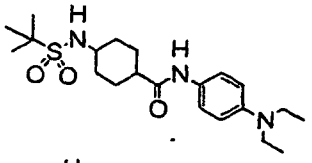
I-34 

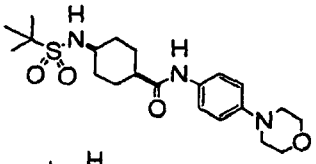
I-35 

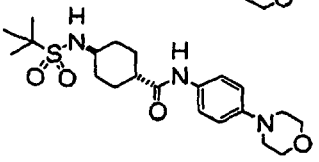
I-36 

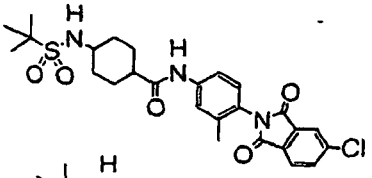
I-37 

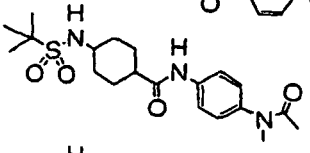
I-38 

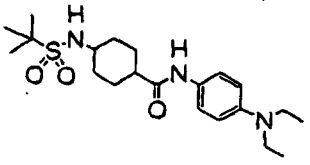
I-39 

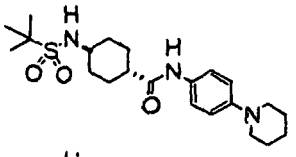
I-40 

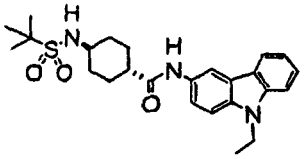
I-41 

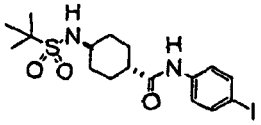
I-42 

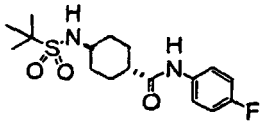
I-43 

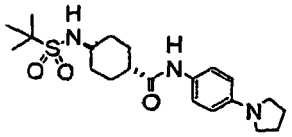
I-44 

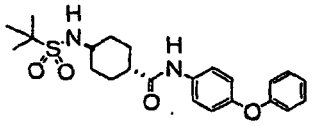
I-45 

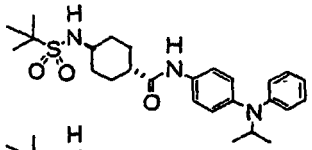
I-46 

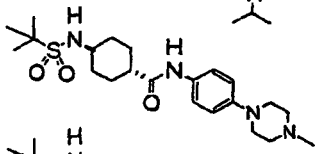
I-47 

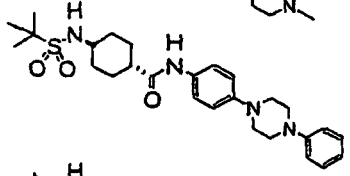
I-48 

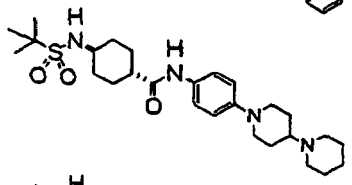
I-49 

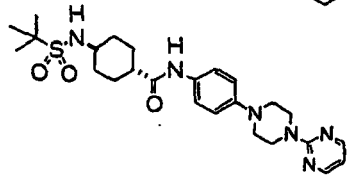
I-50 

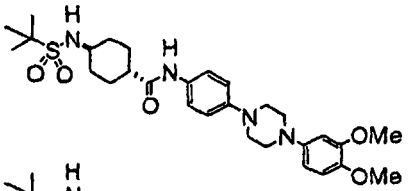
I-51 

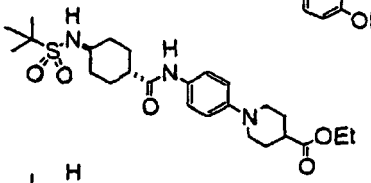
I-52 

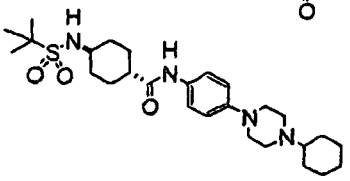
I-53 

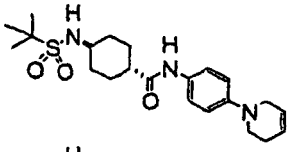
I-54 

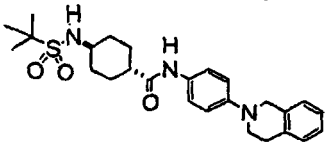
I-55 

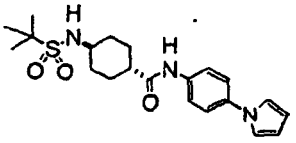
I-56 

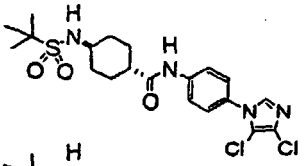
I-57 

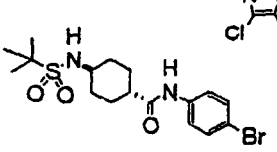
I-58 

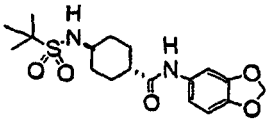
I-59 

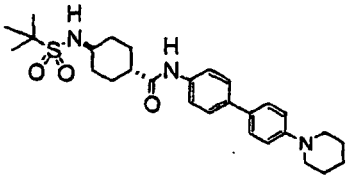
I-60 

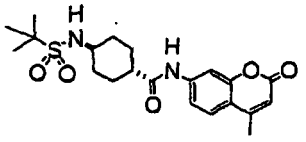
I-61 

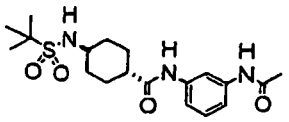
I-62 

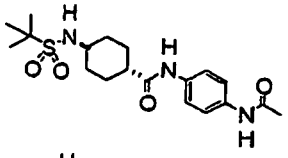
I-63 

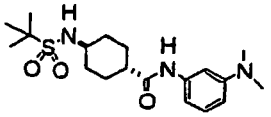
I-64 

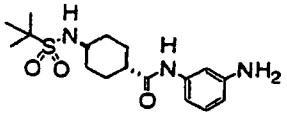
I-65 

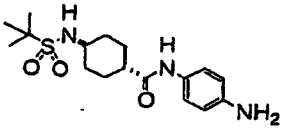
I-66 

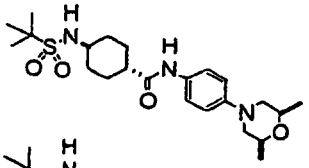
I-67 

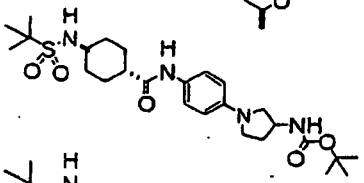
I-68 

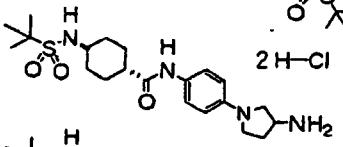
I-69 

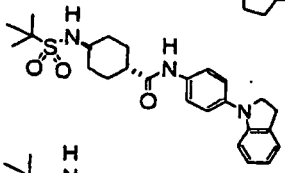
I-70 

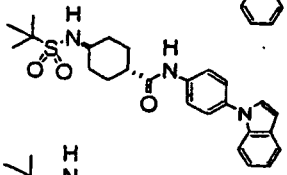
I-71 

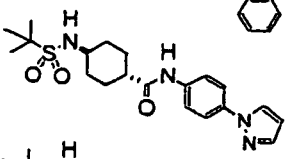
I-72 

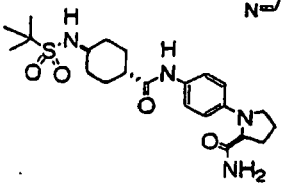
I-73 

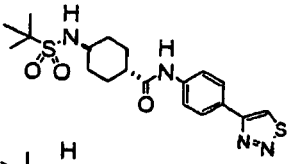
I-74 

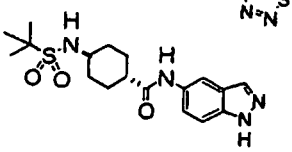
I-75 

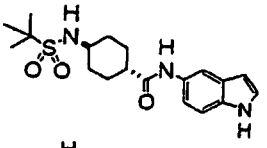
I-76 

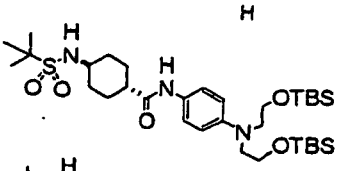
I-77 

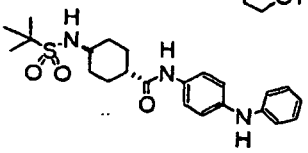
I-78 

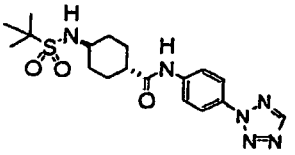
I-79 

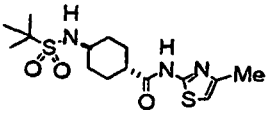
I-80 

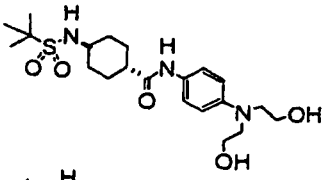
I-81 

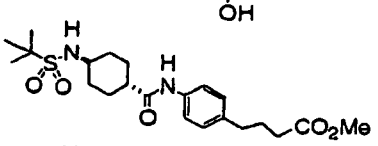
I-82 

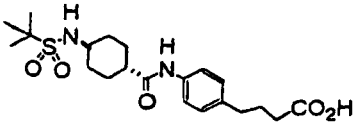
I-83 

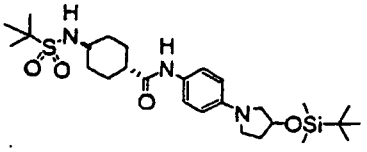
I-84 

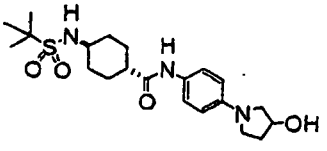
I-85 

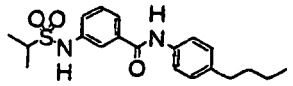
I-86 

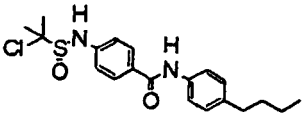
I-87 

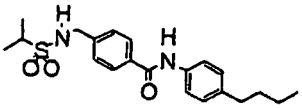
I-88 

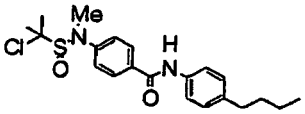
I-89 

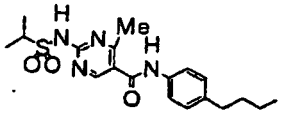
I-90 

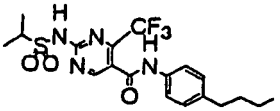
I-91 

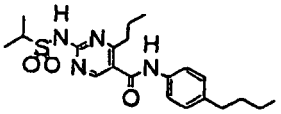
I-92 

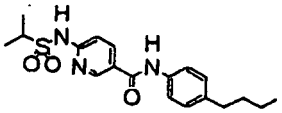
I-93 

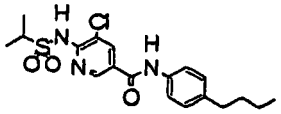
I-94 

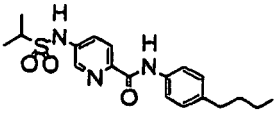
I-95 

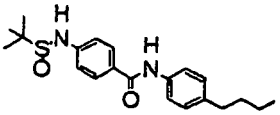
I-96 

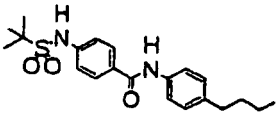
I-97 

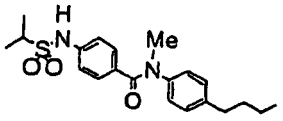
I-98 

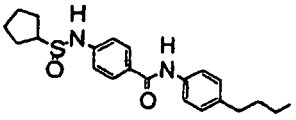
I-99 

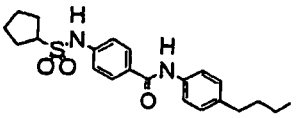
I-100 

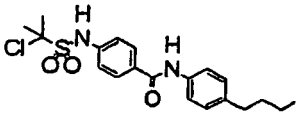
I-101 

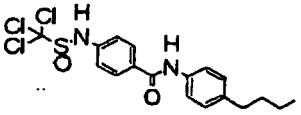
I-102 

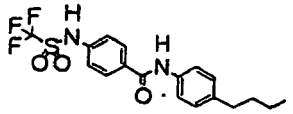
I-103 

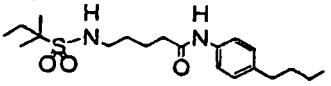
I-104 

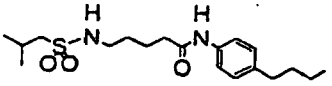
I-105 

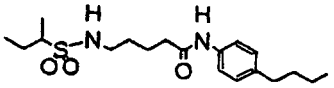
I-106 

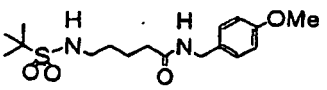
I-107 

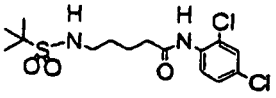
I-108 

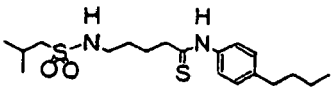
I-109 

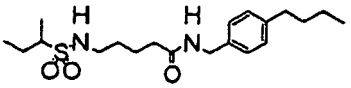
I-110 

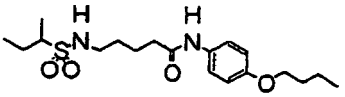
I-111 

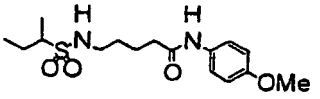
I-112 

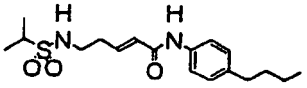
I-113 

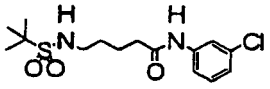
I-114 

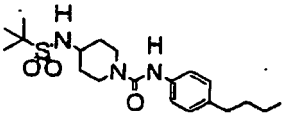
I-115 

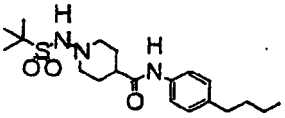
I-116 

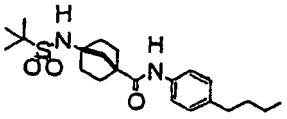
I-117 

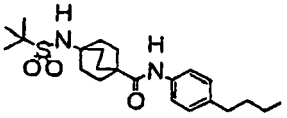
I-118 

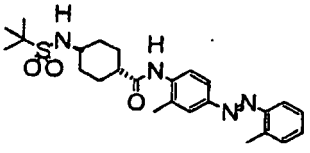
I-119 

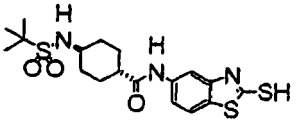
I-120 

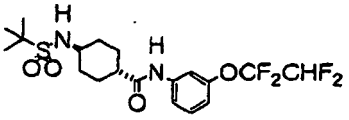
I-121 

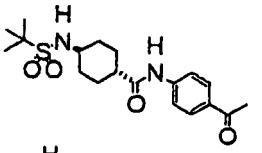
I-122 

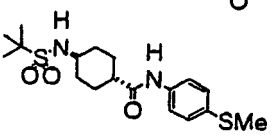
I-123 

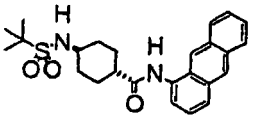
I-124 

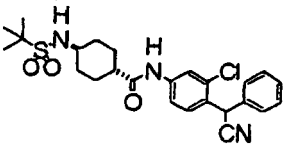
I-125 

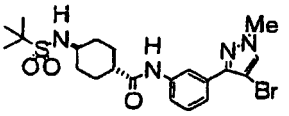
I-126 

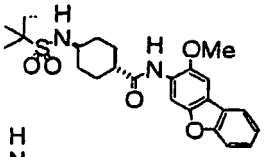
I-127 

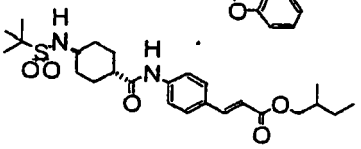
I-128 

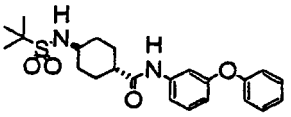
I-129 

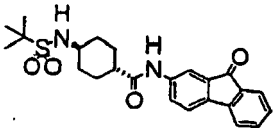
I-130 

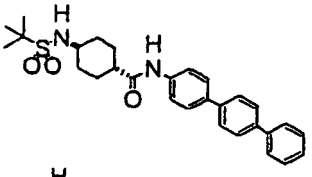
I-131 

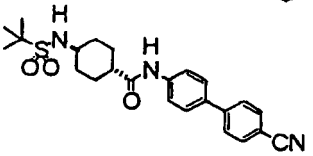
I-132 

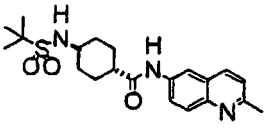
I-133 

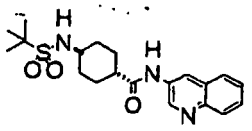
I-134 

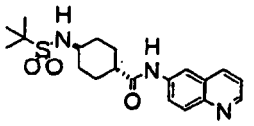
I-135 

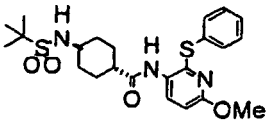
I-136 

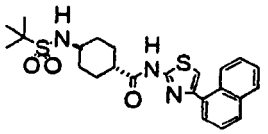
I-137 

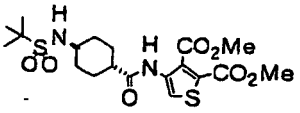
I-138 

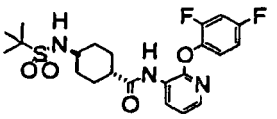
I-139 

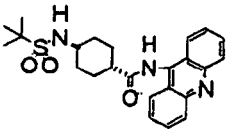
I-140 

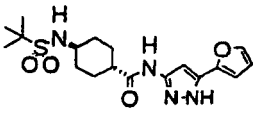
I-141 

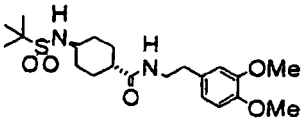
I-142 

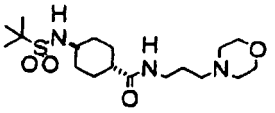
I-143 

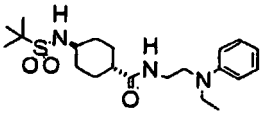
I-144 

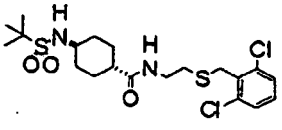
I-145 

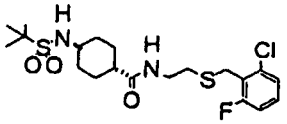
I-146 

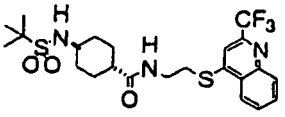
I-147 

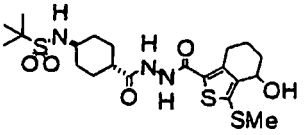
I-148 

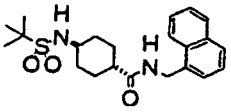
I-149 

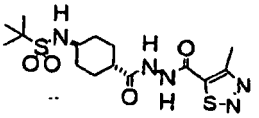
I-150 

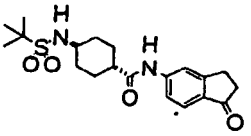
I-151 

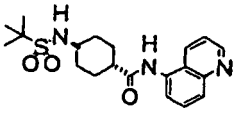
I-152 

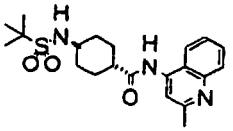
I-153 

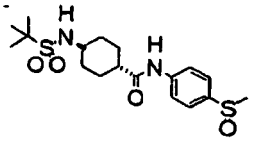
I-154 

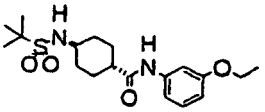
I-155 

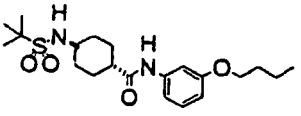
I-156 

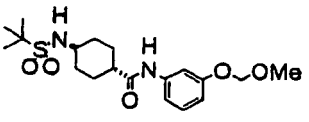
I-157 

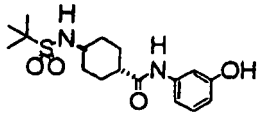
I-158 

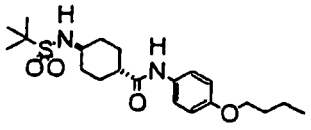
I-159 

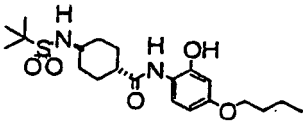
I-160 

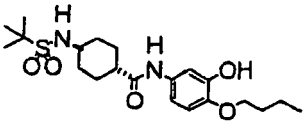
I-161 

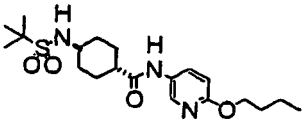
I-162 

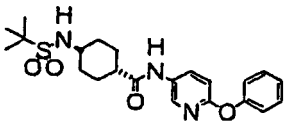
I-163 

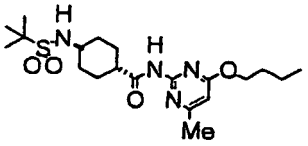
I-164 

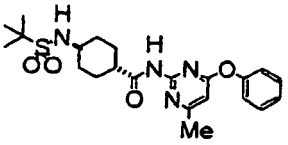
I-165 

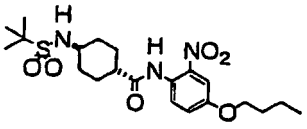
I-166 

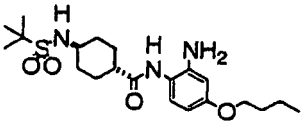
I-167 

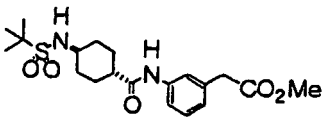
I-168 

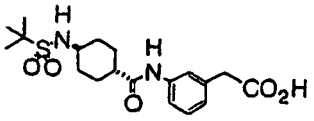
I-169 

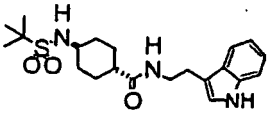
I-170 

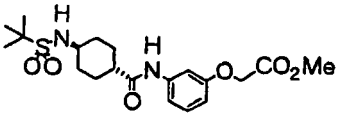
I-171 

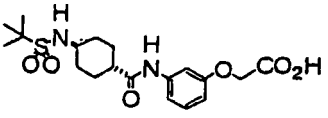
I-172 

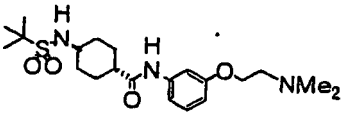
I-173 

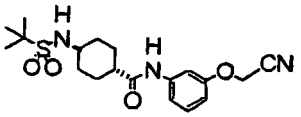
I-174 

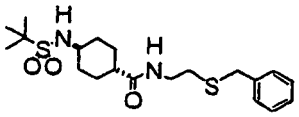
I-175 

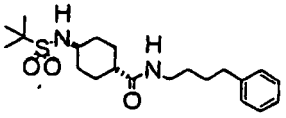
I-176 

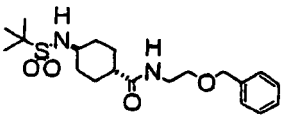
I-177 

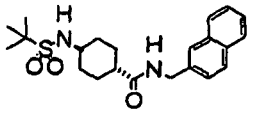
I-178 

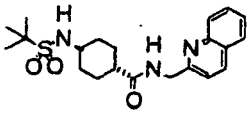
I-179 

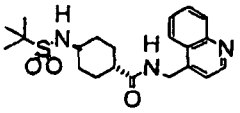
I-180 

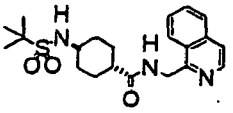
I-181 

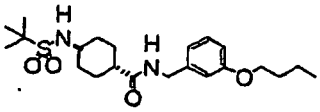
I-182 

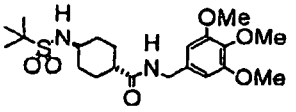
I-183 

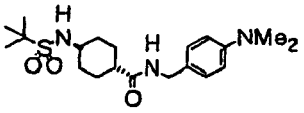
I-184 

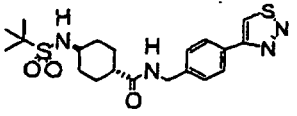
I-185 

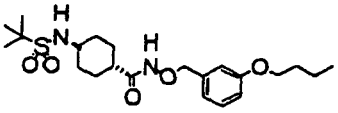
I-186 

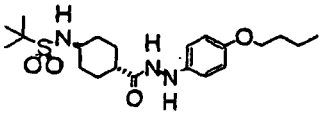
I-187 

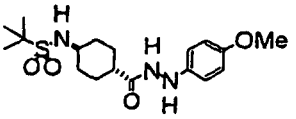
I-188 

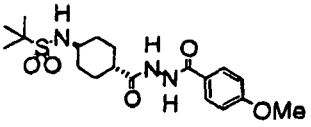
I-189 

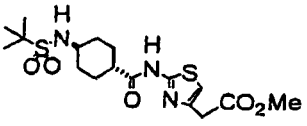
I-190 

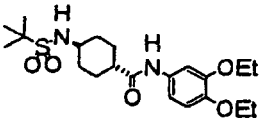
I-191 

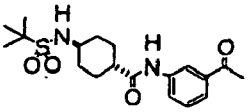
I-192 

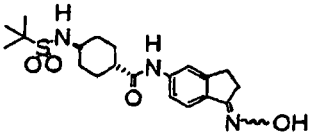
I-193 

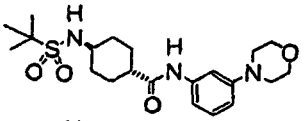
I-194 

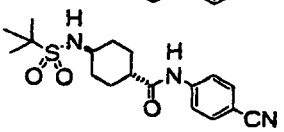
I-195 

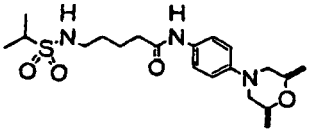
I-196 

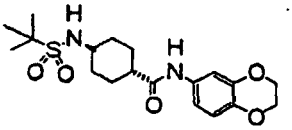
I-197 

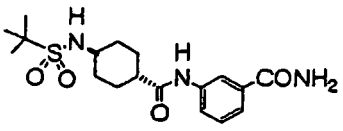
I-198 

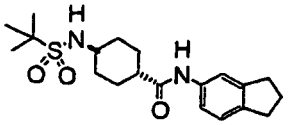
I-199 

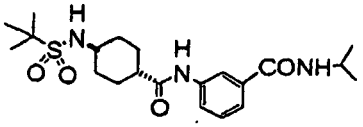
I-200 

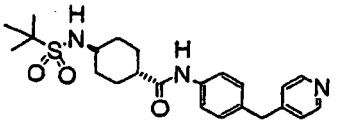
I-201 

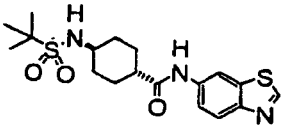
I-202 

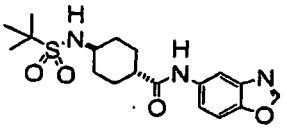
I-203 

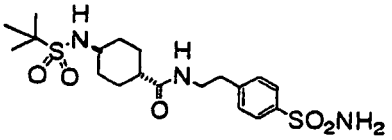
I-204 

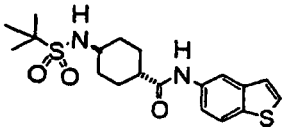
I-205 

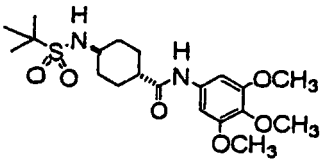
I-206 

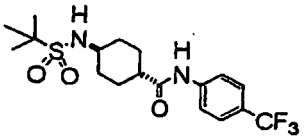
I-207 

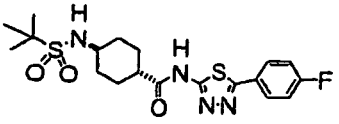
I-208 

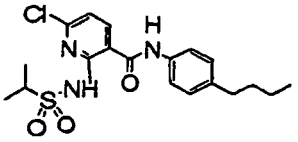
I-209 

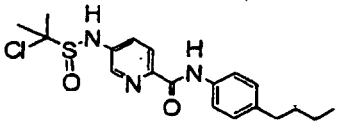
I-210 

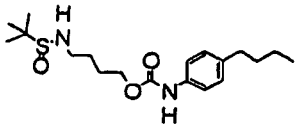
I-211 

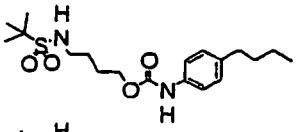
I-212 

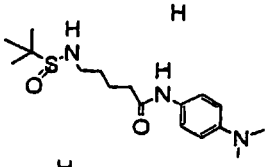
I-213 

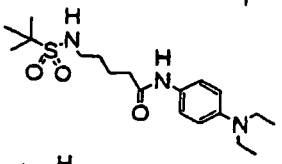
I-214 

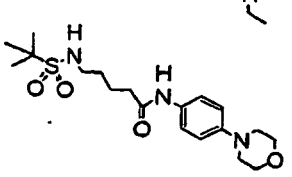
I-215 

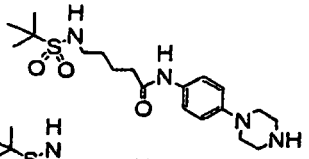
I-216 

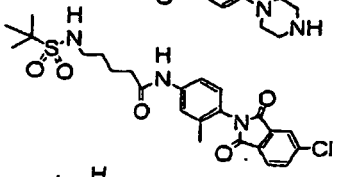
I-217 

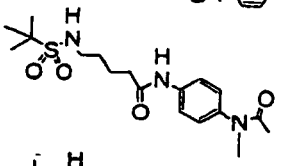
I-218 

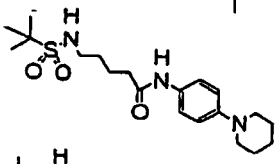
I-219 

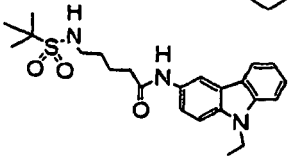
I-220 

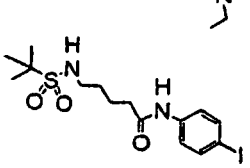
I-221 

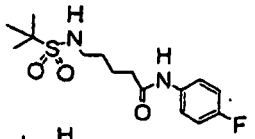
I-222 

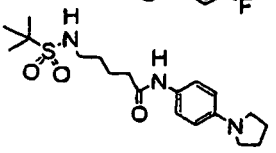
I-223 

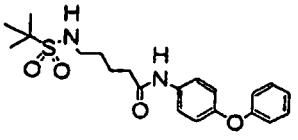
I-224 

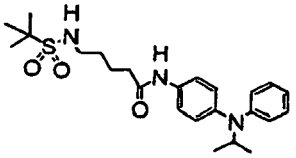
I-225 

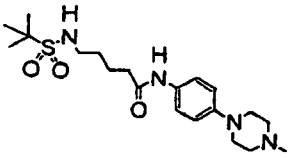
I-226 

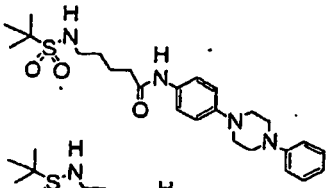
I-227 

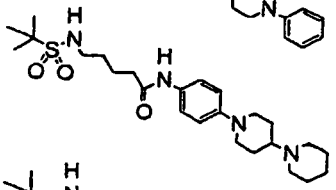
I-228 

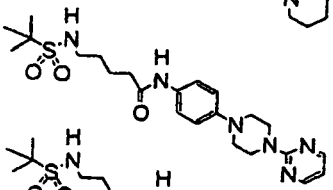
I-229 

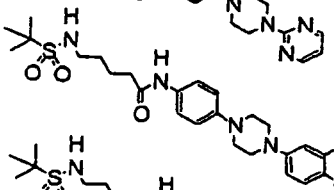
I-230 

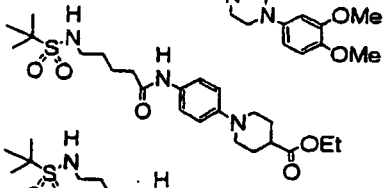
I-231 

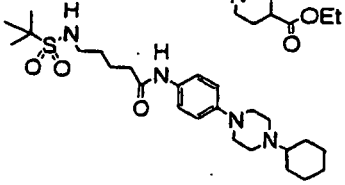
I-232 

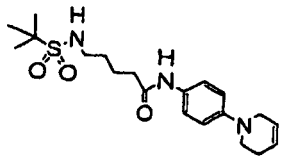
I-233 

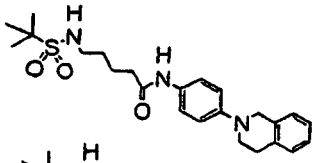
I-234 

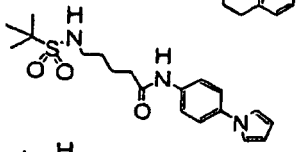
I-235 

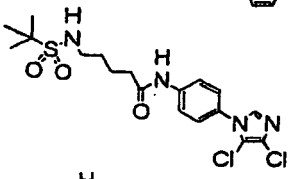
I-236 

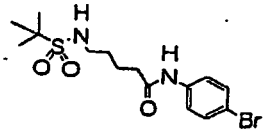
I-237 

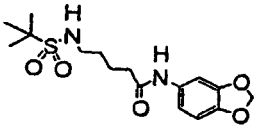
I-238 

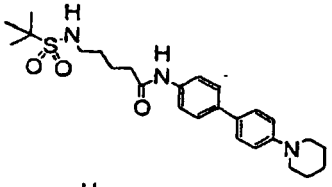
I-239 

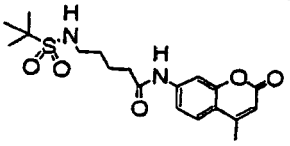
I-240 

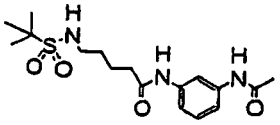
I-241 

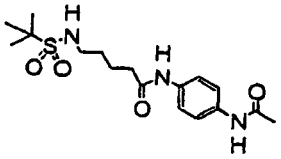
I-242 

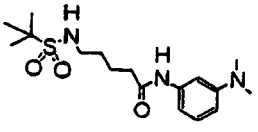
I-243 

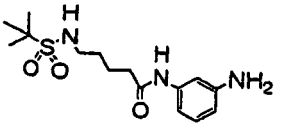
I-244 

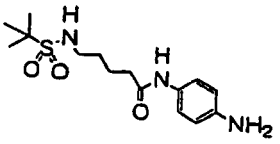
I-245 

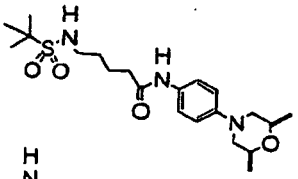
I-246 

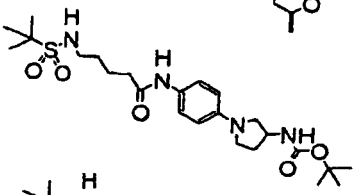
I-247 

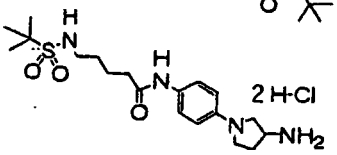
I-248 

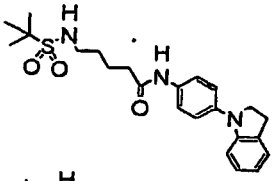
I-249 

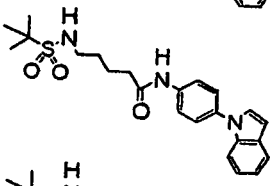
I-250 

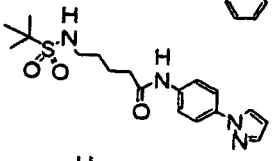
I-251 

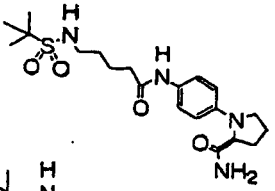
I-252 

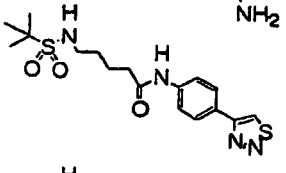
I-253 

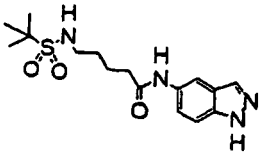

I-254 

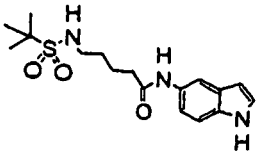
I-25 

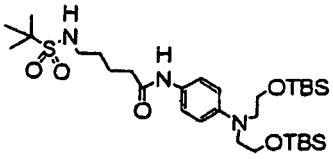
I-256 

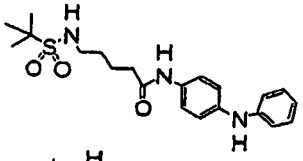
I-257 

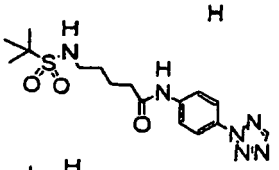
I-258 

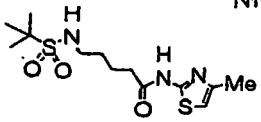
I-259 

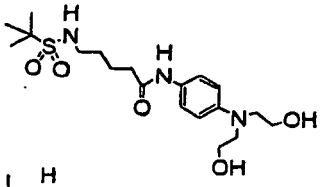
I-260 

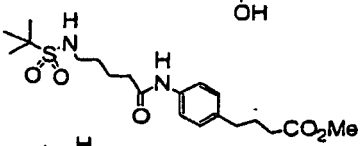
I-261 

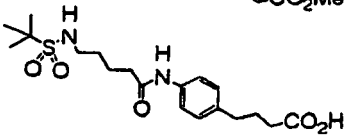
I-262 

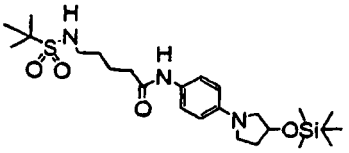
I-263 

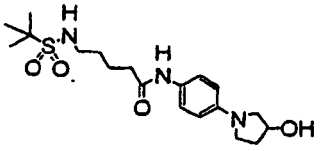
I-264 

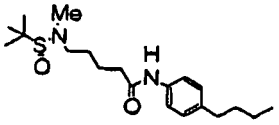
I-265 

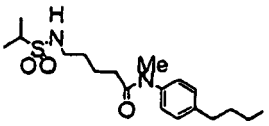
I-266 

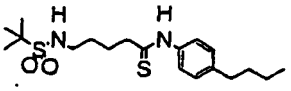
I-267 

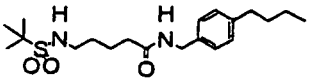
I-268 

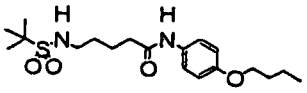
I-269 

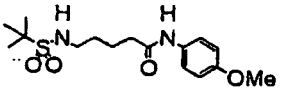
I-270 

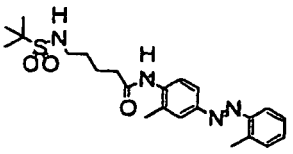
I-271 

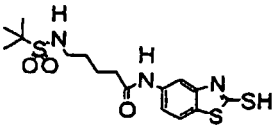
I-272 

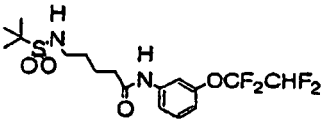
I-273 

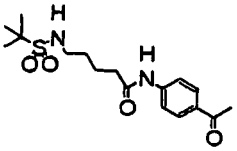
I-274 

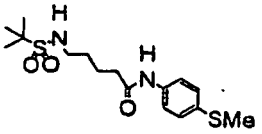
I-275 

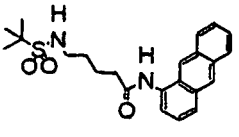
I-276 

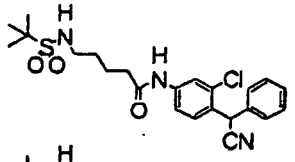
I-277 

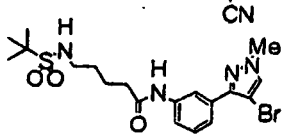
I-278 

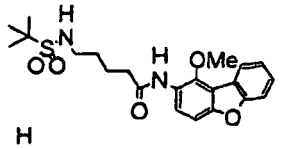
I-279 

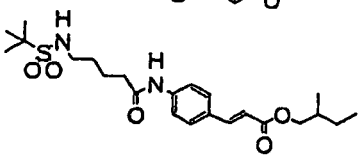
I-280 

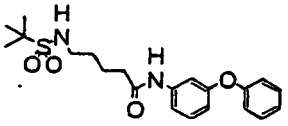
I-281 

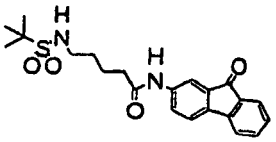
I-282 

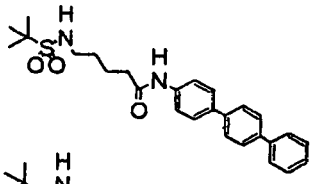
I-283 

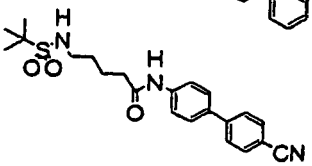
I-284 

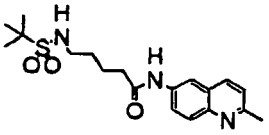
I-285 

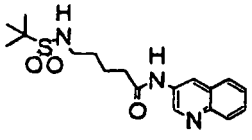
I-286 

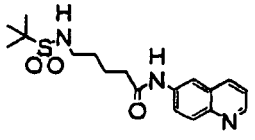
I-287 

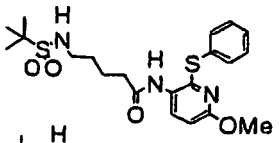
I-288 

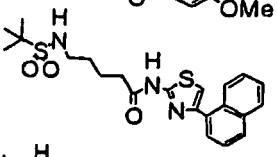
I-289 

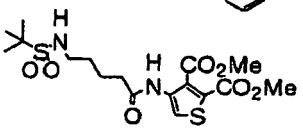
I-290 

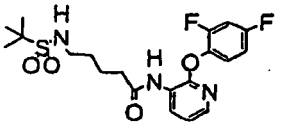
I-291 

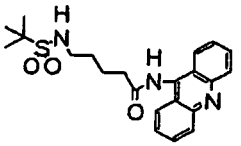
I-292 

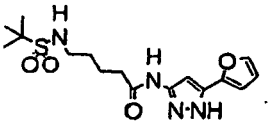
I-293 

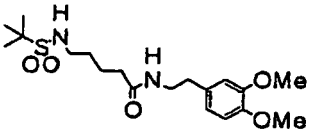
I-294 

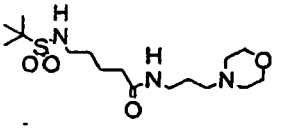
I-295 

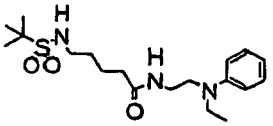
I-296 

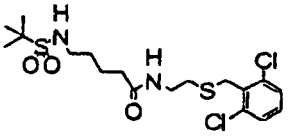
I-297 

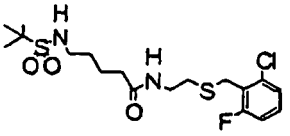
I-298 

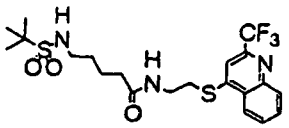
I-299 

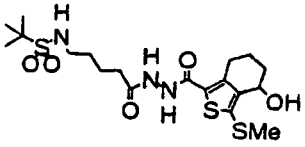
I-300 

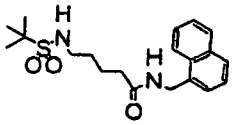
I-301 

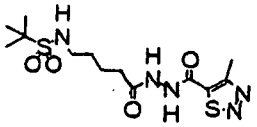
I-302 

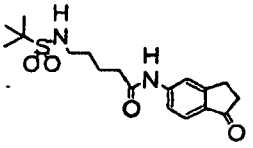
I-303 

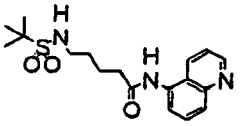
I-304 

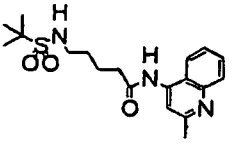
I-305 

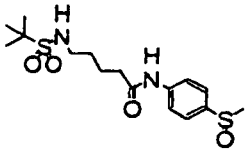
I-306 

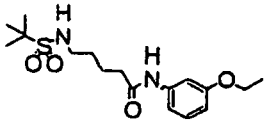
I-307 

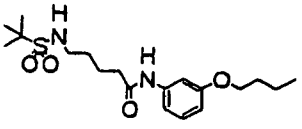
I-308 

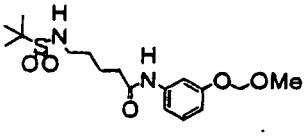
I-309 

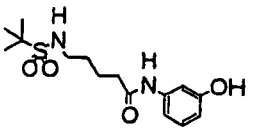
I-310 

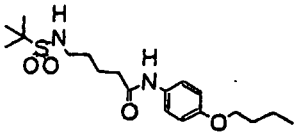
I-311 

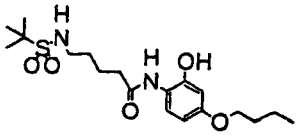
I-312 

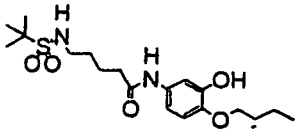
I-313 

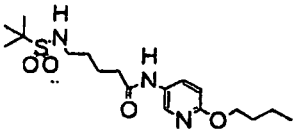
I-314 

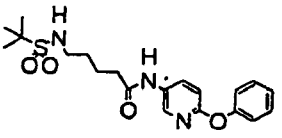
I-315 

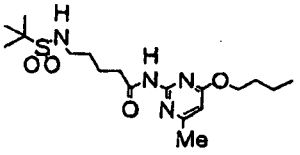
I-316 

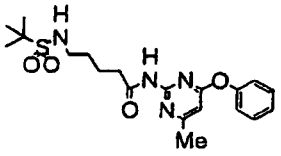
I-317 

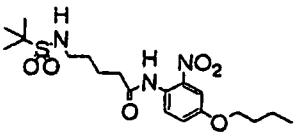
I-318 

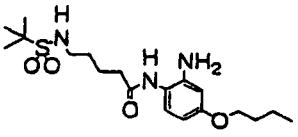
I-319 

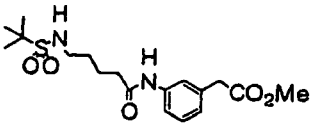
I-320 

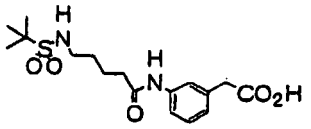
I-321 

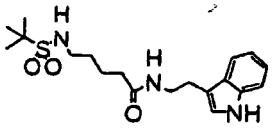
I-322 

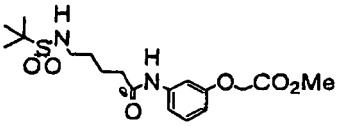
I-323 

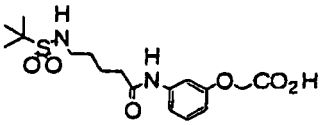
I-324 

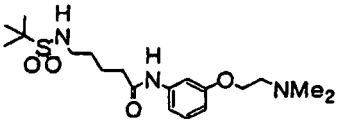
I-325 

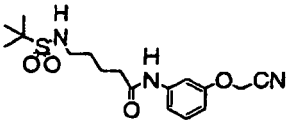
I-326 

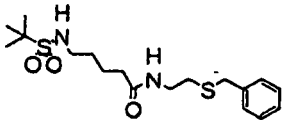
I-327 

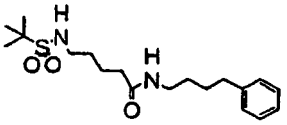
I-38 

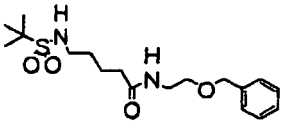
I-329 

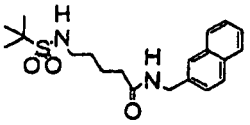
I-330 

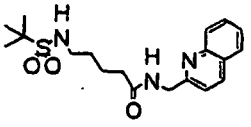
I-331 

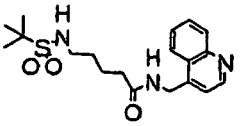
I-332 

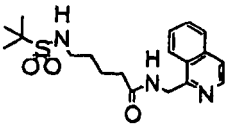
I-333 

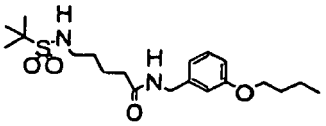
I-334 

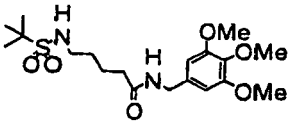
I-335 

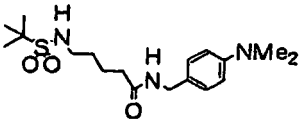
I-336 

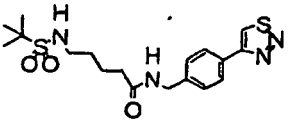
I-337 

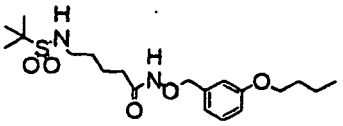
I-338 

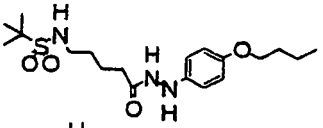
I-339 

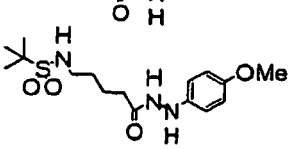
I-340 

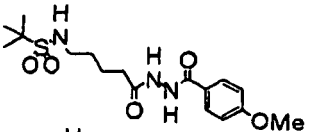
I-341 

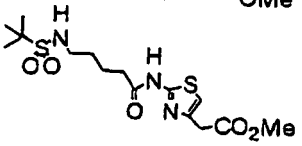
I-342 

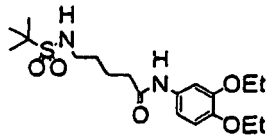
I-343 

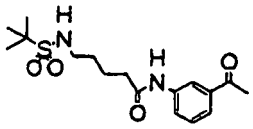
I-344 

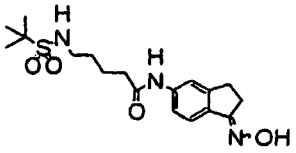
I-345 

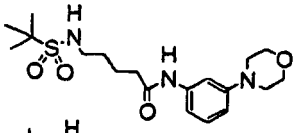
I-346 

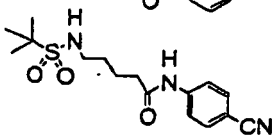
I-347 

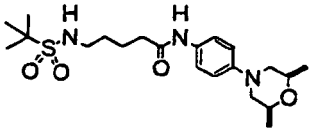
I-348 

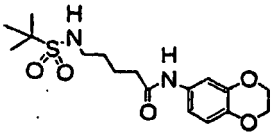
I-349 

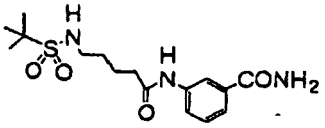
I-350 

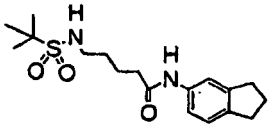
I-351 

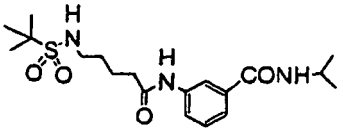
I-352 

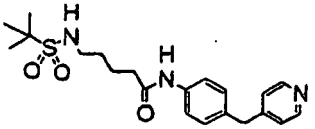
I-353 

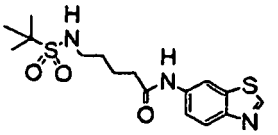
I-354 

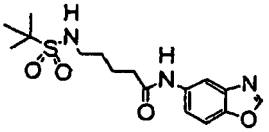
I-355 

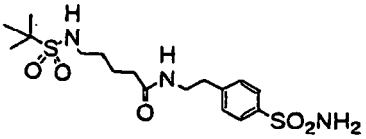
I-356 

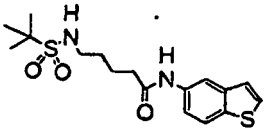
I-357 

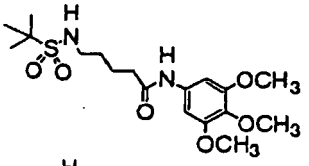
I-358 

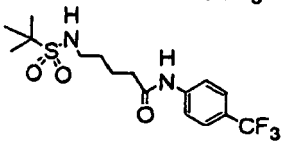
I-359 

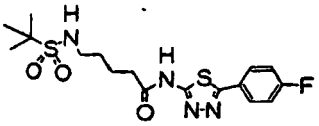
I-360 

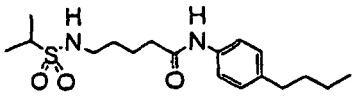
I-361 

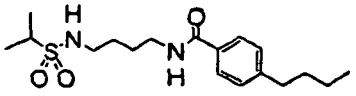
I-362 

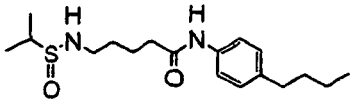
I-363 

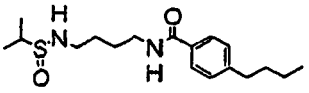
I-364 

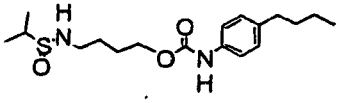
I-365 

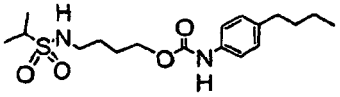
I-366 

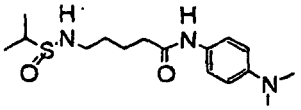
I-367 

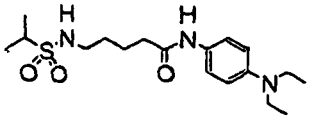
I-368 

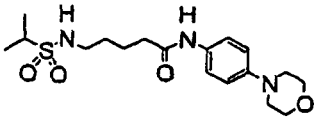
I-369 

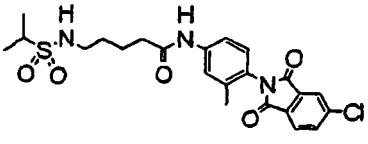
I-370 

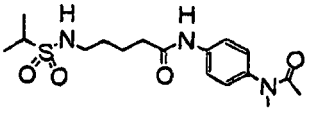
I-371 

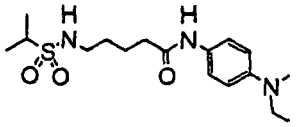
I-372 

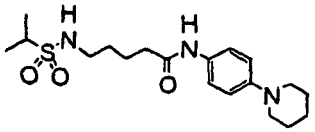
I-373 

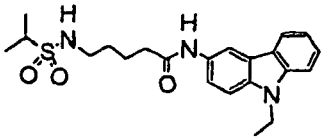
I-374 

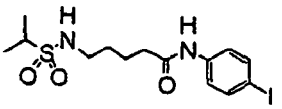
I-375 

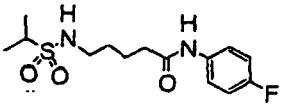
I-376 

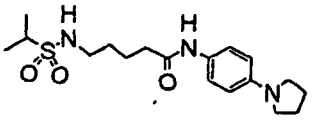
I-377 

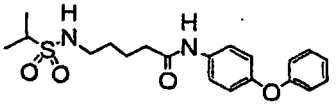
I-378 

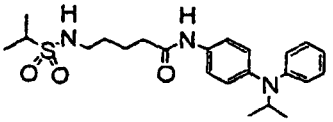
I-379 

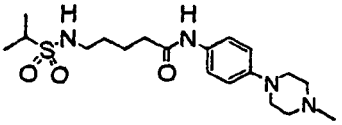
I-380 

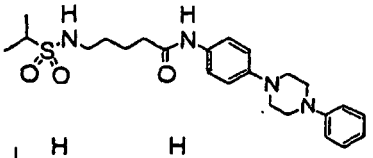
I-381 

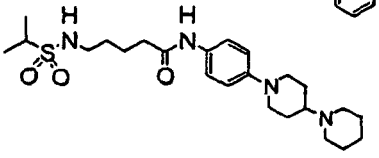
I-382 

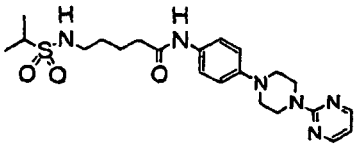
I-383 

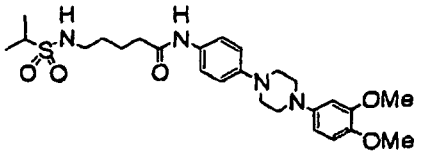
I-384 

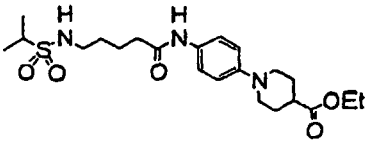
I-385 

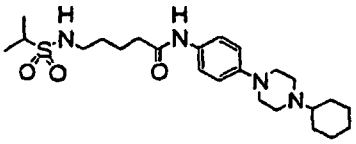
I-386 

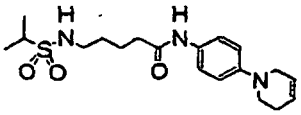
I-387 

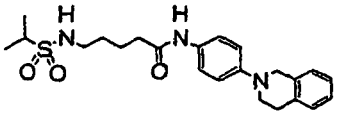
I-388 

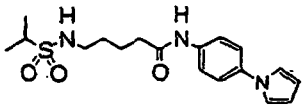
I-389 

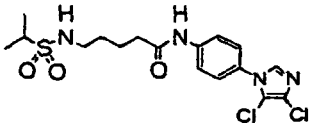
I-390 

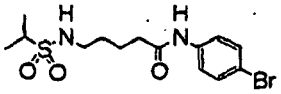
I-391 

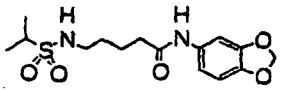
I-392 

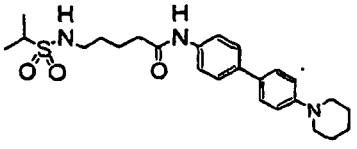
I-393 

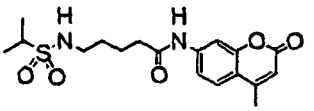
I-394 

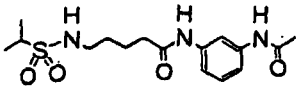
I-395 

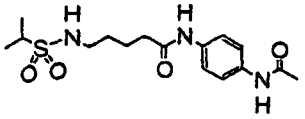
I-396 

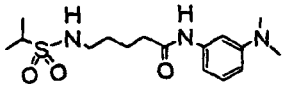
I-397 

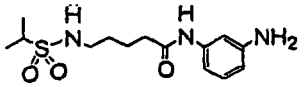
I-398 

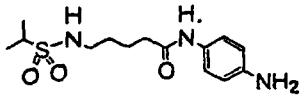
I-399 

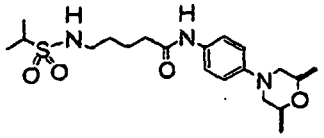
I-400 

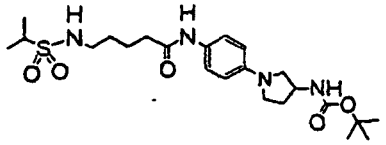
I-401 

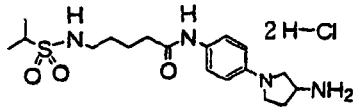
I-402 

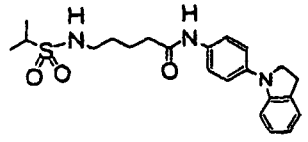
I-403 

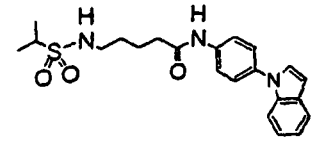
I-404 

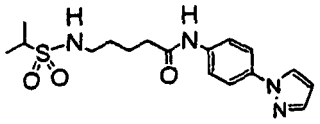
I-405 

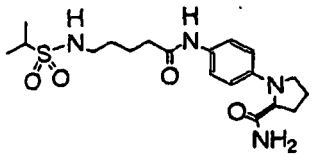
I-406 

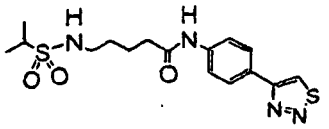
I-407 

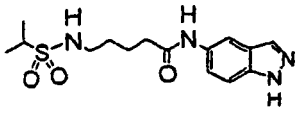

I-408 

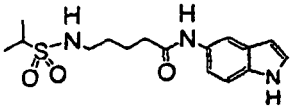
I-409 

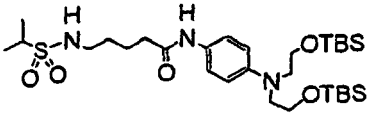
I-410 

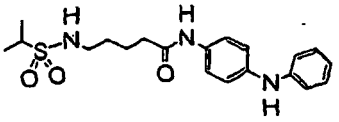
I-411 

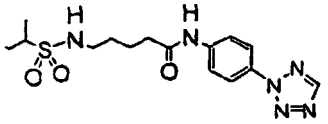
I-412 

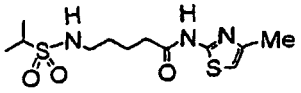
I-413 

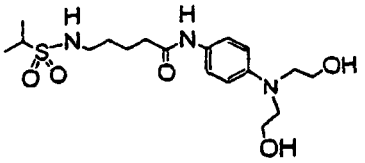
I-414 

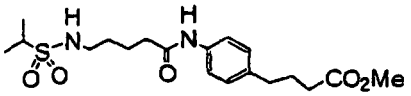
I-415 

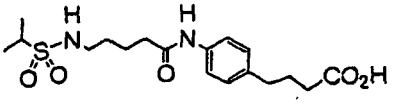
I-416 

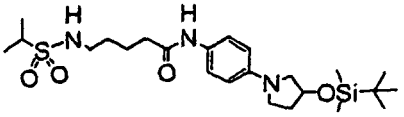
I-417 

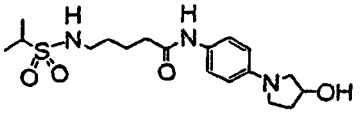
I-418 

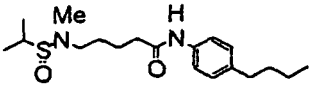
I-419 

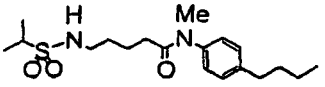
I-420 

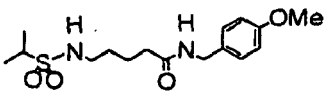
I-421 

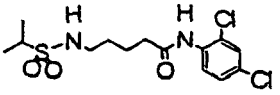
I-422 

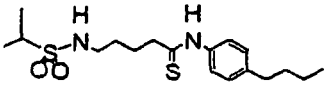
I-423 

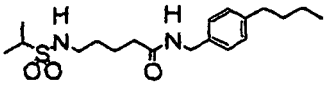
I-424 

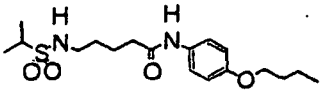
I-425 

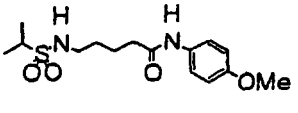
I-426 

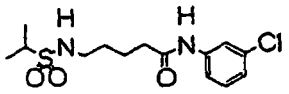
I-427 

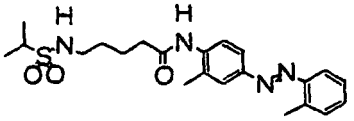
I-428 

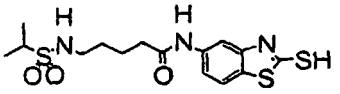
I-429 

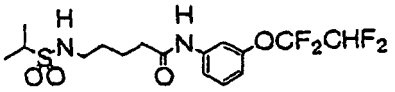
I-430 

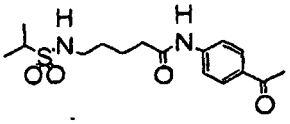
I-431 

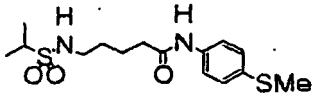
I-432 

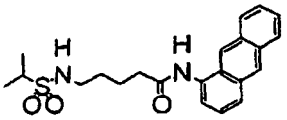
I-433 

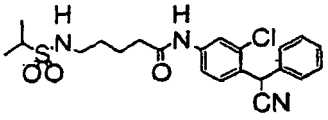
I-434 

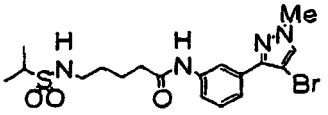
I-435 

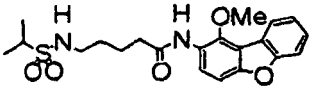
I-436 

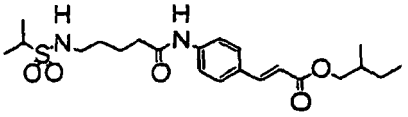
I-437 

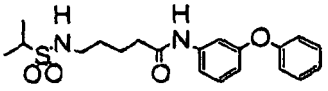
I-438 

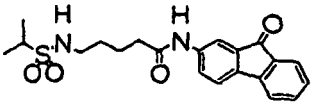
I-439 

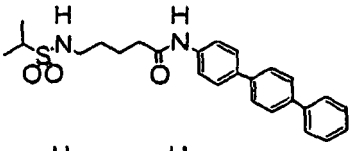
I-440 

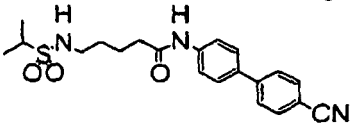
I-441 

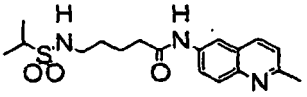
I-442 

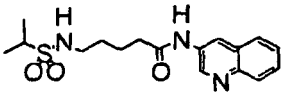
I-443 

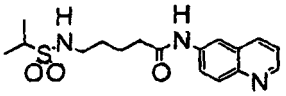
I-444 

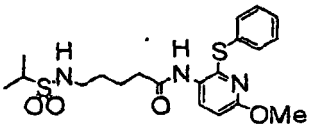
I-445 

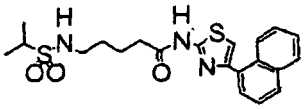
I-446 

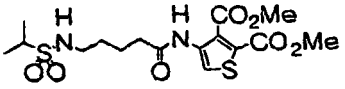
I-447 

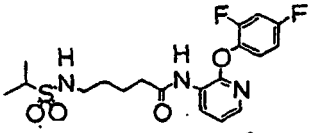
I-448 

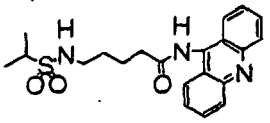
I-449 

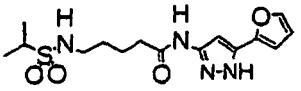
I-450 

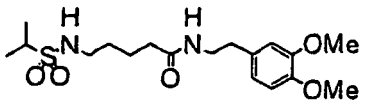
I-451 

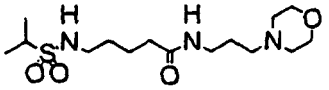
I-452 

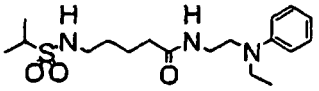
I-453 

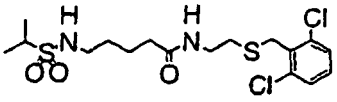
I-454 

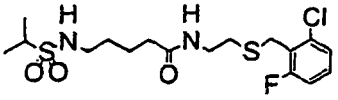
I-455 

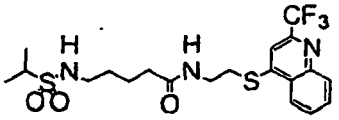
I-456 

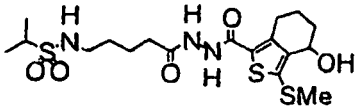
I-457 

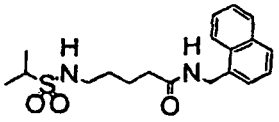
I-458 

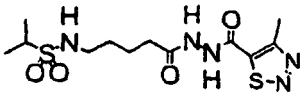
I-459 

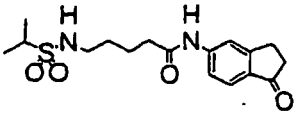
I-460 

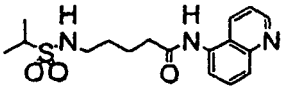
I-461 

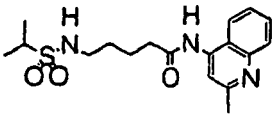
I-462 

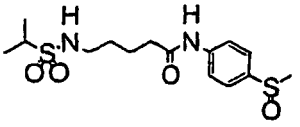
I-463 

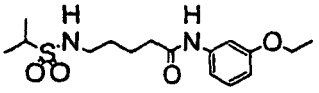
I-464 

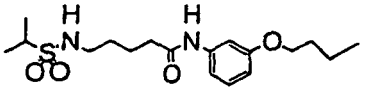
I-465 

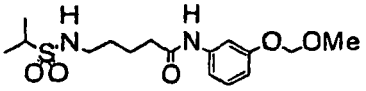
I-466 

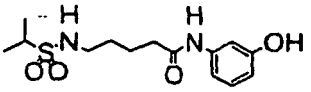
I-467 

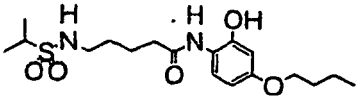
I-468 

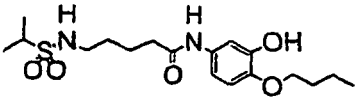
I-469 

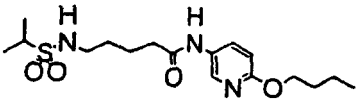
I-470 

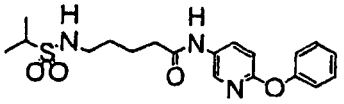
I-471 

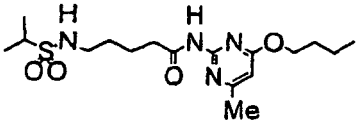
I-472 

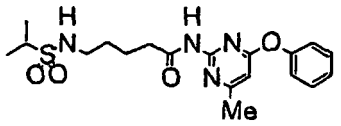
I-473 

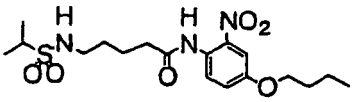
I-474 

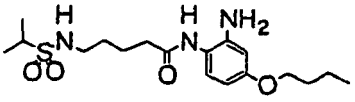
I-475 

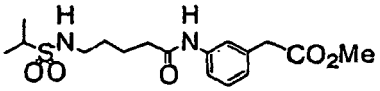
I-476 

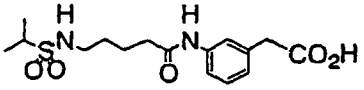
I-477 

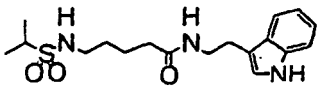
I-478 

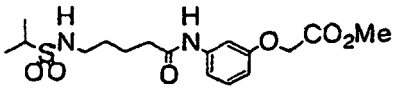
I-479 

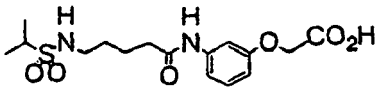
I-480 

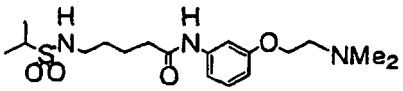
I-481 

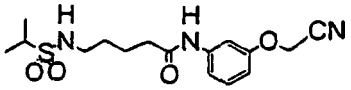
I-482 

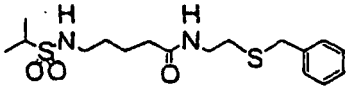
I-483 

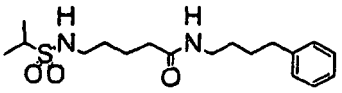
I-484 

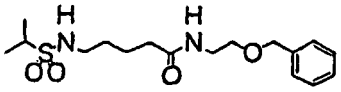
I-485 

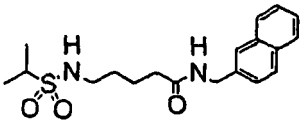
I-486 

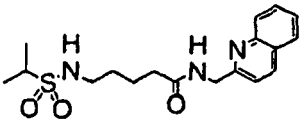
I-487 

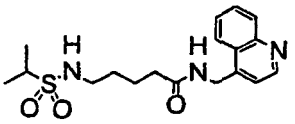
I-488 

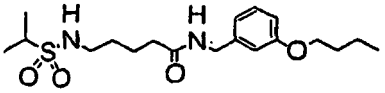
I-489 

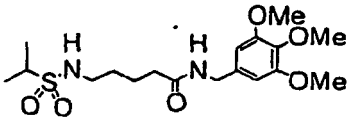
I-490 

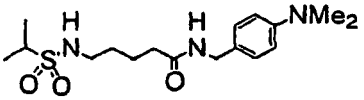
I-491 

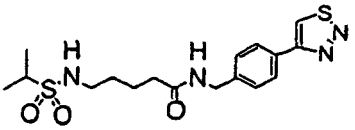
I-492 

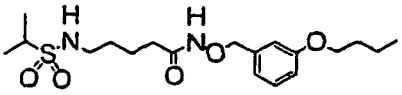
I-493 

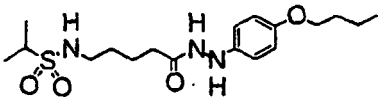
I-494 

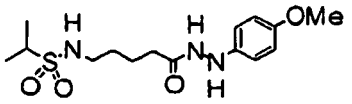
I-495 

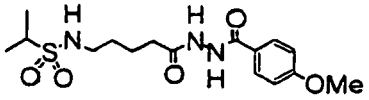
I-496 

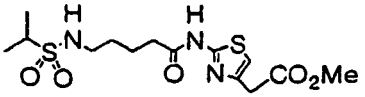
I-497 

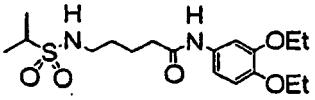
I-498 

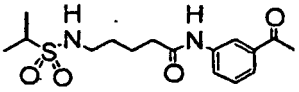
I-499 

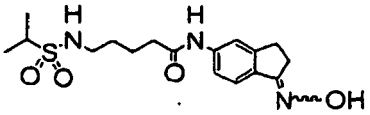
I-500 

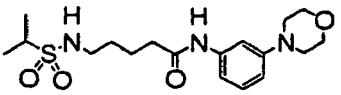
I-501 

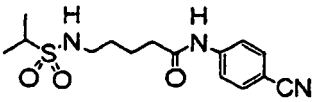
I-502 

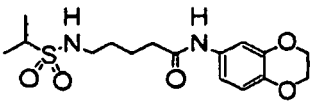
I-503 

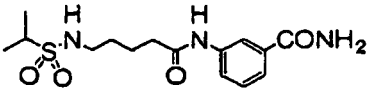
I-504 

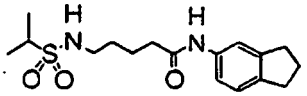
I-505 

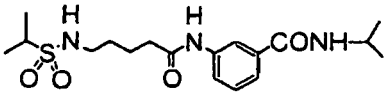
I-506 

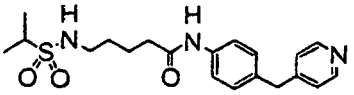
I-507 

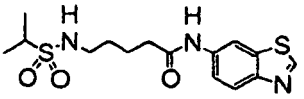
I-508 

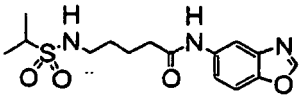
I-509 

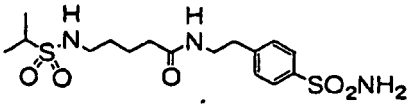
I-510 

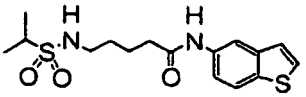
I-511 

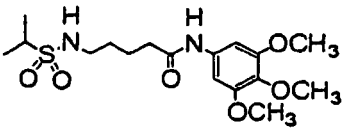
I-512 

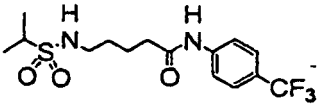
I-513 

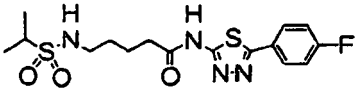
I-514 

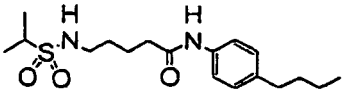
I-515 

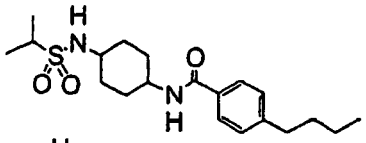
I-516 

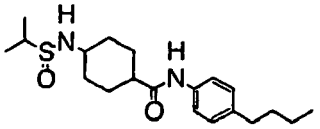
I-517 

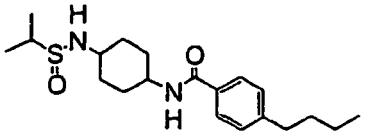
I-518 

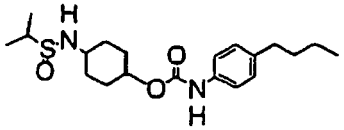
I-519 

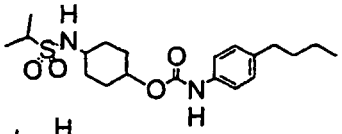
I-520 

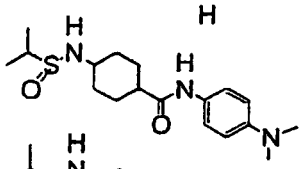
I-521 

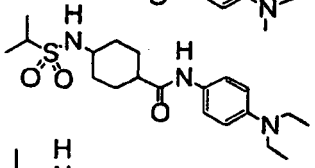
I-522 

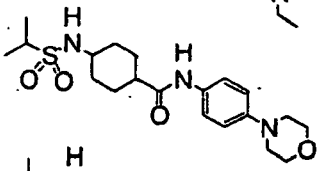
I-523 

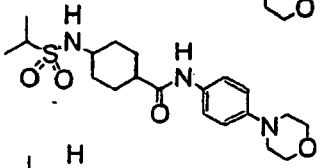
I-524 

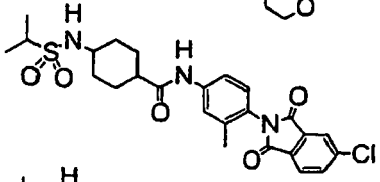
I-525 

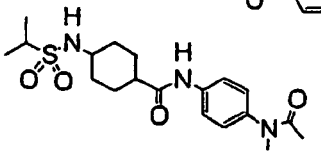
I-526 

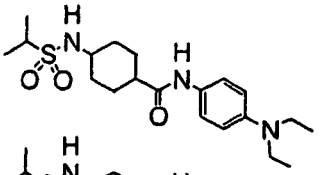
I-527 

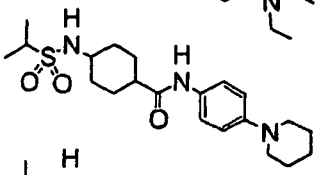
I-528 

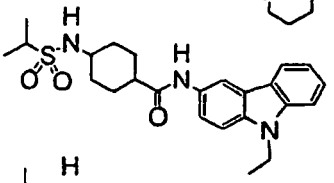
I-529 

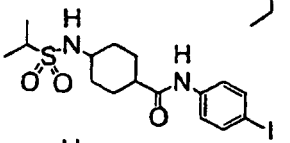
I-530 

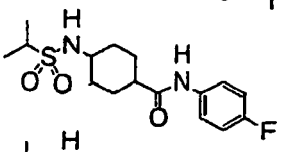
I-531 

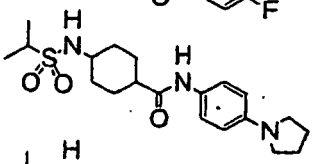
I-532 

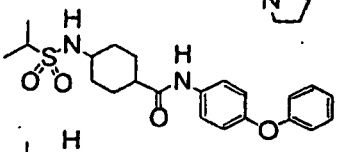
I-533 

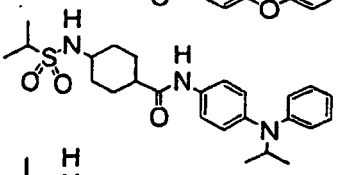
I-534 

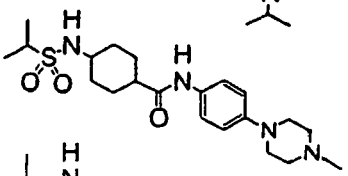
I-535 

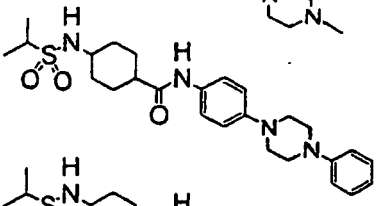
I-536 

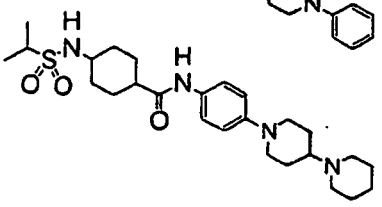
I-537 

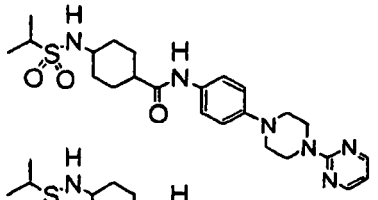
I-538 

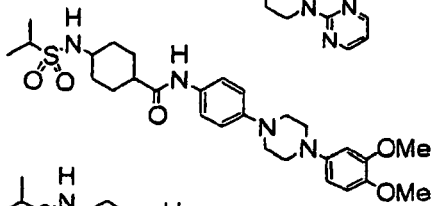
I-539 

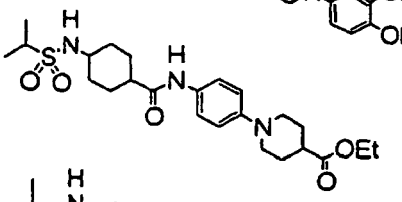
I-540 

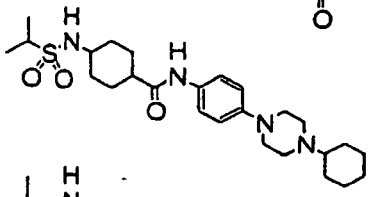
I-541 

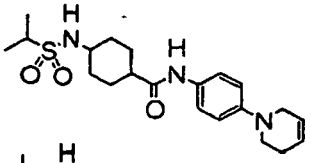
I-542 

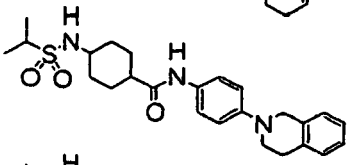
I-543 

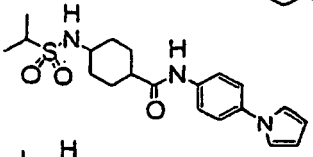
I-544 

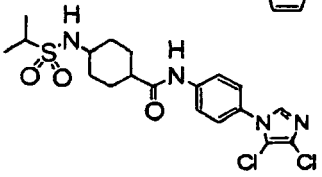
I-545 

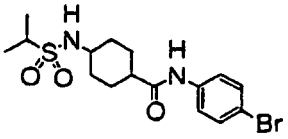
I-546 

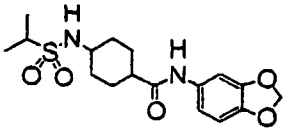
I-547 

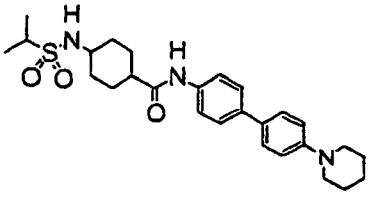
I-548 

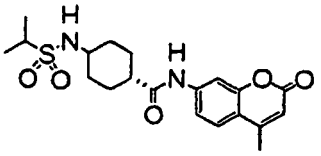
I-549 

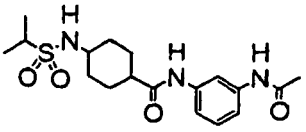
I-550 

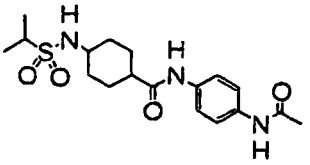
I-551 

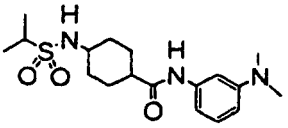
I-552 

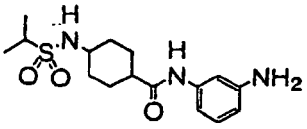
I-553 

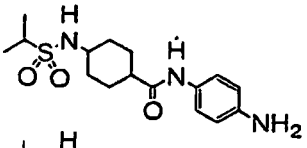
I-554 

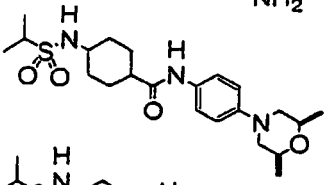
I-555 

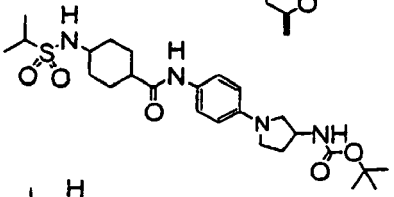
I-556 

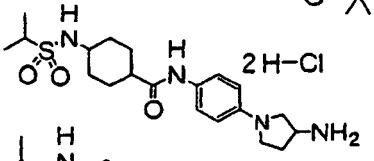
I-557 

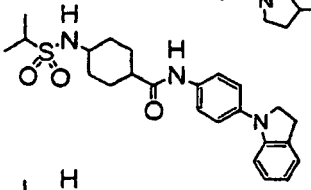
I-558 

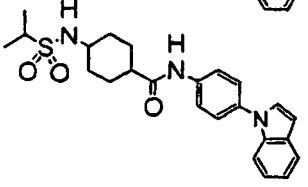
I-559 

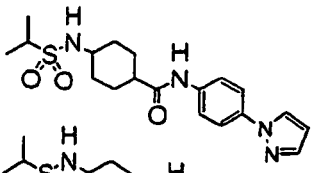
I-560 

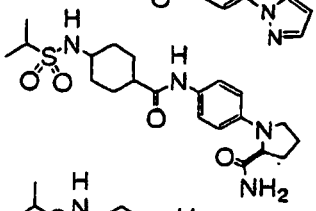
I-561 

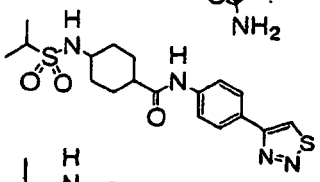
I-562 

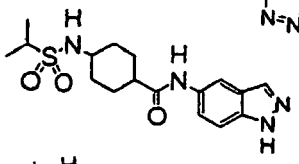
I-563 

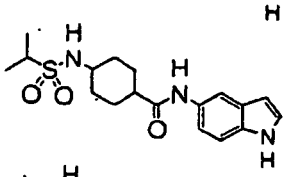
I-564 

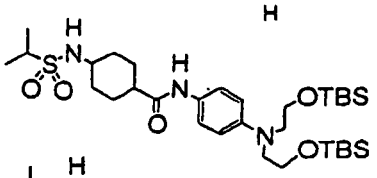
I-565 

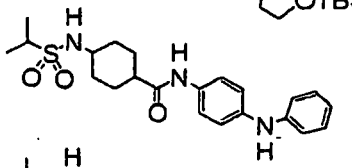
I-566 

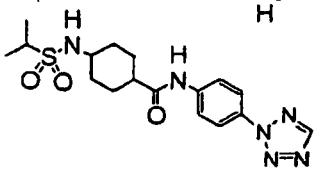
I-567 

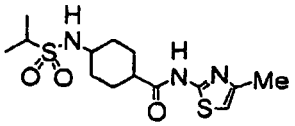
I-568 

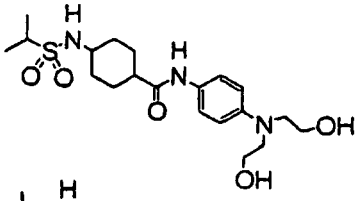
I-569 

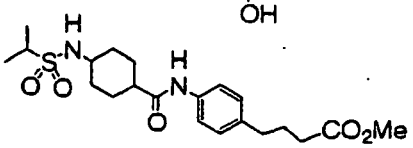
I-570 

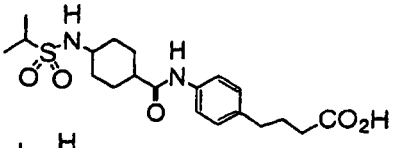
I-571 

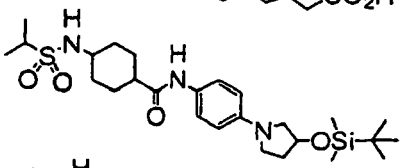
I-572 

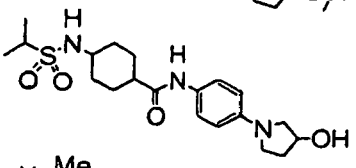
I-573 

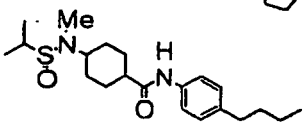
I-574 

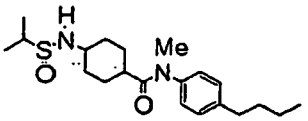
I-575 

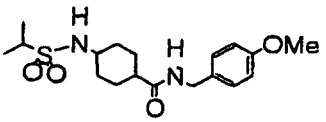
I-576 

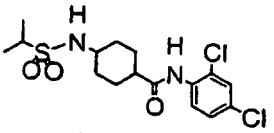
I-577 

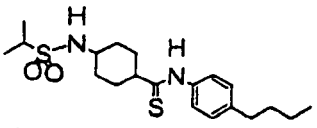
I-578 

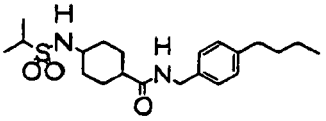
I-579 

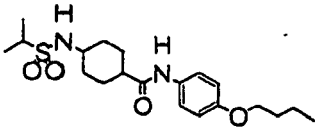
I-580 

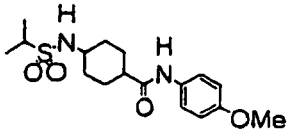
I-581 

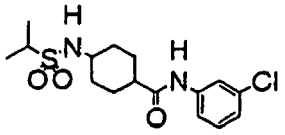
I-582 

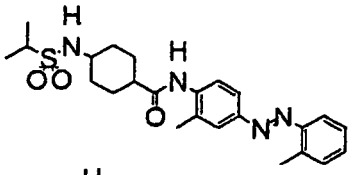
I-583 

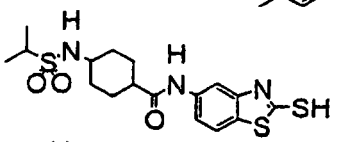
I-584 

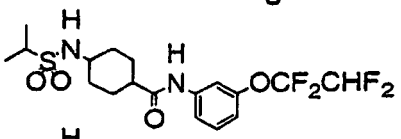
I-585 

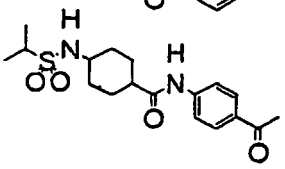
I-586 

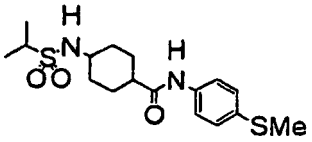
I-587 

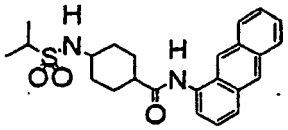
I-589 

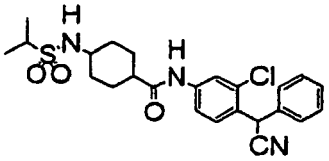
I-590 

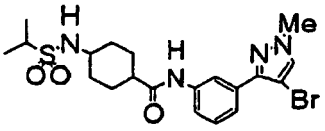
I-591 

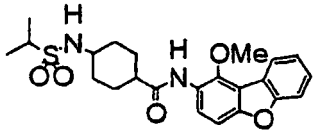
I-592 

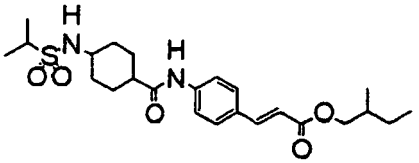
I-593 

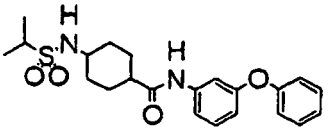
I-594 

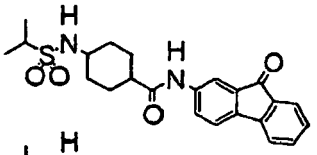
I-595 

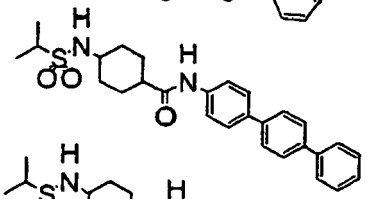
I-596 

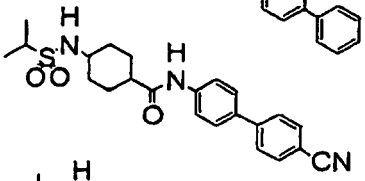
I-597 

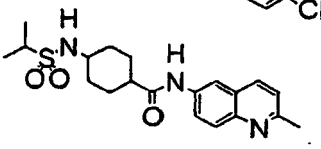
I-598 

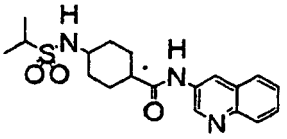
I-599 

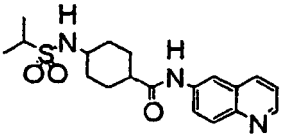
I-600 

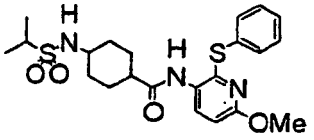
I-601 

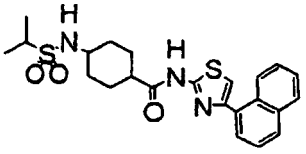
I-602 

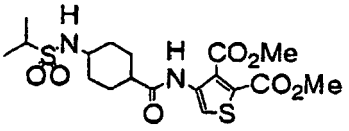
I-603 

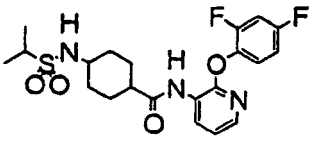
I-604 

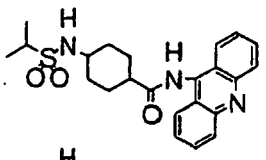
I-605 

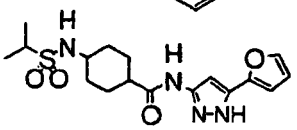
I-606 

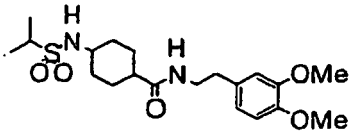
I-607 

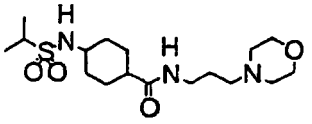
I-608 

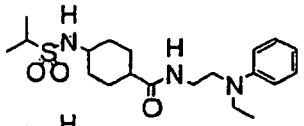
I-609 

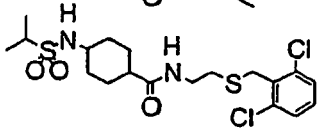
I-610 

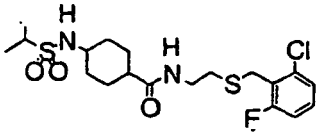
I-611 

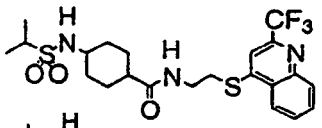
I-612 

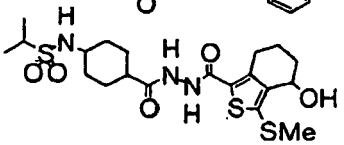
I-613 

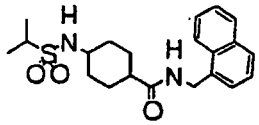
I-614 

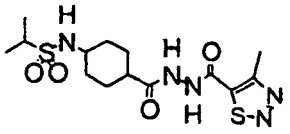
I-615 

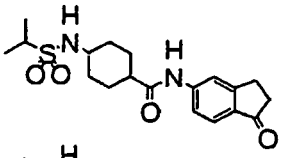
I-616 

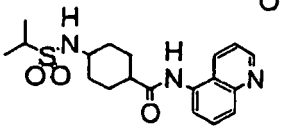
I-617 

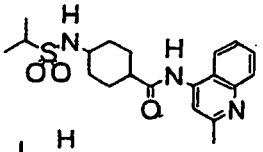
I-618 

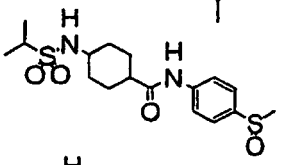
I-619 

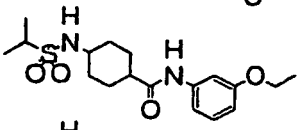
I-620 

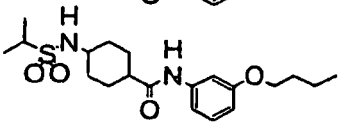
I-621 

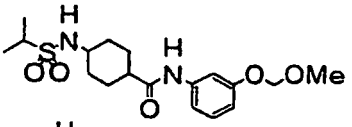
I-622 

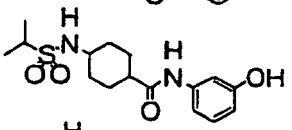
I-623 

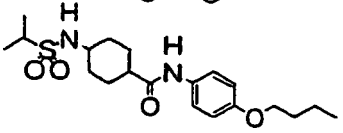
I-624 

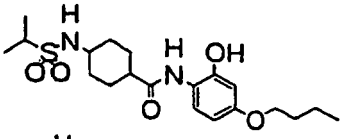
I-625 

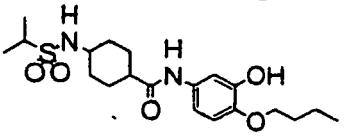
I-626 

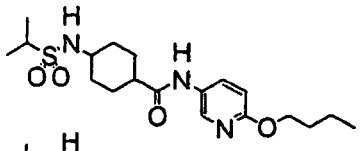
I-627 

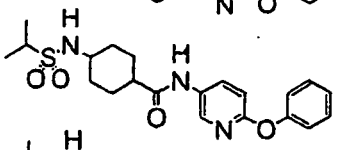
I-628 

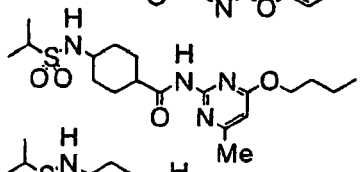
I-629 

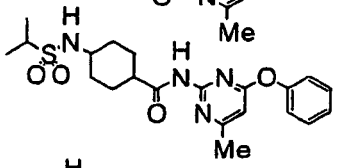
I-630 

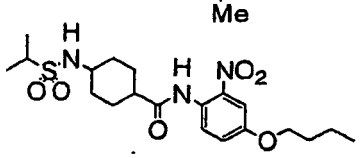
I-631 

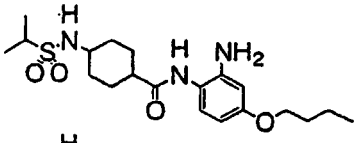
I-632 

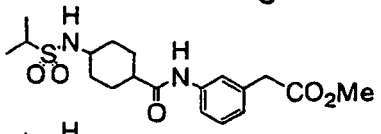
I-633 

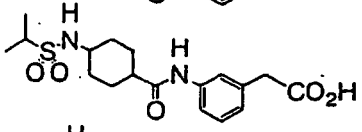
I-634 

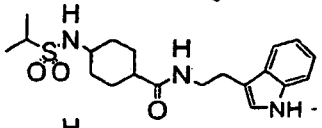
I-635 

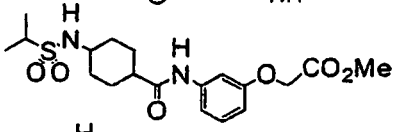
I-636 

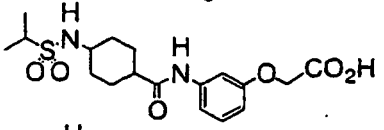
I-637 

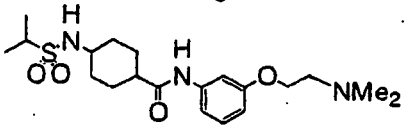
I-638 

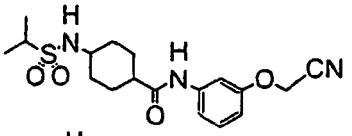
I-639 

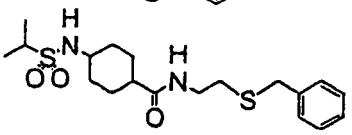
I-640 

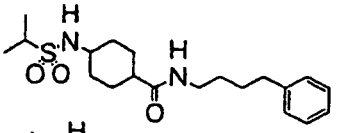
I-641 

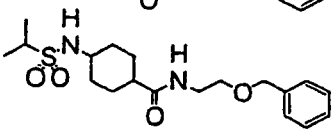
I-642 

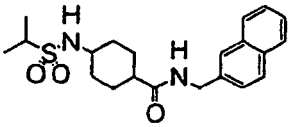
I-643 

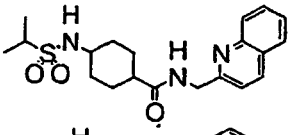
I-644 

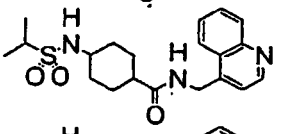
I-645 

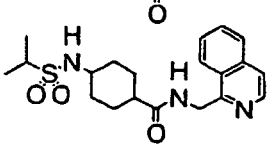
I-646 

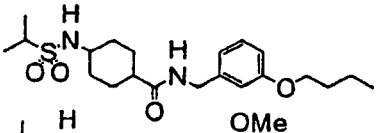
I-647 

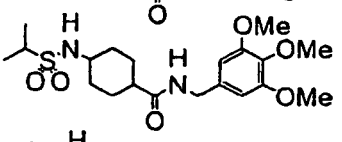
I-648 

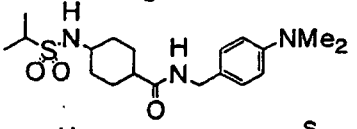
I-649 

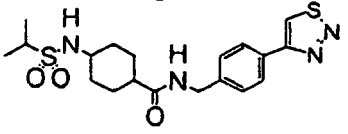
I-650 

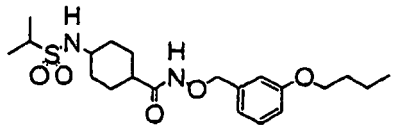
I-651 

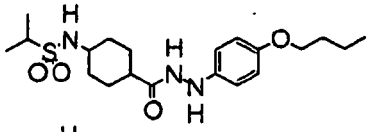
I-652 

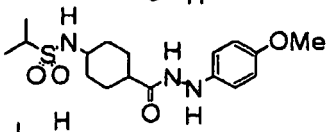
I-653 

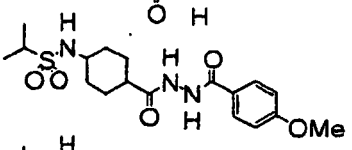
I-654 

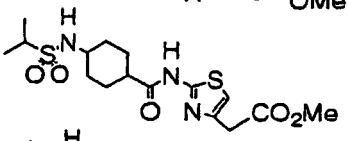
I-655 

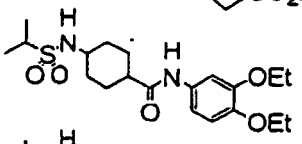
I-656 

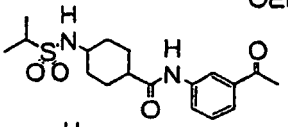
I-657 

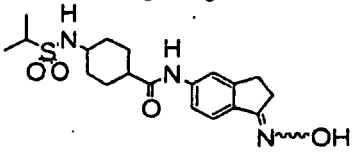
I-658 

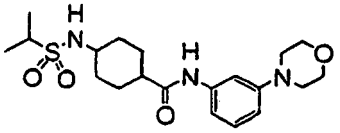
I-659 

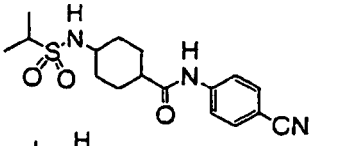
I-660 

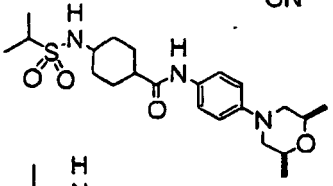
I-661 

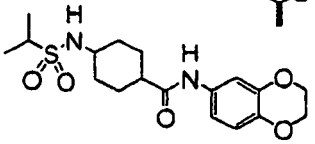
I-662 

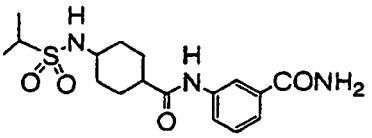
I-663 

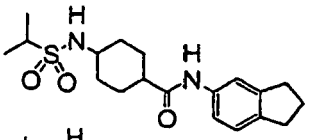
I-664 

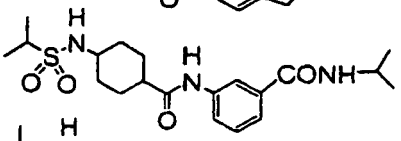
I-665 

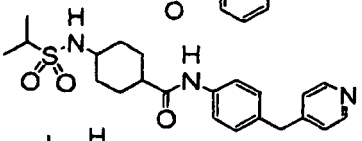
I-666 

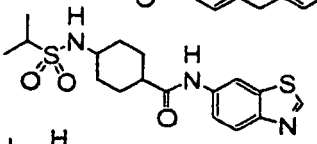
I-667 

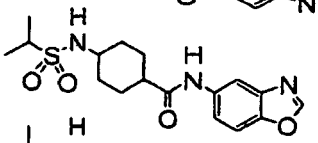
I-668 

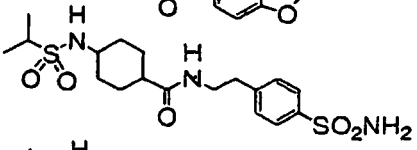
I-669 

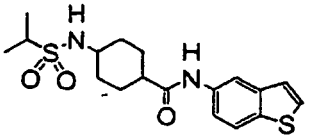
I-670 

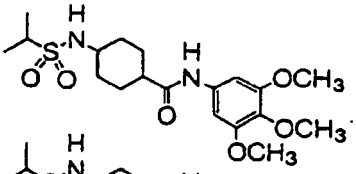
I-671 

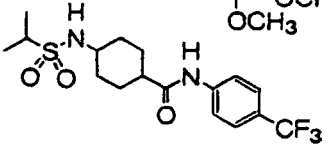
I-672 

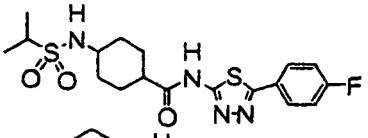
I-673 

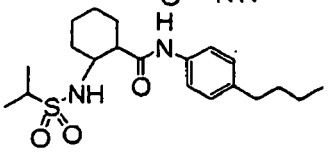
I-674 

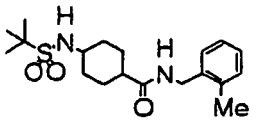
I-675 

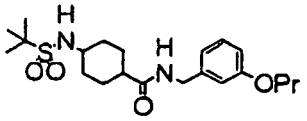
I-676 

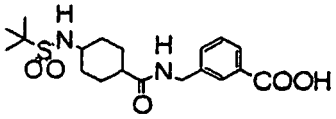
I-677 

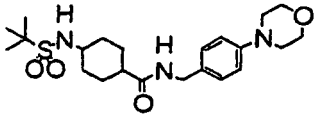
I-678 

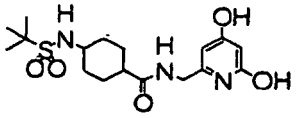
I-679 

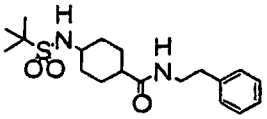
I-680 

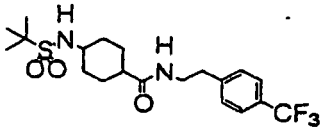
I-681 

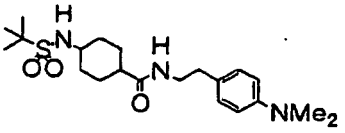
I-682 

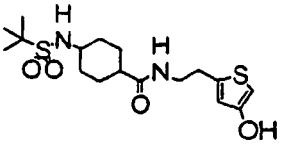
I-683 

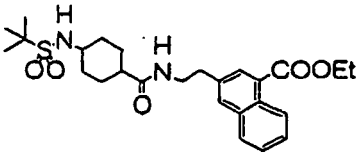
I-684 

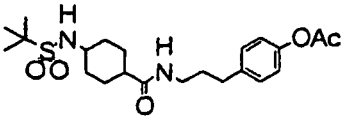
I-685 

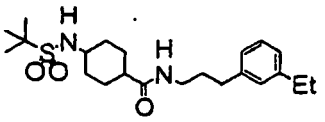
I-686 

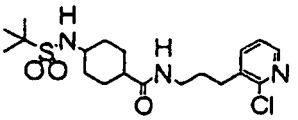
I-687 

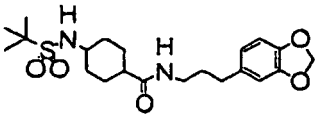
I-688 

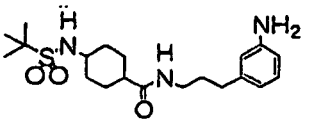
I-689 

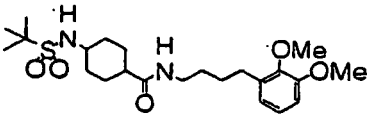
I-690 

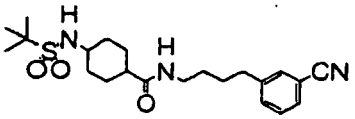
I-691 

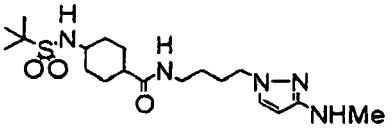
I-692 

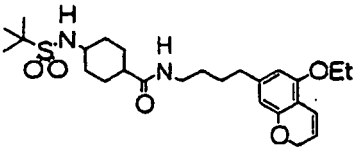
I-693 

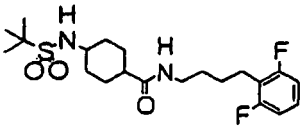
I-694 

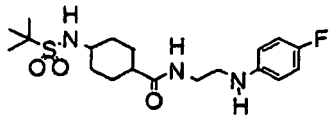
I-695 

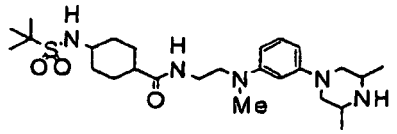
I-696 

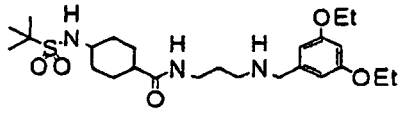
I-697 

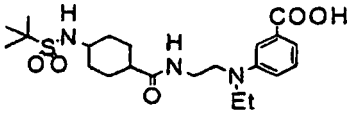
I-698 

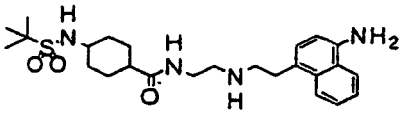
I-699 

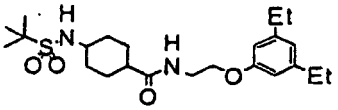
I-700 

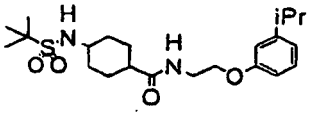
I-701 

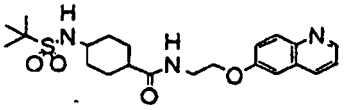
I-702 

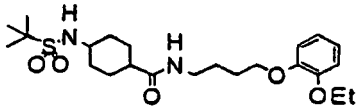
I-703 

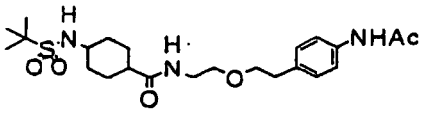
I-704 

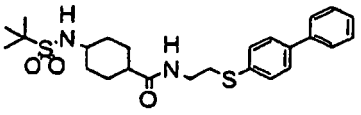
I-705 

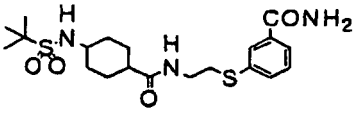
I-706 

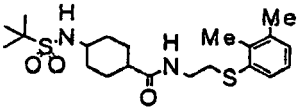
I-707 

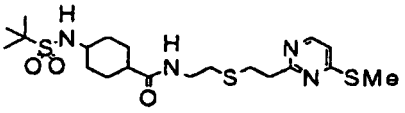
I-708 

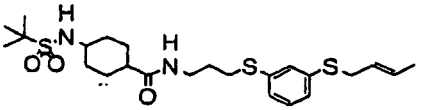
I-709 

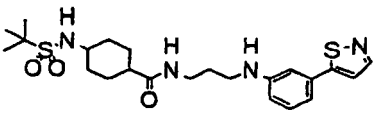
I-710 

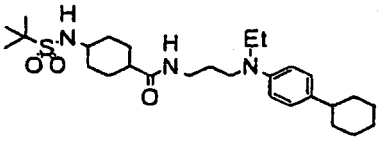
I-711 

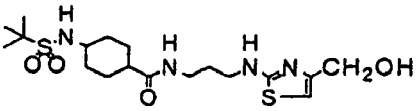
I-712 

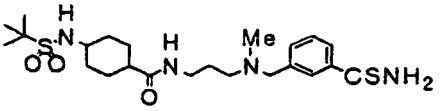
I-713 

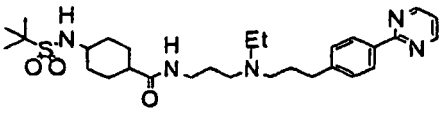
I-714 

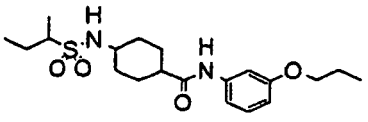
I-715 

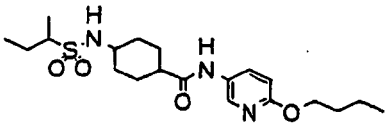
I-716 

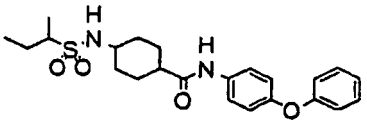
I-717 

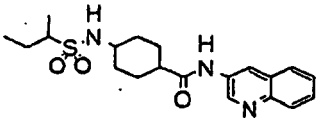
I-718 

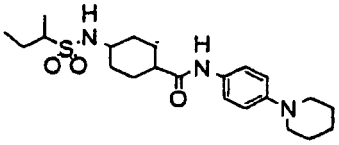
I-719 

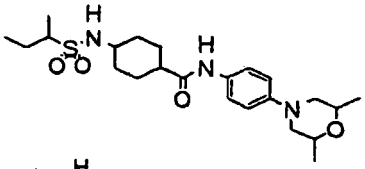
I-720 

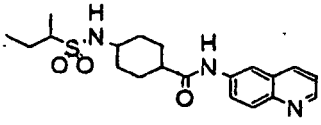
I-721 

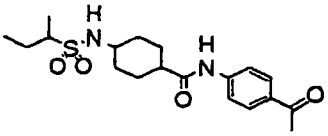
I-722 

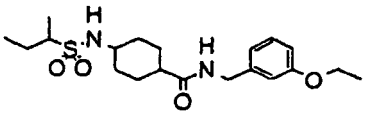
I-723 

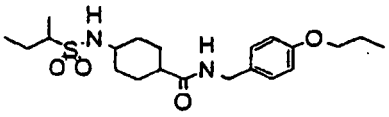
I-724 

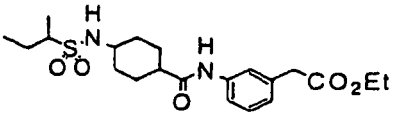
I-725 

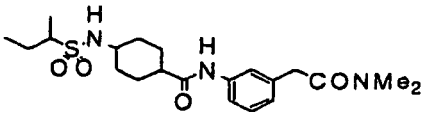
I-726 

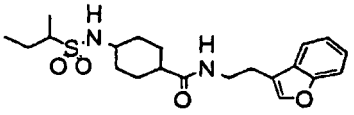
I-727 

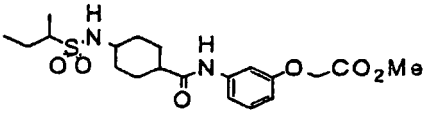
I-728 

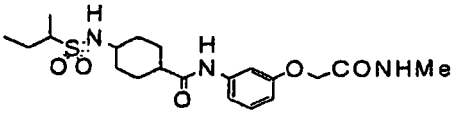
I-729 

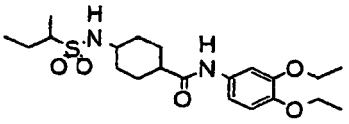
I-730 

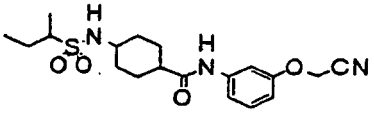
I-731 

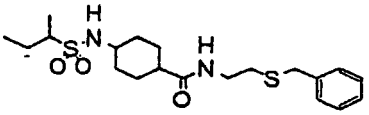
I-732 

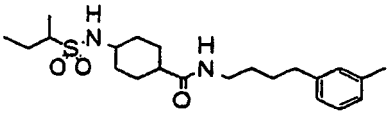
I-733 

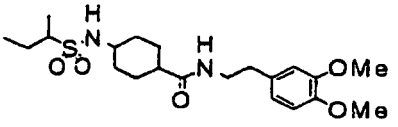
I-734 

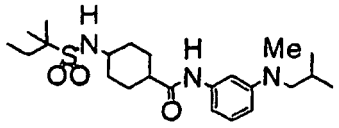
I-735 

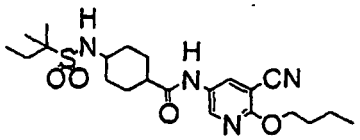
I-736 

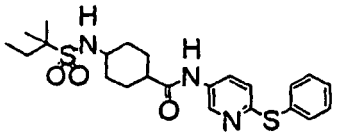
I-737 

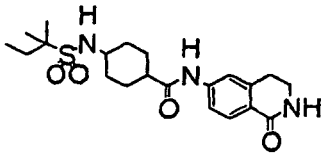
I-738 

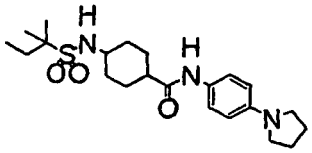
I-739 

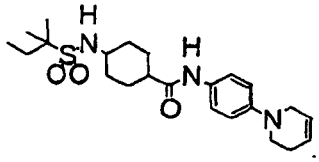
I-740 

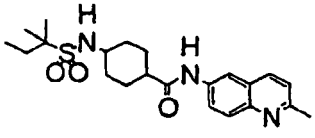
I-741 

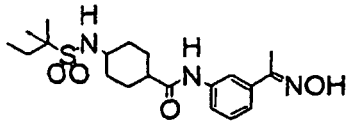
I-742 

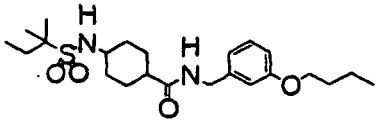
I-743 

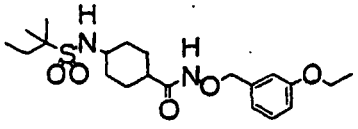
I-744 

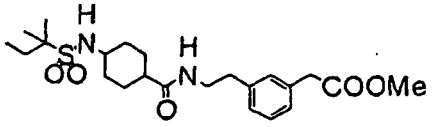
I-745 

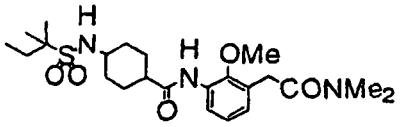
I-746 

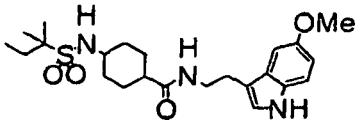
I-747 

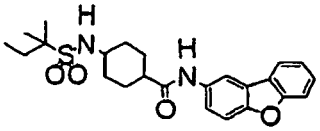
I-748 

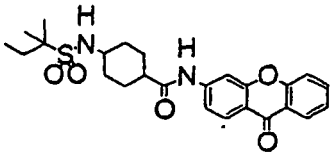
I-749 

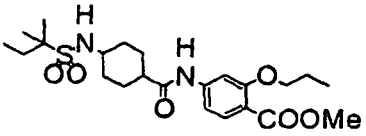
I-750 

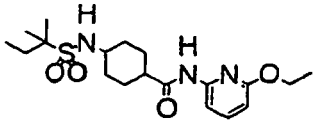
I-751 

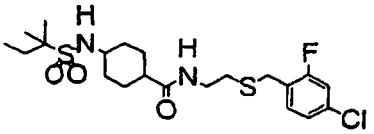
I-752 

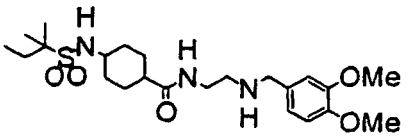
I-753 

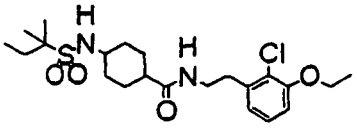
I-754 

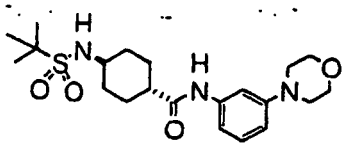
I-755 

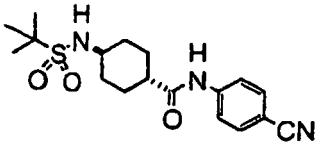
I-756 

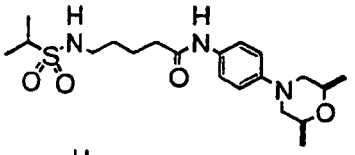
I-757 

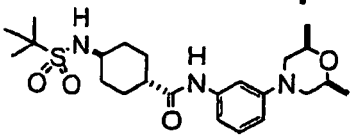
I-758 

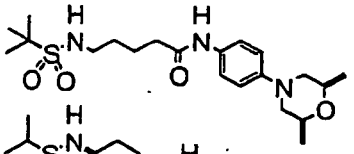
I-759 

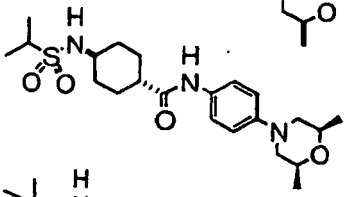
Ia-1 

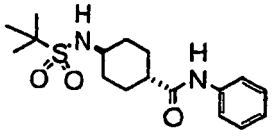
Ia-2 

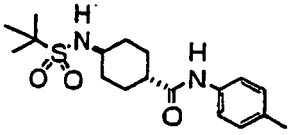
Ia-3 

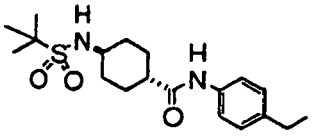
Ia-4 

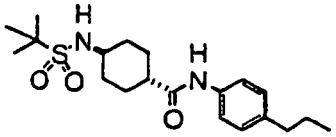
Ia-5 

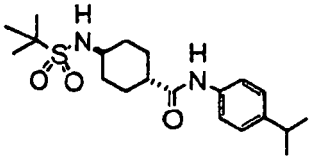
Ia-6 

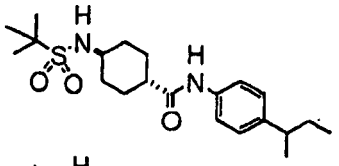
Ia-7 

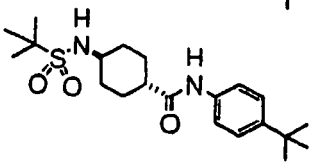
Ia-8 

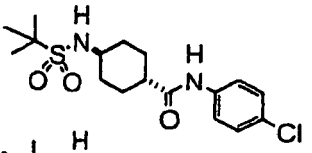
Ia-9 

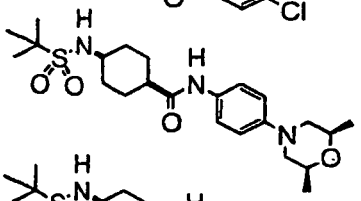
Ia-10 

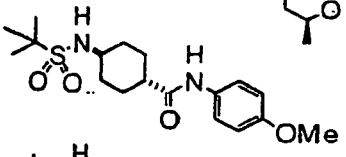
Ia-11 

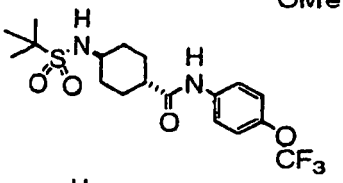
Ia-12 

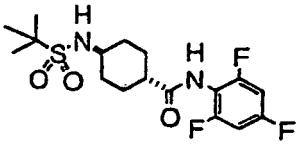
Ia-13 

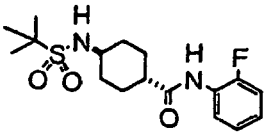
Ia-14 

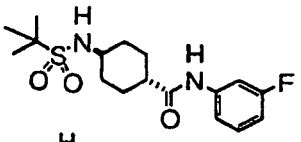
Ia-15 

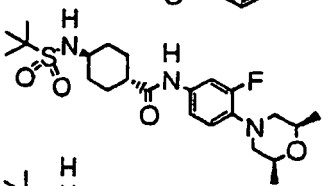
Ia-16 

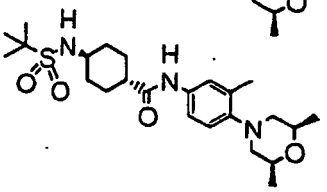
Ia-17 

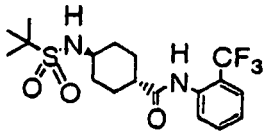
Ia-18 

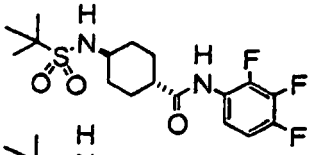
Ia-19 

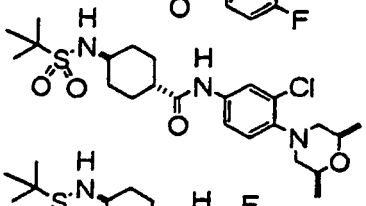
Ia-20 

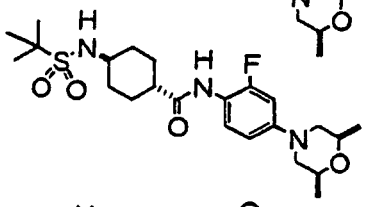
Ia-21 

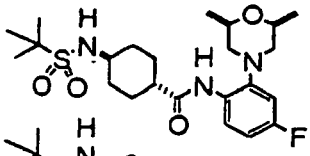
Ia-22 

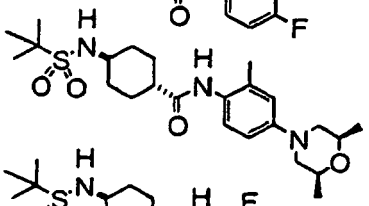
Ia-23 

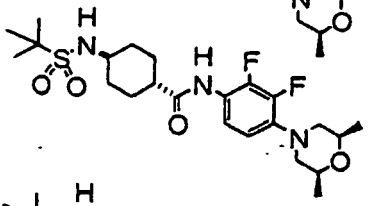
Ia-24 

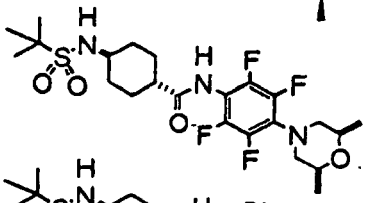
Ia-25 

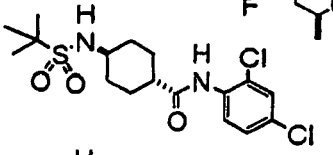
Ia-26 

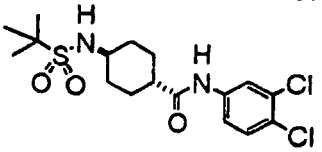
Ia-27 

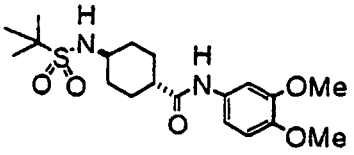
Ia-28 

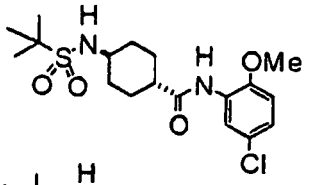
Ia-29 

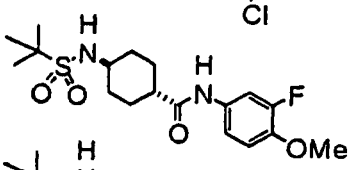
Ia-30 

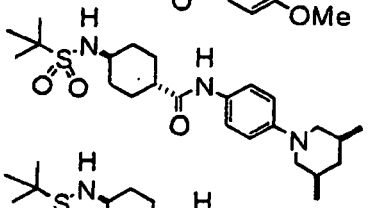
Ia-31 

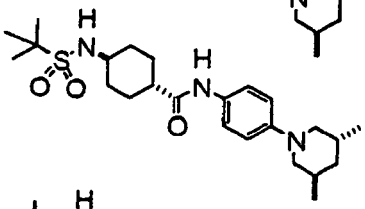
Ia-32 

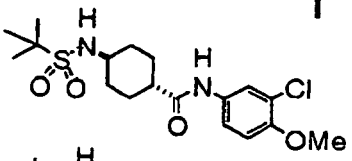
Ia-33 

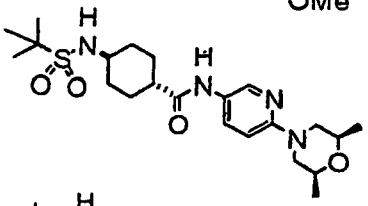
Ia-35 

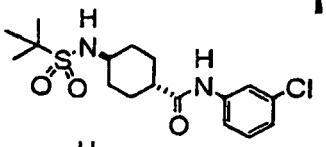
Ia-36 

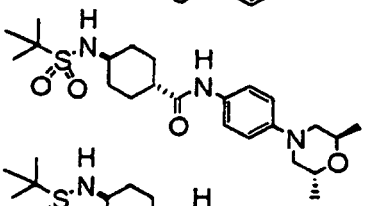
Ia-37 

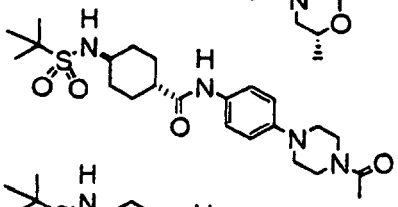
Ia-38 

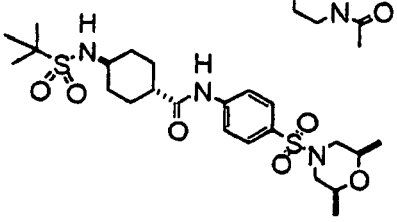
Ia-39 

Ia-40 

Ia-41 

Ia-42 

Ia-43 

Ia-44 

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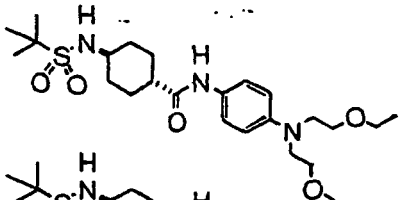

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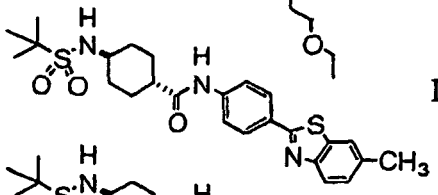
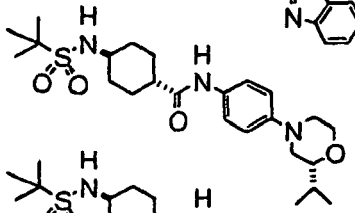


Ia-47



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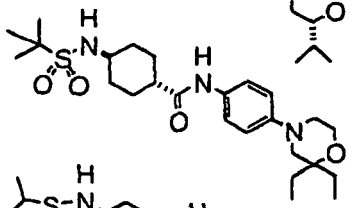

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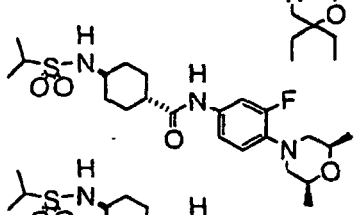
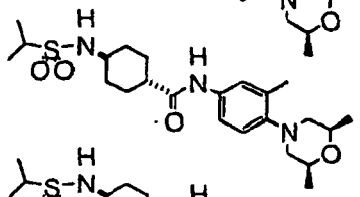
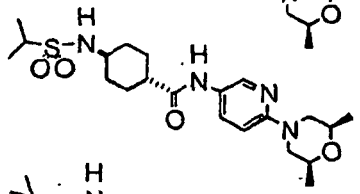


Ia-50



Ia-51



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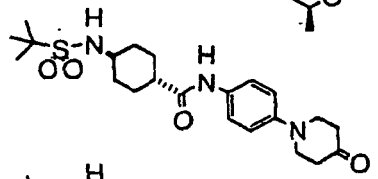

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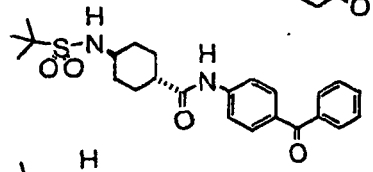
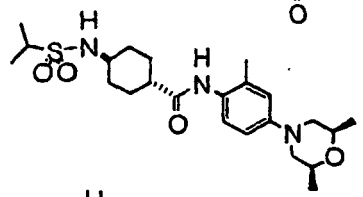
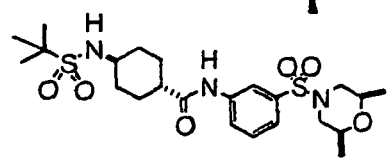


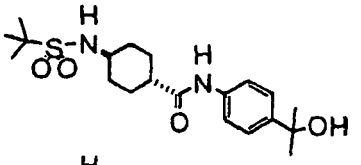
Ia-54



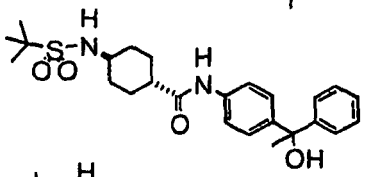
Ia-55



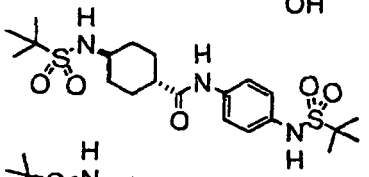
Ia-56



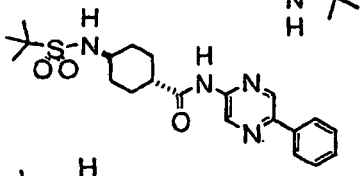
Ia-57



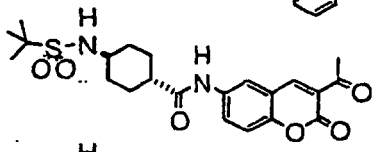
Ia-58



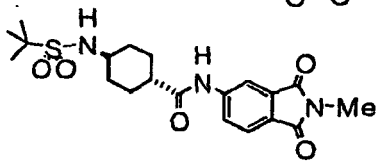
Ia-59



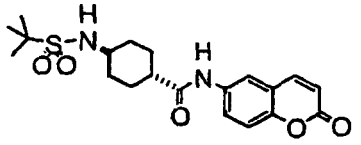
Ia-60



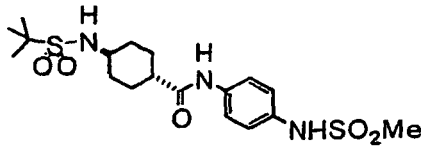
Ia-61



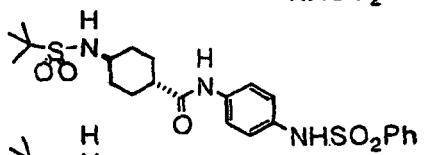
Ia-62



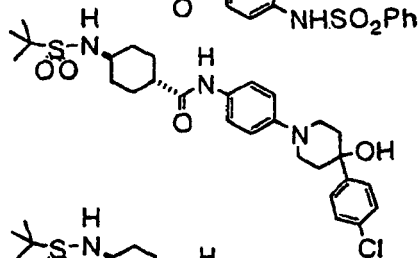
Ia-63



Ia-64



Ia-65



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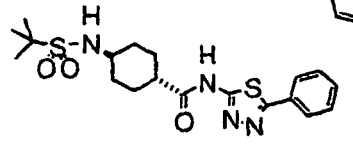
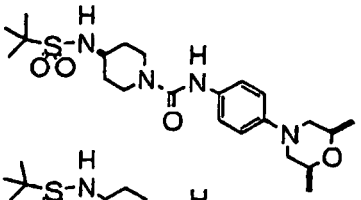
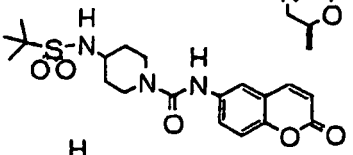
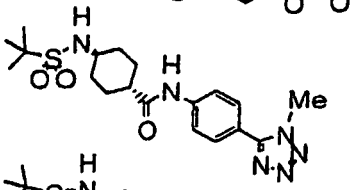
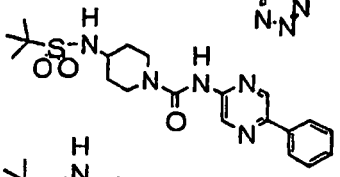
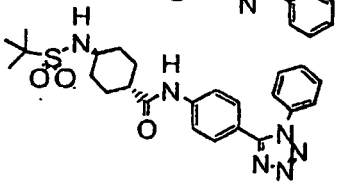


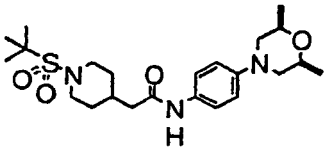
Ia-67 

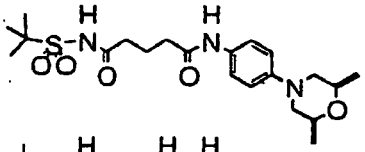
Ia-68 

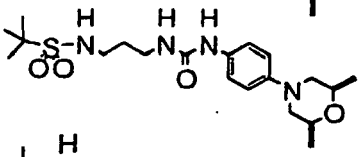
Ia-69 

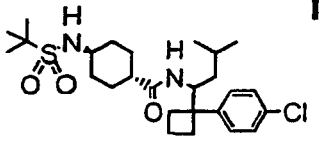
Ia-70 

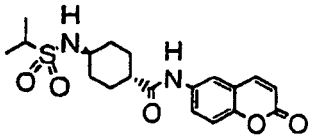
Ia-71 

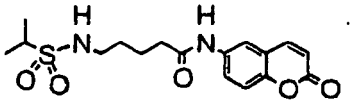
Ia-72 

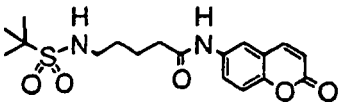
Ia-73 

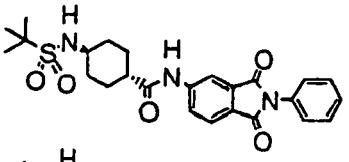
Ia-74 

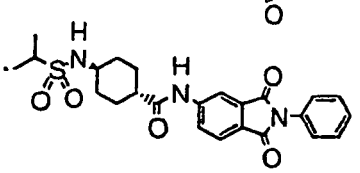
Ia-75 

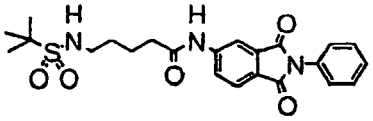
Ia-76 

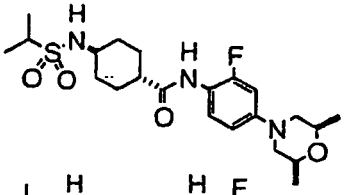
Ia-77 

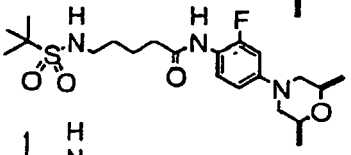
Ia-78 

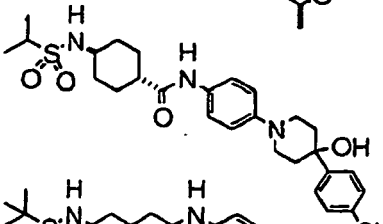
Ia-79 

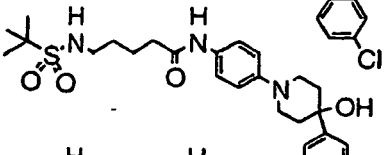
Ia-80 

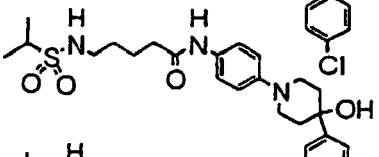
Ia-81 

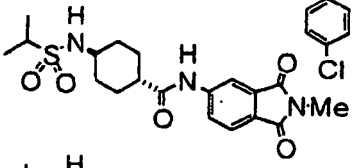
Ia-82 

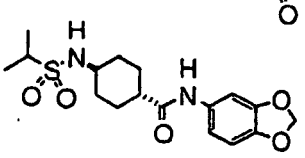
Ia-83 

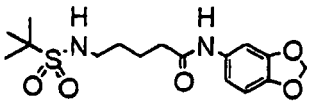
Ia-84 

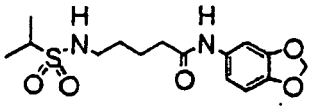
Ia-85 

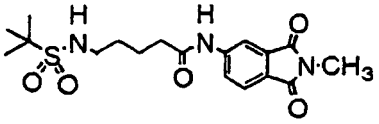
Ia-86 

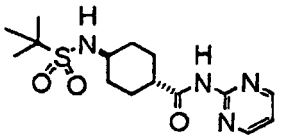
Ia-87 

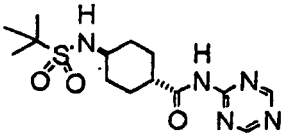
Ia-88 

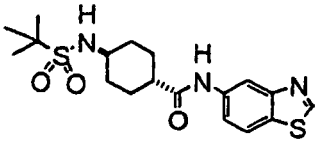
Ia-89 

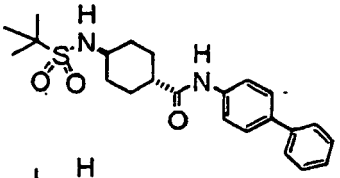
Ia-90 

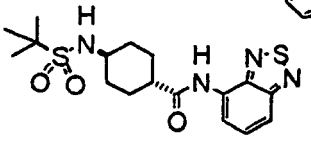
Ia-91 

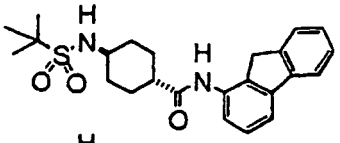
Ia-104 

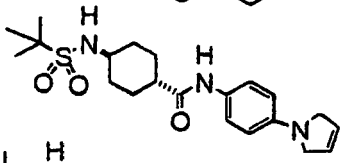
Ia-105 

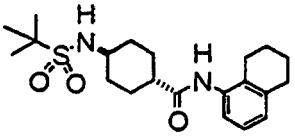
Ia-106 

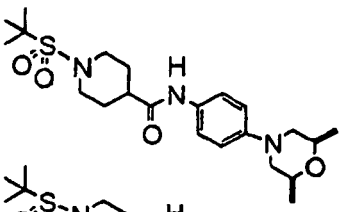
Ia-107 

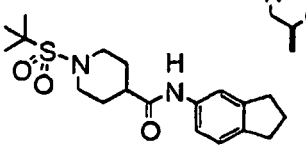
Ia-108 

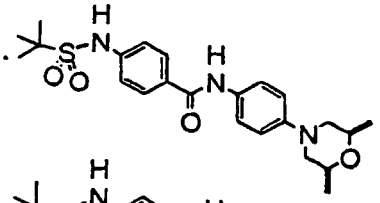
Ia-109 

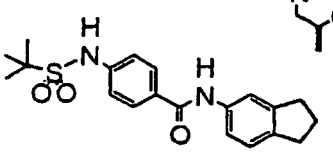
Ia-110 

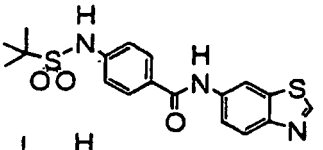
Ia-111 

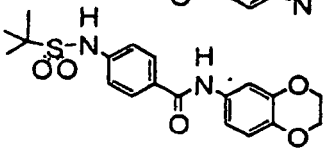
Ia-122 

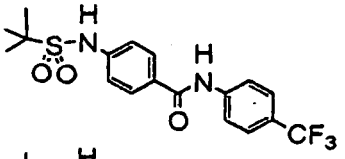
Ia-123 

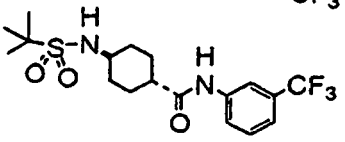
Ia-124 

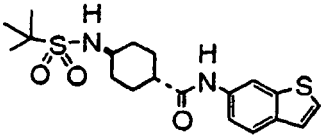
Ia-125 

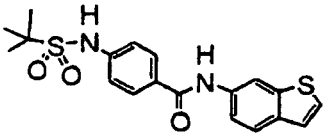
Ia-126 

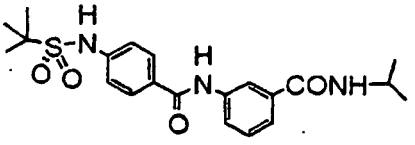
Ia-127 

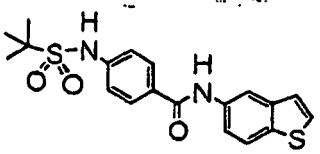
Ia-128 

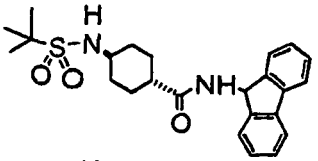
Ia-129 

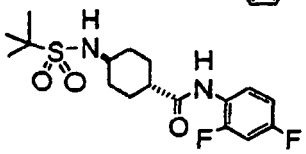
Ia-130 

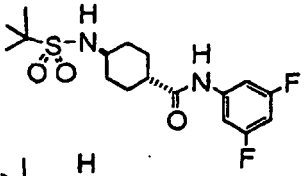
Ia-131 

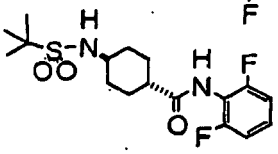
Ia-132 

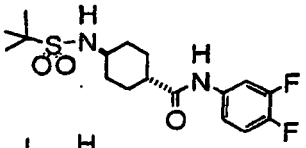
Ia-133 

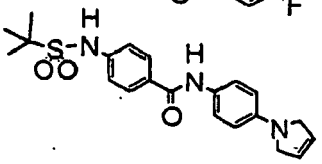
Ia-134 

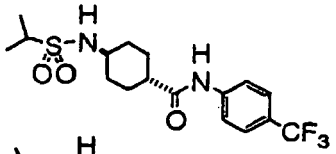
Ia-135 

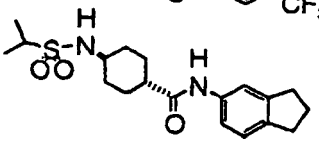
Ia-136 

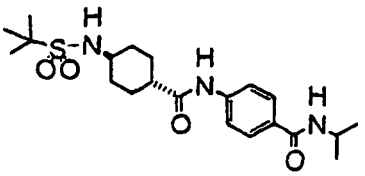
Ia-137 

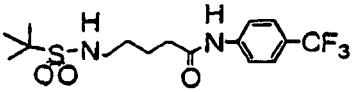
Ia-138 

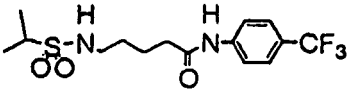
Ia-139 

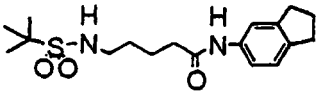
Ia-140 

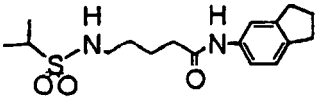
Ia-141 

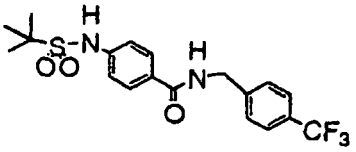
Ia-142 

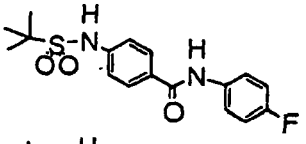
Ia-143 

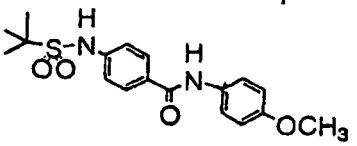
Ia-144 

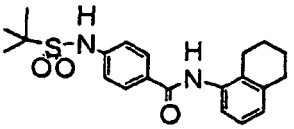
Ia-145 

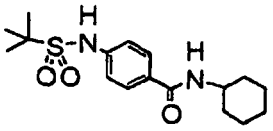
Ia-146 

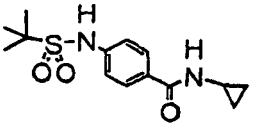
Ia-147 

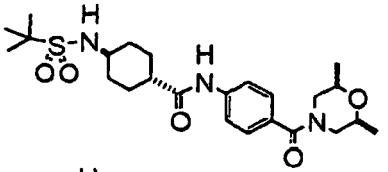
Ia-148 

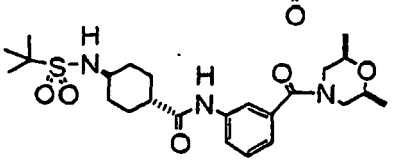
Ia-149 

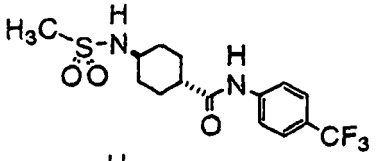
Ia-150 

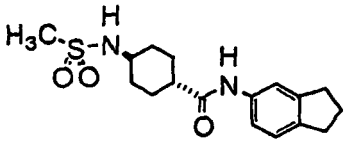
Ia-151 

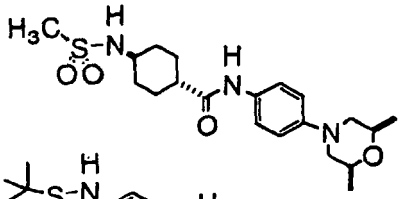
Ia-152 

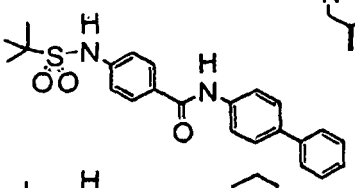
Ia-153 

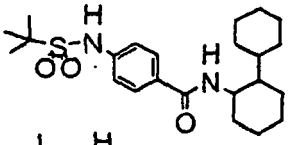
Ia-154 

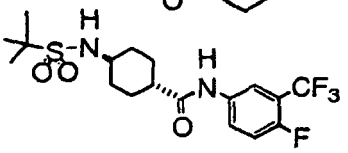
Ia-155 

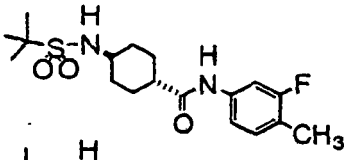
Ia-156 

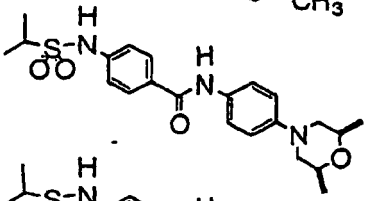
Ia-157 

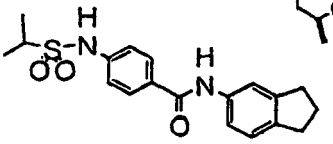
Ia-158 

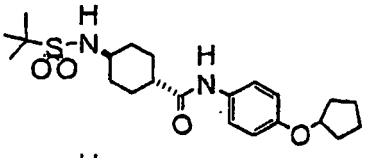
Ia-159 

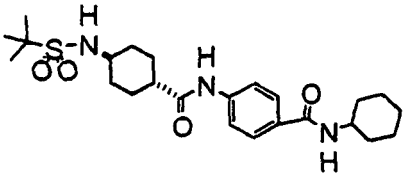
Ia-160 

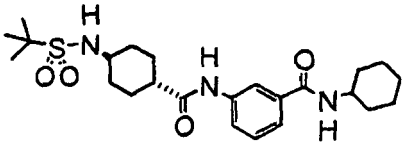
Ia-161 

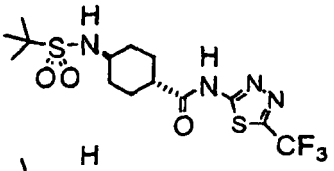
Ia-162 

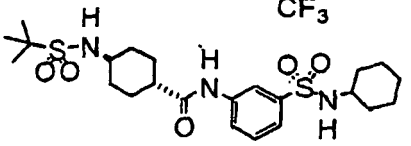
Ia-163 

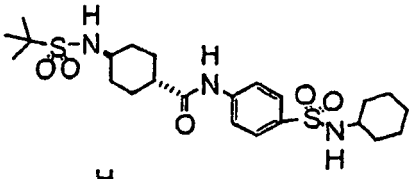
Ia-164 

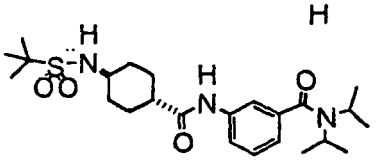
Ia-165 

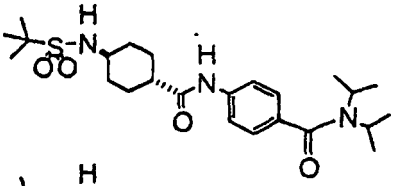
Ia-166 

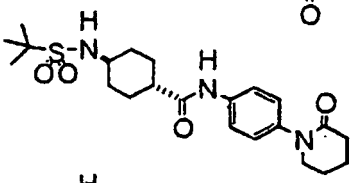
Ia-167 

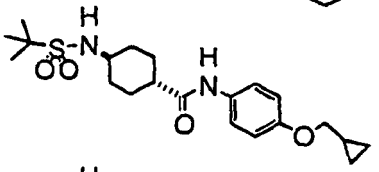
Ia-168 

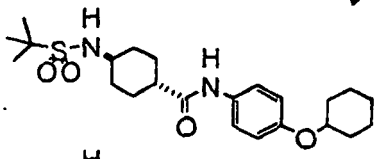
Ia-169 

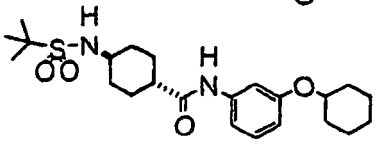
Ia-171 

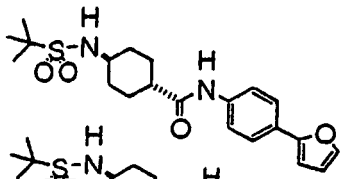
Ia-172 

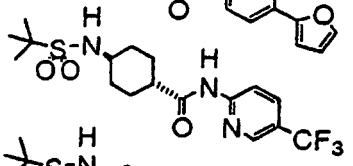
Ia-173 

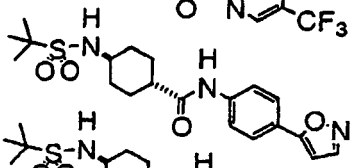
Ia-174 

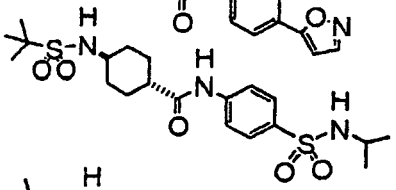
Ia-175 

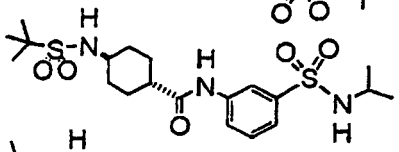
Ia-176 

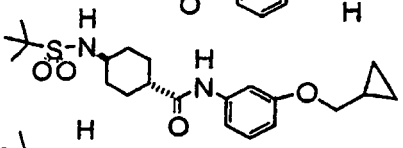
Ia-177 

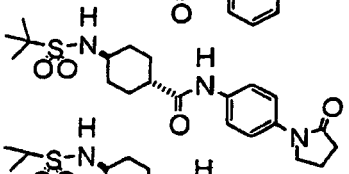
Ia-178 

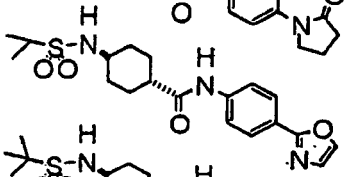
Ia-179 

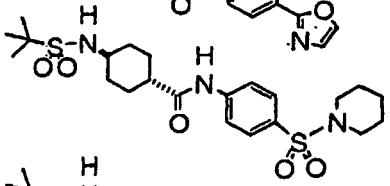
Ia-180 

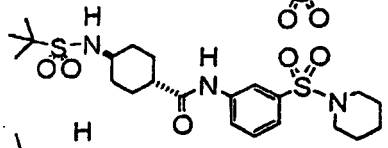
Ia-181 

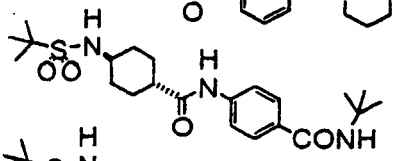
Ia-182 

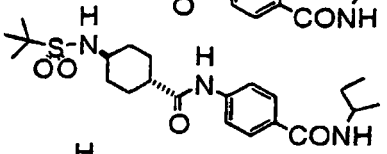
Ia-183 

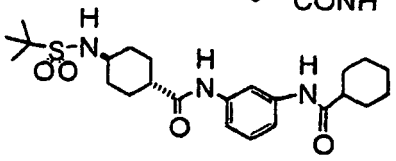
Ia-184 

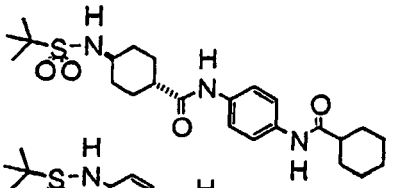
Ia-185 

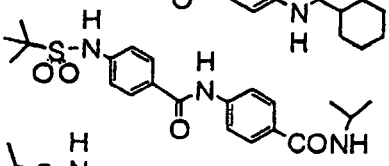
Ia-186 

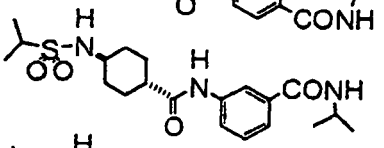
Ia-187 

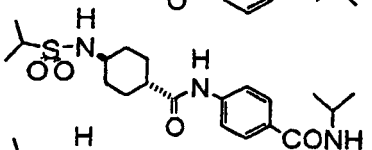
Ia-188 

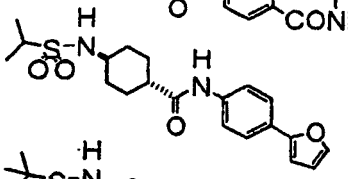
Ia-189 

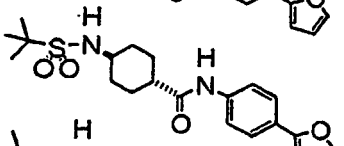
Ia-190 

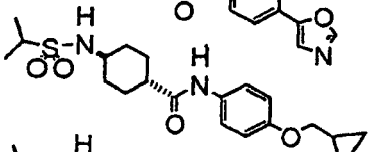
Ia-191 

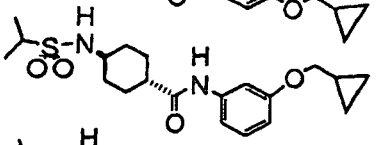
Ia-192 

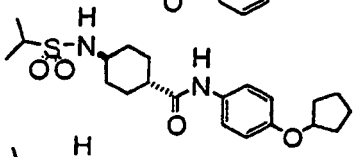
Ia-193 

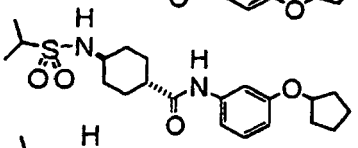
Ia-194 

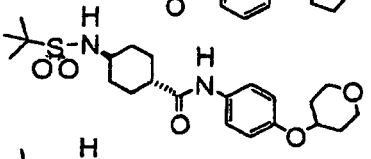
Ia-195 

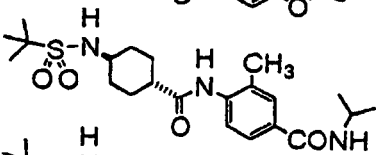
Ia-196 

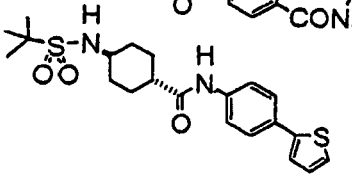
Ia-197 

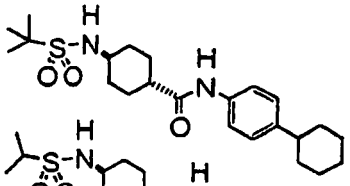
Ia-198 

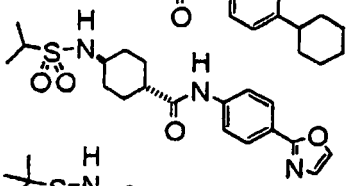
Ia-199 

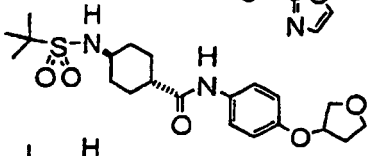
Ia-200 

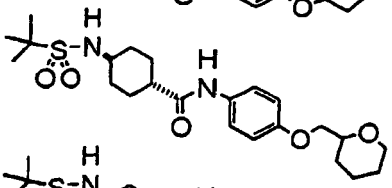
Ia-201 

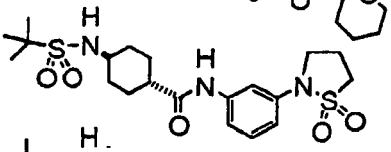
Ia-202 

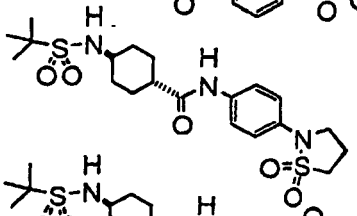
Ia-203 

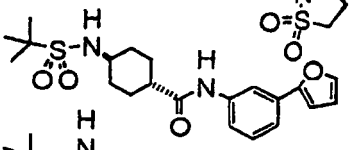
Ia-204 

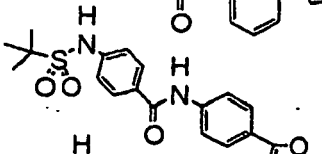
Ia-205 

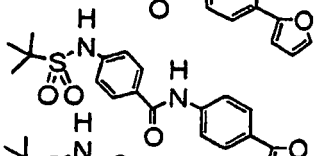
Ia-206 

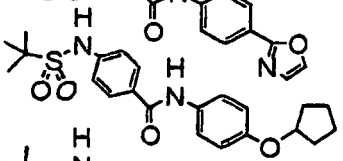
Ia-207 

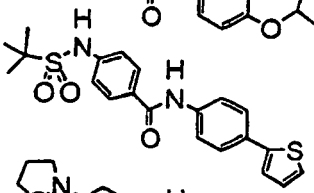
Ia-208 

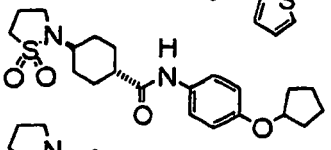
Ia-209 

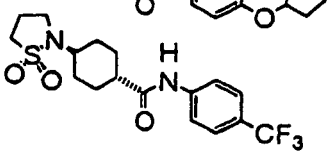
Ia-210 

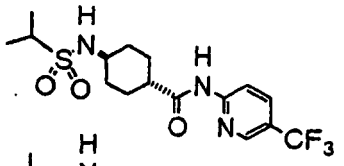
Ia-211 

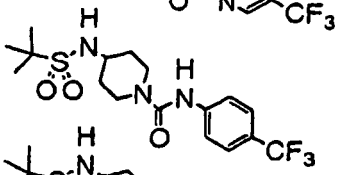
Ia-212 

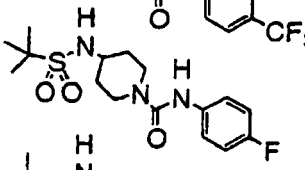
Ia-213 

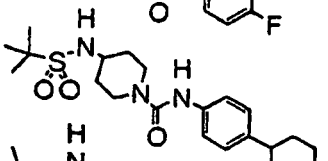
Ia-214 

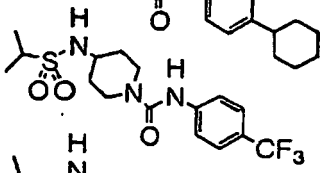
Ia-215 

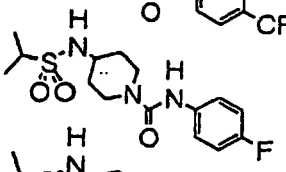
Ia-216 

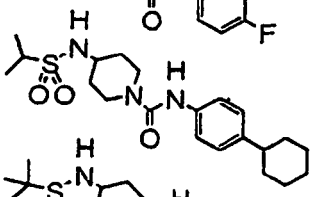
Ia-219 

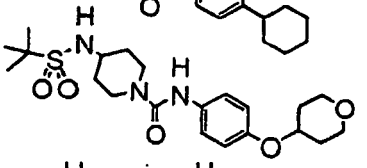
Ia-220 

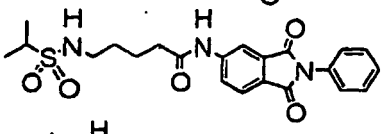
Ia-221 

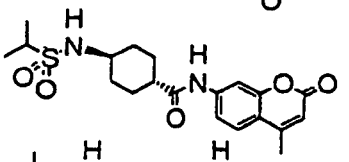
Ia-222 

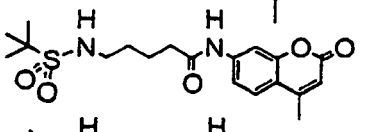
Ia-223 

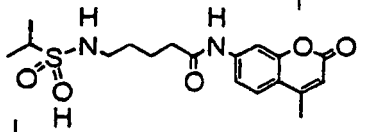
Ia-224 

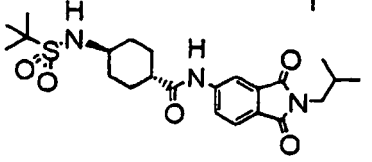
Ia-225 

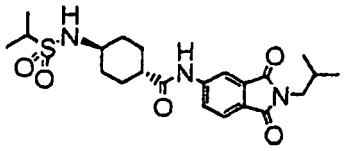
Ia-226 

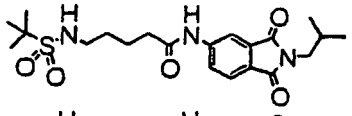
Ia-227 

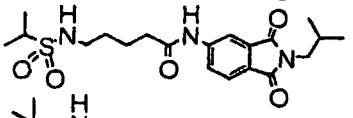
Ia-228 

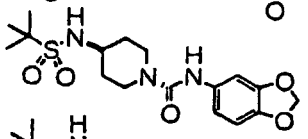
Ia-229 

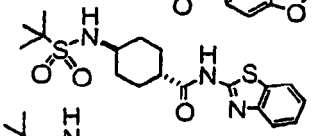
Ia-230 

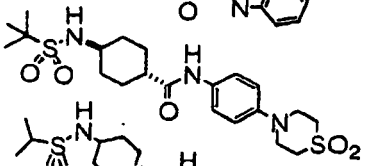
Ia-231 

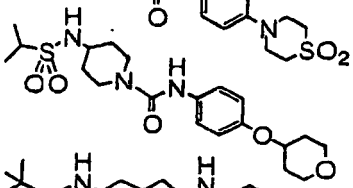
Ia-232 

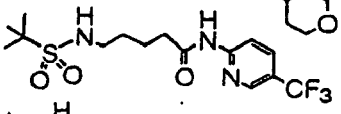
Ia-233 

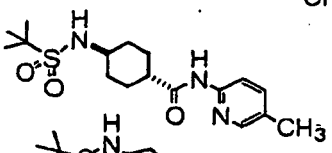
Ia-234 

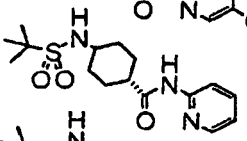
Ia-235 

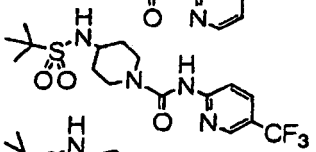
Ia-236 

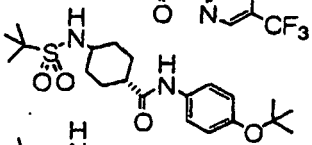
Ia-237 

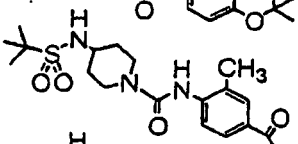
Ia-238 

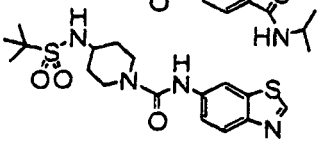
Ia-239 

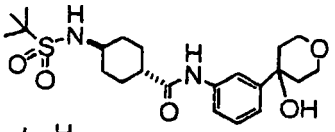
Ia-240 

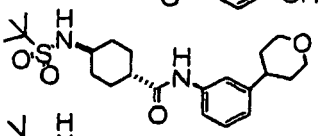
Ia-241 

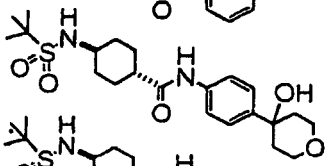
Ia-242 

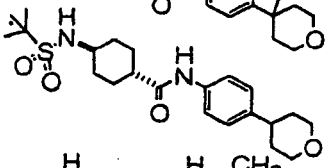
Ia-243 

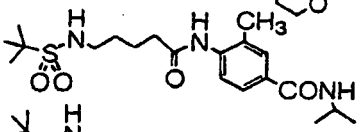
Ia-244 

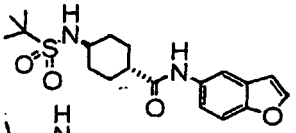
Ia-245 

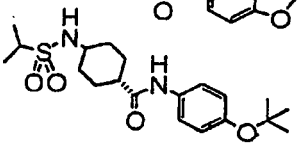
Ia-246 

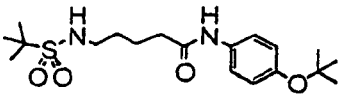
Ia-247 

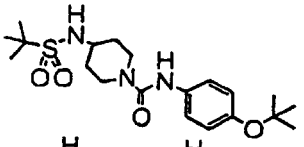
Ia-248 

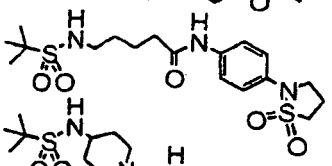
Ia-249 

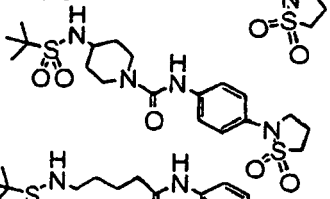
Ia-250 

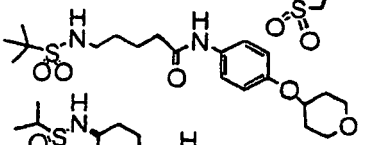
Ia-252 

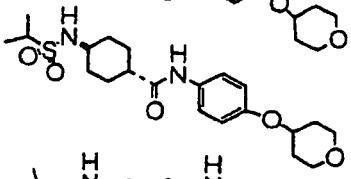
Ia-253 

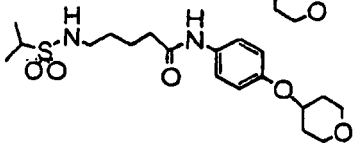
Ia-254 

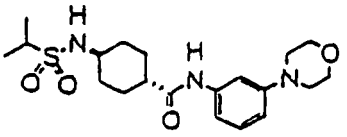
Ia-255 

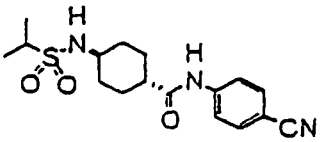
Ia-256 

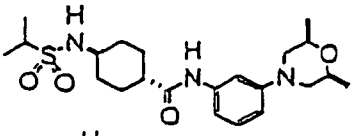
Ia-257 

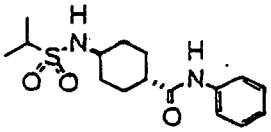
Ia-258 

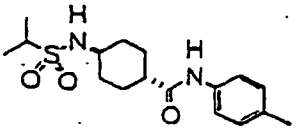
Ia-259 

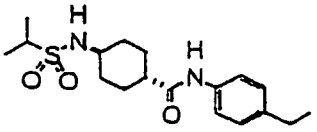
Ib-1 

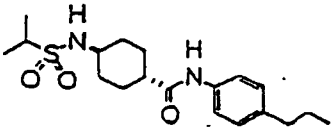
Ib-2 

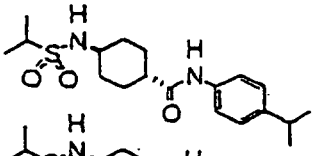
Ib-5 

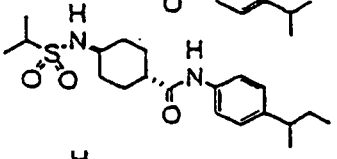
Ib-7 

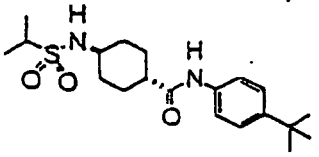
Ib-8 

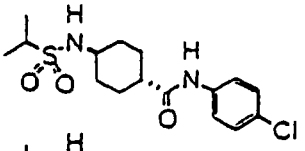
Ib-9 

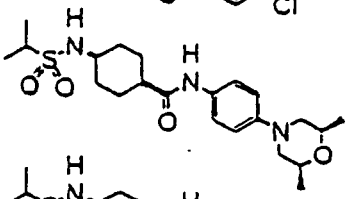
Ib-10 

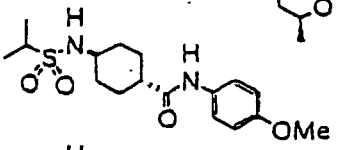
Ib-11 

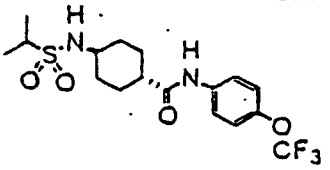
Ib-12 

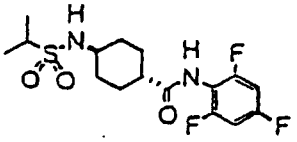
Ib-13 

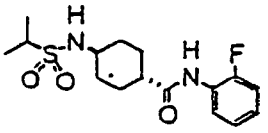
Ib-14 

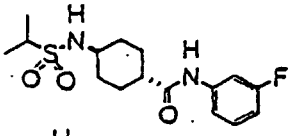
Ib-15 

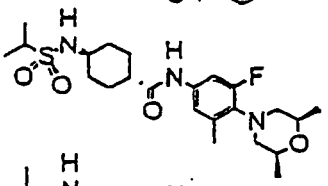
Ib-16 

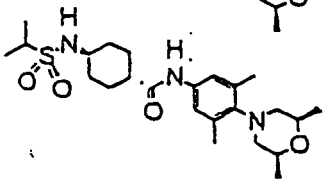
Ib-17 

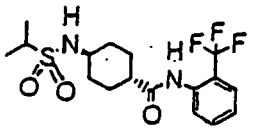
Ib-18 

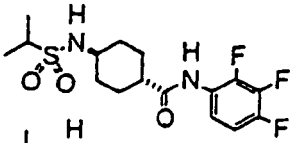
Ib-19 

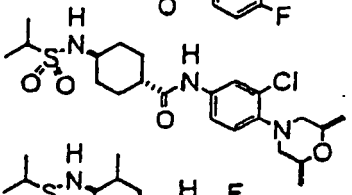
Ib-20 

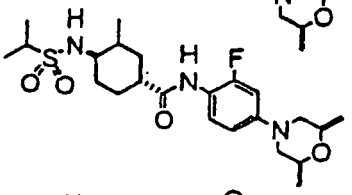
Ib-21 

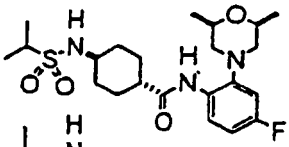
Ib-22 

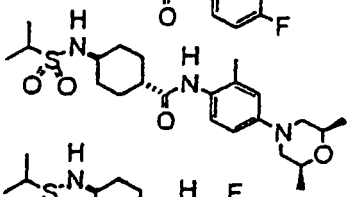
Ib-23 

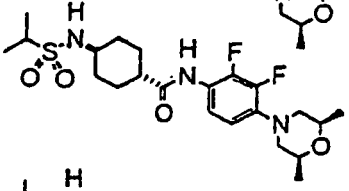
Ib-24 

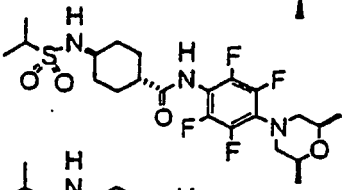
Ib-25 

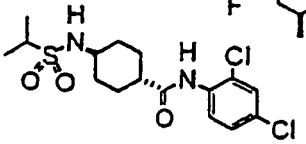
Ib-26 

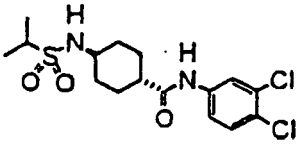
Ib-27 

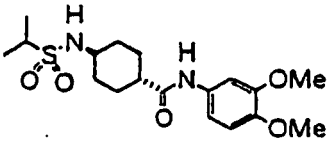
Ib-28 

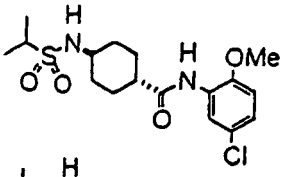
Ib-29 

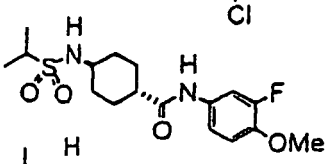
Ib-30 

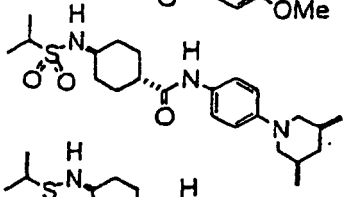
Ib-31 

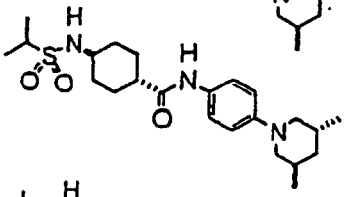
Ib-32 

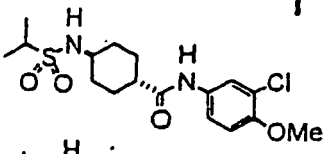
Ib-33 

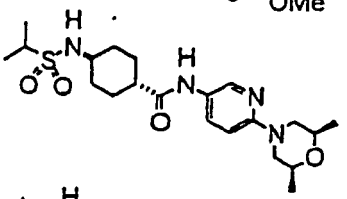
Ib-35 

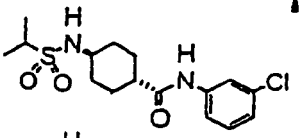
Ib-36 

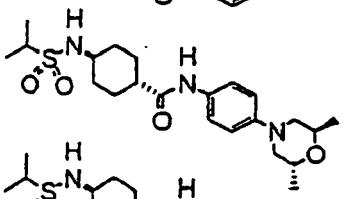
Ib-37 

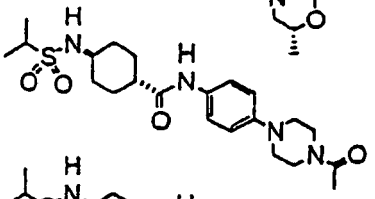
Ib-38 

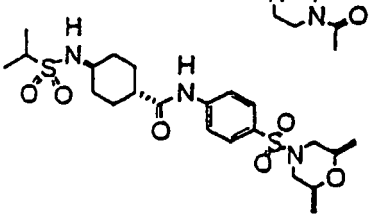
Ib-39 

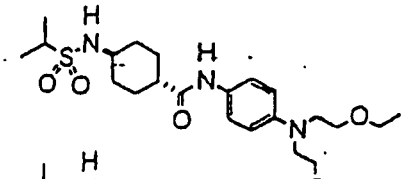
Ib-40 

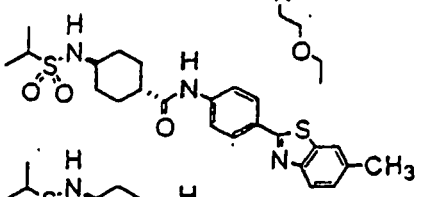
Ib-41 

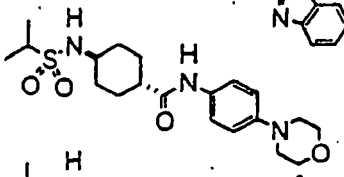
Ib-42 

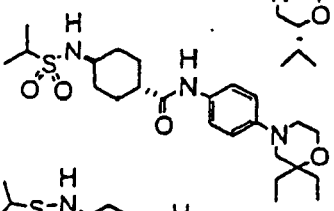
Ib-43 

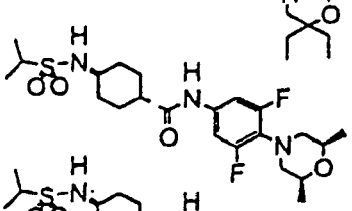
Ib-44 

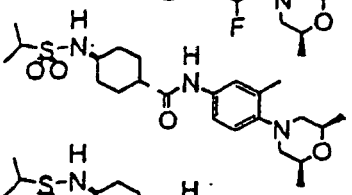
Ib-45 

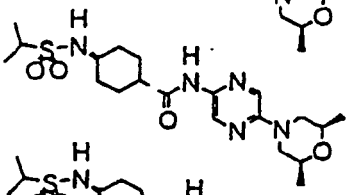
Ib-46 

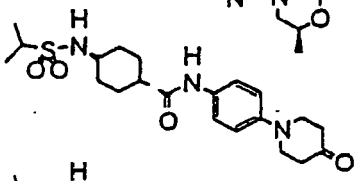
Ib-47 

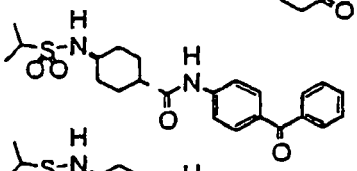
Ib-48 

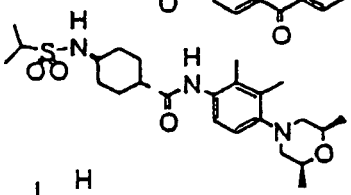
Ib-49 

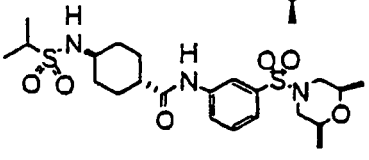
Ib-50 

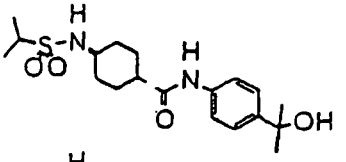
Ib-51 

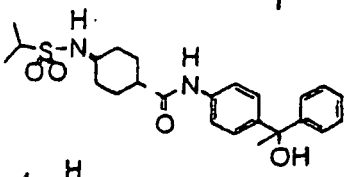
Ib-52 

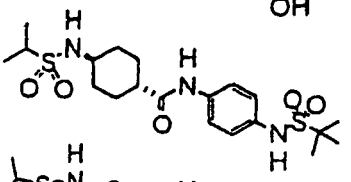
Ib-53 

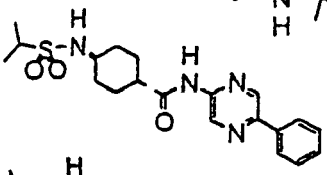
Ib-54 

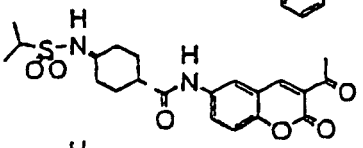
Ib-55 

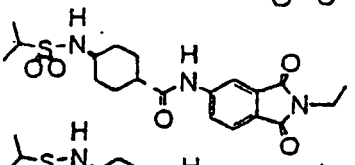
Ib-56 

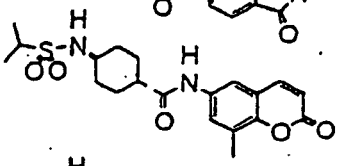
Ib-57 

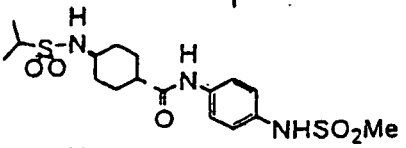
Ib-58 

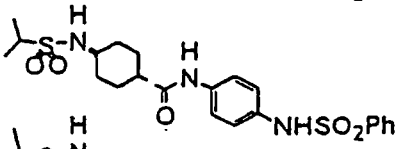
Ib-59 

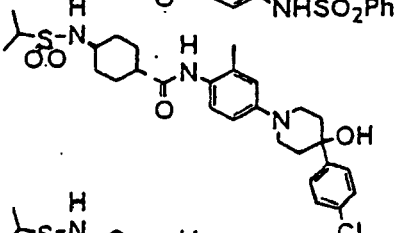
Ib-60 

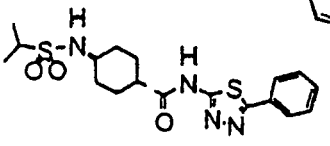
Ib-61 

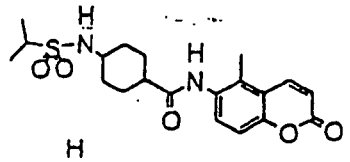
Ib-62 

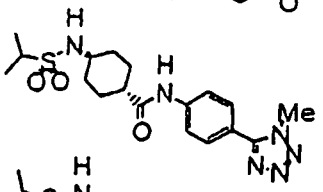
Ib-63 

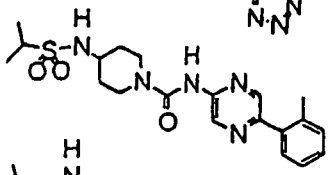
Ib-64 

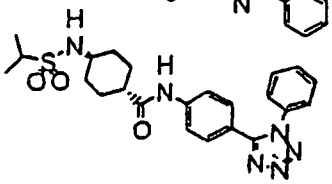
Ib-65 

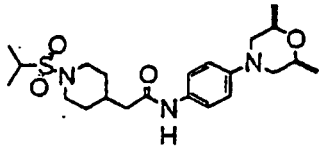
Ib-66 

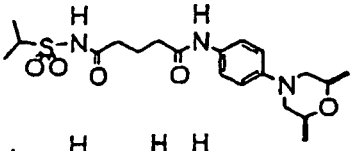
Ib-68 

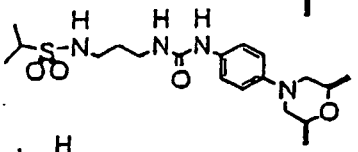
Ib-69 

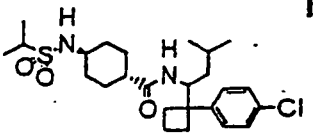
Ib-70 

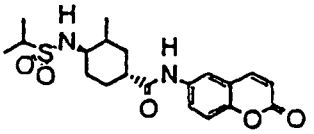
Ib-71 

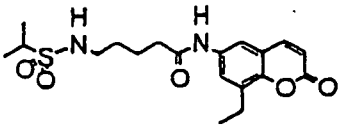
Ib-72 

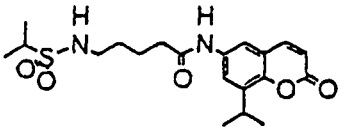
Ib-73 

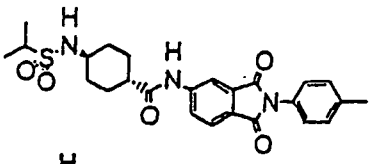
Ib-74 

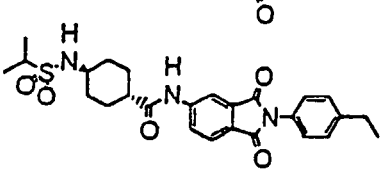
Ib-75 

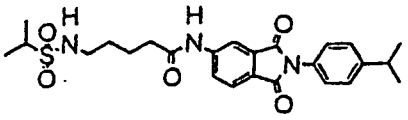
Ib-76 

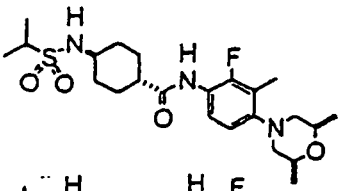
Ib-77 

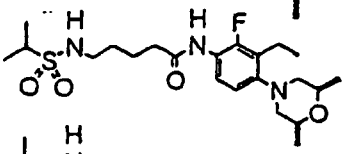
Ib-78 

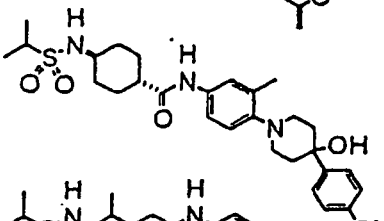
Ib-79 

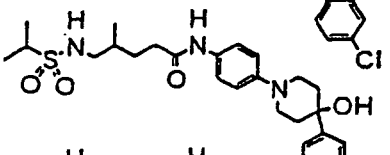
Ib-80 

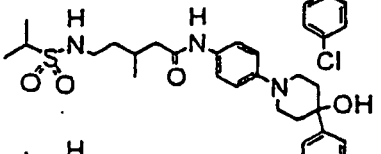
Ib-81 

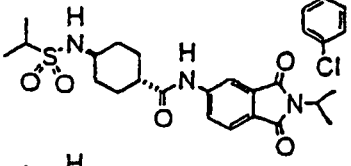
Ib-82 

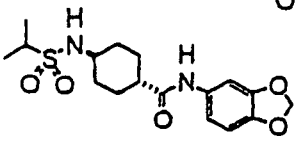
Ib-83 

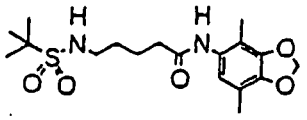
Ib-84 

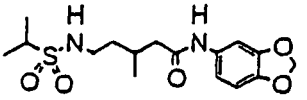
Ib-85 

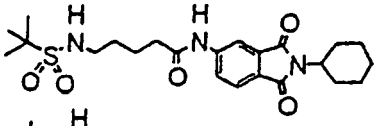
Ib-86 

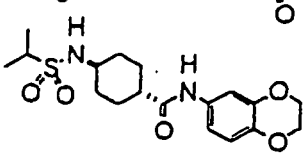
Ib-87 

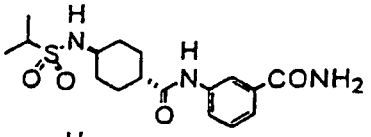
Ib-88 

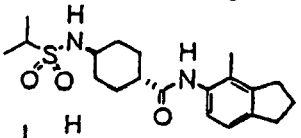
Ib-89 

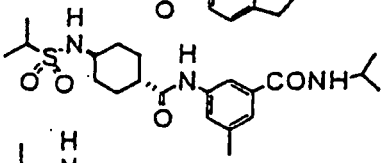
Ib-90 

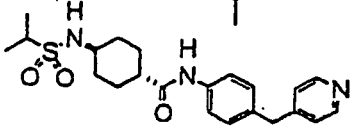
Ib-91 

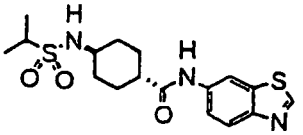
Ib-92 

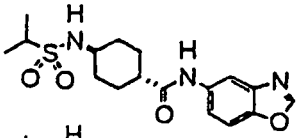
Ib-93 

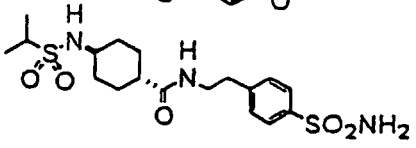
Ib-94 

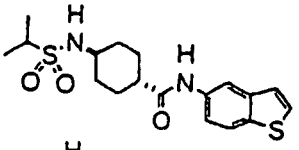
Ib-95 

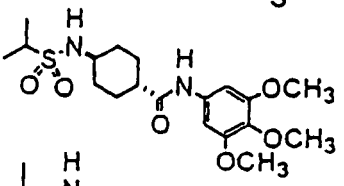
Ib-96 

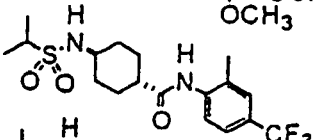
Ib-97 

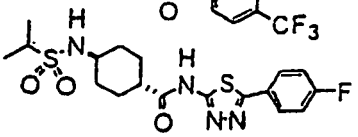
Ib-98 

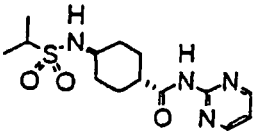
Ib-99 

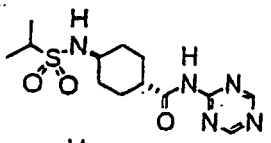
Ib-100 

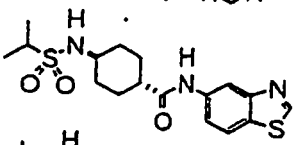
Ib-101 

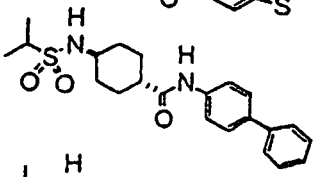
Ib-102 

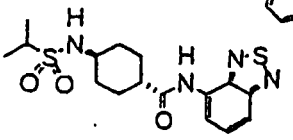
Ib-103 

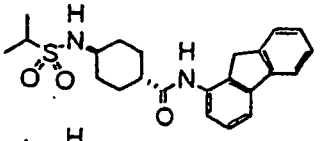
Ib-104 

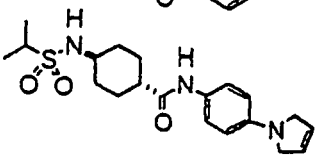
Ib-105 

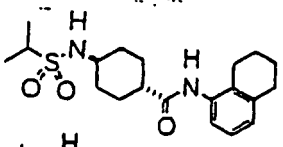
Ib-106 

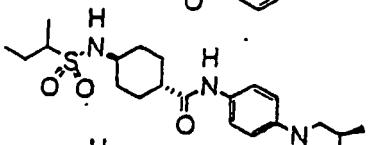
Ib-107 

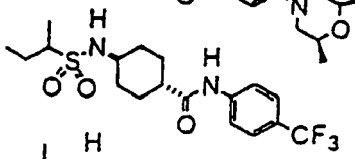
Ib-108 

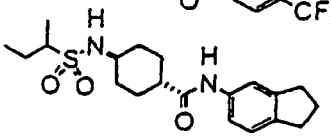
Ib-109 

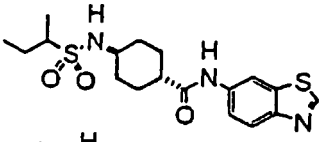
Ib-110 

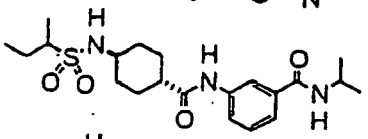
Ib-111 

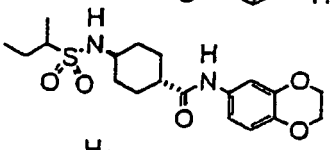
Ib-112 

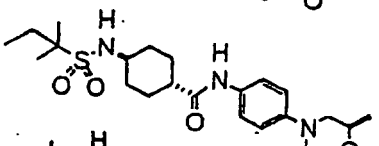
Ib-113 

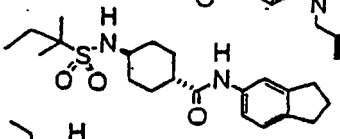
Ib-114 

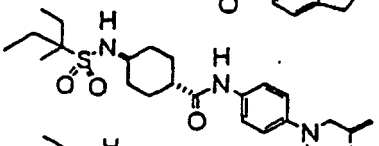
Ib-115 

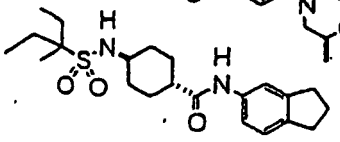
Ib-116 

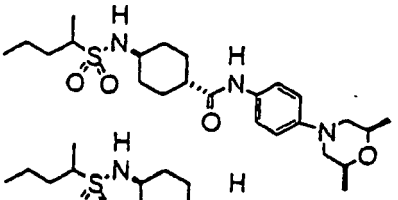
Ib-117 

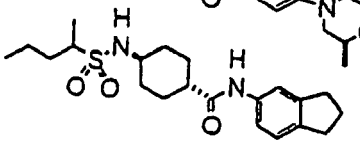
Ib-118 

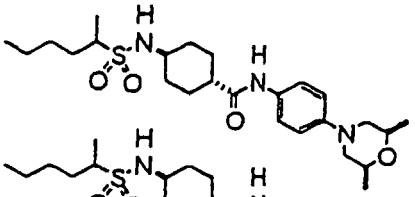
Ib-119 

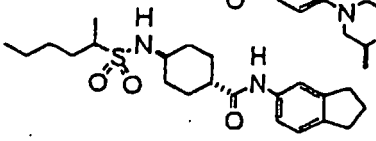
Ib-120 

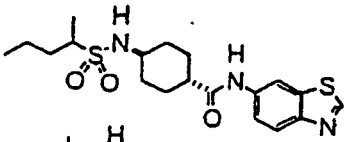
Ib-121 

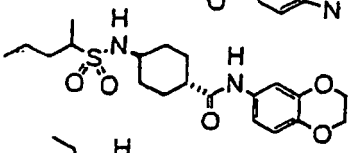
Ib-122 

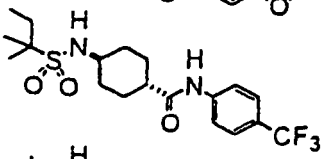
Ib-123 

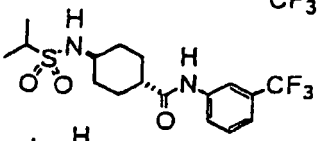
Ib-124 

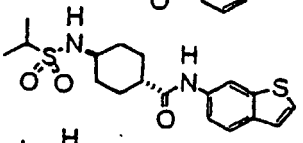
Ib-125 

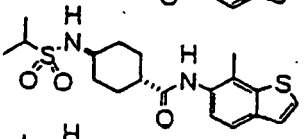
Ib-126 

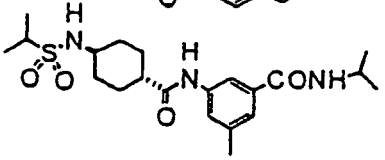
Ib-127 

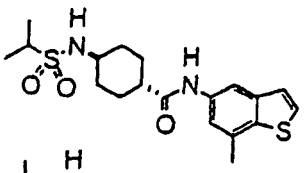
Ib-128 

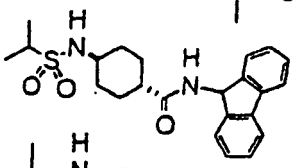
Ib-129 

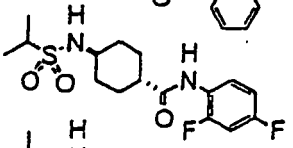
Ib-130 

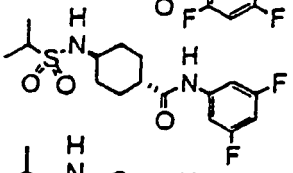
Ib-131 

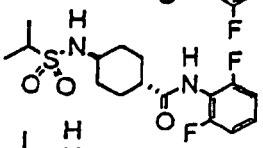
Ib-132 

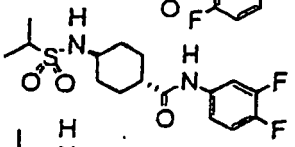
Ib-133 

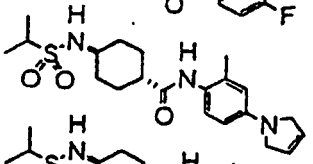
Ib-134 

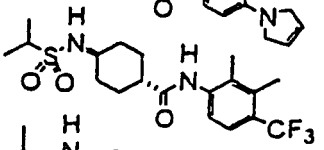
Ib-135 

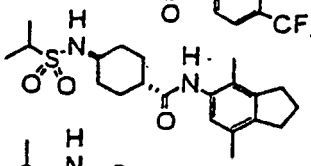
Ib-136 

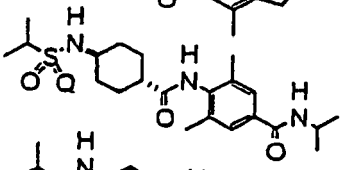
Ib-137 

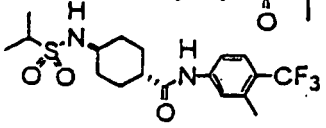
Ib-138 

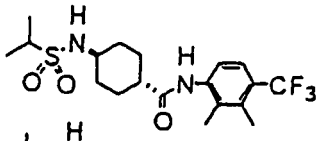
Ib-139 

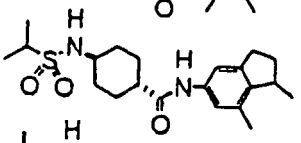
Ib-140 

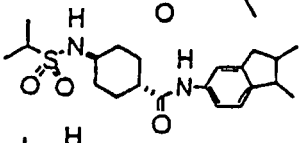
Ib-141 

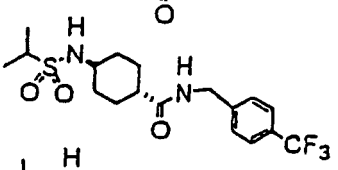
Ib-142 

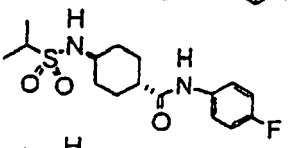
Ib-143 

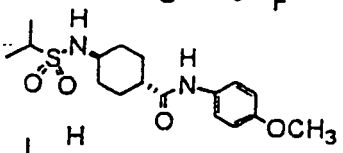
Ib-144 

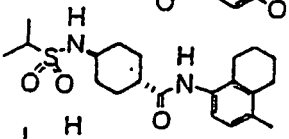
Ib-145 

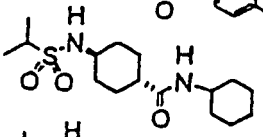
Ib-146 

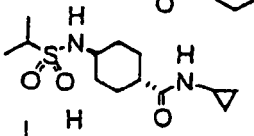
Ib-147 

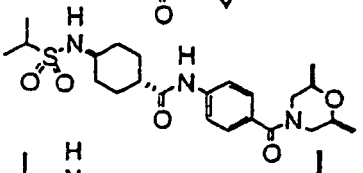
Ib-148 

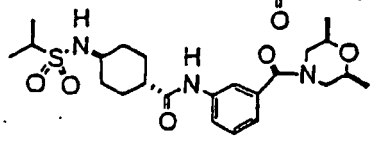
Ib-149 

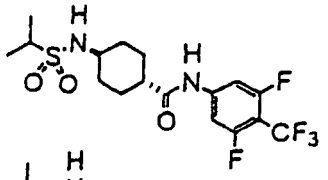
Ib-150 

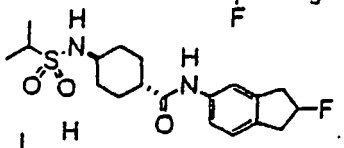
Ib-151 

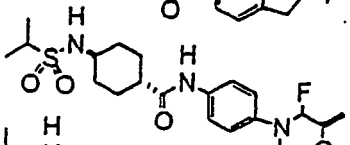
Ib-152 

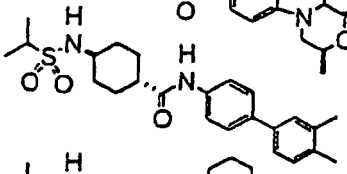
Ib-153 

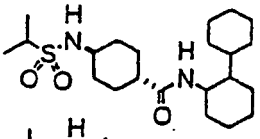
Ib-154 

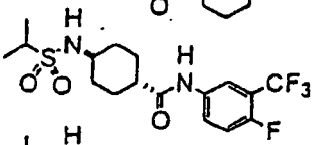
Ib-155 

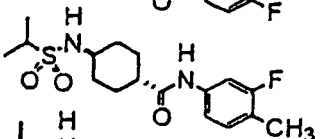
Ib-156 

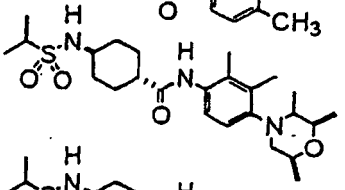
Ib-157 

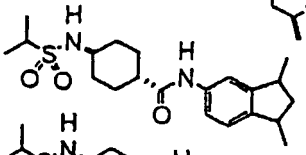
Ib-158 

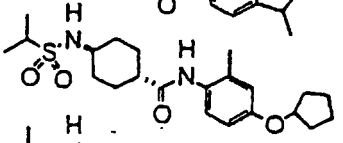
Ib-159 

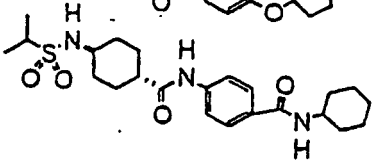
Ib-160 

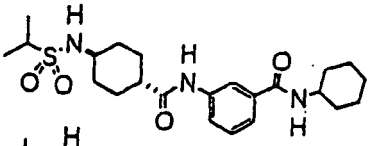
Ib-161 

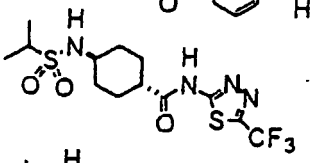
Ib-162 

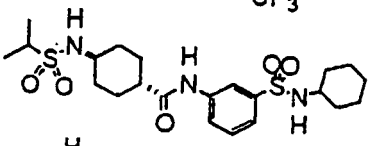
Ib-163 

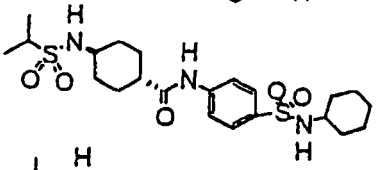
Ib-164 

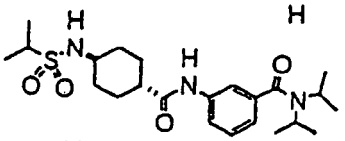
Ib-165 

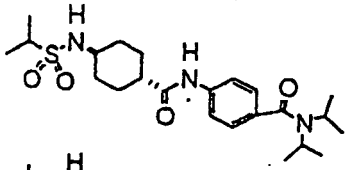
Ib-166 

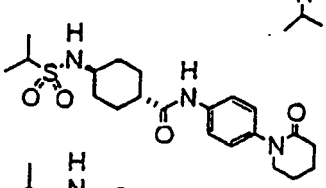
Ib-167 

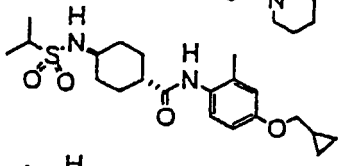
Ib-168 

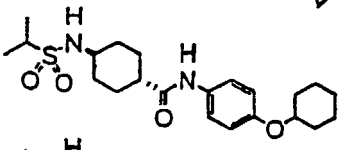
Ib-169 

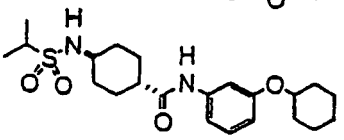
Ib-171 

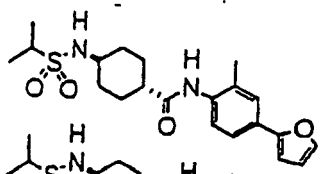
Ib-172 

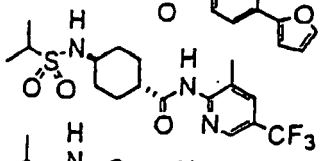
Ib-173 

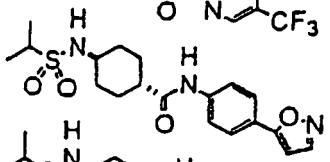
Ib-174 

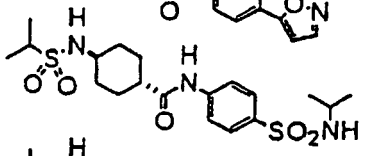
Ib-175 

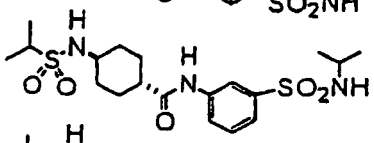
Ib-176 

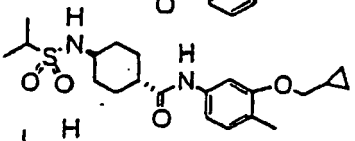
Ib-177 

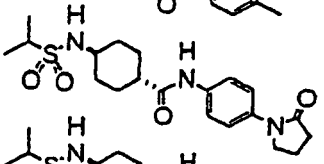
Ib-178 

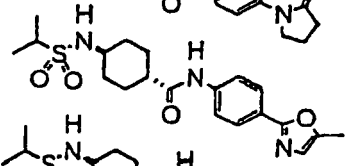
Ib-179 

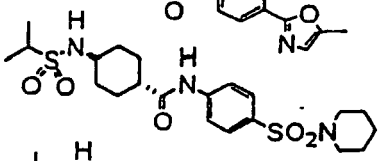
Ib-180 

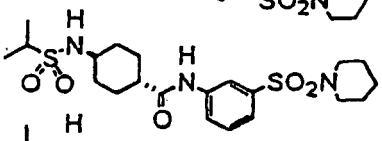
Ib-181 

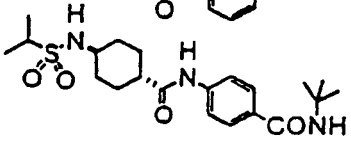
Ib-182 

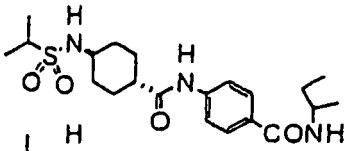
Ib-183 

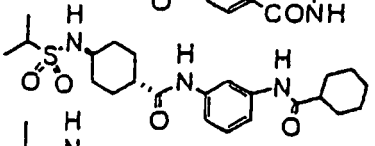
Ib-184 

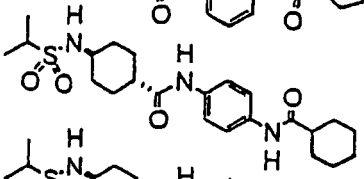
Ib-185 

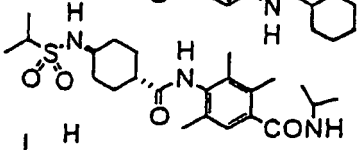
Ib-186 

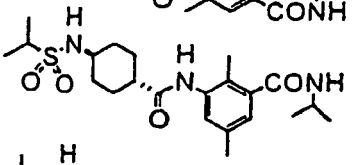
Ib-187 

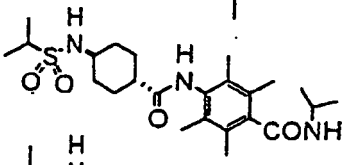
Ib-188 

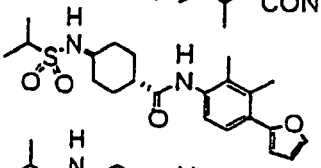
Ib-189 

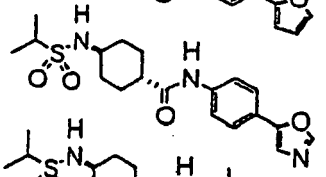
Ib-190 

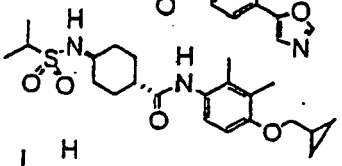
Ib-191 

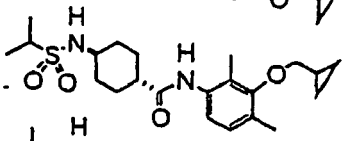
Ib-192 

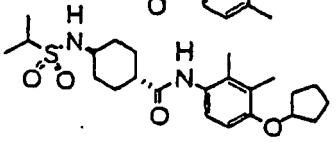
Ib-193 

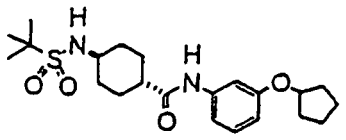
Ib-194 

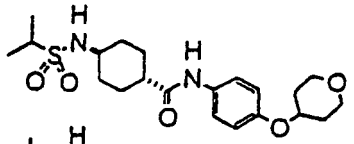
Ib-195 

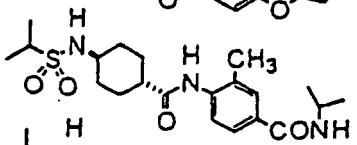
Ib-196 

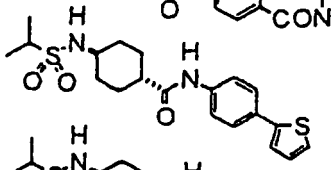
Ib-197 

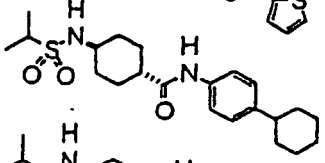
Ib-198 

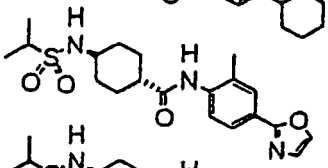
Ib-199 

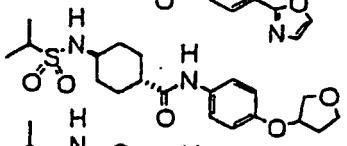
Ib-200 

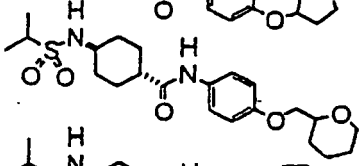
Ib-201 

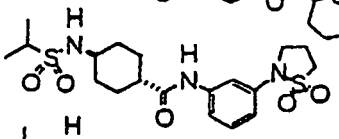
Ib-202 

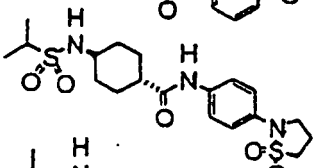
Ib-203 

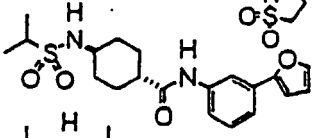
Ib-204 

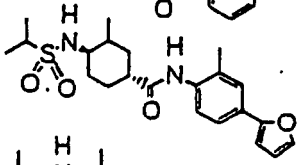
Ib-205 

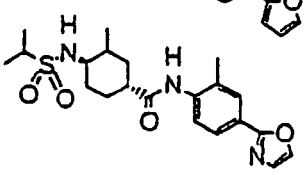
Ib-206 

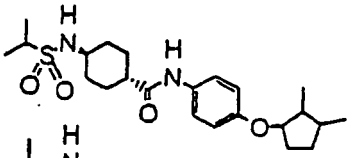
Ib-207 

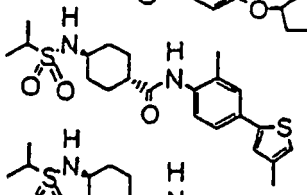
Ib-208 

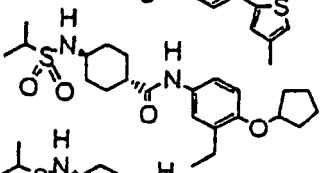
Ib-209 

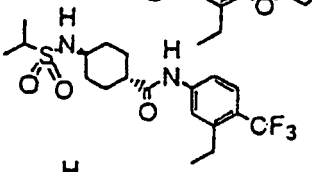
Ib-210 

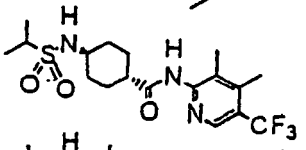
Ib-211 

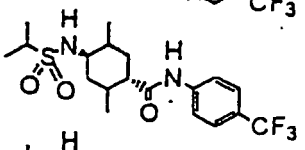
Ib-212 

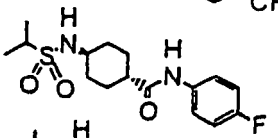
Ib-213 

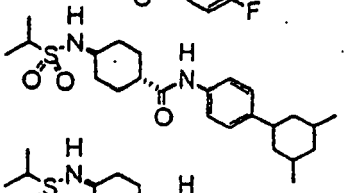
Ib-214 

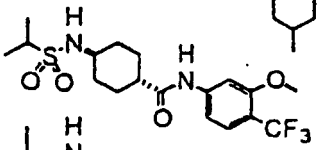
Ib-215 

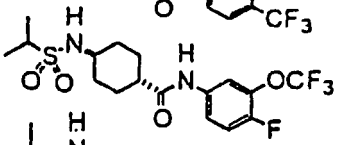
Ib-216 

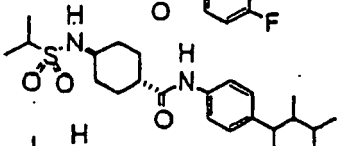
Ib-219 

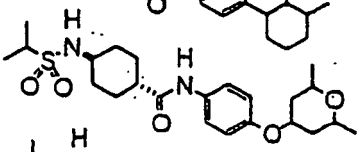
Ib-220 

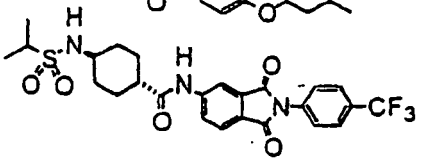
Ib-221 

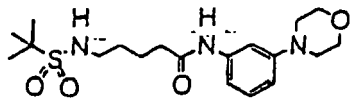
Ib-222 

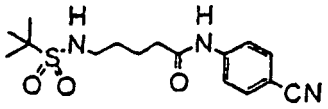
Ib-223 

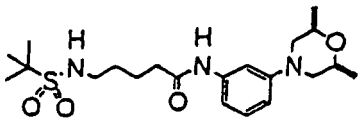
Ib-224 

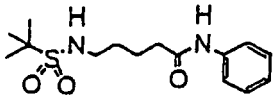
Ib-225 

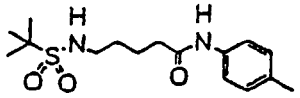
Ib-226 

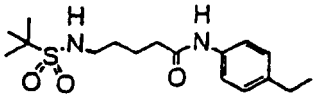
Ic-1 

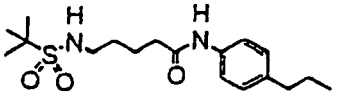
Ic-2 

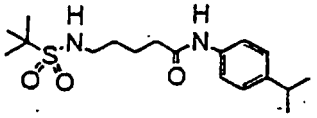
Ic-5 

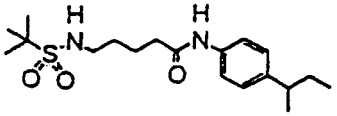
Ic-7 

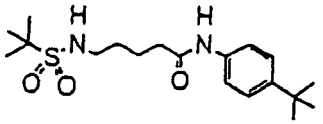
Ic-8 

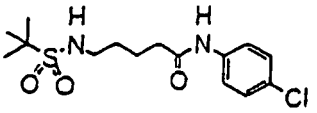
Ic-9 

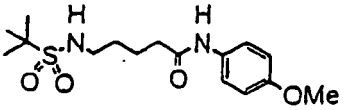
Ic-10 

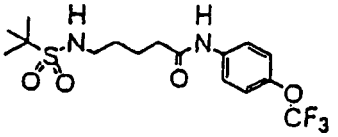
Ic-11 

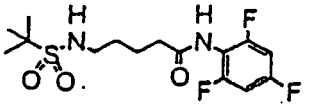
Ic-12 

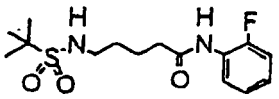
Ic-13 

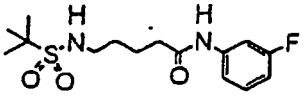
Ic-14 

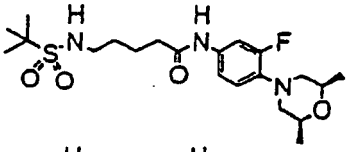
Ic-16 

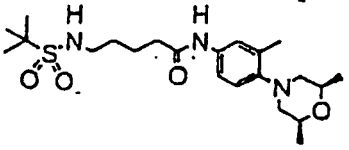
Ic-17 

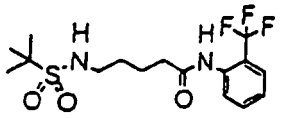
Ic-18 

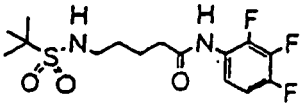
Ic-19 

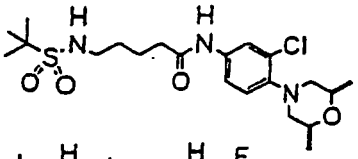
Ic-20 

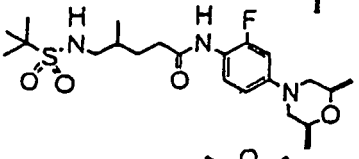
Ic-21 

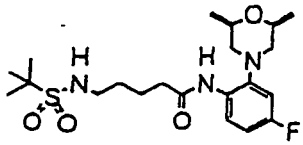
Ic-22 

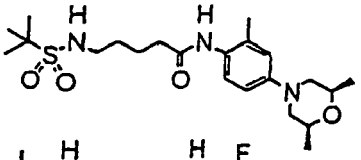
Ic-23 

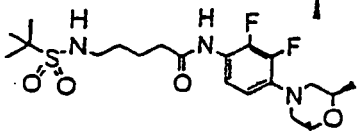
Ic-24 

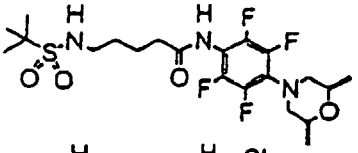
Ic-25 

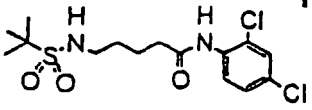
Ic-26 

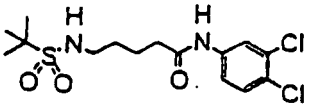
Ic-27 

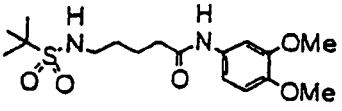
Ic-28 

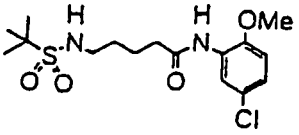
Ic-29 

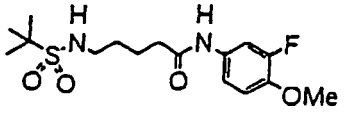
Ic-30 

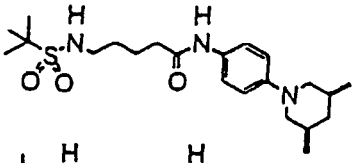
Ic-31 

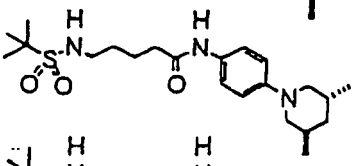
Ic-32 

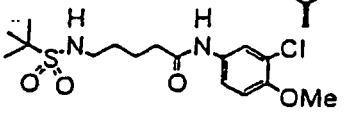
Ic-33 

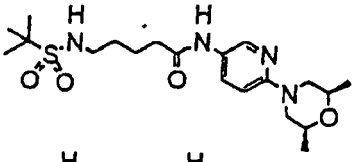
Ic-35 

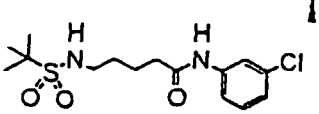
Ic-36 

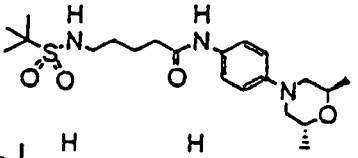
Ic-37 

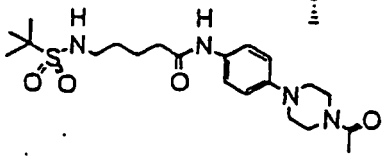
Ic-38 

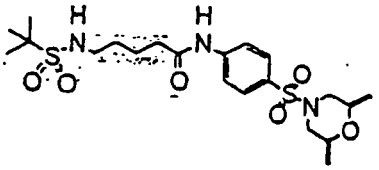
Ic-39 

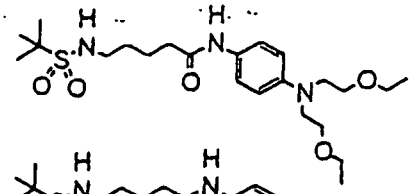
Ic-40 

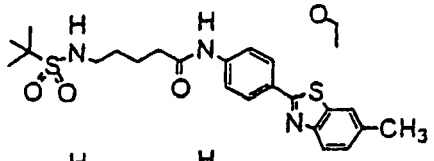
Ic-41 

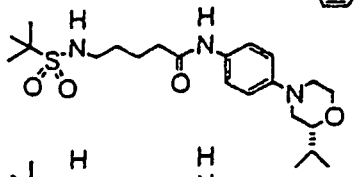
Ic-42 

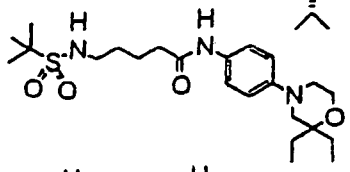
Ic-43 

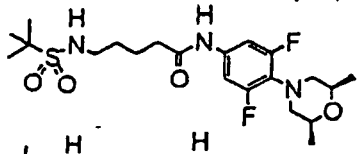
Ic-44 

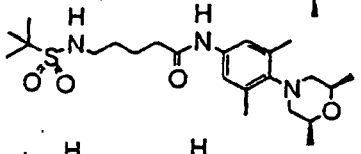
Ic-45 

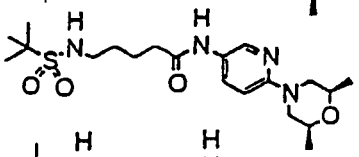
Ic-46 

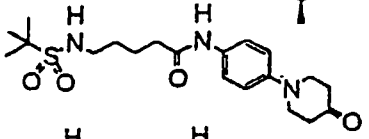
Ic-47 

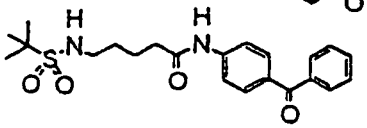
Ic-48 

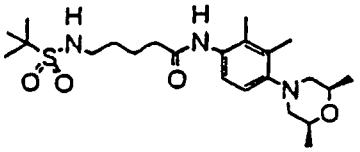
Ic-49 

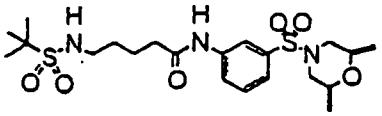
Ic-50 

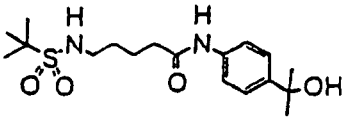
Ic-51 

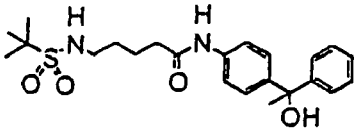
Ic-52 

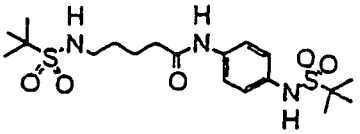
Ic-53 

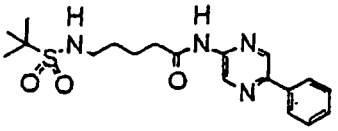
Ic-54 

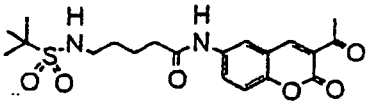
Ic-55 

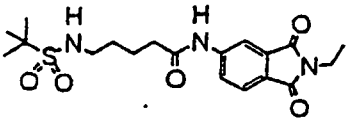
Ic-56 

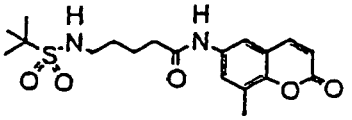
Ic-57 

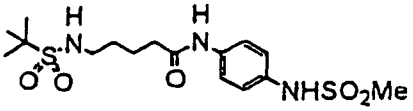
Ic-58 

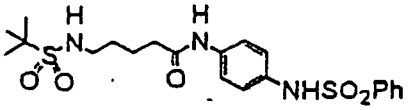
Ic-59 

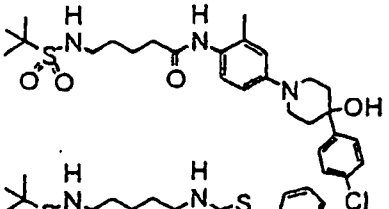
Ic-60 

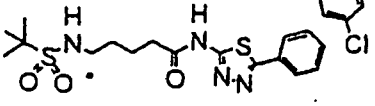
Ic-61 

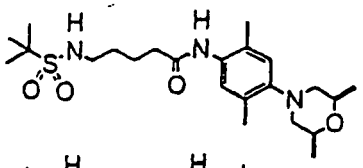
Ic-62 

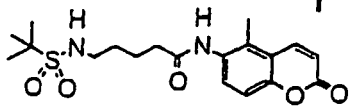
Ic-63 

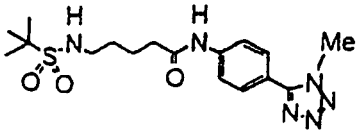
Ic-64 

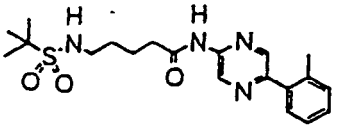
Ic-65 

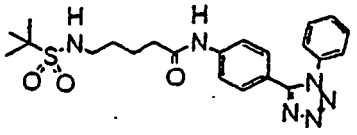
Ic-66 

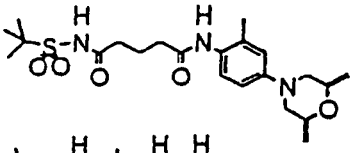
Ic-67 

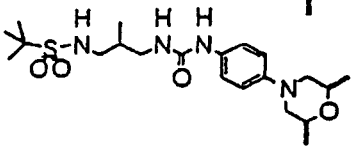
Ic-68 

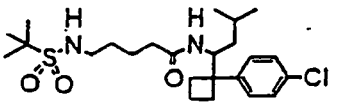
Ic-69 

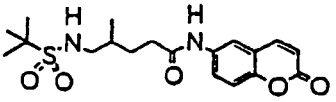
Ic-70 

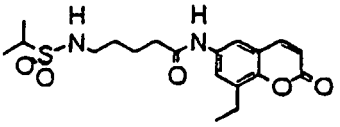
Ic-71 

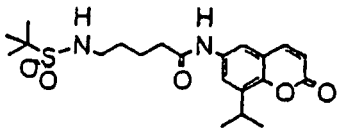
Ic-73 

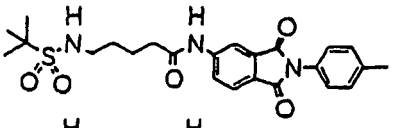
Ic-74 

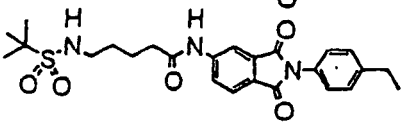
Ic-75 

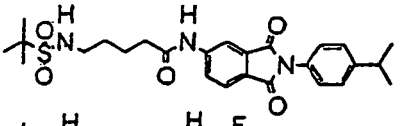
Ic-76 

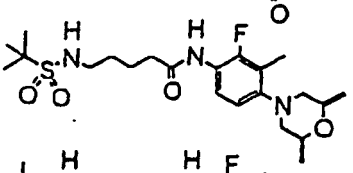
Ic-77 

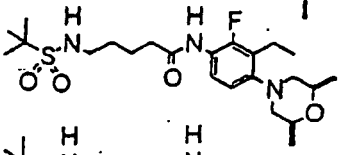
Ic-78 

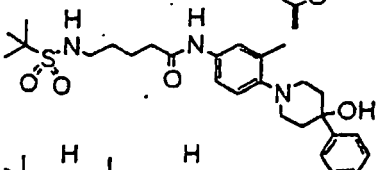
Ic-79 

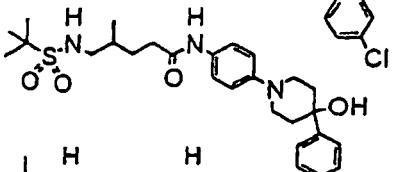
Ic-80 

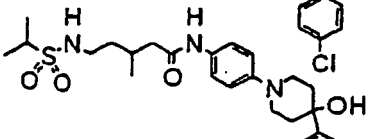
Ic-81 

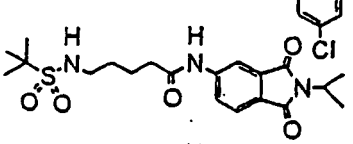
Ic-82 

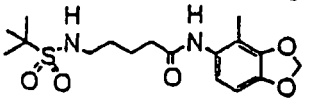
Ic-83 

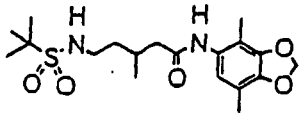
Ic-84 

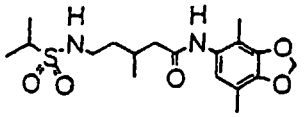
Ic-85 

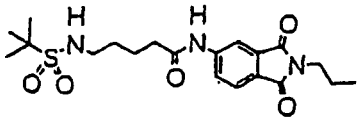
Ic-86 

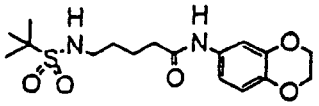
Ic-87 

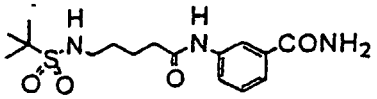
Ic-88 

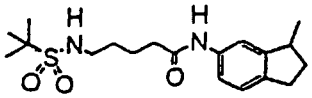
Ic-89 

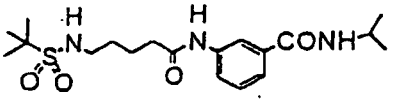
Ic-90 

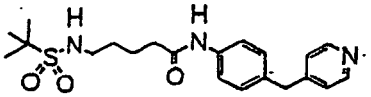
Ic-91 

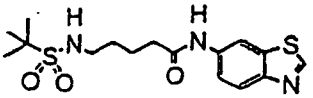
Ic-92 

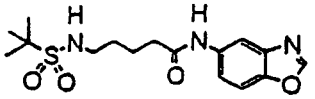
Ic-93 

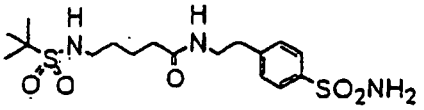
Ic-94 

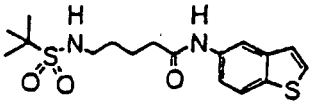
Ic-95 

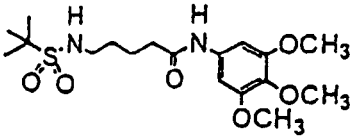
Ic-96 

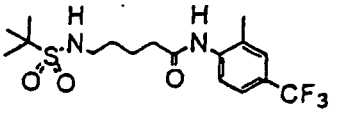
Ic-97 

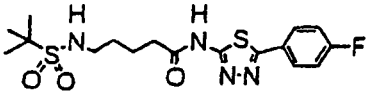
Ic-98 

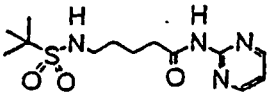
Ic-99 

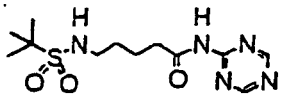
Ic-100 

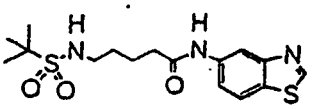
Ic-101 

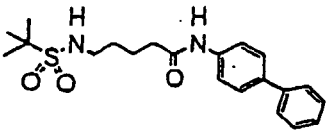
Ic-102 

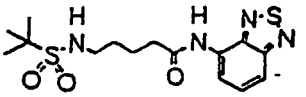
Ic-103 

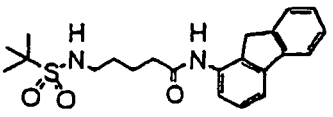
Ic-104 

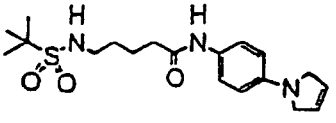
Ic-105 

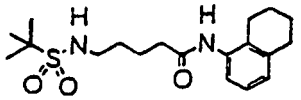
Ic-106 

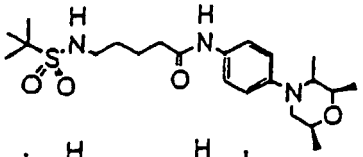
Ic-107 

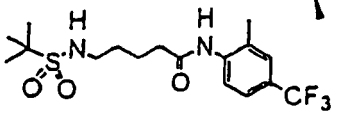
Ic-108 

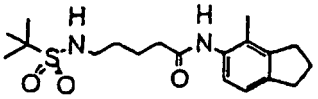
Ic-109 

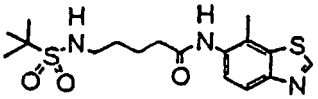
Ic-110 

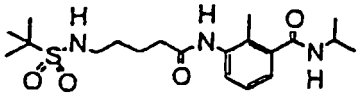
Ic-111 

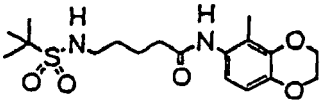
Ic-112 

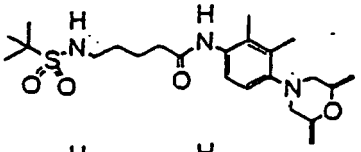
Ic-113 

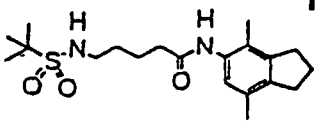
Ic-114 

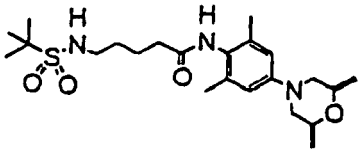
Ic-115 

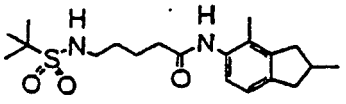
Ic-116 

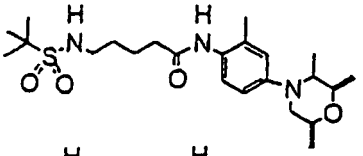
Ic-117 

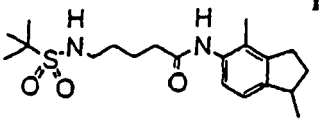
Ic-118 

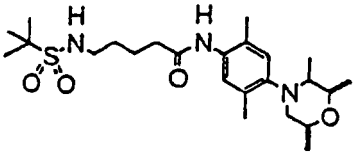
Ic-119 

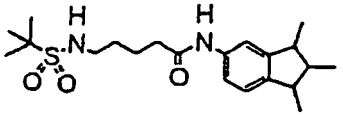
Ic-120 

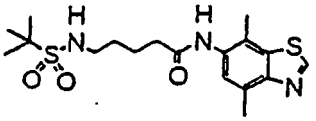
Ic-121 

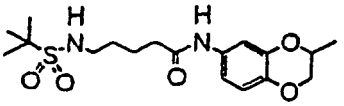
Ic-122 

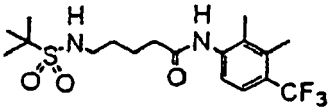
Ic-123 

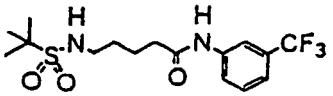
Ic-124 

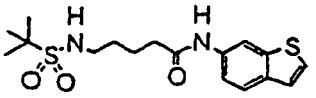
Ic-125 

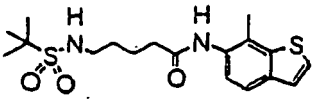
Ic-126 

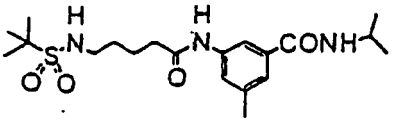
Ic-127 

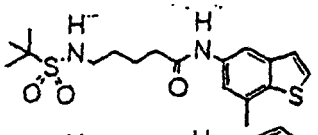
Ic-128 

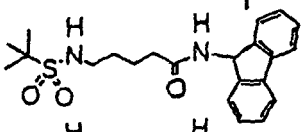
Ic-129 

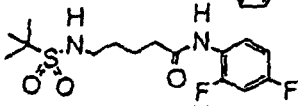
Ic-130 

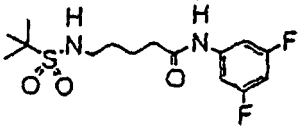
Ic-131 

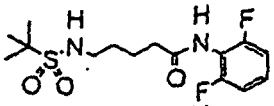
Ic-132 

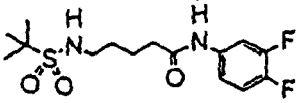
Ic-133 

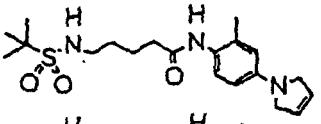
Ic-134 

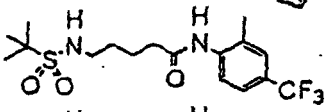
Ic-135 

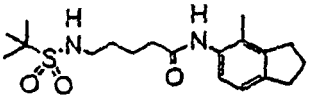
Ic-136 

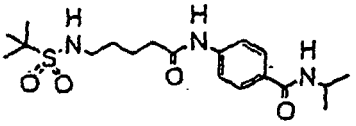
Ic-137 

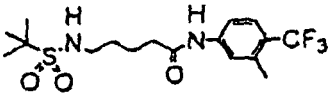
Ic-138 

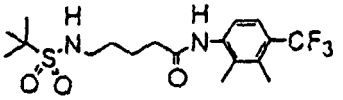
Ic-139 

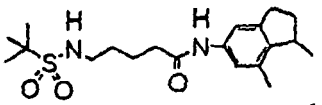
Ic-140 

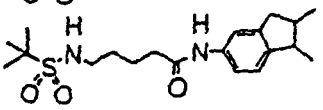
Ic-141 

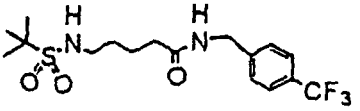
Ic-142 

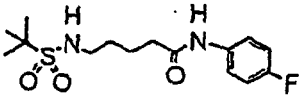
Ic-143 

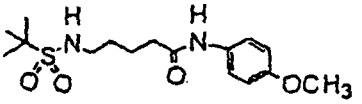
Ic-144 

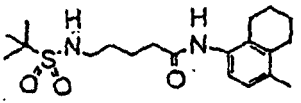
Ic-145 

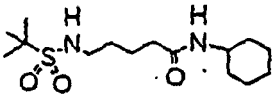
Ic-146 

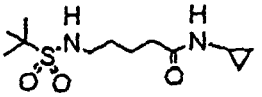
Ic-147 

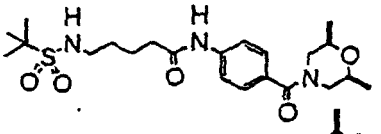
Ic-148 

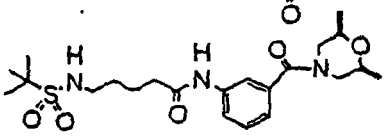
Ic-149 

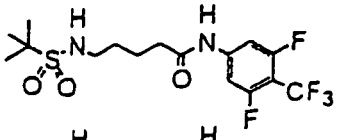
Ic-150 

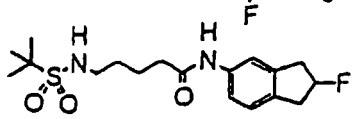
Ic-151 

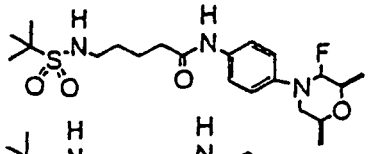
Ic-152 

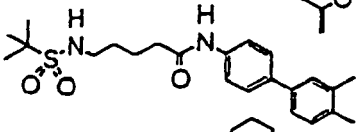
Ic-153 

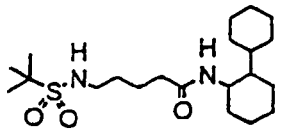
Ic-154 

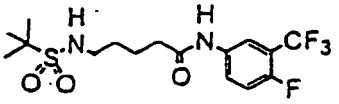
Ic-155 

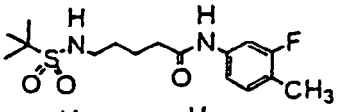
Ic-156 

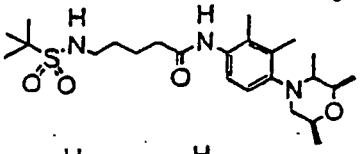
Ic-157 

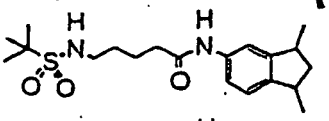
Ic-158 

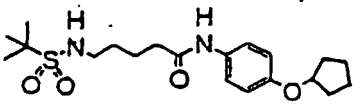
Ic-159 

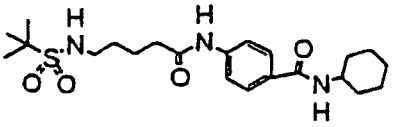
Ic-160 

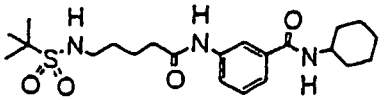
Ic-161 

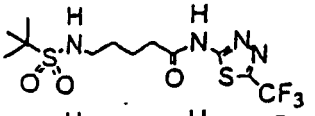
Ic-162 

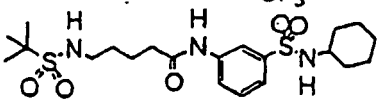
Ic-163 

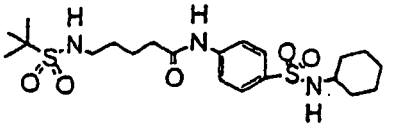
Ic-164 

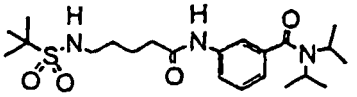
Ic-165 

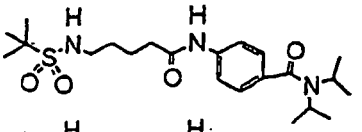
Ic-166 

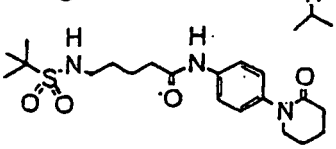
Ic-167 

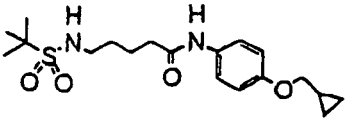
Ic-168 

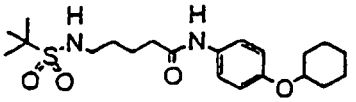
Ic-169 

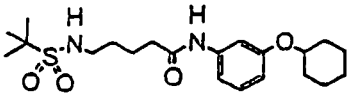
Ic-171 

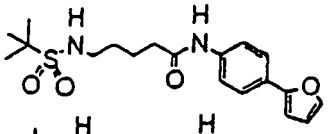
Ic-172 

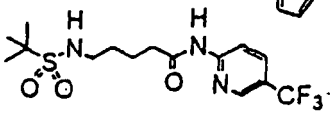
Ic-173 

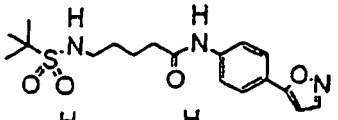
Ic-174 

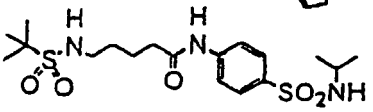
Ic-175 

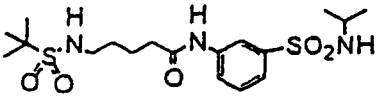
Ic-176 

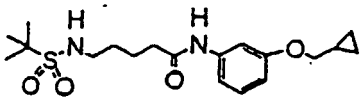
Ic-177 

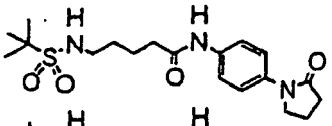
Ic-178 

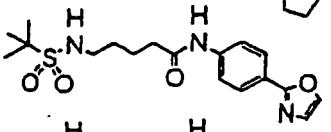
Ic-179 

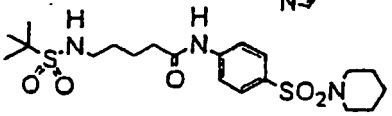
Ic-180 

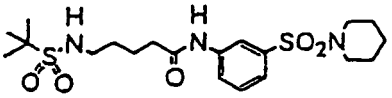
Ic-181 

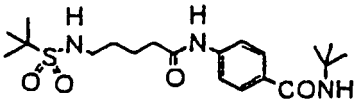
Ic-182 

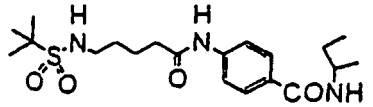
Ic-183 

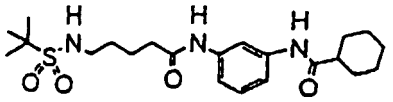
Ic-184 

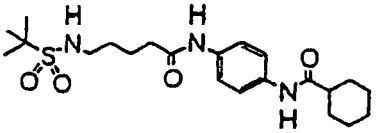
Ic-185 

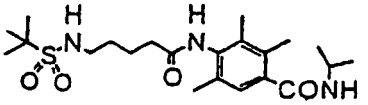
Ic-186 

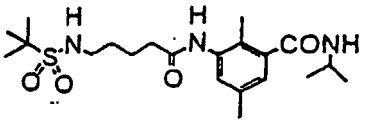
Ic-187 

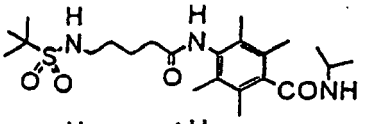
Ic-188 

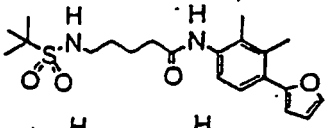
Ic-189 

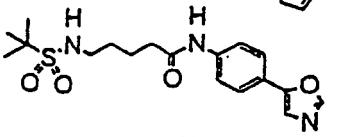
Ic-190 

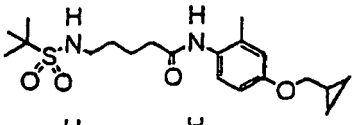
Ic-191 

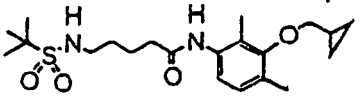
Ic-192 

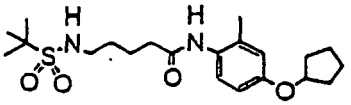
Ic-193 

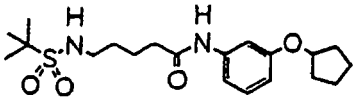
Ic-194 

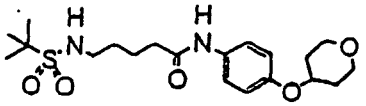
Ic-195 

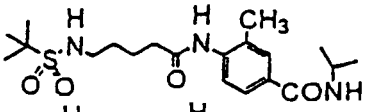
Ic-196 

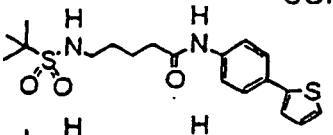
Ic-197 

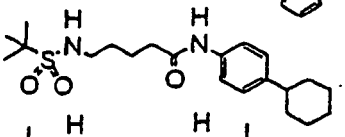
Ic-198 

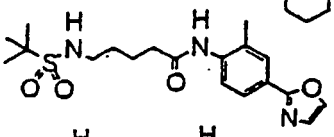
Ic-199 

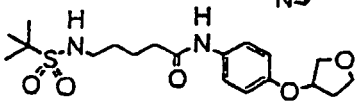
Ic-200 

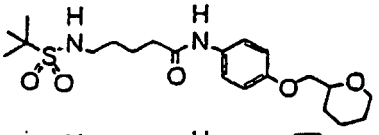
Ic-201 

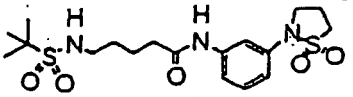
Ic-202 

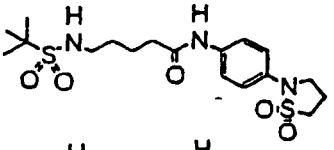
Ic-203 

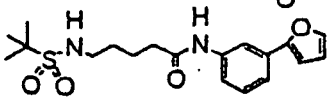
Ic-204 

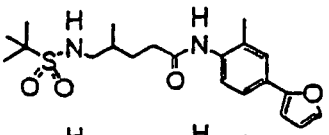
Ic-205 

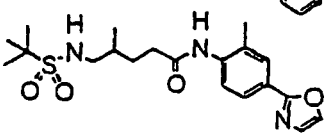
Ic-206 

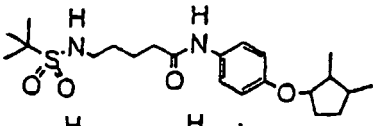
Ic-207 

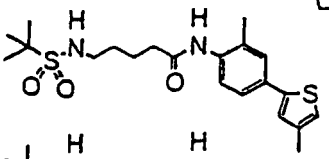
Ic-208 

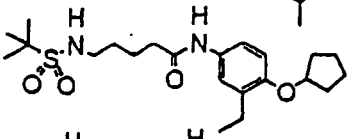
Ic-209 

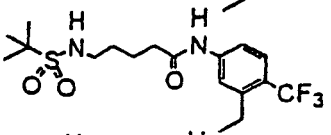
Ic-210 

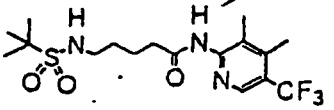
Ic-211 

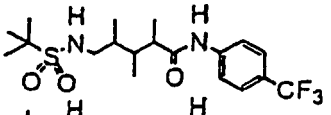
Ic-212 

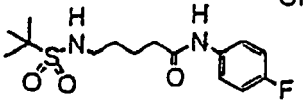
Ic-213 

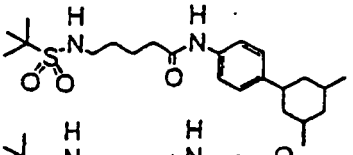
Ic-214 

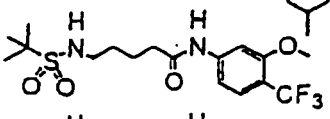
Ic-215 

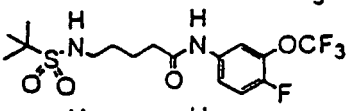
Ic-216 

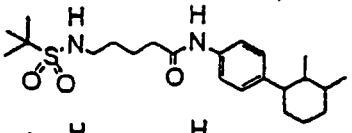
Ic-219 

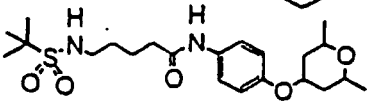
Ic-220 

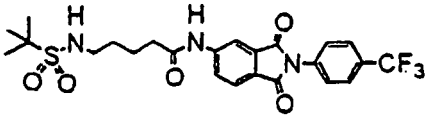
Ic-221 

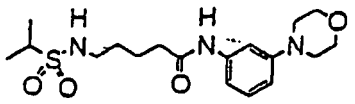
Ic-222 

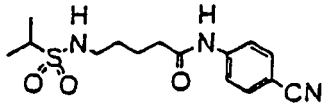
Ic-223 

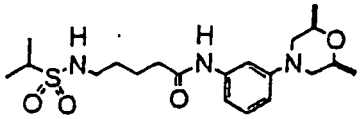
Ic-224 

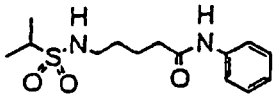
Ic-225 

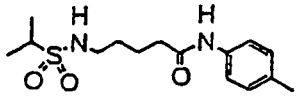
Ic-226 

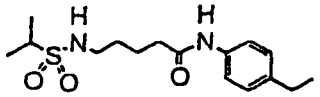
Id-1 

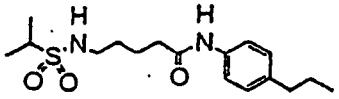
Id-2 

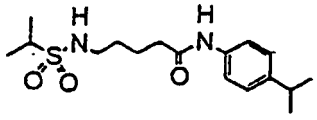
Id-4 

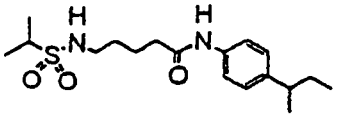
Id-7 

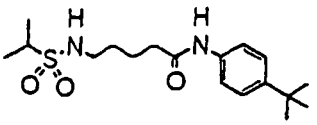
Id-8 

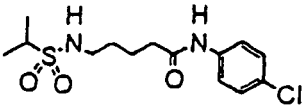
Id-9 

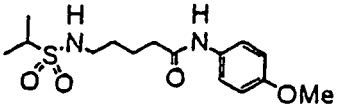
Id-10 

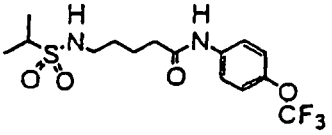
Id-11 

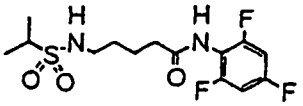
Id-12 

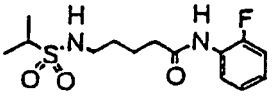
Id-13 

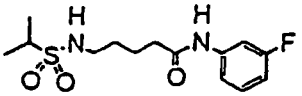
Id-14 

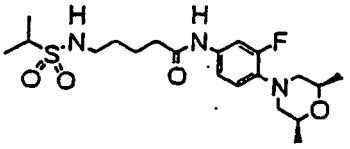
Id-16 

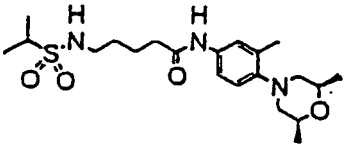
Id-17 

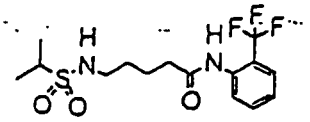
Id-18 

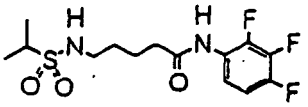
Id-19 

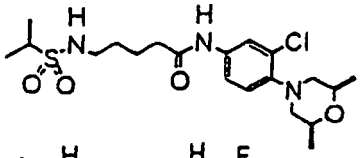
Id-20 

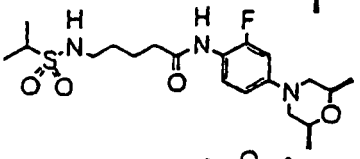
Id-21 

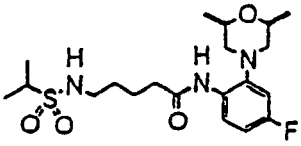
Id-22 

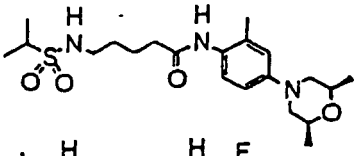
Id-23 

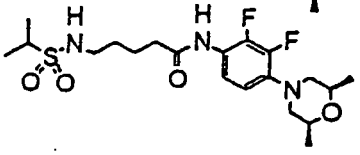
Id-24 

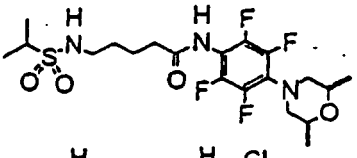
Id-25 

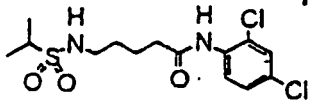
Id-26 

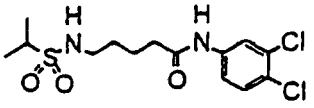
Id-27 

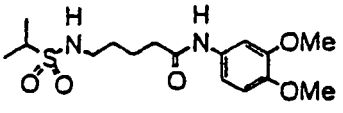
Id-28 

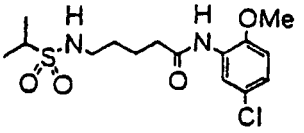
Id-29 

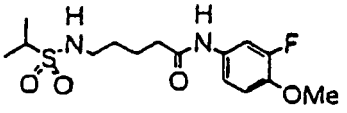
Id-30 

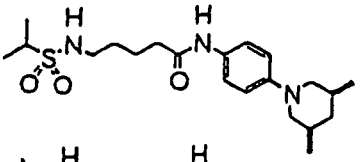
Id-31 

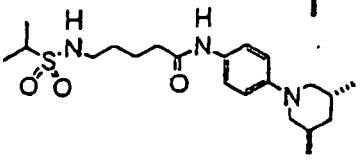
Id-32 

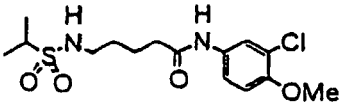
Id-33 

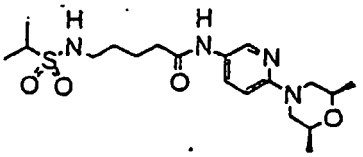
Id-35 

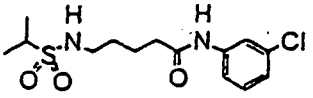
Id-36 

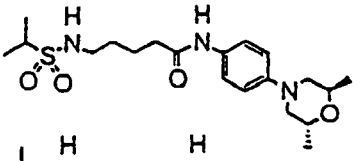
Id-37 

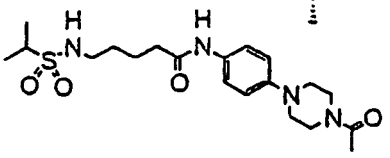
Id-38 

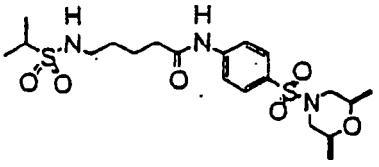
Id-39 

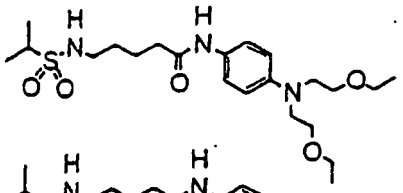
Id-40 

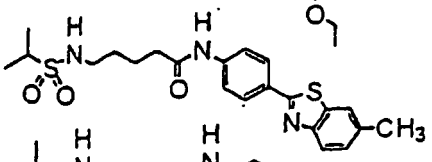
Id-41 

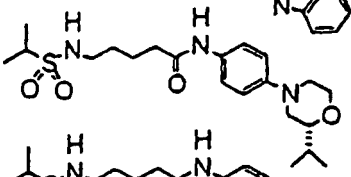
Id-42 

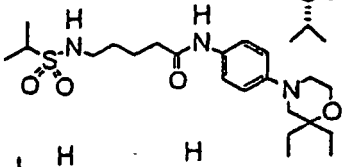
Id-43 

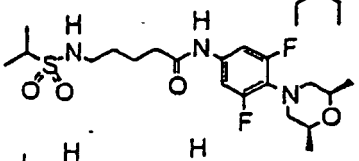
Id-44 

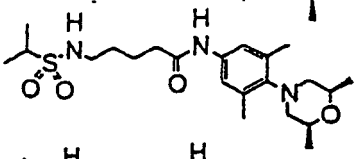
Id-45 

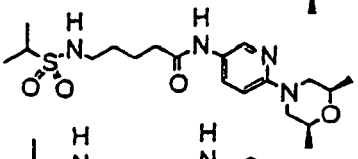
Id-46 

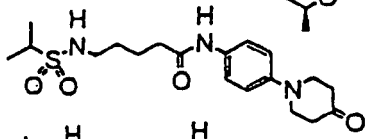
Id-47 

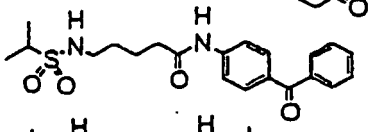
Id-48 

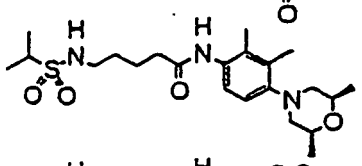
Id-49 

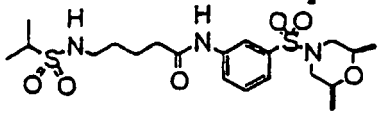
Id-50 

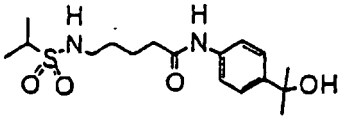
Id-51 

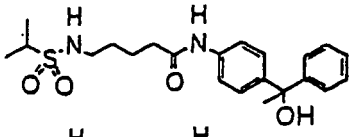
Id-52 

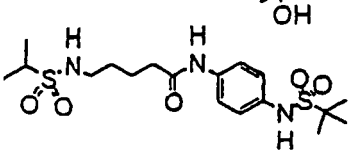
Id-53 

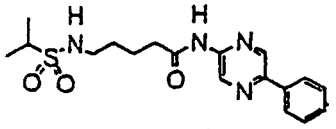
Id-54 

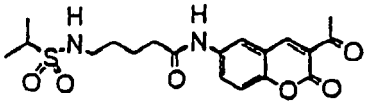
Id-55 

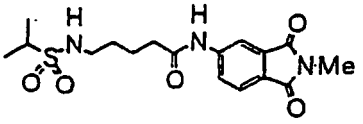
Id-56 

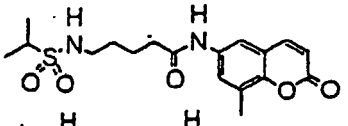
Id-57 

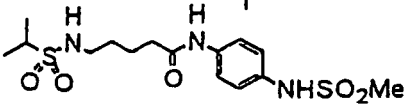
Id-58 

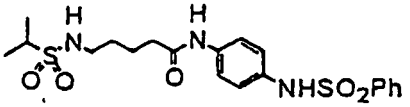
Id-59 

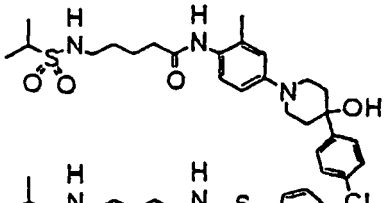
Id-60 

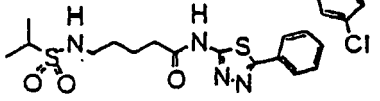
Id-61 

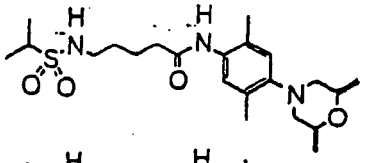
Id-62 

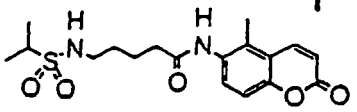
Id-63 

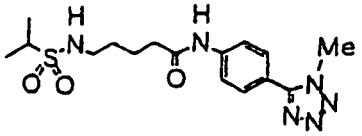
Id-64 

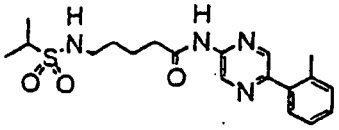
Id-65 

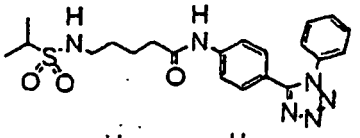
Id-66 

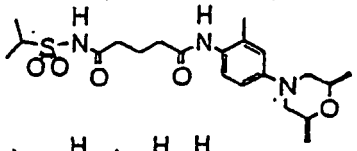
Id-67 

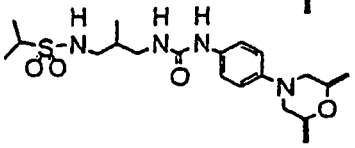
Id-68 

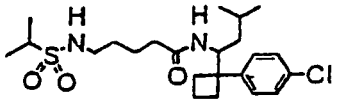
Id-69 

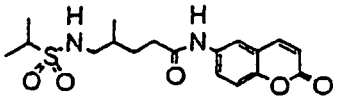
Id-70 

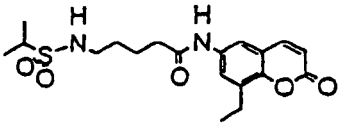
Id-71 

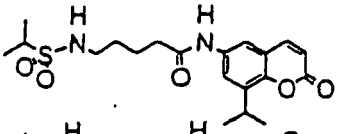
Id-73 

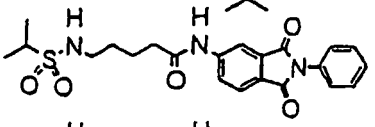
Id-74 

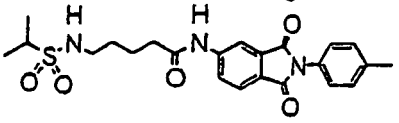
Id-75 

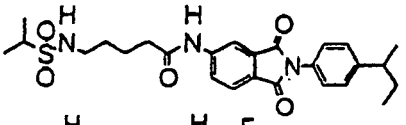
Id-76 

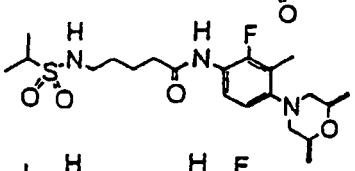
Id-77 

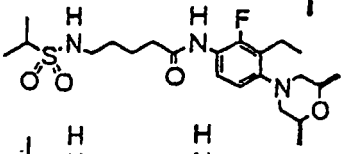
Id-78 

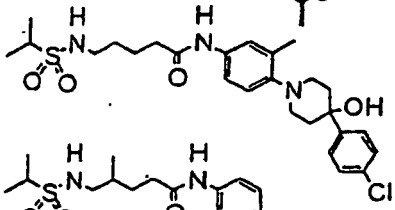
Id-79 

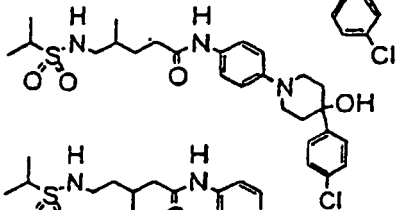
Id-80 

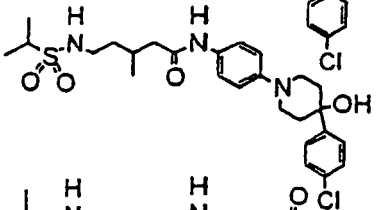
Id-81 

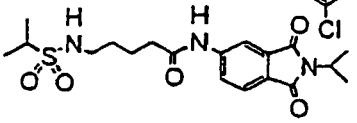
Id-82 

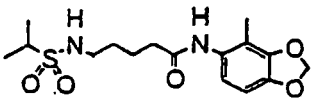
Id-83 

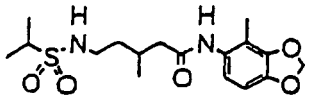
Id-84 

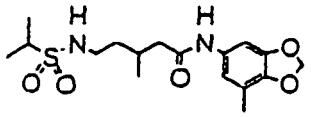
Id-85 

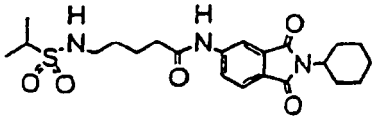
Id-86 

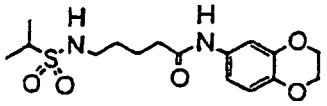
Id-87 

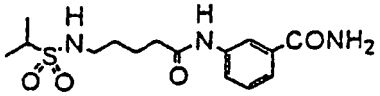
Id-88 

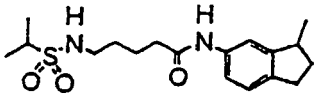
Id-89 

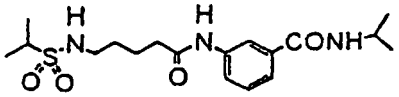
Id-90 

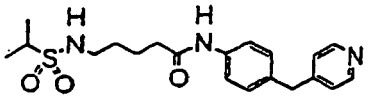
Id-91 

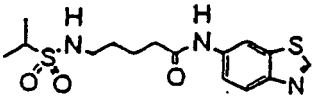
Id-92 

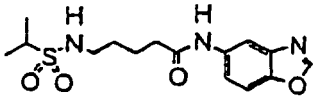
Id-93 

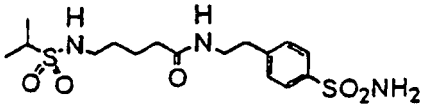
Id-94 

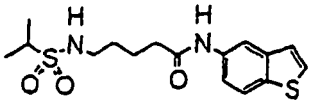
Id-95 

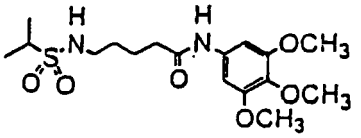
Id-96 

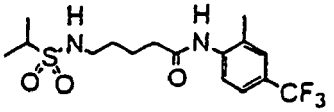
Id-97 

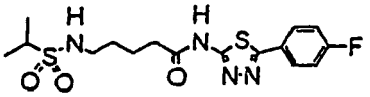
Id-98 

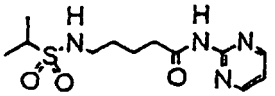
Id-99 

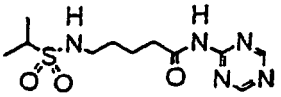
Id-100 

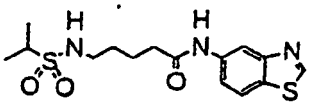
Id-101 

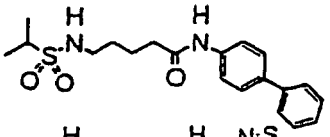
Id-102 

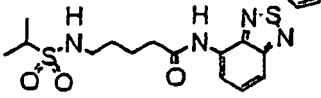
Id-103 

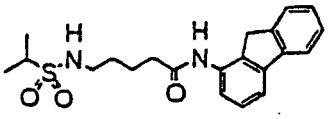
Id-104 

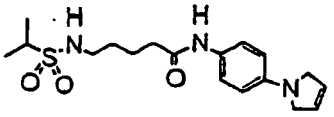
Id-105 

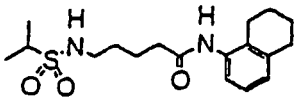
Id-106 

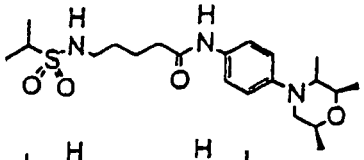
Id-107 

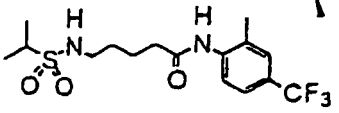
Id-108 

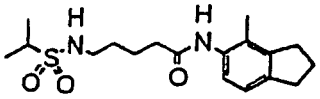
Id-109 

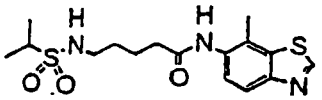
Id-110 

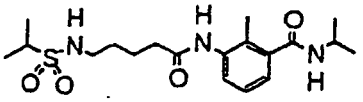
Id-111 

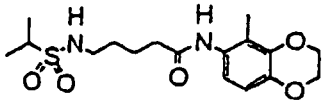
Id-112 

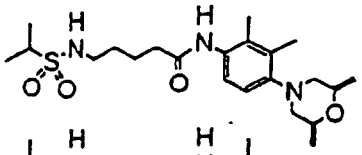
Id-113 

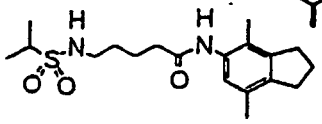
Id-114 

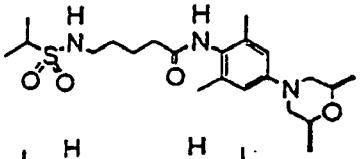
Id-115 

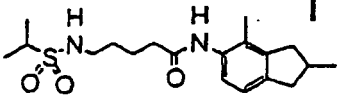
Id-116 

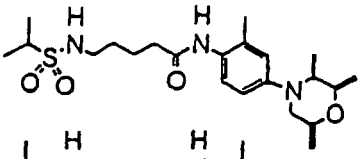
Id-117 

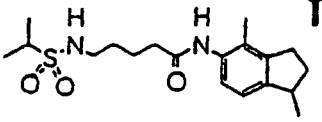
Id-118 

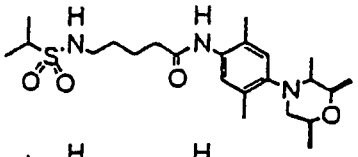
Id-119 

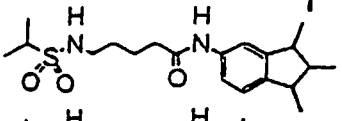
Id-120 

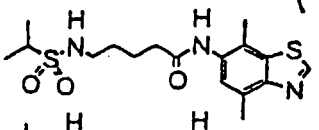
Id-121 

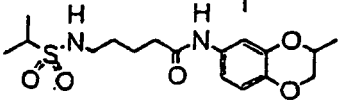
Id-122 

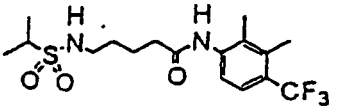
Id-123 

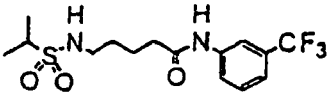
Id-124 

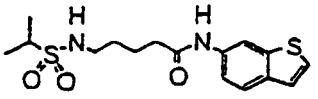
Id-125 

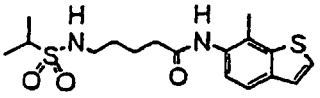
Id-126 

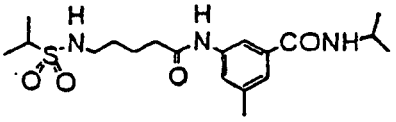
Id-127 

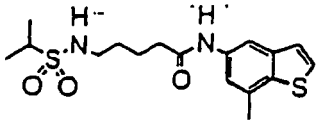
Id-128 

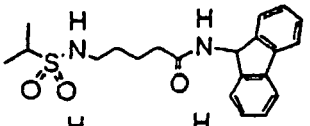
Id-129 

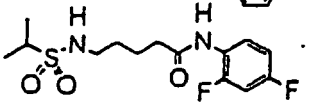
Id-130 

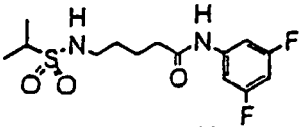
Id-131 

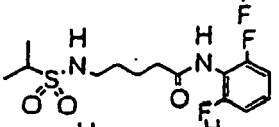
Id-132 

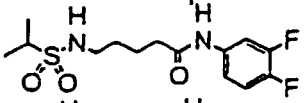
Id-133 

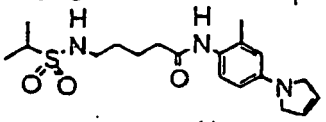
Id-134 

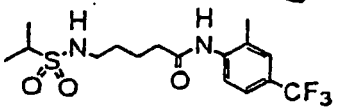
Id-135 

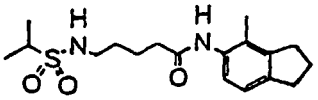
Id-136 

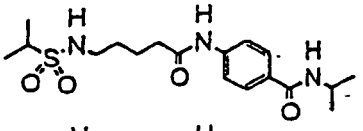
Id-137 

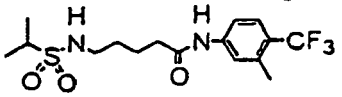
Id-138 

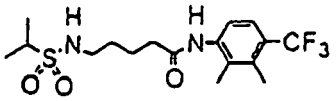
Id-139 

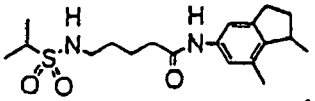
Id-140 

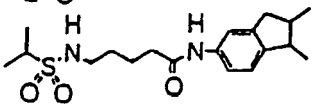
Id-141 

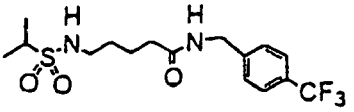
Id-142 

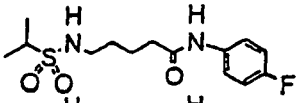
Id-143 

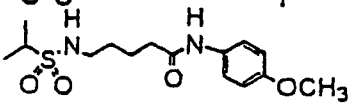
Id-144 

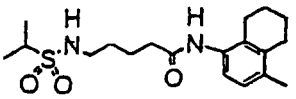
Id-145 

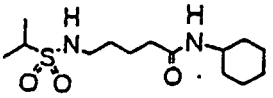
Id-146 

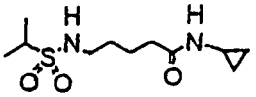
Id-147 

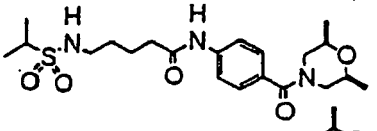
Id-148 

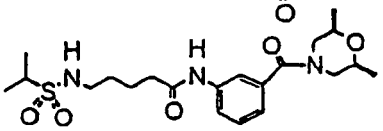
Id-149 

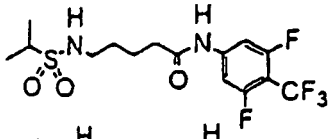
Id-150 

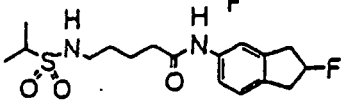
Id-151 

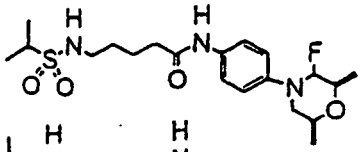
Id-152 

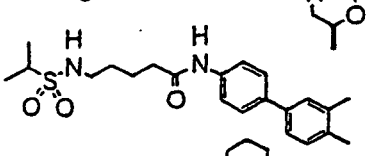
Id-153 

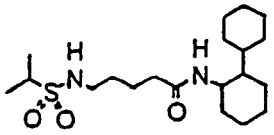
Id-154 

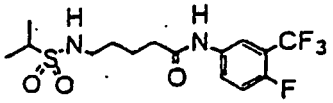
Id-155 

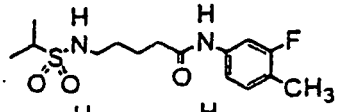
Id-156 

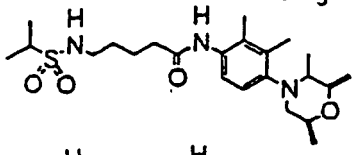
Id-157 

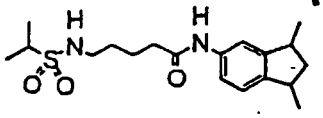
Id-158 

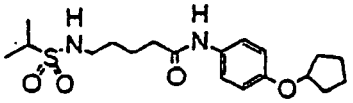
Id-159 

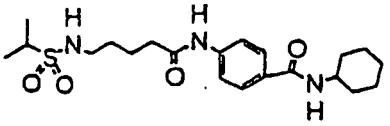
Id-160 

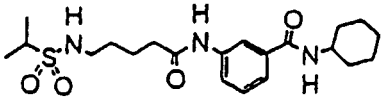
Id-161 

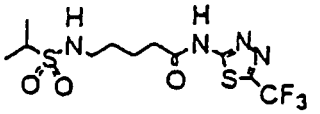
Id-162 

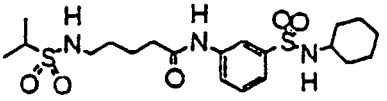
Id-163 

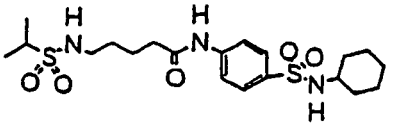
Id-164 

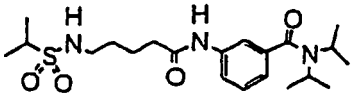
Id-165 

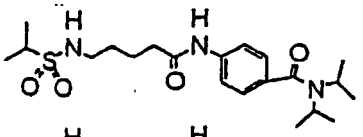
Id-166 

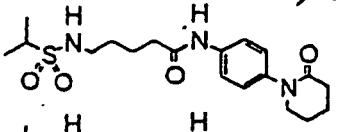
Id-167 

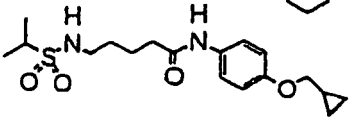
Id-168 

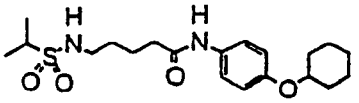
Id-169 

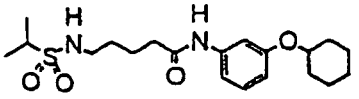
Id-171 

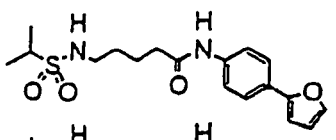
Id-172 

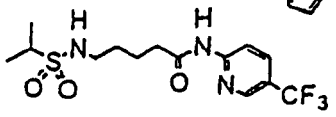
Id-173 

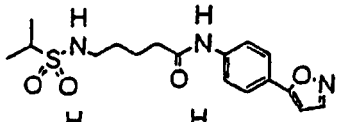
Id-174 

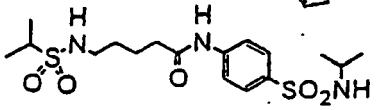
Id-175 

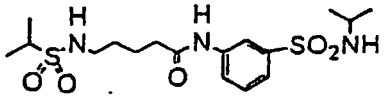
Id-176 

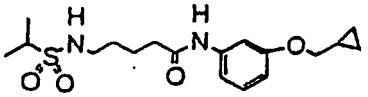
Id-177 

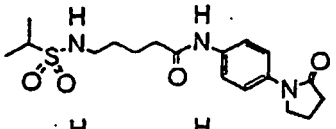
Id-178 

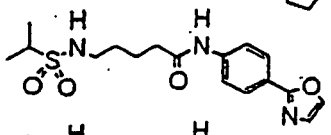
Id-179 

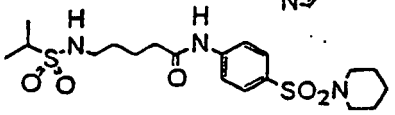
Id-180 

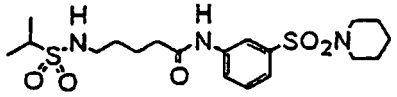
Id-181 

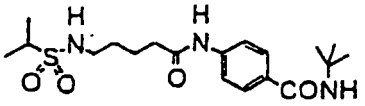
Id-182 

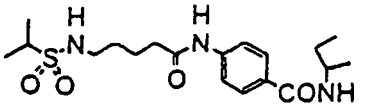
Id-183 

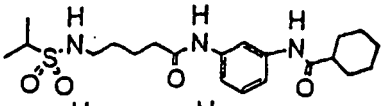
Id-184 

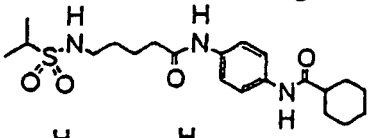
Id-185 

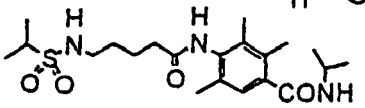
Id-186 

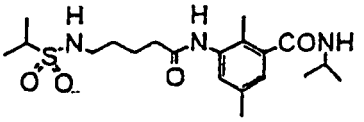
Id-187 

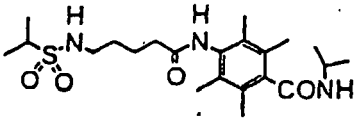
Id-188 

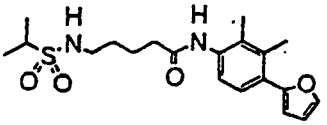
Id-189 

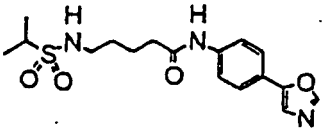
Id-190 

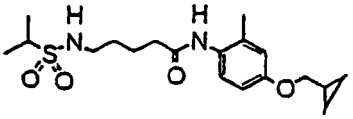
Id-191 

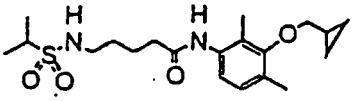
Id-192 

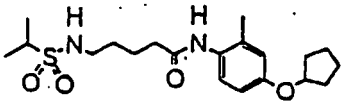
Id-193 

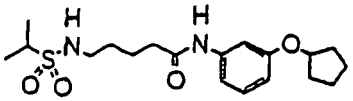
Id-194 

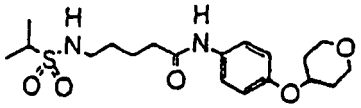
Id-195 

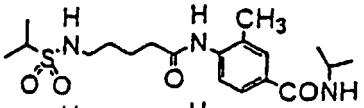
Id-196 

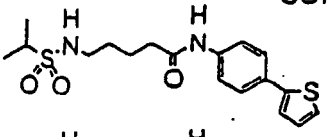
Id-197 

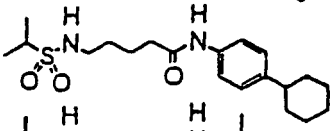
Id-198 

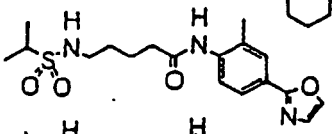
Id-199 

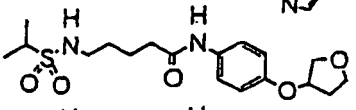
Id-200 

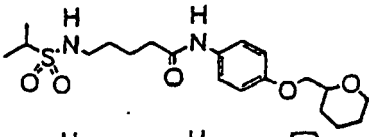
Id-201 

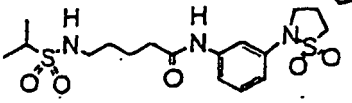
Id-202 

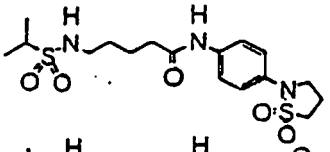
Id-203 

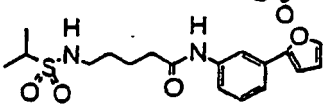
Id-204 

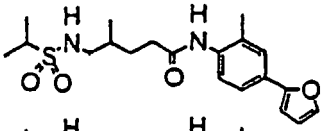
Id-205 

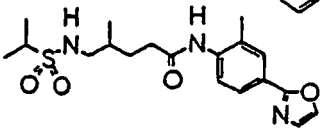
Id-206 

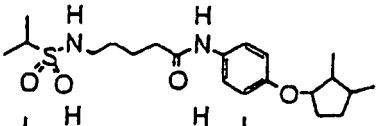
Id-207 

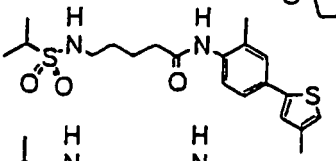
Id-208 

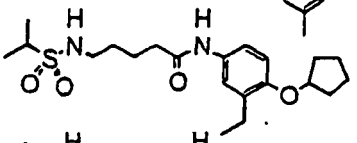
Id-209 

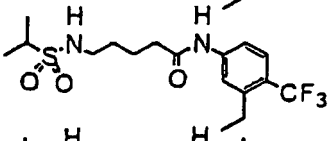
Id-210 

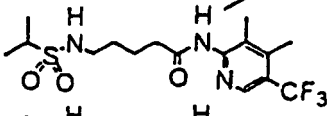
Id-211 

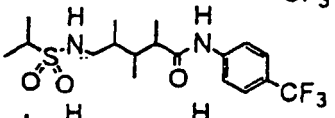
Id-212 

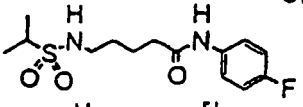
Id-213 

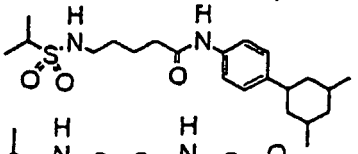
Id-214 

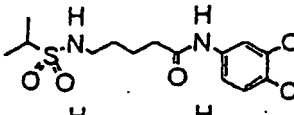
Id-215 

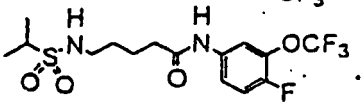
Id-216 

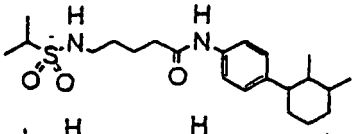
Id-219 

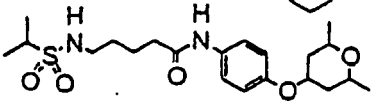
Id-220 

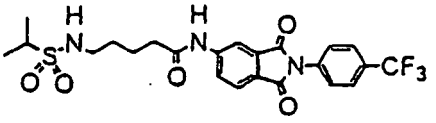
Id-221 

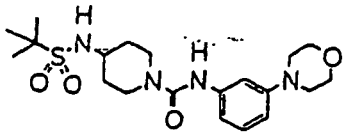
Id-222 

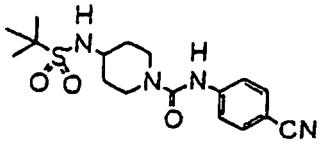
Id-223 

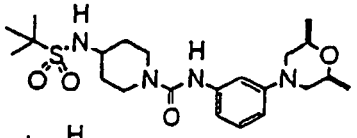
Id-224 

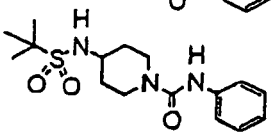
Id-225 

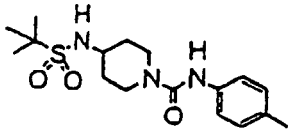
Id-226 

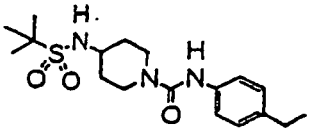
Ie-1 

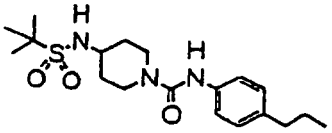
Ie-2 

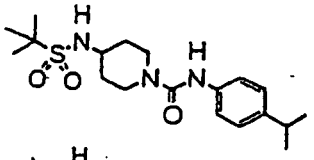
Ie-4 

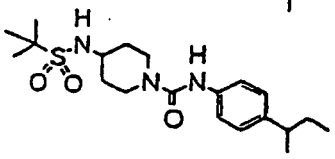
Ie-7 

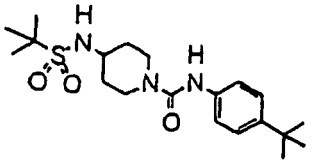
Ie-8 

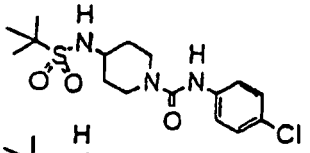
Ie-9 

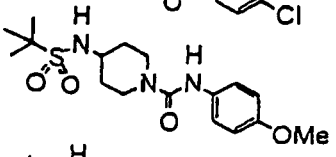
Ie-10 

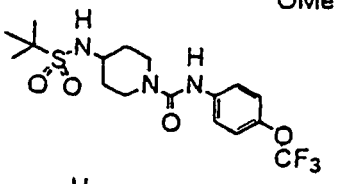
Ie-11 

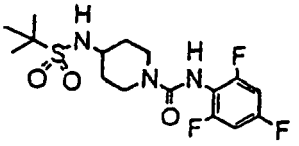
Ie-12 

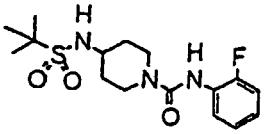
Ie-13 

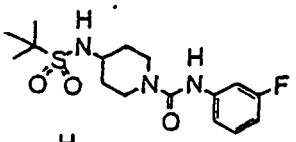
Ie-14 

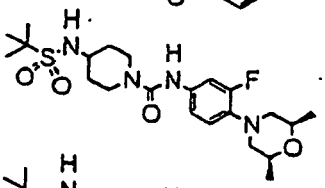
Ie-16 

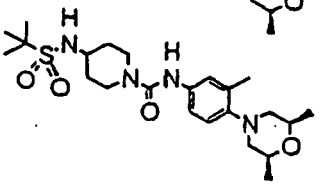
Ie-17 

Ie-18 

Ie-19 

Ie-20 

Ie-21 

Ie-22 

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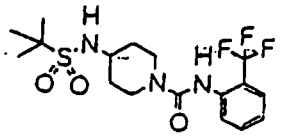

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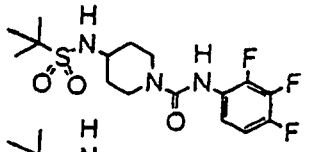

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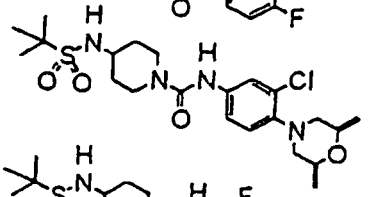

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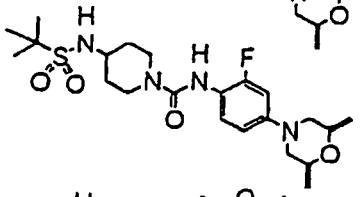

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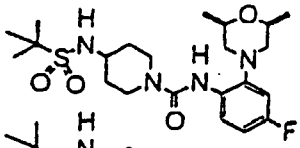

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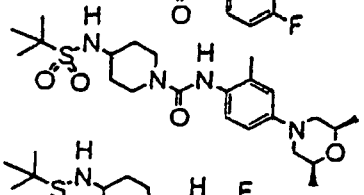

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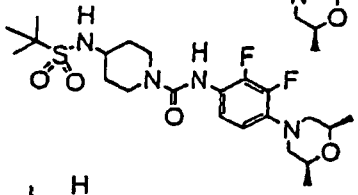

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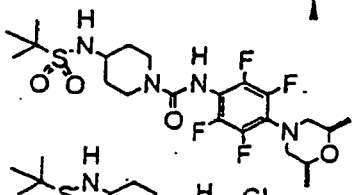

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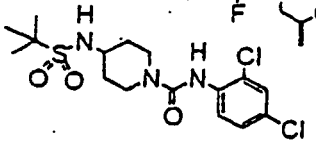

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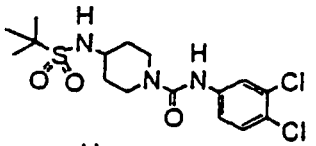

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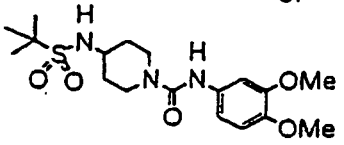

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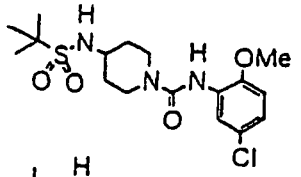

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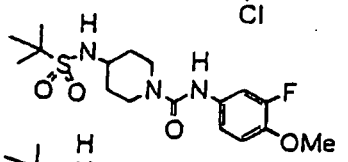

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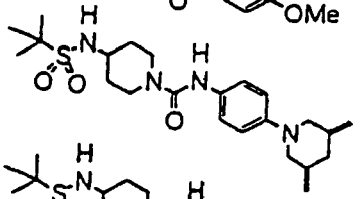

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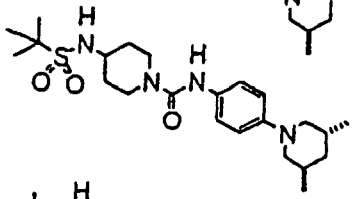

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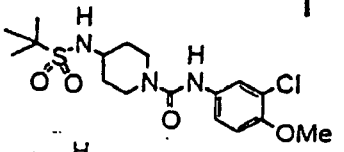

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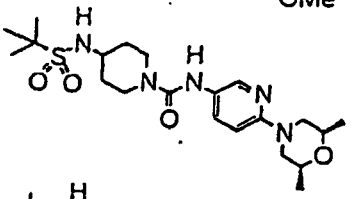

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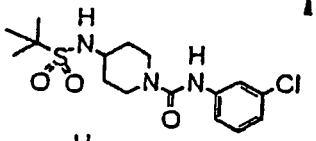

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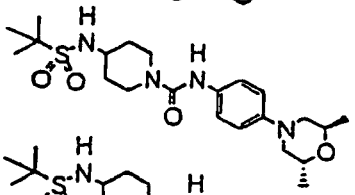

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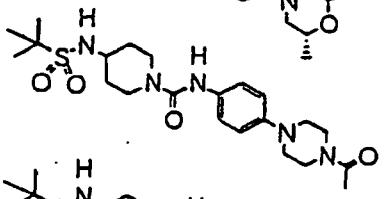

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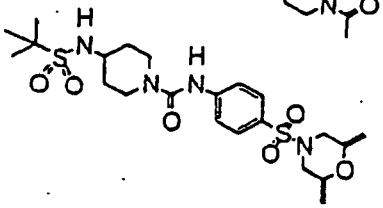
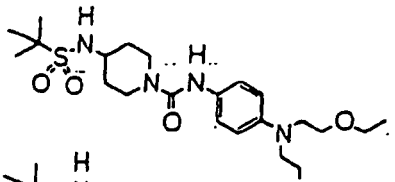
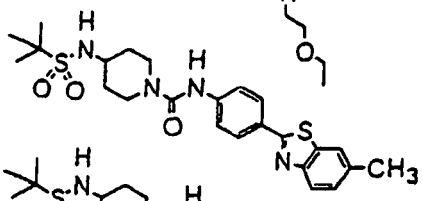
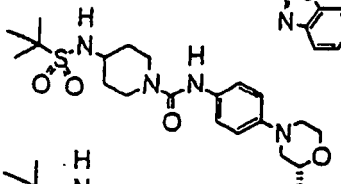
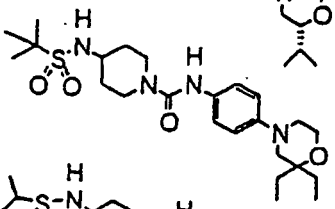
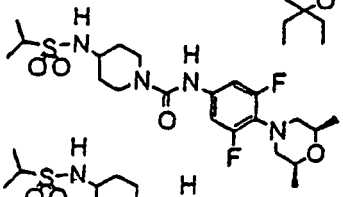


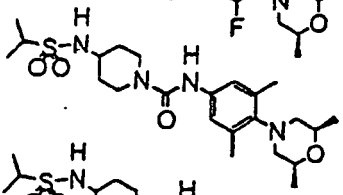
Ie-45 

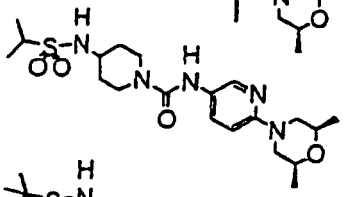
Ie-46 

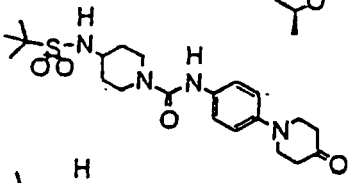
Ie-47 

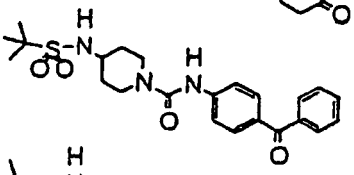
Ie-48 

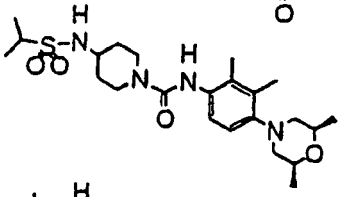
Ie-49 

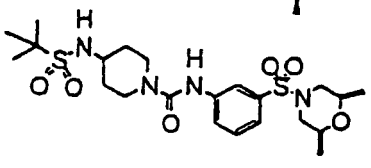
Ie-50 

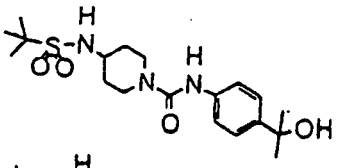
Ie-51 

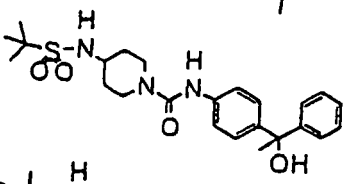
Ie-52 

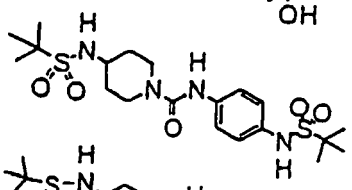
Ie-53 

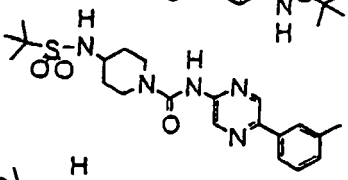
Ie-54 

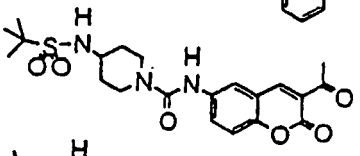
Ie-55 

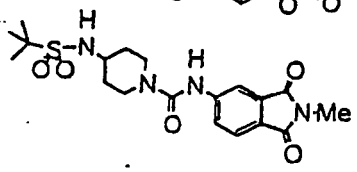
Ie-56 

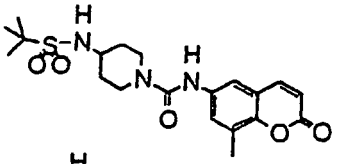
Ie-57 

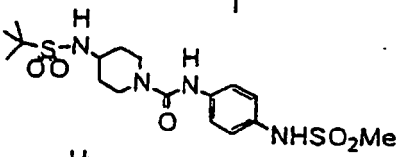
Ie-58 

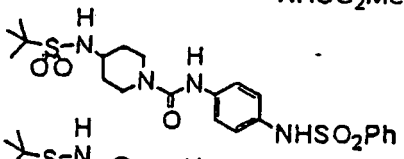
Ie-59 

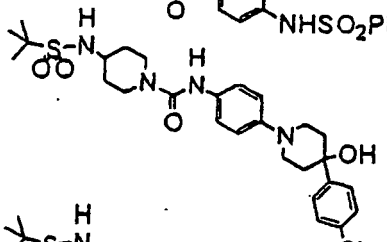
Ie-60 

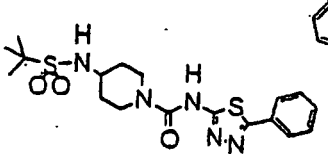
Ie-61 

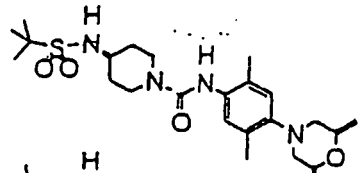
Ie-62 

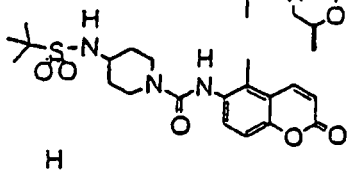
Ie-63 

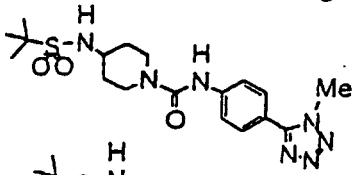
Ie-64 

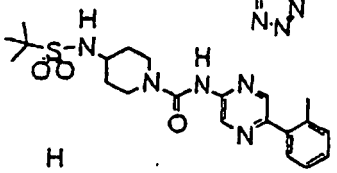
Ie-65 

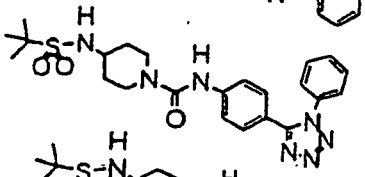
Ie-66 

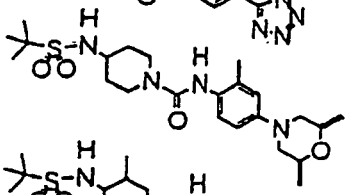
Ie-67 

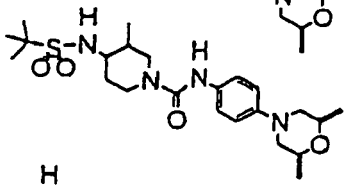
Ie-68 

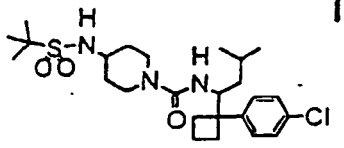
Ie-69 

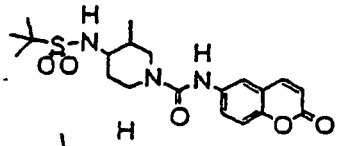
Ie-70 

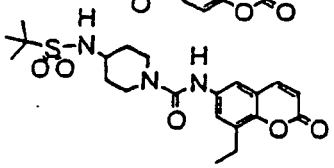
Ie-71 

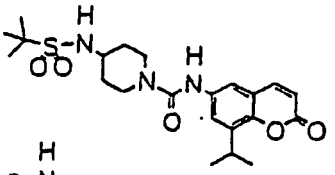
Ie-73 

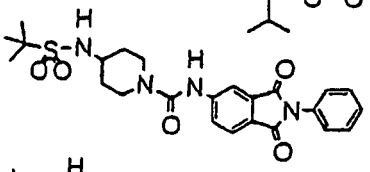
Ie-74 

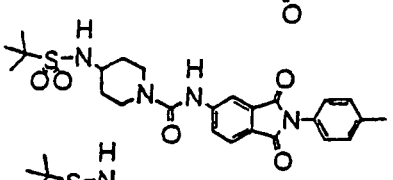
Ie-75 

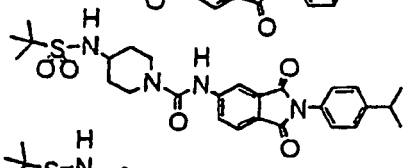
Ie-76 

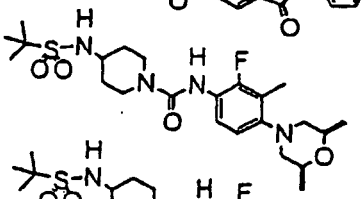
Ie-77 

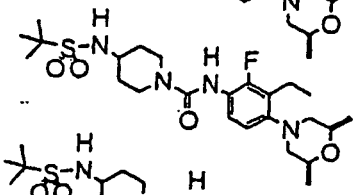
Ie-78 

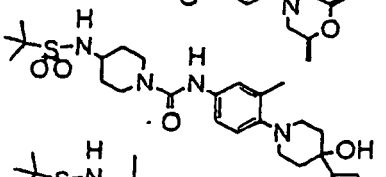
Ie-79 

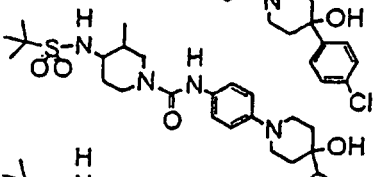
Ie-80 

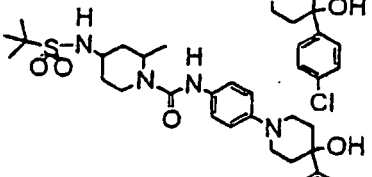
Ie-81 

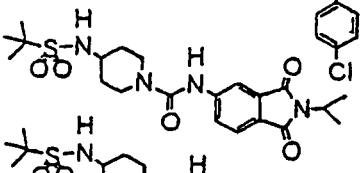
Ie-82 

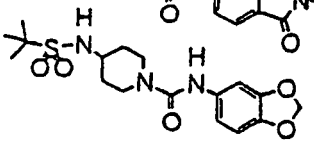
Ie-83 

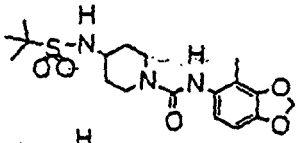
Ie-84 

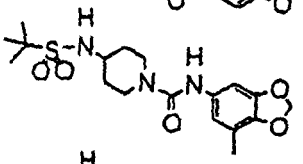
Ie-85 

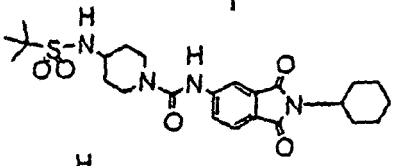
Ie-86 

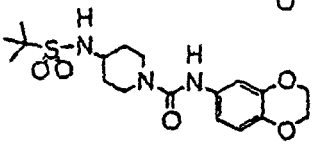
Ie-87 

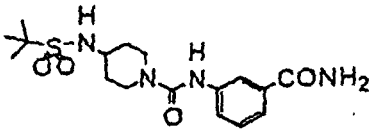
Ie-88 

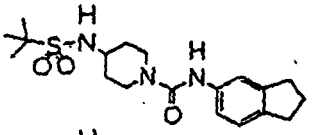
Ie-89 

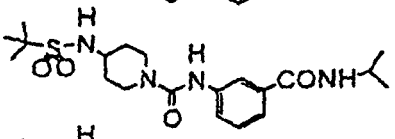
Ie-90 

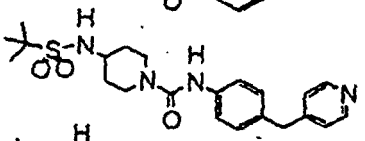
Ie-91 

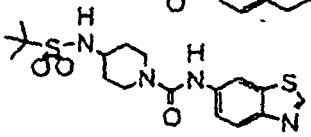
Ie-92 

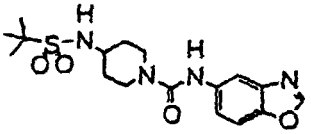
Ie-93 

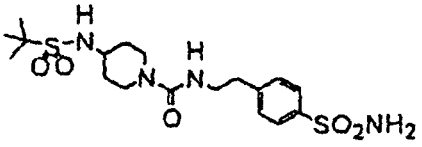
Ie-94 

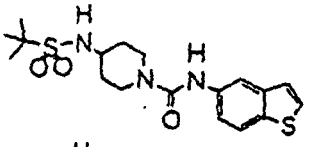
Ie-95 

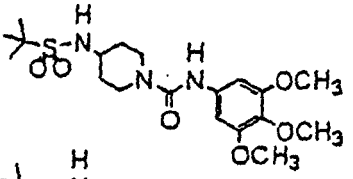
Ie-96 

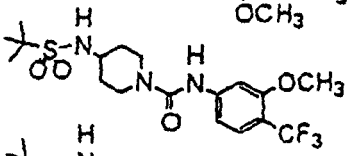
Ie-97 

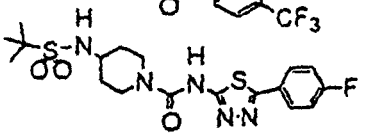
Ie-98 

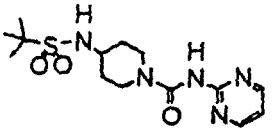
Ie-99 

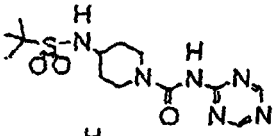
Ie-100 

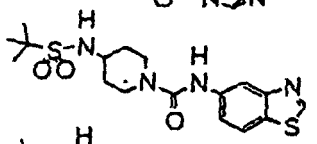
Ie-101 

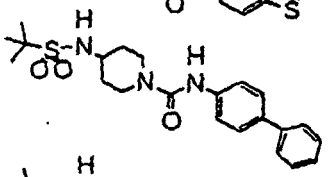
Ie-102 

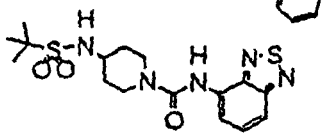
Ie-103 

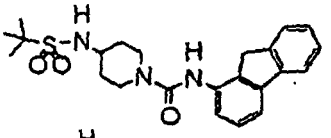
Ie-104 

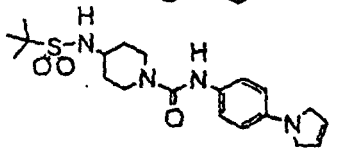
Ie-105 

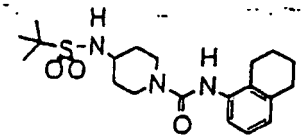
Ie-106 

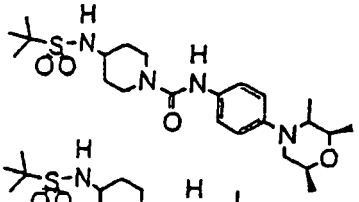
Ie-107 

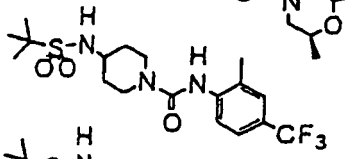
Ie-108 

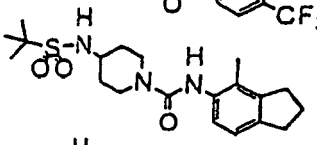
Ie-109 

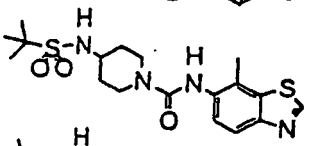
Ie-110 

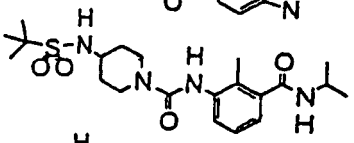
Ie-111 

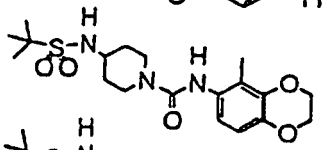
Ie-112 

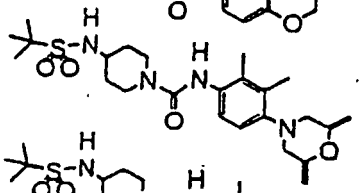
Ie-113 

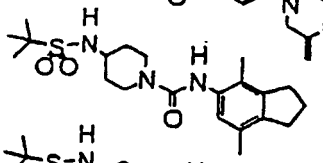
Ie-114 

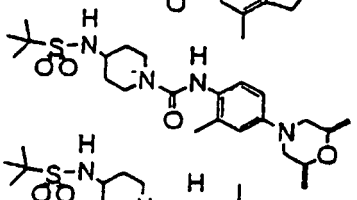
Ie-115 

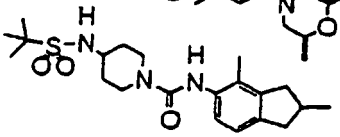
Ie-116 

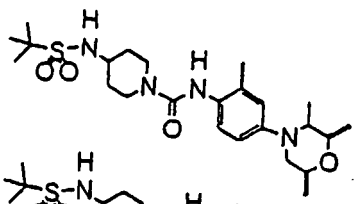
Ie-117 

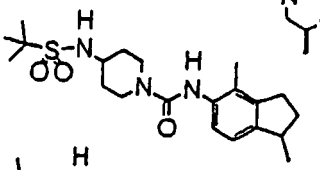
Ie-118 

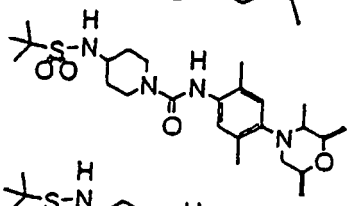
Ie-119 

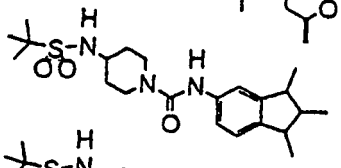
Ie-120 

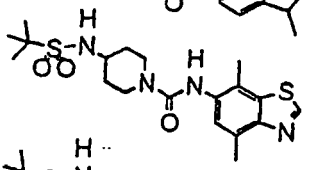
Ie-121 

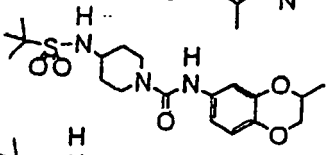
Ie-122 

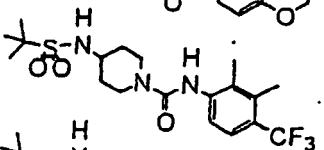
Ie-123 

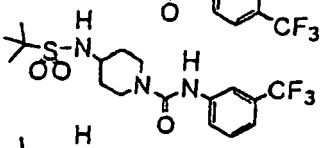
Ie-124 

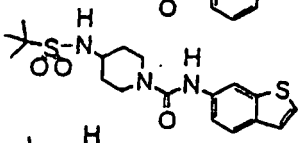
Ie-125 

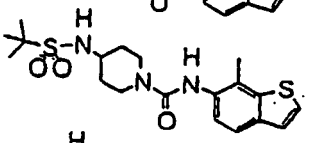
Ie-126 

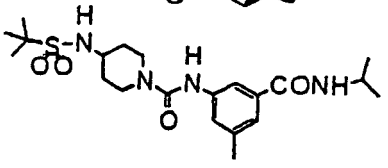
Ie-127 

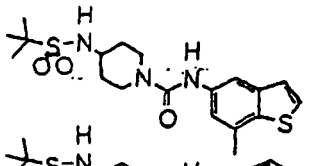
Ie-128 

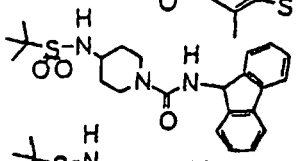
Ie-129 

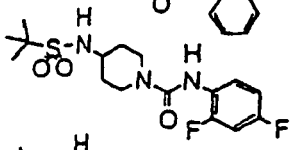
Ie-130 

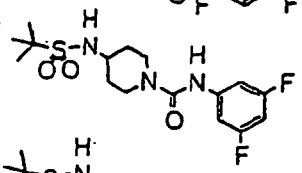
Ie-131 

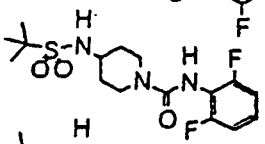
Ie-132 

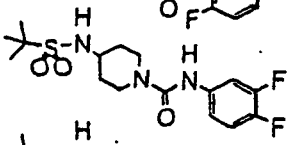
Ie-133 

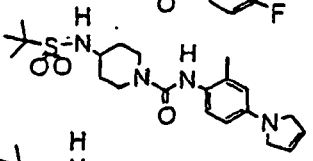
Ie-134 

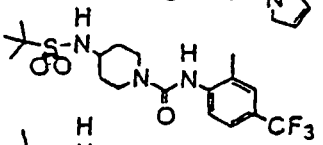
Ie-135 

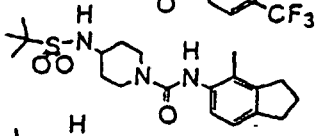
Ie-136 

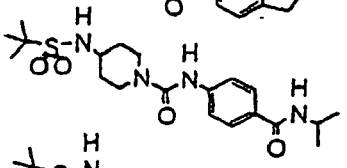
Ie-137 

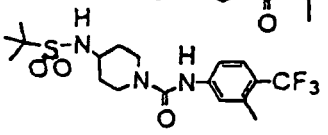
Ie-138 

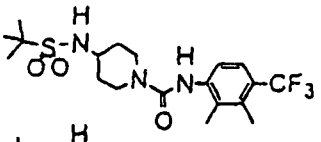
Ie-139 

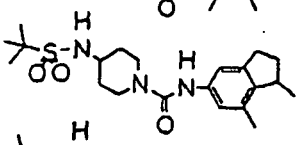
Ie-140 

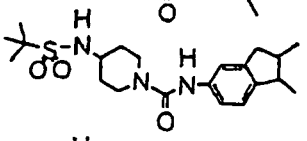
Ie-141 

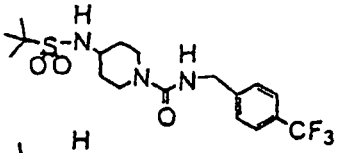
Ie-142 

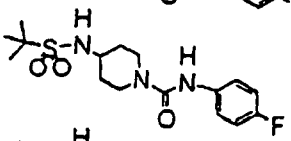
Ie-143 

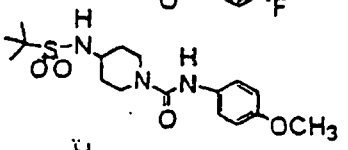
Ie-144 

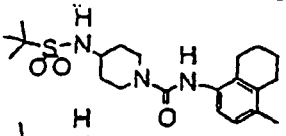
Ie-145 

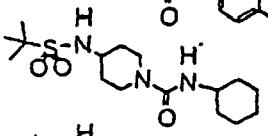
Ie-146 

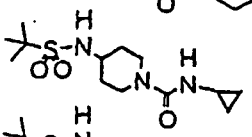
Ie-147 

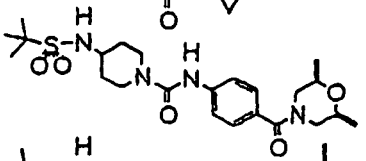
Ie-148 

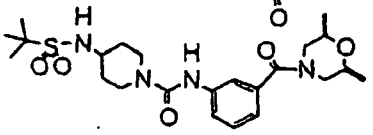
Ie-149 

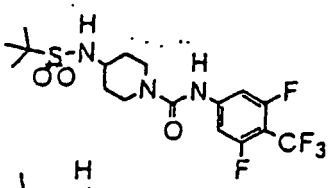
Ie-150 

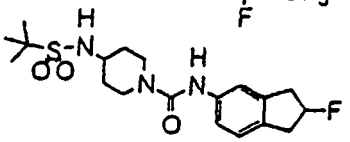
Ie-151 

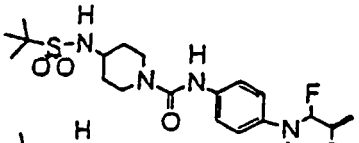
Ie-152 

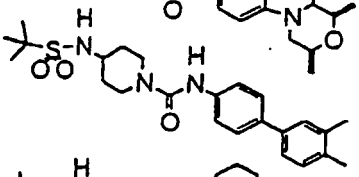
Ie-153 

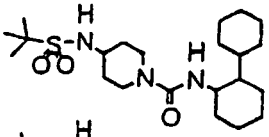
Ie-154 

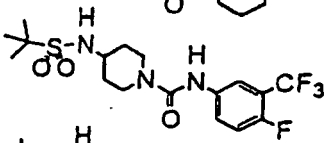
Ie-155 

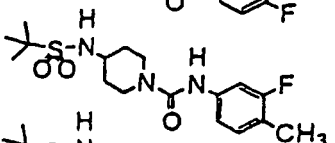
Ie-156 

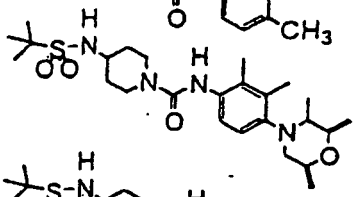
Ie-157 

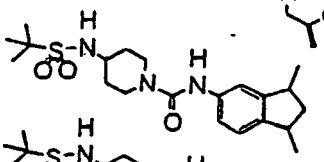
Ie-158 

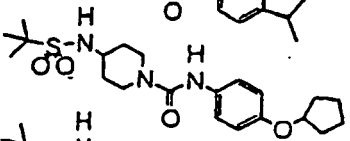
Ie-159 

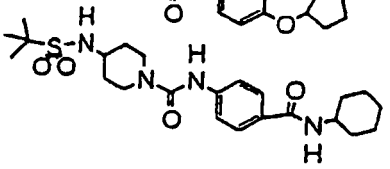
Ie-160 

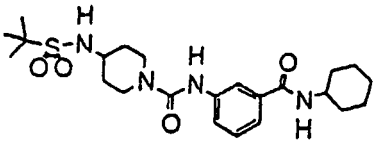
Ie-161 

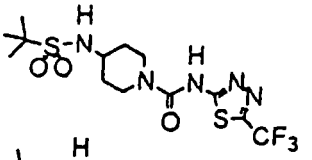
Ie-162 

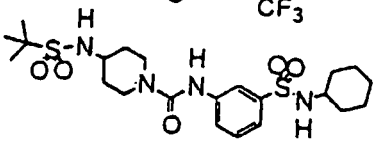
Ie-163 

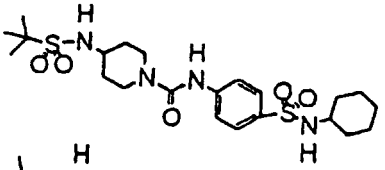
Ie-164 

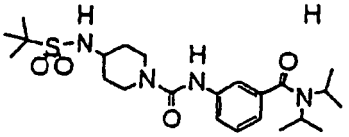
Ie-165 

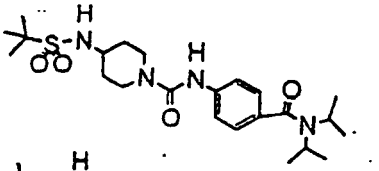
Ie-166 

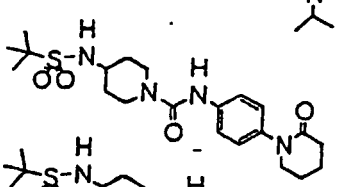
Ie-167 

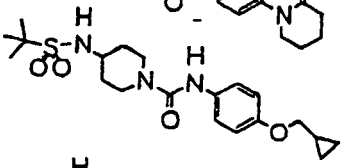
Ie-168 

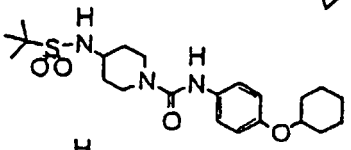
Ie-169 

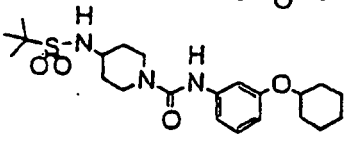
Ie-171 

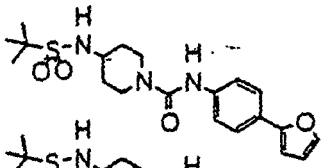
Ie-172 

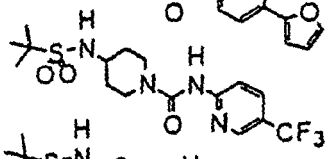
Ie-173 

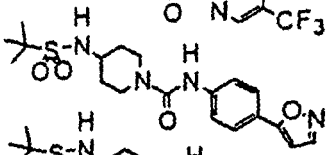
Ie-174 

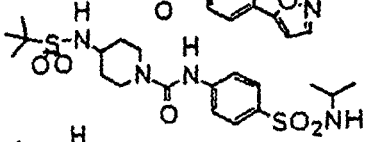
Ie-175 

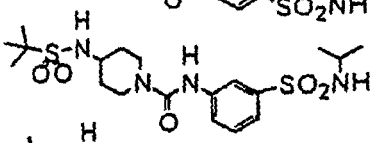
Ie-176 

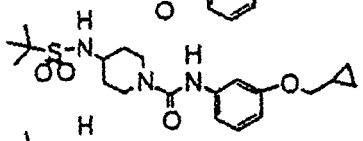
Ie-177 

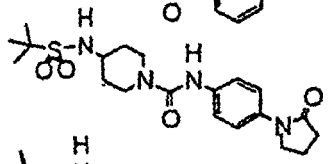
Ie-178 

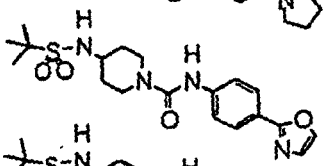
Ie-179 

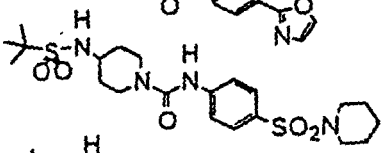
Ie-180 

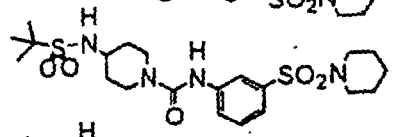
Ie-181 

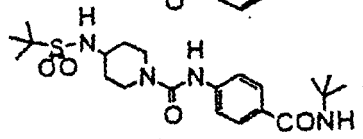
Ie-182 

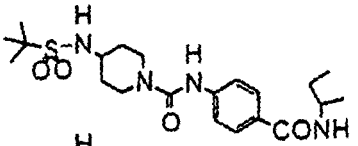
Ie-183 

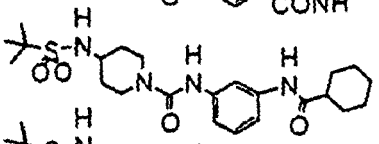
Ie-184 

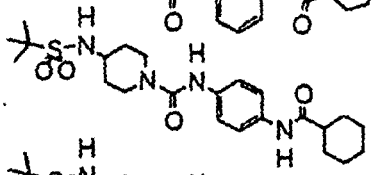
Ie-185 

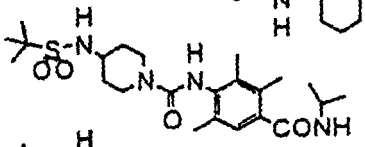
Ie-186 

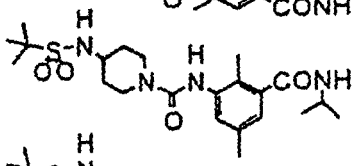
Ie-187 

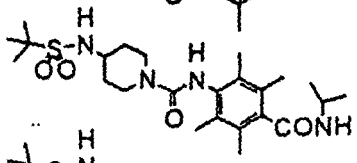
Ie-188 

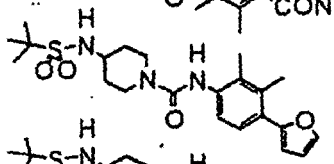
Ie-189 

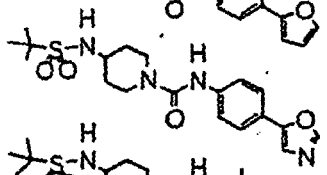
Ie-190 

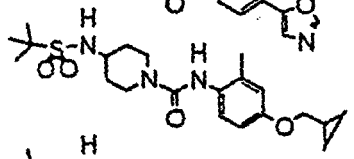
Ie-191 

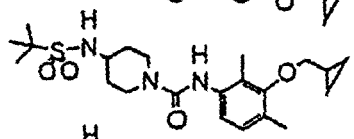
Ie-192 

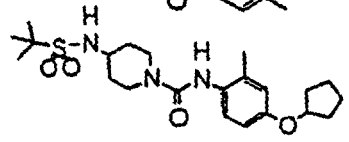
Ie-193 

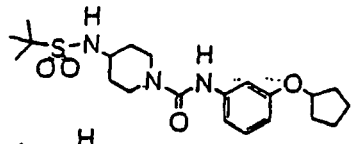
Ie-194 

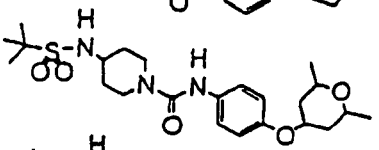
Ie-195 

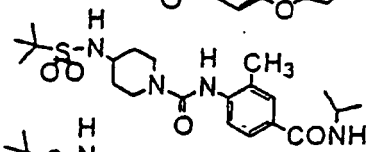
Ie-196 

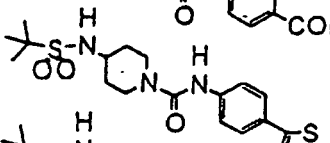
Ie-197 

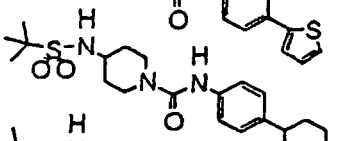
Ie-198 

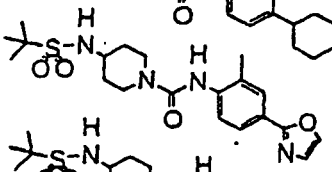
Ie-199 

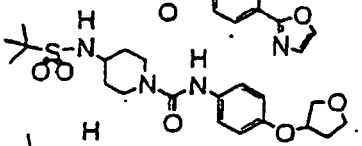
Ie-200 

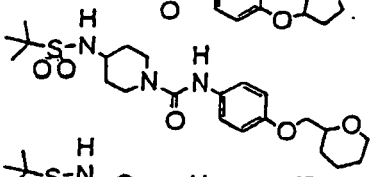
Ie-201 

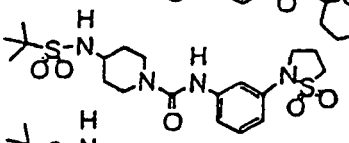
Ie-202 

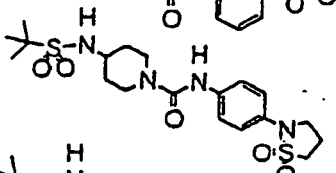
Ie-203 

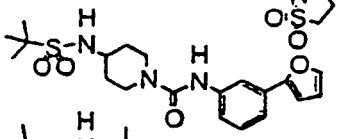
Ie-204 

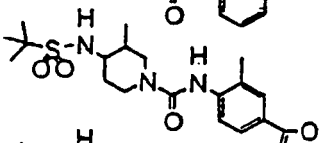
Ie-205 

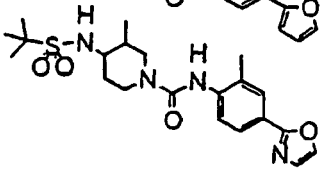
Ie-206 

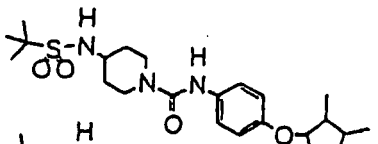
Ie-207 

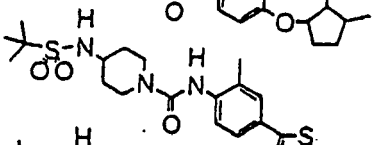
Ie-208 

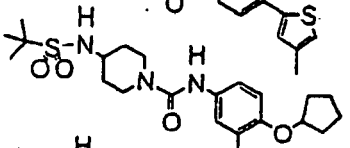
Ie-209 

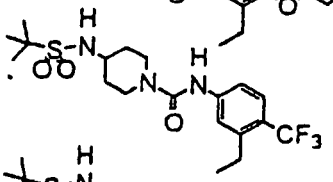
Ie-210 

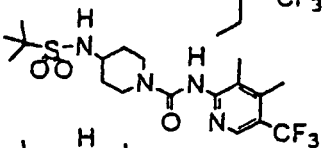
Ie-211 

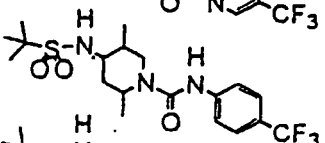
Ie-212 

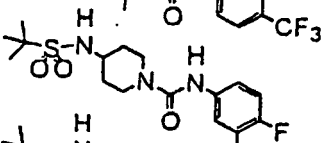
Ie-213 

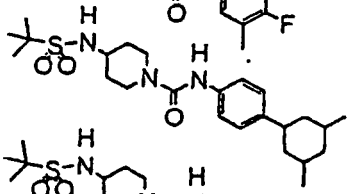
Ie-214 

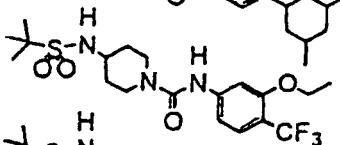
Ie-215 

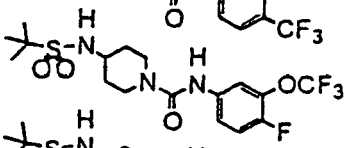
Ie-216 

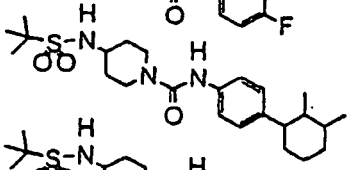
Ie-219 

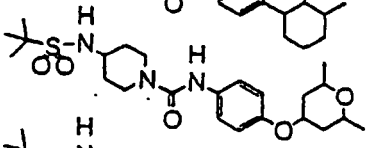
Ie-220 

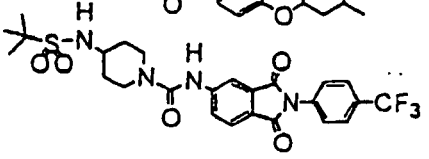
Ie-221 

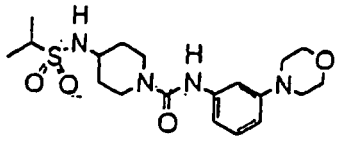
Ie-222 

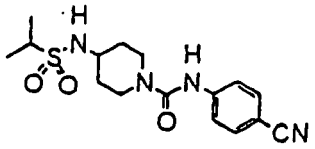
Ie-223 

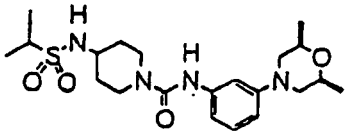
Ie-224 

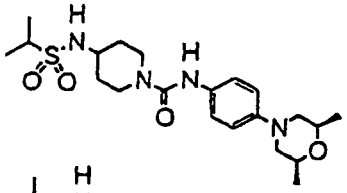
Ie-225 

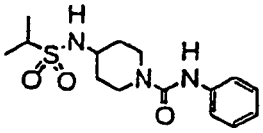
Ie-226 

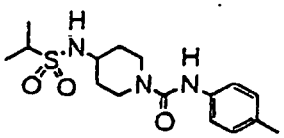
If-1 

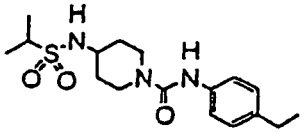
If-2 

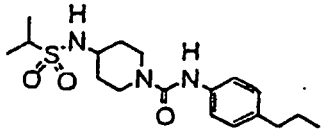
If-4 

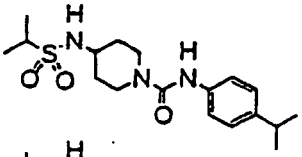
If-6 

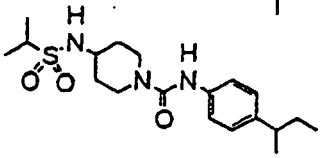
If-7 

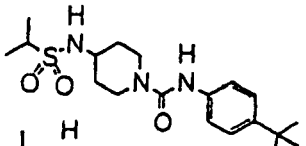
If-8 

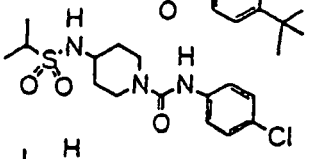
If-9 

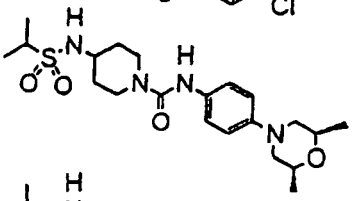
If-10 

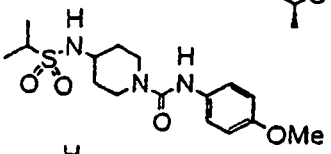
If-11 

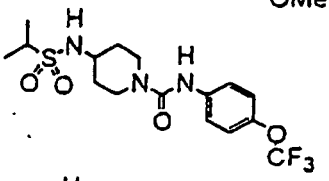
If-12 

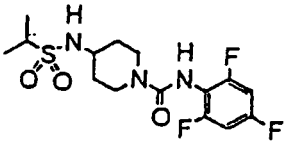
If-13 

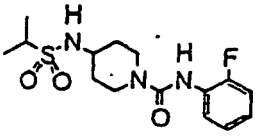
If-14 

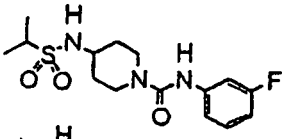
If-15 

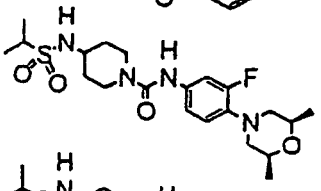
If-16 

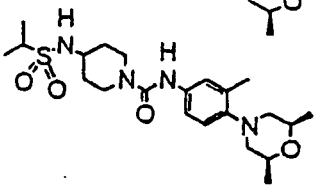
If-17 

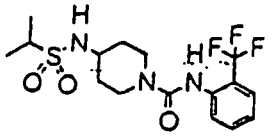
If-18 

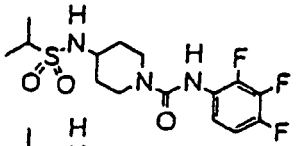
If-19 

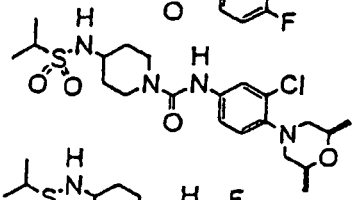
If-20 

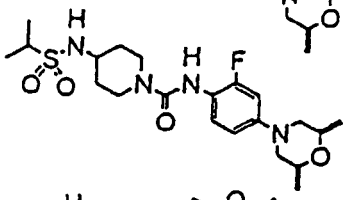
If-21 

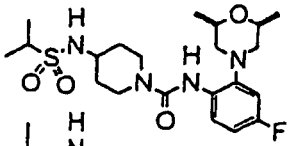
If-22 

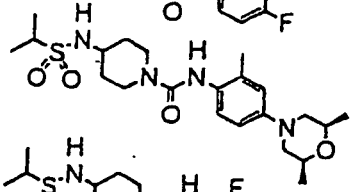
If-23 

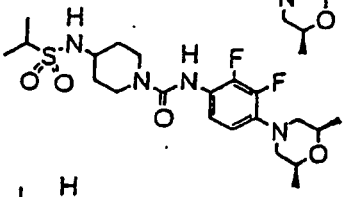
If-24 

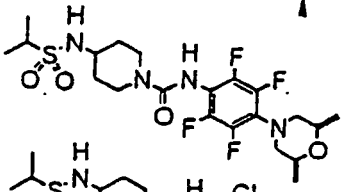
If-25 

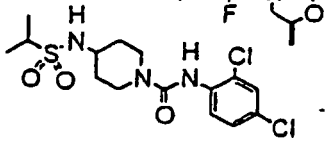
If-26 

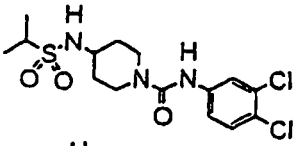
If-27 

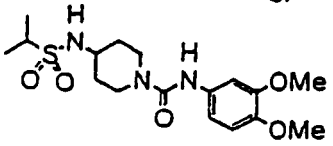
If-28 

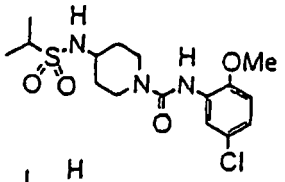
If-29 

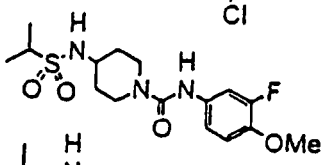
If-30 

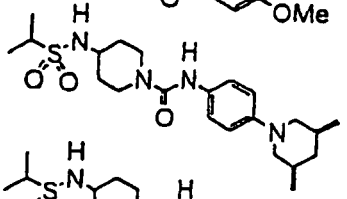
If-31 

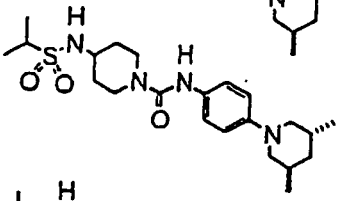
If-32 

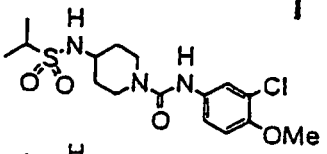
If-33 

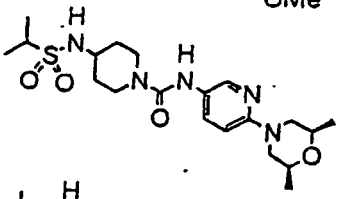
If-35 

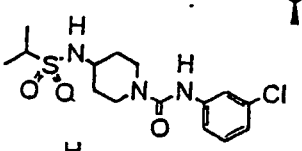
If-36 

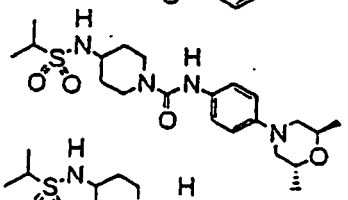
If-37 

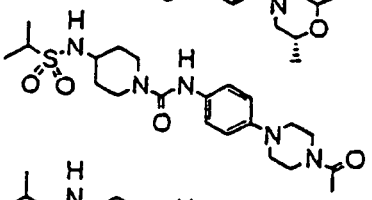
If-38 

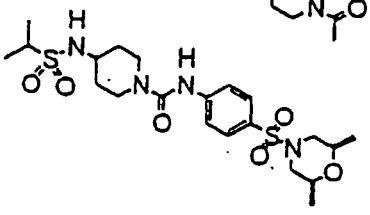
If-39 

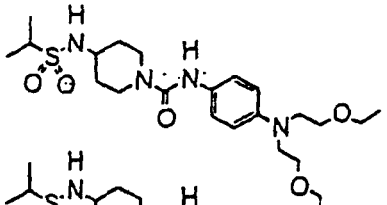
If-40 

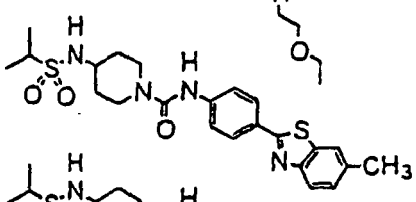
If-41 

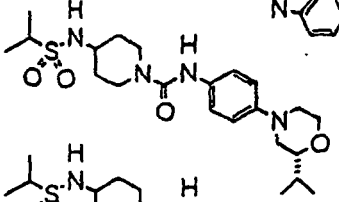
If-42 

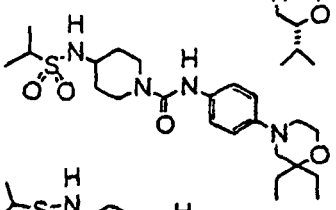
If-43 

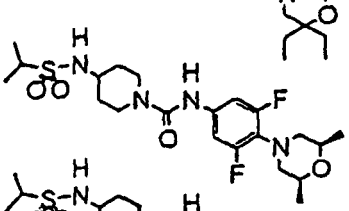
If-44 

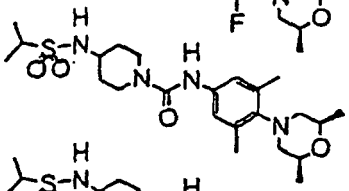
If-45 

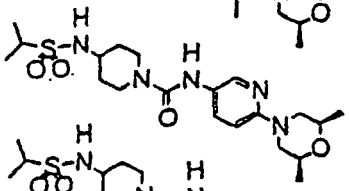
If-46 

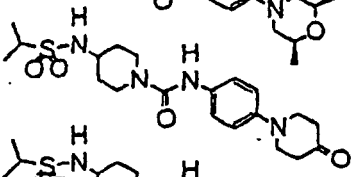
If-47 

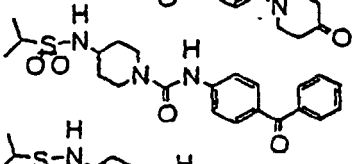
If-48 

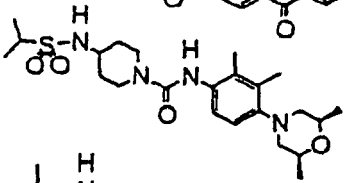
If-49 

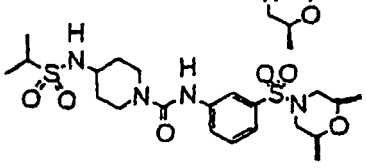
If-50 

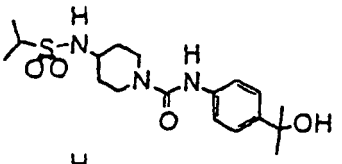
If-51 

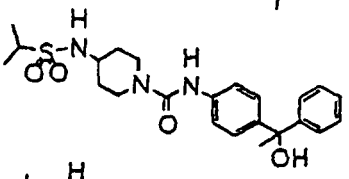
If-52 

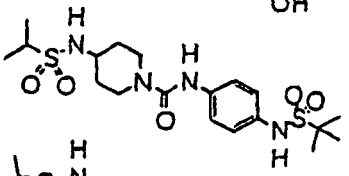
If-53 

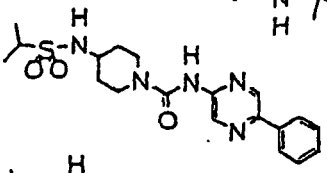
If-54 

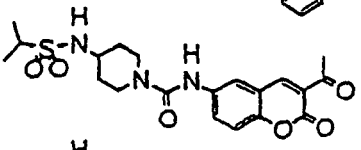
If-55 

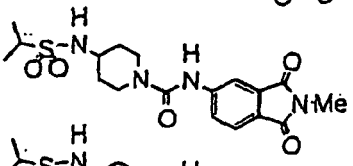
If-56 

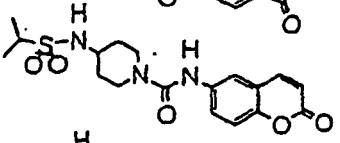
If-57 

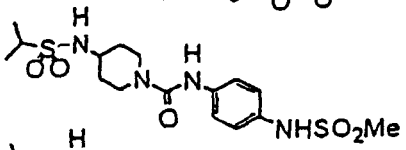
If-58 

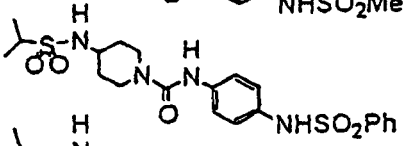
If-59 

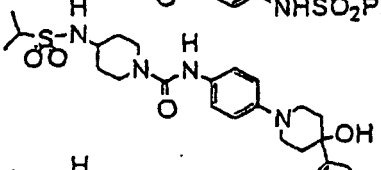
If-60 

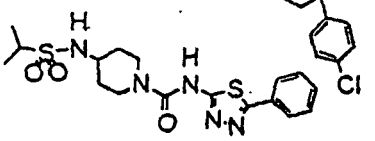
If-61 

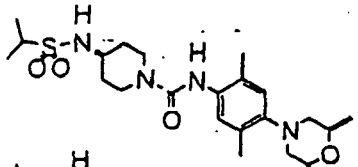
If-62 

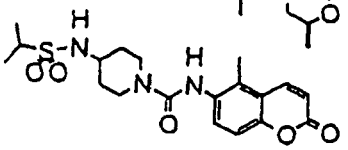
If-63 

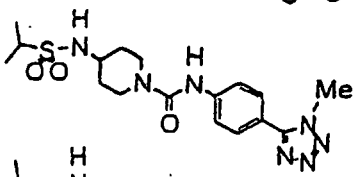
If-64 

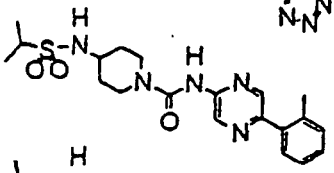
If-65 

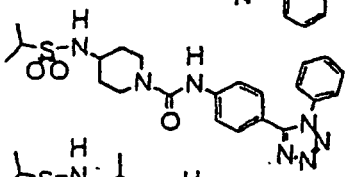
If-66 

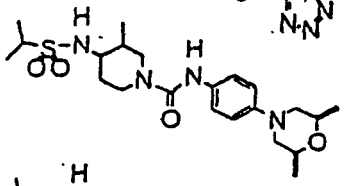
If-67 

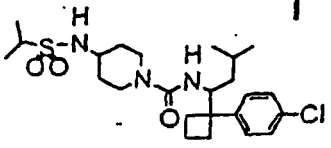
If-68 

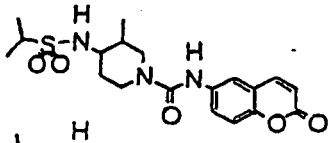
If-69 

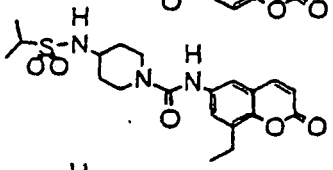
If-70 

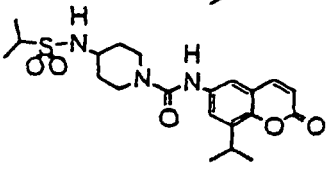
If-71 

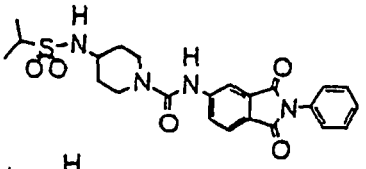
If-74 

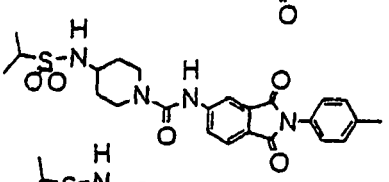
If-75 

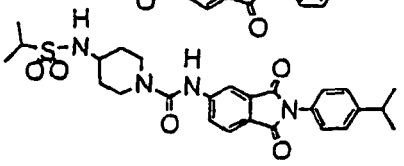
If-76 

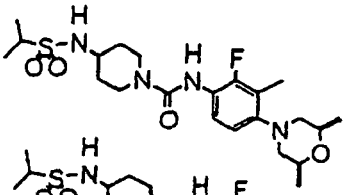
If-77 

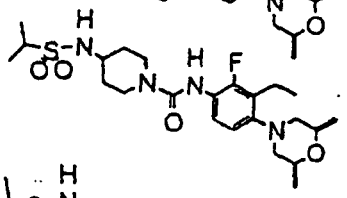
If-78 

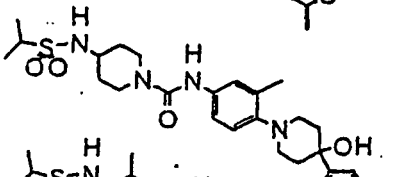
If-79 

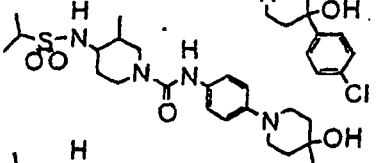
If-80 

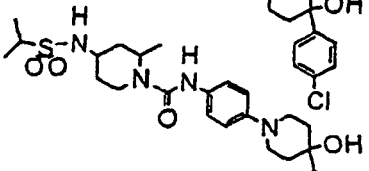
If-81 

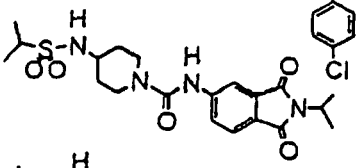
If-82 

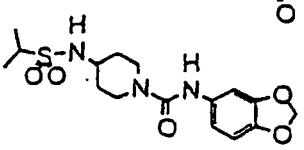
If-83 

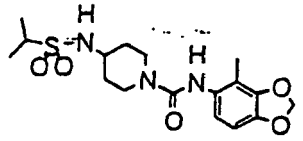
If-84 

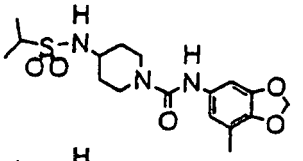
If-85 

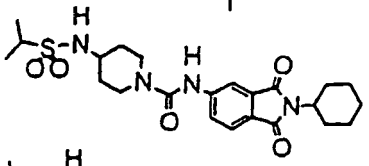
If-86 

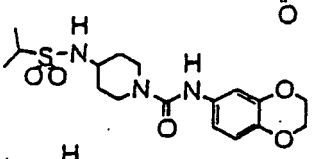
If-87 

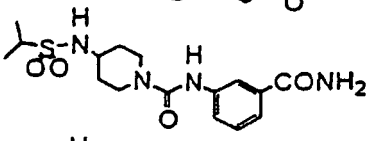
If-88 

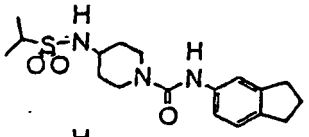
If-89 

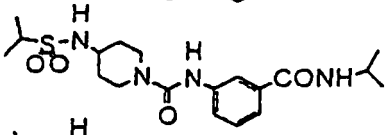
If-90 

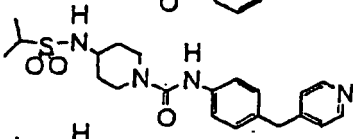
If-91 

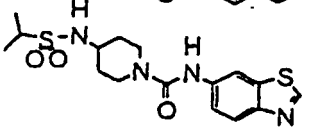
If-92 

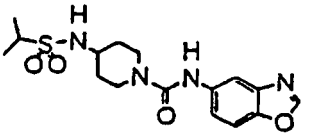
If-93 

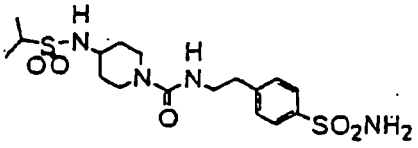
If-94 

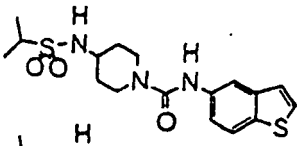
If-95 

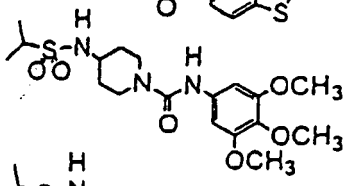
If-96 

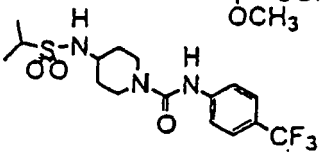
If-97 

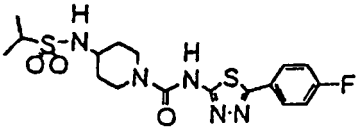
If-98 

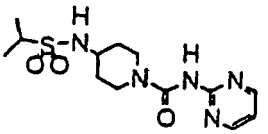
If-99 

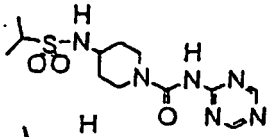
If-100 

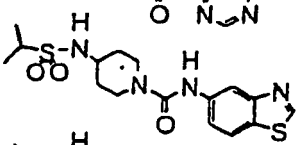
If-101 

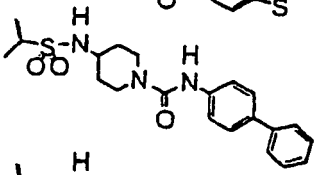
If-102 

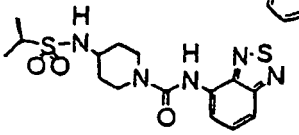
If-103 

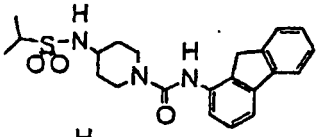
If-104 

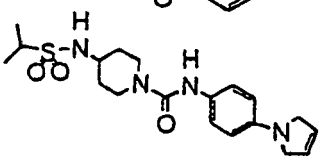
If-105 

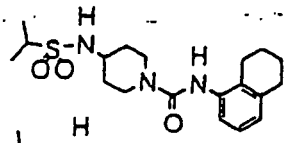
If-106 

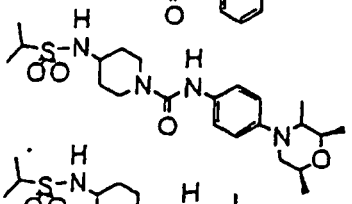
If-107 

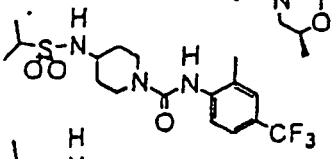
If-108 

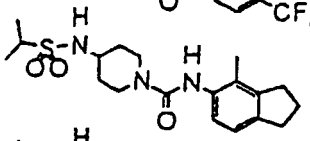
If-109 

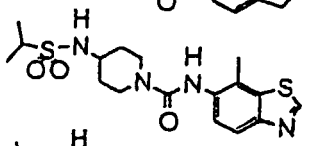
If-110 

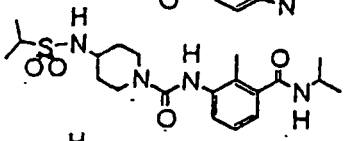
If-111 

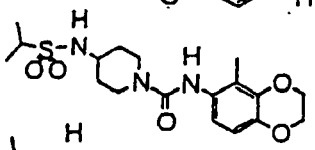
If-112 

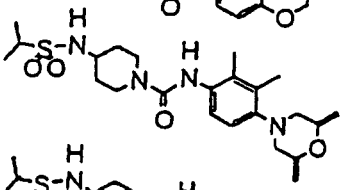
If-113 

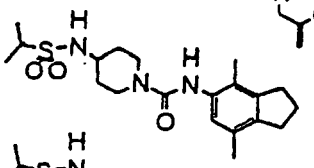
If-114 

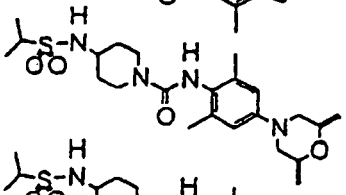
If-115 

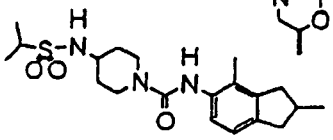
If-116 

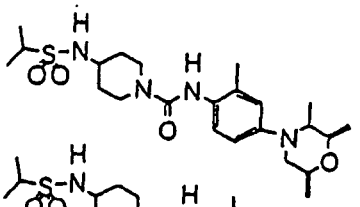
If-117 

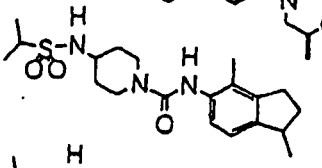
If-118 

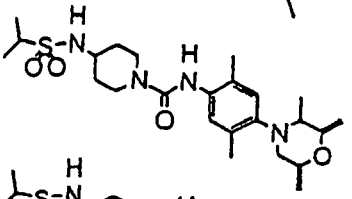
If-119 

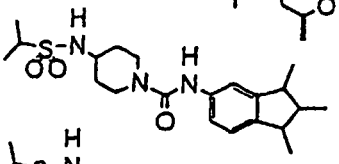
If-120 

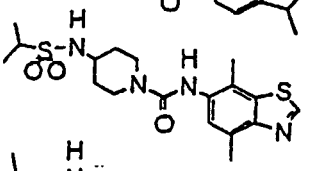
If-121 

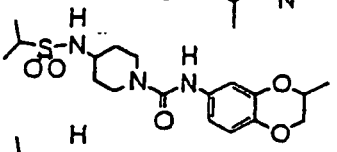
If-122 

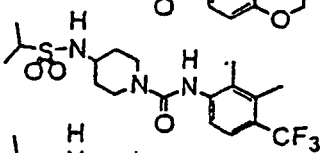
If-123 

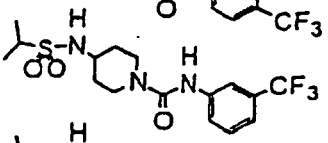
If-124 

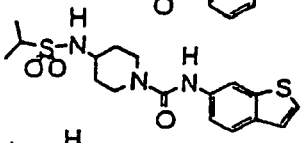
If-125 

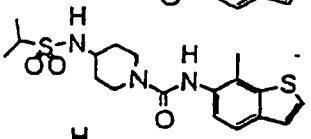
If-126 

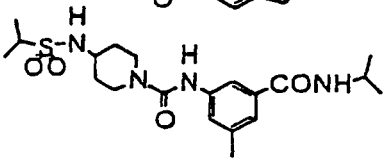
If-127 

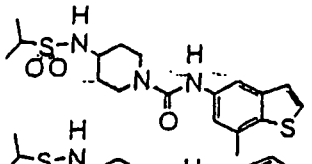
If-128 

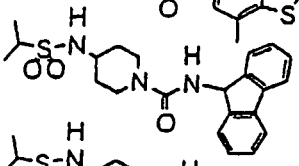
If-129 

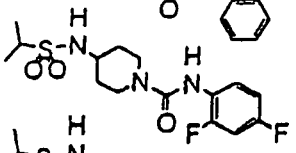
If-130 

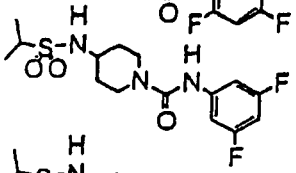
If-131 

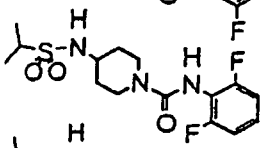
If-132 

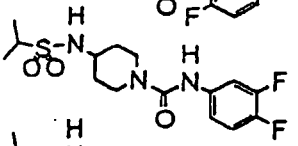
If-133 

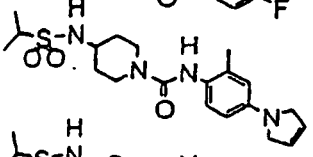
If-134 

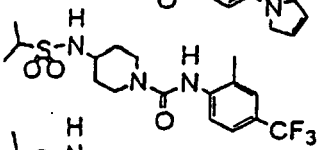
If-135 

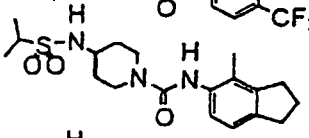
If-136 

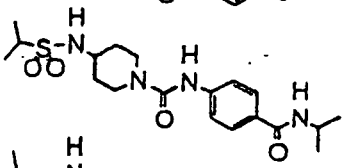
If-137 

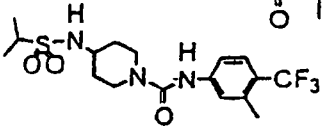
If-138 

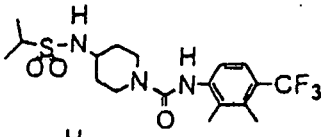
If-139 

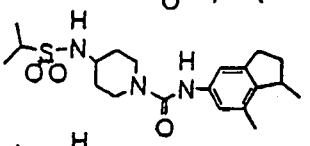
If-140 

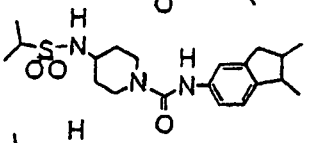
If-141 

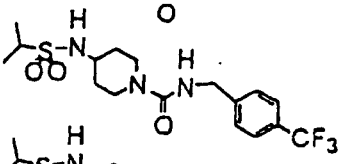
If-142 

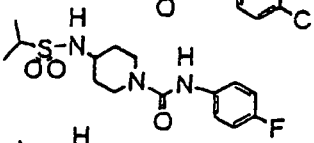
If-143 

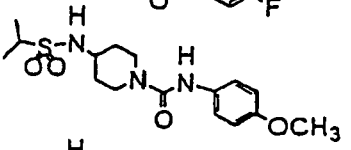
If-144 

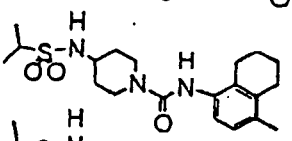
If-145 

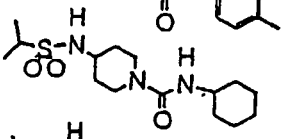
If-146 

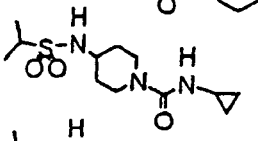
If-147 

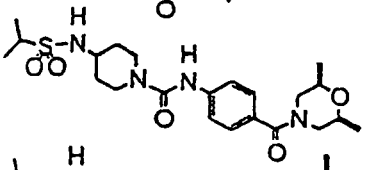
If-148 

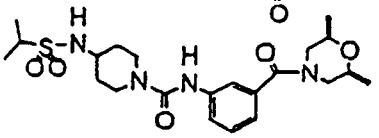
If-149 

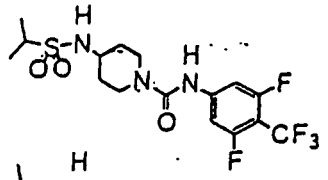
If-150 

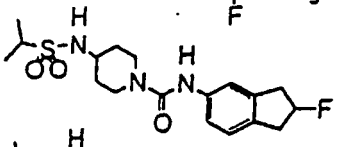
If-151 

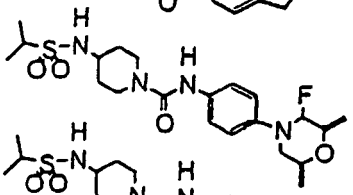
If-152 

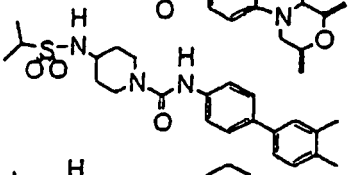
If-153 

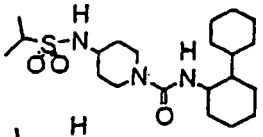
If-154 

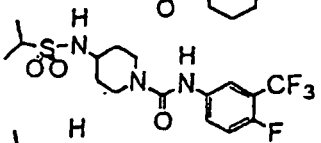
If-155 

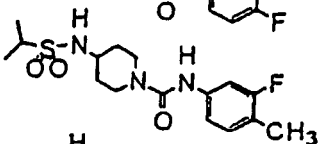
If-156 

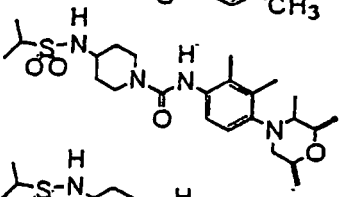
If-157 

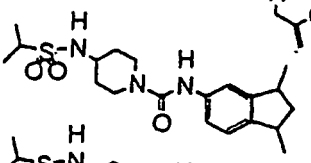
If-158 

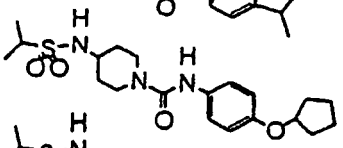
If-159 

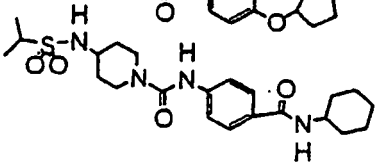
If-160 

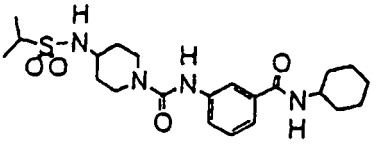
If-161 

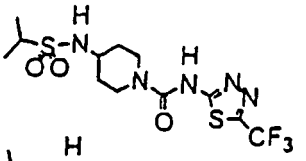
If-162 

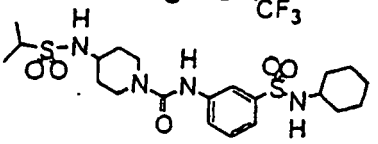
If-163 

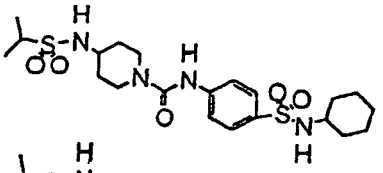
If-164 

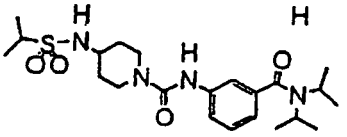
If-165 

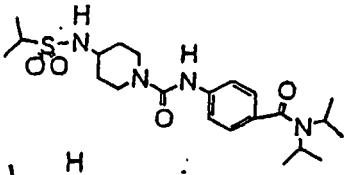
If-166 

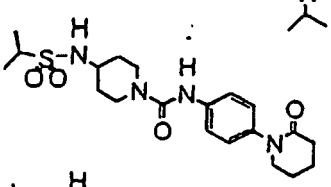
If-167 

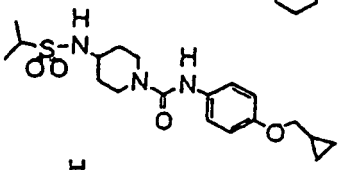
If-168 

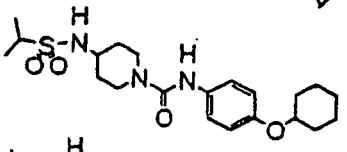
If-169 

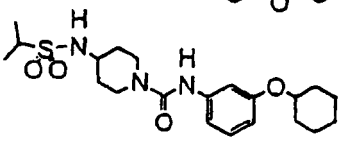
If-171 

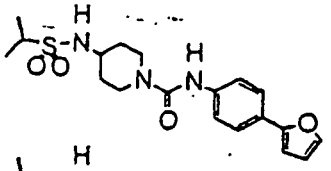
If-172 

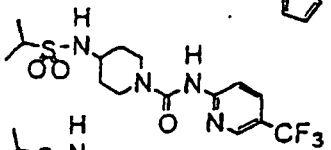
If-173 

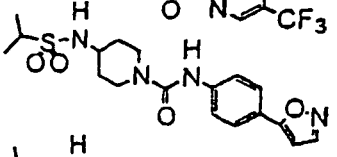
If-174 

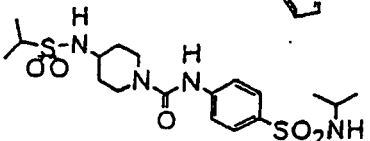
If-175 

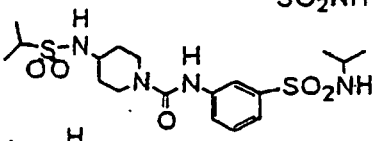
If-176 

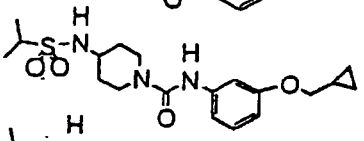
If-177 

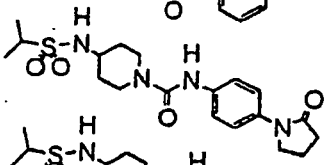
If-178 

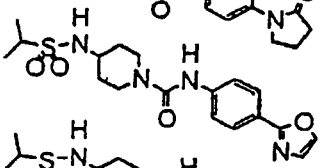
If-179 

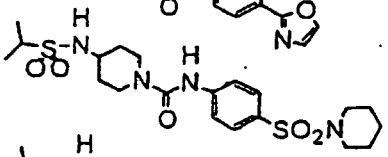
If-180 

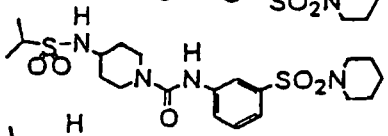
If-181 

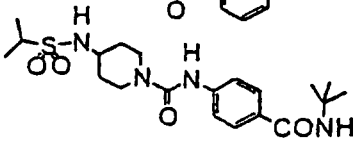
If-182 

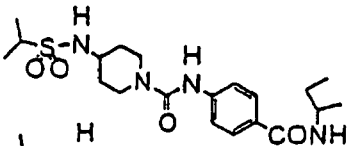
If-183 

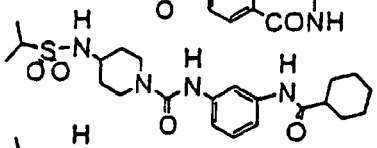
If-184 

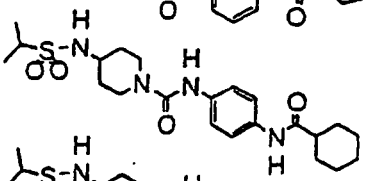
If-185 

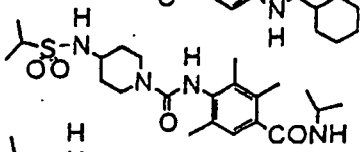
If-186 

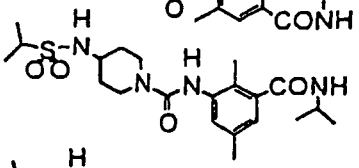
If-187 

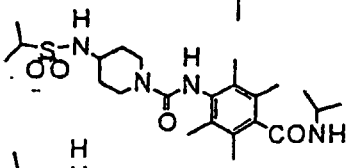
If-188 

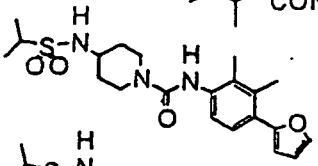
If-189 

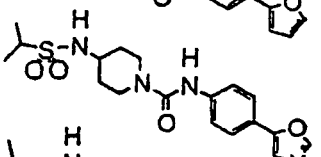
If-190 

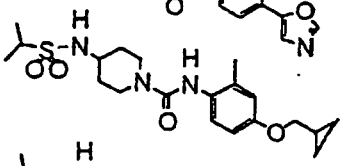
If-191 

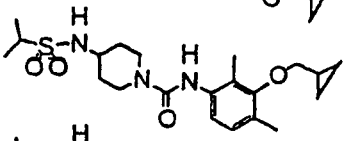
If-192 

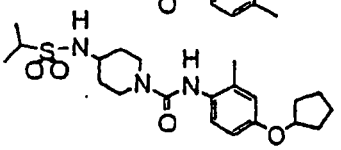
If-193 

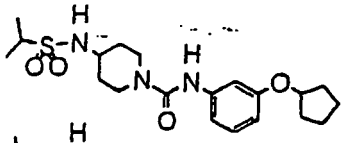
If-194 

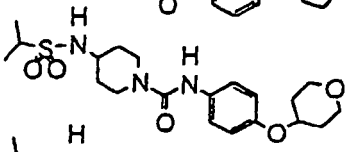
If-195 

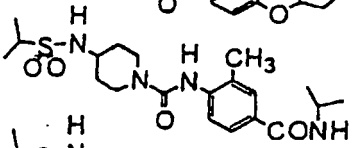
If-196 

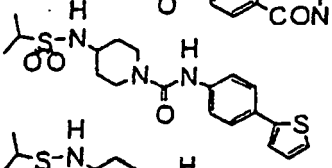
If-197 

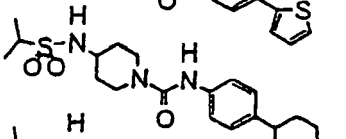
If-198 

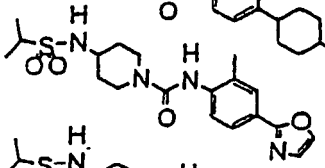
If-199 

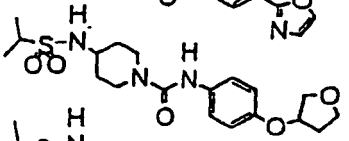
If-200 

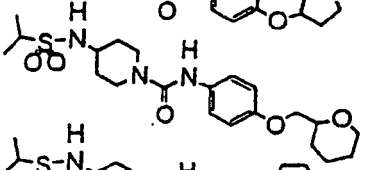
If-201 

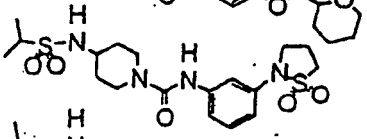
If-202 

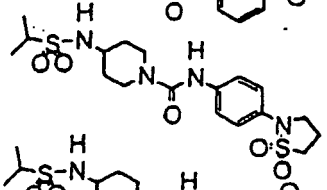
If-203 

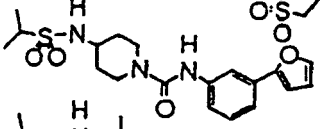
If-204 

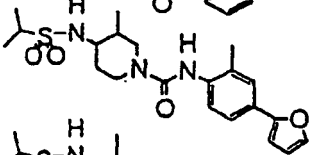
If-205 

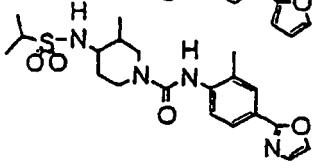
If-206 

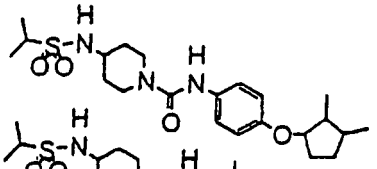
If-207 

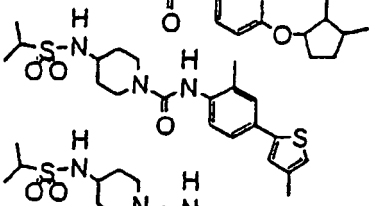
If-208 

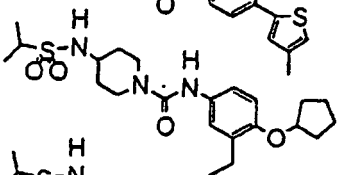
If-209 

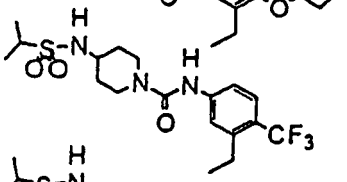
If-210 

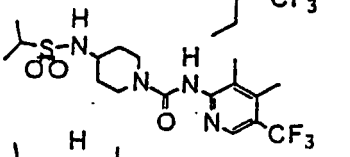
If-211 

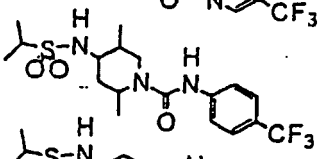
If-212 

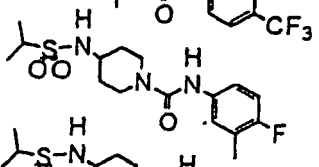
If-213 

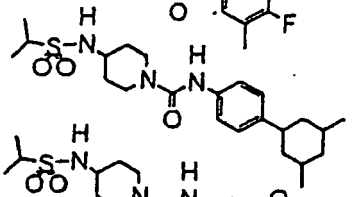
If-214 

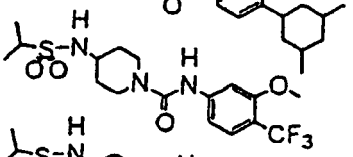
If-215 

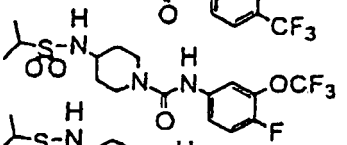
If-216 

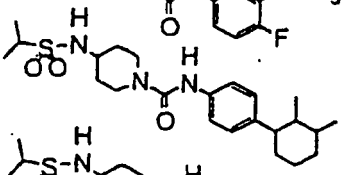
If-219 

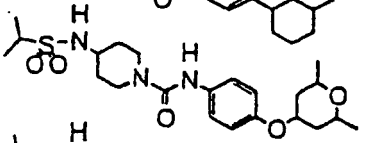
If-220 

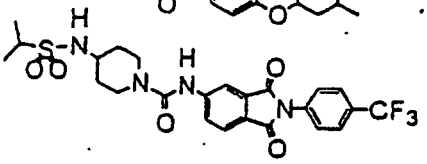
If-221 

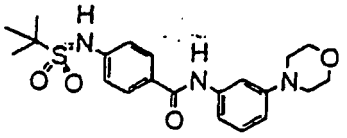
If-222 

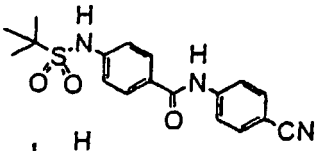
If-223 

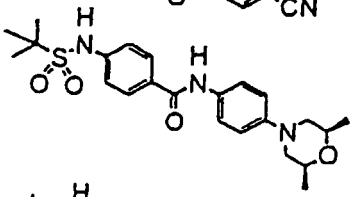
If-224 

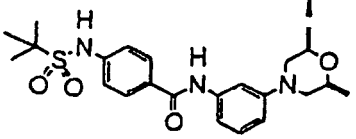
If-225 

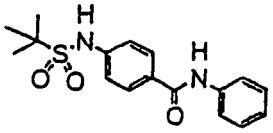
If-226 

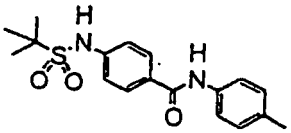
Ig-1 

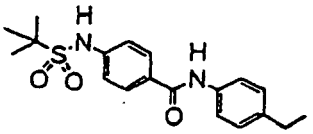
Ig-2 

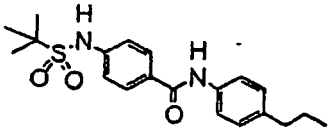
Ig-3 

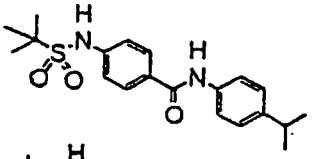
Ig-4 

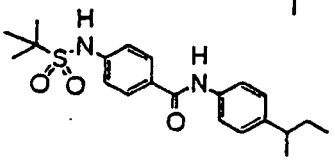
Ig-7 

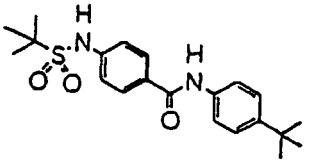
Ig-8 

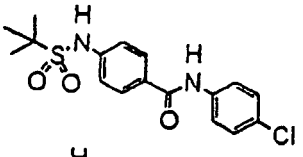
Ig-9 

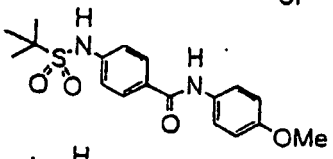
Ig-10 

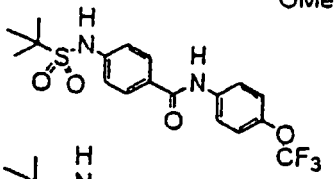
Ig-11 

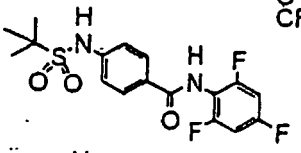
Ig-12 

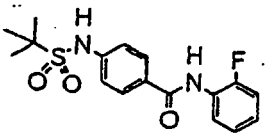
Ig-13 

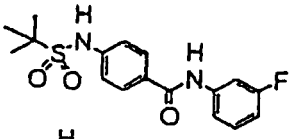
Ig-14 

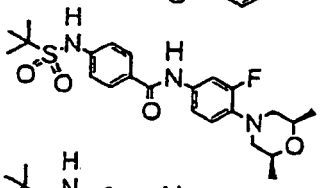
Ig-16 

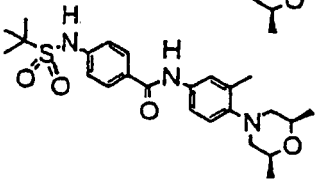
Ig-17 

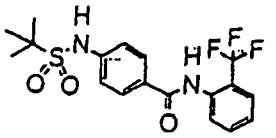
Ig-18 

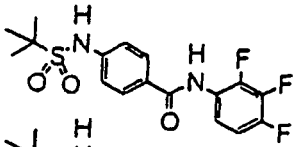
Ig-19 

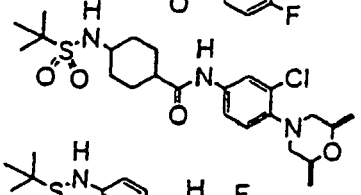
Ig-20 

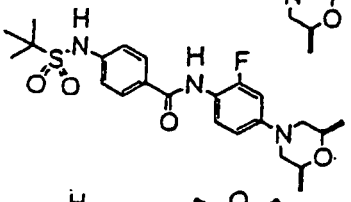
Ig-21 

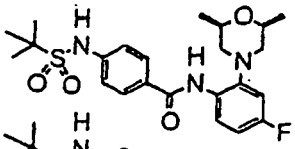
Ig-22 

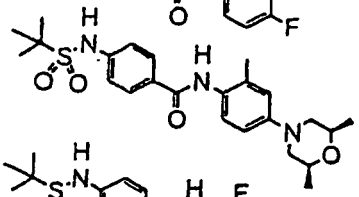
Ig-23 

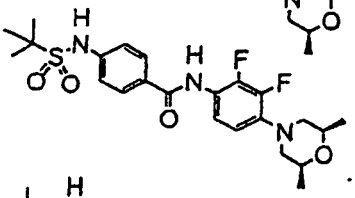
Ig-24 

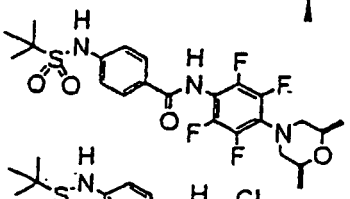
Ig-25 

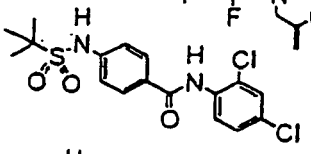
Ig-26 

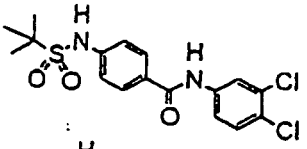
Ig-27 

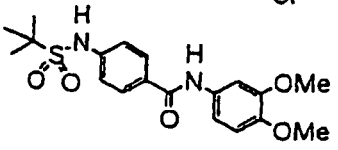
Ig-28 

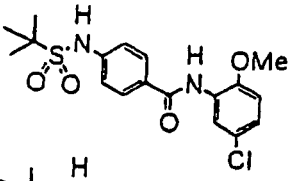
Ig-29 

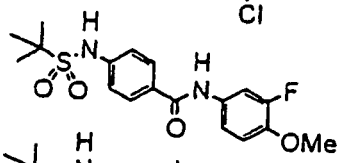
Ig-30 

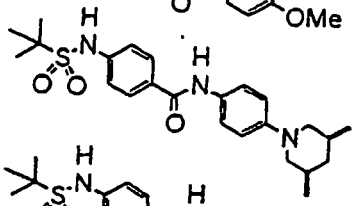
Ig-31 

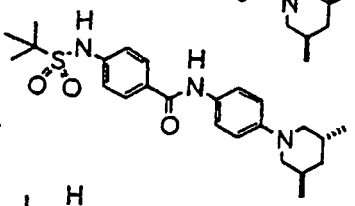
Ig-32 

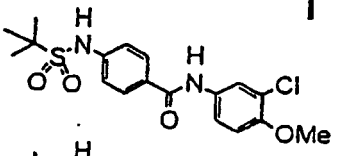
Ig-33 

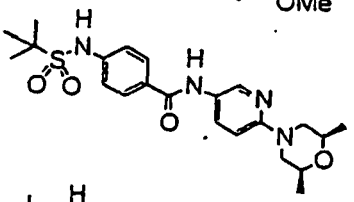
Ig-35 

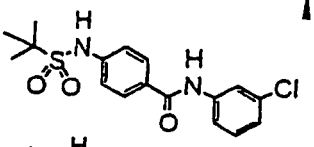
Ig-36 

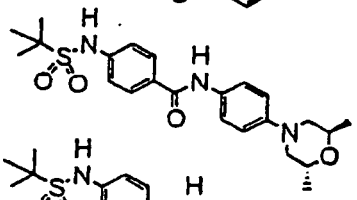
Ig-37 

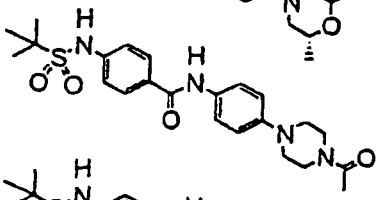
Ig-38 

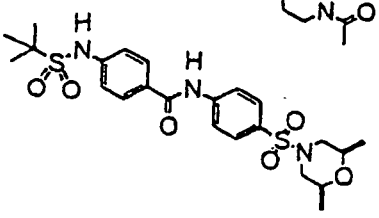
Ig-39 

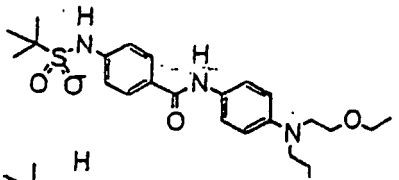
Ig-40 

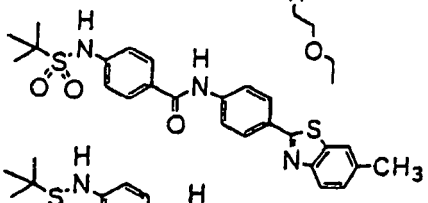
Ig-41 

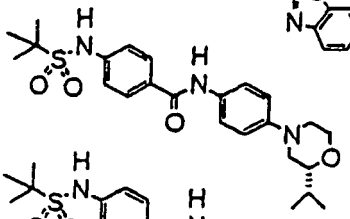
Ig-42 

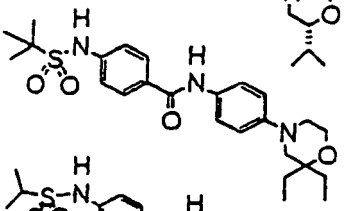
Ig-43 

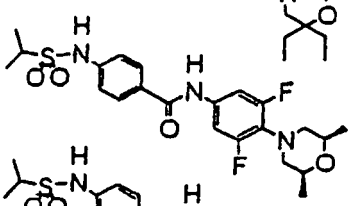
Ig-44 

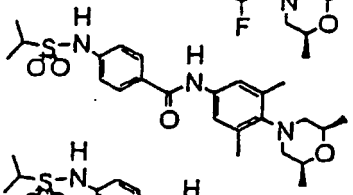
Ig-45 

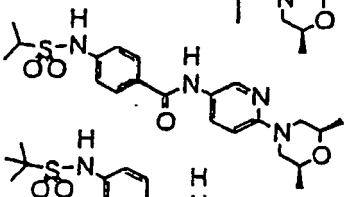
Ig-46 

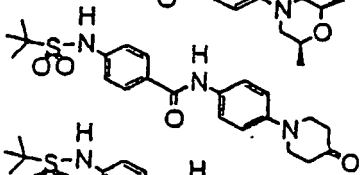
Ig-47 

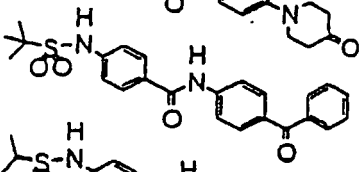
Ig-48 

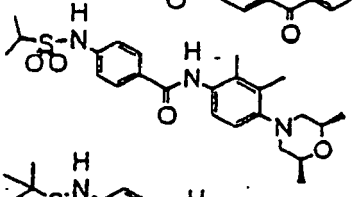
Ig-49 

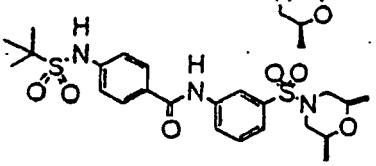
Ig-50 

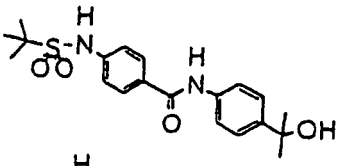
Ig-51 

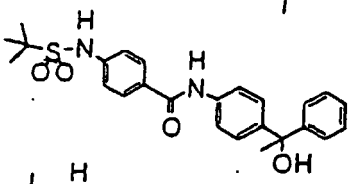
Ig-52 

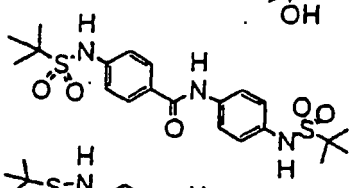
Ig-53 

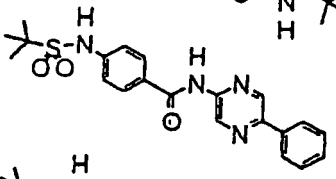
Ig-54 

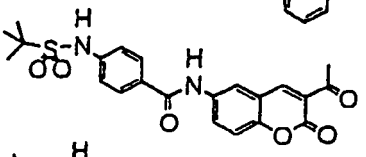
Ig-55 

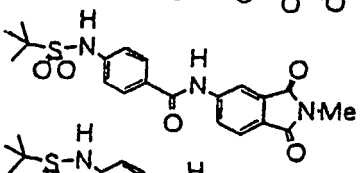
Ig-56 

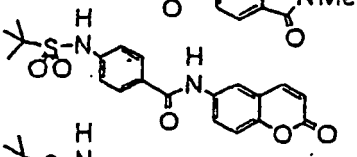
Ig-57 

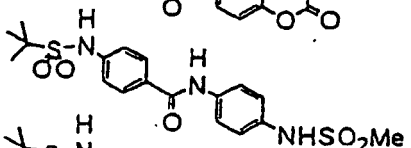
Ig-58 

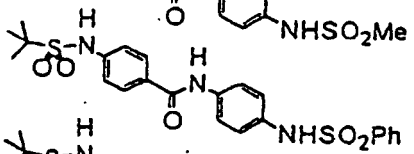
Ig-59 

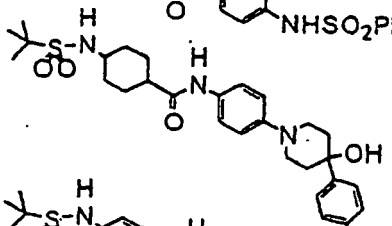
Ig-60 

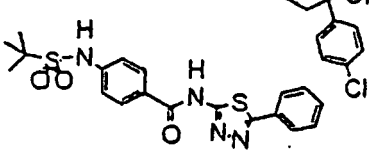
Ig-61 

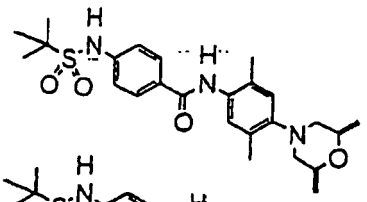
Ig-62 

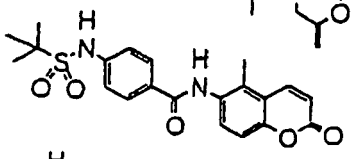
Ig-63 

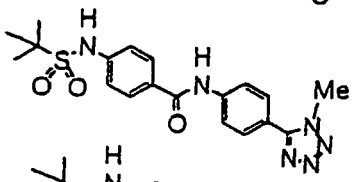
Ig-64 

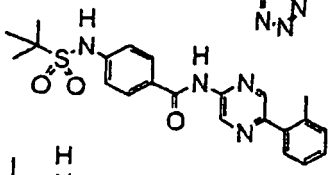
Ig-65 

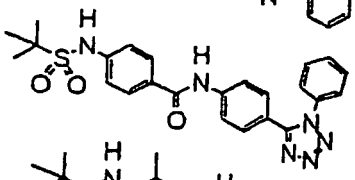
Ig-66 

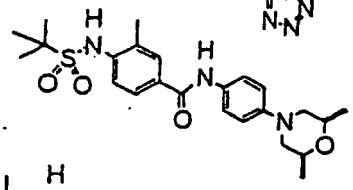
Ig-67 

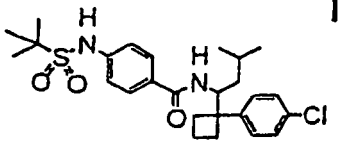
Ig-68 

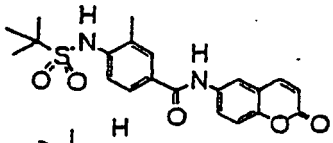
Ig-69 

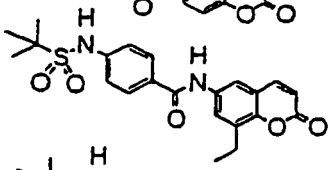
Ig-70 

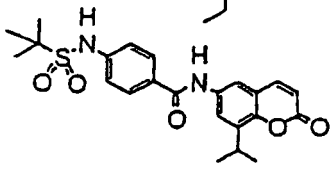
Ig-71 

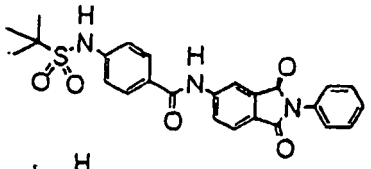
Ig-74 

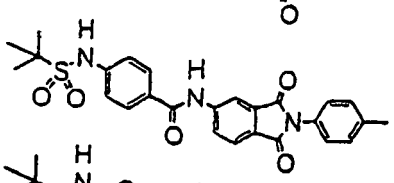
Ig-75 

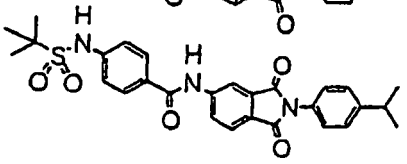
Ig-76 

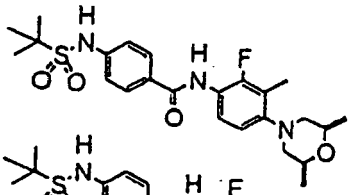
Ig-77 

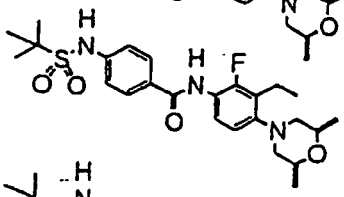
Ig-78 

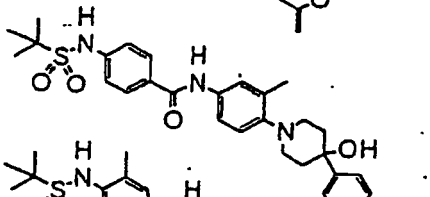
Ig-79 

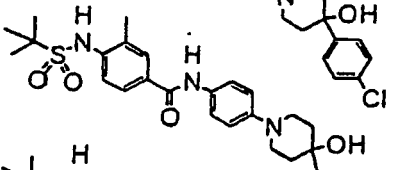
Ig-80 

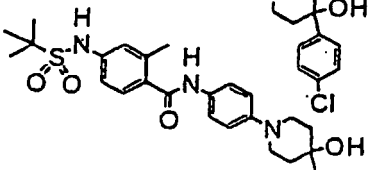
Ig-81 

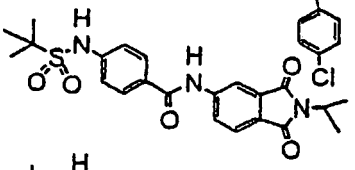
Ig-82 

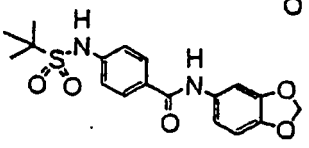
Ig-83 

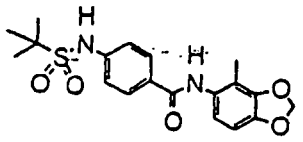
Ig-84 

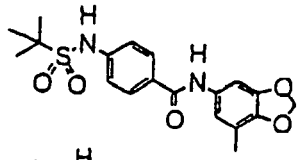
Ig-85 

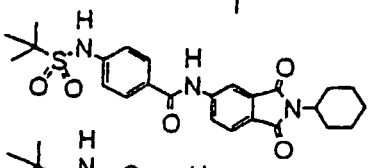
Ig-86 

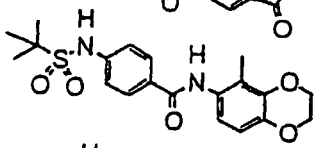
Ig-87 

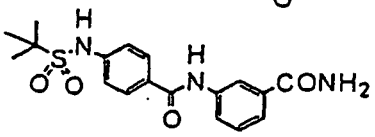
Ig-88 

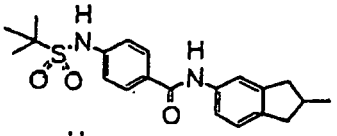
Ig-89 

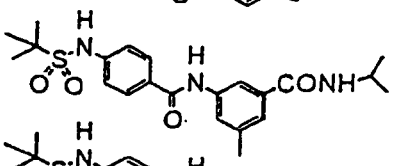
Ig-90 

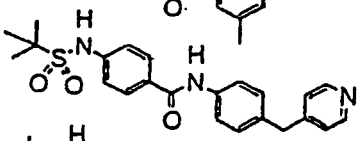
Ig-91 

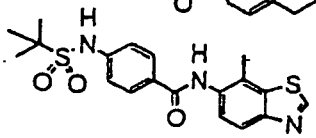
Ig-92 

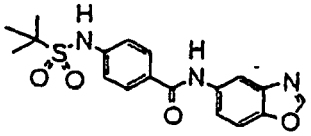
Ig-93 

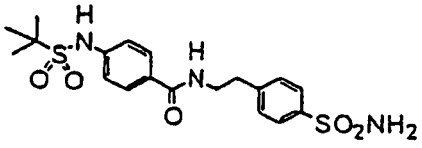
Ig-94 

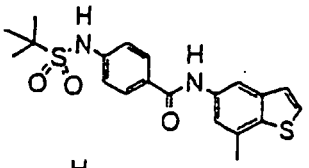
Ig-95 

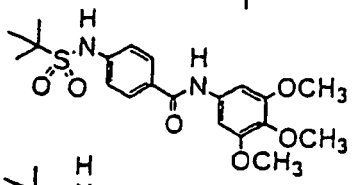
Ig-96 

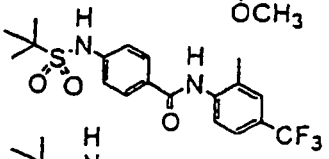
Ig-97 

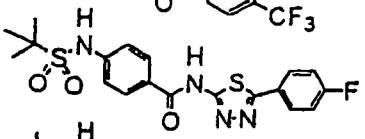
Ig-98 

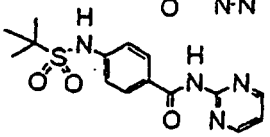
Ig-99 

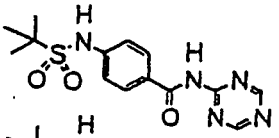
Ig-100 

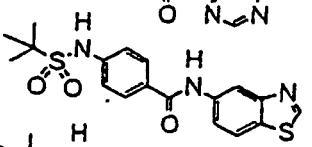
Ig-101 

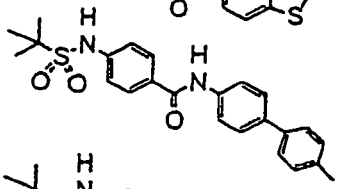
Ig-102 

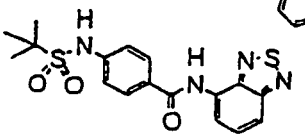
Ig-103 

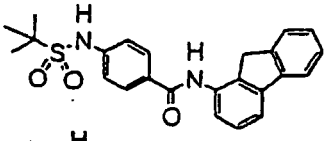
Ig-104 

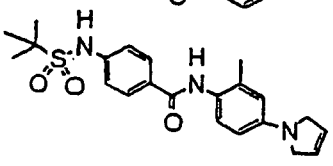
Ig-105 

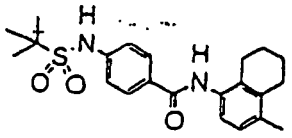
Ig-106 

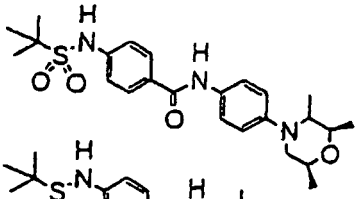
Ig-107 

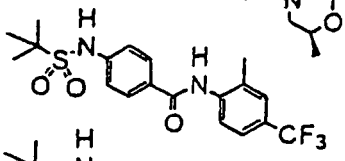
Ig-108 

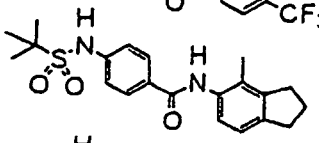
Ig-109 

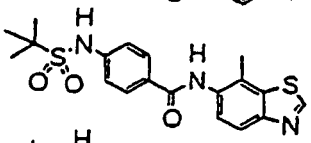
Ig-110 

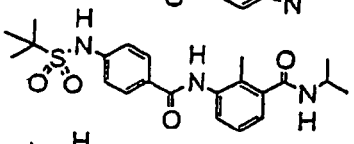
Ig-111 

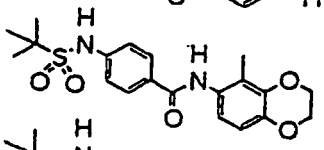
Ig-112 

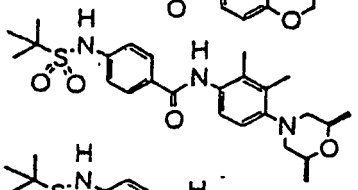
Ig-113 

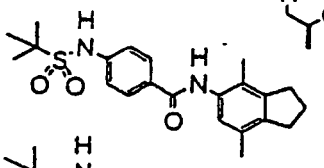
Ig-114 

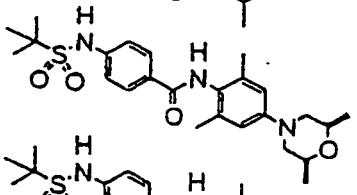
Ig-115 

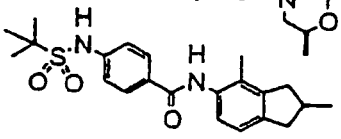
Ig-116 

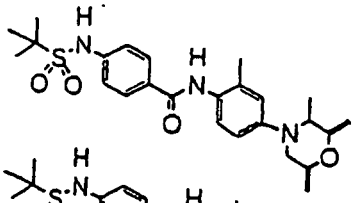
Ig-117 

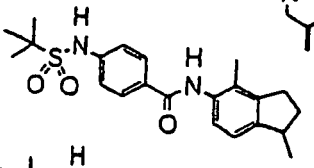
Ig-118 

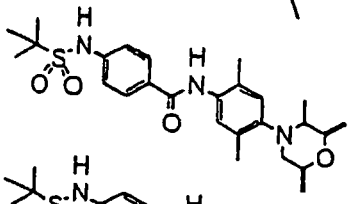
Ig-119 

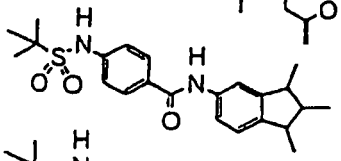
Ig-120 

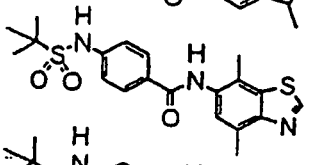
Ig-121 

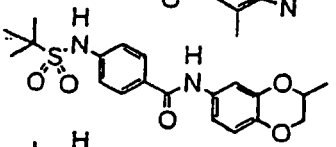
Ig-122 

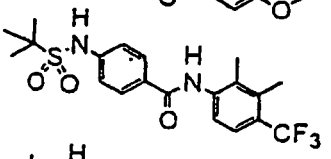
Ig-123 

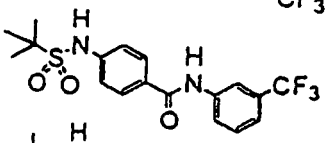
Ig-124 

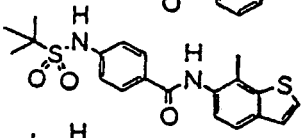
Ig-125 

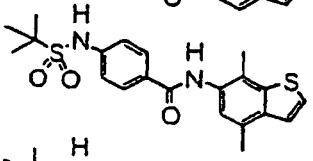
Ig-126 

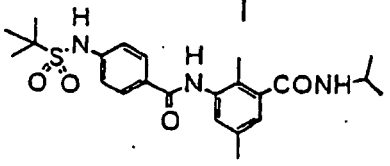
Ig-127 

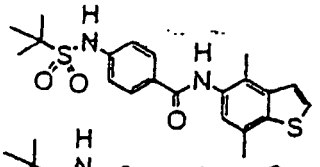
Ig-128 

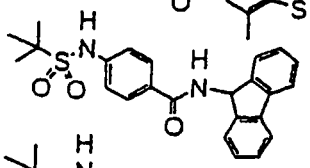
Ig-129 

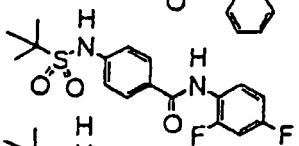
Ig-130 

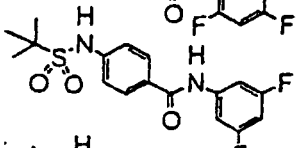
Ig-131 

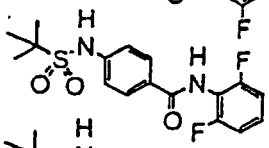
Ig-132 

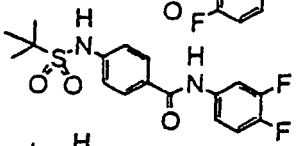
Ig-133 

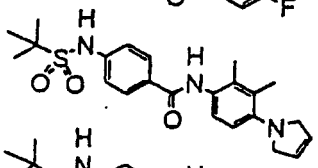
Ig-134 

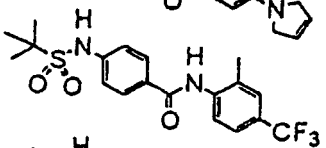
Ig-135 

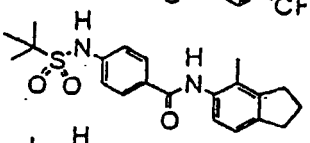
Ig-136 

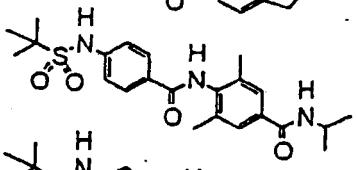
Ig-137 

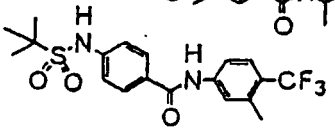
Ig-138 

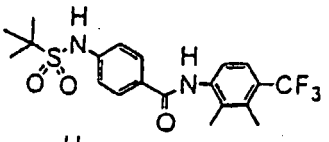
Ig-139 

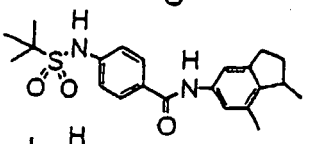
Ig-140 

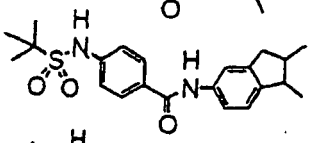
Ig-141 

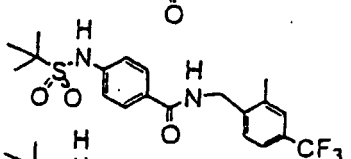
Ig-142 

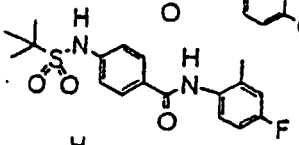
Ig-143 

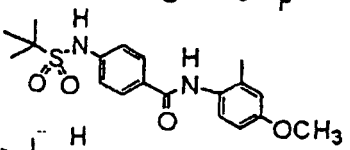
Ig-144 

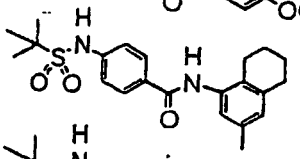
Ig-145 

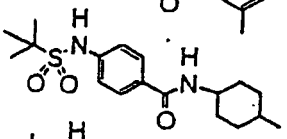
Ig-146 

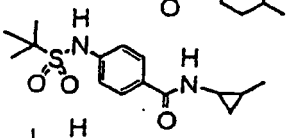
Ig-147 

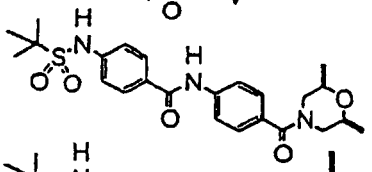
Ig-148 

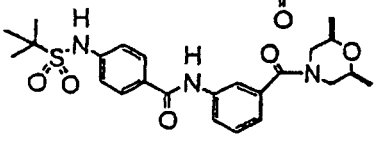
Ig-149 

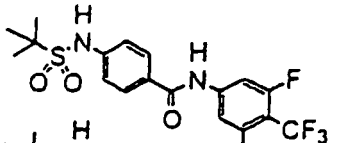
Ig-150 

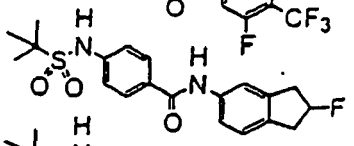
Ig-151 

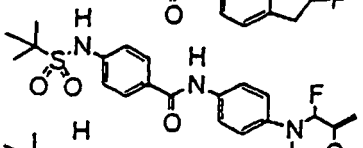
Ig-152 

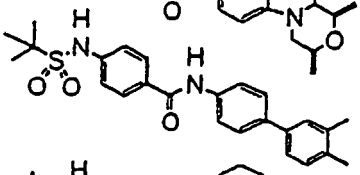
Ig-153 

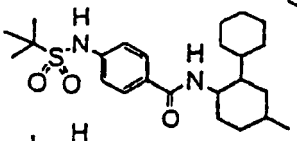
Ig-154 

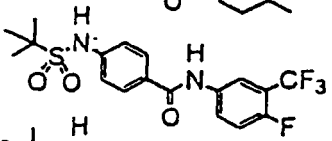
Ig-155 

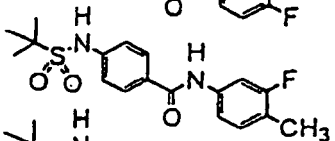
Ig-156 

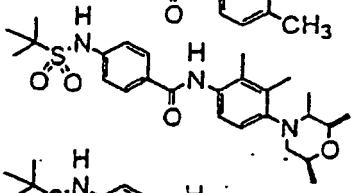
Ig-157 

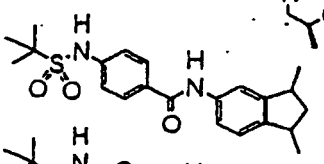
Ig-158 

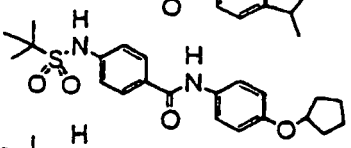
Ig-159 

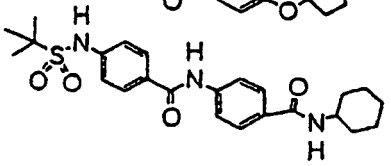
Ig-160 

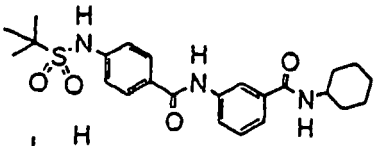
Ig-161 

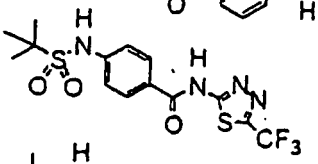
Ig-162 

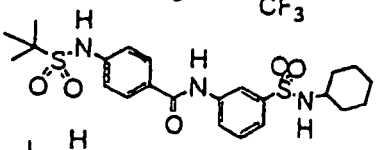
Ig-163 

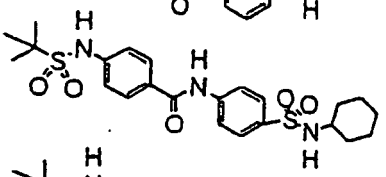
Ig-164 

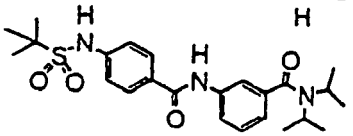
Ig-165 

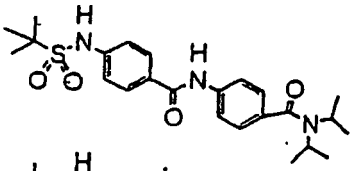
Ig-166 

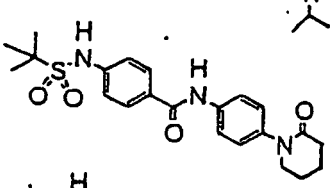
Ig-167 

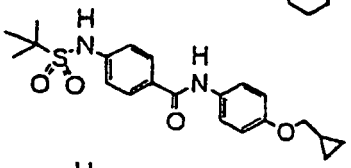
Ig-168 

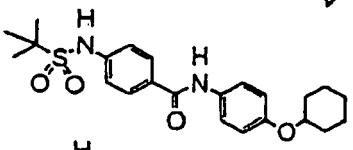
Ig-169 

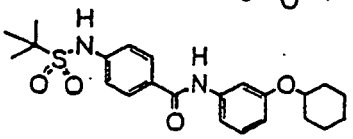
Ig-171 

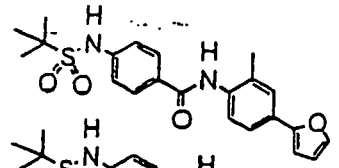
Ig-172 

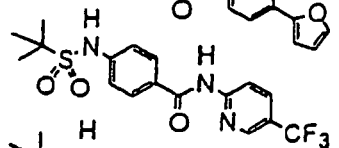
Ig-173 

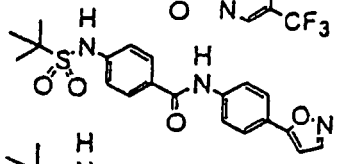
Ig-174 

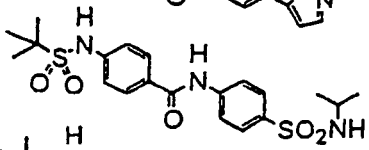
Ig-175 

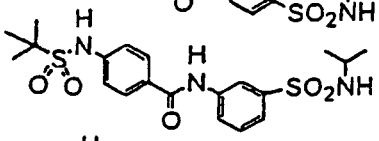
Ig-176 

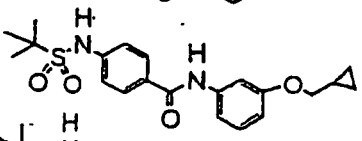
Ig-177 

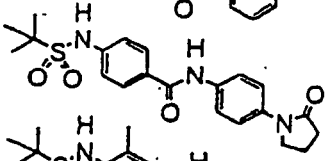
Ig-178 

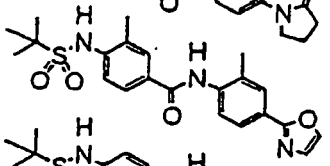
Ig-179 

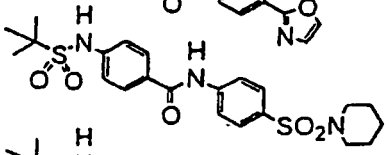
Ig-180 

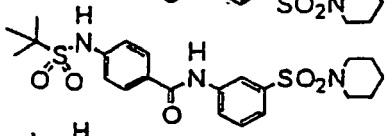
Ig-181 

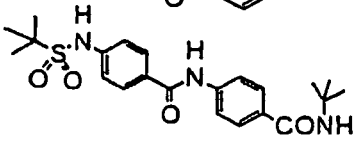
Ig-182 

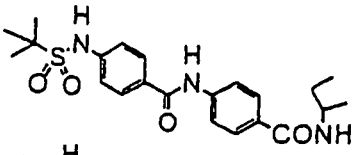
Ig-183 

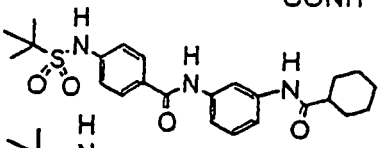
Ig-184 

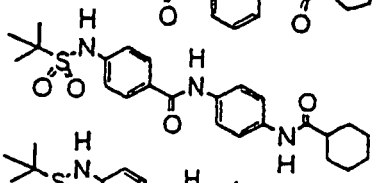
Ig-185 

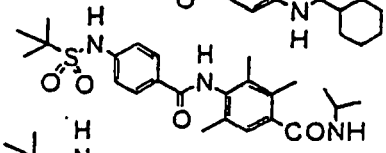
Ig-186 

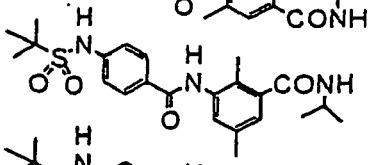
Ig-187 

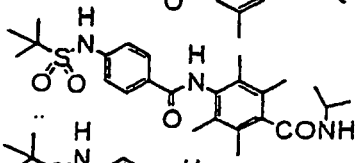
Ig-188 

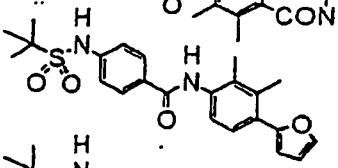
Ig-189 

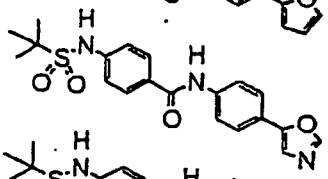
Ig-190 

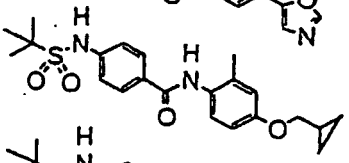
Ig-191 

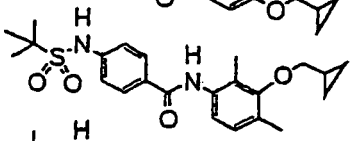
Ig-192 

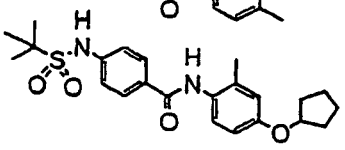
Ig-193 

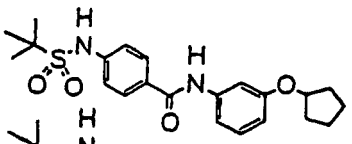
Ig-194 

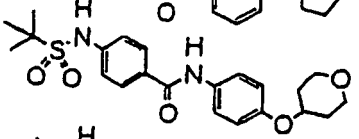
Ig-195 

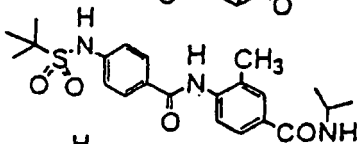
Ig-196 

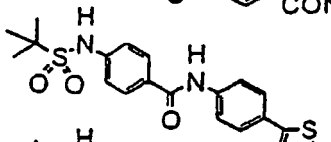
Ig-197 

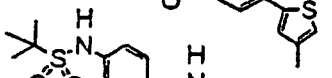
Ig-198 

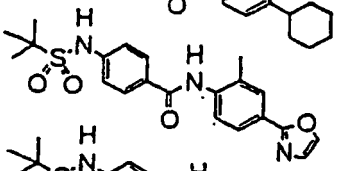
Ig-199 

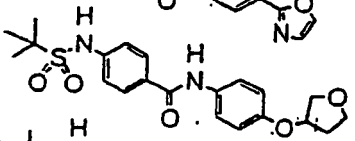
Ig-200 

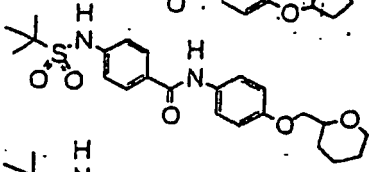
Ig-201 

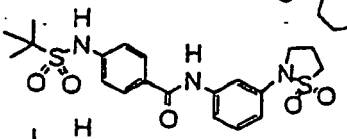
Ig-202 

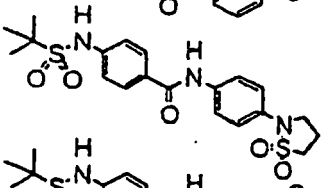
Ig-203 

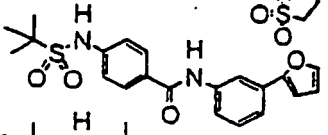
Ig-204 

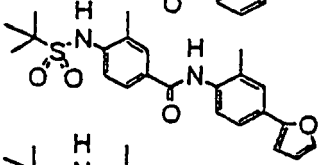
Ig-205 

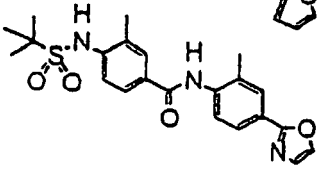
Ig-206 

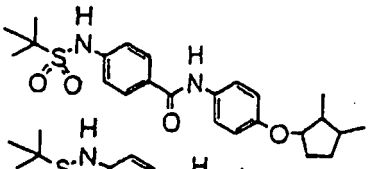
Ig-207 

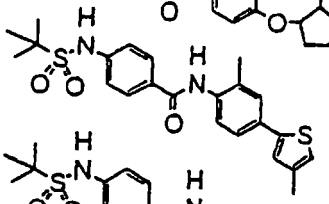
Ig-208 

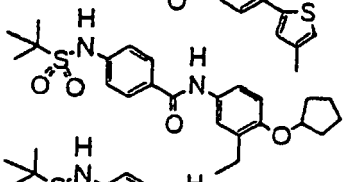
Ig-209 

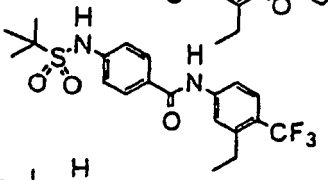
Ig-210 

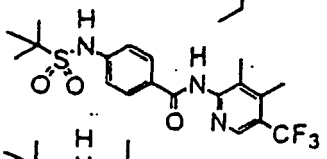
Ig-211 

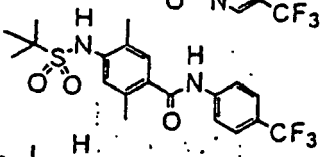
Ig-212 

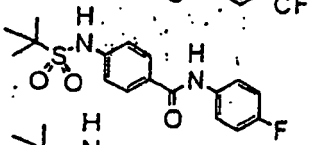
Ig-213 

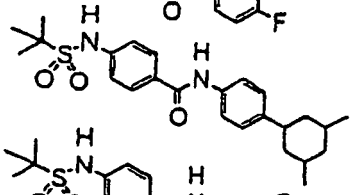
Ig-214 

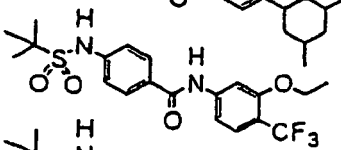
Ig-215 

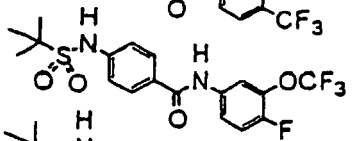
Ig-216 

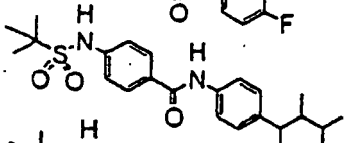
Ig-219 

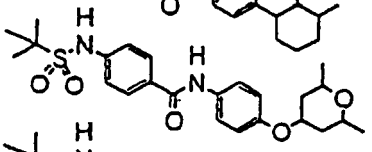
Ig-220 

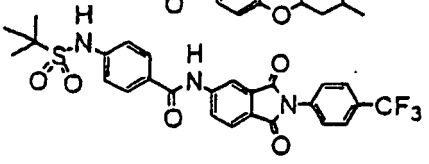
Ig-221 

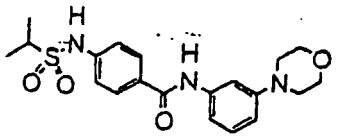
Ig-222 

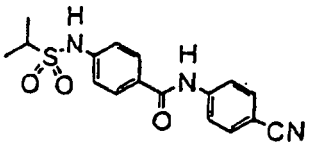
Ig-223 

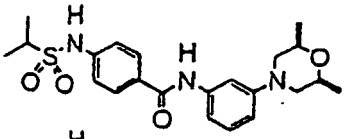
Ig-224 

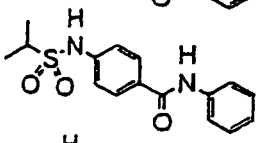
Ig-225 

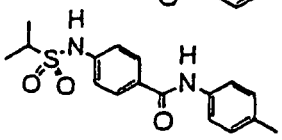
Ig-226 

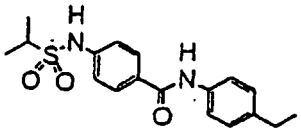
Ih-1 

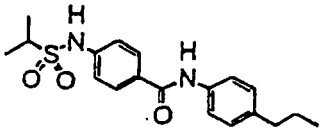
Ih-2 

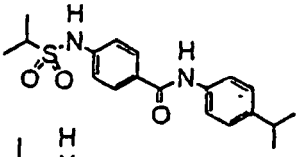
Ih-4 

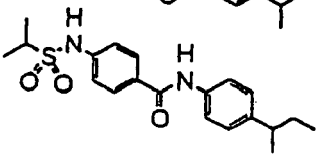
Ih-7 

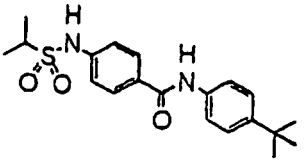
Ih-8 

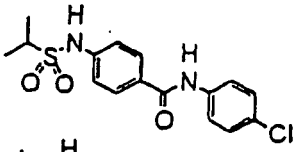
Ih-9 

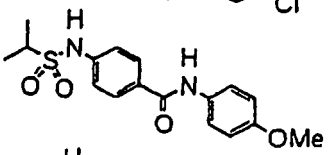
Ih-10 

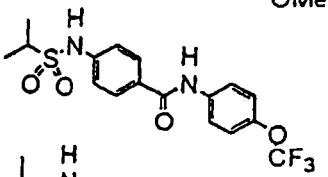
Ih-11 

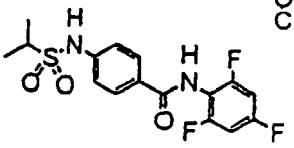
Ih-12 

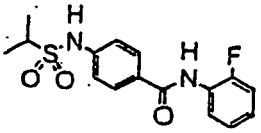
Ih-13 

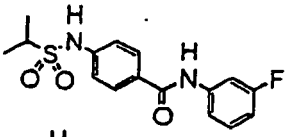
Ih-14 

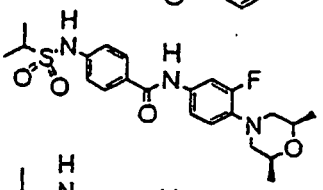
Ih-16 

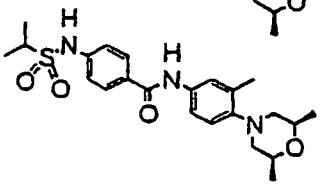
Ih-17 

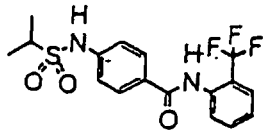
Ih-18 

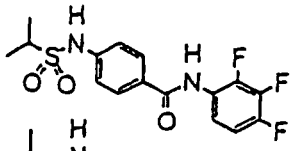
Ih-19 

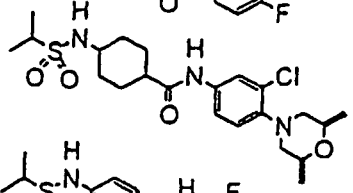
Ih-20 

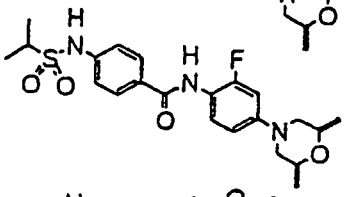
Ih-21 

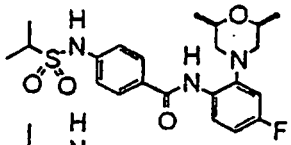
Ih-22 

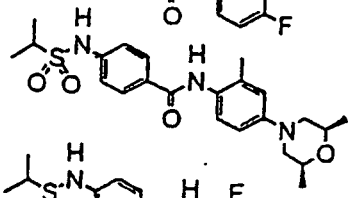
Ih-23 

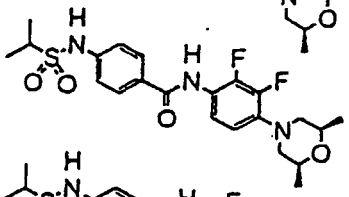
Ih-24 

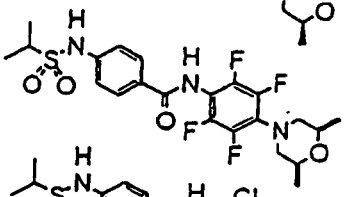
Ih-25 

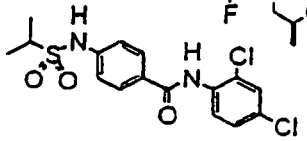
Ih-26 

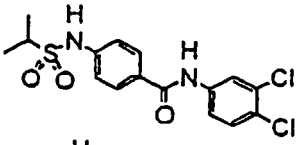
Ih-27 

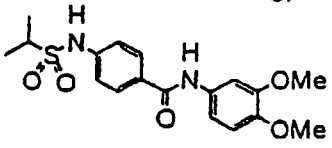
Ih-28 

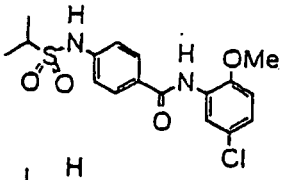
Ih-29 

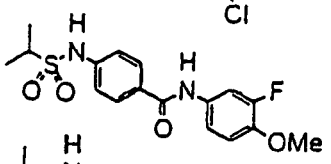
Ih-30 

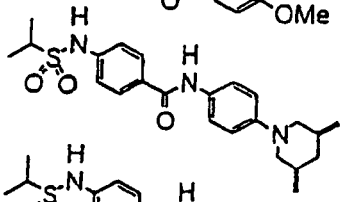
Ih-31 

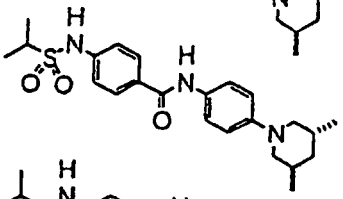
Ih-32 

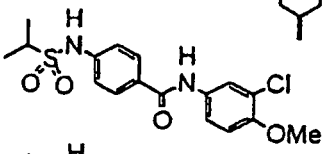
Ih-33 

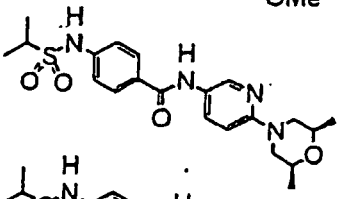
Ih-35 

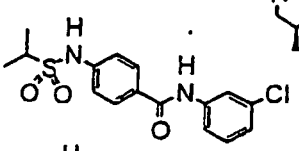
Ih-36 

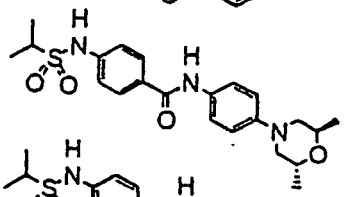
Ih-37 

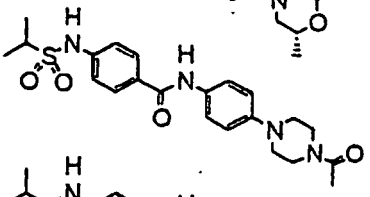
Ih-38 

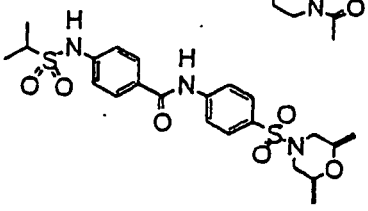
Ih-39 

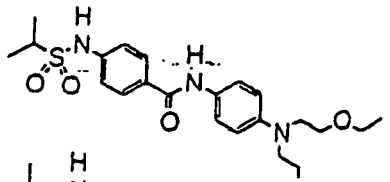
Ih-40 

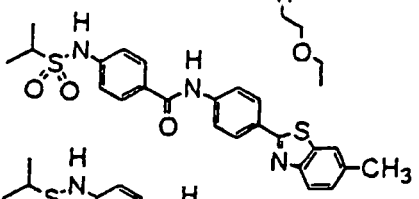
Ih-41 

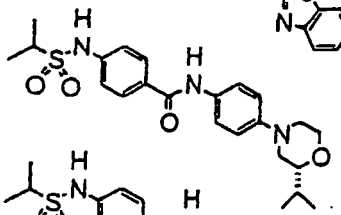
Ih-42 

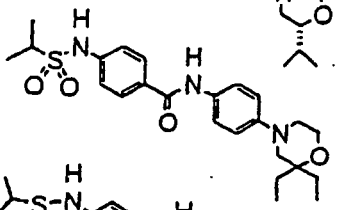
Ih-43 

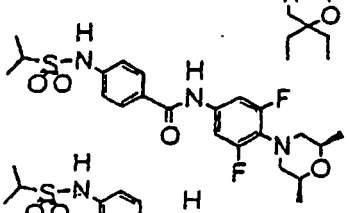
Ih-44 

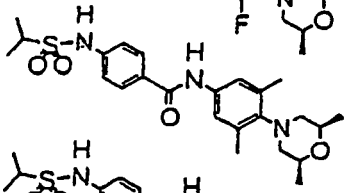
Ih-45 

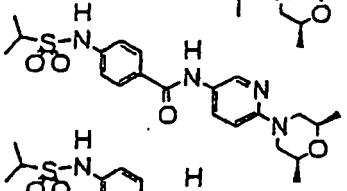
Ih-46 

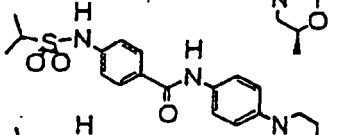
Ih-47 

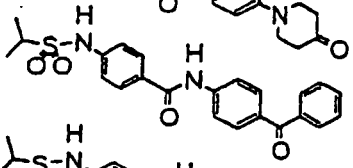
Ih-48 

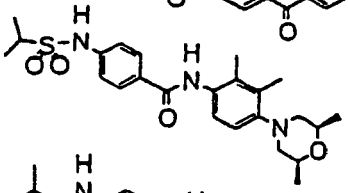
Ih-49 

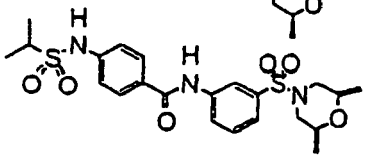
Ih-50 

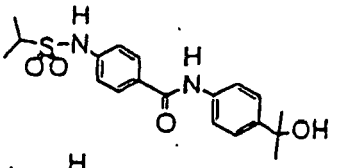
Ih-51 

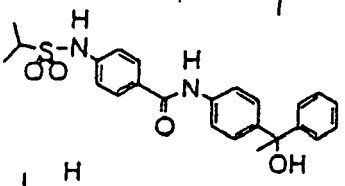
Ih-52 

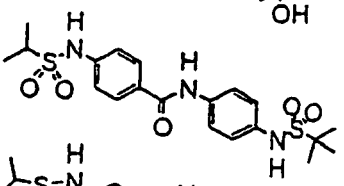
Ih-53 

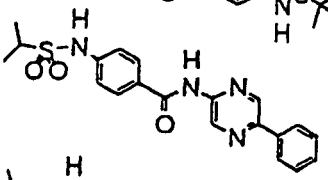
Ih-54 

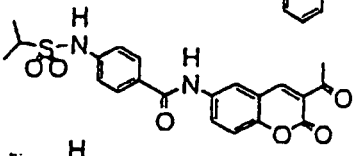
Ih-55 

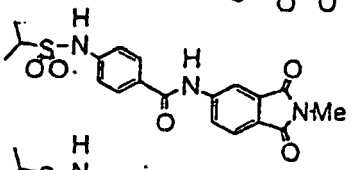
Ih-56 

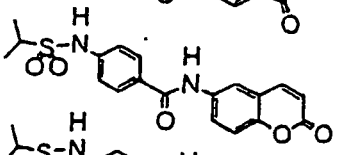
Ih-57 

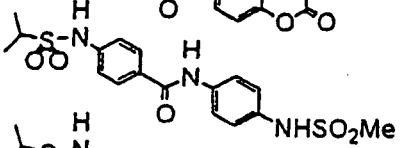
Ih-58 

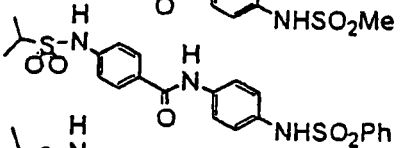
Ih-59 

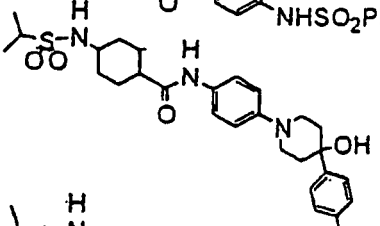
Ih-60 

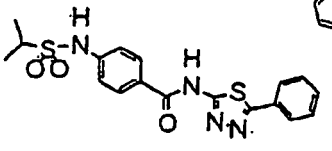
Ih-61 

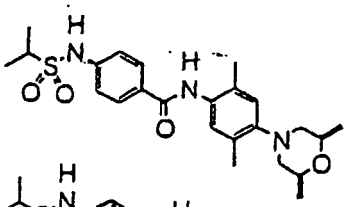
Ih-62 

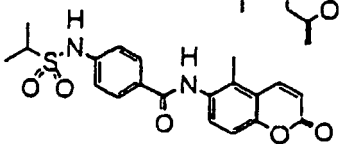
Ih-63 

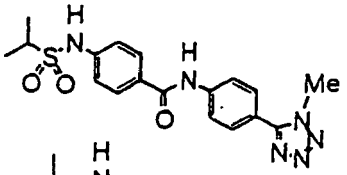
Ih-64 

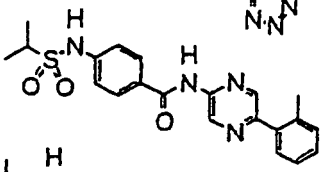
Ih-65 

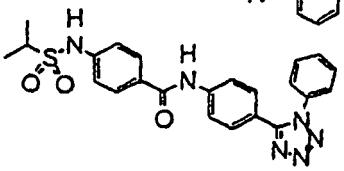
Ih-66 

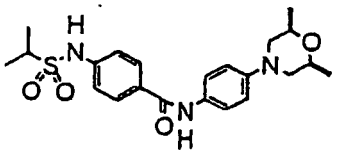
Ih-67 

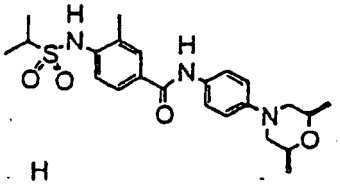
Ih-68 

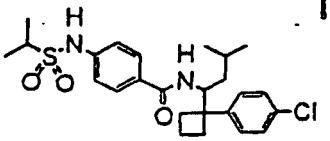
Ih-69 

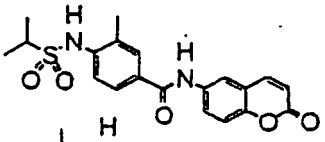
Ih-70 

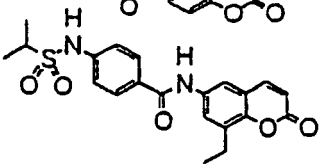
Ih-71 

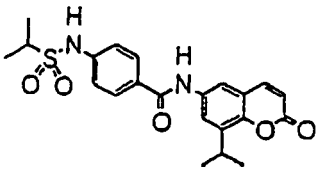
Ih-72 

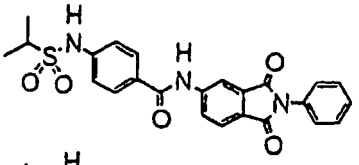
Ih-74 

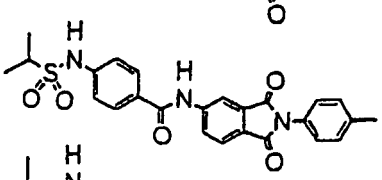
Ih-75 

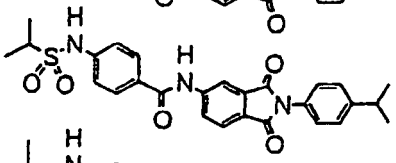
Ih-76 

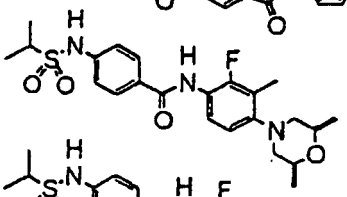
Ih-77 

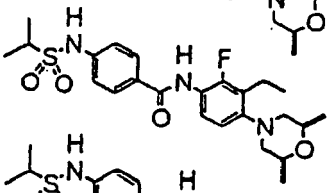
Ih-78 

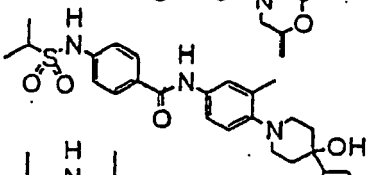
Ih-79 

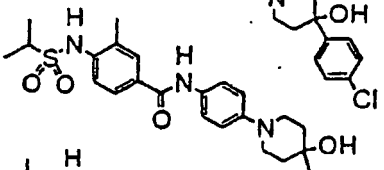
Ih-80 

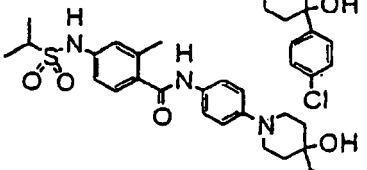
Ih-81 

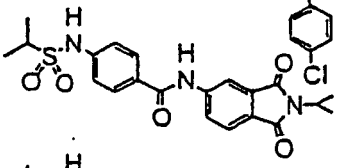
Ih-82 

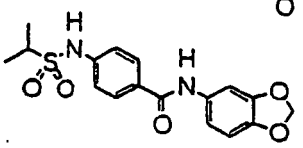
Ih-83 

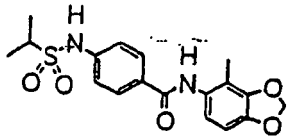
Ih-84 

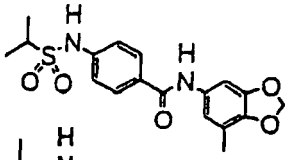
Ih-85 

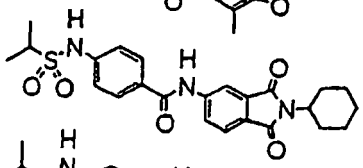
Ih-86 

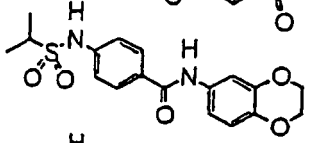
Ih-87 

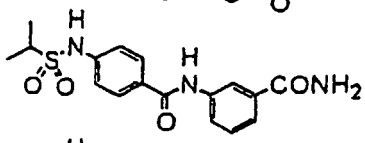
Ih-88 

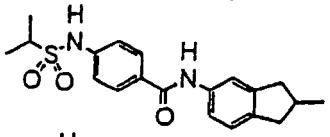
Ih-89 

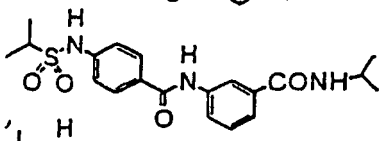
Ih-90 

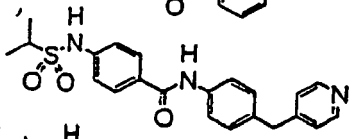
Ih-91 

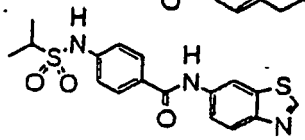
Ih-92 

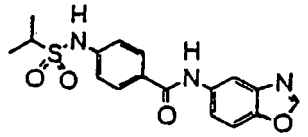
Ih-93 

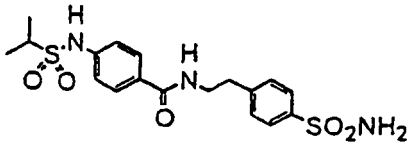
Ih-94 

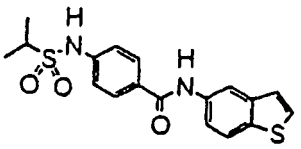
Ih-95 

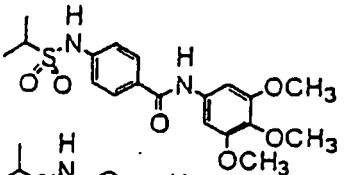
Ih-96 

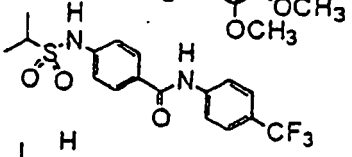
Ih-97 

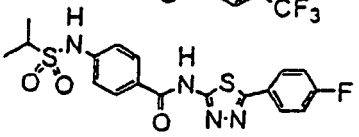
Ih-98 

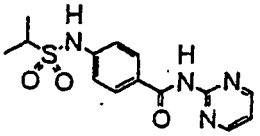
Ih-99 

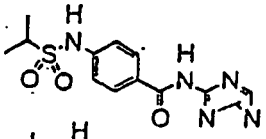
Ih-100 

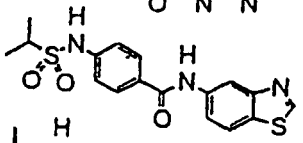
Ih-101 

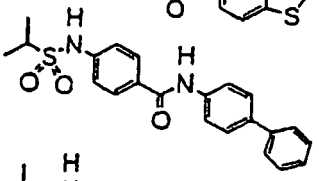
Ih-102 

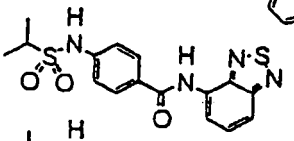
Ih-103 

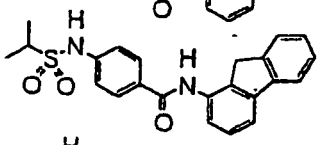
Ih-104 

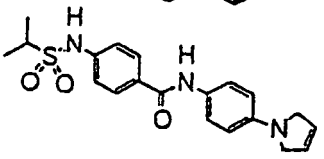
Ih-105 

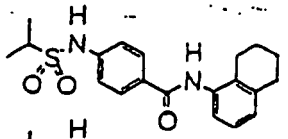
Ih-106 

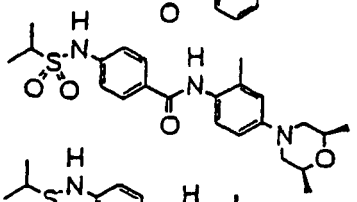
Ih-107 

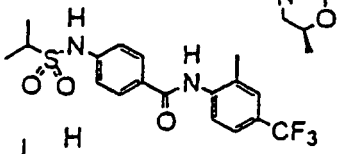
Ih-108 

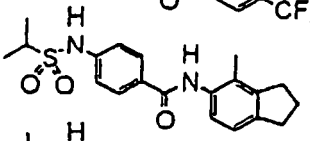
Ih-109 

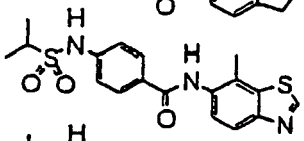
Ih-110 

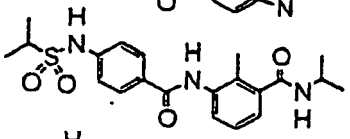
Ih-111 

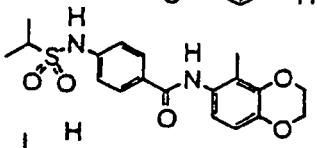
Ih-112 

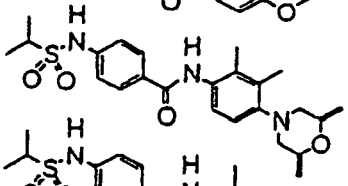
Ih-113 

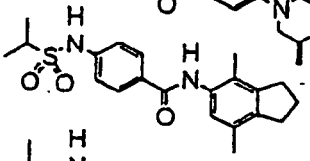
Ih-114 

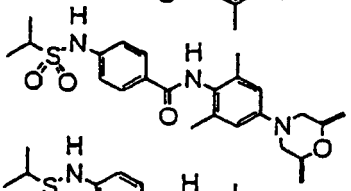
Ih-115 

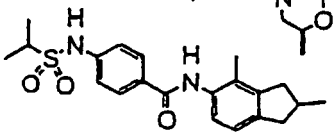
Ih-116 

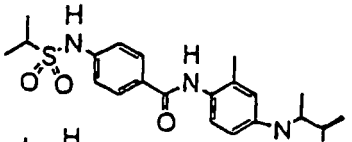
Ih-117 

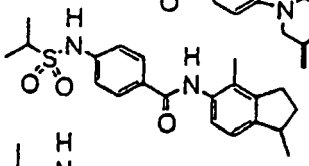
Ih-118 

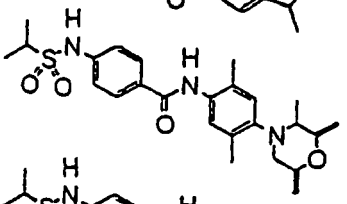
Ih-119 

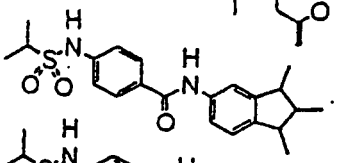
Ih-120 

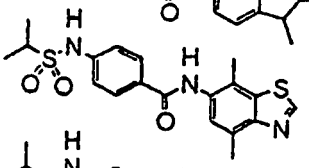
Ih-121 

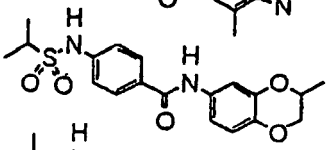
Ih-122 

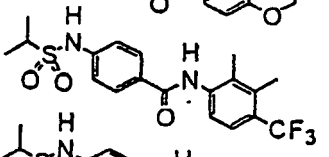
Ih-123 

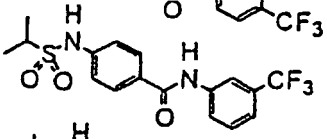
Ih-124 

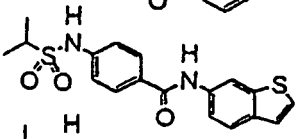
Ih-125 

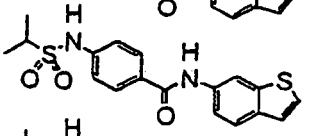
Ih-126 

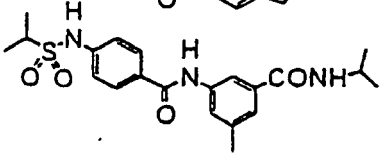
Ih-127 

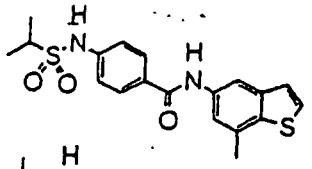
Ih-128 

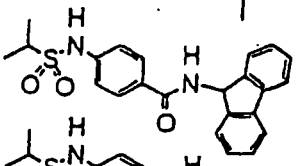
Ih-129 

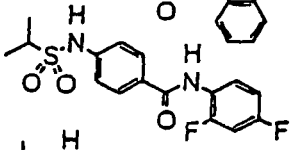
Ih-130 

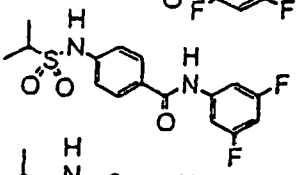
Ih-131 

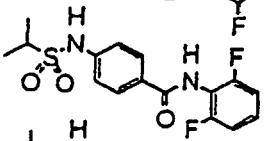
Ih-132 

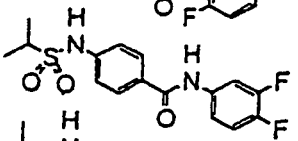
Ih-133 

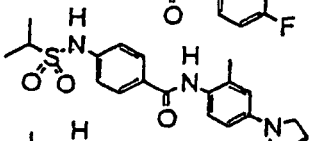
Ih-134 

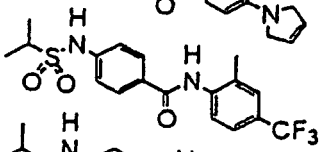
Ih-135 

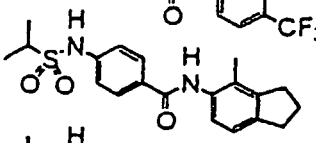
Ih-136 

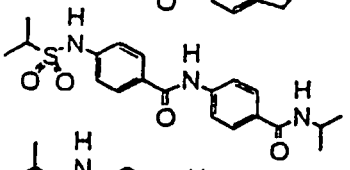
Ih-137 

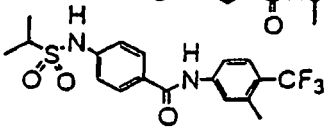
Ih-138 

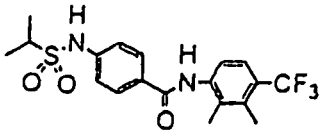
Ih-139 

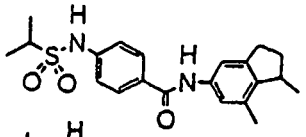
Ih-140 

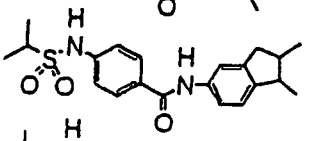
Ih-141 

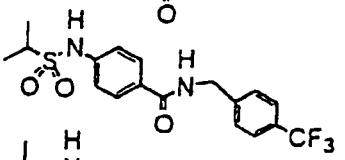
Ih-142 

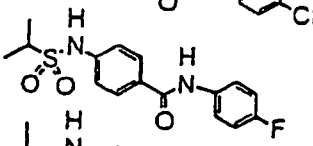
Ih-143 

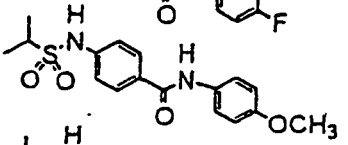
Ih-144 

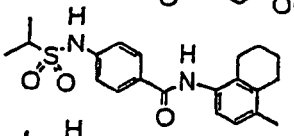
Ih-145 

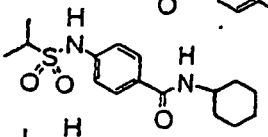
Ih-146 

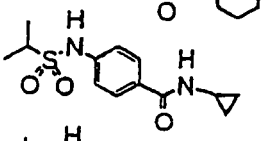
Ih-147 

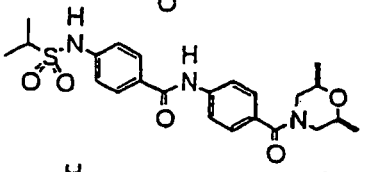
Ih-148 

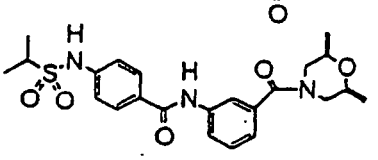
Ih-149 

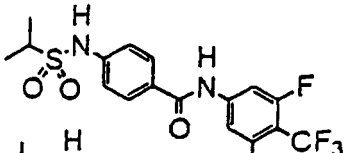
Ih-150 

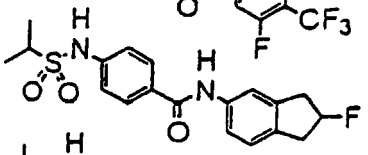
Ih-151 

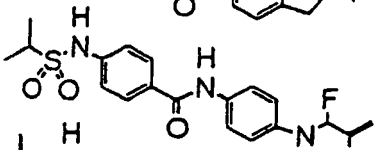
Ih-152 

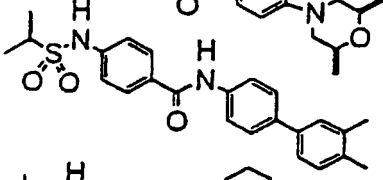
Ih-153 

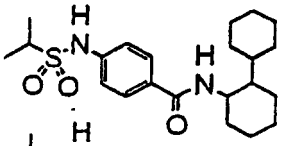
Ih-154 

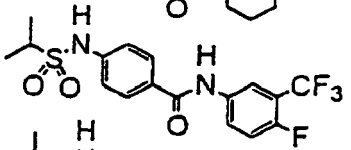
Ih-155 

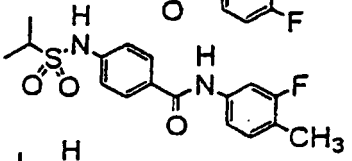
Ih-156 

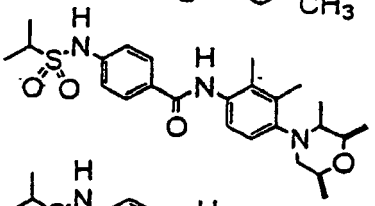
Ih-157 

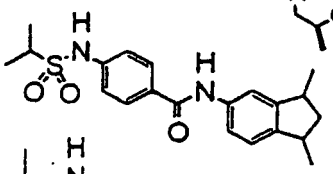
Ih-158 

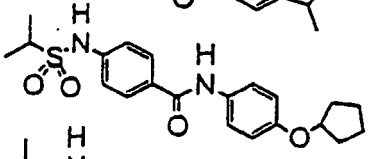
Ih-159 

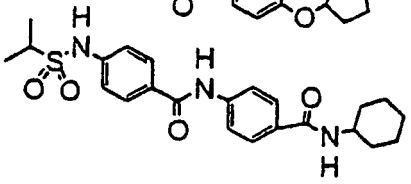
Ih-160 

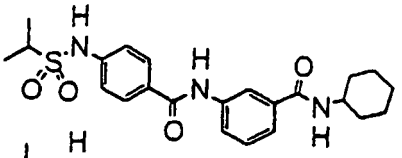
Ih-161 

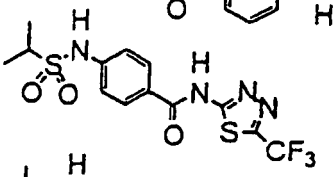
Ih-162 

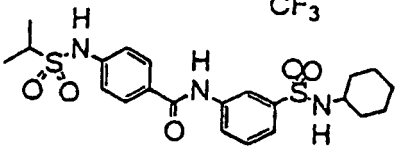
Ih-163 

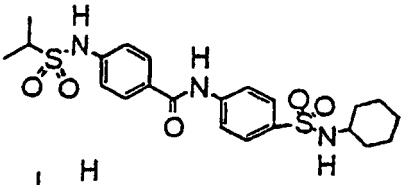
Ih-164 

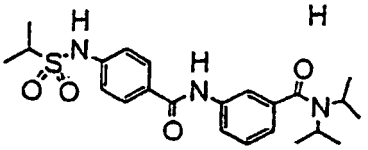
Ih-165 

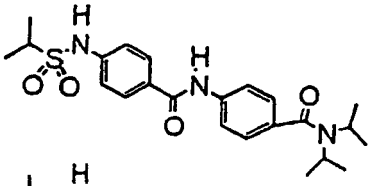
Ih-166 

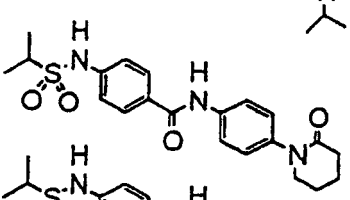
Ih-167 

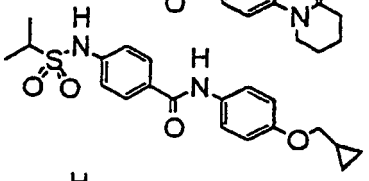
Ih-168 

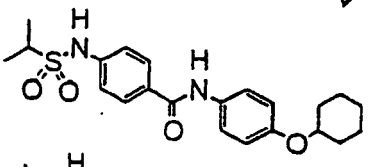
Ih-169 

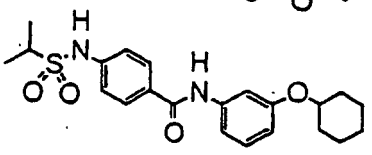
Ih-171 

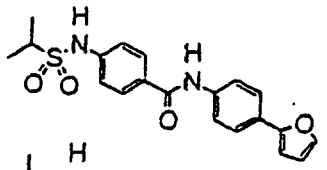
Ih-172 

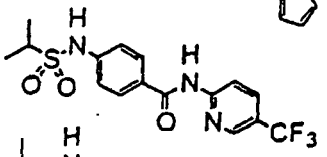
Ih-173 

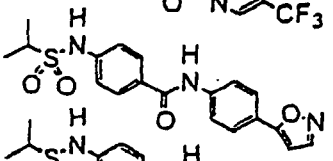
Ih-174 

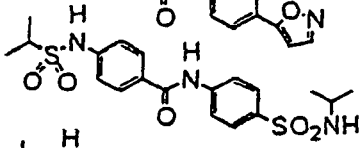
Ih-175 

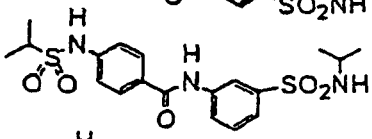
Ih-176 

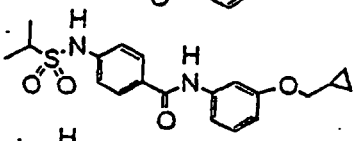
Ih-177 

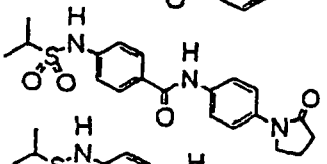
Ih-178 

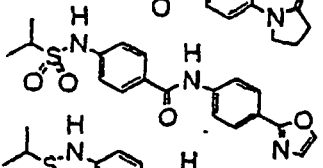
Ih-179 

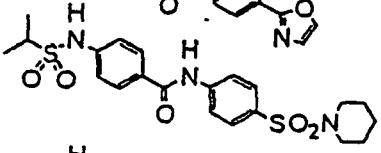
Ih-180 

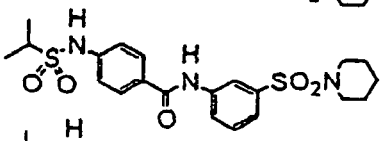
Ih-181 

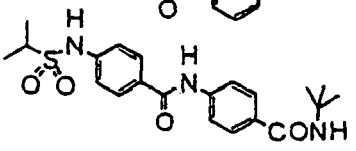
Ih-182 

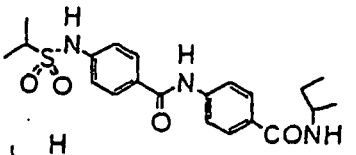
Ih-183 

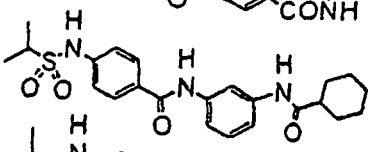
Ih-184 

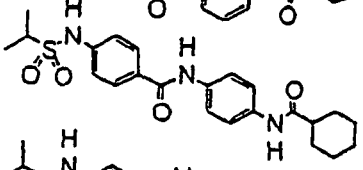
Ih-185 

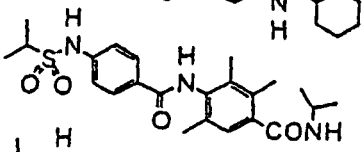
Ih-186 

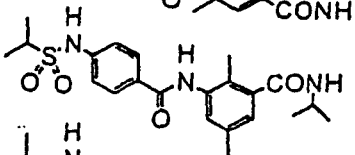
Ih-187 

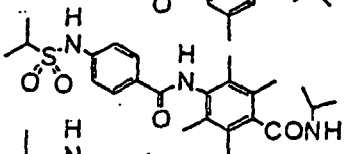
Ih-188 

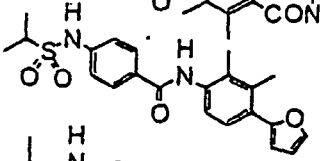
Ih-189 

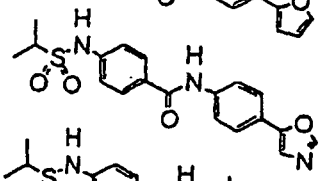
Ih-190 

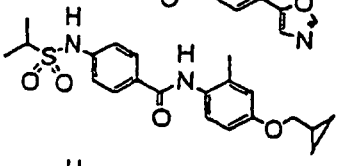
Ih-191 

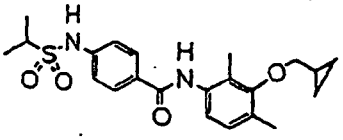
Ih-192 

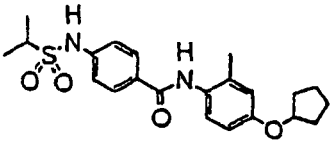
Ih-193 

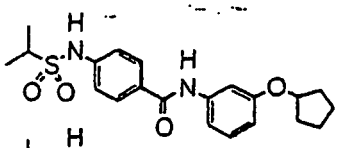
Ih-194 

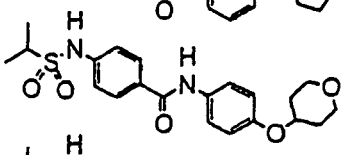
Ih-195 

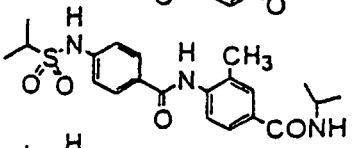
Ih-196 

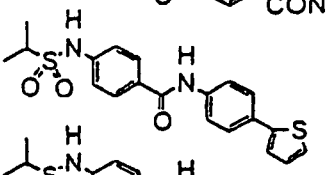
Ih-197 

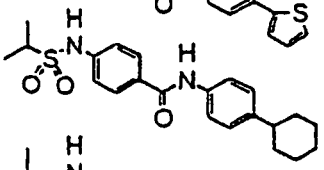
Ih-198 

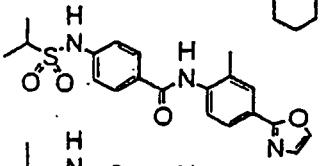
Ih-199 

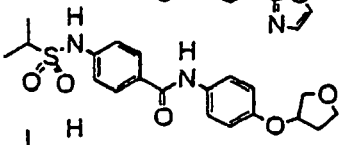
Ih-200 

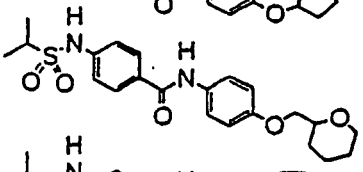
Ih-201 

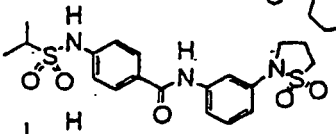
Ih-202 

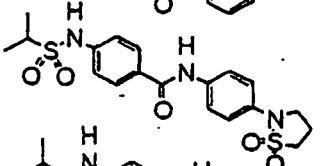
Ih-203 

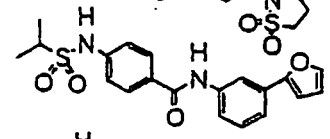
Ih-204 

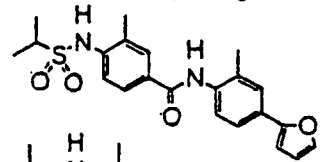
Ih-205 

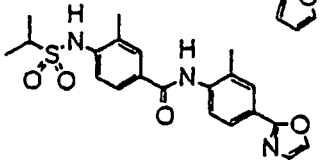
Ih-206 

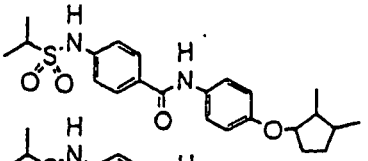
Ih-207 

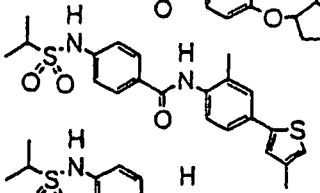
Ih-208 

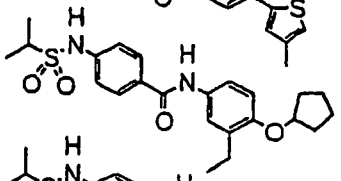
Ih-209 

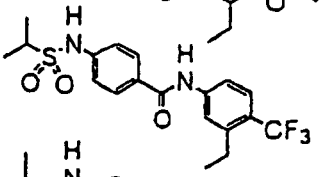
Ih-210 

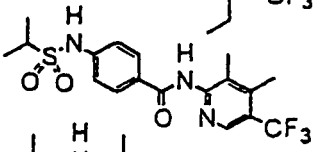
Ih-211 

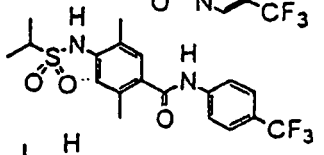
Ih-212 

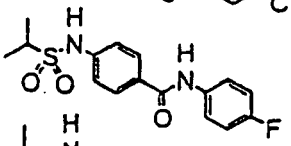
Ih-213 

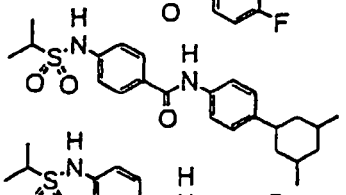
Ih-214 

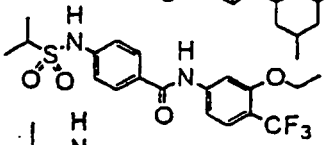
Ih-215 

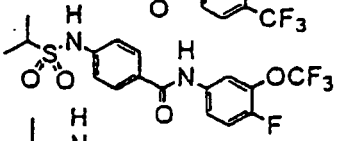
Ih-216 

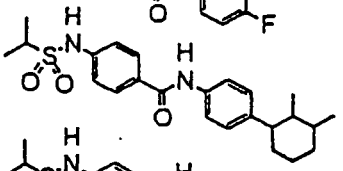
Ih-219 

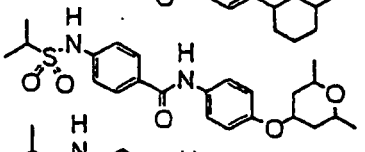
Ih-220 

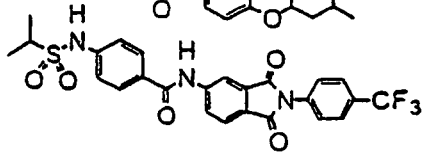
Ih-221 

Ih-222 

Ih-223 

Ih-224 

Ih-225 

Ih-226 

I-2

$^1$H-NMR ($CDCl_3$) δ ppm: 0.94 (t, 3H, J = 7.5 Hz), 1.34-1.44 (m, 2H), 1.40 (d, 6H, J = 6.6 Hz), 1.59-1.68 (m, 2H),

2.69 (t, 2H, J = 7.8 Hz), 3.24-3.35 (m, 1H), 6.49 (s, 1H), 7.23-7.32 (m, 4H), 7.6 (d, 2H, J = 8.7 Hz), 7.79 (d, 2H, J = 8.1 Hz), 7.85 (s, 1H).

I-3

$^1$H-NMR ($CDCl_3$) δ ppm: 0.92 (t, 3H, J = 7.2 Hz), 1.30-1.39 (m, 2H), 1.37 (d, 6H, J = 6.9 Hz), 1.57 (quint, 2H, J = 7.5 Hz), 1.96 (quint, 2H, J = 6.6 Hz), 2.49 (t, 2H, J = 6.6 Hz), 2.57 (t, 2H, J = 7.8 Hz), 3.16-3.26 (m, 3H), 4.62 (brs, 1H), 7.12 (d, 2H, J = 8.1 Hz), 7.43 (d, 2H, J = 8.4 Hz), 7.64 (s, 1H).

I-4

$^1$H-NMR ($CD_3OD$) δ ppm: 0.92 (t, 3H, J = 6.9 Hz), 1.28-1.41 (m, 2H), 1.46 (d, 6H, J = 6.3 Hz), 1.53-1.63 (m, 2H), 2.58 (t, 2H, J = 7.8 Hz), 3.33-3.43 (m, 1H), 6.27-6.29 (m, 1H), 7.14-7.16 (m, 3H), 7.50 (d, 2H, J = 8.4 Hz), 7.90 (s, 1H).

I-5

$^1$H-NMR ($CDCl_3$) δ ppm: 0.92 (t, 3H, J = 7.2 Hz), 1.28-1.41 (m, 2H), 1.46 (d, 6H, J = 6.9 Hz), 1.53-1.63 (m, 2H), 2.59 (t, 2H, J = 7.8 Hz), 3.35-3.44 (m, 1H), 7.15 (d, 2H, J = 8.7 Hz), 7.38 (s, 1H), 7.45 (d, 2H, J = 8.7 Hz), 7.57 (s, 1H).

I-6

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.5 Hz), 1.29-1.39 (m, 2H), 1.37 (d, 6H, J = 6.9 Hz), 1.55 (quint, 2H, J = 7.5 Hz), 2.55 (t, 2H, J = 5.1 Hz), 3.18-3.27 (m, 1H), 3.92 (d, 2H, J = 6.0 Hz), 5.51 (t, 1H, J = 5.7 Hz), 7.10 (d, 2H, J = 8.4 Hz), 7.39 (d, 2H, J = 8.4 Hz), 8.23 (s, 1H).

I-7

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.2 Hz), 1.28-1.38 (m, 2H), 1.37 (d, 6H, J = 6.9 Hz), 1.51-1.67 (m, 4H), 1.78-1.88 (m, 2H), 2.39 (t, 2H, J = 7.2 Hz), 2.57 (t, 2H, J = 7.5 Hz), 3.12-3.22 (m, 3H), 4.30-4.37 (m, 1H), 7.12 (d, 2H, J = 8.4 Hz), 7.36-7.42 (m, 3H).

I-8

$^1$R-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.5 Hz), 1.21-1.47 (m, 4H), 1.35 (d, 6H, J = 6.6 Hz), 1.51-1.63 (m, 4H), 1.67-1.77 (m, 2H), 2.34 (t, 2H, J = 7.5 Hz), 2.55 (t, 2H, J = 7.8 Hz), 3.08-3.17 (m, 3H), 4.71 (t, 1H, J = 6.0 Hz), 7.09 (d, 2H, J = 8.1 Hz), 7.43 (d, 2H, J = 8.4 Hz), 7.74 (s, 1H).

I-9

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.2 Hz), 1.29-1.39 (m, 2H), 1.35 (d, 6H, J = 6.9 Hz), 1.50-1.60 (m, 2H), 2.54 (t, 2H, J = 7.8 Hz), 2.64 (t, 2H, J = 5.7 Hz), 3.14-3.23 (m, 1H), 3.41-3.47 (m, 2H), 5.29 (t, 1H, J = 6.3 Hz), 7.10 (d, 2H, J = 8.4 Hz), 7.39 (d, 2H, J = 8.4 Hz), 7.91 (s, 1H).

I-10

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.5 Hz), 1.22 (s, 9H), 1.30-1.37 (m, 2H), 1.51-1.68 (m, 4H), 1.76-1.86 (m, 2H), 2.31-2.40 (m, 2H), 2.56 (t, 2H, J = 7.5 Hz), 3.15-3.26 (m, 3H), 7.11 (t, 2H, J = 8.7 Hz), 7.42 (d, 2H, J = 8.1 Hz), 7.54 (s, 1H).

I-11

mp : 128-129 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t; 3H, J = 7.5 Hz), 1.29-1.39 (m, 2H), 1.39 (s, 9H), 1.51-1.68 (m, 4H), 1.76-1.84 (m, 2H), 2.37 (t, 2H, J = 7.5 Hz), 2.56 (t, 2H, J = 7.8 Hz), 3.19-3.26 (m, 2H), 4.20 (t, 1H, J = 5.7 Hz), 7.11 (d, 2H, J = 8.1 Hz), 7.42 (d, 2H, J = 8.7 Hz), 7.46 (s, 1H).

I-12

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.5 Hz), 1.28-1.37 (m, 2H), 1.47-1.68 (m, 6H), 2.23 (t, 2H, J = 7.2 Hz), 2.56 (t, 2H, J = 7.5 Hz), 2.90-2.97 (m, 2H), 5.10 (brs, 1H), 7.11 (d, 2H, J = 8.4 Hz), 7.36 (d, 2H, J = 8.1 Hz), 7.50-7.68 (m, 3H), 7.93 (d, 1H, J = 8.1 Hz), 8.06 (d, 1H, J = 8.4 Hz), 8.24 (d, 1H, J = 7.5 Hz), 8.66 (d, 1H, J = 8.7 Hz).

I-13

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.5 Hz), 1.28-1.40 (m, 2H), 1.45-1.73 (m, 6H), 2.23 (t, 2H, J = 7.5 Hz), 2.56 (t, 2H, J = 7.8 Hz), 2.88 (s, 6H), 2.88-2.95 (m, 2H), 5.04 (brs, 1H), 7.10 (d, 2H, J = 8.1 Hz), 7.17 (d, 1H, J = 7.2 Hz), 7.37 (d, 2H, J = 8.4 Hz), 7.48-7.54 (m, 2H), 8.23 (d, 1H, J = 7.2 Hz), 8.30 (d, 1H, J = 8.7 Hz), 8.53 (d, 1H, J = 8.4 Hz).

I-14

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.2 Hz), 1.30-1.43 (m, 6H), 1.36 (d, 6H, J = 6.6 Hz), 1.51-1.62 (m, 4H), 1.67-1.78 (m, 2H), 2.34 (t, 2H, J = 7.5 Hz), 2.56 (t, 2H, J = 7.8 Hz), 3.09-3.20 (m, 3H), 4.34 (brs, 1H), 7.10 (d, 2H, J = 8.4 Hz), 7.41-7.44 (m, 3H).

I-15

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.5 Hz), 1.23 (s, 9H), 1.27-1.80 (m, 12H), 2.30-2.38 (m, 2H), 2.56 (t, 2H, J = 7.5 Hz), 3.15 (brs, 2H), 7.11 (d, 2H, J = 7.8 Hz), 7.43 (d, 2H, J = 7.8 Hz), 7.59 (s, 1H).

I-16

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.5 Hz), 1.29-1.44 (m, 6H), 1.39 (s, 9H), 1.51-1.61 (m, 4H), 1.68-1.78 (m, 2H), 2.35 (t, 2H, J = 7.5 Hz), 2.56 (t, 2H, J.= 8.1 Hz), 3.15-3.21 (m, 2H), 4.14-4.23 (m, 1H), 7.11 (d, 2H, J = 7.8 Hz), 7.36-7.44 (m, 3H).

I-19

$^1$H-NMR ($CDCl_3$) δ ppm: 0.92 (t, 3H, J = 7.5 Hz), 1.21 (s, 9H), 1.30-1.40 (m, 2H), 1.55-1.72 (m, 6H), 2.64 (t, 2H, J

= 7.8 Hz), 3.08-3.33 (m, 3H), 3.42-3.50 (m, 2H), 6.39 (s, 1H), 7.22 (d, 2H, J = 8.4 Hz), 7.69 (d, 2H, J = 8.1 Hz).

I-20

$^1$H-NMR ($CDCl_3$) δ ppm: 0.92 (t, 3H, J = 7.2 Hz), 1.31-1.39 (m, 2H), 1.39 (s, 9H), 1.55-1.72 (m, 6H), 2.64 (t, 2H, J = 7.8 Hz), 3.24 (quart, 2H, J = 6.6 Hz), 3.48 (quart, 2H, J = 6.6 Hz), 4.21 (t, 1H, J = 6.3 Hz), 6.29 (s, 1H), 7.22 (d, 2H, J = 7.8 Hz), 7.67 (d, 2H, J = 8.1 Hz).

I-21

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.2 Hz), 1.23 (s, 9H), 1.30-1.42 (m, 2H), 1.50-2.02 (m, 10H), 2.30-2.42 (m, 1H), 2.57 (t, 2H, J = 8.1 Hz), 3.10 (brs, 1H), 3.57 (brs, 1H), 7.12 (d, 2H, J = 8.4 Hz), 7.41 (d, 2H, J = 7.8 Hz).

I-22

mp : 78-79 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.2 Hz), 1.30-1.40 (m, 2H), 1.40 (s, 9H), 1.50-1.65 (m, 4H), 1.70-1.98 (m, 8H), 2.30-2.40 (m, 1H), 2.57 (t, 2H, J = 7.5 Hz), 3.58-3.70 (m, 1H), 4.16 (d, 1H, J = 9.3 Hz), 7.11-7.15 (m, 3H), 7.40 (d, 2H, J = 8.1 Hz).

I-23

$^1$H-NMR ($CDCl_3$) δ ppm; 0.91 (t, 3H, J = 7.2 Hz), 1.21 (s, 9H), 1.21-1.41 (m, 4H), 1.51-1.64 (m, 4H), 1.86-2.01 (m, 4H), 2.12-2.25 (m, 1H), 2.56 (t, 2H, J = 7.5 Hz), 2.87-2.96 (m, 1H), 3.00-3.12 (m, 1H), 3.23-3.34 (m, 1H), 3.67-3.75 (m, 1H), 7.11 (d, 2H, J = 8.1 Hz), 7.40 (d, 2H, J = 8.4 Hz).

I-24

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.2 Hz), 1.25-1.37 (m, 2H), 1.40 (s, 9H), 1.48-1.65 (m, 6H), 1.90 (d, 2H, J = 11.7 Hz), 2.02 (d, 2H, J = 11.7 Hz), 2.12-2.24 (m, 1H), 2.56 (t, 2H, J = 7.5 Hz), 3.04 (t, 2H, J = 6.3 Hz), 4.31 (t, 1H, J = 5.7 Hz), 7.11 (d, 2H, J = 8.1 Hz), 7.42 (d, 2H, J = 8.4 Hz).

I-25

mp : 232-233 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.5 Hz), 1.23-1.40 (m, 4H), 1.40 (s, 9H), 1.51-1.76 (m, 4H), 2.01-2.26 (m, 5H), 2.56 (t, 2H, J = 7.5 Hz), 3.22-3.38 (m, 1H), 3.79 (d, 1H, J = 9.3 Hz), 7.11 (d, 2H, J = 8.7 Hz), 7.17 (s, 1H), 7.40 (d, 2H, J = 8.4 Hz).

I-26

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.2 Hz), 1.22 (s, 9H), 1.28-1.40 (m, 2H), 1.52-1.62 (m, 2H), 1.85-1.96 (m, 1H), 2.00-2.14 (m, 1H), 2.38-2.53 (m, 2H), 2.56 (t, 2H, J = 7.5 Hz), 3.22-3.37 (m, 3H), 7.11 (d, 2H, J = 8.4 Hz), 7.45 (d, 2H, J = 8.4 Hz), 8.19 (s, 1H).

I-27

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.2 Hz), 1.30-1.40 (m, 2H), 1.40 (s, 9H), 1.52-1.61 (m, 2H), 1.95 (quint, 2H, J = 6.3 Hz), 2.50 (t, 2H, J = 6.9 Hz), 2.56 (t, 2H, J = 7.8 Hz), 3.31 (quart, 2H, J = 6.0 Hz), 4.30-4.36 (m, 1H), 7.12 (d, 2H, J = 8.4 Hz), 7.43 (d, 2H, J = 8.4 Hz), 7.65 (s, 1H).

I-28

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.2 Hz), 1.21 (s, 9H), 1.30-1.62 (m, 8H), 2.08 (d, 4H, J = 11.1 Hz), 2.56 (t, 2H, J = 7.8 Hz), 3.04 (d, 1H, J = 4.8 Hz), 3.20-3.30 (m, 1H), 4.65-4.76 (m, 1H), 6.57 (s, 1H), 7.10 (d, 2H, J = 8.7 Hz), 7.26 (d, 2H, J = 8.1Hz).

I-29

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.2 Hz), 1.23-1.62 (m, 8H), 1.40 (s, 9H), 2.12 (d, 4H, J = 14.4 Hz), 2.56 (t, 2H, J = 7.8 Hz), 3.28-3.40 (m, 1H), 3.90 (s, 1H), 4.60-4.73 (m, 1H), 6.57 (s, 1H), 7.10 (d, 2H, J = 8.4 Hz), 7.25 (d, 2H, J = 8.4Hz).

I-30

$^1$H-NMR ($CDCl_3$) δ ppm: 0.91 (t, 3H, J = 7.5 Hz), 1.26-1.39 (m, 2H), 1.51-1.64 (m, 4H), 1.72-1.81 (m, 2H), 2.34 (t, 2H, J = 6.9 Hz), 2.56 (t, 2H, J = 7.8 Hz), 2.95-3.01 (m, 2H), 4.84 (t, 1H, J = 5.7 Hz), 6.99-7.12 (m, 6H), 7.19-7.24 (m, 1H), 7.30 (s, 1H), 7.38-7.43 (m, 4H), 7.79 (d, 2H, J = 8.7 Hz).

I-31

$^1$H-NMR ($CDCl_3$) δ ppm: 0.92 (t, 3H, J = 7.5 Hz), 1.21 (s, 9H), 1.28-1.62 (m, 8H), 2.07-2.14 (m, 4H), 2.64 (t, 2H, J = 7.8 Hz), 3.11 (d, 1H, J = 5.1 Hz), 3.20 (brs, 1H), 3.90-4.04 (m, 1H), 6.06-6.14 (m, 1H), 7.21 (t, 2H, J = 8.1 Hz), 7.67 (t, 2H, J = 8.4 Hz).

I-32

$^1$H-NMR ($CDCl_3$) δ ppm: 0.92 (t, 3H, J = 7.2 Hz), 1.27-1.65 (m, 8H), 1.40 (s, 9H), 2.10-2.23 (m, 4H), 2.65 (t, 2H, J = 7.5 Hz), 3.23-3.35 (m, 1H), 3.49 (s, 1H), 3.88-4.02 (m, 1H), 5.84-5.92 (m, 1H), 7.13 (t, 2H, J = 8.4 Hz), 7.65 (d, 2H, J = 8.1 Hz).

I-33

$^1$H-NMR ($CDCl_3$) δ ppm: 0.94 (t, 3H, J = 7.2 Hz), 1.30-1.42 (m, 2H), 1.32 (s, 9H), 1.57-1.66 (m, 2H), 2.67 (t, 2H, J = 7.8 Hz), 5.61 (s, 1H), 6.93 (d, 2H, J = 8.7 Hz), 7.25 (d, 2H, J = 8.4 Hz), 7.49 (d, 2H, J = 9.0 Hz), 7.80 (d, 2H, J = 8.1 Hz), 8.22 (s, 1H).

I-34

$^1$H-NMR ($CD_3OD$) δ ppm: 0.95 (t, 3H, J = 7.5 Hz), 1.35 (s, 9H), 1.35-1.44 (m, 2H), 1.57-1.69 (m, 2H), 2.69 (t, 2H, J = 7.5 Hz), 7.28-7.33 (m, 4H), 7.56 (d, 2H, J = 9.0 Hz), 7.83 (d, 2H, J = 8.4 Hz).

I-36

$^1$H-NMR ($CDCl_3$) δ ppm: 0.92 (t, 3H, J = 7.5 Hz), 1.31-1.70 (m, 11H), 1.39 (s, 9H), 1.75-1.85 (m, 1H), 2.65 (t, 2H, J = 8.1 Hz), 3.13 (t, 2H, J = 6.6 Hz), 3.40 (t, 2H, J = 7.2 Hz), 4.10 (t, 1H, J = 5.7 Hz), 6.21 (t, 1H, J = 5.7 Hz), 7.23 (d, 2H, J = 8.1 Hz), 7.67 (d, 2H, J = 8.4 Hz).

I-37

$^1$H-NMR ($CDCl_3$) δ ppm: 0.92 (t, 3H, J = 7.5 Hz), 0.95-1.10 (m, 2H), 1.31-1.40 (m, 2H), 1.39 (s, 9H), 1.55-1.63 (m, 4H), 1.80-1.92 (m, 4H), 2.65 (t, 2H, J = 7.8 Hz), 3.03 (t, 2H, J = 6.6 Hz), 3.31 (t, 2H, J = 6.6 Hz), 4.06 (t, 1H, J = 6.0 Hz), 6.22 (t, 1H, J = 6.0 Hz), 7.23 (d, 2H, J = 8.4 Hz), 7.67 (d, 2H, J = 8.1 Hz).

I-39

$^1$H-NMR ($CDCl_3$) δ ppm: 1.13 (t, 3H, J = 7.2 Hz), 1.39 (s, 9H), 1.69-1.97 (m, 8H), 2.27-2.38 (m, 1H), 3.29-3.35 (m, 4H), 3.60-3.70 (m, 1H), 4.52 (d, 1H, J = 9.3 Hz), 6.64 (d, 2H, J = 8.4 Hz), 7.22 (s, 1H), 7.31 (d, 2H, J = 9.0 Hz).

I-40

$^1$H-NMR ($CDCl_3$) δ ppm: 1.38 (s, 9H), 1.68-1.96 (m, 8H), 2.30-2.40 (m, 1H), 3.11 (t, 4H, J = 4.8 Hz), 3.60-3.72 (m, 1H), 3.86 (t, 4H, J = 4.8 Hz), 4.51 (brs, 1H), 6.89 (d, 2H, J = 9.0 Hz), 7.42 (d, 2H, J = 8.7 Hz).

I-41

mp : >278 °C (dec.)

$^1$H-NMR ($CDCl_3$) δ ppm: 1.18-1.40 (m, 2H), 1.40 (s, 9H), 1.62-1.75 (m, 2H), 2.01-2.27 (m, 5H), 3.10-3.13 (m, 4H), 3.22-3.38 (m, 1H), 3.72 (d, 1H, J = 9.3 Hz), 3.85-3.88 (m, 4H), 6.87 (d, 2H, J = 9.0 Hz), 7.10 (s, 1H), 7.40 (d, 2H, J = 9.0 Hz).

I-42

$^1$H-NMR ($CDCl_3$) δ ppm: 1.40 (s, 9H), 1.61-1.97 (m, 8H), 2.16 (s, 3H), 2.33-2.43 (m, 1H), 3.60-3.70 (m, 1H), 4.66 (brs, 1H), 7.12 (d, 1H, J = 8.7 Hz), 7.46-7.50 (m, 1H), 7.62 (s, H), 7.75-7.78 (m, 1H), 7.86-7.91 (m, 2H).

I-43

$^1$H-NMR ($CDCl_3$) δ ppm: 1.40 (s, 9H), 1.62-2.00 (m, 8H), 1.87 (s, 3H), 2.36-2.47 (m, 1H), 3.24 (s, 3H), 3.64-3.74 (m, 1H), 4.87 (brs, 1H), 7.13 (d, 2H, J = 9.0 Hz), 7.64 (d, 2H, J = 8.4 Hz), 7.81 (s, H).

I-44

mp : 235-236 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.13 (t, 6H, J = 6.9 Hz), 1.18-1.33 (m, 2H), 1.40 (s, 9H), 1.60-1.77 (m, 2H), 2.00-2.26 (m, 5H), 3.28-3.35 (m, 4H), 3.73 (d, 1H, J = 9.3 Hz), 6.60-6.70 (m, 2H), 7.03 (brs, 1H), 7.31 (d, 2H, J = 7.8 Hz).

I-45

mp : >268 °C (dec.)

$^1$H-NMR ($CDCl_3$) δ ppm: 1.20-1.34 (m, 2H), 1.40 (s, 9H), 1.56-1.76 (m, 8H), 2.00-2.26 (m, 5H), 3.06-3.14 (m, 4H), 3.24-3.36 (m, 1H), 3.72 (d, 1H, J = 9.3 Hz), 6.90 (d, 2H, J = 8.7 Hz), 7.09 (s, 1H), 7.36 (d, 2H, J = 8.7 Hz).

I-46

mp : >272 °C (dec.)

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.28 (s, 9H), 1.31-1.59 (m, 7H), 1.87-2.00 (m, 4H), 2.23-2.34 (m, 1H), 3.00-3.16 (m, 1H), 4.35-4.45 (m, 2H), 6.81 (d, 1H, J = 9.0 Hz), 7.16 (t, 1H, J = 7.2 Hz), 7.43 (t, 1H, J = 8.4 Hz), 7.52-7.58 (m, 3H), 8.04 (d, 1H, J = 7.8 Hz), 8.43 (s, 1H).

I-47

$^1$H-NMR ($CDCl_3$) δ ppm: 1.20-1.36 (m, 2H), 1.40 (s, 9H), 1.62-1.77 (m, 2H), 1.98-2.32 (m, 5H), 3.31-3.40 (m, 1H), 3.62 (d, 1H, J = 9.0 Hz), 7.08 (s, 1H), 7.29 (d, 2H, J = 9.0 Hz), 7.61 (d, 2H, J = 9.0 Hz).

I-48

$^1$H-NMR ($CDCl_3$) δ ppm: 1.22-1.36 (m, 2H), 1.40 (s, 9H), 1.62-1.77 (m, 2H), 2.00-2.31 (m, 5H), 3.24-3.40 (m, 1H), 3.62 (d, 1H, J = 10.2 Hz), 7.01 (t, 2H, J = 8.7 Hz), 7.09 (s, 1H), 7.42-7.50 (m, 2H).

I-49

mp : 270 °C (dec.)

$^1$H-NMR ($CDCl_3$) δ ppm: 1.20-1.36 (m, 2H), 1.40 (s, 9H), 1.61-1.77 (m, 2H), 1.95-2.30 (m, 9H), 3.17-3.38 (m, 5H), 3.67 (d, 1H, J = 9.3 Hz), 6.50 (d, 2H, J = 9.0 Hz), 6.97 (s, 1H), 7.30 (d, 2H, J = 9.0 Hz).

I-50

mp : 252-253 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.21-1.37 (m, 2H), 1.40 (s, 9H), 1.62-1.78 (m, 2H), 1.98-2.32 (m, 5H), 3.26-3.40 (m, 1H), 3.68 (d, 1H, J = 9.6 Hz), 6.94-7.02 (m, 4H), 7.08 (t, 1H, J = 7.5 Hz), 7.13 (s, 1H), 7.31 (t, 2H, J = 7.5 Hz), 7.46 (d, 2H, J = 9.0 Hz).

I-51

mp : 278-279 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.02 (d; 6H, J = 6.9 Hz), 1.35 (s, 9H), 1.39-1.71 (m, 6H), 1.90-2.09 (m, 2H), 3.16-3.30 (m, 1H), 3.46 (d, 1H, J = 9.0 Hz), 4.92-5.01 (m, 1H), 6.91-6.95 (m, 2H), 7.00-7.07 (m, 3H), 7.13-7.16 (m, 2H), 7.30-7.36 (m, 2H).

I-52

mp : 276-277 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.20-1.36 (m, 2H), 1.40 (s, 9H), 1.60-1.78 (m, 2H), 1.98-2.30 (m, 5H), 2.36 (s, 3H), 2.58 (t, 4H, J = 4.5 Hz), 3.17 (t, 4H, J = 4.5 Hz), 3.21-3.40 (m, 1H), 3.64 (d, 1H, J = 9.0 Hz), 6.88 (d, 2H, J = 9.0 Hz), 7.01 (s, 1H), 7.37 (d, 2H, J = 9.0 Hz).

I-53

mp : >300 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.20-1.54 (m, 4H), 1.27 (s, 9H), 1.73-1.88 (m, 2H), 1.89-2.01 (m, 2H), 2.13-2.25 (m, 1H), 2.98-3.12 (m, 1H), 3.15-3.31 (m, 8H), 6.76-6.84 (m, 2H), 6.93 (d, 2H, J = 9.0 Hz), 6.99 (d, 2H, J = 8.1 Hz), 7.24 (d, 2H, J = 8.1 Hz), 7.46 (d, 2H, J = 9.0 Hz), 9.60 (s, 1H).

I-54

mp : >215 °C (dec.)

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.27 (s, 9H), 1.27-2.00 (m, 18H), 2.14-2.26 (m, 1H), 2.53-2.84 (m, 4H), 2.86-3.30 (m, 2H), 3.46-3.54 (m, 1H), 3.62-3.74 (m, 2H), 6.78 (d, 1H, J = 8.7 Hz), 6.87 (d, 2H, J = 7.8 Hz), 7.42 (d, 2H, J = 8.7 Hz), 9.58 (s, 1H).

I-55

mp : >290 °C (dec.)

$^1$H-NMR ($CDCl_3$) δ ppm: 1.23-1.40 (m, 2H), 1.40 (s, 9H), 1.60-1.76 (m, 2H), 2.02-2.27 (m, 5H), 3.20 (t, 4H, J = 5.4 Hz), 3.21-3.32 (m, 1H), 3.67 (d, 1H, J = 9.3 Hz), 3.98 (t, 4H, J = 4.8 Hz), 6.52 (t, 1H, J = 4.8 Hz), 6.93 (d, 2H, J = 8.4 Hz), 7.06 (s, 1H), 7.41 (d, 2H, J = 8.7 Hz), 8.33 (d, 2H, J = 4.8 Hz).

I-56

mp : >232 °C (dec.)

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.27 (s, 9H), 1.27-1.48 (m, 4H), 1.80-1.99 (m, 4H), 2.14-2.25 (m, 1H), 3.04-3.24 (m, 8H), 3.68 (s, 3H), 3.76 (s, 3H), 6.44-6.47 (m, 1H), 6.66 (s, 1H), 6.76-6.84 (m, 2H), 6.92 (d, 2H, J = 8.4 Hz), 7.46 (d, 2H, J = 8.4 Hz), 9.61 (s, 1H).

I-57

mp : 284-285 °C (dec.)

$^1$H-NMR ($CDCl_3$) δ ppm: 1.27 (t, 3H, J = 7.2 Hz), 1.40 (s, 9H), 1.61-2.24 (m, 9H), 2.35-2.49 (m, 1H), 2.76 (t, 2H, J = 10.2 Hz), 3.04-3.15 (m, 2H), 3.20-3.36 (m, 1H), 3.55-3.59 (m, 2H), 3.87 (d, 1H, J = 9.6 Hz), 4.12-4.19 (m, 2H), 6.90 (d, 2H, J = 8.7 Hz), 2.79 (s, 1H), 7.40 (d, 2H, J = 8.7 Hz).

I-58

mp : >299 °C (dec.)

$^1$H-NMR ($CDCl_3$) δ ppm: 1.26-1.33 (m, 2H), 1.40 (s, 9H), 1.56-2.42 (m, 19H), 2.73-2.81 (m, 4H), 3.16-3.26 (m, 4H), 3.64 (d, 1H, J = 9.6 Hz), 6.87 (d, 2H, J = 8.7 Hz), 7.04 (s, 1H), 7.37 (d, 2H, J = 9.0 Hz).

I-59

mp : >270 °C (dec.)

$^1$H-NMR ($CDCl_3$) δ ppm: 1.26-1.47 (m, 2H), 1.47 (s, 9H), 1.60-1.80 (m, 4H), 2.01-2.32 (m, 5H), 3.28-3.40 (m, 3H), 3.62-3.74 (m, 3H), 5.74-5.96 (m, 2H), 6.92 (d, 2H, J = 8.7 Hz), 7.13 (s, 1H), 7.39 (d, 2H, J = 9.0 Hz).

I-60

mp : 247-250 °C (dec.)

$^1$H-NMR ($CDCl_3$) δ ppm: 1.20-1.37 (m, 2H), 1.40 (s, 9H), 1.60-1.78 (m, 2H), 1.98-2.33 (m, 5H), 2.93-3.03 (m, 2H), 3.22-3.40 (m, 1H), 3.52 (t, 2H, J = 6.0 Hz), 3.62 (d, 1H, J = 8.4 Hz), 4.36 (s, 2H), 6.93 (d, 2H, J = 8.7 Hz), 7.00 (s, 1H), 7.11-7.22 (m, 4H),7.39 (d, 2H, J = 8.7 Hz).

I-61

mp : 280-281 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.21-1.38 (m, 2H), 1.41 (s, 9H), 1.64-1.80 (m, 2H), 2.02-2.33 (m, 5H), 3.24-3.40 (m, 1H), 3.61 (d, 1H, J = 9.0 Hz), 6.33 (t, 2H, J = 2.1 Hz), 7.04 (t, 2H, J = 2.1 Hz), 7.14 (s, 1H), 7.34 (d, 2H, J = 9.0 Hz), 7.56 (d, 2H, J = 9.0 Hz).

I-62

mp : 260-262 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.22-1.39 (m, 2H), 1.41 (s, 9H), 1.64-1.82 (m, 2H), 2.02-2.35 (m, 5H), 3.24-3.40 (m, 1H), 3.62 (d, 1H, J = 9.6 Hz), 7.31 (d, 2H, J = 9.0 Hz), 7.51 (s, 1H), 7.69 (d, 2H, J = 9.0 Hz).

I-63

mp : 248 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.20-1.38 (m, 2H), 1.40 (s, 9H), 1.61-1.78 (m, 2H), 1.98-2.32 (m, 5H), 3.22-3.45 (m, 1H),

3.64 (d, 1H, J = 9.3 Hz), 7.11 (s, 1H), 7.37-7.46 (m, 4H).

I-64

mp : 272-275 °C (dec.)

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.20-1.53 (m, 4H), 1.27 (s, 9H), 1.75-1.88 (m, 2H), 1.88-2.00 (m, 2H), 2.11-2.24 (m, 1H), 2.96-3.12 (m, 1H), 5.96 (s, 2H), 6.77 (d, 1H, J = 8.7 Hz), 6.82 (d, 1H, J = 8.4 Hz), 6.95 (dd, 1H, J = 1.8, 8.4 Hz), 7.29 (d, 1H, J = 1.8 Hz), 9.70 (s, 1H).

I-65

mp : 293-296 °C (dec.)

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.20-1.70 (m, 10H), 1.27 (s, 9H), 1.79-2.038 (m, 4H), 2.18-2.33 (m, 1H), 2.98-3.30 (m, 5H), 6.79 (d, 1H, J = 9.0 Hz), 6.97 (d, 2H, J = 8.1 Hz), 7.43-7.57 (m, 4H), 7.62 (d, 2H, J = 8.1 Hz), 9.82 (s, 1H).

I-66

mp : >300 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.27 (s, 9H), 1.27-1.53 (m, 4H), 1.86-1.99 (m, 4H), 2.22-2.34 (m, 1H), 2.39 (s, 3H), 3.00-3.14 (m, 1H), 6.25 (s, 1H), 6.79 (d, 1H, J = 9.0 Hz), 7.47-7.50 (m, 1H), 7.69-7.76 (m, 1H), 10.27 (s, 1H).

I-67

mp : 248-249 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.20-1.54 (m, 4H), 1.27 (s, 9H), 1.77-1.90 (m, 2H), 1.90-2.02 (m, 2H), 2.02 (s, 3H), 2.17-2.32 (m, 1H), 2.96-3.13 (m, 1H), 6.78 (d, 1H, J = 8.7 Hz), 7.12-7.30 (m, 3H), 7.89 (s, 1H), 9.79 (s, 1H), 9.88 (s, 1H).

I-68

mp : >300 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.20-1.54 (m, 4H), 1.27 (s, 9H), 1.77-1.89 (m, 2H), 1.89-2.03 (m, 2H), 2.00 (s, 3H), 2.14-2.28 (m, 1H), 2.95-3.13 (m, 1H), 6.78 (d, 1H, J = 8.7 Hz), 7.40-7.54 (m, 4H), 9.72 (s, 1H), 9.83 (s, 1H).

I-69

mp : 199-201 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.21-1.53 (m, 4H), 1.27 (s, 9H), 1.76-1.89 (m, 2H), 1.89-2.02 (m, 2H), 2.13-2.30 (m, 1H), 2.85 (s, 6H), 2.94-3.14 (m, 1H), 6.40 (dd, 1H, J = 2.4, 8.4 Hz), 6.78 (d, 1H, J = 8.7 Hz), 6.90 (d, 1H, J = 8.4 Hz), 7.05 (t, 2H, J = 8.4 Hz), 9.60 (s, 1H).

I-70

mp : 227-230 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.22-1.52 (m, 4H), 1.27 (s, 9H), 1.72-1.87 (m, 2H), 1.87-2.01 (m, 2H), 2.12-2.29 (m, 1H), 2.96-3.12 (m, 1H), 5.00 (s, 2H), 6.22 (d, 1H, J = 7.5 Hz), 6.66 (d, 1H, J = 7.5 Hz), 6.78 (d, 1H, J = 9.0 Hz), 6.86 (d, 1H, J = 7.5 Hz), 6.89-6.95 (m, 1H), 9.46 (s, 1H).

I-71

mp : 270-272 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.22-1.52 (m, 4H), 1.26 (s, 9H), 1.73-1.86 (m, 2H), 1.88-2.00 (m, 2H), 2.08-2.22 (m, 1H), 2.95-3.11 (m, 1H), 4.80 (s, 2H), 6.47 (d, 2H, J = 8.4 Hz), 6.77 (d, 1H, J = 8.4 Hz), 7.20 (d, 2H, J = 8.4 Hz), 9.35 (s, 1H).

I-72

mp : 262-263 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.25 (d, 6H, J = 6.3 Hz), 1.17-1.42 (m, 2H), 1.40 (s, 9H), 1.60-1.78 (m, 2H), 1.98-2.43 (m, 7H), 3.20-3.43 (m, 3H), 3.67 (d, 1H, J = 9.6 Hz), 3.74-3.86 (m, 2H), 6.86 (d, 2H, J = 9.0 Hz), 7.04 (s, 1H), 7.38 (d, 2H, J = 9.0 Hz).

I-73

mp : 218-219 °C

$^1$H-NMR ($CD_3OD$) δ ppm: 1.36 (s, 9H), 1.36-1.69 (m, 4H), 1.45 (s, 9H), 1.88-2.02 (m, 3H), 2.06-2.30 (m, 4H), 3.05-3.44 (m, 3H), 3.46-3.56 (m, 1H), 4.16-4.26 (m, 1H), 6.51 (d, 2H, J = 9.0 Hz), 7.30 (d, 2H, J = 8.7 Hz).

I-74

mp : 295-296 °C (dec.)

$^1$H-NMR ($CD_3OD$) δ ppm: 1.36 (s, 9H), 1.36-1.67 (m, 4H), 1.92-2.13 (m, 4H), 2.26-2.40 (m, 2H), 2.62-2.75 (m, 1H), 3.16-3.25 (m, 1H), 3.58-3.98 (m, 4H), 4.16-4.25 (m, 1H), 7.20-7.30 (m, 2H), 7.62 (d, 2H, J = 9.0 Hz).

I-75

mp : 250-251 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.23-1.55 (m, 4H), 1.27 (s, 9H), 1.78-1.90 (m, 2H), 1.90-2.02 (m, 2H), 2.15-2.28 (m, 1H), 2.98-3.14 (m, 1H), 3.06 (t, 2H, J = 8.4 Hz), 3.87 (t, 2H, J = 8.4 Hz), 6.67 (dd, 1H, J = 1.5, 7.2 Hz), 6.80 (d, 1H, J = 8.4 Hz), 6.94-7.05 (m, 2H), 7.12-7.19 (m, 1H), 7.16 (d, 2H, J = 9.3 Hz), 7.57 (d, 2H, J = 9.3 Hz), 9.73 (s, 1H).

I-76

mp : 265-266 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.23-1.58 (m, 4H), 1.28 (s, 9H), 1.83-2.04 (m, 4H), 2.20-2.36 (m, 1H), 2.97-3.16 (m,

1H), 6.67 (d, 1H, J = 3.0 Hz), 6.82 (d, 1H, J = 8.4 Hz), 7.07-7.22 (m, 2H), 7.47-7.53 (m, 1H), 7.50 (d, 2H, J = 9.0 Hz), 7.58 (d, 1H, J = 3.0 Hz), 7.64 (d, 1H, J = 7.5 Hz), 7.79 (d, 2H, J = 9.0 Hz), 10.02 (s, 1H).

I-77

mp : 281 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.21-1.56 (m, 4H), 1.27 (s, 9H), 1.80-2.03 (m, 4H), 2.18-2.31 (m, 1H), 2.97-3.14 (m, 1H), 6.51 (dd, 1H, J = 2.1, 2.7 Hz), 6.81 (d, 1H, J = 9.0 Hz), 7.67-7.78 (m, 5H), 8.41 (d, 1H, J = 2.1 Hz), 9.96 (s, 1H).

I-78

mp : >300 °C (dec.)

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.27 (s, 9H), 1.27-1.52 (m, 4H), 1.74-2.04 (m, 7H), 2.10-2.25 (m, 2H), 2.96-3.20 (m, 2H), 3.48-3.58 (m, 1H), 3.75-3.84 (m, 1H), 6.39 (d, 2H, J = 8.4 Hz), 6.79 (d, 1H, J = 8.4 Hz), 7.02 (s, 1H), 7.30 (s, 1H), 7.36 (d, 2H, J = 8.1 Hz), 9.48 (s, 1H).

I-79

mp : 248-250 °C (dec.)

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.27 (s, 9H), 1.27-1.54 (m, 4H), 1.85-1.99 (m, 4H), 2.24-2.33 (m, 1H),-3.00-3.14 (m, 1H), 6.82 (d, 1H, J = 8.7 Hz), 7.77 (d, 2H, J = 8.4 Hz), 8.07 (d, 2H, J = 8.4 Hz).

I-80

mp : >300 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.22-1.58 (m, 4H), 1.27 (s, 9H), 1.80-2.03 (m, 4H), 2.18-2.32 (m, 1H), 2.98-3.14 (m, 1H), 6.80 (d, 1H, J = 8.7 Hz), 7.35-7.50 (m, 2H), 7.99 (s, 1H), 8.11 (s, 1H), 9.79 (s, 1H), 12.94 (s, 1H).

I-81

mp : 261-262 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.21-1.57 (m, 4H), 1.27 (s, 9H), 1.78-2.02 (m, 4H), 2.17-2.30 (m, 1H), 2.96-3.16 (m, 1H), 6.34 (s, 1H), 6.80 (d, 1H, J = 8.7 Hz), 7.14-7.32 (m, 3H), 7.85 (s, 1H), 9.58 (s, 1H), 10.95 (s, 1H).

I-82

$^1$H-NMR ($CDCl_3$) δ ppm: 0.86 (s, 18H), 1.24-1.37 (m, 2H), 1.37 (s, 9H), 1.56-1.74 (m, 2H), 1.95-2.19 (m, 5H), 3.18-3.32 (m, 1H), 3.44 (t, 4H, J = 6.3 Hz), 3.70 (t, 4H, J = 6.3 Hz), 4.39 (d, 1H, J = 9.0 Hz), 6.59 (d, 2H, J = 9.0 Hz), 7.31 (d, 2H, J = 8.7 Hz), 7.43 (s, 1H).

I-83

mp : 264-265 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.27 (s, 9H), 1.27-1.52 (m, 4H), 1.78-1.88 (m, 2H), 1.90-2.00 (m, 2H), 2.14-2.26 (m, 1H), 2.96-3.14 (m, 1H), 6.72-6.82 (m, 2H), 6.99 (t, 4H, J = 7.8 Hz), 7.18 (t, 2H, J = 7.5 Hz), 7.46 (d, 2H, J = 9.0 Hz), 8.00 (s, 1H), 9.65 (s, 1H).

I-84

mp : 257 °C (dec.)

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.23-1.57 (m, 4H), 1.27 (s, 9H), 1.83-2.03 (m, 4H), 2.23-2.35 (m, 1H), 2.98-3.15 (m, 1H), 6.80 (d, 1H, J = 8.1 Hz), 7.87 (d, 2H, J = 9.0 Hz), 8.34 (d, 2H, J = 9.0 Hz), 9.21 (s, 1H), 10.20 (s, 1H).

I-85

mp : 256-258 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.22-1.53 (m, 4H), 1.26 (s, 9H), 1.79-2.01 (m, 4H), 2.25 (s, 3H), 2.28-2.42 (m, 1H), 2.97-3.02 (m, 1H), 6.71 (d, 1H, J = 0.9 Hz), 6.80 (d, 1H, J = 8.1 Hz), 11.91 (s, 1H).

I-86

mp : 228-230 °C

$^1$H-NMR ($CD_3OD$) δ ppm: 1.36 (s, 9H), 1.36-1.48 (m, 2H), 1.55-1.70 (m, 2H), 1.87-1.98 (m, 2H), 2.08-2.17 (m, 2H), 2.20-2.32 (m, 1H), 3.15-3.27 (m, 1H), 3.50 (t, 4H, J = 5.7 Hz), 3.69 (t, 4H, J = 5.7 Hz), 6.72 (d, 2H, J = 9.0 Hz), 7.29-7.33 (m, 2H).

I-87

mp : 183-184 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.27 (s, 9H), 1.27-1.48 (m, 4H), 1.73-1.89 (m, 4H), 1.90-2.00 (m, 2H), 2.16-2.28 (m, 1H), 2.28 (t, 2H, J = 7.5 Hz), 2.51-2.54 (m, 2H), 2.97-3.13 (m, 1H), 3.58 (s, 3H), 6.79 (d, 1H, J = 8.7 Hz), 7.08 (d, 2H, J = 8.7 Hz), 7.49 (d, 2H, J = 8.4 Hz), 9.73 (s, 1H).

I-88

mp : 217-218 °C

$^1$H-NMR ($CD_3OD$) δ ppm: 1.36 (s, 9H), 1.36-1.46 (m, 2H), 1.55-1.69 (m, 2H), 1.83-2.00 (m, 4H), 2.07-2.18 (m, 2H), 2.26-2.36 (m, 3H), 2.61 (t, 2H, J = 7.5 Hz), 3.14-3.26 (m, 1H), 7.13 (d, 2H, J = 8.1 Hz), 7.44 (d, 2H, J = 8.1 Hz).

I-89

$^1$H-NMR ($CDCl_3$) δ ppm: 0.08 (d, 6H, J = 3.3 Hz), 0.88(s, 9H), 1.21-1.36 (m, 2H), 1.39 (s, 9H), 1.61-1.74 (m, 2H), 1.88-2.23 (m, 6H), 3.06-3.11 (m, 1H), 3.24-3.74 (m, 4H), 3.92 (d, 1H, J = 9.6 Hz), 4.48-4.56 (m, 1H), 6.47 (d, 2H, J = 9.0 Hz), 7.17 (s, 1H), 7.32 (d, 2H, J = 9.0 Hz).

I-90
mp : amorphous
$^1$H-NMR ($CD_3OD$) δ ppm: 1.36 (s, 9H), 1.36-1.47 (m, 2H), 1.56-1.70 (m, 3H), 1.88-2.30 (m, 6H), 3.05-3.49 (m, 5H), 4.50 (brs, 1H), 6.50 (d, 2H, J = 9.0 Hz), 7.29 (d, 2H, J = 9.0 Hz).

I-91
mp : 105-106 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 0.92(t, 3H, J = 7.3 Hz), 1.25-1.27(m, 2H), 1.36(d, 6H, J = 6.9 Hz), 1.51-1.59(m, 2H), 2.56 (t, 2H, J = 7.8 Hz), 3.27(sept, 1H, J = 6.9 Hz), 7.12(d, 2H, J = 8.6 Hz), 7.32(t, 1H, J = 7.8 Hz), 7.45(brd, 1H, J = 7.8 Hz), 7.53(d, 2H, J = 8.6 Hz), 7.58(d, 1H, J = 7.8 Hz), 7.71-7.72(m, 2H), 8.27(s, 1H).

I-92
mp : 163-164 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 0.93(t, 3H, J = 7.3 Hz), 1.32-1.39(m, 2H), 1.55-1.65(m, 2H), 1.87(s, 3H), 1.95(s, 3H), 2.60 (t, 2H, J = 7.6 Hz), 7.07(d, 2H, J = 8.4 Hz), 7.18(d, 2H, J = 8.5 Hz), 7.54(d, 2H, J = 8.5 Hz), 7.91 (brs, 1H), 8.18(d, 2H, J = 8.4 Hz), 8.77(s, 1H).

I-93
mp : 173 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 0.93(t, 3H, J = 7.3 Hz), 1.32-1.40(m, 2H), 1.39(d, 6H, J = 6.9 Hz), 1.55-1.62(m, 2H), 2.60 (t, 2H, J = 7.8 Hz), 3.13(sept, 1H, J = 6.9 Hz), 4.39(d, 2H, J = 6.3 Hz), 4.45(t, 1H, J = 6.3 Hz), 7.18(d, 2H, J = 8.7 Hz), 7.46(d, 2H, J = 8.7 Hz), 7.54 (d, 2H, J = 8.7 Hz), 7.80(s, 1H), 7.85(d, 2H, J = 8.7 Hz).

I-94
mp : 159-160 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 0.93(t, 3H, J = 7.3 Hz), 1.32-1.39(m, 2H), 1.54-1.80(m, 2H), 1.79(s, 3H), 1.80(s, 3H), 2.60t, 2H, J = 7.7 Hz), 3.18(s, 3H), 7.18(d, 2H, J = 8.5 Hz), 7.30(d, 2H, J = 8.8 Hz), 7.52(d, 2H, J = 8.5 Hz), 7.70(brs, 1H), 7.84(d, 2H, J = 8.8 Hz), 8.77(s, 1H).

I-95
mp : 177-178 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 0.94(t, 3H, J = 7.2Hz), 1.31-1.48(m, 8H), 1.54-1.66(m, 2H), 2.55(s, 3H), 2.62(t, 2H, J = 7.6Hz), 3.92(sept, 1H, J = 6.6Hz), 7.20(d, 2H, J = 8.45Hz), 7.74(d, 2H, J = 8.5Hz), 9.01(brs, 1H), 9.17(s, 1H).

I-96
mp : 220-223 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 0.93(t, 3H, J = 7.3Hz), 1.28-1.42(m, 2H), 1.50(d, 6H, J = 6.8Hz), 1.54-1.65(m, 2H), 2.62 (t, 2H, J = 7.6Hz), 4.08(sept, 1H, J = 7.1Hz), 7.20(d, 2H, J = 8.5Hz), 7.48(d, 2H, J = 8.5Hz), 7.71(brs, 1H), 8.51(brs, 1H), 8.95(s, 1H).

I-97
mp : 195-197 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 0.91(t, 3H, J = 7.6Hz), 0.94(t, 3H, J = 7.3Hz), 1.32-1.44(m, 6H), 1.54-1.64(m, 2H), 1.66-1.78 (m, 2H), 2.62(t, 2H, J = 7.7Hz), 2.86(brs, 2H), 3.98(sept, 1H, J = 7.1Hz), 7.19(d, 2H, J = 8.5Hz), 7.63(d, 2H, J = 8.4Hz), 8.72(brs, 1H), 8.81(brs, 1H).

I-98
mp : 216-218 °C
$^1$H-NMR ($CDCl_3$+$CD_3OD$) δ ppm: 0.93(t, 3H, J = 7.4Hz), 1.29-1.40(m, 2H), 1.43(d, 2H, J = 6.9Hz), 1.51-1.63(m, 2H), 2.60(t, 2H, J = 7.8Hz), 3.65(sept; 1H, J = 6.9Hz), 7.18(d, 2H, J = 8.5Hz), 7.22(d, 1H, J = 8.8Hz), 7.55(d, 2H, J = 8.5Hz), 8.18(dd, 1H, J = 8.8, 2.4Hz), 8.63(d, 1H, J = 2.4Hz).

I-99
mp : 201-202 °C
$^1$H-NMR ($CDCl_3$) δ ppm:0.93(t, 3H, J = 7.3Hz), 1.22-1.40(m, 2H), 1.49(d, 2H, J = 7.1Hz), 1.51-1.63(m, 2H), 2.59(t, 2H, J = 7.7Hz), 4.22(sept, 1H, J = 7.1Hz), 7.16(d, 2H, J = 8.4Hz), 7.41(brs, 1H), 7.52(d, 2H, J = 8.4Hz), 8.10(brs, 1H), 8.13(d, 1H, J = 2.2Hz), 8.61(brs, 1H).

I-100
mp : 160-162 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 0.93(t, 3H, J = 7.3Hz), 1.22-1.42(m, 2H), 1.45(d, 2H, J = 6.9Hz), 1.51-1.63(m, 2H), 2.61 (t, 2H, J = 7.8Hz), 3.37(sept, 1H, J = 6.9Hz), 6.89(brs, 1H), 7.19(d, 2H, J = 8.4Hz), 7.65(d, 2H, J = 8.4Hz), 7.80(dd, 1H, J = 8.4, 2.4Hz), 8.27(d, 1H, J = 8.4Hz), 8.45(d, 1H, J = 2.4Hz), 9.75(brs, 1H).

I-101, I-214
mp : 192-194 °C
$^1$H-NMR ($CDCl_3$) δ ppm:0.93(t, 3H, J = 7.3Hz), 1.27-1.41(m, 2H), 1.35(s, 9H), 1.50-1.66(m, 2H), 2.60(t, 2H, J = 7.6Hz), 5.58(brs, 1H), 7.07(d, 2H, J = 8.5Hz), 7.17(d, 2H, J = 8.5Hz), 7.52(d, 2H, J = 8.5Hz), 7.71(brs, 1H), 7.79(d, 2H, J = 8.5Hz).

I-102
mp : 216-217 °C
$^1$H-NMR ($CDCl_3$) δ ppm:0.93(t, 3H, J = 7.3Hz), 1.26-1.42(m, 2H), 1.45(s, 9H), 1.70-1.83(m, 2H), 2.60(t, 2H, J = 7.7Hz), 6.42(brs, 1H), 7.18(d, 2H, J = 8.5Hz), 7.35(d, 2H, J = 8.5Hz), 7.51(d, 2H, J = 8.5Hz), 7.68(brs, 1H), 7.82(d, 2H, J = 8.5Hz).
I-103
$^1$H-NMR ($CDCl_3$) δ ppm: 0.91(t, 3H, J = 7.3 Hz), 1.28-1.36(m, 2H), 1.32(d, 6H, J = 6.9 Hz), 1.49-1.59(m, 2H), 2.54 (t, 2H, J = 7.7 Hz), 3.23(sept, 1H, J = 6.9 Hz), 3.46(s, 3H), 6.76(brs, 1H), 6.91(d, 2H, J = 8.2 Hz), 6.99(d, 2H, J = 8.8 Hz), 7.03(d, 2H, J = 8.2 Hz), 7.25(d, 2H, J = 8.8 Hz).
I-104
mp : 182-183 °C
$^1$H-NMR ($CDCl_3$) δ ppm:0.93(t, 3H, J = 7.3Hz), 1.28-1.40(m, 2H), 1.51-1.63(m, 2H), 1.64-1.88(m, 4H), 1.90-2.23 (m, 4H), 2.60(t, 2H, J = 7.6Hz), 3.39(m, 1H), 6.16(brs, 1H), 7.07(d, 2H, J = 8.5Hz), 7.16(d, 2H, J = 8.5Hz), 7.52(d, 2H, J = 8.5Hz), 7.74(brs, 1H), 7.77(d, 2H, J = 8.5Hz).
I-105
mp : 190-191 °C
$^1$H-NMR ($CDCl_3$) δ ppm:0.93(t, 3H, J = 7.3Hz), 1.28-1.41(m, 2H), 1.52-1.69(m, 4H), 1.75-1.90(m, 2H), 1.92-2.07 (m, 4H), 2.58(t, 2H, J = 7.6Hz), 3.59(m, 1H), 6.53(brs, 1H), 7.18(d, 2H, J = 8.5Hz), 7.31(d, 2H, J = 8.5Hz), 7.52(d, 2H, J = 8.5Hz), 7.67(brs, 1H), 7.84(d, 2H, J = 8.5Hz).
I-106
mp : 194-197 °C
$^1$H-NMR ($CDCl_3$) δ ppm:0.93(t, 3H, J = 7.3Hz), 1.22-1.41(m, 2H), 1.53-1.65(m, 2H), 1.90(s, 6H), 2.60(t, 2H, J = 7.8Hz), 6.86(brs, 1H), 7.18(d, 2H, J = 8.5Hz), 7.43(d, 2H, J = 8.5Hz), 7.51(d, 2H, J = 8.5Hz), 7.71(brs, 1H), 7.84(d, 2H, J = 8.5Hz).
I-107
mp : 211-212 °C
$^1$H-NMR ($CDCl_3$) δ ppm:0.93(t, 3H, J = 7.3Hz), 1.24-1.40(m, 2H), 1.50-1.62(m, 2H), 2.60(t, 2H, J = 7.6Hz), 6.19 (brs, 1H), 7.17(d, 2H, J = 8.5Hz), 7.18(d, 2H, J = 8.5Hz), 7.51(d, 2H, J = 8.5Hz), 7.66(brs, 1H), 7.86(d, 2H, J = 8.5Hz).
I-108
mp : 298-300 °C
$^1$H-NMR (DMSO-$d_6$) δ ppm: 0.90(t, 3H, J = 7.3Hz), 1.22-1.39(m, 2H), 1.48-1.60(m, 2H), 2.54(t, 2H, J = 7.3Hz), 7.04 (d, 2H, J = 8.8Hz), 7.12(d, 2H, J = 8.5Hz), 7.64(d, 2H, J = 8.5Hz), 7.69(d, 2H, J = 8.8Hz), 9.80(s, 1H).
I-109
mp : 122-123 °C
$^1$H-NMR ($CDCl_3$) δ ppm:0.90(t, 3H, J = 7.4Hz), 0.97(t, 3H, J = 7.7Hz), 1.26-1.38(m, 2H), 1.30(s, 6H), 1.50-1.66(m, 4H), 1.72-1.83(m, 4H), 2.34(t, 2H, J = 7.1Hz), 2.55(t, 2H, J = 7.6Hz), 3.19(q, 1H, J = 6.0Hz), 4.60(brs, 1H), 7.08(d, 2H, J = 8.5Hz), 7.42(d, 2H, J = 8.5Hz), 7.85(s, 1H).
I-110
mp : 109-110 °C
$^1$H-NMR ($CDCl_3$) δ ppm:0.91(t, 3H, J = 7.4Hz), 1.10(d, 6H, J = 6.7Hz), 1.29-1.38(m, 2H), 1.55(s, 9H), 1.60-1.70(m, 2H), 1.78-1.89(m, 2H), 2.26(m, 1H), 2.39(t, 2H, J = 7.0Hz), 2.57(t, 2H, J = 7.7Hz), 2.90(d, 2H, J = 6.6Hz), 3.16(brs, 1H), 4.24(brs, 1H), 7.12(d, 2H, J = 8.5Hz), 7.40(d, 2H, J = 8.5Hz).
I-111
mp : 64-65 °C
$^1$H-NMR, ($CDCl_3$) δ ppm:0.91(t, 3H, J = 7.3Hz), 1.02(t, 3H, J = 7.5Hz), 1.35(d, 3H, J = 6.7Hz), 1.26-1.38(m, 2H), 1.48-1.69(m, 5H), 1.76-1.87(m, 2H), 2.04(m, 1H), 2.38(t, 2H, J= 7.3Hz), 2.56(t, 2H, J = 7.6Hz), 2.91(m, 1H), 3.16 (brs, 2H), 4.42(brs, 1H), 7.11(d, 2H, J = 8.5Hz), 7.42(d, 2H, J = 8.5Hz), 7.47(brs, 1H).
I-112
mp : 79-80 °C
$^1$H-NMR ($CDCl_3$) δ ppm:1.36(s, 9H), 1.52-1.62(m, 2H), 1.67-1.76(m, 2H), 2.22(t, 2H, J = 7.4Hz), 3.16(q, 2H, J = 6.3Hz), 3.78(s, 3H), 4.33(d, 2H, J = 5.4Hz), 4.62(brs, 1H), 6.20(brs, 1H), 6.85(d, 2H, J = 8.8Hz), 7.19(d, 2H, J = 8.8Hz).
I-113
mp : 125-126 °C
$^1$H-NMR, ($CDCl_3$) δ ppm:1.38(s, 9H), 1.62-1.70(m, 2H), 1.76-1.88(m, 2H), 2.46(t, 2H, J = 7.4Hz), 3.22(q, 2H, J = 6.1Hz), 4.22(t, 1H, J = 6.1Hz), 7.24(dd, 1H, J = 8.9, 2.3Hz), 7.36(d, 1H, J = 2.3Hz), 7.65(brs, 1H), 8.29(d, 1H, J = 8.9Hz).
I-114
mp : 89-91 °C
$^1$H-NMR ($CDCl_3$) δ ppm:0.92 (t, 3H, J = 7.0Hz), 1.06 (d, 6H, J = 7.0Hz), 1.36 (m 1H), 1.50-1.72 (m ,5H), 1.94-2.06

(m, 2H), 2.26 (m, 1H), 2.60 (t, 2H, J = 7.7Hz), 2.84 (t, 2H, J = 7.7Hz), 2.93 (d, 2H, J = 6.3Hz), 3.20 (t, 2H, J = 6.6Hz), 4.30 (brs, 1H), 7.19 (d, 2H, J = 8.5Hz), 7.63 (d, 2H, J = 8.5Hz), 9.15(brs, 1H).

I-115

mp : 94-95 °C

$^1$H-NMR ($CDCl_3$) δ ppm:0.92 (t, 3H, J = 7.5Hz), 1.03 (t, 3H, J = 7.5Hz), 1.23-1.40 (m ,5H), 1.42-1.65 (m, 6H), 1.75 (m, 1H), 2.02 (m, 1H), 2.24 (t, 2H, J = 7.0Hz), 2.59 (t, 2H, J = 8.0Hz), 2.90 (m, 1H), 3.14 (q, 2H, J = 6.6Hz), 4.20 (m, 1H), 4.40 (d, 2H, J = 5.4Hz), 5.70 (brs, 1H), 7.14 (d, 2H, J = 8.1Hz), 7.18(d, 2H, J = 8.1Hz).

I-116

mp: 89-91 °C

$^1$H-NMR ($CDCl_3$) δ ppm:0.97 (t, 3H, J = 7.3Hz), 1.02 (t, 3H, J = 7.5Hz), 1.35 (d, 3H, J = 7.0Hz), 1.40-1.90 (m ,9H), 2.04 (m ,1H), 2.37 (t, 2H, J = 7.0Hz), 2.90 (m, 1H), 3.17 (q, 2H, J = 6.6Hz), 3.93 (t, 2H, J = 6.6Hz), 4.32 (m, 1H), 6.84 (d, 2H, J = 9.0Hz), 7.31 (brs, 1H), 7.40 (d, 2H, J = 9.0Hz).

I-117

mp: 110-111 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.02 (t, 3H, J = 7.5Hz), 1.34 (d, 3H, J = 6.6Hz), 1.45-1.70 (m ,3H), 1.75-1.85 (m, 2H), 2.05 (m ,1H), 2.36 (t, 2H, J = 7.5Hz), 2.90 (m, 1H), 3.16 (q, 2H, J = 6.6Hz), 3.78 (s, 3H), 4.50 (m, 1H), 6.84 (d, 2H, J = 6.8Hz), 7.42 (d, 2H, J = 6.8Hz), 7.48 (brs, 1H).

I-118

mp: 113-115 °C

$^1$H-NMR ($CDCl_3$) δ ppm:0.92 (t, 3H, J = 7.0Hz), 1.20-1.34 (m ,1H), 1.37 (d, 6H, J = 7.0Hz), 1.48-1.70 (m, 3H), 2.43 (q, 2H, J = 6.6Hz), 2.58 (t, 2H, J = 7.7Hz), 3.10-3.31 (m, 3H), 4.75 (m, 1H), 6.04 (d, 1H, J = 15.0Hz), 6.77 (dt, 1H, J = 7.7, 15.0Hz), 7.14 (d, 2H, J = 8.4Hz), 7.55 (d, 2H, J = 8.4Hz), 7.85 (brs, 1H).

I-119

mp : 139-140 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.19(s, 9H), 1.47(m, 2H), 1.61(m, 2H), 2.18(t, 2H, J = 7.6Hz), 3.03(q, 2H, J = 6.3Hz), 4.09 (t, 1H, J = 5.9Hz), 6.85(brd, 1H, J = 8.0Hz), 7.00(t, 1H, J = 8.0Hz), 7.16(brd, 1H, J = 8.0), 7.48(brs, 1H), 7.57(brs, 1H).

I-120

mp: 183°C

$^1$H-NMR ($CDCl_3$) δ ppm:0.91(t, 3H, J = 7.3Hz), 1.20-1.58(m, 6H), 1.40(s, 9H), 2.07(dd, 1H, J = 12.9, 3.1Hz), 2.52 (t, 2H, J = 7.7Hz), 2.95(dd, 2H, J = 11.5, 2.5Hz), 3.46(m, 1H), 3.88-4.07(m, 3H), 6.47(s, 1H), 7.08(d, 2H, J = 8.5Hz), 7.22(d, 2H, J = 8.5Hz).

I-121

mp : 163-166 °C

$^1$H-NMR ($CDCl_3$) δ ppm:0.91(t, 3H, J = 7.3Hz), 1.32-1.62(m, 6H), 1.45(s, 9H), 1.95-2.07(m, 3H), 2.20(m, 1H), 2.46 (td, 1H, J = 10.4, 3.7Hz), 2.37(t, 2H, J = 7.6Hz), 3.43(brd, 2H, J = 10.4Hz), 4.80(s, 1H), 7.12(d, 2H, J = 8.4Hz), 7.14 (s, 1H), 7.39(d, 2H, J = 8.4Hz).

I-122

mp : 188-189 °C

$^1$H-NMR ($CDCl_3$) δ ppm:0.91 (t, 3H, J = 7.5Hz), 1.25-1.41 (m ,2H), 1.42 (s, 9H), 1.50-1.62 (m ,2H), 1.78-1.95 (m , 4H), 2.00-2.20 (m ,6H), 2.57 (t, 2H, J = 7.5Hz), 3.99 (brs, 1H), 7.10 (brs, 1H), 7.12 (d, 2H, J = 6.5Hz), 7.41 (d, 2H, J = 6.5Hz).

I-123

mp : 197-198 °C

$^1$H-NMR ($CDCl_3$) δ ppm:0.91 (t, 3H, J = 7.5Hz), 1.24-1.40 (m ,2H), 1.39 (s, 9H), 1.50-1.70 (m ,2H), 1.99 (brs , 12H), 2.56 (t, 2H, J = 7.5Hz), 3.47 (brs, 1H), 7.10 (s, 1H), 7.11 (d, 2H, J = 8.5Hz), 7.38 (d, 2H, J = 8.5Hz).

I-124

mp : 258-260 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.20-1.40 (m, 2H), 1.41 (s, 9H), 1.62-1.81 (m, 2H), 2.03-2.35 (m, 5H), 2.37 (s, 3H), 2.71 (s, 3H), 3.32 (m, 1H), 3..64 (d, 1H, J = 8.4Hz), 7.08 (brs, 1H), 7.24 (m, 1H), 7.33 (m, 2H), 7.60 (d, 1H, J = 8.1Hz), 7.77 (s, 1H), 7.80 (d, 1H, J = 8.4Hz), 8.14 (m, 1H).

I-125

mp : 297-299 °C

$^1$H-NMR-(DMSO-$d_6$)- δ ppm 1.27 (s, 9H), 1.28-1.56 (m, 4H), 1.80-2.01 (m, 4H), 2.47 (m, 1H), 2.76 (brs, 1H), 3.05 (m, 2H), 6.78 (d, 1H, J = 9.0Hz), 7.23 (d, 1H, J = 9.0Hz), 7.46 (dd, 1H, J = 2.0, 9.0Hz), 8.03 (d, 1H, J = 2.0Hz).

I-126

mp : 198-199 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.18-1.39 (m, 2H), 1.40 (s, 9H), 1.60-1.79 (m, 2H), 1.98-2.35 (m, 5H), 3.30 (m, 1H), 3.67 (d, 1H, J = 9.6Hz), 5.89 (tt, 1H, J = 3.0, 50.0Hz), 6.97 (d, 1H, J = 7.8Hz), 7.21 (s, 1H), 7.30.7.40 (m, 2H), 7.55 (s, 1H)

I-127
mp : 262-264 °C
$^1$H-NMR ($CDCl_3$) δ ppm:1.20-1.39 (m, 2H), 1.41 (s, 9H), 1.60-1.80 (m, 2H), 2.00-2.36 (m, 5H), 2.57 (s, 3H), 3.33 (m, 1H), 3..62 (d, 1H, J = 8.7Hz), 7.28 (brs, 1H), 7.62 (d, 2H, J = 8.7Hz), 7.94 (d, 2H, J = 8.7Hz).
I-128
mp : 252-254 °C
$^1$H-NMR ($CDCl_3$) δ ppm:1.18-1.39 (m, 2H), 1.40 (s, 9H), 1.58-1.79 (m, 2H), 1.99-2.30 (m, 5H), 2.46 (s, 3H), 3.32 (m, 1H), 3..64 (m, 1H), 7.11 (brs, 1H), 7.23 (d, 2H, J = 9.0Hz), 7.44 (d, 2H, J = 9.0Hz).
I-129
mp : >300 °C
$^1$H-NMR ($CDCl_3$+$CD_3OD$) δ ppm:1.30-1.45(m, 2H), 1.42(s, 9H), 1.70-1.88(m, 2H), 2.10-2.37(m, 4H), 2.52(m, 1H), 3.34(m, 1H), 7.43-7.54(m, 3H), 7.82(d, 1H, J = 6.7Hz), 7.88(d, 1H, J = 8.5Hz), 7.98-8.07(m, 2H), 8.44(s, 1H), 8.46 (s, 1H).
I-130
mp : 123-124 °C
$^1$H-NMR ($CDCl_3$) δ ppm:1.18-1.34(m, 2H), 1.40(s, 9H), 1.62-1.75(m, 2H), 2.00-2.28(m, 5H), 3.31(m, 1H), 3.61(d, 1H, J = 9.5Hz), 5.59(s, 1H), 7.17(s, 1H), 7.30-7.37(m, 6H), 7.41(d, 1H, J = 8.5Hz), 7.84(d, 1H, J = 2.1Hz).
1-131
mp: 202-204 °C
$^1$H-NMR ($CDCl_3$) δ ppm:1.27-1.38(m, 2H), 1.38(s, 9H), 1.62-1.75(m, 2H), 1.97-2.04(m, 2H), 2.18-2.27(m, 3H), 3.26 (m, 1H), 3.81(s, 3H), 4.62(d, 1H, J = 7.9Hz), 7.12(d, 1H, J = 7.8Hz), 7.40(t, 1H, J = 7.8Hz), 7.51(s, 3H), 7.61(d, 1H, J = 7.8Hz), 7.71(s, 1H), 8.21(brs, 1H).
I-132
mp : 236-237 °C
$^1$H-NMR ($CDCl_3$) δ ppm:1.23-1.43(m, 2H), 1.41(s, 9H), 1.66-1.80(m, 2H), 2.08-2.12(m, 2H), 2.23-2.31(m, 3H), 3.34 (m, 1H), 3.87(d, 1H, J = 9.5Hz), 4.02(s, 3H), 7.30(td, 1H, J = 7.3, 1.1Hz), 7.36(s, 1H), 7.39(td, 1H, J = 7.3, 1.5Hz), 7.53(brd, 1H, J = 7.3Hz), 7.84(brd, 1H, J = 7.3Hz), 8.05(s, 1H), 8.73(s, 1H).
I-133
mp : 198-200 °C
$^1$H-NMR ($CDCl_3$) δ ppm:0.93(t, 3H, J = 7.3Hz), 0.97(t, 3H, J = 6.7Hz), 1.18-1.81(m, 7H), 1.39(s, 9H), 1.98-2.05(m, 2H), 2.21-2.24(m, 3H), 3.29(m, 1H), 4.00(dd, 1H, J = 10.7, 6.7Hz), 4.09(dd, 1H, J =10.7, 6.1Hz), 4.27(d, 1H, J = 9.8Hz), 6.37(d, 1H, J = 15.9Hz), 7.47(d, 2H, J = 8.5Hz), 7.59(d, 2H, J = 8.5Hz), 7.62(d, 1H, J = 15.9Hz), 7.83(brs, 1H).
I-134
mp : 212-213 °C
$^1$H-NMR ($CDCl_3$) δ ppm:1.21-1.32(m, 2H), 1.39(s, 9H), 1.59-1.73(m, 2H), 1.99-2.04(m, 2H), 2.10-2.26(m, 3H), 3.26 (m, 1H), 3.72(d, 1H, J = 9.6Hz), 6.74(m, 1H), 7.02(d, 2H, J = 7.4Hz), 7.11(t, 1H, J = 7.4Hz), 7.13-7.19(m, 2H), 7.22-7.26(m, 2H), 7.34(t, 2H, J = 7.4Hz).
I-135
mp : 294-296 °C
$^1$H-NMR (DMSO-$d_6$) δ ppm:1.27 (s, 9H), 1.28-1.55 (m, 4H), 1.81-2.05 (m, 4H), 2.26 (m, 1H), 2.98-3.20 (m, 2H), 6.78 (d; 1H, J = 9.0Hz), 7.31 (t, 1H, J = 7.5Hz), 7.54-7.72 (m, 5H), 7.94 (brs, 1H).
1-136
mp : >300 °C
$^1$H-NMR (DMSO-$d_6$) δ ppm:1.28 (s, 9H), 1.29-1.59 (m, 4H), 1.81-2.02 (m, 4H), 2.27 (m, 1H), 3.06 (m, 1H), 6.81 (d, 1H, J = 8.7Hz), 7.38 (t, 1H, J = 7.2Hz), 7.48 (t, 2H, J = 7.2Hz), 7.62-7.81 (m, 10H), 9.93 (brs, 1H).
I-137
mp : 291-292 °C
$^1$H-NMR ($CDCl_3$) δ ppm:1.25-1.39 (m, 2H), 1.41 (s, 9H), 1.61-1.80 (m, 2H), 2.01-2.36 (m, 5H), 3.32 (m, 1H), 3.63 (d, 1H, J = 9.3Hz), 7.20 (brs, 1H), 7.53-7.74 (m, 8H).
I-138
mp : 259-262 °C
$^1$H-NMR ($CD_3OD$) δ ppm:1.40 (s, 9H), 1.40-1.80 (m, 4H), 2.00-2.30 (m, 4H), 2.45 (m, 1H), 3.00 (s, 3H), 3.15-3.30 (m, 2H), 7.90 (d, 1H, J = 8.4Hz), 8.12 (d, 1H, J = 9.0Hz), 8.39 (d, 1H, J = 9.0Hz), 8.72 (s, 1H), 8.92 (d, 1H, J = 8.4Hz), 10.4 (s, 1H).
I-139
mp : 265-268 °C
$^1$H-NMR ($CDCl_3$) δ ppm:1.25-1.40(m, 2H), 1.40(s, 9H), 168-1.81(m, 2H), 2.05-2.10(m, 2H), 2.23-2.37(m, 3H), 3.32 (m, 1H), 4.27(d, 1H, J = 9.1Hz), 7.53(t, 1H, J = 7.9Hz), 7.63(td, 1H, J = 7.9, 1.4Hz), 7.77(d, 1H, J = 7.9Hz), 8.03(d,

1H, J = 7.9Hz), 8.37(brs, 1H), 8.85-8.86(m, 2H).

I-140

mp : 258-260 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.20-1.40 (m, 2H), 1.41 (s, 9H), 1.52-1.85 (m, 2H), 2.03-2.35 (m, 5H), 3.34 (m, 1H), 3.75 (m, 1H), 7.35-7.66 (m, 3H), 8.05 (d, 1H, J = 9.0Hz), 8.11 (d, 1H, J = 9.0Hz), 8.40 (brs, 1H), 8.83 (s, 1H).

I-141

mp : 205-206 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.20-1.37(m, 2H), 1.40(s, 9H), 1.43-1.62(m, 2H), 1.90-2.01(m, 2H), 2.02-2.23(m, 3H), 3.27 (m, 1H), 3.63(d, 1H, J = 9.6Hz), 3.70(s, 3H), 6.64(d, 1H, J = 8.8Hz), 7.28-7.41(m, 5H), 7.45(brs, 1H), 8.26(d, 1H, J = 8.8Hz).

I-142

mp : 277-280 °C

$^1$H-NMR ($CDCl_3$) δ ppm:0.23-0.34(m, 2H), 1.34(s, 9H), 1.34-1.55(m, 5H), 1.76-1.80(m, 2H), 2.97(m, 1H), 3.31(d, 1H, J = 9.6Hz), 7.18(s, 1H), 7.50-7.59(m, 4H), 7.77(dd, 1H, J = 7.4, 1.0Hz), 7.91-7.98(m, 2H), 8.39(dd, 1H, J = 7.4, 1.9Hz).

I-143

mp : 202-203 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.23-1.40(m, 2H), 1.40(s, 9H), 1.57-1.71(m, 2H), 2.05-2.10(m, 2H), 2.18-2.28(m, 3H), 3.31 (m, 1H), 3.91(s, 3H), 3.93(s, 3H), 4.05(d, 1H, J = 9.5Hz), 8.15(s, 1H), 9.56(s, 1H).

I-144

mp : 177-178 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.27-1.39(m, 2H), 1.40(s, 9H), 1.65-1.79(m, 2H), 2.04-2.07(m, 2H), 2.12-2.34(m, 3H), 3.22 (m, 1H), 3.93(d, 1H, J = 9.1Hz), 6.90-7.03(m, 3H), 7.25(m, 1H), 7.77(dd, 1H, J = 4.9, 1.7Hz), 7.81(brs, 1H), 8.72 (dd, 1H, J = 7.8, 1.5Hz).

I-145

mp : >300 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm:1.30(s, 9H), 1.44-1.70(m, 4H), 2.05-2.19(m, 4H), 2.73(m, 1H), 3.18(m, 1H), 6.86(d, 1H, J = 8.8Hz), 7.62(t, 2H, J = 8.5Hz), 7.86(t, 2H, J = 8.5Hz), 7.89(d, 2H, J = 8.5Hz), 8.16(d, 2H, J = 8.5Hz).

I-146

mp : 240-242 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm:1:26-1.53(m, 4H), 1.27(s, 9H), 1.74-1.83(m, 2H), 1.90-1.97(m, 2H), 2.26(m, 1H), 3.04 (m, 1H), 6.59(brs, 1H), 6.74-6.79(m, 3H), 7.74(s, 1H), 10.32(s, 1H), 12.80(s, 1H). I-147

mp : 167-169 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.05-1.28 (m, 2H), 1.38 (s, 9H), 1.47-1.70 (m, 2H), 1.80-2.00 (m, 3H), 2.13-2.25 (m, 2H), 2.75 (t, 2H, J = 6.9Hz), 3.24 (m, 1H), 3.49 (dt, 2H, J = 6.3, 6.9Hz), 3.58 (d, 1H, J = 8.7Hz), 3.87 (s, 6H), 5.40 (brs, 1H), 6.71 (m, 2H), 6.82 (d, 1H, J = 8.7Hz).

I-148

mp : 171-172 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.16-1.38 (m, 2H), 1.39 (s, 9H), 1.50-1.79 (m, 4H), 1.85-2.02 (m, 3H), 2.15-2.30 (m, 2H), 2.35-2.56 (m, 6H), 3.25 (m, 1H), 3.33 (q, 2H, J = 6.0Hz), 3.63 (d, 1H, J = 9.0Hz), 3.72 (t, 4H, J = 4.6Hz), 6.77 (brs, 1H).

I-149

$^1$H-NMR ($CDCl_3$) δ ppm:1.20-1.36 (m, 2H), 1.28 (t, 3H, J = 7.2Hz), 1.39 (s, 9H), 1.45-1.70 (m, 2H), 1.85-2.30 (m, 7H), 2.43 (s, 3H), 3.05-3.42 (m, 3H), 3.46-3.80 (m, 3H), 7.31 (d, 1H, J = 7.2Hz), 7.40-7.52 (m, 3H), 8.18 (brs, 1H).

I-150

mp : 203-204 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.15-1.37 (m, 2H), 1.39 (s, 9H), 1.42-1.70 (m, 2H), 1.85-2.29 (m, 5H), 2.76 (t, 2H, J = 6.0Hz), 3.26 (m, 1H), 3.49 (q, 2H, J = 6.0Hz), 3.61 (m, 1H), 4.03 (s, 2H), 5.88 (brs, 1H), 7.15 (dd, 1H, J = 7.0, 8.8Hz), 7.30-7.35 (m, 2H).

I-151

mp : 181-183 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.15-1.30 (m, 2H), 1.39 (s, 9H), 1.45-1.64 (m, 2H), 1.88-2.05 (m, 3H), 2.15-2.25 (m, 2H), 2.69 (t, 2H, J = 6.0Hz), 3.28 (m, 1H), 3.47 (q, 2H, J = 6.0Hz), 3.58 (d, 1H, J = 9.9Hz), 3.87 (s, 2H), 5.83 (brs, 1H), 7.00 (m, 1H), 7.20 (m, 2H).

I-152

mp : 222-224 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.16-1.37 (m, 2H), 1.39 (s, 9H), 1.49-1.70 (m, 2H), 1.90-2.25 (m, 5H), 3.26 (m, 1H), 3.36 (t, 2H, J = 6.4Hz), 3.66 (dt, 3H, J = 6.0, 6.4Hz), 5.87 (t, 1H, J = 6.0Hz), 7.58 (s, 1H), 7.68 (dd, 1H, J = 7.0, 8.5Hz), 7.83 (dd, 1H, J = 7.0, 8.5Hz), 8.19 (t, 2H, J = 8.5Hz).

I-153
mp : 207-209 °C
$^1$H-NMR ($CDCl_3$) δ ppm:1.05-1.25 (m, 2H), 1.38 (s, 9H), 1.40-2.03 (m, 10H), 2.05-2.25 (m, 2H), 2.58 (s, 3H), 2.76 (m, 1H), 3.05-3.35 (m, 2H), 3.97 (d, 1H, J = 9.5Hz), 4.94 (t, 1H, J = 4.0Hz), 8.42 (d, 1H, J = 5.5Hz), 8.97 (d, 1H, J = 5.5Hz).
I-154
mp : 184-185 °C
$^1$H-NMR ($CDCl_3$) δ ppm:1.05-1.25 (m, 2H), 1.37 (s, 9H), 1.50-1.69 (m, 2H), 1.85-2.05 (m, 3H), 2.10-2.21 (m, 2H), 3.24 (m, 1H), 3.64 (m, 1H), 4.87 (s, 1H), 4.88 (s, 1H), 5.67 (brs, 1H), 7.42 (d, 2H, J = 5.5Hz), 7.52 (m, 2H), 7.78 (m, 1H), 7.82 (m, 1H), 7.95 (d, 1H, J = 7.0Hz).
I-155
mp : 208-210 °C
$^1$H-NMR (DMSO-$d_6$) δ ppm:1.26 (s, 9H), 1.27-1.50 (m, 4H), 1.75-2.00 (m, 4H), 2.16 (m, 1H), 2.81 (s, 3H), 3.02 (m, 1H), 6.79 (d, 1H, J = 8.5Hz), 10.00 (s, 1H), 10.66 (s, 1H).
I-156
mp : 256-257 °C
$^1$H-NMR ($CDCl_3$) δ ppm:1.20-1.39 (m, 2H), 1.41 (s, 9H), 1.60-1.81 (m, 2H), 2.01-2.35 (m, 5H), 2.69 (t, 2H, J = 6.0Hz), 3.11 (t, 2H, J = 6.0Hz), 3.30 (m, 1H), 3.61 (d, 1H, J = 9.3Hz), 7.21 (d, 1H, J = 8.0Hz), 7.31 (s, 1H), 7.70 (d, 1H, J = 8.0Hz), 7.99 (s, 1H).
I-157
mp : 269-271 °C
$^1$H-NMR ($CDCl_3$) δ ppm:1.20-1.45 (m, 2H), 1.41 (s, 9H), 1.70-1.90 (m, 2H), 2.10-2.45 (m, 5H), 3.37 (m, 1H), 3.68 (m, 1H), 7.45 (dd, 1H, J = 4.0, 8.0Hz), 7.53 (brs, 1H), 7.72 (t, 1H, J = 8.0Hz), 7.83 (d, 1H, J = 8.0Hz), 8.02 (d, 1H, J = 8.0Hz), 8.18 (d, 1H, J = 8.0Hz), 8.93 (d, 1H, J = 4.0Hz).
I-158
mp : 253-255 °C
$^1$H-NMR ($CDCl_3$) δ ppm:1.20-1.40 (m, 2H), 1.42 (s, 9H), 1.60-1.90 (m, 2H), 2.06-2.50 (m, 5H), 2.72 (s, 3H), 3.33 (m, 1H), 3.78 (d, 1H, J = 9.2Hz), 7.52 (t, 1H, J = 7.0Hz), 7.62-7.80 (m, 2H), 7.94 (brs, 1H), 8.05 (d, 1H, J = 8.5Hz), 8.20 (s, 1H).
I-159
mp : 253-255 °C
$^1$H-NMR ($CDCl_3$) δ ppm:1.20-1.39 (m, 2H), 1.40 (s, 9H), 1.60-1.80 (m, 2H), 1.98-2.30 (m, 5H), 2.71 (s, 3H), 3.31 (m, 1H), 3.68 (d, 1H, J = 9.0Hz), 7.41 (brs, 1H), 7.61 (d, 2H, J = 9.0Hz), 7.70 (d, 2H, J = 9.0Hz).
I-160
mp : 211-212 °C
$^1$H-NMR ($CDCl_3$) δ ppm:1.20-1.32 (m, 2H), 1.39 (t, 3H, J = 7.0Hz), 1.40 (s, 9H), 1.55-1.79 (m, 2H), 1.98-2.35 (m, 5H), 3.31 (m, 1H), 3.65 (d, 1H, J = 9.5Hz), 4.03 (q, 2H, J = 7.0Hz), 6.64 (d, 1H, J = 8.0Hz), 6.92 (d, 1H, J = 8.0Hz), 7.10 (s, 1H), 7.19 (t, 1H, J = 8.0Hz), 7.30 (brs, 1H).
I-161
mp : 202-203 °C
$^1$H-NMR ($CDCl_3$) δ ppm:0.96 (t, 1H, J = 7.3Hz), 1.29-1.39 (m, 2H), 1.40 (s, 9H), 1.41-1.58 (m, 2H), 1.60-1.80 (m, 4H), 1.98-2.31 (m, 5H), 3.31 (m, 1H), 3.66 (d, 1H, J = 8.5Hz), 3.96 (t, 2H, J = 6.4Hz), 6.64 (d, 1H, J = 8.0Hz), 6.90 (d, 1H, J = 8.0Hz), 7.11 (s, 1H), 7.19 (t, 1H, J = 8.0Hz), 7.31 (brs, 1H).
I-162
mp : 177-180 °C
$^1$H-NMR ($CDCl_3$) δ ppm:1.18-1.38 (m, 2H), 1.39 (s, 9H), 1.59-1.78 (m, 2H), 1.95-2.05 (m, 2H), 2.07-2.25 (m, 3H), 3.26 (m, 1H), 3.46 (s, 3H), 4.17 (d, 1H, J = 9.5Hz), 5.15 (s, 2H), 6.77 (d, 1H, J = 8.0Hz), 7.10-7.23 (m, 2H), 7.34 (s, 1H), 7.58 (s, 1H).
I-163
mp : 175-178°C
$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.27 (s, 9H), 1.28-1.50 (m, 4H), 1.78-2.00 (m, 4H), 2.22 (m, 1H), 2.96-3.15 (m, 2H), 6.67 (m, 1H), 6.79 (d, 1H, J = 8.5Hz), 7.18 (m, 2H), 7.38 (s, 1H), 9.81 (s, 1H).
I-164
mp : 232-233 °C
$^1$H-NMR ($CDCl_3$) δ ppm:0.97(t, 3H, J = 7.3Hz), 1.22-1.30(m, 2H), 1.40(s, 9H), 1.44-1.51(m, 2H), 1.67-1.77(m, 4H), 2.02-2.24(m, 5H), 3.22(m, 1H), 3.62(d, 1H, J = 9.6Hz), 4.25(t, 2H, J = 6.8Hz), 6.71(d, 1H, J = 8.4Hz), 7.01(brs, 1H), 7.91(dd, 1H, J = 8.4, 3.3Hz), 8.08(d, 1H, J = 3.3Hz).
I-165

mp : 199-200 °C

$^1$H-NMR ($CDCl_3$) δ ppm:0.96(t, 3H, J = 7.4Hz), 1.24-1.50(m, 4H), 1.40(s, 9H), 1.67-1.76(m, 3H), 2.03-2.08(m, 2H), 2.24-2.35(m, 3H), 3.29(m, 1H), 3.76(d, 1H, J = 9.1Hz), 3.91(t, 2H, J = 6.6Hz), 6.41(dd, 1H, J = 8.8, 2.5Hz), 6.55(d, 1H, J = 2.5Hz), 6.82(d, 1H, J = 8.8Hz), 7.43(s, 1H), 8.95(s, 1H).

I-166

mp : 215-218 °C

$^1$H-NMR ($CDCl_3$+$CD_3OD$) δ ppm:0.97(t, 3H, J = 7.4Hz), 1.24-1.40(m, 4H), 1.39(s, 9H), 1.42-1.50(m, 2H), 1.54-1.72 (m, 2H), 1.76-1.82(m, 2H), 1.91-2.00(m, 2H), 2.06-2.22(m, 3H), 3.24(m, 1H), 4.00(t, 2H, J = 6.6Hz), 6.78(d, 1H, J = 8.8Hz), 6.98(dd, 1H, J = 8.8, 2.5Hz), 7.09(d, 1H, J = 8.8Hz).

I-167

mp : 212-213 °C

$^1$H-NMR ($CDCl_3$) δ ppm:0.96(t, 3H, J = 7.5Hz), 1.26-1.34(m, 2H), 1.40(s, 9H), 1.45-1.50(m, 2H), 1.68-1.77(m, 4H), 2.03-2.08(m, 2H), 2.17(m, 1H), 2.26-2.29(m, 2H), 3.29(m, 1H), 3.60(d, 1H, J = 9.0Hz), 4.25(t, 2H, J = 6.8Hz), 6.71 (d, 1H, J = 8.4Hz), 7.01(brs, 1H), 7.91(dd, 1H, J = 8.4, 3.3Hz), 8.08(d, 1H, J = 3.3Hz).

I-168

mp : 230-232 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.22-1.35(m, 2H), 1.40(s, 9H), 1.63-1.77(m, 2H), 2.03-2.08(m, 2H), 2.15-2.29(m, 3H), 3.31 (m, 1H), 3.63(d, 1H, J = 9.3Hz), 6.89(d, 1H, J = 9.4Hz), 7.10(brd, 2H, J = 7.4Hz), 7.12(brs, 1H), 7.18(t, 1H, J = 7.4Hz), 7.36(brt, 2H, J = 7.4Hz), 8.09-8.15(m, 2H).

I-169

mp: 159-160 °C

$^1$H-NMR ($CDCl_3$) δ ppm:0.97(t, 3H, J = 7.3), 1.20-1.35(m, 2H), 1.40(s, 9H), 1.37-1.49(m, 2H), 1.61-1.78(m, 4H), 2.05-2.08(m, 2H), 2.23-2.26(m, 2H), 2.36(s, 3H), 2.97(brs, 1H), 3.32(m, 1H), 3.86(brs, 1H), 4.30(t, 2H, J = 6.5Hz), 6.25(s, 1H), 7.92(brs, 1H).

I-170

mp : 180-181 °C

$^1$H-NMR ($CDCl_3$) δ ppm:0.88-0.89(m, 2H), 1.39(s, 9H), 1.42-1.60(m, 2H), 1.86-1.90(m, 2H), 2.04-2.09(m, 2H), 2.42 (s, 3H), 2.91(m, 1H), 3.20(m, 1H), 3.63(d, 1H, J = 9.2Hz), 6.38(s, 1H), 7.15(m, 2H), 7.28(m, 1H), 7.45(m, 2H), 7.84 (brs, 1H).

I-171

mp : 173-174°C

$^1$H-NMR ($CDCl_3$) δ ppm:0.98(t, 3H, J = 7.5Hz), 1.29-1.40(m, 2H), 1.40(s, 9H), 1.55(m, 2H), 1.62-1.83(m, 4H), 2.09-2.12(m, 2H), 2.24-2.32(m, 3H), 3.32(m, 1H), 3.63(d, 1H, J = 9.5Hz), 3.99(t, 2H, J = 6.4Hz), 7.22(dd, 1H, J = 9.4, 2.7Hz), 7.66(d, 1H, J = 2.7Hz), 8.63(d, 1H, J = 9.4Hz), 10.17(s, 1H).

I-172

mp : 238-242 °C

$^1$H-NMF ($CDCl_3$) δ ppm:0.96(t, 3H, J = 7.3Hz), 1.23-1.52(m, 4H), 1.40(s, 9H), 1.61-1.78(m, 4H), 2.05-2.28(m, 5H), 3.30(m, 1H), 3.66(d, 1H, J = 9.4Hz), 3.84(brs, 2H), 3.90(t, 2H, J = 6.4Hz), 6.32-6.35(m, 2H), 6.96(brs, 1H), 6.97(d, 1H, J = 9.4Hz).

1-173

mp : 165-166 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.23-1.26(m, 2H), 1.40(s, 9H), 1.67-1.72(m, 2H), 2.01-2.06(m, 2H), 2.11-2.28(m, 3H), 3.31 (m, 1H), 3.60(s, 2H), 3.69(s, 3H), 4.02(brs, 1H), 7.01(d, 1H, J = 8.0Hz), 7.25(t, 1H, J = 8.0Hz), 7.43(d, 1H, J = 8.0Hz), 7.49(brs, 1H), 7.51(brs, 1H).

I-174

mp : 264-265 °C

$^1$H-NMR ($CDCl_3$+$CD_3OD$) δ ppm: 1.26-1.29(m, 2H), 1.39(s, 9H), 1.62-1.69(m, 2H), 1.96-2.00(m, 2H), 2.18-2.21(m, 3H), 3.25(m, 1H), 3.58(s, 2H), 7.01(d, 1H, J = 7.5Hz), 7.26(t, 1H, J = 7.5Hz), 7.42(brs, 1H), 7.50(d, 1H, J = 7.5Hz).

I-175

mp : 90-94 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.16-1.23(m, 2H), 1.37(s, 9H), 1.44-1.56(m, 2H), 1.73-1.85(m, 3H), 2.11-2.15(m, 2H), 3.57 (t, 2H, J = 6.4Hz), 3.21(m, 1H), 3.58(m, 2H), 3.84(d, 1H, J = 9.3Hz), 5.56(brs, 1H), 7.01(s, 1H), 7.11(t, 1H, J = 7.5Hz), 7.21(t, 1H, J = 7.5Hz), 7.38(d, 1H, J = 7.5Hz), 7.59(d, 1H, J = 7.5Hz), 8.24(brs, 1H).

I-176

mp : 116-118 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.18-1.38 (m, 2H), 1.40 (s, 9H), 1.60-1.79 (m, 2H), 1.95-2.30 (m, 5H), 3.30 (m, 1H), 3.69 (m, 1H), 3.80 (s, 3H), 4.64 (s, 2H), 6.67 (d, 1H, J = 8.0Hz), 7.00 (d, 1H, J = 8.5Hz), 7.15-7.24 (m, 2H), 7.32 (brs, 1H).

I-177

mp : 219-220 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.27 (s, 9H), 1.28-1.50 (m, 4H), 1.75-2.01 (m, 4H), 2.18-2.30 (m, 1H), 2.95-3.15 (m, 2H), 4.61 (s, 2H), 6.56 (m, 1H), 6.80 (d, 1H, J = 8.5Hz), 7.16 (m, 2H), 7.28 (brs, 1H), 9.87 (brs, 1H).

I-178

mp : 170-173 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.18-1.39 (m, 2H), 1.40 (s, 9H), 1.50-1.80 (m, 2H), 1.90-2.33 (m, 5H), 2.36 (s, 6H), 2.75 (t, 2H, J = 5.5 Hz), 3.30 (m, 1H), 3.70 (m, 1H), 4.08 (t, 2H, J = 5.5Hz), 6.68 (d, 1H, J = 8.0Hz), 6.94 (d, 1H, J = 7.5Hz), 7.15-7.23 (m, 2H), 7.33 (brs, 1H).

I-179

mp : 191-193 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.20-1.39 (m, 2H), 1.40 (s, 9H), 1.58-1.80 (m, 2H), 1.98-2.32 (m, 5H), 3.30 (m, 1H), 3.70 (d, 1H, J = 9.5 Hz), 4.77 (s, 2H), 6.73 (d, 1H, J = 8.0Hz), 7.04 (d, 1H, J = 8.0Hz), 7.20-7.31 (m, 2H), 7.48 (brs, 1H).

I-180

mp : 174-176 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.10-1.30 (m, 2H), 1.40 (s, 9H), 1.45-1.65 (m, 2H), 1.81-2.02 (m, 3H), 2.15-2.30 (m, 2H), 2.58 (t, 2H, J = 6.5Hz), 3.25 (m, 1H), 3.37 (dt, 2H, J = 5.5, 6.5Hz), 3.60 (d, 1H, J = 9.5Hz), 3.71 (s, 2H), 5.73 (brs, 1H), 7.20-7.40 (m, 5H).

I-181

mp : 176-178 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.15-1.30 (m, 2H), 1.39 (s, 9H), 1.45-1.70 (m, 6H), 1.85-2.01 (m, 3H), 2.15-2.28 (m, 2H), 2.63 (t, 2H, J = 7.0Hz), 3.25 (dt, 2H, J = 6.0, 7.0Hz), 3.27 (m, 1H), 3.63 (m, 1H), 5.35 (brs, 1H), 7.17 (m, 3H), 7.29 (m; 2H).

I-182

mp : 152-154 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.15-1.30 (m, 2H), 1.39 (s, 9H), 1.45-1.65 (m, 2H), 1.85-2.05 (m, 3H), 2.09-2.25 (m, 2H), 3.25 (m, 1H), 3.45 (dt, 2H, J = 5.0, 5.0Hz), 3.55 (t, 2H, J = 5.0Hz), 3.60 (m, 1H), 4.51 (s, 2H), 5.81 (brs, 1H), 7.29-7.40 (m, 5H).

I-183

mp : 208-211 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.20-1.31(m, 2H), 1.39(s, 9H), 1.62-1.68(m, 2H), 1.98-2.25(m, 5H), 3.30(m, 1H), 3.57(d, 1H, J = 9.2Hz), 4.59(d, 2H , J = 5.8Hz), 5.76(brs, 1H), 7.37(dd, 1H, J = 8.4, 2.0Hz), 7.46-7.52(m, 2H), 7.69(brs, 1H), 7.78-7.83(m, 3H).

I-184

mp : 180-182 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.22-1.37(m, 2H), 1.40(s, 9H), 1.60-1.69(m, 2H), 2.05-2.09(m, 2H), 2.21-2.27(m, 3H), 3.45 (m, 1H), 3.64(d, 1H, J = 9.6Hz), 4.77(d, 2H, J = 4.9Hz), 7.43(d, 1H, J = 8.6Hz), 7.46(brs, 1H), 7.61(t, 1H, J =7.7Hz), 7.73(t, 1H, J = 7.7Hz), 7.87(t, 1H, J = 7.7Hz), 8.20(t, 1H, J = 7.7Hz), 8.24(d, 1H, J = 8.6Hz).

I-185

mp : 260-261 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.22-1.32(m, 2H), 1.39(s, 9H), 1.60-1.70(m, 2H), 1.97-2.01(m, 2H), 2.11(m, 1H), 2.21-2.24 (m, 2H), 3.30(m, 1H), 3.61(d, 1H, J = 9.3Hz),4.95(d, 2H, J = 6.0Hz), 5.85(brs, 1H), 7.33(d, 1H, J = 4.8Hz), 7.62(dd, 1H, J = 8.4, 6.9Hz), 7.75(dd, 1H, J = 8.1, 6.9Hz), 8.00(d, 1H, J = 8.1Hz), 8.20(d, 1H, J = 8.4Hz), 8.42(d, 1H, J = 4.8Hz).

I-186

mp : 231-233 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.23-1.40(m, 2H), 1.40(s, 9H), 1.62-1.76(m, 2H), 2.04-2.10(m, 2H), 2.22-2.32(m, 3H), 3.30 (m, 1H), 3.95(d, 1H, J = 9.3Hz), 5.04(d, 2H, J = 4.1Hz), 7.61(d, 1H, J = 5.8Hz), 7.63(brs, 1H), 7.65(dd, 1H, J = 8.2, 6.9Hz), 7.73(dd, 1H, J = 8.5, 6.9Hz), 7.86(d, 1H, J = 8.2Hz), 8.10(d, 1H, J = 8.5Hz), 8.42(d, 1H, J = 5.8Hz).

I-187

mp : 184-187°C

$^1$H-NMR ($CDCl_3$) δ ppm:0.97(t, 3H, J = 7.3 Hz), 1.18-1.30(m, 2H), 1.39(s, 9H), 1.42-1.65(m, 4H), 1.70-1.80(m, 2H), 1.94-2.08(m, 3H), 2.18-2.26(m, 2H), 3.29(m, 1H), 3.61(d, 1H, J = 9.5Hz), 3.93(t, 2H, J = 6.4Hz), 4.39(d, 2H, J = 5.5Hz), 5.67(brs, 1H), 6.79-6.83(m, 3H), 7.23(t, 1H, J = 7.6Hz).

I-188

mp : 224-226 °C

$^1$H-NMR ($CDCl_3$) δ ppm:.16-1.31(m, 2H), 1.38(s, 9H), 1.55-1.70(m, 2H), 1.92-2.07(m, 3H), 2.17-2.23(m, 2H), 3.21 (m, 1H), 3.81(s, 3H), 3.83(s, 6H), 4.05(d, 1H, J = 9.8Hz), 4.34(d, 2H, J = 5.8Hz), 5.96(brs, 1H), 6.47(s, 2H).

I-189

mp : 217-218 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.15-1.30(m, 2H), 1.37(s, 9H), 1.52-1.66(m, 2H), 1.90-2.06(m, 3H), 2.13-2.20(m, 2H), 2.93 (s, 6H), 3.24(m, 1H), 3.94(d, 1H, J = 9.5Hz), 4.30(d, 2H, J = 5.5Hz), 5.73(brs, 1H), 6.69(d, 2H, J = 8.9Hz), 7.12(d, 2H, J = 8.9Hz).

I-190

mp : amorphous solid

$^1$H-NMR ($CDCl_3$) δ ppm:1.17-1.32(m, 2H), 1.39(s, 9H), 1.54-1.72(m, 2H), 1.96-2.13(m, 3H), 2.18-2.27(m, 2H), 3.30 (m, 1H), 3.63(d, 1H, J = 9.2Hz), 4.51(d, 2H, J = 5.8Hz), 5.82(brs, 1H), 7.40(d, 2H, J = 8.5Hz), 8.02(d, 2H, J = 8.5Hz), 8.64(s, 1H).

I-191

mp : 126-128 °C

$^1$H-NMR ($CDCl_3$) δ ppm:0.97(t, 3H, J = 7.4 Hz), 1.10-1.28(m, 2H), 1.36(s, 9H), 1.42-1.86(m, 9H), 2.06-2.18(m, 2H), 3.22(m, 1H), 3.95(t, 2H, J = 4.5Hz), 4.16(brs, 1H), 4.85(s, 2H), 6.82-6.95(m, 3H), 7.26(t, 1H, J = 7.8Hz), 8.54(brs, 1H).

I-192

mp : 178-181 °C

$^1$H-NMR ($CDCl_3$) δ ppm:0.96(t, 3H, J = 7.3 Hz), 1.18-1.52(m, 4H), 1.39(s, 9H), 1.58-1.76(m, 4H), 1.92-2.00(m, 2H), 2.02-2.29(m, 3H), 3.28(m, 1H), 3.78(d, 1H, J = 9.5Hz), 3.89(t, 2H, J = 6.6Hz), 6.00(brs, 1H), 6.78(s, 4H), 7.35(brs, 1H).

I-193

mp : 187-188 °C

$^1$H-NMR ($CDCl_3$+$CD_3OD$) δ ppm:1.21-1.40(m, 2H), 1.38(s, 9H), 1.52-1.69(m, 2H), 1.90-2.00(m, 2H), 2.02-2.20(m, 3H), 3.22(m, 1H), 3.75(s, 3H), 6.79(s, 4H).

I-194

mp : 251-253 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm:1.27(s, 9H), 1.24-1.50(m, 4H), 1.72-1.83(m, 2H), 1.91-1.99(m, 2H), 2.16(m, 1H), 3.02 (m, 1H), 3.82(s, 3H), 6.79(d, 1H, J = 8.2Hz), 7.01(d, 2H, J = 8.8Hz), 7.85(d, 2H, J = 8.8Hz), 9.72(brs, 1H), 8.64(brs, 1H).

I-195

mp : 183-185 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.22-1.37(m, 2H), 1.40(s, 9H), 1.58-1.75(m, 2H), 2.05-2.10(m, 2H), 2.20-2.30(m, 3H), 3.32 (m, 1H), 3.70(s, 2H), 3.73(s, 3H), 6.79(s, 1H), 8.83(brs, 1H).

I-196

mp: 185-187 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.20-1.39 (m, 2H), 1.40 (s, 9H), 1.44 (t, 6H, J = 7.0 Hz), 1.60-1.80 (m, 2H), 1.95-2.35 (m, 5H), 3.30 (m, 1H), 3.62 (d, 1H, J = 8.9 Hz), 4.06 (q, 2H, J = 7.0 Hz), 4.09 (q, 2H, J = 7.0 Hz), 6.08 (s, 1H), 7.02 (s, 1H), 7.36 (s, 1H).

I-197

mp : 211-213 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.20-1.40 (m, 2H), 1.41 (s, 9H), 1.60-1.80 (m, 2H), 2.00-2.36 (m, 5H), 2.61 (s, 3H), 3.32 (m, 1H), 3.64 (d, 1H, J = 9.2 Hz), 7.28 (s, 1H), 7.43 (t, 1H, J = 7.5 Hz), 7.69 (d, 1H, J = 7.5 Hz), 7.85 (d, 1H, J = 7.5 Hz), 8.02 (s, 1H).

I-198

mp : 268-269 °C

$^1$H-NMR ($CDCl_3$) δ ppm:1.20-1.39 (m, 2H), 1.40 (s, 9H), 1.42-2.32 (m, 7H), 2.90-3.10 (m, 4H), 3.30 (m, 1H), 3.68 (d, 1H, J = 8.8 Hz), 6.59 (s, 1H), 7.18 (d, 1H, J = 8.7 Hz), 7.59 (d, 1H, J = 8.7 Hz), 7.77 (brs, 1H).

I-199 mp : 221-224 °C

I-200 mp : 237-240 °C

I-201 mp : 87-90 °C

I-202 mp : 222-223°C

I-203 mp : 255-257 °C

I-204 mp : 234-236 °C

I-205 mp : 208-210 °C

I-206 mp : 217-218 °C

I-207 mp : 275-279 °C

I-208 mp : 248-250 °C

I-209 mp : 256-258 °C

I-210 mp : 270-271 °C

I-211 mp : 219-220 °C

I-212 mp : 260-261 °C

I-213 mp : >300 °C

I-214 mp : 206-207 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 0.93(t, 3H, J = 7.4 Hz), 1.30-1.42(m, 2H), 1.49(d, 6H, J = 6.9 Hz), 1.53-1.65(m, 2H), 2.61 (t, 2H, J = 7.7 Hz), 4.15(sept, 1H, J = 6.9 Hz), 7.04(d, 1H, J = 8.2 Hz), 7.20(d, 2H, J = 8.2 Hz), 7.51(d. 2H, J = 8.2 Hz), 7.89(d, 1H, J = 8.8 Hz), 8.18(s, 1H), 10.55(s, 1H).

I-215

$^1$H-NMR ($CDCl_3$) δ ppm:0.93(t, 3H, J = 7.3Hz), 1.30-1.41(m, 2H), 1.52-1.63(m, 2H), 1.95(s, 6H), 2.61(t, 2H, J = 7.8Hz), 6.99(brs, 1H), 7.20(d, 2H, J = 8.5Hz), 7.65(d, 2H, J = 8.5Hz), 7.93(dd, 1H, J = 8.5, 2.5Hz), 8.28(d, 1H, J = 8.5Hz), 8.55(d, 1H, J = 2.5Hz), 9.76(brs, 1H).

Ia-1

mp 221-224 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.19-1.38 (m, 2H), 1.40 (s, 9H), 1.62-1.77 (m, 2H), 2.00-2.31 (m, 5H), 3.18 (t, 4H, J = 4.8 Hz), 3.21-3.38 (m, 1H), 3.85 (t, 4H, J = 4.8 Hz), 6.64-6.32 (m, 2H), 7.11 (s, 1H), 7.20 (t, 1H, J = 7.8 Hz), 7.45 (s, 1H).

Ia-3

mp 87-90 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.25 (d, 6H, J = 6.3 Hz), 1.37 (d, 6H, J = 6.9 Hz), 1.59-1.70 (m, 2H), 1.76-1.88 (m, 2H), 2.32-2.42 (m, 4H), 3.11-3.23 (m, 3H), 3.39 (d, 2H, J = 10.8 Hz), 3.74-3.86 (m, 2H), 4.34 (t, 1H, J = 9.0 Hz), 6.86 (d, 2H, J = 9.0 Hz), 7.30 (s, 1H), 7.40 (d, 2H, J = 9.0 Hz).

Ia-4

mp 233-234 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.25 (d, 6H, J = 6.3 Hz), 1.40 (s, 9H), 1.26-1.37 (m, 2H), 1.62-1.78 (m, 2H), 2.00-2.22 (m, 5H), 2.42 (t, 2H, J = 11.7 Hz), 3.20-3.40 (m, 1H), 3.46 (d, 2H, J = 10.5 Hz), 3.67 (d, 1H, J = 9.3 Hz), 3.72-3.84 (m, 2H), 6.62-6.76 (m, 2H), 7.10 (s, 1H), 7.18 (t, 1H, J = 7.8 Hz), 7.42 (s, 1H).

Ia-5

mp 125-126 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.25 (d, 6H, J = 6.3 Hz); 1.40 (s, 9H), 1.59-1.70 (m, 2H), 1.77-1.84 (m, 2H), 2.30-2.46 (m, 4H), 3.24 (q, 2H, J = 6.6 Hz), 3.38 (d, 2H, J = 11.7 Hz), 3.74-3.88 (m, 2H), 4.08 (t, 1H, J = 5.7 Hz), 6.87 (d, 2H, J = 8.7 Hz), 7.30 (s, 1H), 7.41 (d, 2H, J = 8.7 Hz).

Ia-6

mp 229-230 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.25 (d, 6H, J = 6.3 Hz), 1.26-1.34 (m, 2H), 1.39 (d, 6H, J = 6.9 Hz), 1.61-1.77 (m, 2H), 1.98-1.26 (m, 5H), 2.32-2.46 (m, 2H), 3.15 (quintet, 1H, J = 6.6 Hz), 3.22-3.35 (m, 1H), 3.39 (d, 2H, J = 11.4 Hz), 3.74-3.92 (m, 2H), 3.88 (d, 1H, J = 8.4 Hz), 6.96-6.71 (m, 2H), 7.05 (brs, 1H), 7.39 (d, 2H, J = 9.3 Hz).

Ia-7

mp 253-254 °C

$^1$H-NMR (DMSO) δ ppm: 1.24-1.60 (m, 4H), 1.27 (s, 9H), 1.77-2.07 (m, 4H), 2.16-2.34 (m, 1H), 2.97-3.15 (m, 1H), 6.78 (d, 1H, J = 7.2 Hz), 7.01 (t, 1H, J = 6.0 Hz), 7.27 (t, 2H, J = 6.6 Hz), 7.58 (d, 2H, J = 7.5 Hz), 9.78 (s, 1H).

Ia-8

mp 257-258 °C

$^1$H-NMR (DMSO) δ ppm: 1.22-1.54 (m, 4H), 1.27 (s, 9H), 1.77-1.88 (m, 2H), 1.88-2.00 (m, 2H), 2.16-2.34 (m, 1H), 2.23 (s, 3H), 2.92-3.14 (m, 1H), 6.77 (d, 1H, J = 8.4 Hz), 7.07 (d, 2H, J = 8.4 Hz), 7.46 (d, 2H, J = 8.1 Hz), 9.68 (s, 1H).

Ia-9

mp 231-232 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.21 (t, 3H, J = 7.5 Hz), 1.22-1.38 (m, 2H), 1.40 (s, 9H), 1.62-1.78 (m, 2H), 1.98-2.31 (m, 5H), 2.61 (q, 2H, J = 7.5 Hz), 3.24-3.38 (m, 1H), 3.70 (d, 1H, J = 9.9 Hz), 7.11 (s, 1H), 7.14 (d, 2H, J = 8.7 Hz), 7.40 (d, 2H, J = 8.7 Hz).

Ia-10

mp 233-234 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 0.96 (t, 3H, J = 7.2 Hz), 1.20-1.37 (m, 2H), 1.40 (s, 9H), 1.56-1.78 (m, 4H), 1.98-2.32 (m, 5H), 2.54 (t, 2H, J = 7.2 Hz), 3.23-3.39 (m, 1H), 3.66 (d, 1H, J = 9.6 Hz), 7.08 (s, 1H), 7.12 (d, 2H, J = 8.4 Hz), 7.39 (d, 2H, J = 8.4 Hz).

Ia-11

mp 243-244 °C

$^1$H-NMR (CDCl3) δ ppm: 1.22 (d, 6H, J = 6.9), 1.22-1.77 (m, 4H), 1.40 (s, 9H), 2.01-2.30 (m, 5H), 2.83-2.92 (m, 1H), 3.24-3.40 (m, 1H), 3.66-3.69 (m, 1H), 7.09 (s, 1H), 7.17 (d, 2H, J = 8.4 Hz), 7.41 (d, 2H, J = 8.1 Hz).

Ia-12

mp 246-247 °C

$^1$H-NMR (CDCl3) δ ppm: 0.80 (t, 3H, J = 7.5), 1.20 (d, 3H, J = 7.2), 1.26-1.77 (m, 6H), 1.40 (s, 9H), 2.01-2.27 (m, 5H), 2.51-2.60 (m, 1H), 3.20-3.38 (m, 1H), 3.64-3.69 (m, 1H), 7.08 (s, 1H), 7.12 (d, 2H, J = 8.4 Hz), 7.41 (d, 2H, J = 8.4 Hz).

Ia-13
mp 278-279 °C
$^1$H-NMR (CDCl3) δ ppm: 1.22-1.52 (m, 4H), 1.29 (s, 9H), 1.40 (s, 9H), 1.61-1.77 (m, 2H), 2.02-2.30 (m, 5H), 3.20-3.38 (m, 1H), 3.66-3.69 (m, 1H), 7.10 (s, 1H), 7.33 (d, 2H, J = 9.0 Hz), 7.42 (d, 2H, J = 8.7 Hz).
Ia-14
mp 263-264 °C
$^1$H-NMR (DMSO) δ ppm: 1.24-1.51 (m, 4H), 1.27 (s, 9H), 1.82-1.99 (m, 4H), 2.19-2.28 (m, 1H), 2.98-3.12 (m, 1H), 6.78 (d, 1H, J = 8.7 Hz), 7.33 (d, 2H, J = 8.7 Hz), 7.61 (d, 2H, J = 9.0 Hz), 9.94 (s, 1H).
Ia-15
mp 209-210 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 1.25 (d, 6H, J = 6.3 Hz), 1.40 (s, 9H), 1.70-1.98 (m, 8H), 2.19-2.38 (m, 3H), 3.39 (d, 2H, J = 11.7 Hz), 3.58-3.92 (m, 3H), 4.12-4.26 (m, 1H), 6.82-6.96 (m, 2H), 7.10 (br, 1H), 7.41 (d, 2H, J = 8.1 Hz).
Ia-16
mp 238-240 °C
$^1$H-NMR (DMSO) δ ppm: 1.22-1.52 (m, 4H), 1.27 (s, 9H), 1.81-1.84 (m, 2H), 1.93-1.97 (m, 2H), 2.16-2.23 (m, 1H), 2.95-3.12 (m, 1H), 3.70 (s, 3H), 6.77 (d, 1H, J = 8.4 Hz). 6.85 (d, 2H, J = 9.0 Hz), 7.48 (d, 2H, J = 9.3 Hz), 9.64 (s, 1H).
Ia-17
mp 245-246 °C
$^1$H-NMR (DMSO) δ ppm: 1.22-1.52 (m, 4H), 1.27 (s, 9H), 1.83-1.87 (m, 2H), 1.94-1.99 (m, 2H), 2.20-2.28 (m, 1H), 2.98-3.12 (m, 1H), 6.78 (d, 1H, J = 8.7 Hz), 7.28 (d, 2H, J = 8.7 Hz), 7.69 (d, 2H, J = 9.0 Hz), 9.64 (s, 1H).
Ia-18
mp 240-241 °C
$^1$H-NMR (CDCl3) δ ppm: 1.22-1.78 (m, 4H), 1.40 (s, 9H), 2.05-2.33 (m, 5H), 3.22-3.44 (m, 1H), 3.64-3.67 (m, 1H), 6.61 (s, 1H), 6.69-6.77 (m, 2H).
Ia-19
mp 240-241 °C
$^1$H-NMR (CDCl3) δ ppm: 1.24-1.77 (m, 4H), 1.40 (s, 9H), 2.05-2.30 (m, 5H), 3.22-3.38 (m, 1H), 3.70-3.74 (m, 1H), 7.00-7.15 (m, 3H), 7.36 (s, 1H), 8.29-8.34 (m, 1H).
Ia-20
mp 239-240 °C
$^1$H-NMR (CDCl3) δ ppm: 1.24-1.78 (m, 4H), 1.40 (s, 9H), 2.02-2.30 (m, 5H), 3.22-3.40 (m, 1H), 3.63-3.66 (m, 1H), 6.89-6.84 (m, 1H), 7.10-7.17 (m, 2H), 7.22-7.34 (m, 1H), 7.48-7.51 (m, 1H).
Ia-21
mp 259-260 °C
$^1$H-NMR ($CDCl_3$/DMSO) δ ppm: 1,21 (d, 6H, J = 6.0 Hz), 1.22-1.44 (m, 2H), 1.40 (s, 9H), 1.60-1.78 (m, 2H), 1.87-2.03 (m, 2H), 2.08-2.29 (m, 3H), 2.39 (t, 2H, J = 10.2 Hz), 3.14-3.32 (m, 1H), 3.19 (d, 2H, J = 11.4 Hz), 3.77-3.93 (m, 2H), 5.33 (d, 1H, J = 9.0 Hz), 6.84 (dd. 1H, JFH, HH = 8.1, 8.1 Hz), 7.20 (d, 1H, J = 7.8 Hz), 7.49 (d, 1H, JFH = 14.7 Hz), 8.86 (s, 1H). Ia-22
mp 234-235 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 1,20 (d, 6H, J = 5.7 Hz), 1.22-1.44 (m, 2H), 1.38 (s, 9H), 1.54-1.76 (m, 2H), 1.94-2.32 (m, 5H), 2.27 (s, 3H), 2.39 (t, 2H, J = 10.8 Hz), 2.87 (d, 2H, J = 11.4 Hz), 3.20-3.40 (m, 1H), 3.76-3.92 (m, 2H), 3.91 (d, 1H, J = 9.3 Hz), 6.93 (d, 1H, J = 8.1 Hz), 7.21 (brs, 1H), 7.27 (brs, 1H), 7.36 (brs, 1H).
Ia-23
mp 195-196 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 1.20-1.44 (m, 4H), 1.41 (s, 9H), 1.59-1.76 (m, 2H), 2.03-2.14 (m, 2H), 2.15-2.33 (m, 3H), 3.20-3.40 (m, 1H), 3.64 (s, 1H, J = 9.0 Hz), 7.19-7.24 (m, 1H), 7.44 (brs, 1H), 7.52-7.63 (m, 2H), 8.17 (d, 1H, J = 8.7 Hz).
Ia-24
mp 209-210 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 1.22-1.39 (m, 2H), 1.56 (s, 9H), 1.61-1.78 (m, 2H), 2.00-2.12 (m, 2H), 2.17-2.33 (m, 3H), 3.24-3.39 (m, 1H), 3.67 (d, 1H, J = 9.6 Hz), 6.90-7.01 (m, 1H), 7.21 (s, 1H), 7.95-8.06 (m, 1H).
Ia-25
mp 278-281 °C
$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.10 (d, 6H, J = 6.3 Hz), 1.27 (s, 9H), 1.28-1.55 (m, 4H), 1.78-2.00 (m, 4H), 2.11-2.26 (m, 1H), 2.31 (t, 2H, J = 11.1 Hz), 3.00-3.10 (m, 1H), 3.08 (d, 1H, J = 10.8 Hz), 3.67-3.80 (m, 2H), 6.78 (d, 1H, J = 8.7 Hz), 7.08 (d, 1H, J = 9.0 Hz), 7.41 (dd, 1H, J = 2.4, 8.7 Hz), 7.78 (d, 1H, J = 8.7 Hz), 9.85 (s, 1H).
Ia-26
mp 253-255 °C
$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.13 (d, 6H, J = 6.0 Hz), 1.27 (s, 9H), 1.28-1.52 (m, 4H), 1.78-2.00 (m, 4H), 2.21 (t, 2H,

J = 11.1 Hz), 2.26-2.36 (m, 1H), 2.96-3.10 (m, 1H), 3.56 (d, 1H, J = 12.3 Hz), 3.60-3.72 (m, 2H), 6.66-6.84 (m, 4H), 7.47 (t, 1H, J = 9.3 Hz), 9.28 (s, 1H).

Ia-27

mp 223-226 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.09 (d, 6H, J = 6.3 Hz), 1.27 (s, 9H), 1.28-1.54 (m, 4H), 1.77-2.01 (m, 4H), 2.32 (t, 2H, J = 11.1 Hz), 2.32-2.42 (m, 1H), 2.90 (d, 1H, J = 11.4 Hz), 2.96-3.12 (m, 1H), 3.76-3.92 (m, 2H), 6.78-6.98 (m, 3H), 7.68 (dd, 1H, J = 3.3, 8.7 Hz), 8.84 (s, 1H).

Ia-28

mp 237-238 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.22-1.44 (m, 2H), 1,25 (d, 6H, J = 6.3 Hz), 1.40 (s, 9H), 1.61-1.79 (m, 2H), 2.05-2.32 (m, 5H), 2.21 (s, 3H), 2.38 (t, 2H, J = 10.2 Hz), 3.22-3.42 (m, 1H), 3.40 (d, 2H, J = 11.1 Hz), 3.65 (d, 1H, J = 9.3 Hz), 3.72-3.90 (m, 2H), 6.70-6.78 (m, 2H), 6.81 (brs, 1H), 7.50 (d, 1H, J = 9.6 Hz).

Ia-29

mp 208-209 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.22 (d, 6H, J = 6.0 Hz), 1.23-1.40 (m, 2H), 1.40 (s, 9H), 1.60-1.78 (m, 2H), 2.00-2.16 (m, 2H), 2.14-2.33 (m, 3H), 2.45 (t, 2H, J = 11.1 Hz), 3.21 (d, 2H, J = 10.8 Hz), 3.24-3.38 (m, 1H), 3.63 (d, 1H, J = 9.3 Hz), 3.80-3.94 (m, 2H), 5.33 (d, 1H, J = 9.0 Hz), 6.66 (dd, 1H, JFH, HH = 6.6, 6.6 Hz), 7.16 (brs, 1H), 7.89 (dd, 1H, JFH, HH = 9.0, 9.0 Hz).

Ia-30

mp 284-287 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.08 (d, 6H, J = 6.0 Hz), 1.26 (s, 9H), 1.28-1.53 (m, 4H), 1.82-2.22 (m, 4H), 2.25-2.39 (m, 1H), 2.78 (t, 2H, J = 10.5 Hz), 2.97-3.14 (m, 1H), 3.18 (d, 2H, J = 11.4 Hz), 3.65-3.76 (m, 2H), 6.79 (d, 1H, J = 8.7 Hz), 9.75 (s, 1H).

Ia-31

mp 200-201 °C

$^1$H-NMR (CDCl3) δ ppm: 1.22-1.40 (m, 2H), 1.40 (s, 9H), 1.62-1.76 (m, 2H), 2.04-2.32 (m, 5H), 3.22-3.40 (m, 1H), 3.62-3.66 (m, 1H), 7.22-7.24 (m, 1H), 7.38-7.38 (m, 1H), 7.60 (s, 1H), 8.33-8.36 (m, 1H).

Ia-32

mp 260-261 °C

$^1$H-NMR ($CDCl_3$/DMSO) δ ppm: 1.25-1.42 (m, 2H), 1.38 (s, 9H), 1.64 (q, 2H, J = 13.5 Hz), 1.95 (d, 2H, J = 12.3 Hz), 2.16 (d, 2H, J = 10.5 Hz), 2.18-2.32 (m, 1H), 3.14-3.30 (m, 1H), 5.53 (d, 1H, J = 9.0 Hz), 7.31 (d, 1H, J = 8.7 Hz), 7.46 (dd, 1H, J = 2.4, 8.7 Hz), 7.90 (d, 1H, J = 2.1 Hz), 9.35 (s, 1H).

Ia-33

mp 227 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.27 (s, 9H), 1.30-1.56 (m, 4H), 1.78-2.01 (m, 2H), 2.12-2.36 (m, 2H), 2.96-3.13 (m, 1H), 3.70 (s, 3H), 3.71 (s, 3H), 6.77 (d, 1H, J = 8.7 Hz), 6.85 (d, 1H, J = 8.7 Hz), 7.06 (dd, 1H, J = 2.4, 8.7 Hz), 7.33 (d, 1H, J = 2.4 Hz), 9.65 (s, 1H).

Ia-35

mp 214-216 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.23-1.38 (m, 2H), 1.40 (s, 9H), 1.6a-1.76 (m, 2H), 2.00-2.12 (m. 2H), 2.20-2.32 (m, 3H), 3.24-3.39 (m, 1H), 3.68 (d, 1H, J = 9.0 Hz), 6.77 (d, 1H, J = 8.7 Hz), 7.00 (dd, 1H, J = 2.4, 8.7 Hz), 7.77 (s, 1H), 8.45 (d, 1H, J = 2.4 Hz).

Ia-36

mp 241-242 °C

$^1$H-NMR ($CDCl_3$/DMSO) δ ppm: 1.25-1.42 (m, 2H), 1.37 (s, 9H), 1.62 (q, 2H, J = 11.7 Hz), 1.93 (d, 2H, J = 12.0 Hz), 2.12 (d, 2H, J = 10.8 Hz), 2.16-2.30 (m, 1H), 3.12-3.28 (m, 1H), 3.84 (s, 3H), 6.07 (d, 1H, J = 8.4 Hz), 6.89 (dd, 1H, JFH, HH = 9.3, 9.3 Hz), 7.24 (d, 1H, J = 8.7 Hz), 7.55 (d, 1H, JFH = 13.5 Hz), 9.32 (s, 1H).

Ia-37

mp 248-249 °C

$^1$H-NMR (CDCl3) δ ppm: 0.60-0.73 (m, 1H), 0.91 (d, 6H, J = 6.6), 1.12-1.40 (m, 2H), 1.40 (s, 9H), 1.54-1.88 (m, 5H), 1.98-2.29 (m, 7H), 3.22-3.37 (m, 1H), 3.51-3.54 (m, 2H), 3.72 (d, 1H, J = 9.6), 6.88 (d, 1H, J = 8.7), 7.06 (s, 1H), 7.35 (d, 1H, J = 9.0).

Ia-38

mp 237-238 °C

$^1$H-NMR (CDCl3) δ ppm: 1.01 (d, 6H, J = 6.6), 1.20-1.40 (m, 2H), 1.40 (s, 9H), 1.60-1.74 (m, 4H), 1.99-2.28 (m, 7H), 2.69-2.82 (m, 2H), 3.02-3.14 (m, 2H), 3.20-3.38 (m, 1H), 3.80-3.90 (m, 1H), 6.83-6.86 (m, 2H), 7.14 (s, 1H), 7.34 (d, 1H, J = 8.4).

Ia-39

mp 234-235 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 1.20-1.36 (m, 2H), 1.40 (s, 9H), 1.60-1.77 (m, 2H), 1.90-2.32 (m, 5H), 3.21-3.39 (m, 1H), 3.65 (d, 1H, J = 9.6 Hz), 6.87 (d, 1H, J = 8.7 Hz), 7.04 (s, 1H), 7.37 (dd, 1H, J = 2.7, 8.7.Hz), 7.56 (d, 1H, J = 2.7 Hz).
Ia-40
mp 257-258 °C
$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.14 (d, 6H, J = 6.0 Hz), 1.27 (s, 9H), 1.28-1.53 (m, 4H), 1.78-2.00 (m, 4H), 2.13-2.256 (m, 1H), 2.30 (t, 2H, J = 11.7 Hz), 2.97-3.12 (m, 1H), 3.53-3.67 (m, 2H), 4.01 (d, 1H, J = 12.3 Hz), 6.80 (dd, 1H, J = 3.0, 9.0 Hz), 7.79 (d, 1H, J = 9.0 Hz), 8.27 (s, 1H), 9.66 (s, 1H).
Ia-41
mp 245-246 °C
$^1$H-NMR ($CDCl_3$/DMSO) δ ppm: 1.25-1.42 (m, 2H), 1.37 (s, 9H), 1.62 (q, 2H, J = 12.6 Hz), 1.94 (d, 2H, J = 11.1 Hz), 2.13 (d, 2H, J = 11.1 Hz), 2.18-2.35 (m, 1H), 3.11-3.29 (m, 1H), 6.07 (d, 1H, J = 8.1 Hz), 6.95-7.06 (m, 1H), 7.14-7.27 (m, 1H), 7.44 (d, 1H, J = 7.2 Hz), 7.79 (s, 1H), 9.48 (s, 1H).
Ia-43
mp 294-295 °C
$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.26 (s, 9H), 1.28-1.53 (m, 4H), 1.76-1.87 (m, 2H), 1.89-2.00 (m, 2H), 2.13-2.25 (m, 1H), 2.96-3.10 (m, 5H), 3.52-3.60 (m, 4H), 6.78 (d, 1H, J = 9.0 Hz), 6.88 (d, 2H, J = 9.0 Hz), 7.44 (d, 2H, J = 9.0 Hz), 9.59 (s, 1H).
Ia-44
mp 250-252 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 1.13 (d, 6H, J = 6.3 Hz), 1.21-1.38 (m, 2H), 1.41 (s, 9H), 1.63-1.80 (m, 2H), 1.93 (t, 2H, J = 10.8 Hz), 2.00-2.10 (m, 2H), 2.16-2.32 (m, 3H), 3.24-3.39 (m, 1H), 3.54 (d, 2H, J = 10.2 Hz), 3.64-3.78 (m, 3H), 7.47 (s, 1H), 7.69 (d, 2H, J = 9.0 Hz), 7.73 (d, 2H, J = 9.0 Hz).
Ia-45
mp 193 °C
$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.10 (t, 6H, J = 7.2 Hz), 1.26 (s, 9H), 1.28-1.52 (m, 4H), 1.75-1.86 (m, 2H), 1.89-2.01 (m, 2H), 2.10-2.22 (m, 1H), 2.96-3.10 (m, 1H), 3.30-3.52 (m, 12H), 6.60 (d, 2H, J = 9.0 Hz), 6.80 (d, 1H, J = 9.0 Hz), 7.33 (d, 2H, J = 9.0 Hz), 9.46 (s, 1H).
Ia-46
mp >300 °C
$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.28 (s, 9H), 1.28-1.58 (m, 4H), 1.83-2.04 (m, 4H), 2.23-2.36 (m, 1H), 2.46 (s, 3H), 3.00-3.14 (m, 1H), 6.79 (d, 1H, J = 8.7 Hz), 7.34 (d, 1H, J = 8.7 Hz), 7.78 (d, 2H, J = 8.7 Hz), 7.89 (d, 1H, J = 8.4 Hz), 7.91 (s, 1H), 8.00 (d, 2H, J = 8.7 Hz), 10.13 (s, 1H).
Ia-47
mp 236-237 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 0.97 (d, 6H, J = 6.6 Hz), 1.01 (d, 6H, J = 6.6 Hz), 1.20-1.37 (m, 2H), 1.40 (s, 9H), 1.60-1.84 (m, 3H), 1.97-2.31 (m, 5H), 2.50 (t, 1H, J = 10.8 Hz), 2.78 (dt, 1H, J = 3.3, 11.4 Hz), 3.25-3.38 (m, 1H), 3.45 (d, 1H, J = 11.4 Hz), 3.75 (dt, 1H, J = 2.4, 11.4 Hz), 4.02 (dt, 1H, J = 2.4, 11.4 Hz), 6.88 (d, 2H, J = 9.0 Hz), 7.05 (s, 1H), 7.39 (d, 2H, J = 9.0 Hz).
Ia-48
mp 228-229 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 0.88 (t, 6H, J = 7.2 Hz), 1.19-1.45 (m, 4H), 1.40 (s, 9H), 1.45-1.76 (m, 4H), 1.76-1.92 (m, 1H), 1.96-2.30 (m, 5H), 2.66-3.20 (m, 3H), 3.20-3.40 (m, 1H), 3.78 (d, 1H, J = 9.3 Hz), 3.82 (s, 1H), 6.62-6.98 (m, 2H), 7.09 (brs, 1H), 7.37 (d, 2H, J = 7.8 Hz).
Ia-49
mp 262-263 °C
$^1$H-NMR ($CDCl_3$/DMSO) δ ppm: 1.21 (d, 6H, J = 5.7 Hz), 1.26-1.34 (m, 2H), 1.37 (d, 6H, J = 5.4 Hz), 1.52-1.76 (m, 2H), 1.85-2.03 (m, 2H), 2.03-2.30 (m, 3H), 2.30-2.53 (m, 2H), 3.02-3.33 (m, 4H), 3.75-3.98 (m, 2H), 5.70 (brs, 1H), 6.73-6.98 (m, 1H), 7.14-7.25 (m, 1H), 7.52 (d, 1H, JFH = 13.5 Hz), 8.86 (brs, 1H).
Ia-50
mp 232-233 °C
$^1$H-NMR($CDCl_3$) δ ppm: 1.21 (d, 6H, J = 6.3 Hz), 1.22-1.37 (m, 2H), 1.38 (d, 6H, J = 6.9 Hz), 1.68 (q, 2H, J = 12.6 Hz), 1.98-2.26 (m, 5H), 2.29 (s, 3H), 2.41 (t, 2H, J = 10.2 Hz), 2.88 (d, 2H, J = 11.1 Hz), 3.15 (septet, 1H, J = 6.6 Hz), 3.21-3.37 (m, 1H), 3.77-3.92 (m, 2H), 3.87 (d, 1H, J = 7.8 Hz), 6.88-7.06 (m, 3H), 7.35 (s, 1H).
Ia-51
mp 211-212 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 1.20-1.42 (m, 2H), 1.26 (d, 6H, J = 6.3 Hz), 1.38 (d, 6H, J = 6.9 Hz), 1.62-1.78 (m, 2H), 1.99-2.28 (m, 5H), 2.49 (dd, 2H, J = 10.5, 10.5 Hz), 3.17 (quint, 1H, J = 6.9 Hz), 3.20-3.38 (m, 1H), 3.66-3.99 (m,

2H), 3.90-4.01 (m, 3H), 6.62 (d, 1H, J = 9.0 Hz), 7.06 (s, 1H), 7.90 (dd, 1H, J = 2.4, 9.0 Hz), 8.09 (d, 1H, J = 2.4 Hz).

Ia-52

mp 247-249 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.21-1.36 (m, 2H), 1.40 (s, 9H) 1.62-1.78 (m, 2H), 1.98-2.32 (m, 5H), 2.55 (t, 4H, J = 6.0 Hz), 3.23-3.38 (m, 1H), 3.55 (t, 4H, J = 6.0 Hz), 3.72 (d, 1H, J = 9.6 Hz), 6.94 (d, 2H, J = 9.0 Hz), 7.10 (s, 1H), 7.42 (d, 1H, J = 9.0 Hz).

Ia-53

mp 234-235 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.22-1.38 (m, 2H), 1.41 (s, 9H) 1.64-1.80 (m, 2H), 2.00-2.32 (m, 5H), 3.25-3.40 (m, 1H), 3.73 (d, 1H, J = 9.3 Hz), 7.43 (s, 1H), 7.48 (t, 2H, J = 7.5 Hz), 7.55-7.66 (m, 3H), 7.68-7.89 (m, 4H).

Ia-54

mp 235-236 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.24-1.39 (m, 2H), 1.25 (d, 6H, J = 6.3 Hz), 1.39 (d, 6H, J = 6.9 Hz), 1.60-1.80 (m, 2H), 2.00-2.28 (m, 5H), 2.21 (s, 3H), 2.38 (t, 2H, J = 10.8 Hz), 3.15 (septet, 1H, J = 6.3 Hz), 3.23-3.38 (m, 1H), 3.40 (d, 2H, J = 11.7 Hz), 3.72-3.88 (m, 2H), 3.87 (d, 1H, J = 9.3 Hz), 6.78-6.86 (m, 3H), 7.50 (d, 1H, J = 9.6 Hz).

Ia-55

mp 185-186 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.14 (d, 6H, J = 6.3 Hz), 1.22-1.38 (m, 2H), 1.41 (s, 9H), 1.62-1.78 (m, 2H), 2.02 (t, 2H, J = 10.5 Hz), 2.02-2.10 (m, 2H), 2.16-2.31 (m, 3H), 3.24-3.39 (m, 1H), 3.56 (d, 2H, J = 9.3 Hz), 3.63-3.80 (m, 3H), 7.46 (dd, 1H, J = 1.5, 8.1 Hz), 7.51 (t, 1H, J = 8.1 Hz), 7.63 (s, 1H), 7.81 (t, 1H, J = 1.8 Hz), 7.98 (dt, 1H, J = 1.8, 8.1 Hz).

Ia-56

mp 229-230 °C

$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.28-1.54 (m, 4H), 1.38 (s, 6H), 1.78-1.84 (m, 2H), 1.90-2.00 (m, 2H), 2.15-2.30 (m, 1H), 2.97-3.13 (m, 1H), 4.90 (s, 1H), 6.79 (d, 1H, J = 9.0 Hz), 7.34 (d, 2H, J = 8.7 Hz), 7.48 (d, 2H, J = 8.4 Hz), 9.72 (s, 1H).

Ia-57

mp 211-212 °C

$^1$H-NMR ($CDCl_3$/DMSO) δ ppm: 1.24-1.40 (m, 2H), 1.38 (s, 9H), 1.57-1.74 (m, 2H), 1.91 (s, 3H), 1.92-2.01 (m, 2H), 2.12-2.24 (m, 2H), 2.51 (brs, 1H), 3.18-3.33 (m, 1H), 4.96 (d, 1H, J = 9.3 Hz), 7.16-7.53 (m, 9H), 7.41 (s, 1H).

Ia-58

mp 298-299 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.24 (s, 9H), 1.27 (s, 9H), 1.28-1.54 (m, 4H), 1.75-2.02 (m, 4H), 2.14-2.28 (m, 1H), 2.97-3.11 (m, 1H), 6.78 (d, 1H, J = 8.4 Hz), 7.18 (d, 2H, J = 9.0 Hz), 7.48 (d, 2H, J = 9.0 Hz), 9.46 (s, 1H), 9.76 (s, 1H).

Ia-59

mp 253-254 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.22-1.40 (m, 2H), 1.41 (s, 9H), 1.65-1.81 (m, 2H), 2.04-2.16 (m, 2H), 2.22-2.36 (m, 2H), 3.24-3.41 (m, 1H), 3.74 (d, 1H, J = 9.6 Hz), 7.40-7.54 (m, 3H), 7.88-8.01 (m, 3H), 8.66 (d, 1H, J = 1.5 Hz), 9.57 (d, 1H, J = 1.2 Hz).

Ia-60

mp 213-214 °C

$^1$H-NMR (DMSO) δ ppm: 1.32-1.50 (m, 2H), 1.35 (s, 9H), 1.52-1.70 (m, 2H), 1.88-2.00 (m, 2H), 2.04-2.16 (m, 2H), 2.22-2.38 (m, 1H), 2.65 (s, 3H), 2.99-3.15 (m, 1H), 6.46 (d, 1H, J = 9.3 Hz), 7.28 (d, 1H, J = 9.0 Hz), 7.81 (s, 1H), 8.20 (s, 1H), 8.47 (s, 1H), 9.89 (s, 1H).

Ia-61

mp 274-275 °C

$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 1H), 1.28-1.58 (m, 4H), 1.84-2.08 (m, 4H), 2.22-2.40 (m, 1H), 2.99-3.15 (m, 1H), 3.01 (s, 3H), 6.81 (d, 1H, J = 8.1 Hz), 7.78 (d, 2H, J = 7.8 Hz), 7.84 (d, 2H, J = 8.4 Hz), 8.18 (s, 1H), 10.43 (s, 1H).

Ia-62

mp 235-236 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 1.22-1.39 (m, 2H), 1.41 (s, 3H), 1.66-1.80 (m, 2H), 2.01-2.12 (m, 2H), 2.14-2.22 (m, 1H), 2.23-2.34 (m, 2H), 3.24-3.42 (m, 1H), 3.69 (d, 1H, J = 9.5 Hz), 6.44 (d, 1H, J = 9.3 Hz), 7.27 (brs, 1H), 7.28 (d, 1H, J = 9.3 Hz), 7.37 (dd, 1H, J = 2.4, 9.0 Hz), 7.68 (d, 1H, J = 9.6 Hz), 8.04 (d, 1H, J = 2.4 Hz).

Ia-63

mp 277-279 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.27 (s, 9H), 1.28-1.54 (m, 4H), 1.77-2.02 (m, 4H), 2.15-2.29 (m, 1H), 2.90 (s, 3H), 2.96-3.13 (m, 1H), 6.79 (d, 1H, J = 8.7 Hz), 7.12 (d, 2H, J = 9.0 Hz), 7.54 (d, 2H, J = 9.0 Hz), 9.50 (s, 1H), 9.81 (s, 1H).

Ia-64

mp 259-260 °C
$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.26 (s, 9H), 1.26-1.50 (m, 4H), 1.74-1.99 (m, 4H), 2.10-2.25 (m, 1H), 2.95-3.10 (m, 1H), 6.78 (d, 1H, J = 8.7 Hz), 6.97 (d, 2H, J = 9.0 Hz), 7.42 (d, 2H, J = 9.0 Hz), 7.50-7.71 (m, 5H), 9.73 (s, 1H), 10.05 (s, 1H).
Ia-65
mp 292-293 °C
$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.27 (s, 9H), 1.28-1.54 (m, 4H), 1.62-1.72 (m, 2H), 1.77-1.87 (m, 2H), 1.91-2.10 (m, 4H), 2.13-2.25 (m, 1H), 2.98-3.12 (m, 1H), 3.41-3.52 (m, 2H), 5.09 (s, 1H), 6.79 (d, 1H, J = 9.0 Hz), 6.91 (d, 2H, J = 9.0 Hz), 7.37 (d, 2H, J = 9.0 Hz), 7.42 (d, 2H, J = 9.0 Hz), 7.51 (d, 2H, J = 9.0 Hz), 9.56 (s, 1H).
Ia-66
mp >300 °C
$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.27 (s, 9H), 1.28-1.58 (m, 4H), 1.85-2.02 (m, 4H), 2.40-2.52 (m, 1H), 3.00-3.16 (m, 1H), 6.81 (d, 1H, J = 9.0 Hz), 7.50-7.58 (m, 3H), 7.90-7.97 (m, 2H), 12.58 (s, 1H).
Ia-67
mp 199-200 °C
$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.14 (d, 6H, J = 6.3 Hz), 1.28 (s, 9H), 1.31-1.48 (m, 4H), 1.76-1.88 (m, 2H), 2.17 (t, 2H, J = 11.1 Hz), 2.82 (t, 2H, J = 11.7 Hz), 3.46 (d, 2H, J = 11.4 Hz), 3.20-3.36 (m, 1H), 3.62-3.74 (m, 2H), 4.02 (d, 2H, J = 12.9 Hz), 6.83 (d, 2H, J = 9.0 Hz), 6.89 (d, 1H, J = 8.7 Hz), 7.28 (d, 2H, J = 9.0 Hz), 8.27 (s, 1H).
Ia-68
mp 237-239 °C
$^1$H-NMR ($CDCl_3$/DMSO) δ ppm: 1.40 (s, 9H), 1.49-1.65 (m, 2H), 1.99-2.10 (m, 2H), 2.95 (t, 2H, J = 11.1 Hz), 3.36-3.52 (m, 1H), 4.17 (d, 1H, J = 12.9 Hz), 5.84 (d, 1H, J = 8.7 Hz), 6.39 (d, 1H, J = 9.6 Hz), 7.21 (d, 1H, J = 9.3 Hz), 7.51 (dd, 1H, J = 2.4, 9.3 Hz), 7.72 (d, 1H, J = 9.9 Hz), 7.85 (d, 1H, J = 2.7 Hz), 8.04 (s, 1H).
Ia-69
mp 259-260 °C
$^1$H-NMR (DMSO) δ ppm: 1.25-1.55 (m, 4H), 1.27 (s, 9H), 1.82-2.05 (m, 4H), 2.22-2.36 (m, 1H), 2.98-3.17 (m, 1H), 4.16 (s, 3H), 6.80 (d, 1H, J = 8.4 Hz), 7.77-7.87 (m, 4H), 10.16 (s, 1H).
Ia-70
mp 259-260 °C
$^1$H-NMR (DMSO) δ ppm: 1.28 (s, 9H), 1.36-1.56 (m, 2H), 1.80-1.92 (m, 2H), 2.86-3.02 (m, 2H), 3.36-3.52 (m, 1H), 4.04-4.20 (m, 2H), 6.92 (d, 1H, J = 7.5 Hz), 7.38-7.58 (m, 3H), 8.00-8.14 (m, 2H), 8.90 (s, 1H), 9.08 (s, 1H), 9.63 (s, 1H).
Ia-71
mp 228.229 °C
$^1$H-NMR ($CDCl_3$/DMSO) δ ppm: 1.27-1.42 (m, 2H), 1.38 (s, 9H), 1.57-1.75 (m, 2H), 1.90-2.02 (m, 2H), 2.12-2.34 (m, 3H), 3.14-3.32 (m, 1H), 5.37 (d, 1H, J = 9.3 Hz), 7.38-7.43 (m, 3H), 7.46 (d, 2H, J = 8.7 Hz), 7.51-7.60 (m, 2H), 7.68 (d, 2H, J = 9.0 Hz), 9.33 (s, 1H).
Ia-75
mp 169-170 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 0.58-0.72 (m, 1H), 0.80 (d, 3H, J = 6.6 Hz), 0.94 (d, 3H, J = 6.0 Hz), 1.14-1.35 (m, 3H), 1.39 (s, 9H), 1.48-1.66 (m, 2H), 1.74-2.06 (m, 5H), 2.06-2.44 (m, 6H), 3.18-3.35 (m, 1H), 3.64-3.74 (m, 1H), 4.46-4.60 (m, 1H), 6.98-7.38 (m, 5H).
Ia-76
mp 236-237 °C
$^1$H-NMR ($CDCl_3$/DMSO) δ ppm: 1.27-1.42 (m, 2H), 1.38 (d, 6H, J = 6.6 Hz), 1.60-1.78 (m, 2H), 1.94-2.06 (m, 2H), 2.12-2.30 (m, 3H), 3.06.3.34 (m, 2H), 5.10 (brs, 1H), 6.41 (d, 1H, J = 9.9 Hz), 7.25 (d, 1H, J = 8.4 Hz), 7.48 (dd, 1H, J = 2.4, 8.7 Hz), 7.68 (d, 1H, J = 9.9 Hz), 8.12 (d, 1H, J = 2.4 Hz), 8.88 (brs, 1H).
Ia-77
mp 117-118 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 1.38 (d, 6H, J = 6.9 Hz), 1.65 (quintet, 2H, J = 5.4 Hz), 1.75-1.91 (m, 2H), 2.42 (t, 2H, J = 7.4 Hz), 3.10-3.24 (m, 3H), 4.77 (brs, 1H), 6.41 (d, 1H, J = 9.6 Hz), 7.18-7.26 (m, 1H), 7.48 (dd, 1H, J = 1.8, 8.7 Hz), 7.67 (d, 1H, J = 9.9 Hz), 8.01 (s, 1H), 8.23 (brs, 1H).
Ia-78
mp 138-139 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 1.41 (s, 9H), 1.64 (quintet, 2H, J = 6.6 Hz), 1.84 (quintet, 2H, J = 7.3 Hz), 2.42 (t, 2H, J = 7.5 Hz), 3.26 (q, 2H, J = 6.5 Hz), 4.59 (brs, 1H), 6.41 (d, 1H, J = 9.3 Hz), 7.23 (d, 1H, J = 8.7 Hz), 7.49 (dd, 1H, J = 2.4, 9.0 Hz), 7.67 (d, 1H, J = 9.9 Hz), 8.03 (d, 1H, J = 2.4 Hz), 8.28 (brs, 1H).
Ia-79
mp 289-290 °C

$^1$H-NMR (DMSO) δ ppm: 1.24-1.63 (m, 4H), 1.28 (s, 9H), 1.84-2.08 (m, 4H), 2.24-2.41 (m, 1H), 3.00-3.16 (m, 1H), 6.82 (d, 1H, J = 8.1 Hz), 7.36-7.60 (m, 5H), 7.86-7.99 (m, 2H), 8.28 (s, 1H), 10.50 (s, 1H).

Ia-80

mp 239-240 °C

$^1$H-NMR (DMSO) δ ppm: 1.22 (d, 1H, J = 6.6 Hz), 1.23-1.40 (m, 2H), 1.40-1.59 (m, 2H), 1.83-2.04 (m, 4H), 2.23-2.39 (m, 1H), 2.98-3.23 (m, 2H), 7.00 (d, 1H, J = 7.8 Hz), 7.36-7.59 (m, 5H), 7.85-7.97 (m, 2H), 8.29 (s, 1H), 10.50 (s, 1H).

Ia-81

mp 205-206 °C

$^1$H-NMR ($CDCl_3$/DMSO) δ ppm: 1.40 (s, 9H), 1.66 (quintet, 2H, J = 7.0 Hz), 1.85 (quintet, 2H, J = 7.2 Hz), 2.45 (t, 2H, J = 7.5 Hz), 3.24 (t, 2H, J = 6.5 Hz), 5.17 (brs, 1H), 7.36-7.54 (m, 5H), 7.85 (d, 1H, J = 8.4 Hz), 8.07 (dd, 1H, J =1.8, 8.1 Hz), 8.23 (d, 1H, J = 1.8 Hz), 9.61 (s, 1H).

Ia-82

mp 216-217 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.14 (d, 6H, J = 6.3 Hz), 1.22 (d, 6H, J = 6.9 Hz), 1.22-1.53 (m, 4H), 1.76-1.98 (m, 2H), 2.21 (t, 2H, J = 10.8 Hz), 2.22-2.36 (m, 1H), 2.96-3.20 (m, 2H), 3.57 (d, 2H, J = 12.0 Hz), 3.60-3.74 (m, 1H), 6.66-6.85 (m, 2H), 6.98 (d, 1H, J = 7.8 Hz), 7.47 (d, 1H, J = 8.7 Hz), 9.30 (s, 1H).

Ia-83

mp 118-119 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.41 (d, 6H, J = 6.3 Hz), 1.26 (s, 9H), 1.40-1.67 (m, 4H), 2.17-2.36 (m, 3H), 2.97-3.10 (m, 2H), 3.57 (d, 2H, J = 12.0 Hz), 3.61-3.74 (m, 1H), 6.67-6.92 (m, 3H), 7.48 (t, 1H, J = 9.0 Hz), 9.37 (s, 1H).

Ia-84

mp 265-267 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.21 (d, 6H, J = 6.6 Hz), 1.20-1.57 (m, 4H), 1.60-2.30 (m, 9H), 2.99-3.20 (m, 4H), 3.40-3.52 (m, 2H), 5.09 (s, 1H), 6.91 (d, 2H, J = 8.7 Hz), 6.98 (d, 1H, J = 7.5 Hz), 7.37 (d, 2H, J = 8.7 Hz), 7.42 (d, 2H, J = 8.7 Hz), 7.51 (d, 2H, J = 8.7 Hz), 9.56 (s, 1H).

Ia-85

mp 185-186 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.26 (s, 9H), 1.42-1.72 (m, 6H), 1.96-2.10 (m, 2H), 2.26 (t, 2H, J = 6.9 Hz), 2.96-3.12 (m, 4H), 3.41-3.52 (m, 2H), 5.09 (s, 1H), 6.88 (d, 1H, J = 8.7 Hz), 6.92 (d, 2H, J = 9.0 Hz), 7.37 (d, 2H, J = 8.7 Hz), 7.43 (d, 2H, J = 9.0 Hz), 7.52 (d, 2H, J = 8.7 Hz), 9.63 (s, 1H).

Ia-86

mp 162-164 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.21 (d, 6H, J = 6.6 Hz), 1.41-1.73 (m, 6H), 1.96-2.10 (m, 2H), 2.26 (t, 2H, J = 7.2 Hz), 2.91-3.20 (m, 5H), 3.42-3.52 (m, 2H), 5.09 (s, 1H), 6.92 (d, 2H, J = 9.3 Hz), 6.99 (t, 1H, J = 6.0 Hz), 7.37 (d, 2H, J = 8.7 Hz), 7.43 (d, 2H, J = 9.3 Hz), 7.52 (d, 2H, J = 8.7 Hz), 9.64 (s, 1H).

Ia-87

mp 245-247 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.22 (d, 6H, J = 6.6 Hz), 1.22-1.58 (m, 4H), 1.81-2.02 (m, 4H), 2.22.2.36 (m, 1H), 3.00-3.20 (m, 2H), 3.01 (s, 3H), 6.99 (d, 1H, J = 8.4 Hz), 7.75-7.88 (m, 2H), 8.19 (d, 1H, J = 1.2 Hz), 10.43 (s, 1H).

Ia-88

mp 208-209 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.22 (d, 6H, J = 6.9 Hz), 1.22-1.55 (m, 4H), 1.75-1.98 (m, 4H), 2.11-2.24 (m, 1H), 2.98-3.20 (m, 2H), 5.96 (s, 2H), 6.82 (d, 1H, J = 8.4 Hz), 6.91-7.03 (m, 2H), 7.30 (d, 1H, J = 1.8 Hz), 9.72 (s, 1H).

Ia-89

mp 142-143 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.27 (s, 9H), 1.40-1.66 (m, 4H), 2.26 (t, 2H, J = 7.5 Hz), 3.02 (q, 2H, J = 6.6 Hz), 5.96 (s, 2H), 6.82 (d, 1H, J = 8.4 Hz), 6.88 (t, 1H, J = 8.4 Hz), 6.94 (dd, 1H, J = 1.8, 8.4 Hz), 7.30 (d, 1H, J = 1.8 Hz), 9.78 (s, 1H).

Ia-90

mp 100 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.20 (d, 6H, J = 6.9 Hz), 1.40-1.66 (m, 4H), 2.26 (t, 2H, J = 7.5 Hz), 2.89-2.99 (m, 2H), 3.13 (quint, 1H, J = 6.6 Hz), 5.96 (s, 2H), 6.83 (d, 1H, J = 8.1 Hz), 6.91-7.02 (m, 2H), 7.30 (d, 1H, J = 1.8 Hz), 9.78 (s, 1H).

Ia-91

mp 189-190 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.26 (s, 9H), 1.43-1.71 (m, 4H), 2.40 (t, 2H, J = 7.5 Hz), 2.97-3.09 (m, 2H), 3.01 (s, 3H), 6.85-6.93 (m, 1H), 7.76-7.88 (m, 2H), 8.20 (d, 1H, J = 1.2 Hz), 10.49 (s, 1H).

Ia-104

mp 238-241 °C

$^1$H-NMR (DMSO) δ ppm: 1.27 (s. 9H), 1.3-1.5 (m. 4H), 1.8-2.0 (m, 4H), 2.50 (m, 1H), 3.05 (m, 1H), 6.55 (br s, 1H), 6.79 (d, 1H, J= 8.2), 7.15 (t, 1H, J= 4.8), 8.64 (d, 2H, J= 4.8). Ia-105

mp 232-234 °C

$^1$H-NMR (DMSO) δ ppm: 1.26 (s, 9H), 1.2-1.5.(m, 4H), 1.8-2.0 (m, 4H), 2.55 (m, 1H), 3.05 (m, 1H), 6.77 (d, 1H, J=8.7), 9.92 (s, 2H), 10.93 (s, 1H).

Ia-106

mp 226-228 °C

$^1$H-NMR (DMSO) δ ppm: 1.28 (s, 9H), 1.22-1.58 (m, 4H), 1.82-2.04 (m, 4H), 2.29 (m, 1H), 3.07 (m, 1H), 6.79 (d, 1H, J = 8.7 Hz), 7.6 1(d-d, 1H, J = 1.8 Hz, 8.7 Hz), 8.04 (d, 1H, J.= 8.7 Hz), 8.48 (d, 1H, 2.1 Hz), 9.35 (s, 1H), 10.05 (s, 1H):

Ia-107

mp 282-283 °C

$^1$H-NMR (DMSO) δ ppm: 1.22-1.57 (m, 4H), 1.27 (s, 9H), 1.80-2.04 (m, 4H), 2.27 (m, 1H), 3.06 (m, 1H), 6.81 (d, 1H, J = 8.7 Hz), 7.32 (m, 1H), 7.44 (t, 2H, J = 7.5 Hz), 7.57-7.72 (m, 6H), 9.91 (s, 1H).

Ia-108

mp 191-192 °C

$^1$H-NMR (DMSO) δ ppm: 1.24-1.58 (m, 4H), 1.28 (s, 9H), 1.86-2.04 (m, 4H), 2.70 (m, 1H), 3.08 (m, 1H), 6.83 (d, 1H, J = 8.7 Hz), 7.63-7.79 (m, 2H), 8.31 (d, 1H, J = 7.2 Hz). 10.27 (s, 1H).

Ia-109

mp 283-285 °C

$^1$H-NMR (DMSO) δ ppm: 1.24-1.60 (m, 4H), 1.28 (s, 9H), 1.87-2.04 (m, 4H), 2.42 (m, 1H), 3.09 (m, 1H), 3.87 (s, 2H), 6.82 (d, 1H, J = 8.7 Hz), 7.28-7.43 (m, 3H), 7.60 (d, 2H, J = 7.8 Hz), 7.68 (d, 1H, J = 7.2 Hz), 7.89 (d, 1H, J = 7.5 Hz), 9.48 (s, 1H).

Ia-110

mp 263-265 °C

$^1$H-NMR (DMSO) δ ppm: 1.24-1.54 (m, 4H), 1.27 (s, 9H), 1.76-1.87 (m, 2H), 1.89-2.01 (m, 2H), 2.17 (m, 1H), 3.04 (m, 1H), 4.01 (s, 4H), 6.01 (s, 2H), 6.44 (d, 2H, J = 8.7 Hz), 6.77 (d, 1H, J = 8.7 Hz), 7.39 (d, 2H, J = 9,0 Hz), 9.44 (s, 1H).

Ia-111

mp 239-241 °C

$^1$H-NMR (DMSO) δ ppm: 1.24-1.54 (m, 4H), 1.27 (s, 9H), 1.62-1.76 (m, 4H), 1.80-2.02 (m, 4H), 2.30 (m, 1H), 2.47-2.59 (m, 2H), 2.66-2.76 (m, 2H), 6.08 (m, 1H), 6.79 (d, 1H, J = 9.0 Hz), 6.88 (d, 1H, J = 6.9 Hz), 7.02 (t, 1H, J = 7.5 Hz), 7.13 (d, 1H, J = 7.5 Hz), 8.98 (s, 1H).

Ia-124

mp 247-249 °C

$^1$H-NMR (DMSO) δ ppm: 1.15 (d, 6H, J = 6.3 Hz), 1.30 (s, 9H), 2.15-2.26 (m, 2H), 3.48-3.57 (m, 2H), 3.63-3.76 (m, 2H), 6.92 (d, 2H, J = 8.7 Hz), 7.59 (d, 2H, J = 9.0 Hz), 7.38 (d, 2H, J = 9.0 Hz), 7.87 (d, 2H, J = 8.7 Hz), 9.92 (brs, 1H), 9.98 (brs, 1H).

Ia-125

mp 228.-232 °C

$^1$H-NMR (DMSO) δ ppm: 1.30 (s, 9H), 1.95-2.08 (m, 2H), 2.77-2.89 (m, 4H), 7.17 (d, 1H, J = 8.4 Hz), 7.39 (d, 2H, J = 9.0 Hz), 7.42-7.48 (m, 1H), 7.64 (brs, 1H), 7.87 (d, 2H, J = 9.0 Hz), 9.99 (brs, 2H).

Ia-126

mp 244-246 °C

$^1$H-NMR (DMSO) δ ppm: 1.31 (s, 9H), 7.42 (d, 2H, J = 8.4 Hz), 7.81 (d-d, 1H, J = 2.1 Hz, 8.7 Hz), 7.93 (d, 2H, J = 9.0 Hz), 8.05 (d, 1H, J = 9.0 Hz), 8.66 (d. 1H, J = 2.1 Hz), 9.29 (s, 1H), 10.05 (brs, 1H), 10.39 (brs, 1H).

Ia-127

mp 238-239 °C

$^1$H-NMR (DMSO) δ ppm: 1.30 (s, 9H), 4.18-4.27 (m, 4H), 6.81 (d, 1H, J = 8.4 Hz), 7.16 (d-d, 1H, J = 2.7 Hz, 9.0 Hz), 7.34-7.42 (m, 3H), 7.85 (d, 2H, J = 8.4 Hz), 9.94 (brs, 1H), 9.99 (brs, 1H).

Ia-128

mp 286-287 °C

$^1$H-NMR (DMSO) δ ppm: 1.31 (s, 9H), 7.41 (d, 2H, J = 8.7 Hz), 7.71 (d, 2H, J = 8.4 Hz), 7.91 (d, 2H, J = 8.7 Hz), 7.99 (d, 2H, J = 8.7 Hz), 10.05 (brs, 1H), 10.44 (brs, 1H).

Ia-129

mp 232-234 °C

$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.3-1.5 (m, 4H), 1.8-2.0 (m, 4H), 2.25 (1H, m), 3.07 (m, 1H), 6.80 (d, 1H, J=9.0), 7.37 (d, 1H, J= 8.1), 7.53 (t, 1H, J=8.1), 7.75 (t, 1H, J= 8.1), 8.12 ( s, 1H), 10.16 (s, 1H).

Ia-130

mp 274-277 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.23-1.58 (m, 4H), 1.81-2.03 (m, 4H), 2.28 (m, 1H), 3.07 (m, 1H), 6.80 (d, 1H, J = 8.4 Hz), 7.36 (d-d, 1H, J = 0.9 Hz, 5.7 Hz), 7.43 (d-d, 1H, J = 2.1 Hz, 8.7 Hz), 7.60 (d, 1H, J = 5.4 Hz), 7.78 (d, 1H, J = 8.7 Hz), 8.40 (d, 1H, 1.8 Hz), 9.97 (brs, 1H).
Ia-131
mp 259-260 °C
$^1$H-NMR (DMSO) δ ppm: 1.31 (s, 9H), 7.40 (d, 1H, J = 4.8 Hz), 7.41 (d, 2H, J = 8.7 Hz), 7.66 (d, 1H, J = 5.1 Hz), 7.67 (d-d, 1H, J = 1.8 Hz, 8.7 Hz), 7.84 (d, 1H, J = 9.0 Hz), 7.92 (d, 2H, J = 8.7 Hz), 8.50 (s, 1H), 10,03 (brs, 1H), 10,27 (brs 1H).
Ia-132
mp 265-266 °C
$^1$H-NMR (DMSO) δ ppm: 1.17 (d, 6H, J = 6.6 Hz), 1.31 (s, 9H), 4.10 (m, 1H), 7.35-7.46 (m, 3H), 7.54 (d, 1H, J = 7.5 Hz), 7.87-7.97 (m, 3H), 8.15 (brs, 1H), 8.20 (d, 1H, J = 7.5 Hz), 10.03 (brs, 1H), 10.25 (brs, 1H).
Ia-133
mp 249-250 °C
$^1$H-NMR (DMSO) δ ppm: 1.31 (s, 9H), 7.41 (d, 2H, J = 8.7 Hz), 7.45 (d, 1H, J = 5.4 Hz), 7.67 (d-d, 1H, J = 1.8 Hz, 8.7 Hz), 7.76 (d, 1H, J = 5.4 Hz), 7.92 (d, 2H, J = 8.7 Hz), 7.95 (d, 1H, J = 8.1 Hz), 8.39 (d, 1H, J = 1.8 Hz), 10.02 (brs, 1H), 10 23 (brs, 1H).
Ia-134
mp 305-306 °C
$^1$H-NMR (DMSO) δ ppm: 1.25 (m, 2H), 1.25 (s, 9H), 1.52 (m, 2H), 1.82 (m, 2H,), 1.94 (m, 2H), 2.13 (m, 1H), 3.04 (m, 1H), 6.00 (d, 1H, J= 8.1), 6.74 (d, 1H, J= 8.4), 7.3-7.5 (m, 6H), 7.85 (d, 2H, J=7.5), 8.31 (d, 1H, J=8.4).
Ia-135
mp 220-222 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.3-1.5 ( m, 4H), 1.8-2.0 (m, 4H), 2.37 (m, 1H), 3.03 (m, 1H), 6.80 (d, 1H, J=8.7), 7.04 (m, 1H), 7.29 (m, 1H), 7.79 (m, 1H), 9.60 (s, 1H). Ia-136
mp 263-264 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 ( s, 9H), 1.3-1.5 (m, 4H), 1.8-2.0 (m, 4H), 2.20( m, 1H), 3.03 (m, 1H), 6.80 (d, 1H, J= 8.4), 6.87 (m, 1H), 7.31 (m, 2H), 10.21 (s, 1H).
Ia-137
mp 260-262 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.3-1.5 ( m, 4H), 1.8-2.0 (m, 4H), 2.30 (m, 1H), 3.05 (m, 1H), 6.80 (d, 1H, J= 8.4), 7.13 (t, 2H, J= 8.1), 7.31 (m, 1H), 9.52 (s, 1H).
Ia-138
mp 270-273 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.3-1.5 (m, 4H), 1.8-2.0 (m, 4H), 2.12 (m, 1H), 3.05 (m, 1H), 6.79 (d, 1H, J=9.0), 7.31 (m, 2H), 7.80 (m, 1H), 10.05 (s, 1H).
Ia-139
mp 267-270 °C
$^1$H-NMR (DMSO) δ ppm: 1.30 (s, 9H), 4.05 (s, 4H), 6.04 (s, 2H), 6.51 (d, 2H, J = 8.7 Hz), 7.34 (d, 2H, J = 8.4 Hz), 7.54 (d, 2H, J = 8.4 Hz), 7.87 (d, 2H, J = 8.4 Hz), 9.82 (brs, 1H), 9.97 (brs, 1H).
Ia-140
mp 227-229 °C
$^1$H-NMR (DMSO) δ ppm: 1.22 (d, 6H, J = 6.6 Hz), 1.20-1.57 (m 4H), 1.80-2.01 (m, 4H), 2.27 (m, 1H), 2.95-3.22 (m, 2H), 6.99 (d,1H, J = 7.8 Hz), 7.65 (d, 2H, J = 8.7 Hz), 7.80 (d, 2H, J = 8.4 Hz), 10.18 (brs, 1H).
Ia-141
mp 205-207 °C
$^1$H-NMR (DMSO) δ ppm: 1.22 (d, 6H, J = 6.9 Hz), 1.20-1.55 (m, 4H), 1.75-2.05 (m, 6H), 2.21 (m, 1H), 2.72-2.85 (m, 4H), 2.93-3.20 (m, 2H), 6.98 (d, 1H, J = 8.1 Hz), 7.10 (d, 1H, J = 8.1 Hz), 7.26 (d-d, 1H, J = 2.1 Hz, 8.1 Hz), 7.51 (s, 1H), 9.67 (brs, 1H).
Ia-142
mp 295-296 °C
$^1$H-NMR (DMSO) δ ppm: 1.15 (d, 6H,J=6.6), 1.27 (s, 9H), 1.3-1.5 (m, 4H), 1.8-2.0 (m, 4H), 2.27 (m, 1H), 3.05 (m, 1H), 4.07 (m, 1H), 6.80 (d, 1H, J=8.7), 7.64 (d, 2H, J=8.7), 7.79 (d, 2H, J=8.7), 8.06 (d, 1H, J=7.5), 10.01 (s, 1H).
Ia-143
mp 146-147 °C
$^1$H-NMR (DMSO) δ ppm: 1.26 (s, 9H), 1.5-1.7 (m, 4H), 2.36 (t, 2H, J=7.8), 3.03 (q, 2H, J=6.3), 6.89 (t, 1H, J=6.3), 7.66 (d, 2H, J=8.4), 7.80 (d, 2H, J=8.4), 10.25 (s, 1H).

Ia-144
mp 138-140 °C
$^1$H-NMR (DMSO) δ ppm: 1.21 (d, 6H, J=6.0), 1.4-1.7 (m, 4H), 2.37 (t, 2H, J=7.5), 2.96 (q, 2H, J=6.3), 3.14 (m, 1H), 6.99 (t, 1H, J=5.4), 7.66 (d, 2H, J=7.8), 7.81 (d, 2H, J=7.8), 10.26 (s, 1H).
Ia-145
mp 134-136 °C
$^1$H-NMR (DMSO) δ ppm: 1.26 (s, 9H), 1.39 (m, 2H), 1.4-1.7 (m, 4H), 2.28 (t, 2H, J=7.2), 2.79 (m, 4H), 3.02 (q, 2H, J=7.2), 6.88 (t, 1H, J=6.0), 7.10 (t, 1H, J=6.0), 7.51 (s, 1H), 9.73 (s, 1H).
Ia-146
mp 135-137 °C
$^1$H-NMR (DMSO) δ ppm: 1.20 (d. 6H, J=6.6), 1.4-1.7 (m, 4H), 1.99 (m, 2H), 2.28 (t, 2H, J=7.2), 2.79 (m, 4H), 2.94 (q, 2H, J=6.3), 3.13 (m, 1H), 6.98 (t, 1H, J=6.9), 7.10 (d, 2H, J=8.1), 7.26 (d, 2H, J=8.1), 7.51 (s, 1H), 9.73 (s, 1H).
Ia-147
mp 206-207 °C
$^1$H-NMR (DMSO) δ ppm: 1.29 (s, 9H), 4.54 (d, 2H, J = 5.7 Hz), 7.35 (d, 2H, J = 9.0 Hz), 7.52 (d, 2H, J = 7.8 Hz), 7.69 (d, 2H, J = 8.1 Hz), 7.83 (d, 2H, J = 8.7Hz), 9.02 (t, 1H, J = 5.7 Hz), 9.97 (brs, 1H).
Ia-148
mp 250-251 °C
$^1$H-NMR (DMSO) δ ppm: 1.30 (s, 9H), 7.18 (t, 2H, J = 9.3 Hz), 7.40 (d, 2H, J = 8.7 Hz), 7.76 (d-d, 2H, J = 5.1 Hz, 9.3 Hz), 7.88 (d, 2H, J = 9.0 Hz), 10.02 (brs, 1H), 10.17 (brs, 1H).
Ia-149
mp 220-222 °C
$^1$H-NMR (DMSO) δ ppm: 1.30 (s, 9H), 3.74 (s, 3H), 6.92 (d, 2H, J = 9.0 Hz), 7.38 (d, 2H, J = 9.0 Hz), 7.64 (d, 2H, J = 9.0 Hz), 7.87 (d, 2H, J = 9.0 Hz), 9.99 (s, 2H).
Ia-150
mp 264-266 °C
$^1$H-NMR (DMSO) δ ppm: 1.31 (s, 9H), 1.66-1.76 (m, 4H), 2.57- 2.66 (m, 2H), 2,71-2.80 (m, 2H), 6.98 (m, 1H), 7.06-7.16 (m, 2H), 7.38 (d, 2H, J = 9.0 Hz), 7.90 (d, 2H, J = 8.7 Hz), 9.60 (s, 1H), 9.99 (s, 1H).
Ia-151
mp 235-236 °C
$^1$H-NMR (DMSO) δ ppm: 1.03-1.39 (m, 5H), 1.27 (s, 9H), 1.55-1.87 (m, 5H), 3.73 (m, 1H), 7.31 (d, 2H, J = 8.7 Hz), 7.76 (d, 2H, J = 8.4 Hz), 8.01 (d, 1H, J = 7.8 Hz), 9.90 (s, 1H).
Ia-152
mp 244-246 °C
$^1$H-NMR (DMSO) δ ppm: 0.50-0.72 (m, 4H), 1.27 (s, 9H), 2.81 (m, 1H), 7.31 (d, 2H, J = 8.7 Hz), 7.73 (d, 2H, J = 8.7 Hz), 8.30 (d, 1H, J = 4.2 Hz), 9.91 (brs, 1H).
Ia-153
mp >300 °C
$^1$H-NMR (DMSO) δ ppm: 1.06 (m, 6H), 1.27 (s, 9H), 1.2-1.5 (m, 4H), 1.8-2.0 (m, 4H), 2.25 (m, 1H), 2.7 (m, 1H), 3.05 (m, 1H), 3.51 (m, 4H), 4.30 (m, 1H), 6.80 (d, 1H, J=8.4), 7.34 (d, 2H, J=8.4), 7.65 (d; 2H, J=8.4), 10.01 (s, 1H).
Ia-154
mp 247-249 °C
$^1$H-NMR (DMSO) δ ppm: 1.05 (m,6H), 1.27 (s, 9H), 1.2-1.5 (m, 4H), 1.8-2.0 (m, 4H), 2.23 (m, 1H), 2.77 (m, 1H), 3.05 (m, 1H), 3.52 (m, 4H), 4.33 (m, 1H), 6.80 (d, 1H, J=9.0), 7.03 (d, 1H, J=7.8), 7.35 (t, 1H, J=7.8), 7.59 (d, 1H, J=7.8), 7.68 (s, 1H), 9.96 (s, 1H).
Ia-155
mp 258-259 °C
$^1$H-NMR (DMSO) δ ppm: 1.25(m, 2H), 1.50 (m,2H), 1.86 (m, 2H), 1.99 (m, 2H), 2.28 (m , 1H), 2.93 (s, 3H), 3.10 (m, 1H), 7.02 (d, 1H, J=7.5), 7.65 (d, 2H, J=8.4), 7.80 (d, 2H, J=8.4). 10.20 (s, 1H).
Ia-156
mp 250-253 °C
$^1$H-NMR (DMSO) δ ppm: 1.28 (m, 2H), 1.50 (m, 2H), 1.82 (m, 2H), 2.00 (m, 4H), 2.22 (m, 1H), 2.79 (m, 4H), 2.92 (s, 3H), 3.11 (m, 1H), 7.01 (d, 1H, J=(.1), 7.26 (d, 1H, J=8.1), 7.51 (s, 1H), 9.68 (s, 1H).
Ia-157
mp 259-262 °C
$^1$H-NMR (DMSO) δ ppm: 1.13 (d, 6H, J=6.0), 1.25 (m, 2H), 1.50 (m, 2H), 1.80 (m, 2H), 1.95 (m, 2H), 2.17 (m, 3H), 2.92 (s, 3H), 3.10 (m, 1H), 3.70 (m,2H), 3.68 (m, 2H), 6.86 (d, 2H J=9.3), 7.00 (d, 1H, J=7.2), 7.43 (d, 2H, J=9.3), 9.58 (s, 1H).

Ia-158
mp 298-300 °C
$^1$H-NMR (DMSO) δ ppm: 1.31 (s, 9H), 7.30-7.50 (m, 5H), 7.63-7, 71 (m, 4H), 7.87 (d, 2H, J = 8.7 Hz), 7.91 (d, 2H, J = 9.0 Hz), 10.03 (brs, 1H), 10.22 (brs, 1H).
Ia-159
mp 278-281 °C
$^1$H-NMR (DMSO) δ ppm: 0.74-1.87 (m, 20H), 1.29 (s, 9H), 3.76 (m, 1H), 7.32 (d, 2H, J = 8.4 Hz), 7.75 (d, 2H, J = 8.7 Hz), 7.75 (d, 1H, J = 8.7 Hz), 7.90 (brs, 1H).
Ia-160
mp 227-228 °C
$^1$H-NMR (DMSO) δ ppm: 1.22-1.55 (m, 4H), 1.27 (s, 9H), 1.80-2.02 (m, 4H), 2.23 (m, 1H), 3.06 (m, 1H), 6.78 (d, 1H, J = 8.7 Hz), 7.45 (t, 1H, J = 9.9 Hz), 7.82 (m, 1H), 8.12 (d-d, 1H, J = 2.4 Hz, 6.3 Hz), 10.17 (brs, 1H).
Ia-161
mp 259-260 °C
$^1$H-NMR (DMSO) δ ppm: 1.22-1.54 (m, 4H), 1.27 (s, 9H), 1.78-2.01 (m, 4H), 2.16 (s, 3H), 2.21 (m, 1H), 3.05 (m, 1H), 6.77 (d, 1H, J = 8.4 Hz), 7.12-7.21 (m, 2H), 7.53 (m, 1H), 9.90 (brs, 1H).
Ia-162
mp 222-226 °C
$^1$H-NMR (DMSO) δ ppm: 1.15 (d,6H,J = 6.3 Hz), 1.26 (d, 6H, J = 6.9 Hz), 2.16-2.26 (m, 2H), 3.31 (m, 1H), 3.48-3.58 (m, 2H), 3.63-3.76 (m, 2H), 6.92 (d, 2H, J = 9.0 H), 7.32 (d, 2H, J = 8.7 Hz), 7.59 (d, 2H, 9.0 Hz), 7.89 (d, 2H, J = 9.0 Hz), 9.92 (s, 1H), 10.13 (brs, 1H).
Ia-163
mp 197-200 °C
$^1$H-NMR (DMSO) δ ppm: 1.26 (d, 6H, J = 6.3 Hz), 1.95-2.09 (m, 2H), 2.77-2.90 (m, 4H), 3.32 (m, 1H), 7.17 (d, 1H, J = 8.1 Hz), 7.32 (d, 2H, J = 8.7 Hz), 7.45 (d-d, 1H, J = 1.8 Hz, 8.1 Hz), 7.64 (brs, 1H), 7.90 (d, 2H, J = 8.7 Hz), 9.99 (brs, 1H), 10.13 (brs, 1H).
Ia-164
mp 145-247 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.3-2.0 (m, 16H), 2.19 (m, 1H), 3.05 (m, 1H), 4.74 (m, 1H), 6.79 (d, 1H, J=9.0), 6.80 (d, 2H, J=9.0), 7.47 (d, 2H, J=9.0), 9.63 (s, 1H).
Ia-165
mp >300 °C
$^1$H-NMR (DMSO) δ ppm: 1.03-2.02 (m, 18H), 1.27 (s, 9H), 2.26 (m, 1H), 3.06 (m, 1H), 3.73 (m, 1H), 6.78 (d, 1H, J = 8.7 Hz), 7.63 (d, 2H, J = 9.0 Hz), 7.78 (d, 2H, J = 8.7 Hz), 8.02 (d, 1H, J = 8.1Hz), 10.00 (brs, 1H).
Ia-166
mp 200-201 °C
$^1$H-NMR (DMSO) δ ppm: 1.03-2.02 (m, 18H), 1.27 (s, 9H), 2.25 (m, 1H), 3.06 (m, 1H), 3.73 (m, 1H), 6.78 (d, 1H, J = 8.7 Hz), 7.33 (t, 1H, J = 8.1 Hz), 7.46 (d, 1H, J = 8.1 Hz), 7.76 (m, 1H), 7.94 (m, 1H), 8.14 (d, 1H, J = 8.1 Hz), 9.92 (brs, 1H).
Ia-167
mp 282-285 °C
$^1$H-NMR (DMSO) δ ppm: 1.22-1.57 (m, 4H), 1.27 (s, 9H), 1.87-2.03 (m, 4H), 2.49 (m, 1H), 3.07 (m, 1H), 6.83 (d, 1H, J = 8.7 Hz), 13.20 (brs, 1H).
Ia-168
mp 120-124 °C
$^1$H-NMR (DMSO) δ ppm: 0.94-1.66 (m, 14H), 1.27 (s, 9H), 1.80-2.04 (m, 4H), 2.25 (m1H), 2.92 (m, 1H), 3.06 (m, 1H), 6.78 (d, 1H, J = 8.7 Hz), 7.42-7.53 (m, 2H), 7.63 (d, 1H, J = 7.2 Hz), 7.73 (m, 1H), 8.17 (m, 1H), 10.11 (brs, 1H).
Ia-169
mp 256-257 °C
$^1$H-NMR (DMSO) δ ppm: 0.93-1.20 (m, 5H), 1.24-1.64 (m, 9H), 1.27 (s, 9H), 1.80-2.02 (m, 4H), 2.27 (m, 1H), 2.87 (m, 1H), 3.06 (m, 1H), 6.79 (d, 1H, J = 9.0 Hz), 7.48 (d, 1H, J = 7.2 Hz), 7.68-7.79 (m, 4H), 10.17 (brs, 1H).
Ia-171
mp 242-244 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (m, 12H), 1.45 (m, 4H), 1.90 (m, 4H), 2.25 (m, 1H), 3.07 (m, 1H), 3.67 (m, 2H), 6.77 (d, 1H, J=8.7), 6.90 (d, 1H, J=7.8), 7.31 (t, 1H, J=7.5), 7.53 (d, 1H, J=7.8), 7.59 (s,1H), 9.89 (s, 1H).
Ia-172
mp >310 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (m, 12H), 1.38 (m, 4H), 1.84 (m, 2H), 1.97 (m, 2H), 2.25 (m, 1H), 3.07 (m, 1H), 3.66

(m, 2H), 6.81 (d, 1H, J=8.7), 7.20 (d, 2H, J=6.7), 7.61 (d, 2H, J=8.7), 9.94 (s, 1H).
Ia-173
mp 279-281 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.3-1.5 (m, 4H), 1.83 (m, 6H), 1.93 (m, 2H), 2.21 (m, 1H), 2.36 (m, 2H), 3.05 (m, 1H), 3.54 (m, 2H), 6.79 (d, 1H, J=8.7), 7.16 (d, 2H, J=9.0), 7.56 (d, 2H, J=9.0), 9.83 (s, 1H).
Ia-174
mp 258-262 °C
$^1$H-NMR (DMSO) δ ppm: 0.29 (m, 2H), 0.53 (m,2H), 1.20 (m, 1H), 1.27 (s, 9H), 1.3-1.5 (m, 4H), 1.7-2.0 (m, 4H), 2.20 (m, 1H), 3.05 (m, 1H), 3.75 (d, 2H, J=6.9), 6.79 (d, 1H, J=9.0), 6.83 (d, 2H, J=9.0), 7.46 (d, 2H, J=9.0), 9.64 (s, 1H).
Ia-175
mp 246-248 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.3-2.0 (m, 18H), 2.19 (m, 1H), 3.04 (m, 1H), 4.23 (m, 1H), 6.79 (d, 1H, J=8.7), 6.84 (d, 2H, J=9.0), 7.45 (d, 2H, J=9.0), 9.64 (s, 1H).
Ia-176
mp 200-202 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.3-2.0 (m, 18H), 2.21 (m, 1H), 3.05 (m, 1H), 4.23 (m, 1H), 6.57 (d, 1H, J=6.9), 6.80 (d, 1H, J=9.0), 7.0-7.2 (m, 2H), 7.28 (s, 1H), 9.74 (s, 1H). Ia-177
mp 266-268 °C
$^1$H-NMR (DMSO) δ ppm: 1.22-1.56 (m, 4H), 1.27 (s, 9H), 1.79-2.02 (m, 4H), 2.25 (m,1H), 3.05 (m, 1H), 6.56 (m, 1H), 6.77-6.84 (m, 2H), 7.58-7.71 (m, 5H), 9.92 (brs, 1H).
Ia-178
mp 223-224 °C
$^1$H-NMR (DMSO) δ ppm: 1.26-1.54 (m,4H), 1.27 (s, 9H), 1.81-2.02 (m,4H), 2.45 (m, 1H), 3.06 (m, 1H), 6.80 (d, 1H, J = 8.7 Hz), 8.15 (d-d, 1H, J = 2.4 Hz, 9.0 Hz), 8.27 (d, 1H, J = 9.0 Hz), 8.70 (m, 1H), 10.85 (brs, 1H).
Ia-179
mp 224-227 °C
$^1$H-NMR (DMSO) δ ppm: 1.24-1.56 (m, 4H), 1.27 (s, 9H), 1.80-2.03 (m, 4H), 2.27 (m, 1H), 3.06 (m, 1H), 6.80 (d, 1H, J = 8.7 Hz), 6.90 (d, 1H, J = 1.8 Hz), 7.72-7.84 (m, 4H), 8.60 (d, 1H, J = 1.8 Hz), 10.09 (brs, 1H).
Ia-180
mp 226-227 °C
$^1$H-NMR (DMSO) δ ppm: 0.92 (d, 6H, J = 6.6 Hz), 1.26-1.55 (m, 4H), 1.27 (s, 9H), 1.80-2.03 (m, 4H), 2.27 (m, 1H), 3.05 (m, 1H), 3.20 (m, 1H), 6.80 (d, 1H, J = 8.7 Hz), 7.42 (d, 1H, J = 7.2 Hz), 7.67-7.79 (m, 4H), 10.19 (brs, 1H).
Ia-181
mp 191-192 °C
$^1$H-NMR (DMSO) δ ppm: 0.95 (d, 6H, J = 6.6 Hz), 1.26-1.55 (m, 4H), 1.27 (s, 9H), 1.80-2.03 (m, 4H), 2.25 (m, 1H), 3.06 (m, 1H), 3.23 (m, 1H), 6.80 (d, 1H, J = 8.4 Hz), 7.41-7.53 (m, 2H), 7.58 (d, 1H, J = 7.2 Hz), 7.73 (m, 1H), 8.18 (m, 1H), 10.13 (brs, 1H).
Ia-182
mp 192-193 °C
$^1$H-NMR (DMSO) δ ppm: 0.30 (m, 2H), 0.55 (m, 2H), 1.2-1.5 (m, 5H), 1.27 (s, 1H), 1.8-2.0 (m, 4H), 2.20 (m, 1H), 3.04 (m, 1H), 3.75 (d, 2H, J=6.9), 6.58 (m, 1H), 6.79 (d, 1H, J=8.7), 7.0-7.2 (m, 2H), 7.31 (s, 1H), 9.76 (s, 1H).
Ia-183
mp >310 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.3-1.5 (m,4H), 1.82 (m, 2H), 1.97 (m, 2H), 2.04 (m, 2H), 2.39 (m, 1H), 2.46 (t, 2H, J=7.8), 3.07 (m, 1H), 3.79 (t, 2H, J=7.5), 6.79 (d, 1H, J=8.7), 7.56 (m, 4H), 9.80 (s, 1H).
Ia-184
mp 281.283 °C
$^1$H-NMR (DMSO) δ ppm: 1.24-1.57 (m, 4H), 1.27 (s, 9H), 1.80-2.04 (m, 4H), 2.27 (m, 1H), 3.06 (m, 1H), 6.80 (d, 1H, J = 9,0 Hz), 7.33 (s, 1H), 7.75 (d, 2H, J = 9.3 Hz), 7.91 (d, 2H, J = 8.7 Hz), 8.16 (s, 1H), 10.09 (brs, 1H).
Ia-185
mp 226-227 °C
$^1$H-NMR (DMSO) δ ppm: 1.24-1.58 (m, 10H), 1.27 (s, 9H), 1.81-2.02 (m, 4H), 2.28 (m, 1H), 2.78-2.88 (m, 4H), 3.06 (m, 1H), 6.80 (d, 1H, J = 8.7 Hz), 7.64 (d, 2H, J = 8.7 Hz), 7.82 (d, 2H, J = 8.7 Hz), 10.25 (brs, 1H).
Ia-186
mp 148-150 °C
$^1$H-NMR (DMSO) δ ppm: 1.25-1.60 (m, 10H), 1.27 (s, 9H), 1.82-2.03 (m, 4H), 2.24 (m, 1H), 2.82-2.92 (m, 4H), 3.06 (m,1H), 6.79 (d, 1H, J = 8.4 Hz), 7.36 (m, 1H), 7.55 (t, 1H, J = 7.8 Hz), 7.84 (m, 1H), 8.06 (m, 1H), 10.18 (brs, 1H).
Ia-187

mp >310 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.36 (s, 9H), 1.43 (m, 4H), 1.85 (m, 2H), 1.93 (m, 2H), 2.27 (m, 1H), 3.06 (m, 1H), 6.80 (d, 1H, J=8.7), 7.58 (s, 1H), 7.62 (d, 2H), 7.75 (d, 2H, J=9.0), 10.00 (s, 1H).
Ia-188
mp 285-292 °C
$^1$H-NMR (DMSO) δ ppm: 0.85 (t, 3H, J=7.5), 1.11 (d, 3H, J=6.3), 1.26 (s, 9H), 1.3-1.6 (m, 6H), 1.85 (m, 2H), 1.95 (m, 2H), 2.27 (m, 1H), 3.06 (m, 1H), 3.90 (m, 1H), 6.80 (d, 1H, J=8.4), 7.64 (d, 2H, J=8.7), 7.79 (d, 2H, J=8.7), 7.99 (d, 1H, J=8.1), 10.02 (s, 1H).
Ia-189
mp 278-281 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.2-2.0 (m, 17H), 2.03 (m, 2H), 3.03 (m, 1H), 6.79 (d, 1H, J=8.4), 7.1-7.3 (m, 3H), 7.94 (s, 1H), 9.78 (m, 2H).
Ia-190
mp >310 °C
$^1$H-NMR (DMSO) δ ppm: 1.1-2.0 (m, 17H), 1.27 (s, 9H), 2.25 (m, 2H), 3.03 (m, 1H), 6.79 (d, 1H, J=8.7), 7.48 (m, 4H), 9.71 (m, 2H).
Ia-191
mp 275-277 °C
$^1$H-NMR (DMSO) δ ppm: 1.16 (d, 6H, J = 6.6 Hz), 1.31 (s, 9H), 4.09 (m, 1H), 7.41 (d, 2H, J = 8.7 Hz), 7.84 (s, 4H), 7.90 (d, 2H, J = 9.0 Hz), 8.11 (d, 1H, J = 7.5 Hz), 10.04 (brs, 1H), 10.30 (brs, 1H).
Ia-192
mp 204-205 °C
$^1$H-NMR (DMSO) δ ppm: 1.15 (d, 6H, J = 6.6 Hz), 1.20-1.56 (m, 4H), 1.22 (d, 6H, J = 6.6 Hz), 1.78-2.00 (m, 4H), 2.25 (m, 1H), 2.98-3.22 (m, 2H), 4.06 (m, 1H), 6.99 (d, 1H, J = 8.1 Hz), 7.34 (t, 1H, J = 8.1 Hz), 7.46 (d, 1H, J = 7.8 Hz), 7.75 (m 1H), 7.96 (m, 1H), 8.17 (d, 1H, J = 8.7 Hz), 9.94 (brs, 1H).
Ia-193
mp 285-286 °C
$^1$H-NMR (DMSO) δ ppm: 1.15 (d, 6H, J = 6.6 Hz), 1.20-1.56 (m, 4H), 1.22 (d, 6H, J = 6.9 Hz), 1.79-2.00 (m, 4H), 2.26 (m, 1H), 2.97-3.20 (m, 2H), 4.07 (m, 1H), 6.99 (d, 1H, J = 7.8 Hz), 7.64 (d, 2H, J = 8.7 Hz), 7.79 (d, 2H, J = 8.7 Hz), 8.06 (d, 1H, J = 7.5 Hz), 10.02 (brs, 1H).
Ia-194
mp 248-250 °C
$^1$H-NMR (DMSO) δ ppm: 1.22-1.57 (m, 4H), 1.22 (d, 6H, J = 6.6 Hz), 1.78-2.00 (m, 4H), 2.25 (m, 1H), 2.98-3.22 (m, 2H), 6.56 (m, 1H), 6.82 (d, 1H, J = 3.3 Hz), 6.99 (d, 1H, J = 7.8 Hz), 7.58- 7.71 (m, 5H), 9.92 (brs, 1H).
Ia-195
mp 271-275 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.28-1.56 (m, 4H), 1.80-2.02 (m, 4H), 2.25 (m, 1H), 3.06 (m, 1H), 6.80 (d, 1H, J = 9.0 Hz), 7.57 (s, 1H), 7.62-7.74 (m, 4H), 8.39 (s, 1H), 9.99 (brs, 1H).
Ia-196
mp 226-228 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 0.30 (m, 2H), 1.23 (d, 6H, J=6.9), 1.2-2.0 (m, 4H), 2.20 (m, 1H), 3.10 (m, 2H), 3.76 (d, 2H, J=6.9), 6.83 (d, 2H, J=8.7), 6.99 (d, 1H, J=8.1), 7.46 (d, 2H, J=8.7), 9.65 (s, 1H).
Ia-197
mp 173-175 °C
$^1$H-NMR (DMSO) δ ppm:0.31 (m, 2H), 0.56 (m, 2H), 1.22 (d, 6H, J=6.6), 1.2-1.5 (m, 4H), 1.8-2.0 (m, 4H), 2.22 (m, 1H), 3.10 (m, 1H), 3.76 (d, 1H, J=7.2), 6.58 (d, 1H, J=8.1), 7.0-7.2 (m, 2H), 7.32 (s, 1H), 9.78 (s, 1H).
Ia-198
mp 233-235 °C
$^1$H-NMR (DMSO) δ ppm: 1.25 (d, 6H, J=6.9), 1.2-2.0 (m, 16H), 2.19 (m, 1H), 3.10 (m, 2H), 4.73 (m, 1H), 6.80 (d, 2H, J=8.7), 6.98 (d, 1H, J=7.8), 7..45 (d, 2H, J=8.7), 9.63 (s, 1H). Ia-199
mp 185-186 °C
$^1$H-NMR (DMSO) δ ppm: 1.22 (d, 6H, J=6.9), 1.2-2.0 (m, 16H), 2.22 (m, 1H), 3.10 (m, 2H), 4.73 (m, 1H), 6.54 (m, 1H), 7.0-7.2 (m, 2H), 7.3 (s, 1H), 9.75 (s ,1H).
Ia-200
mp 235-237 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.3-1.6 (m, 6H), 1.8-2.0 (m, 6H), 2.20 (m, 1H), 3.05 (m, 1H), 3.45 (m, 2H), 3,82 (m, 2H), 4.47 (m, 1H), 6.79 (d, 1H, J=9.0), 6.89 (d, 2H, J=9.0), 7.47 (d, 2H,J=9.0), 9.66 (s, 1H).
Ia-201

mp 300-301 °C
$^1$H-NMR (DMSO) δ ppm: 1.15 (d, 6H, J = 6.6 Hz), 1.26-1.56 (m, 4H), 1.27 (s, 9H), 1.82-2.03 (m, 4H), 2.23 (s, 3H), 2.37 (m, 1H), 3.06 (m, 1H), 4.07 (m, 1H), 6.81 (d, 1H, J = 8.7 Hz), 7.52 (d, 1H, J = 8.4 Hz), 7.62 (d, 1H, J = 8.4 Hz), 7.68 (s, 1H), 8.09 (d, 1H, J = 7.5 Hz), 9.22 (brs, 1H).
Ia-202
mp 269-270 °C
$^1$H-NMR (DMSO) δ ppm: 1.25-1.26 (m, 4H), 1.27 (s, 9H), 1.80-2.03 (m, 4H), 2.25 (m, 1H), 3.07 (m, 1H), 6.80 (d, 1H, J = 8.4 Hz), 7.11 (m, 1H), 7.42 (d, 1H, J = 3.6 Hz), 7.48 (m, 1H), 7.58 (d, 2H, J = 8.7 Hz), 7.64 (d, 2H, J = 8.4 Hz), 9.92 (brs, 1H).
Ia-203
mp 271-273 °C
$^1$H-NMR (DMSO) δ ppm: 1.14-1.54 (m, 9H), 1.26 (s, 9H), 1.63-1.88 (m, 7H), 1.89-2.01 (m, 2H), 2.21 (m, 1H), 2.42 (m, 1H), 3.04 (m, 1H), 6.79 (d, 1H, J = 9.0 Hz), 7.11 (d, 2H, J = 8.4 Hz), 7.47 (d, 2H, J = 8.1 Hz), 9.70 (brs, 1H).
Ia-204
mp 250-251 °C
$^1$H-NMR (DMSO) δ ppm: 1.22-1.39 (m, 2H), 1.22 (d, 6H, J = 6.6 Hz), 1.40-1.57 (m 2H), 1.80-2.01 (m, 4H), 2.28 (m, 1H), 2.98-3.21 (m, 2H), 7.00 (d, 1H, J = 7.8 Hz), 7.34 (s, 1H), 7.75 (d, 2H, J = 9.0 Hz), 7.91 (d, 2H, J = 8.7 Hz), 8.17 (s, 1H), 10.10 (brs, 1H).
Ia-205
mp 239-240 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.2-1.5 (m, 4H), 1.8-2.0 (m, 5H), 2.08 (m, 2H), 3.05 (m, 1H), 3.80 (m, 4H), 4.95 (m, 1H), 6.79 (d, 1H, J=8.7), 6.83 (d, 2H, J=8.7), 7.48 (d, 2H, J=8.7), 9.66 (s, 1H).
Ia-206
mp 236-238 °C
$^1$H-NMR (DMSO) δ ppm:1.27 (s, 9H), 1.2-1.7 (m, 8H), 1.8-2.0 (m, 6H), 2.18 (m, 1H), 3.04 (m, 1H), 3.3-3.6(m, 2H), 3.85 (m, 3H), 6.80 (d, 1H, J=9.0), 6.84 (d, 2H, J=9.0), 7.47 (d, 2H, J=9.0), 9.65 (s, 1H).
Ia-207
mp 224-226 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.2-1.5 (m, 4H), 1.8-2.0 (m, 4H), 2.24(m, 1H), 2.39 (m, 2H), 3.06 (m, 1H), 3.50 (t, 2H, J=7.5), 3.70 (t, 2H, J=6.3), 6.78 (d, 1H, J=6.6), 6.83 (m, 1H), 7.25 (m, 1H), 7.27 (m, 1H), 7.54 (s,1H), 9.61 (s, 1H).
Ia-208
mp 275-277 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.3-1.5 (m, 4H), 1.8-2.0 (m, 4H), 2.22 (m, 1H), 2.38 (m, 2H), 3.07 (m, 1H), 3.47 (t, 2H, J=6.9), 3.69 (t, 2H, J=6.6), 6.80 (d, 1H, J=8.7), 7.14 (d, 2H, J=8.4), 7.58 (d, 2H, J=8.4), 9.83 (s, 1H).
Ia-209
mp 214-215 °C
$^1$H-NMR (DMSO) δ ppm: 1.26-1.56 (m, 4H), 1.27 (s, 9H), 1.80-2.03 (m, 4H), 2.25 (m, 1H), 3.06 (m, 1H), 6.59 (m, 1H), 6.81 (d, 1H, J = 8.4 Hz), 6.86 (d, 1H, J = 2.7 Hz), 7.28-7.40 (m, 2H), 7.47 (m, 1H), 7.75 (s, 1H), 8.01 (s, 1H), 9.91 (brs, 1H).
Ia-210
mp 272-275 °C
$^1$H-NMR (DMSO) δ ppm: 1.31 (s, 9H), 6.59 (m, 1H), 6.87 (d, 1H, J = 3.3 Hz), 7.41 (d, 2H, J = 8.7 Hz), 7.68 (d, 2H, J = 8.7 Hz), 7.72 (m, 1H), 7.83 (d, 2H, J = 8.7 Hz), 7.90 (d, 2H, J = 8.7 Hz), 10.03 (brs, 1H), 10.22 (brs, 1H).
Ia-211
mp 251-255 °C
$^1$H-NMR (DMSO) δ ppm: 1.31 (s, 9H), 7.36 (s, 1H), 7.41 (d, 2H, J = 8.4 Hz), 7.91 (d, 2H, J = 8.4 Hz), 7.92-8.00 (m, 4H), 8.19 (s, 1H), 10.06 (brs, 1H), 10.38 (brs, 1H).
Ia-212
mp 241-244 °C
$^1$H-NMR (DMSO) δ ppm: 1.30 (s, 9H), 1.50-1.78 (m, 6H), 1.81-1.97 (m, 2H), 4.78 (m, 1H), 6.87 (d, 2H, J = 9.0 Hz), 7.38 (d, 2H, J = 8.7 Hz), 7.61 (d, 2H, J = 9.0 Hz), 7.87 (d, 2H, J = 8.7 Hz), 9.97 (brs, 1H), 9.99 (brs, 1H).
Ia-213
mp 283-286 °C
$^1$H-NMR (DMSO) δ ppm: 1.31 (s, 9H), 7.12 (d-d, 1H, J = 3.6 Hz, 5.1 Hz), 7.41 (d, 2H, J = 9.0 Hz), 7.46 (m, 1H), 7.50 (d-d, 1H, J = 1.2 Hz, 5.1 Hz), 7.64 (d, 2H, J = 8.7 Hz), 7.82 (d, 2H, J = 8.7 Hz), 7.90 (d, 2H, J = 9.3 Hz), 10.03 (brs, 1H), 10.22 (brs, 1H).
Ia-216

mp 224-225°C
$^1$H-NMR ($CDCl_3$) δ ppm: 1.22 (d, 6H, J=6.9), 1.2-1.5 (m, 4H), 1.8-2.0 (m, 4H), 2.45 (m, 1H), 3.12 (m, 2H), 6.99 (d, 1H, J=8.1), 8.15 (m, 1H), 8.27 (d, 1H, J=9.0), 8.69 (s, 1H), 10.86 (s, 1H).
Ia-219
mp 270-272 °C
$^1$H-NMR (DMSO) δ ppm: 1.28 (s, 9H), 1.34-1.51 (m, 2H), 1.80-1.92 (m, 2H), 2.83- 2.97 (m, 2H), 3.32 (m, 1H), 3.99-4.12 (m 2H), 6.92 (d, 1H, J = 8.7 Hz), 7.57 (d, 2H, J = 8.7 Hz), 7.68 (d, 2H, J = 9.0 Hz), 8.90 (brs, 1H).
Ia-220
mp 187-189 °C
$^1$H-NMR (DMSO) δ ppm: 1.28 (s, 9H), 1.31-1.51 (m, 2H), 1.78-1.90 (m, 2H), 2.78-2.93 (m, 2H), 3.30 (m, 1H), 3.97-4.09 (m, 2H), 6.90 (d, 1H, J = 8.7 Hz), 7.06 (t, 2H, J = 9.0 Hz), 7.44 (d-d, 2H, J = 4.8 Hz, 9.0 Hz), 8.53 (brs, 1H).
Ia-221
mp 260-262 °C
$^1$H-NMR (DMSO) δ ppm: 1.12-1.50 (m, 7H), 1.28 (s, 9H), 1.63-1.90 (m, 7H), 2.40 (m, 1H), 2.76-2.91 (m, 2H), 3.28 (m, 1H), 3.96-4.09 (m, 2H), 6.90 (d, 1H, J = 8.7 Hz), 7.06 (d, 2H, J = 8.4 Hz), 7.32 (d, 2H, J = 8.4 Hz), 8.40 (brs, 1H).
Ia-222
mp 265-267 °C
$^1$H-NMR (DMSO) δ ppm: 1.23 (d, 6H, J = 6.6 Hz), 1.31-1.48 (m, 2H), 1.77-1.90 (m, 2H), 2.84-2.98 (m, 2H), 3.16 (m, 1H), 3.33 (m, 1H), 3.96-4.10 (m, 2H), 7.11 (d, 1H, J = 7.8 Hz), 7.57 (d, 2H, J = 8.7 Hz), 7.67 (d, 2H, J = 8.4 Hz), 8.90 (brs, 1H).
Ia-223
mp 183-186 °C
$^1$H-NMR (DMSO) δ ppm: 1.23 (d, 6H, J = 6.9 Hz), 1.28-1.47 (m, 2H), 1.76-1.88 (m, 2H), 2.80-3.16 (m, 2H), 3.16 (m, 1H), 3.32 (m, 1H), 3.94-4.07 (m, 2H), 7.00-7.14 (m, 3H), 7.44 (d-d, 2H, J = 4.8 Hz, 9.0 Hz), 8.53 (brs, 1H).
Ia-224
mp 232-234 °C
$^1$H-NMR (DMSO) δ ppm: 1.12-1.46 (m, 7H), 1.23 (d, 6H, J = 6.6 Hz), 1.63-1.87 (m, 7H), 2.40 (m, 1H), 2.78-2.93 (m, 2H), 3.15 (m,1H), 3.31 (m,1H), 3.94-4.07 (m, 2H), 7.06 (d, 2H, J = 8.4 Hz), 7.09 (d, 1H, J = 8.1 Hz), 7.32 (d, 2H, J = 8.4 Hz), 8.39 (brs, 1H).
Ia-225
mp 222-224 °C
$^1$H-NMR (DMSO) δ ppm: 1.28 (s, 9H), 1.30-1.61 (m, 4H), 1.77-1.98 (m, 4H), 2.66-2.90 (m, 2H), 3.28 (m, 1H), 3.40-3.50 (m, 2H), 3.79-3.88 (m, 2H), 3.96-4.08 (m, 2H), 4.44 (m, 1H), 6.85 (d, 2H, J = 9.0 Hz), 6.91 (d, 1H, J = 9.0 Hz), 7.31 (d, 2H, J = 9.3 Hz), 8.34 (brs, 1H).
Ia-226
mp 194-195 °C
$^1$H-NMR ($CDCl_3$/DMSO) δ ppm: 1.39 (d, 6H, J = 7.2 Hz), 1.66 (quintet, 2H, J = 6.8 Hz), 1.87 (quintet, 2H, J = 7.7 Hz), 2.47 (t, 2H, J = 7.5 Hz), 3.11-3.22 (m, 1H), 3.21 (t, 2H, J = 6.2 Hz), 5.00 (brs, 1H), 7.35-7.56 (m, 5H), 7.86 (d, 1H, J = 8.4 Hz), 8.05 (dd, 1H, J = 1.8, 8.1 Hz), 8.20 (d, 1H, J = 1.8 Hz), 9.24 (s, 1H).
Ia-227
mp >300 °C
$^1$H-NMR (DMSO) δ ppm: 1.22 (d, 6H, J = 6.3 Hz), 1.20-1.40 (m, 4H), 1.74-2.10 (m, 4H), 2.20-2.40 (m, 1H), 2.39 (s, 3H), 3.00-3.30 (m, 2H), 6.25 (s, 1H), 6.99 (brs, 1H), 7.43-7.57 (m, 1H), 7.71 (d, 1H, J = 8.1 Hz), 7.76 (s, 1H), 10.27 (s, 1H).
Ia-228
mp 168-169 °C
$^1$H-NMR (DMSO) δ ppm: 1.26 (s, 9H), 1.49 (quintet, 2H, J = 7.5 Hz), 1.64 (quintet, 2H, J = 7.4 Hz), 2.38 (t, 2H, J = 7.2 Hz), 2.40 (s, 3H), 3.04 (q, 2H, J = 6.5 Hz), 6.25 (s, 1H), 6.89 (t, 1H, J = 6.0 Hz), 7.48 (dd, 1H, J = 1.8, 8.4 Hz), 7.71 (d, 1H, J = 8.4 Hz), 7.77 (d, 1H, J = 1.8 Hz), 10.33 (s, 1H).
Ia-229
mp 174-175 °C
$^1$H-NMR (DMSO) δ ppm: 1.21 (d, 6H, J = 6.6 Hz), 1.42-1.56 (m, 2H), 1.56-1.70 (m, 2H), 2.33-2.42 (m, 2H), 2.40 (s, 3H), 2.90-3.02 (m, 2H), 3.14 (septet, 1H, J= 6.5 Hz), 6.26 (s, 1H), 6.99 (brs, 1H), 7.48 (d, 1H, J = 8.4 Hz), 7.71 (d, 1H, J = 8.7 Hz), 7.77 (s, 1H), 10.33 (s, 1H).
Ia-230
mp 194-195 °C
$^1$H-NMR (DMSO) δ ppm: 0.86 (d, 6H, J = 6.9 Hz), 1.25-1.65 (m, 4H), 1.27 (s, 9H), 1.81-2.05 (m, 5H), 2.23-2.35 (m, 1H), 2.99-3.15 (m, 1H), 3.36 (d, 2H, J = 7.2 Hz), 6.80 (d, 1H, J = 8.4 Hz), 7.80 (d, 1H, J = 8.4 Hz), 7.87 (d, 1H, J =

8.4 Hz), 8.19 (s, 1H), 10.44 (s, 1H).

Ia-231

mp 221-222°C

$^1$H-NMR (DMSO) δ ppm: 0.86 (d, 6H, J = 6.9 Hz), 1.22-1.40 (m, 2H), 1.23 (d, 6H, J = 6.9 Hz), 1.40-1.58 (m, 2H), 1.82-2.04 (m, 5H), 2.22-2.37 (m, 1H), 3.00-3.16 (m, 1H), 3.15 (septet, 1H, J = 6.6 Hz), 3.36 (d, 2H, J = 7.5 Hz), 6.99 (d, 1H, J = 7.5 Hz), 7.80 (d, 1H, J = 8.4 Hz), 7.86 (d, 1H, J = 8.4 Hz), 8.19 (s, 1H), 10.45 (s, 1H).

Ia-232

mp 196-197 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 0.93 (d, 6H, J = 6.6 Hz), 1.42 (s, 1H), 1.60-1.70 (m, 2H), 1.88 (quintet, 2H, J = 7.4 Hz), 2.02-2.20 (m, 1H), 2.46 (t, 2H, J = 7.7 Hz), 3.29 (q, 2H, J = 6.1 Hz), 3.48 (d, 2H, J = 7.8 Hz), 4.26 (t, 1H, J = 6.0 Hz), 7.76 (d, 1H, J = 8.1 Hz), 7.90 (dd, 1H, J = 1.8, 8.1 Hz), 8.07 (d, 1H, J = 1.5 Hz), 8.39 (s, 1H).

Ia-233

p. 151-152 °C

$^1$H-NMR ($CDCl_3$) δ ppm: 0.93 (d, 6H, J = 6.6 Hz), 1.40 (d, 6H, J = 6.6 Hz), 1.62-1.69 (m, 2H), 1.88 (quintet, 2H, J = 7.3 Hz), 2.03-2.16 (m, 1H), 2.47 (t, 2H, J = 7.5 Hz), 3.21 (septet, 1H, J = 6.8 Hz), 3.23 (q, 2H, J = 6.3 Hz), 3.48 (d, 2H, J = 7.5 Hz), 4.43 (t, 1H, J = 6.0 Hz), 7.76 (d, 1H, J = 8.4 Hz), 7.91 (dd, 1H, J = 1.8, 8.4 Hz), 8.06 (d, 1H, J =1.8 Hz), 8.36 (s, 1H).

Ia-234

mp 219-220 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.28 (s, 9H), 1.30-1.50 (m, 2H), 1.74-1.88 (m, 2H), 2.83 (t, 2H, J = 11.1 Hz), 3.20-3.32 (m, 1H), 3.94-4.07 (m, 2H), 5.94 (s, 2H), 6.77 (d, 1H, J= 8.8 Hz), 6.82 (dd, 1H, J = 1.8, 8.7 Hz), 6.89 (d, 1H, J = 8.7 Hz), 7.11 (d, 1H, J =1.8 Hz), 8.38 (s, 1H).

Ia-235

mp 280-282 °C

$^1$H-NMR (DMSO-$d_6$) δ ppm: 1.27 (s, 9H). 1.26-1.57 (m, 4H), 1.86-2.03 (m, 4H), 2.38-2.50 (m, 1H), 3.00-3.14 (m, 1H), 6.81 (d, 1H, J = 8.4 Hz), 7.29 (t, 1H, J = 8.4 Hz), 7.43 (t, 1H, J = 7.5 Hz), 7.73 (d, 1H, J = 8.4 Hz), 7.96 (d, 1H, J = 7.5 Hz), 12.27 (s, 1H).

Ia-237

mp 204-205 °C

$^1$H-NMR (DMSO) δ ppm: 1.23 (d, 6H, J = 6.6 Hz), 1.29-1.61 (m, 4H), 1.75-1.98 (m, 4H), 2.78-2.92 (m, 2H), 3.15 (m, 1H), 3.29 (m, 1H), 3.38-3.51 (m, 2H), 3.78-3.89 (m, 2H), 3.94-4.06 (m, 2H), 4.44 (m, 1H), 6.85 (d, 2H, J = 9.0 Hz), 7.10 (d, 1H, J = 7.8 Hz), 7.31 (d, 2H, J = 9.3 Hz), 8.34 (brs, 1H).

Ia-238

mp 128-130 °C

$^1$H-NMR (DMSO) δ ppm: 1.26 (s, 9H), 1.41-1.53 (m, 2H), 1.55-1.68 (m, 2H), 2.44 (t, 2H, J = 7.2 Hz), 2.98-3.07 (m, 2H), 6.90 (t, 1H, J = 6.0 Hz), 8.16 (d-d, 1H, J = 2.1 Hz, 8.7 Hz), 8.29 (d, 1H, J = 8.7 Hz), 8.70 (m, 1H), 10.91 (brs, 1H).

Ia-239

mp 256-258 °C

$^1$H-NMR (DMSO) δ ppm: 1.26-1.53 (m, 4H), 1.26 (s, 9H), 1.76-2.00 (m, 4H), 2.23 (s, 3H), 2.39 (m, 1H), 3.04 (m, 1H), 6.80 (d, 1H, J = 8.7 Hz), 7.57 (d-d, 1H, J = 2.4 Hz, 8.4 Hz), 7.97 (d, 1H, J = 8.4 Hz), 8.12 (m, 1H), 10.26 (brs, 1H).

Ia-240

mp 288-290 °C

$^1$H-NMR (DMSO) δ ppm: 1.26-1.53 (m, 4H), 1.27 (s, 9H), 1.78-1.90 (m, 4H), 2.40 (m, 1H), 3.04 (m, 1H), 6.81 (d, 1H, J = 8.7 Hz), 7.07 (m, 1H), 7.75 (m, 1H), 8.07 (d, 1H, J = 8.4 Hz), 8.29 (m, 1H), 10.36 (brs, 1H).

Ia-241

mp 249-250 °C

$^1$H-NMR (DMSO) δ ppm: 1.28 (s, 9H), 1.34-1.50 (m, 2H), 1.79-1.90 (m, 2H), 2.74-2.98 (m, 2H), 3.32 (m, 1H), 4.02-4.14 (m, 2H), 6.91 (d, 1H, J = 8.4 Hz), 7.94 (d, 1H, J = 9.0 Hz), 8.04 (d-d, 1H, J = 2.1 Hz, 9.0 Hz), 8.60 (s, 1H), 9.76 (brs, 1H).

Ia-242

mp 250-252 °C

$^1$H-NMR (DMSO) δ ppm: 1.24 (s, 9H), 1.27 (s, 9H), 1.24-1.54 (m, 4H), 1.76-1.88 (m, 2H). 1.90-2.01 (m, 2H), 2.21 (m, 1H), 3.05 (m, 1H), 6.79 (d, 1H, J = 8.7 Hz), 6.88 (d, 2H, J = 9.0 Hz), 7.48 (d, 2H, J = 9.0 Hz), 9.72 (brs, 1H).

136-0290

mp 250-252 °C

$^1$H-NMR (DMSO) δ ppm: 1.15 (d, 6H, J = 6.6 Hz), 1.28 (s, 9H), 1.35-1.52 (m, 2H), 1.78-1.92 (m, 2H), 2.20 (s, 3H), 2.81-2.96 (m, 2H), 3.33 (m, 1H), 3.96-4.16 (m, 3H), 6.92 (d, 1H, J = 8.7 Hz), 7.27 (d, 1H, J = 8.1 Hz), 7.60 (m, 1H), 7.66 (m, 1H), 8.06 (d, 1H, J = 7.8 Hz), 8.14 (brs, 1H).

Ia-244
mp 211-213 °C
$^1$H-NMR (DMSO) δ ppm: 1.29 (s, 9H), 1.35-1.52 (m, 2H), 1.81-1.93 (m, 2H), 2.83-2.97 (m, 2H), 3.32 (m, 1H), 4.03-4.14 (m, 2H), 6.93 (d, 1H, J = 8.7 Hz), 7.55 (d-d, 1H, J = 2.1 Hz, 9.0 Hz), 7.94 (d, III, J = 9.0 Hz), 8.29 (d, 1H, J =1.8 Hz), 8.78 (brs, 1H), 9.19 (s, 1H).
Ia-245
mp 196-197 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.2-1.6 (m, 6H), 1.8-2.0 (m, 6H), 2.23 (m, 1H), 3.05 (m, 1H), 3.73 (m, 4h), 4.99 (s, 1H), 6.79 (d, 1H, J=8.7), 7.13 (d, 1H, J=6.8), 7.22 (t, 1H, J=6.8), 7.49 (d, 1H, J=6.8), 7.72 (s, 1H), 9.78 (s, 1H).
Ia-246
mp 242-244 °C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.2-1.5 (m, 4H), 1.65 (m, 4H), 1.8-2.0 (m, 4H), 2.23 (m, 1H), 2.71 (m, 1H), 3.06 (m, 1H), 3.43 (m, 2H), 3.93 (m, 2H), 6.79 (d, 1H, J=8.7), 6.91 (d, 1H, J=8.7), 7.20 (t, 1H, J=7.5), 7.40 (d, 1H, J=7.5), 7.53 (s, 1H), 9.76 (s, 1H).
Ia-247
mp 242-245°C
$^1$H-NMR (DMSO) δ ppm: 1.27 (s, 9H), 1.2-1.6 (m, 6H), 1.8-2.0 (m, 6H), 2.23 (m, 1H), 3.05 (m, 1H), 3.74 (m, 4H), 4.94 (brs, 1H), 6.79 (d, 1h, J=8.7), 7.38 (d, 1H, J=8.7), 7.52 (d, 1H, J=8.7), 9.76 (s, 1H).
Ia-248
mp 272-274 °C
$^1$H-NMR ($CDCl_3$) δ ppm: 1.27 (s, 9H), 1.2-1.5 (m, 4H), 1.62 (m, 4H), 1.8-2.0 (m, 4H), 2.22 (m, 1H), 2.68 (m, 1H), 3.05 (m, 1H), 3.41 (m, 2H), 3.92 (m, 2H), 6.79 (d, 1H, J=9.0), 7.15 (d, 2H, J=8.7), 7.50 (d, 2H, J=8.7), 9.73(s, 1H).
Ia-249 mp 174-176 °C
Ia-250 mp 255-257 °C
Ia-252 mp 249-251 °C
Ia-253 mp 120-121 °C
Ia-254 mp 236-237 °C
Ia-255 mp 172-174 °C
Ia-256 mp 257-259 °C
Ia-257 mp 179-180 °C
Ia-258 mp 227-229 °C
Ia-259 mp 135-136 °C

Experiment 1 Affinity for NPY Y5 receptor

**[0150]** cDNA sequence encoding a human NPY Y5 receptor (WO96/16542) was cloned in the expression vector pME18S (Takebe et al. Mol. Cell. Biol. 8, 8957). The obtained expression vector was transfected into a host CHO cells by using a Lipofect AMINE reagent (Trademark, Gico BRL Co., Ltd.) according to an instruction protocol to obtain the cells that stably express NPY Y5 receptor.

**[0151]** The membranes prepared from the above CHO cells expressing NPY Y5 receptor, the compound of the present invention and 30,000 cpm [$^{125}$I] peptide YY (60 pM of final concentration: Amersham) were incubated in the assay buffer (20 mM HEPES-Hanks buffer containing 0.1% bovine serum albumin, pH 7.4) at 25 °C for 2 hours, and then the mixture was filtered with a glassfilter GF/C treated with polyethyleneimine. After the glassfilter was washed with 50 mM Tris-HCl buffer (pH 7.4), the radioactivity on the filter was measured with a gamma counter. The non-specific binding was detected in the presence of 200 nM of peptide YY. The 50 % inhibitory concentration of the test compound against the specific peptide YY binding ($IC_{50}$ value) was calculated (Inui, A. et al. Endocrinology 131, 2090 - 2096 (1992)). The results are shown in Tables 1 and 2.

**[0152]** The compounds of the present invention inhibited the binding of peptide YY (NPY homologue) to NPY Y5 receptors. In other words, the compounds of the present invention showed affinity for the NPY Y5 receptor.

Experiment 2 cAMP production inhibitory activity in CHO cells

**[0153]** After CHO cells expressing human NPY Y5 receptor were incubated in the presence of 2.5 mM isobutylmethylxanthine (SIGMA) at 37 °C for 20 min, the compound of the present invention was added and incubated for 5 min. Then, 50 nM NPY and 10 μM forskolin (SIGMA) were added to the cells and incubated for 30 min. After the reaction was terminated by adding 1N HCl, the amount of cAMP in the supernatant was measured with EIA kit (Amersham LIFE SCIENCE). The inhibitory activity of NPY against forskolin stimulated cAMP was regarded as 100 % and the 50 % inhibitory concentration ($IC_{50}$ value) of the compound of the present invention against the NPY activity was calculated.

The results are shown in Tables 1 to 4.

Table 1

| Compound | binding $IC_{50}$(nM) | cAMP $IC_{50}$(nM) |
|---|---|---|
| I-2 | 7.5 | 72 |
| I-7 | 3 | <10 |
| I-11 | 1.3 | 5 |
| I-18 | 4.4 | 29 |
| I-20 | 7 | 21 |
| I-22 | 8.6 | 51 |
| I-24 | 9.6 | 71 |
| I-25 | 0.6 | 2.6 |
| I-41 | 5.3 | 38.2 |
| I-44 | 1.0 | 13.4 |
| I-45 | 1.2 | 27.9 |
| I-46 | 0.8 | 10.5 |
| I-47 | 0.6 | 14.9 |
| I-49 | 0.4 | 8.1 |
| I-50 | 0.3 | 8.4 |
| I-53 | 4.1 | 21 |
| I-55 | 9.0 | 40 |
| I-57 | 4.8 | 47 |
| I-59 | 0.8 | 35 |
| I-60 | 0.69 | 18 |
| I-61 | 0.26 | 5.3 |
| I-62 | 0.58 | 16 |
| I-63 | 1.3 | 50 |
| I-64 | 2.2 | 80 |
| I-65 | 1.8 | 72 |
| I-66 | 1.5 | 30 |
| I-67 | 2 | 17 |
| I-69 | 3.8 | 13 |
| I-72 | 2.3 | 2.1 |
| I-75 | 0.55 | 3.4 |
| I-76 | 0.61 | 5.5 |
| I-77 | 1.8 | 28 |
| I-79 | 0.59 | 25 |
| I-83 | 0.61 | 29 |
| I-84 | 1.3 | 25 |
| I-86 | 3.4 | 100 |
| I-87 | 0.66 | 21 |
| I-90 | 2.8 | 50 |
| I-92 | 7 | 61 |
| I-101 | 3.9 | 38 |
| I-102 | 1.7 | 14 |
| I-106 | 6.4 | 29 |

Table 2

| | | |
|---|---|---|
| I-109 | 1.2 | 3.2 |
| I-110 | 4.3 | 13.6 |
| I-111 | 1.8 | 6.1 |
| I-114 | 7 | 30 |
| I-116 | 1.2 | 11 |
| I-120 | 1.4 | 4.8 |
| I-123 | 1.8 | 168 |
| I-126 | 0.6 | 13.2 |
| I-127 | 1.4 | 30.4 |
| I-128 | 1.3 | 10.2 |
| I-129 | 2.1 | 174 |
| I-130 | 1.1 | 42.5 |
| I-131 | 1.1 | 34.8 |
| I-132 | 2.2 | 30.4 |
| I-133 | 0.9 | 21.1 |
| I-134 | 0.5 | 10.0 |
| I-135 | 0.7 | 22.0 |
| I-136 | 2.8 | - |
| I-137 | 1.4 | 68.2 |
| I-138 | 1.0 | 18.6 |
| I-139 | 0.41 | 7.6 |
| I-140 | 0.48 | 8.9 |
| I-141 | 0.42 | 7.4 |
| I-142 | 0.49 | 28 |
| I-143 | 3.5 | 44 |
| I-144 | 3.4 | 52 |
| I-146 | 2.3 | 20 |
| I-147 | 7.1 | 63 |
| I-149 | 0.83 | 15 |
| I-150 | 0.17 | 5.2 |
| I-151 | 0.17 | 2.6 |
| I-152 | 0.88 | 46 |
| I-153 | 1.7 | 29 |
| I-154 | 1.1 | 11 |
| I-156 | 0.81 | 17 |
| I-160 | 0.61 | 8.8 |
| I-161 | 0.49 | 3.1 |
| I-162 | 1.7 | 32 |
| I-163 | 2.3 | 83 |
| I-164 | 0.71 | 5.9 |
| I-165 | 0.44 | 47 |
| I-166 | 0.37 | 9.7 |
| I-167 | 0.72 | 39 |
| I-168 | 2.1 | 32 |
| I-171 | 2.4 | 71 |
| I-172 | 0.91 | 36 |
| I-187 | 0.58 | 13 |
| I-191 | 1.1 | 11 |
| I-196 | 1.4 | 6.8 |
| I-197 | 6.7 | 38 |
| I-198 | 7.2 | 33 |
| I-199 | 4.8 | 31 |
| I-202 | 6.7 | 67 |
| I-204 | 1.0 | 6.3 |
| I-205 | 2.9 | 17 |
| I-206 | 5.9 | 54 |
| I-207 | 4.6 | 23 |
| I-210 | 1.1 | 13 |
| I-212 | 0.67 | 7.5 |
| I-213 | 0.44 | 4.0 |
| Ia-1 | 4.8 | 31 |
| Ia-3 | 9.2 | 150 |
| Ia-4 | 1.4 | 15 |
| Ia-5 | 1.6 | 43 |
| Ia-6 | 2.4 | 23 |
| Ia-8 | 2.9 | 34 |
| Ia-9 | 0.94 | 11 |
| Ia-10 | 0.47 | 2.7 |
| Ia-11 | 0.64 | 7.2 |
| Ia-12 | 0.94 | 5.5 |
| Ia-13 | 1.5 | 3.3 |
| Ia-14 | 4.8 | 28 |
| Ia-16 | 0.1 | - |
| Ia-17 | 0.1 | 1.9 |
| Ia-20 | 4.9 | 100 |

Table 3

| | | |
|---|---|---|
| Ia-21 | 3.4 | 35 |
| Ia-22 | 3.1 | 38 |
| Ia-24 | 5.2 | 74 |
| Ia-25 | 1.1 | 18 |
| Ia-26 | 1.9 | 27 |
| Ia-28 | 5.2 | 130 |
| Ia-29 | 1 | 7.3 |
| Ia-30 | 2.6 | 25 |
| Ia-31 | 3.8 | 11 |
| Ia-32 | 0.52 | 6.7 |
| Ia-33 | 1.8 | 64 |
| Ia-35 | 1.8 | - |
| Ia-36 | 1.6 | 86 |
| Ia-37 | 0.73 | 3.8 |
| Ia-38 | 1 | 2.2 |
| Ia-39 | 1.5 | 3.5 |
| Ia-40 | 2.2 | 9.3 |
| Ia-41 | 2.5 | 9 |
| Ia-42 | 3.6 | 20 |
| Ia-44 | 4.8 | 27 |
| Ia-45 | 4.8 | 42 |
| Ia-46 | 0.87 | 8.3 |
| Ia-47 | 0.82 | 3.8 |
| Ia-48 | 1.2 | 6.1 |
| Ia-49 | 2.6 | 83 |
| Ia-50 | 1.7 | 24 |
| Ia-51 | 1.3 | 3.4 |
| Ia-52 | 1.9 | 22 |
| Ia-53 | 0.22 | 8.1 |
| Ia-54 | 0.44 | 9 |
| Ia-55 | 1.1 | 27 |
| Ia-56 | 2.3 | 96 |
| Ia-57 | 0.93 | 31 |
| Ia-58 | 2.5 | 110 |
| Ia-59 | 0.71 | 16 |
| Ia-60 | 0.95 | 10 |
| Ia-61 | 0.68 | 19 |
| Ia-62 | 1.1 | 29 |
| Ia-63 | 3.9 | 370 |
| Ia-64 | 7.1 | 96 |
| Ia-65 | 1.1 | 11 |
| Ia-66 | 0.59 | 3.2 |
| Ia-67 | 6.3 | 75 |
| Ia-68 | 9.5 | 180 |
| Ia-69 | 2.7 | 33 |
| Ia-70 | 1.5 | 31 |
| Ia-71 | 1.3 | 12 |
| Ia-76 | 2.2 | - |
| Ia-78 | 2 | 150 |
| Ia-79 | 0.82 | - |
| Ia-80 | 0.44 | 3.0 |
| Ia-81 | 2.7 | 4.5 |
| Ia-83 | 1.2 | 53 |
| Ia-84 | 0.25 | 13 |
| Ia-85 | 0.22 | 14 |
| Ia-86 | 0.73 | 11 |
| Ia-87 | 0.49 | 61 |
| Ia-88 | 0.62 | 48 |
| Ia-91 | 4 | 150 |
| Ia-106 | 1.9 | 24 |
| Ia-107 | 0.14 | 1.3 |
| Ia-109 | 0.6 | 3.9 |
| Ia-110 | 0.3 | 1.1 |
| Ia-111 | 5.1 | 28 |
| Ia-124 | 1.1 | 22 |
| Ia-125 | 4.1 | 46 |
| Ia-126 | 2.3 | 58 |
| Ia-127 | 6.1 | 160 |
| Ia-129 | 1.3 | 26 |
| Ia-130 | 0.21 | 3 |
| Ia-131 | 1.3 | 17 |
| Ia-132 | 2.8 | 76 |
| Ia-133 | 1.7 | 8.8 |
| Ia-135 | 8.2 | 49 |
| Ia-136 | 1.6 | 13 |
| Ia-138 | 2.2 | 28 |
| Ia-139 | 1.9 | 25 |
| Ia-140 | 1 | 24 |
| Ia-141 | 1 | 5.7 |
| Ia-142 | 0.67 | 5.5 |

Table 4

| | | |
|---|---|---|
| Ia-143 | 7.8 | 39 |
| Ia-144 | 6.1 | 57 |
| Ia-145 | 7 | 86 |
| Ia-146 | 9.9 | 79 |
| Ia-158 | 0.71 | 1.7 |
| Ia-160 | 0.76 | 140 |
| Ia-161 | 1.9 | 18 |
| Ia-163 | 7 | 400 |
| Ia-164 | 0.38 | 4.7 |
| Ia-168 | 0.95 | 13 |
| Ia-169 | 1.9 | 88 |
| Ia-173 | 6.9 | 140 |
| Ia-174 | 0.35 | 5.4 |
| Ia-175 | 0.49 | 9.2 |
| Ia-176 | 0.63 | 5.1 |
| Ia-177 | 0.49 | 7.5 |
| Ia-178 | 4.6 | 16 |
| Ia-179 | 0.89 | 19 |
| Ia-180 | 1.9 | 11 |
| Ia-181 | 7.7 | 25 |
| Ia-182 | 0.24 | 2.1 |
| Ia-183 | 1.9 | 7.8 |
| Ia-184 | 0.38 | - |
| Ia-185 | 0.94 | 4.4 |
| Ia-186 | 0.93 | 12 |
| Ia-187 | 1.9 | 60 |
| Ia-188 | 0.75 | 28 |
| Ia-189 | 3.5 | 95 |
| Ia-190 | 0.34 | 1000 |
| Ia-191 | 0.49 | 220 |
| Ia-192 | 5.9 | 200 |
| Ia-193 | 1.4 | 43 |
| Ia-194 | 0.22 | 8.1 |
| Ia-195 | 1.4 | 31 |
| Ia-196 | 0.39 | 1.3 |
| Ia-197 | 0.44 | 2.5 |
| Ia-198 | 0.23 | 2.6 |
| Ia-199 | 0.11 | 1.6 |
| Ia-200 | 1.4 | 18 |
| Ia-201 | 3.1 | 74 |
| Ia-202 | 0.37 | 3.4 |
| Ia-203 | 0.2 | 2.6 |
| Ia-204 | 1 | 6.3 |
| Ia-205 | 2.4 | 99 |
| Ia-206 | 1.9 | 460 |
| Ia-207 | 0.55 | 5.9 |
| Ia-208 | 1.2 | 9.7 |
| Ia-209 | 0.55 | - |
| Ia-210 | 2.8 | 99 |
| Ia-211 | 4.8 | 240 |
| Ia-212 | 0.52 | 2.6 |
| Ia-213 | 0.91 | 28 |
| Ia-219 | 2.5 | 28 |
| Ia-221 | 0.47 | 1.5 |
| Ia-222 | 3.7 | 18 |
| Ia-224 | 0.1 | 1.2 |
| Ia-225 | 3.4 | 20 |
| Ia-226 | 0.37 | 21 |
| Ia-227 | 0.59 | - |
| Ia-228 | 0.96 | - |
| Ia-229 | 1.9 | - |
| Ia-230 | 0.32 | - |
| Ia-231 | 0.29 | - |
| Ia-232 | 0.7 | - |
| Ia-233 | 0.63 | - |
| Ia-235 | 5.5 | - |
| Ia-237 | 1.1 | 15 |
| Ia-241 | 1.9 | - |
| Ia-243 | 1.3 | - |
| Ia-246 | 0.26 | 20 |
| Ia-247 | 0.79 | 31 |
| Ia-248 | 0.27 | 17 |
| Ia-250 | 1.9 | - |
| Ia-252 | 1.2 | - |
| Ia-253 | 0.53 | - |
| Ia-254 | 2.0 | - |
| Ia-255 | 3.2 | - |
| Ia-256 | 5.7 | - |
| Ia-257 | 8.6 | - |
| Ia-258 | 1.8 | - |

**[0154]** As shown in Tables 1 to 4, the compounds of the present invention have an NPY Y5 receptor antagonistic activity.

Experiment 3

**[0155]** Using the membranes prepared from Y1-expression cells (human neuroblastoma, SK-N-MC) and the mem-

branes prepared from Y2-expression cells (human neuroblastoma, SMS-KAN), the experiment was carried out in a similar way as Experiment 1 to determine the affinity for NPY Y1 receptor and NPY Y2 receptor.

**[0156]** Binding $IC_{50}$ values for NPY Y1 and NPY Y2 receptors of I-27, I-32, I-41, I-45, I-46, I-47, I-48, I-49, I-59, I-61, I-63, I-64, I-66, I-69, I-72, I-152, I-154, I-204, I-205, I-212, Ia-3, Ia-5, Ia-6, Ia-12, Ia-16, Ia-17, Ia-20, Ia-21, Ia-22, Ia-26, Ia-28, Ia-29, Ia-30, Ia-31, Ia-32, Ia-33, Ia-37, Ia-39, Ia-40, Ia-50, Ia-51, Ia-54, Ia-62, Ia-67, Ia-124, Ia-126, Ia-139, Ia-140, Ia-142, Ia-178, Ia-199 and Ia-200 were 100,000 nM or higher and each compound had a selectivity for NPY Y5 receptor.

Formulation Example 1 Tablets

**[0157]**

| | |
|---|---|
| Compound (I-1) | 15 mg |
| Starch | 15 mg |
| Lactose | 15 mg |
| Crystalline cellulose | 19 mg |
| Polyvinyl alcohol | 3 mg |
| Distilled water | 30 ml |
| Calcium stearate | 3 mg |

**[0158]** After all of the above ingredients except for calcium stearate are uniformly mixed, the mixture is crushed and granulated, and dried to obtain a suitable size of granules. After calcium stearate is added to the granules, tablets are formed by compression molding.

Formulation Example 2 Capsules

**[0159]**

| | |
|---|---|
| Compound (I-2) | 10 mg |
| Magnesium stearate | 10 mg |
| Lactose | 80 mg |

**[0160]** After the above ingredients are mixed to prepare powders or granules, the obtained are filled in capsules.

Formulation Example 3 Granules

**[0161]**

| | |
|---|---|
| Compound (I-3) | 30 g |
| Lactose | 265 g |
| Magnesium Stearate | 5 g |

**[0162]** After the above ingredients are mixed uniformly and formed by compression molding, the obtained are crushed, granulated and sieved to prepare suitable volume of granules.

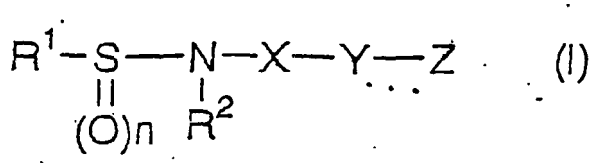
Industrial Applicability

**[0163]** As shown in the above Experiments, the compounds of the present invention have an NPY Y5 receptor antagonistic activity. Therefore, the compounds of the present invention are useful as an anti-obestic agent and anorectic agent.

## Claims

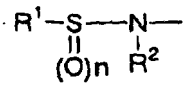
**1.** Use of

a compound of the formula (I):

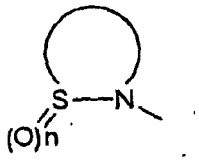


(I)

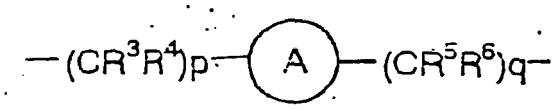
wherein $R^1$ is optionally substituted $C_1$-$C_{10}$ alkyl, or optionally substituted $C_3$-$C_8$ cycloalkyl,
$R^2$ is hydrogen or $C_1$-$C_{10}$ alkyl, and $R^1$ and $R^2$ taken together may form $C_1$-$C_6$ alkylene including the case



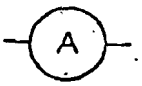
is



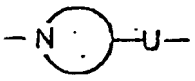
n is 1 or 2,
X is optionally substituted $C_1$-$C_6$ alkylene,
optionally substituted $C_2$-$C_6$ alkenylene,
optionally substituted -CO-$C_1$-$C_6$ alkylene,
optionally substituted -CO-$C_2$-$C_6$ alkenylene or



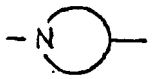
wherein $R^3$, $R^4$, $R^5$ and $R^6$ are each independently hydrogen or $C_1$-$C_{10}$ alkyl,



is optionally substituted $C_3$-$C_8$ cycloalkylene, optionally substituted $C_3$-$C_8$ cycloalkenylene, optionally substituted $C_5$-$C_8$ bicycloalkylene, arylene optionally substituted selected from a bivalent group formed by excluding one hydrogen from phenyl, naphthyl, anthryl, phenanthryl, indanyl, indenyl, biphenylyl, acenaphthyl, tetrahydronaphthyl and fluorenyl,
or optionally substituted heterocyclediyl and p and q are each independently 0 or 1,
-$NR^2$-X- may be



wherein

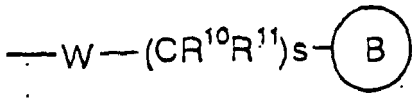


is piperidinediyl, piperazinediyl, pyridinediyl, pyrazinediyl, pyrrolidinediyl or pyrrolediyl and U is single bond, $C_1$-$C_6$ alkylene or $C_2$-$C_6$ alkenylene,
Y is OCON-$R^7$,-CONR$^7$, CSNR$^7$, NR$^7$CO or NR$^7$CS,
$R^7$ is hydrogen or $C_1$-$C_{10}$ alkyl, and
Z is optionally substituted $C_1$-$C_{10}$ alkyl, optionally substituted $C_2$-$C_{10}$ alkenyl, optionally substituted amino, optionally substituted $C_1$-$C_{10}$ alkoxy, optionally substituted carbocyclyl or optionally substituted heterocyclyl, wherein heterocyclyl is selected from 5- or 6-membered heteroaryl selected from pyrrolyl, imidazolyl, pyrazolyl, pyridyl, pyridazinyl, pyrimidinyl, oxazolyl, oxadiazolyl, isothiazolyl, thiazolyl, thiadiazolyl, furyl and thienyl; fused heterocyclyl consisting of two rings selected from as indolyl, isoindolyl, indazolyl, indolizinyl, indolinyl, isoindolinyl, quinolyl, isoquinolyl, cinnolinyl, phthalazinyl, quinazolinyl, naphthyridinyl, quinoxalinyl, purinyl, pteridinyl, benzopyranyl, benzimidazolyl, benzisoxazolyl, benzoxazolyl, benzoxadiazolyl, benzisothiazolyl, benzothiazolyl, benzothiadiazolyl, benzofuryl, isobenzofuryl, benzothienyl, benzotriazolyl, imidazopyridyl, triazoropyridyl, imidazothiazolyl, pyrazinopyridazinyl, quinazolinyl, quinolyl, isoquinolyl, naphthyridinyl, dihydropyridyl, tetrahydroquinolyl and tetrahydrobenzothienzyl; and heterocyclediyl is a bivalent group formed by excluding are hydrogen from above heterocyclyl, carbocyclyl is selected from $C_3$-$C_8$ cycloalkyl, $C_3$-$C_8$ cycloalkenyl, $C_3$-$C_8$ bicycloalkyl and aryl as defined above, a pharmaceutically acceptable salt or solvate thereof for the preparation of a pharmaceutical composition as an NPY-Y5-receptor antagonist whereby the substitutents of "optionally substituted $C_1$-$C_{10}$ alkyl" represented by Z are, (1) halogen; (2) cyano;

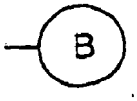
(3) the following groups (i) to (xvi), which are optionally substituted with one or more substituents selected from "a substituents group β" defined below,

(i) hydroxy, (ii) $C_1$-$C_{10}$ alkoxy, (iii) mercapto, (iv) $C_1$-$C_{10}$ er alkylthio, (v) acyl, (vi) acyloxy, (vii) carboxy, (viii) $C_1$-$C_{10}$ alkoxycarbonyl, (ix) imino, (x) carbamoyl, (xi) thiocarbamoyl, (xii) $C_1$-$C_{10}$ alkylcarbamoyl, (xiii) lower alkylthiocarbamoyl, (xiv) amino, (xv) $C_1$-$C_{10}$ alkylamino or (xvi) heterocyclylcarbonyl;

or
(4) a group of the formula:



wherein $R^{10}$ and $R^{11}$ are each independently hydrogen or $C_1$-$C_{10}$ alkyl and when this group has two or more of $R^{10}$ and/or two or more of $R^{11}$, each $R^{10}$ and/or each $R^{11}$ may be different,
W is single bond, O, S or NR$^{12}$,
$R^{12}$ is hydrogen, $C_1$-$C_{10}$ alkyl or phenyl,



is cycloalkyl, bicycloalkyl, cycloalkenyl, aryl or heterocyclyl, each of which is optionally substituted with one or more of substituents selected from "a substituents group α" defined below and
s is an integer of 0 to 4;
the substituents group α" is a group constituting of (1) halogen; (2) oxo; (3) cyano; (4) nitro; (5) imino optionally substituted with $C_1$-$C_{10}$ alkyl or hydroxy;
(6) the following groups (i) to (xxi), which are optionally substituted with one or more of groups selected from

the substituents group β,

(i) hydroxy, (ii) $C_1$-$C_{10}$ alkyl, (iii) $C_2$-$C_{10}$ alkenyl, (iv) $C_1$-$C_{10}$ er alkoxy, (v) carboxy, (vi) $C_1$-$C_{10}$ alkoxycarbonyl, (vii) acyl, (viii) acyloxy, (ix) imino, (x) mercapto, (xi) $C_1$-$C_{10}$ alkylthio, (xii) carbamoyl, (xiii) $C_1$-$C_{10}$ alkylcarbamoyl, (xiv) cycloalkylcarbamoyl, (xv) thiocarbamoyl, (xvi) $C_1$-$C_{10}$ alkylthiocarbamoyl, (xvii) $C_1$-$C_{10}$ alkylsulfinyl, (xviii) $C_1$-$C_{10}$ alkylsulfonyl, (xix) sulfamoyl, (xx) $C_1$-$C_{10}$ alkylsulfamoyl and (xxi) cycloalkylsulfamoyl;

(7) the following groups (i) to (v), which are optionally substituted with the substituents group β, $C_1$-$C_{10}$ alkyl, $C_1$-$C_{10}$ alkoxy ($C_1$-$C_{10}$)alkyl, optionally protected hydroxy($C_1$-$C_{10}$)alkyl, halogeno($C_1$-$C_{10}$)alkyl, lower alkylsulfonyl and/or arylsulfonyl,

(i) cycloalkyl, (ii) cycloalkenyl, (iii)cycloalkyloxy, (iv) amino and (v) alkylenedioxy;
and

(8) the following groups (i) to (xii), which are optionally substituted with the substituents group β, $C_1$-$C_{10}$ alkyl, halogeno($C_1$-$C_{10}$)alkyl and/or oxo,

(i) phenyl, (ii) naphthyl, (iii) phenoxy, (iv) phenyl($C_1$-$C_{10}$)alkoxy, (v) phenylthio, (vi) phenyl($C_1$-$C_{10}$)alkylthio, (vii) phenylazo, (viii) heterocyclyl, (ix) heterocyclyloxy, (x) heterocyclylthio, (xi) heterocyclylcarbonyl and (xii) heterocyclylsulfonyl.

"a substituents group β" is a group consisting of halogen, optionally protected hydroxy, mercapto, $C_1$-$C_{10}$ alkoxy, $C_2$-$C_{10}$ alkenyl, amino, $C_1$-$C_{10}$ alkylamino, $C_1$-$C_{10}$ alkoxycarbonylamino, $C_1$-$C_{10}$ alkylthio, acyl, carboxy, $C_1$-$C_{10}$ alkoxycarbonyl, carbamoyl, cyano, cycloalkyl, phenyl, phenoxy, $C_1$-$C_{10}$ alkylphenyl, $C_1$-$C_{10}$ alkoxyphenyl, halogenophenyl, naphthyl and heterocyclyl;
the substituents for "optionally substituted $C_1$-$C_{10}$ alkyl" represented by any other than Z are one or more substituents selected from the substituents group β;
the substituents for "optionally substituted $C_1$-$C_{10}$ alkoxy" are one or more substituents selected from the substituents group β;
the substituents for "optionally substituted cycloalkyl" are one or more substituents selected from the substituents group α;
the substituents for "optionally substituted lower alkenyl" are halogen, lower alkoxy, lower alkenyl, amino, lower alkylamino, lower alkoxycarbonylamino, lower alkylthio, acyl, carboxy, lower alkoxycarbonyl, carbamoyl, cyano, cycloalkyl, phenyl, lower alkylphenyl, lower alkoxyphenyl, naphthyl and/or heterocyclyl;
the substituents for "optionally substituted cycloalkenyl" are one or more substituents selected from the substituents group β;
the substituents for "optionally substituted amino" are the substituents group β, optionally substituted benzoyl and/or optionally substituted heterocyclylcarbonyl wherein the substituents are hydroxy, $C_1$-$C_{10}$ alkyl, lower alkoxy and/or $C_1$-$C_{10}$ alkylthio;
the term "optionally substituted aryl" and "optionally substituted phenyl" represented by Z include the above "aryl" and "phenyl" respectively, which may be substituted with the substituents group α or $C_1$-$C_{10}$ alkyl which may be substituted with one or more group selected from the substituents group α;
the substituents for "optionally substituted aryl" and "optionally substituted phenyl" represented by any other than Z are one or more groups selected from the substituents group β;
the term "optionally substituted carbocyclyl" includes the above "optionally substituted cycloalkyl", "optionally substituted cycloalkenyl", "optionally substituted bicycloallyl" and "optionally substituted aryl";
the substituents for "optionally substituted heterocyclyl" are the same as those for the above "optionally substituted aryl",
and one or more groups selected from the substituents group β are the substituents for "optionally substituted $C_1$-$C_6$ alkylene", "optionally substituted $C_2$-$C_6$ alkenylene", "optionally substituted cycloalkylene", "optionally substituted cyclohexylene", "optionally substituted bicycloalkylene", "optionally substituted cycloalkenylene", "optionally substituted phenylene", "optionally substituted heterocyclediyl" and "optionally substituted piperidinylene.

**2.** Use according to Claim 1 wherein $R^2$ is hydrogen or $C_1$-$C_{10}$ alkyl and Z is optionally substituted $C_1$-$C_{10}$ alkyl, optionally substituted $C_2$-$C_{10}$ alkenyl, optionally substituted $C_1$-$C_{10}$ alkoxy, optionally substituted carbocyclyl, optionally substituted heterocyclyl or optionally substituted amino, provided that $R^1$ is optionally substituted C3 to C10 alkyl when Z is optionally substituted amino, wherein carbocyclyl and heterocyclyl are defined as above and the optional substituents are defined as above.

**3.** Use according to Claim 1 wherein $R^1$ is optionally substituted $C_1$-$C_{10}$ alkyl or optionally substituted $C_3$-$C_8$ cycloalkyl, X is optionally substituted $C_2$-$C_6$ alkylene, optionally substituted $C_2$-$C_6$ alkenylene or

wherein p and q are 0,

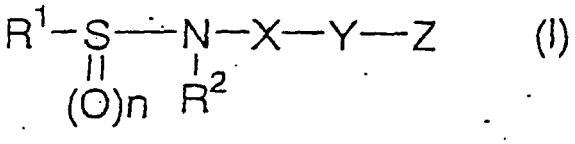
is optionally substituted $C_3$-$C_8$ cycloalkylene, optionally substituted $C_3$-$C_8$ cycloalkenylene, optionally substituted $C_5$-$C_8$ bicycloalkylene, optionally substituted arylene or optionally substituted heterocyclediyl,
and
Z is optionally substituted $C_1$-$C_{10}$ alkyl, optionally substituted carbocyclyl or optionally substituted heterocyclyl, wherein arylene, heterocyclothiyl and heterocyclyl are defined as above and the optional substituents are as defined above.

**4.** Use according to any one of Claims 1 to 3 wherein $R^1$ is optionally substituted C3 to C10 alkyl wherein the optional substituents are as defined above.

**5.** Use according to any one of Claims 1 to 4 as an anti-obestic agent.

**6.** Use according to any one of Claims 1 to 4 as an anorectic agent.

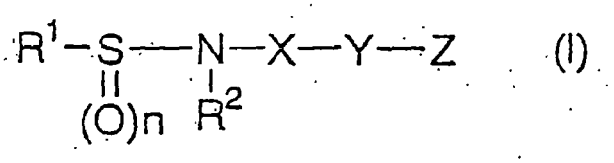
**7.** A compound of the formula (I):



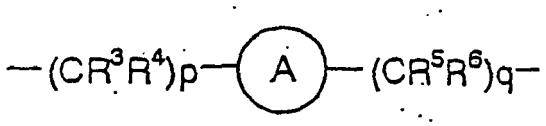
wherein X is C2 to C6 alkylene or C3 to C6 alkenylene, $R^1$ is optionally substituted C3 to C10 alkyl or optionally substituted C5 to C6 cycloalkyl and the other symbols are the same as defined in Claim 1, provided that Z is not $C_1$-$C_{10}$ alkylphenylamino, hydroxy($C_1$-$C_{10}$)alkylphenylamino and acylphenylamino when Y is $NR^7CO$, , pharmaceutically acceptable salt or solvate thereof, wherein the optional substituents are as defined above.

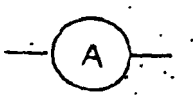
**8.** The compound described in Claim 7 wherein Z is optionally substituted $C_1$-$C_{10}$ alkyl or optionally substituted phenyl, pharmaceutically acceptable salt or solvate thereof, wherein the optional substituents are as defined above.

**9.** A compound of the formula (I):



wherein X is





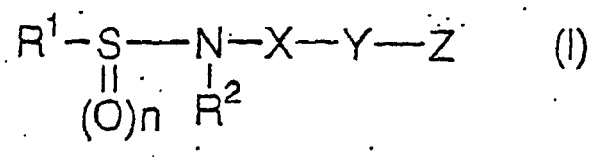
is optionally substituted $C_3$-$C_6$ cycloalkylene, optionally substituted $C_3$-$C_8$ cycloalkenylene, optionally substituted $C_5$-$C_8$ bicycloalkylene or optionally substituted piperidinylene, $R^1$ is optionally substituted C3 to C10 alkyl or optionally substituted C5 to C6 cycloalkyl and the other symbols are the same as defined in Claim 1, pharmaceutically acceptable salt or solvate thereof, wherein the optional substituents are as defined above.

**10.** The compound described in Claim 9 wherein -Ⓐ- is optionally substituted cyclohexylene or optionally substituted piperidinylene and p and q are simultaneously 0, pharmaceutically acceptable salt or solvate thereof wherein the optional substituents are as defined above.

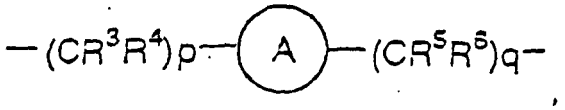
**11.** The compound described in Claim 9 or 10 wherein Y is CONH, pharmaceutically acceptable salt or solvate thereof.

**12.** The compound claimed in any one of Claims 9 to 11 wherein Z is optionally substituted $C_1$-$C_{10}$ alkyl, optionally substituted phenyl, optionally substituted pyridyl or optionally substituted benzopyranyl, pharmaceutically acceptable salt or solvate thereof, wherein the optional substituents are as defined above.

**13.** A compound of the formula (I):

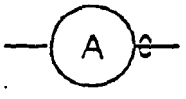


wherein X is



is heteroarylene, $R^1$ is optionally substituted C3 to C10 alkyl or optionally substituted C5 to C6 cycloalkyl and the other symbols are the same as defined in Claim 1, pharmaceutically acceptable salt or solvate thereof wherein the optional substituents are as defined above.

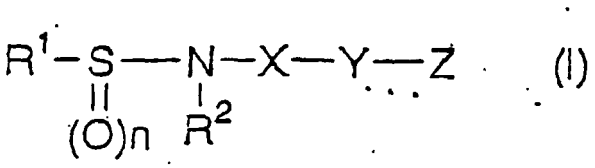
**14.** The compound claimed in Claim 13 wherein



is thiophenediyl or furandiyl, pharmaceutically acceptable salt or solvate thereof.

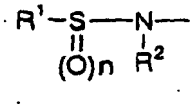
**15.** A pharmaceutical composition comprising the compound claimed in any one of Claims 7 to 14, pharmaceutically acceptable salt or solvate thereof.

**16.** A compound of the formula (I):

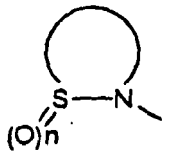


(I)

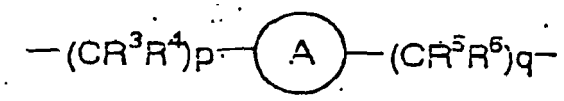
wherein $R^1$ is optionally substituted $C_1$-$C_{10}$ alkyl, or optionally substituted $C_3$-$C_8$ cycloalkyl
$R^2$ is hydrogen or $C_1$-$C_{10}$ alkyl, and $R^1$ and $R^2$ taken together may form $C_1$-$C_6$ alkylene including the case



is

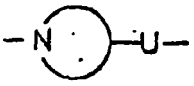


n is 1 or 2,
X is optionally substituted $C_1$-$C_6$ alkylene,
optionally substituted $C_2$-$C_6$ alkenylene,
optionally substituted -CO-$C_1$-$C_6$ alkylene,
optionally substituted -CO-$C_2$-$C_6$ alkenylene or



wherein $R^3$, $R^4$, $R^5$and $R^6$ are each independently hydrogen or $C_1$-$C_{10}$ alkyl,

is optionally substituted $C_3$-$C_8$ cycloalkylene, optionally substituted $C_3$-$C_8$ cycloalkenylene, optionally substituted $C_5$-$C_8$ bicycloalkylene, arylene optionally substituted selected from a bivalent group formed by excluding one hydrogen from phenyl, naphthyl, anthryl, phenanthryl, indanyl, indenyl, biphenylyl, acenaphthyl, tetrahydronaphthyl and fluorenyl, or optionally substituted heterocyclediyl and p and q are each independently 0 or 1,
-$NR^2$-X- may be



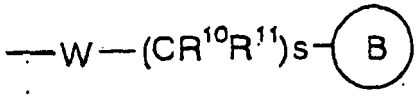
wherein

is piperidinediyl, piperazinediyl, pyridinediyl, pyrazinediyl, pyrrolidinediyl or pyrroledlyl and U is single bond, $C_1$-$C_6$ alkylene or $C_2$-$C_6$ alkenylene,
Y is $OCONR^7$, $CONR^7$, $CSNR^7$, $NR^7CO$ or $NR^7CS$,
$R^7$ is hydrogen or $C_1$-$C_{10}$ alkyl, and
Z is optionally substituted $C_1$-$C_{10}$ alkyl, optionally substituted $C_2$-$C_{10}$ alkenyl, optionally substituted amino, optionally substituted $C_1$-$C_{10}$ alkoxy, optionally substituted carbocyclyl or optionally substituted heterocyclyl, wherein heterocyclyl is selected from 5- or 6-membered heteroary selected from pyrrolyl, imidazolyl, pyrazolyl, pyridyl, pyridazinyl, pyrimidinyl, oxazolyl, oxadiazolyl, isothiazolyl thiazolyl, thiadiazolyl, furyl and thienyl; fused heterocyclyl consisting of two rings selected from as indolyl, isoindolyl, indazolyl, indolizinyl, indolinyl, isoindolinyl, quinolyl, isoquinolyl, cinnolinyl, phthalazinyl, quinazolinyl, naphthyridinyl, quinoxalinyl, purinyl, pteridinyl, benzopyranyl, benzimidazolyl, benzisoxazolyl, benzoxazolyl benbzoxadiazolyl, benzisothiazolyl, benzothiazolyl, benzothiadiazolyl, benzofuryl, isobenzofuryl, benzothienyl, benzotriazolyl, imidazopyridyl, triazoropyridyl, imidazothiazolyl, pyrazinopyridazinyl, quinazolinyl, quinolyl, isoquinolyl, naphthyridinyl, dihydropyridyl, tetrahydroquinolyl and tetrahydrobenzothienyl;
and and heterocyclediyl is a bivalent group formed by excluding one hydrogen from above heterocyclyl carbocyclyl is selected from $C_3$-$C_8$ cycloalkyl, $C_3$-$C_8$ cycloalkenyl $C_3$-$C_8$ bicycloalkyl are aryl as defined above, pharmaceutically acceptable salt or solvate thereof as an NPY Y5 receptor antagonist whereby the substituents of "optionally substituted lower alkyl" represented by Z are, (1) halogen; (2) cyano;

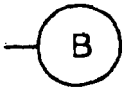
(3) the following groups (i) to (xvi), which are optionally substituted with one or more substituents selected from "a substituents group β" defined below, .

(i) hydroxy, (ii) $C_{1-10}$ alkoxy, (iii) mercapto, (iv) $C_1$-$C_{10}$ alkylthio, (v) acyl, (vi) acyloxy, (vii) carboxy, (viii) $C_1$-$C_{10}$ alkoxycarbonyl, (ix) imino, (x) carbamoyl, (xi) thiocarbamoyl, (xii) $C_1$-$C_{10}$ alkylcarbamoyl, (xiii) lower alkylthiocarbamoyl, (xiv) amino, (xv) $C_{1-10}$ alkylamino or (xvi) heterocyclylcarbonyl;

or
(4) a group of the formula:



wherein $R^{10}$ and $R^{11}$ are each independently hydrogen or $C_1$-$C_{10}$ alkyl and when this group has two or more of $R^{10}$ and/or two or more of $R^{11}$, each $R^{10}$ and/or each $R^{11}$ may be different,
W is single bond, O, S or $NR^{12}$,
$R^{12}$ is hydrogen, $C_1$-$C_{10}$ alkyl or phenyl,



is cycloalkyl, bicycloalkyl, cycloalkenyl, aryl or heterocyclyl, each of which is optionally substituted with one or more of substituents selected from "a substituents group α" defined below and s is an integer of 0 to 4;
substituents group α" is a group constituting of (1) halogen; (2) oxo; (3) cyano; (4) nitro: (5) imino optionally

substituted with $C_1$-$C_{10}$ alkyl or hydroxy;
(6) the following groups (i) to (xxi), which are optionally substituted with one or more of groups selected from the substituents group β,

(i) hydroxy, (ii) $C_1$-$C_{10}$ alkyl, (iii) $C_2$-$C_{10}$ alkenyl, (iv) $C_1$-$C_{10}$ alkoxy, (v) carboxy, (vi) $C_1$-$C_{10}$ alkoxycarbonyl, (vii) acyl, (viii) acyloxy, (ix) imino, (x) mercapto, (xi) $C_1$-$C_{10}$ alkylthio, (xii) carbamoyl, (xiii) $C_1$-$C_{10}$ alkylcarbamoyl, (xiv) cycloalkylcarbamoyl, (xv) thiocarbamoyl, (xvi) $C_1$-$C_{10}$ alkylthiocarbamoyl, (xvii) $C_1$-$C_{10}$ alkylsulfinyl, (xviii) $C_1$-$C_{10}$ alkylsulfonyl, (xix) sulfamoyl, (xx) $C_1$-$C_{10}$ alkylsulfamoyl and (xxi) cycloalkylsulfamoyl;

(7) the following groups (i) to (v), which are optionally substituted with the substituents group β, $C_1$-$C_{10}$ alkyl, $C_1$-$C_{10}$ alkoxy($C_1$-$C_{10}$)alkyl, optionally protected hydroxy($C_1$-$C_{10}$)alkyl, halogeno($C_1$-$C_{10}$)alkyl, lower alkylsulfonyl and/or arylsulfonyl,

(i) cycloalkyl, (ii) cycloalkenyl, (iii)cycloalkyloxy, (iv) amino and (v) alkylenedioxy;
and

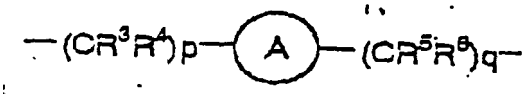
(8) the following groups (i) to (xii), which are optionally substituted with the substituents group β, $C_1$-$C_{10}$ alkyl, halogeno($C_1$-$C_{10}$)alkyl and/or oxo,

(i) phenyl, (ii) naphthyl, (iii) phenoxy, (iv) phenyl($C_1$-$C_{10}$)alkoxy, (v) phenylthio, (vi) phenyl($C_1$-$C_{10}$)alkylthio, (vii) phenylazo, (viii) heterocyclyl, (ix) heterocyclyloxy, (x) heterocyclylthio, (xi) heterocyclylcarbonyl and (xii) heterocyclylsulfonyl.

"a substituents group β" is a group consisting of halogen, optionally protected hydroxy, mercapto, $C_1$-$C_{10}$ alkoxy, $C_2$-$C_{10}$ alkenyl, amino, $C_1$-$C_{10}$ alkylamino, $C_1$-$C_{10}$ alkoxycarbonylmino, $C_1$-$C_{10}$ alkylthio, acyl, carboxy, $C_1$-$C_{10}$ alkoxycarbonyl, carbamoyl, cyano, cycloalkyl, phenyl, phenoxy, $C_1$-$C_{10}$ alkylphenyl, $C_1$-$C_{10}$ alkoxyphenyl, halogenophenyl, naphthyl and heterocyclyl;
the substituent for "optionally substituted $C_1$-$C_{10}$ alkyl" represented by any other than Z are one or more substituents selected from the substituents group β;
the substituents for "optionally substituted cycloalkyl" are one or more substituents selected from the substituents group α;
the substituents for "optionally substituted lower alkenyl" are halogen, lower alkoxy, lower alkenyl, amino, lower alkylamino, lower alkoxycarbonylamino, lower alkylthio, acyl, carboxy, lower alkoxycarbonyl, carbamoyl, cyano, cycloalkyl, phenyl, lower alkylphenyl, lower alkoxyphenyl, naphthyl and/or heterocyclyl;
the substituents for "optionally substituted cycloalkenyl" are one or more substituents selected from the substituents group β;
the substituents for "optionally substituted amino" are the substituents group β, optionally substituted benzoyl and/or optionally substituted heterocyclylcarbonyl wherein the substituents is hydroxy, $C_1$-$C_{10}$ alkyl, lower alkoxy and/or $C_1$-$C_{10}$ alkylthio;
the term "optionally substituted aryl" and "optionally substituted phenyl" represented by Z include the above "aryl" and "phenyl" respectively, which may be substituted with the substituents group α or $C_1$-$C_{10}$ alkyl which may be substituted with one or more group selected from the substituents group α;
the substituents for "optionally substituted aryl" and "optionally substituted phenyl" represented by any other than Z are one or more groups selected from the substituents group β;
the term "optionally substituted carbocyclyl" includes the above "optionally substituted cycloalkyl", "optionally substituted cycloalkenyl", "optionally substituted bicycloalkyl" and "optionally substituted aryl".
the Substituents for "optionally substituted heterocyclyl" are the same as those for the above "optionally substituted aryl".
and one or more groups selected from the substituents group β are the substituents for "optionally substituted $C_1$-$C_6$ alkylene", "optionally substituted $C_2$-$C_6$ alkenylene", "optionally substituted cycloalkylene", "optionally substituted cyclohexylene", "optionally substituted bicycloalkylene", "optionally substituted cycloalkenylene", "optionally substituted phenylene", "optionally substituted heterocyclediyl" and "optionally substituted piperidinylene.

**17.** Compound according to Claim 16 wherein $R^2$ is hydrogen or $C_1$-$C_{10}$ alkyl and Z is optionally substituted $C_1$-$C_{10}$ alkyl, optionally substituted $C_2$-$C_{10}$ alkenyl, optionally substituted $C_1$-$C_{10}$ alkoxy, optionally substituted carbocyclyl, optionally substituted heterocyclyl or optionally substituted amino, provided that $R^1$ is optionally substituted C3 to C10 alkyl when Z is optionally substituted amino, wherein carbocyclyl and heterocyclyl are defined as above and the optional substituents are defined as above.

**18.** Compound according to Claim 16 wherein $R^1$ is optionally substituted $C_1$-$C_{10}$ alkyl or optionally substituted $C_3$-$C_8$ cycloalkyl, X is optionally substituted $C_2$-$C_6$ alkylene, optionally substituted $C_2$-$C_6$ alkenylene or



wherein p and q are 0,

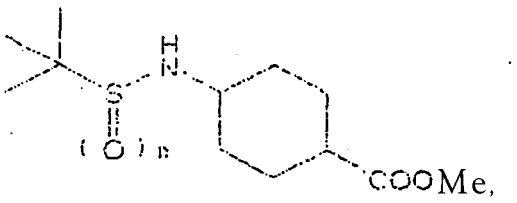
is optionally substituted $C_3$-$C_8$ cycloalkylene, optionally substituted $C_3$-$C_8$ cycloalkenylene, optionally substituted $C_5$-$C_8$ bicycloalkylene, optionally substituted arylene or optionally substituted heterocyclediyl,
and
Z is optionally substituted $C_1$-$C_{10}$ alkyl, optionally substituted carbocyclyl or optionally substituted heterocyclyl, wherein arylene, heterocyclediyl and heterocyclyl are defined as above and the optional substitutents are defined as above.

**19.** Compound according to any one of Claims 16 to 18 wherein $R^1$ is optionally substituted C3 to C10 alkyl, wherein the optional substituents are as defined above.

**20.** Compound according to any one of Claims 16 to 19 as an anti-obestic agent.

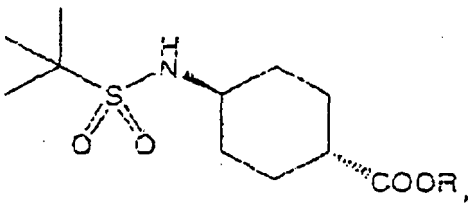
**21.** Compound according to any one of Claims 16 to 19 as an anorectic agent.

**22.** A compound of the formula:



wherein n is 2.

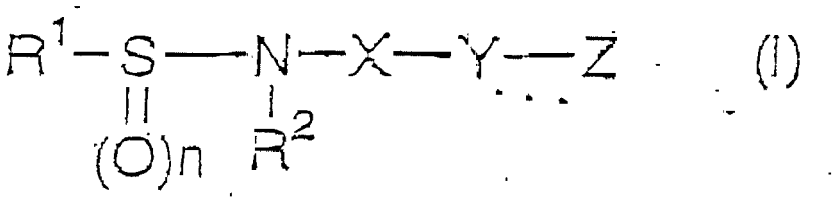
**23.** A compound of the formula:



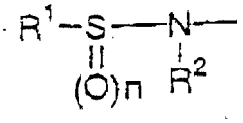
wherein R is hydrogen or methyl.

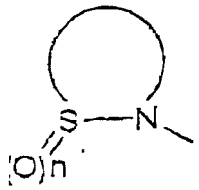
**Patentansprüche**

**1.** Verwendung einer Verbindung der Formel (I)

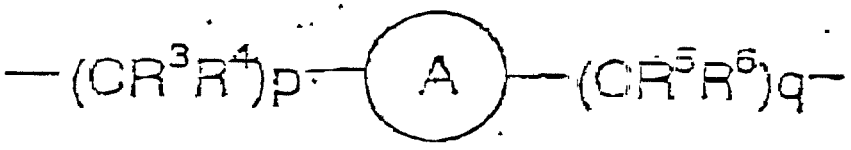


wobei $R^1$ gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkyl oder gegebenenfalls substituiertes $C_{3-8}$-Cyclalkyl ist;
$R^2$ Wasserstoff oder $C_1$-$C_{10}$-Alkyl ist und $R^1$ und $R^2$ zusammengenommen $C_1$-$C_6$-Alkylen bilden können, einschließlich des Falls, dass

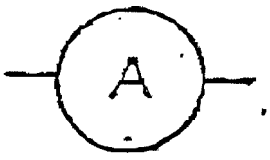




ist;
n 1 oder 2 ist,
X gegebenenfalls substituiertes $C_1$-$C_6$-Alkylen,
gegebenenfalls substituiertes $C_2$-$C_6$-Alkenylen,
gegebenenfalls substituiertes -CO-$C_1$-$C_6$-Alkylen,
gegebenenfalls substituiertes -CO-$C_2$-$C_6$-Alkenylen oder



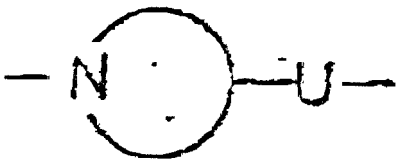
ist,
wobei $R^3$, $R^4$, $R^5$ und $R^6$ jeweils unabhängig Wasserstoff oder $C_1$-$C_{10}$-Alkyl sind,



gegebenenfalls substituiertes $C_3$-$C_8$-Cycloalkylen, gegebenenfalls substituiertes $C_3$-$C_8$-Cycloalkenylen, gegebe-

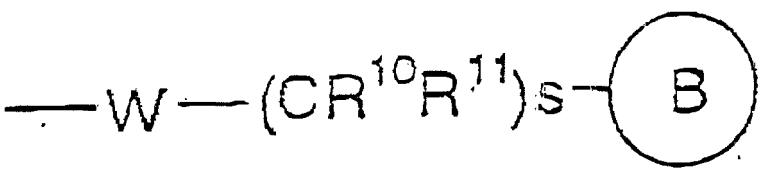
nenfalls substituiertes $C_5$-$C_8$-Bicycloalkylen, gegebenenfalls substituiertes Arylen, ausgewählt aus einem bivalenten Rest, hergestellt durch den Ausschluss eines Wasserstoffatoms aus Phenyl, Naphthyl, Anthryl, Phenanthryl, Indanyl, Indenyl, Biphenylyl, Acenaphthyl, Tetrahydronaphthyl und Fluorenyl, oder gegebenenfalls substituiertes. Heterocyclusdiyl ist, und p und q jeweils unabhängig 0 oder 1 sind;

-$NR^2$-X-

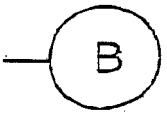


sein kann,
wobei

Piperidindiyl, Piperazindiyl, Pyridindiyl, Pyrazindiyl, Pyrrolidindiyl oder Pyrroldiyl ist und U eine Einfachbindung, $C_1$-$C_6$-Alkylen oder $C_2$-$C_6$-Alkenylen ist,
Y $OCONR^7$, $CONR^7$. $CSNR^7$, $NR^7CO$ oder $NR^7CS$ ist,
$R^7$ Wasserstoff oder $C_1$-$C_{10}$-Alkyl ist, und
Z gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkyl, gegebenenfalls substituiertes $C_2$-$C_{10}$-Alkenyl, gegebenenfalls substituiertes Amino, gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkoxy, gegebenenfalls substituiertes Carbocyclyl oder gegebenenfalls substituiertes Heterocyclyl ist, wobei Heterocyclyl ausgewählt ist aus einem 5- oder 6-gliedrigen Heteroaryl, ausgewählt aus Pyrrolyl, Imidazolyl, Pyrazolyl, Pyridyl, Pyridazinyl, Pyrimidinyl, Oxazolyl, Oxadiazolyl, Isothiazolyl, Thiazolyl, Thiadiazolyl, Furyl und Thienyl; einem kondensierten Heterocyclyl, bestehend aus zwei Ringen, ausgewählt aus Indolyl, Isoindolyl, Indazolyl, Indolizinyl, Indolinyl, Isoindolinyl, Chinolyl, isochinolyl, Cinnolinyl, Phthalazinyl, Chinazolinyl, Naphthyridinyl, Chinoxalinyl, Purinyl, Pteridinyl, Benzopyranyl, Benzimidazolyl, Benzisoxazolyl, Benzoxazolyl, Benzoxadiazolyl, Benzisothiazolyl, Benzothiazolyl, Benzothiadiazolyl, Benzofuryl, Isobenzofuryl, Benzothienyl, Benzotriazolyl, Imidazopyridyl, Triazoropyridyl, Imidazothiazolyl, Pyrazinpyridazinyl, Chinazolinyl, Chinolyl, Isochinolyl, Naphthyridinyl, Dihydropyridyl, Tetrahydrochinolyl und Tetrahydrobenzothienyl, und Hetercyclusdiyl ein bivalenter Rest, welcher durch den Ausschluss eines Wasserstoffatoms aus dem verstehenden Heterocyclyl gebildet wird, ist, Carbocyclyl ausgewählt ist aus $C_3$-$C_8$-Cycloalkyl, $C_3$-$C_8$-Cycloalkenyl, $C_5$-$C_8$-Bicycloalkyl und Aryl wie vorstehend definiert,
eines pharmazeutisch verträglichen Salzes oder Solvats davon, zur Herstellung eines Arzneimittels als einen NPY-Y5-Rezeptorantagonisten,
wobei die Substituenten für "gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkyl", dargestellt durch Z die folgende Bedeutung haben: (1) Halogen; (2) Cyano;
(3) die folgenden Reste (i) bis (xvi), weiche gegebenenfalls mit einem oder mehreren Substituenten, ausgewählt aus "einem Substituenten-Rest β" wie nachstehend definiert, substituiert sind,
(i) Hydroxy, (ii) $C_1$-$C_{10}$-Alkoxy, (iii) Mercapto, (iv) $C_1$-$C_{10}$-Alkylthio, (v) Acyl, (vi) Acyloxy, (vii) Carboxy, (viii) $C_1$-$C_{10}$-Alkoxycarbonyl, (ix) Imino, (x) Carbamoyl, (xi) Thiocarbamoyl, (xii) $C_1$-$C_{10}$-Alkylcarbamoyl, (xiii) Niederalkylthiocarbamoyl, (xiv) Amino, (xv) $C_1$-$C_{10}$-Alkylamino oder (xvi) Hetercyclylcarbonyl; oder
(4) ein Rest der Formel



wobei $R^{10}$ und $R^{11}$ jeweils unabhängig Wasserstoff oder $C_1$-$C_{10}$-Alkyl sind und wenn dieser Rest zwei oder mehr von $R^{10}$ und/oder zwei oder mehr von $R^{11}$ aufweist, jedes $R^{10}$ und/oder jedes $R^{11}$ verschieden sein kann,
W eine Einfachbindung, O, S oder $NR^{12}$ ist,
$R^{12}$ Wasserstoff, $C_1$-$C_{10}$-Alkyl oder Phenyl ist.




Cycloalkyl, Bicycloalkyl, Cycloalkenyl, Aryl oder Heterocyclyl ist, welche jeweils gegebenenfalls mit einem oder mehreren Substituenten, ausgewählt aus "einem Substituenten-Rest $\alpha$" wie nachstehend definiert sind, und s eine ganze Zahl von 0 bis 4 ist;
"der Substituenten-Rest $\alpha$" ein Rest, bestehend aus (1) Halogen; (2) Oxo; (3) Cyano; (4) Nitro; (5) Imino, gegebenenfalls substituiert mit $C_1$-$C_{10}$-Alkyl oder Hydroxy, ist;
(6) die folgenden Reste (i) bis (xxi), welche gegebenenfalls mit einem oder mehreren Resten substituiert sind, ausgewählt aus dem Substituenten-Rest $\beta$,
(i) Hydroxy, (ii) $C_1$-$C_{10}$-Alkyl, (iii) $C_2$-$C_{10}$-Alkenyl, (iv) $C_1$-$C_{10}$-Alkoxy, (v) Carboxy, (vi) $C_1$-$C_{10}$-Alkoxycarbonyl, (vii) Acyl, (viii) Acyloxy, (ix) Imino, (x) Mercapto, (xi) $C_1$-$C_{10}$-Alkylthio, (xii) Carbamoyl, (xiii) $C_1$-$C_{10}$-Alkylcarbamoyl, (xiv) Cycloalkylcarbamoyl, (xv) Thiocarbamoyl, (xvi) $C_1$-$C_{10}$-Alkythiocarbamoyl, (xvii) $C_1$-$C_{10}$-Alkylsulfinyl, (xviii) $C_1$-$C_{10}$-Alkylsulfonyl, (xix) Sulfamoyl, (xx) $C_1$-$C_{10}$-Alkylsulfamoyl und (xxi) Cycloalkylsulfamoyl;
(7) die folgenden Reste (i) bis (v), welche gegebenenfalls mit dem Substituenten-Rest $\beta$, $C_1$-$C_{10}$-Alkyl, $C_1$-$C_{10}$-Alkoxy-($C_{1-10}$)-alkyl, gegebenenfalls geschütztem Hydroxy-($C_1$-$C_{10}$)-alkyl, Halogen-($C_1$-$C_{10}$)-alkyl, Niederalkylsulfonyl und/oder Arylsulfonyl substituiert sind,
(i) Cycloalkyl, (ii) Cycloalkenyl, (iii) Cycloalkyloxy, (iv) Amino und (v) Alkylendioxy; und
(8) die folgenden Reste (i) bis (xii), welche gegebenenfalls mit dem Substituenten-Rest $\beta$, $C_1$-$C_{10}$-Alkyl, Halogen-($C_1$-$C_{10}$)-alkyl und/oder Oxo substituiert sind,
(i) Phenyl, (ii) Naphthyl, (iii) Phenoxy, (iv) Phenyl-($C_1$-$C_{10}$)-alkoxy, (v) Plaezzylthio, (vi) Phenyl-($C_1$-$C_{10}$)-alkylthio, (vii) Phenylazo, (viii) Heterocyclyl, (ix) Heterocyclyloxy, (x) Heterocyclylthio, (xi) Heterocyclylcarbonyl und (xii) Heterocyclylsulfonyl;
"ein Substituenten-Rest $\beta$" ein Rest ist, bestehend aus Halogen, gegebenenfalls geschütztem Hydroxy, Mercapto, $C_1$-$C_{10}$-Alkoxy, $C_2$-$C_{10}$-Alkenyl, Amino, $C_1$-$C_{10}$-Alkylamino, $C_1$-$C_{10}$-Alkoxycarbonylamino, $C_1$-$C_{10}$-Alkylthio, Acyl, Carboxy, $C_1$-$C_{10}$-Alkoxycarbonyl, Carbamoyl, Cyano, Cycloalkyl, Phenyl, Phenoxy, $C_1$-$C_{10}$-Alkylphenyl, $C_1$-$C_{10}$-Alkoxyphenyl, Halogenphenyl, Naphthyl und Heterocyclyl; die Substituenten für "gegegebenenfalls substituiertes $C_1$-$C_{10}$-Alkyl", dargestellt durch alle Reste außer Z, ein oder mehrere Substituenten, ausgewählt aus dem Substituenten-Rest $\beta$, sind;
die Substituenten für "gegebenenfalls substimiertes $C_1$-$C_{10}$-Alkoxy" ein oder mehrere Substituenten, ausgewählt aus dem Substituenten-Rest $\beta$, sind;
die Substituenten für "gegebenenfalls substituiertes Cycloalkyl" ein oder mehrere Substituenten, ausgewählt aus dem Substituenten Rest $\alpha$, sind;
die Substituenten für "gegebenenfalls substituiertes Niederalkenyl" Halogen, Niederalkoxy, Niederalkenyl, Amino, Niederalkylamino, Niederalkoxycarbonylamino, Niederalkylthio, Acyl, Carboxy, Niederalkoxycarbonyl, Carbamoyl, Cyano, Cycloalkyl, Phenyl, Niederalkylpbenyl, Niedcralkoxyphenyl, Naphthyl und/oder Heterocyclyl sind;
die Substituenten für "gegebenenfalls substituiertes Cycloalkenyl" ein oder mehrere Substituenten, ausgewählt aus dem Substituenten-Rest $\beta$, sind;
die Substituenten für "gegebenenfalls substituiertes Amino" der Substituenten-Rest $\beta$, gegebenenfalls substituiertes Benzoyl und/oder gegebenenfalls substituiertes Heterocyclylcarbonyl sind, wobei die Substituenten Hydroxy, $C_1$-$C_{10}$-Alkyl, Niederalkoxy und/oder $C_1$-$C_{10}$-Alkylthio sind;
der Begriff "gegebenenfalls substituiertes Aryl" und "gegebenenfalls substituiertes Phenyl", dargestellt durch Z, die vorangehenden Reste "Aryl" beziehungsweise "Phenyl" einschließt, welche mit dem Substituenten-Rest $\alpha$ oder mit $C_1$-$C_{10}$-Alkyl substituiert sein können, welcher mit einem oder mehreren Resten, ausgewählt aus dem Substituenten-Rest $\alpha$, substituiert sein kann;
die Substituenten für "gegebenenfalls substituiertes Aryl" und "gegebenenfalls substituiertes Phenyl", dargestellt durch alle Reste außer Z, ein oder mehrere Reste, ausgewählt aus dem Substituenten-Rest $\beta$, sind;
der Begriff "gegebenenfalls substituiertes Carbocyclyl" die vorstehenden Begriffe "gegebenenfalls substituiertes Cycloalkyl", "gegebenenfalls substituiertes Cycloalkenyl", "gegebenenfalls substituiertes Bicycloalkyl" und "gege-

benenfalls substituiertes Aryl" einschließt;
die Substituenten für "gegebenenfalls substituiertes Heterocyclyl" die gleichen wie die für den vorstehenden Begriff "gegebenenfalls substituiertes Aryl"sind;
und ein oder mehrere Reste des Substituentiten-Rests β die Substituenten für "gegebenenfalls substituiertes $C_1$-$C_6$-Alkylen", "gegebenenfalls substituiertes $C_2$-$C_6$-Alkenylen", "gegebenenfalls substituiertes Cycloalkylen", "gegebenenfalls substituiertes Cyclohexylen", "gegebenenfalls substituiertes Bicycloalkylen", "gegebenenfalls substituiertes Cycloalkenylen", "gegebenenfalls substituiertes Phenylen", "gegebenenfalls substituiertes Heterocyclusdiyl" und "gegebenenfalls substituiertes Piperidinylen" sind.

**2.** Verwendung gemäß Anspruch 1, wobei $R^2$ Wasserstoff oder $C_1$-$C_{10}$-Alkyl ist und Z gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkyl, gegebenenfalls substituiertes $C_2$-$C_{10}$-Alkenyl, gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkoxy, gegebenenfalls substituiertes Carbocyclyl, gegebenenfalls substituiertes Heterocyclyl oder gegebenenfalls substituiertes Amino ist, mit der Maßgabe, dass $R^1$ gegebenenfalls substituiertes C3- bis C10-Alkyl ist, wenn Z gegebenenfalls substituiertes Amino ist, wobei Carbocyclyl und Heterocyclyl wie vorstehend definiert sind und die fakultativen Substituenten wie vorstehend definiert sind.

**3.** Verwendung gemäß Anspruch 1, wobei $R^1$ gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkyl oder gegebenenfalls substituiertes $C_3$-$C_8$-Cycloalkyl ist, X gegebenenfalls substituiertes $C_2$-$C_6$-Alkylen, gegebenenfalls substituiertes $C_2$-$C_6$-Alkenylen oder

ist,
wobei p und q 0 sind,

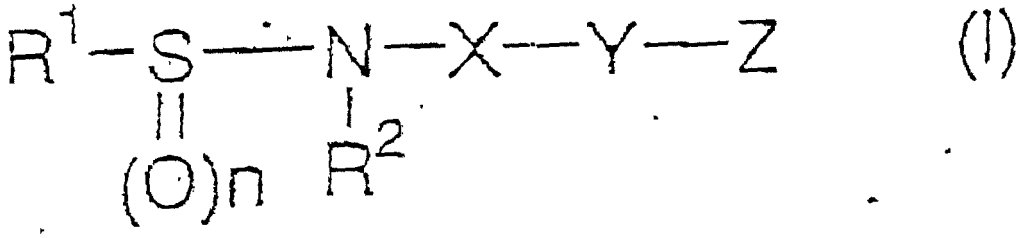
gegebenenfalls substituiertes $C_3$-$C_8$-Cycloalkylen, gegebenenfalls substituiertes $C_3$-$C_8$-Cycloalkenylen, gegebenenfalls substituiertes $C_5$-$C_8$-Bicycloalkylen, gegebenenfalls substituiertes Arylen oder gegebenenfalls substituiertes Heterocyclusdiyl ist, und
Z gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkyl, gegebenenfalls substituiertes Carbocyclyl oder gegebenenfalls substituiertes Heterocyclyl ist, wobei Arylen, Heterocyclusdiyl und Heterocyclyl wie vorstehend definiert sind und die fakultativen Substituenten wie vorstehend definiert sind.

**4.** Verwendung gemäß einem der Ansprüche 1 bis 3, wobei $R^1$ gegebenenfalls substituiertes C3- bis C10-Alkyl ist, wobei die fakultativen Substituenten wie vorstehend definiert sind.

**5.** Verwendung gemäß einem der Ansprüche 1 bis 4 als ein Mittel gegen Fettsucht.

**6.** Verwendung gemäß einem der Ansprüche 1 bis 4 als ein Anorektikum.

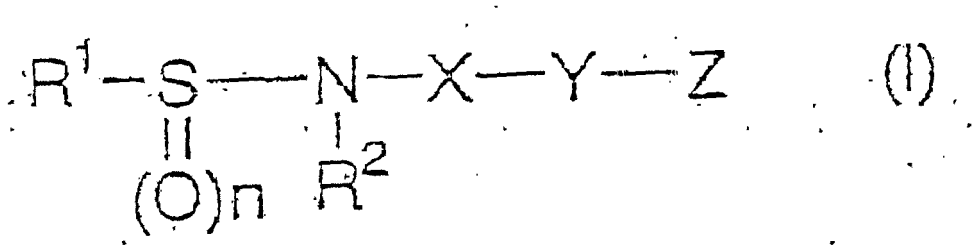
**7.** Verbindung der Formel (I)



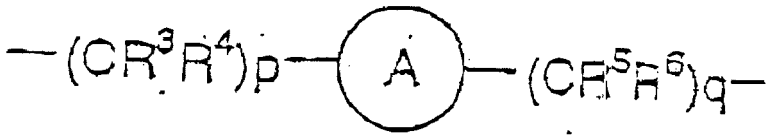
wobei X C2- bis C6-Alkylen oder C3- bis C6-Alkenylen ist, $R^1$ gegebenenfalls substituiertes C3- bis C10-Alkyl oder gegebenenfalls substituiertes C5- bis C6-Cycloalkyl ist und die anderen Elemente wie in Anspruch 1 definiert sind, mit der Maßgabe, dass Z nicht $C_1$-$C_{10}$-Alkylphenylamino, Hydroxy-($C_1$-$C_{10}$)-alkylphenylamino und Acylphenylamino ist, wenn Y $NR^7CO$ ist,
ein pharmazeutisch verträgliches Salz oder Solvat davon, wobei die fakultativen Substituenten wie vorstehend definiert sind.

**8.** Verbindung gemäß Anspruch 7, wobei Z gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkyl oder gegebenenfalls substituiertes Phenyl ist, ein pharmazeutisch verträgliches Salz oder Solvat davon, wobei die fakultativen Substituenten wie vorstehend definiert sind.

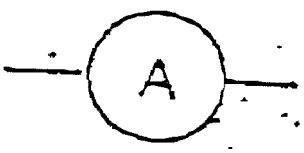
**9.** Verbindung der Formel (I):



wobei X

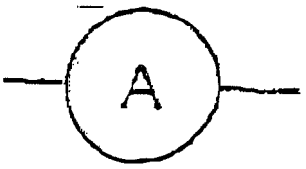


ist,



gegebenenfalls substituiertes $C_3$-$C_8$-Cycloalkylen, gegebenenfalls substituiertes $C_3$-$C_8$-Cycloalkenylen, gegebenenfalls substituiertes $C_5$-$C_8$-Bicycloalkylen oder gegebenenfalls substituiertes Piperidinylen ist, R gegebenenfalls substituiertes C3- bis C10-Alkyl oder gegebenenfalls substituiertes C5- bis C6-Cycloalkyl ist und die anderen Elemente wie in Anspruch 1 definiert sind, ein pharmazeutisch verträgliches Salz oder Solvat davon, wobei die fakultativen Substituenten wie vorstehend definiert sind.

**10.** Verbindung gemäß Anspruch 1, wobei

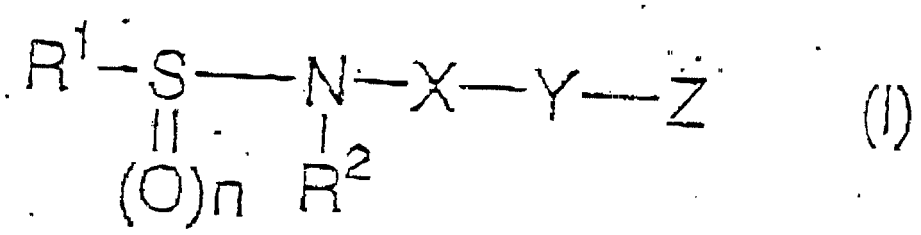


gegebenenfalls substituiertes Cyclohexylen oder gegebenenfalls substituiertes Piperidinylen ist und p und q gleichzeitig 0 sind,
ein pharmazeutisch verträgliches Salz oder Solvat davon, wobei die fakultativen Substituenten wie vorstehend definiert sind.

**11.** Verbindung gemäß Anspruch 9 oder 10, wobei Y CONH ist, ein pharmazeutisch verträgliches Salz oder Solvat davon.

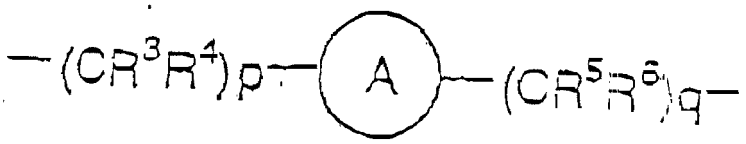
**12.** Verbindung gemäß einem der Ansprüche 9 bis 11, wobei Z gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkyl, gegebenenfalls substituiertes Phenyl, gegebenenfalls substituiertes Pyridyl oder gegebenenfalls substituiertes Benzopyranyl ist,
ein pharmazeutisch verträgliches Salz oder Solvat davon, wobei die fakultativen Substituenten wie vorstehend definiert sind.

**13.** Verbindung der Formel (I)

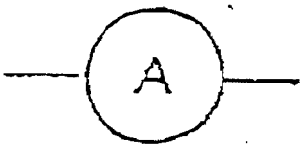


(I)

wobei X

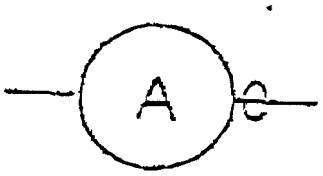


ist,



Heteroarylen ist, $R^1$ gegebenenfalls substituiertes C3- bis C10-Alkyl ist oder gegebenenfalls substituiertes C5- bis C6-Cycloalkyl ist, und die anderen Elemente wie in Anspruch 1 definiert sind, ein pharmazeutisch verträgliches Salz oder Solvat davon, wobei die fakultativen Substituenten wie vorstehend definiert sind.

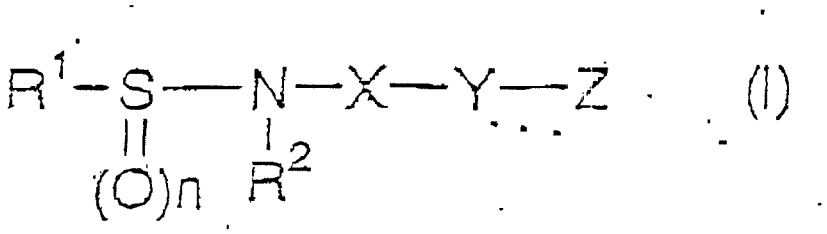
**14.** Verbindung gemäß Anspruch 13, wobei



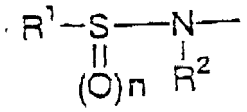

Thiophendiyl oder Furandiyl ist, ein pharmazeutisch verträgliches Salz oder Solvat davon.

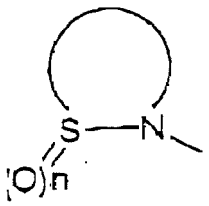
**15.** Arzneimittel, umfassend die Verbindung gemäß einem der Ansprüche 7 bis 14, ein pharmazeutisch verträgliches Salz oder Solvat davou.

**16.** Verbindung der Formel (I):

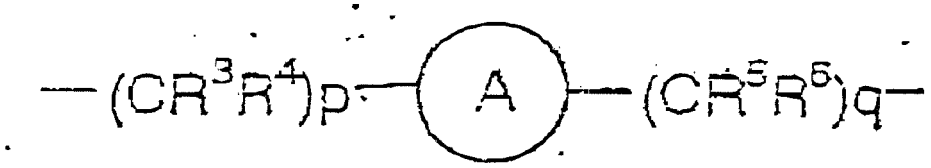



wobei $R^1$ gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkyl oder gegebenenfalls substituiertes $C_{3-8}$-Cyclalkyl ist;
$R^2$ Wasserstoff oder $C_1$-$C_{10}$-Alkyl ist und $R^1$ und $R^2$ zusammengenommen $C_1$-$C_6$-Alkylen bilden können, einschließlich des Falls, dass

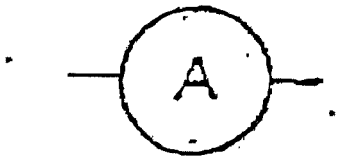


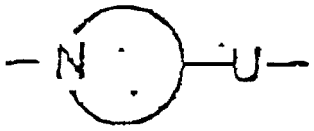

ist;
n 1 oder 2 ist,
X gegebenenfalls substituiertes $C_1$-$C_6$-Alkylen,
gegebenenfalls substituiertes $C_2$-$C_6$-Alkenylen,
gegebenenfalls substituiertes -CO-$C_1$-$C_6$-Alkylen,
gegebenenfalls substituiertes -CO-$C_2$-$C_6$-Alkenylen oder



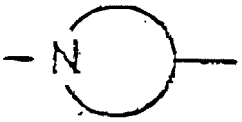
ist,
wobei $R^3$, $R^4$, $R^5$ und $R^6$ jeweils unabhängig Wasserstoff oder $C_1$-$C_{10}$-Alkyl sind,



gegebenenfalls substituiertes $C_3$-$C_8$-Cycloalkylen, gegebenenfalls substituiertes $C_3$-$C_8$-Cycloalkenylen, gegebenenfalls substituiertes $C_5$-$C_8$-Bicycloalkylen, gegebenenfalls substituiertes Arylen, ausgewählt aus einem bivalenten Rest, hergestellt durch den Ausschluss eines Wasserstoffatoms aus Phenyl, Naphthyl, Anthryl, Phenanthryl, Indanyl, Indenyl, Biphenylyl. Acenaphthyl, Tetrahydronaphthyl und Fluorenyl, oder gegebenenfalls substituiertes Heterocyclusdiyl ist, und p und q jeweils unabhängig 0 oder 1 sind;
$-NR^2-X-$



sein kann,
wobei



Piperidindiyl, Piperazindiyl, Pyridindiyl, Pyrazindiyl, Pyrrolidindiyl oder Pyrroldiyl ist und U eine Einfachbindung, $C_1$-$C_6$-Alkylen oder $C_2$-$C_6$-Alkenylen ist,
Y $OCONR^7$, $CONR^7$, $CSNR^7$, $NR^7CO$ oder $NR^7CS$ ist,
$R^7$ Wasserstoff oder $C_1$-$C_{10}$-Alkyl ist, und
Z gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkyl, gegebenenfalls substituiertes $C_2$-$C_{10}$-Alkenyl, gegebenenfalls substituiertes Amino, gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkoxy, gegebenenfalls substituiertes Carbocyclyl oder gegebenenfalls substituiertes Heterocyclyl ist, wobei Heterocyclyl ausgewählt ist aus einem 5- oder 6-gliedrigen Heteroaryl, ausgewählt aus Pyrrolyl, Imidazolyl, Pyrazolyl, Pyridyl, Pyridazinyl, Pyrimidinyl, Oxazolyl, Oxadiazolyl, Isothiazolyl, Thiazolyl, Thiadiazolyl, Furyl und Thienyl; einem kondensierten Heterocyclyl, bestehend aus zwei Ringen, ausgewählt aus Indolyl, Isoindolyl, Indazolyl, Indolizinyl, Indolinyl, Isoindolinyl, Chinolyl, Isochmolyl, Cinnolinyl, Phthalazinyl, Chinazolinyl, Naphthyridinyl, Chinoxalinyl, Pminyl, Pteridinyl, Benzopyranyl, Benzimidazotyl, Benzisoxazolyl, Benzoxazolyl, Benzoxadiazolyl, Benzisothiazolyl, Benzothiazolyl, Benzothiadiazolyl, Benzofuryl, Isobenzofuryl, Benzothienyl, Benzotriazolyl, Imidazopyridyl, Triazoropyridyl, Imidazothiazolyl, Pyrazinpyridazinyl, Chinazolinyl, Chinolyl, Isochinolyl, Naplathyridinyl, Dihydropyridyl, Tetrahydrochinolyl und Tetrahydrobenzothienyl, und Hetercyclusdiyl ein bivalenter Rest, welcher durch den Ausschluss eines Wasserstoffatoms aus dem vorstehenden

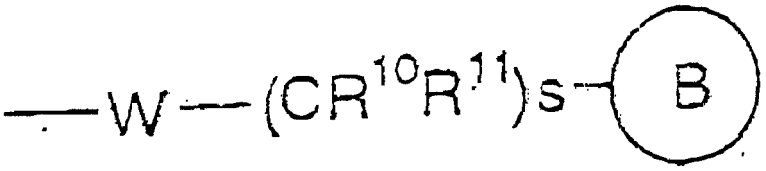
Heterocyclyl gebildet wird, ist, Carbocyclyl ausgewählt ist aus $C_3$-$C_8$-Cycloalkyl, $C_3$-$C_8$-Cycloalkenyl, $C_5$-$C_8$-Bieycloalkyl und Aryl wie vorstehend definiert, ein pharmazeutisch verträgliches Salz oder Solvat davon, als ein NPY-Y5-Rezeptorantagonist,

wobei die Substituenten für "gegebenenfalls substituiertes $C_1$-$C_{10}$Alkyl", dargestellt durch Z, folgende Bedeutung haben: (1) Halogen; (2) Cyano;

(3) die folgenden Reste (i) bis (xvi), welche gegebenenfalls mit einem oder mehreren Substituenten, ausgewählt aus "einem Substimemen-Rest β" wie nachstehend definiert, substituiert sind,

(i) Hydroxy, (ii) $C_1$-$C_{10}$-Alkoxy, (iii) Mercapto, (iv) $C_1$-$C_{10}$-Alkylthio, (v) Acyl, (vi) Acyloxy, (vii) Carboxy, (viii) $C_1$-$C_{10}$-Alkoxycarbonyl, (ix) Imino, (x) Carbamoyl, (xi) Thiocarbamoyl, (xii) $C_1$-$C_{10}$-Alkylcarbamoyl, (xiii) Niederalkylthiocarbamoyl, (xiv) Amino, (xv) $C_1$-$C_{10}$-Alkylamino oder (xvi) Hetercyclylcarbonyl; oder

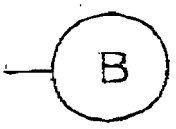
(4) ein Rest der Formel




wobei $R^{10}$ und $R^{11}$ jeweils unabhängig Wasserstoff oder $C_1$-$C_{10}$-Alkyl sind und wenn dieser Rest zwei oder mehr von $R^{10}$ und/oder zwei oder mehr von $R^{11}$ aufweist, jedes $R^{10}$ und/oder jedes $R^{11}$ verschieden sein kann,

W eine Einfachbindung, O, S oder $NR^{12}$ ist,

$R^{12}$ Wasserstoff, $C_1$-$C_{10}$-Alkyl oder Phenyl ist,




Cycloalkyl, Bicycloalkyl, Cycloalkenyl, Aryl oder Heterocyclyl ist, welche jeweils gegebenenfalls mit einem oder mehreren Substituenten, ausgewählt aus "einem Substiruenten-Rest α" wie nachstehend definiert sind, und s eine ganze Zahl von 0 bis 4 ist;

"der Substituenten-Rest α" ein Rest, bestehend aus (1) Halogen; (2) Oxo; (3) Cyano; (4) Nitro; (5) Imino, gegebenenfalls substituiert mit $C_1$-$C_{10}$-Alkyl oder Hydroxy, ist;

(6) die folgenden Reste (i) bis (xxi), welche gegebenenfalls mit einem oder mehreren Resten substituiert sind, ausgewählt aus dem Subsätuentcn-Rest β,

(i) Hydroxy, (ii) $C_1$-$C_{10}$-Alkyl, (iii) $C_2$-$C_{10}$-Alkenyl, (iv) $C_1$-$C_{10}$-Alkoxy, (v) Carboxy, (vi) $C_1$-$C_{10}$-Alkoxycarbonyl, (vii) Acyl, (viii) Acyloxy, (ix) Imino, (x) Mercapto, (xi) $C_1$-$C_{10}$Alkylthio, (xii) Carbamoyl, (xiii) $C_1$-$C_{10}$-Alkylcarbamoyl, (xiv) Cycloalkylcarbamoyl, (xv) Thiocarbamoyl, (xvi) $C_1$-$C_{10}$-Alkylthiocarbamoyl, (xvii) $C_1$-$C_{10}$Alkylsulfinyl, (xviii) $C_1$-$C_{10}$-Alkylsulfonyl, (xix) Sulfamoyl, (xx) $C_1$-$C_{10}$Alkylsulfamoyl und (xxi) Cycloalkylsulfamoyl;

(7) die folgenden Reste (i) bis (v), welche gegebenenfalls mit dem Substituenten-Rest β, $C_1$-$C_{10}$-Alkyl, $C_1$-$C_{10}$-Alkoxy-($C_1$-$C_{10}$)-alkyl, gegebenenfalls geschütztem Hydroxy-($C_1$-$C_{10}$)-alkyl, Halogen-($C_1$-$C_{10}$)-alkyl, Niederalkylsulfonyl und/oder Arylsulfonyl substituiert sind,

(i) Cycloalkyl, (ii) Cycloalkenyl, (iii) Cycloalkyloxy, (iv) Amino und (v) Alkylendioxy; und

(8) die folgenden Reste (i) bis (xii), welche gegebenenfalls mit dem Substituenten- Rest β, $C_1$-$C_{10}$-Alkyl, Halogen-($C_1$-$C_{10}$)-alkyl und/oder Oxo substituiert sind,

(i) Phenyl, (ii) Naphthyl, (iii) Phenoxy, (iv) Phenyl-($C_1$-$C_{10}$)-alkoxy, (v) Phenylthio, (vi) Phenyl-($C_1$-$C_{10}$)-alkylthio, (vii) Phenylazo, (viii) Heterocyclyl, (ix) Heterocyclyloxy, (x) Heterocyclylthio, (xi) Heterocyclylcarbonyl und (xii) Heterocyclylsulfonyl;

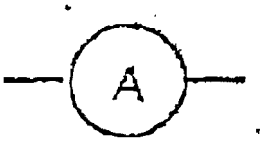
"ein Substituenten-Rest β" ein Rest ist, bestehend aus Halogen, gegebenenfalls geschütztem Hydroxy, Mercapto, $C_1$-$C_{10}$-Alkoxy, $C_2$-$C_{10}$-Alkenyl, Amino, $C_1$-$C_{10}$-Alkylamino, $C_1$-$C_{10}$-Alkoxycarbonylamino, $C_1$-$C_{10}$-Alkylthio, Acyl, Carboxy, $C_1$-$C_{10}$-Alkoxycarbonyl, Carbamoyl, Cyano, Cycloalkyl, Phenyl, Phenoxy, $C_1$-$C_{10}$-Alkylphenyl, $C_1$-$C_{10}$-Alkoxyphenyl, Halogenphenyl, Naphthyl und Heterocyclyl; die Substituenten für "gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkyl", dargestellt durch alle Reste außer Z, ein oder mehrere Substituenten, au gewählt aus dem Substituenten-Rest β, sind;

die Substituenten für "gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkoxy" ein oder mehrere Substituenten, ausgewählt aus dem Substituenten-Rest β, sind;
die Substituenten für "gegebenenfalls substituiertes Cycloalkyl" ein oder mehrere Substituenten, ausgewählt aus dem Substituenten Rest α, sind;
die Substituenten für "gegebenenfalls substituiertes Niederalkenyl" Halogen, Niederalkoxy, Niederalkenyl, Amino, Niederalkylamino, Niederalkoxycarbonylamino, Niederalkylthio, Acyl, Carboxy, Niederalkoxycarbonyl, Carbamoyl, Cyano, Cycloalkyl, Phenyl, Niederalkylphenyl, Niederalkoxyphenyl, Naphthyl und/oder Heterocyclyl sind;
die Substituenten für "gegebenenfalls substituiertes Cycloalkenyl" ein oder mehrere Substituenten, ausgewählt aus dem Substituenten-Rest β, sind;
die Substituenten für "gegebenenfalls substituiertes Amino" der Substituenten-Rest β, gegebenenfalls substituiertes Benzoyl und/oder gegebenenfalls substituiertes Heterocyclylcarbonyl sind, wobei die Substituenten Hydroxy, $C_1$-$C_{10}$-Alkyl, Niederalkoxy und/oder $C_1$-$C_{10}$-Alkylthio sind;
der Begriff "gegebenenfalls substituiertes Aryl" und "gegebenenfalls substituiertes Phenyl", dargestellt durch Z, die vorangehenden Reste "Aryl" beziehungsweise "Phenyl" einschließt, welche mit dem Sabstituenten-Rest α oder mit $C_1$-$C_{10}$-Alkyl substituiert sein können, welcher mit einem oder mehreren Resten, ausgewählt aus dem Substituenten-Rest α, substituiert sein kann;
die Substituenten für "gegebenenfalls substituiertes Aryl" und "gegebenenfalls substituiertes Phenyl", dargestellt durch alle Reste außer Z, ein oder mehrere Reste, ausgewählt aus dem Substituenten-Rest β, sind;
der Begriff "gegebenenfalls substituiertes Carbocyclyl" die vorstehenden Begriffe "gegebenenfalls substituiertes Cycloalkyl", "gegebenenfalls substituiertes Cycloalkenyl", "gegebenenfalls substituiertes Bicycloalkyl" und "gegebenenfalls substituiertes Aryl" einschließt;
die Substituenten für "gegebenenfalls substituiertes Heterocyclyl" die gleichen wie die für den vorstehenden Begriff "gegebenenfalls substituiertes Aryl"sind;
und ein oder mehrere Reste des Substituenten-Rests β die Substituenten für "gegebenenfalls substituiertes $C_1$-$C_6$-Alhylen", "gegebenenfalls substituiertes $C_2$-$C_6$-Alkenylen", "gegebenenfalls substituiertes Cycloalkylen", "gegebenenfalls substituiertes Cyelohexylen", "gegebenenfalls substituiertes Bicycloalkylen", "gebenenfalls substituiertes Cycloalkenylen", "gegebenenfalls substituiertes Phenylen", "gegebenenfalls substituiertes Hererocyclusdiyl" und "gegebenenfalls substituiertes Piperidinylen" sind.

**17.** Verbindung gemäß Anspruch 16, wobei $R^2$ Wasserstoff oder $C_1$-$C_{10}$-Alkyl ist und Z gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkyl, gegebenenfalls substituiertes $C_2$-$C_{10}$-Alkenyl, gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkoxy, gegebenenfalls substituiertes Carbocyclyl, gegebenenfalls substituiertes Heterocyclyl oder gegebenenfalls substituiertes Amino ist, mit der Maßgabe, dass $R^1$ gegebenenfalls substituiertes C3- bis C10-Alkyl ist, wenn Z gegebenenfalls substituiertes Amino ist, wobei Carbocyclyl und Heterocyclyl wie vorstehend definiert sind und die fakultativen Substituenten wie vorstehend definiert sind.

**18.** Verbindung gemäß Anspruch 16, wobei $R^1$ gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkyl oder gegebenenfalls substituiertes $C_3$-$C_8$-Cycloalkyl ist, X gegebenenfalls substituiertes $C_2$-$C_6$-Alkylen, gegebenenfalls substituiertes $C_2$-$C_5$-Alkenylen oder

ist,
wobei p und q 0 sind,



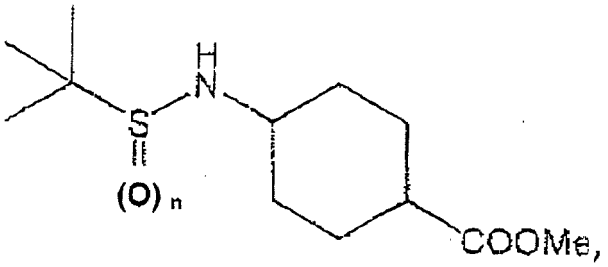
gegebenenfalls substituiertes $C_3$-$C_8$-Cycloalkylen, gegebenenfalls substituiertes $C_3$-$C_8$-Cycloalkenylen, gegebenenfalls substituiertes $C_5$-$C_8$-Bicycloalkylen, gegebenenfalls substituiertes Arylen oder gegebenenfalls substituiertes Heterocyclusdiyl ist, und
Z gegebenenfalls substituiertes $C_1$-$C_{10}$-Alkyl, gegebenenfalls substituiertes Carbocyclyl oder gegebenenfalls substituiertes Heterocyclyl ist, wobei Arylen, Heterocyclusdiyl und Heterocyclyl wie vorstehend definiert sind und die fakultativen Substituenten wie vorstehend definiert sind.

**19.** Verbindung gemäß einem der Ansprüche 16 bis 18, wobei $R^1$ gegebenenfalls substituiertes C3- bis C10-Alkyl ist, wobei die fakultativen Substituenten wie vorstehend definiert sind.

**20.** Verbindung gemäß einem der Ansprüche 16 bis 19 als ein Mittel gegen Fettsucht.

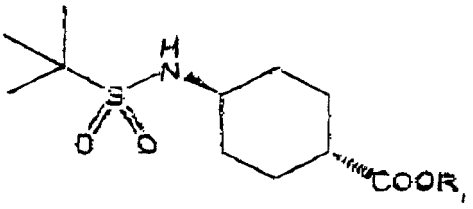
**21.** Verbindung gemäß einem der Ansprüche 16 bis 19 als ein Anorektikum.

**22.** Verbindung der Formel




wobei n 2 ist.

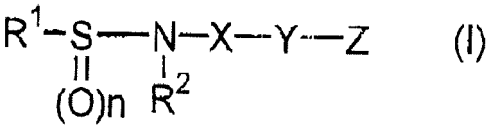
**23.** Verbindung der Formel




wobei R Wasserstoff oder Methyl ist.

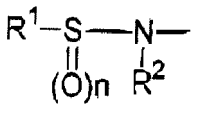
**Revendications**

**1.** Utilisation d'un composé de formule (I) :

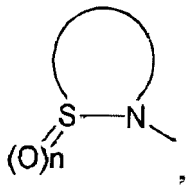



dans laquelle $R^1$ est un groupe alkyle en $C_1$-$C_{10}$ éventuellement substitué ou un groupe cycloalkyle en $C_3$-$C_8$ éventuellement substitué,

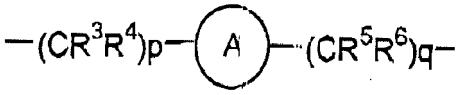
$R^2$ est un atome d'hydrogène ou un groupe alkyle en $C_1$-$C_{10}$, et $R^1$ et $R^2$ pris ensemble peuvent former un groupe alkylène en $C_1$-$C_6$, incluant le cas



est

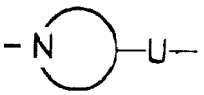


n vaut 1 ou 2,
X est un groupe alkylène en $C_1$-$C_6$ éventuehenwnt substitué, un groupe alcénylène en $C_2$-$C_6$ éventuellement substitué, un groupe -CO-alkylène en $C_1$-$C_6$ éventuellement substitué, un groupe -CO-alcénylène en $C_2$-$C_6$ éventuellement substitué, ou

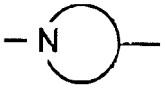


où $R^3$, $R^4$, $R^5$ et $R^6$ sont chacun indépendamment un atome d'hydrogène ou un groupe alkyle en $C_1$-$C_{10}$,

est un groupe cycloalkylène en $C_3$-$C_8$ éventuellement substitué, un groupe cycloalcénylène en $C_3$-$C_8$ éventuellement substitué, un groupe bicycloalkylène en $C_5$-$C_8$ éventuellement substitué, un groupe arylène éventuellement substitué choisi parmi un groupe bivalent formé par l'exclusion d'un atome d'hydrogène d'un groupe phényle, naphtyle, anthryle, phénanthryle, indanyle, indényle, biphénylyle, acénaphtyle, tétrahydronapthyle et fluorényle, ou un groupe hétérocyclediyle éventuellement substitué, et p et q sont chacun indépendamment 0 ou 1,- $NR^2$-X- peut être



où

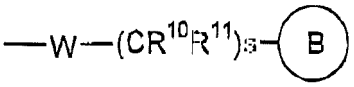


est un groupe pipéridinediyle, pipérazinediyle, pyridinediyle, pyrazinediyle, pyrrolidinediyle ou pyrrolediyle, et U est une liaison simple, un groupe alhylène en $C_1$-$C_6$ ou un groupe alcénylène en $C_2$-$C_6$,
Y est $OCONR^7$, $CONR^7$, $CSNR^7$, $NR^7CO$ ou $NR^7CS$,

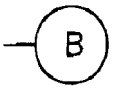
$R^7$ est un atome d'hydrogène ou un groupe alkyle en $C_1$-$C_{10}$, et
Z est un groupe alkyle en $C_1$-$C_{10}$ éventuellement substitué, un groupe alcényle en $C_2$-$C_{10}$ éventuellement substitué, un groupe amino éventuellement substitué, un groupe alcoxy en $C_1$-$C_{10}$ éventuellement substitué, un groupe carbocyclyle éventuellement substitué ou un groupe hétérocyclyle éventuellement substitué, où le groupe hétérocyclyle est choisi parmi un groupe hétémaryle de 5 ou 6 éléments choisi parmi les groupes pyrrolyle, imidazolyle, pyrazolyle, pyridyle, pyridazinyle, pyrimidinyle, oxazolyle, oxadiazolyle, isothiazolyle, thiazolyle, thiadiazolyle, furyle et thiényle ; un groupe hétérocyclyle condensé constitué de deux cycles choisis parmi les groupes indolyle, isoindolyle, indazolyle, indolizinyle, indolinyle, isoindolinyle, quinolyle, isoquinolyle, cinnolinyle, phtalazinyle, quinazolinyle, napthyridinyle, quinoxalinyle, purinyle, pténdinyle, benzopyranyle, benzimidazolyle, benzisoxazolyle, benzoxazolyle, benzoxadiazolyle, benzisothiazolyle, benzothiazolyle, benzothiadiazolyle, beuzofuryle, isobenzofuryle, benzothiényle, benzotriazolyle, imidazopyridyle, triazoropyridyle, imidazothiazolyle, pyrazinopyridazinyle, quinazolinyle, quinolyle, isoquinolyle, naphtyridinyle, dihydropyridyle, tétrahydroqoinoléyle et tétrahydrobenzothiényle ; et le groupe hétérocyclediyle est un groupe bivalent formé par l'exclusion d'un atome d'hydrogène du groupe hétérocyclyle ci-dessus et le groupe carbocyclyle est choisi parmi un groupe cycloalkyle en $C_3$-$C_8$, un groupe cycloalcényle en $C_3$-$C_8$, un groupe bicycloalkyle en $C_5$-$C_8$ et un groupe aryle comme défini ci-dessus,
d'un sel ou d'un solvate pharmaceutiquement acceptable de celui-ci, pour la préparation d'une composition pharmaceutique en tant qu'antagoniste du récepteur NPY Y5 ;
par quoi les substituants du « groupe alkyle en $C_1$-$C_{10}$ éventuellement substitué » représenté par Z sont, (1) un atome d'halogène ; (2) un groupe cyano ; (3) les groupes (i) à (xvi) suivants, qui sont éventuellement substitués par ou plusieurs substituants choisis parmi « un groupe de substituants β » définis-ci-dessous,

(i) un groupe hydroxy, (ii) un groupe alcoxy en $C_1$-$C_{10}$, (iii) un groupe mercapto, (iv) un groupe alkylthio en $C_1$-$C_{10}$, (v) un groupe acyle, (vi) un groupe acyloxy, (vii) un groupe carboxy, (viii) un groupe alcoxycarbonyle en $C_1$-$C_{10}$, (ix) un groupe imino, (x) un groupe carbamoyle, (xi) un groupe thiocarbamoyle, (xii) un groupe alkylcarbamoyle en $C_1$-$C_{10}$, (xiii) un groupe allrylthiocarbamoyle inférieur, (xiv) un groupe amino, (xv) un groupe alkylamino en $C_1$-$C_{10}$ ou (xvi) un groupe hétérocyclylcarbonyle; ou

(4) un groupe de formule :



dans laquelle $R^{10}$ et $R^{11}$ sont chacun indépendamment un atome d'hydrogène ou un groupe alkyle en $C_1$-$C_{10}$, et lorsque ce groupe a deux $R^{10}$ ou plus et/ou deux $R^{11}$ ou 5 plus, chaque $R^{10}$ et/ou chaque $R^{11}$ peut être différent,
W est une liaison simple, O, S ou $NR^{12}$,
$R^{12}$ est un atome d'hydrogène, un groupe alkyle en $C_1$-$C_{10}$ ou un groupe phényle,



est un groupe cycloalkyle, bicycloalkyle, cycloalcényle, aryle ou hétérocyclyle, dont chacun est éventuellement substitué par un ou plusieurs substituants choisis parmi « un groupe de substituants α » défini ci-dessous et
s est un entier de 0 à 4 ;
« le groupe de substituants α » est un groupe constitué par (1) un atome d'halogène ; (2) un groupe oxo ; (3) un groupe cyano ; (4) un groupe nitro ; (5) un groupe imino éventuellement substitué par un groupe alkyle en $C_1$-$C_{10}$ ou un groupe hydroxy ;
(6) les groupes (i) à (xxi) suivants, qui sont éventuellement substitués par un ou plusieurs groupes choisis parmi les groupes de substituants β,

(i) un groupe hydroxy, (ii) un groupe alkyle en $C_1$-$C_{10}$, (iii) un groupe alcényle en $C_2$-$C_{10}$, (iv) un groupe alcoxy en $C_1$-$C_{10}$, (v) un groupe carboxy, (vi) un groupe alcoxycarbonyle en $C_1$-$C_{10}$, (vii) un groupe acyle, (viii) un groupe acyloxy, (ix) un groupe imino, (x) un groupe mercapto, (xi) un groupe alkylthio en $C_1$-$C_{10}$, (xii) un groupe carbamoyle, (xiii) un groupe alkylcarbamoyle en $C_1$-$C_{10}$, (xiv) un groupe cycloalkylcarbamoyle, (xv) un groupe thiocarbamoyle, (xvi) un groupe alkylthiocarbamoyle en $C_1$-$C_{10}$, (xvii) un groupe alkylsulfinyle en $C_1$-$C_{10}$, (xviii)

un groupe alkylsulfonyle en $C_1$-$C_{10}$, (xix) un groupe sulfamoyle, (xx) un groupe alkylsulfamoyle en $C_1$-$C_{10}$, et (xxi) un groupe cycloalkylsulfamoyle;

(7) les groupes (i) à (v) suivants, qui sont evenuellement substitués par le groupe de substituants β, un groupe alkyle en $C_1$-$C_{10}$, un groupe (alcoxy en $C_1$-$C_{10}$)alkyle en $C_1$-$C_{10}$, un groupe hydroxyalkyle en $C_1$-$C_{10}$ éventuellement protégé, un groupe halogénoalkyle en $C_1$-$C_{10}$, un groupe alkylsulfonyle inférieur et/ou un groupe arylsulfonyle,

(i) un groupe cycloalkyle, (ii) un groupe cycloalcényle, (iii) un groupe cycloalkyloxy, (iv) un groupe amino et (v) un groupe alkylènedioxy ; et

(8) les groupes (i) à (xii) suivants, qui sont éventuellement substitués par le groupe de substituants β, un groupe alkyle en $C_1$-$C_{10}$, un groupe halogénoalkyle en $C_1$-$C_{10}$ et/ou un groupe oxo,

(i) un groupe phényle, (ii) un groupe naphtyle, (iii) un groupe phénoxy, (iv) un groupe phényl(alcoxy en $C_1$-$C_{10}$), (v) un groupe phénylthio, (vi) un groupe phényl(alkylthio en $C_1$-$C_{10}$), (vii) un groupe phénylazo, (viii) un groupe hétérocyclyle, (ix) un groupe hétérocyclyloxy, (x) un groupe hétérocyclylthio, (xi) un groupe hétérocyclylcarbonyle et (xii) un groupe hétérocyclylsulfonyle ;

« un groupe de substituants β » est un groupe constitué par un atome d'halogène, les groupes hydroxy éventuellement protégé, mercapto, alcoxy en $C_1$-$C_{10}$, alcényle en $C_2$-$C_{10}$, amino, alkylamino en $C_1$-$C_{10}$, alcoxycarbonylamino en $C_1$-$C_{10}$, alkylthio en $C_1$-$C_{10}$, acyle, carboxy, alcoxycarbonyle en $C_1$-$C_{10}$, earbamoyle, cyano, cycloalkyle, phényle, phénoxy, alkylphényle en $C_1$-$C_{10}$, alcoxyphényle en $C_1$-$C_{10}$, halogénophényle, naphtyle et hétérocyclyle ;
les substituants pour le « groupe alkyle en $C_1$-$C_{10}$ éventuellement substitué » représentés par n'importe quel autre groupe que Z sont un ou plusieurs substituants choisis parmi le groupe de substituants β ;
les substituants pour le « groupe alcoxy en $C_1$-$C_{10}$ éventuellement substitué » sont un ou plusieurs substituants choisis parmi le groupe de substituants β ;
les substituants pour le « groupe cycloalkyle éventuellement substitué » sont un ou plusieurs substituants choisis parmi le groupe de substituants α ;
les substituants pour le « groupe alcényle inférieur éventuellement substitué » sont un atome d'halogène, les groupes alcoxy inférieur, alcényle inférieur, amino, alkylamino inférieur, alcoxycarbonylamino inférieur, alkylthio inférieur, acyle, carboxy, alcoxycarbonyle inférieur, carbamoyle, cyano, cycloalkyle, phényle, alkylphényle inférieur, alcoxyphényle inférieur, naphtyle et/ou hétérocyclyle ;
les substituants pour le « groupe cycloakényle éventuellement substitué » sont un ou plusieurs substituants choisis parmi le groupe de substituants β ;
les substituants pour le « groupe amino éventuellement substitué » sont le groupe de substituants β, un groupe benzoyle éventuellement substitué et/ou un groupe hétérocyclylcarbonyle éventuellement substitué où les substituants sont un groupe hydroxy, un groupe alkyle en $C_1$-$C_{10}$, un groupe alcoxy inférieur et/ou un groupe alkylthio en $C_1$-$C_{10}$ ;
le terme « aryle éventuellement substitué » et «phényle éventuellement substitué » représentés par Z comprend les groupes « aryle » et «phényle» ci-dessus respectivement, qui peuvent être substitués par le groupe de substituants α ou un groupe alkyle en $C_1$-$C_{10}$ qui peut être substitué par un ou plusieurs groupes choisis parmi le groupe de substituants α ;
les substituants pour « un groupe aryle éventuellement substitué » et « un groupe phényle éventuellement substitué » représentés par n'importe quel groupe autre que Z sont un ou plusieurs groupes choisis parmi le groupe de substituants β ;
le terme « groupe carbocyclyle éventuellement substitué » comprend un groupe « cycloalkyle éventuellement substitué », un groupe « cycloalcényle éventuellement substitué », un groupe « bicycloalkyle éventuellement substitué » et un groupe « aryle éventuellement substitué » ;
les substituants pour le « groupe hétérocyclyle éventuellement substitué » sont les mêmes que ceux pour le « groupe aryle éventuellement substitué » ci-dessus ;
et un ou plusieurs groupes choisis parmi le groupe de substituants β sont les substituants pour les groupes « alkylène en $C_1$-$C_6$ éventuellement substitué », « alcénylène en $C_2$-$C_6$ éventuellement substitué », « cycloalkylène éventuellement substitué », « cyclohexylène éventuellement substitué », « bicycloalkylène éventuellement substitué », « cycloalcénylène éventuellement substitué », « phénylène éventuellement substitué », « hétérocyckdiyle éventuellement substitué » et « pipéridinylène éventuellement substitué ».

**2.** Utilisation selon la revendication 1, dans laquelle $R^2$ est un atome d'hydrogène ou un groupe alkyle en $C_1$-$C_{10}$ et

Z est un groupe alkyle en $C_1$-$C_{10}$ éventuellement substitué, un groupe alcényle en $C_2$-$C_{10}$ éventuellement substitué, un groupe alcoxy en $C_1$-$C_{10}$ éventuellement substitué, un groupe carbocyclyle éventuellement substitué, un groupe hétérocyclyle éventuellement substitué ou un groupe amino éventuellement substitué, à condition que $R^1$ soit un groupe alkyle en $C_3$-$C_{10}$ éventuellement substitué lorsque Z est un groupe amino éventuellement substitué, où le groupe carbocyclyle et le groupe hétérocyclyle sont définis comme ci-dessus et les substituants éventuels sont définis comme ci-dessus.

**3.** Utilisation selon la revendication 1, dans laquelle $R^1$ est un groupe alkyle en $C_1$-$C_{10}$ éventuellement substitué ou un groupe cycloalkyle en $C_3$-$C_8$ éventuellement substitué, X est un groupe alkylène en $C_2$-$C_6$ éventuellement substitué, un groupe alcénylène en $C_2$-$C_6$ éventuellement substitué ou

où p et q valent 0,

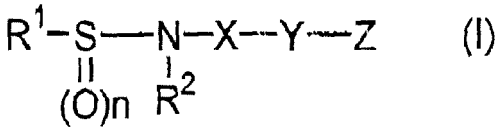
est un groupe cycloalkylene en $C_3$-$C_8$ éventuellement substitué, un groupe cycloalcénylène en $C_3$-$C_8$ éventuellement substitué, un groupe bicycloalkylène en $C_5$-$C_8$ éventuellement substitué, un groupe arylène éventuellement substitué ou un groupe hétérocyclediyle éventuellement substitué, et,
Z est un groupe alkyle en $C_1$-$C_{10}$ éventuellement substitué, un groupe carbocyclyle éventuellement substitué ou un groupe héterocyclyle éventuellement substitué, où le groupe arylène, le groupe hétérocyclediyle, le groupe hétérocyclyle sont définis comme ci-dessus et les substituants éventuels sont définis comme ci-dessus.

**4.** Utilisation selon l'une quelconque des revendications 1 à 3, dans laquelle $R^1$ est un groupe alkyle en $C_3$-$C_{10}$ éventuel tement substitué, où les substituants éventuels sont définis comme ci-dessus.

**5.** Utilisation selon l'une quelconque des revendications 1 à 4, en tant qu'agent contre l'obésité.

**6.** Utilisation selon l'une quelconque des revendications 1 à 4, en tant qu'agent anorexigène.

**7.** Composé de formule (T) :

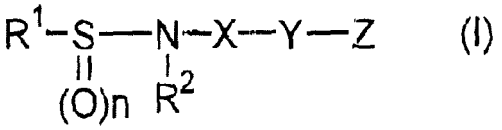


(I)

dans laquelle X est un groupe alkylène en $C_2$-$C_6$ ou un groupe alcénylène en $C_3$-$C_6$, $R^1$ est un groupe alkyle en $C_3$-$C_{10}$ éventuellement substitué ou un groupe cycloalkyle en $C_5$-$C_6$ éventuellement substitué, et les autres symboles sont tels que définis dans la revendication 1, à condition que Z ne soit pas un groupe alkylphénylamino en $C_1$-$C_{10}$, un groupe hydroxy(alkyle en $C_1$-$C_{10}$)phénylamino et un groupe acylphénylamino lorsque Y est $NR^7CO$,
un sel ou un solvate pharmaceutiquement acceptable de celui-ci, où les substituants éventuels sont définis comme ci-dessus.

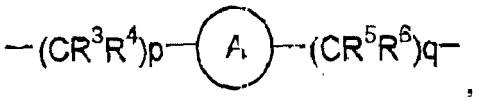
**8.** Composé décrit selon la revendication 7, dans lequel Z est un groupe alkyle en $C_1$-$C_{10}$ éventuellement substitué ou un groupe phényle éventuellement substitué,
un sel ou un solvate pharmaceutiquement acceptable de celui-ci, où les substituants éventuels sont définis comme ci-dessus.

**9.** Composé de formule (I) :



(I)

dans laquelle X est



,

est un groupe cycloalkylène en $C_3$-$C_8$ éventuellement substitué, un groupe cycloalcénylène en $C_3$-$C_8$ éventuellement substitué, un groupe bicycloalkylène en $C_5$-$C_8$ éventuellement substitué ou un groupe pipéridinylène éventuellement substitué, $R^1$ est un groupe alkyle en $C_3$-$C_{10}$ éventuellement substitué ou un groupe cycloalkyle en $C_5$-$C_6$ éventuellement substitué, et les autres symboles sont tels que définis dans la revendication 1,
un sel ou un solvate pharmaceutiquenent acceptable de celui-ci, où les substituants éventuels sont définis comme ci-dessus.

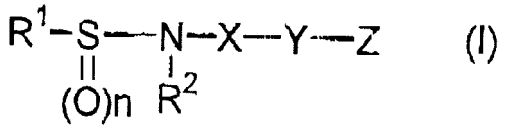
**10.** Composé selon la revendication 9, dans lequel

est un groupe cyclohexylène éventuellement substitué ou un groupe pipéridinylène éventuellement substitué, et p et q valent simultanément 0,
un sel ou un solvate pharmaceutiquement acceptable de celui-ci, où les substituants éventuels sont définis comme ci-dessus.

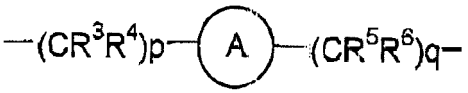
**11.** Composé selon la revendication 9 ou 10, dans lequel Y est CONH, un sel ou un solvate pharmaceutiquement acceptable de celui-ci.

**12.** Composé selon l'une quelconque des revendications 9 à 11, dans lequel Z est un groupe alkyle en $C_1$-$C_{10}$ éventuellement substitué, un groupe phényle éventuellement substitué, un groupe pyridyle éventuellement substitué ou un groupe benzopyranyle éventuellement substitué,
un sel ou un solvate pharmaceutiquement acceptable de celui-ci, où les substituants éventuels sont définis comme ci-dessus.

**13.** Composé de formule (I) :

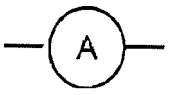


dans laquelle X est



est un groupe hétéroarylène, $R^1$ est un groupe alkyle en $C_3$-$C_{10}$ éventuellement substitué ou un groupe cycloalkyle en $C_5$-$C_6$ éventuellement substitué, et les autres symboles sont les mêmes que ceux définis dans la revendication 1, où les substituants éventuels sont définis comme ci-dessus,
un sel ou un solvate pharmaceutiquement acceptable de celui-ci.

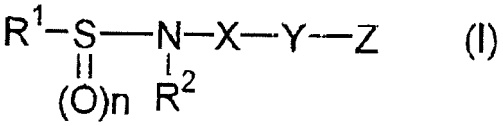
**14.** Composé selon la revendication 13, dans lequel



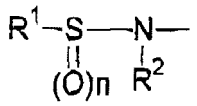
est un groupe thiophènediyle ou un groupe furandiyle,
un sel ou un solvate pharmaceutiquement acceptable de celui-ci.

**15.** Composition pharmaceutique comprenant le composé selon l'une quelconque des revendications 7 à 14, un sel ou un solvate pharmaceutiquement acceptable de celui-ci.

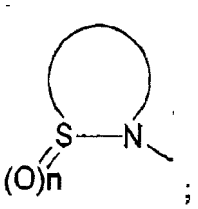
**16.** Composé de formule (I) :



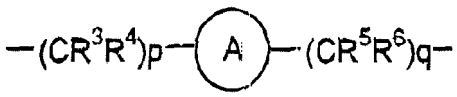
dans laquelle $R^1$ est un groupe alkyle en $C_1$-$C_{10}$ éventuellement substitué ou un groupe cycloalkyle en $C_3$-$C_8$ éventuellement substitué,
$R^2$ est un atome d'hydrogène ou un groupe alkyle en $C_1$-$C_{10}$, et $R^1$ et $R^2$ pris ensemble peuvent former un groupe alkylène en $C_1$-$C_6$ incluant le cas



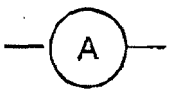
est



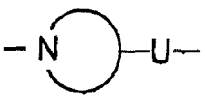
n vaut 1 ou 2,
X est un groupe alkylène en $C_1$-$C_6$ éventuellement substitué, un groupe alcénylène en $C_2$-$C_6$ éventuellement substitué, un groupe -CO-alkylène en $C_1$-$C_6$ éventuellement substitué, un groupe -CO-alcénylène en $C_2$-$C_6$ éventuellement substitué, ou



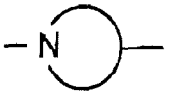
où $R^3$, $R^4$, $R^5$ et $R^6$ sont chacun indépendamment un atome d'hydrogène ou un groupe alkyle en $C_1$-$C_{10}$,



est un groupe cycloalkylène en $C_3$-$C_8$ éventuellement substitué, un groupe cycloalcénylène en $C_3$-$C_8$ éventuellement substitué, un groupe bicycloalkylène en $C_5$-$C_8$ éventuellement substitué, un groupe arylène éventuellement substitué choisi parmi un groupe bivalent formé par l'exclusion d'un atome d'hydrogène d'un groupe phényle, naphtyle, anthryle, phénanthryle, indanyle, indényle, biphénylyle, acénaphtyle, tétrahydronapthyle et fluorényle, ou un groupe hétérocyclediyle éventuellement substitué, et p et q sont chacun indépendamment 0 ou 1, -$NR^2$-X- peut être



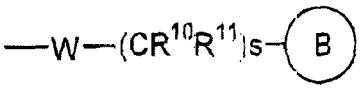
où



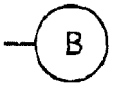
est un groupe pipéridinediyle, pipérazinediyle, pyridinediyle, pyrazinediyle, pyrrolidinediyle ou pyrrolediyle, et U est une liaison simple, un groupe alkylène en $C_1$-$C_6$ ou un groupe alcénylène en $C_2$-$C_6$, Y est $OCONR^7$, $CONR^7$, $CSNR^7$, $NR^7CO$ ou $NR^7CS$,
$R^7$ est un atome d'hydrogène ou un groupe alkyle en $C_1$-$C_{10}$, et
Z est un groupe alkyle en $C_1$-$C_{10}$ éventuellement substitué, un groupe alcényle en $C_2$-$C_{10}$ éventuellement substitué, un groupe amino éventuellement substitué, un groupe alcoxy en $C_1$-$C_{10}$ éventuellement substitué, un groupe car-

bocyclyle éventuellement substitué ou un groupe hétérocyclyle éventuellement substitué, où le groupe hétérocyclyle est choisi parmi un groupe héteroaryle de 5 ou 6 éléments choisi parmi les groupes pyrrolyle, imidazolyle, pyrazolyle, pyridyle, pyridazinyle, pyrimidinyle, oxazolyle, oxadiazolyle, isothiazolyle, thiazolyle, thiadiazolyle, furyle et thiényle ; un groupe hétérocyclyle condensé constitué de deux cycles choisis parmi les groupes indolyle, isoindolyle, indazolyle, indolizinyle, indolinyle, isoindolinyle, quinolyle, isoquinolyle, cinnolinyle, phtalazinyle, quinazolinyle, napthyridinyle, quinoxalinyle, purinyle, ptéridinyle, benzopyranyle, benzimidazolyle, benzisoxazolyle, benzoxazolyle, benzoxadiazolyle, benzisothiazolyle, benzothiazolyle, benzothiadiazolyle, benzofuryle, isobenzofuryle, benzothiényle, benzotriazolyle, imidazopyridyle, triazoropyridyle, imidazothiazolyle, pyrazinopyridazinyle, quinazolinyle, quinolyle, isoquinolyle, naphtyridinyle, dihydropyridyle, tétrahydroquinoléyle et tétrahydrobenzothiényle ; et le groupe hétérocyelediyle est un groupe bivalent formé par l'exclusion d'un atome d'hydrogène du groupe hétérocyclyle ci-dessus et le groupe carbocyclyle est choisi parmi un groupe cycloalkyle en $C_3$-$C_8$, un groupe cycloalcényle en $C_3$-$C_8$, un groupe bicycloalkyle en $C_5$-$C_8$ et un groupe aryle comme défini ci-dessus ;
un sel ou un solvate pharmaceutiquement acceptable de celui-ci, en tant qu'antagoniste du récepteur NPY Y5;
par quoi les substituants du « groupe alkyle en $C_1$-$C_{10}$ éventuellement substitué » représenté par Z sont, (1) un atome d'halogène; (2) un groupe cyano ; (3) les groupes (i) à (xvi) suivants, qui sont éventuellement substitués par ou plusieurs substituants choisis parmi « un groupe de substituants β » définis-ci-dessous,

(i) un groupe hydroxy, (ii) un groupe alcoxy en $C_1$-$C_{10}$, (iii) un groupe mercapto, (iv) un groupe alkylthio en $C_1$-$C_{10}$, (v) un groupe acyle, (vi) un groupe acyloxy, (vii) un groupe carboxy, (viii) un groupe alcoxycarbonyle en $C_1$-$C_{10}$, (ix) un groupe imino, (x) un groupe carbamoyle, (xi) un groupe thiocarbamoyle, (xii) un groupe alkylcarbamoyle en $C_1$-$C_{10}$, (xiii) un groupe alkylthiocarbamoyle inférieur, (xiv) un groupe amino, (xv) un groupe alkylamino en $C_1$-$C_{10}$ ou (xvi) un groupe bétérocyclylcarbonyle ; ou
(4) un groupe de formule :



dans laquelle $R^{10}$ et $R^{11}$ sont chacun indépendamment un atome d'hydrogène ou un groupe alkyle en $C_1$-$C_{10}$, et lorsque ce groupe a deux $R^{10}$ ou plus et/ou deux $R^{11}$ ou plus, chaque $R^{10}$ et/ou chaque $R^{11}$ peut être différent,
W est une liaison simple, O, S ou $NR^{12}$,
$R^{12}$ est un atome d'hydrogène, un groupe alkyle en $C_1$-$C_{10}$ ou un groupe phényle,



est un groupe cycloalkyle, bicycloalkyle, cycloalcényle, aryle ou hétérocyclyle, dont chacun est éventuellement substitué par un ou plusieurs substituants choisis parmi « un groupe de substituants α » défini ci-dessous et
s est un entier de 0 à 4 ;
« le groupe de substituants α » est un groupe constitué par (1) un atome d'halonène ; (2) un groupe oxo ; (3) un groupe cyano ; (4) un groupe nitro ; (5) un groupe imino éventuellement substitué par un groupe alkyle en $C_1$-$C_{10}$ ou un groupe hydroxy; (6) les groupes (i) à (xxi) suivants, qui sont éventuellement substitués par un ou plusieurs groupes choisis parmi les groupes de substituants β,

(i) un groupe hydroxy, (ii) un groupe alkyle en $C_1$-$C_{10}$, (iii) un groupe alcényle en $C_2$-$C_{10}$, (iv) un groupe alcoxy en $C_1$-$C_{10}$, (v) un groupe carboxy, (vi) un groupe alcoxycarbonyle en $C_1$-$C_{10}$, (vii) un groupe acyle, (viii) un groupe acyloxy, (ix) un groupe imino, (x) un groupe mercapto, (xi) un groupe alkylthio en $C_1$-$C_{10}$, (xii) un groupe carbamoyle, (xiii) un groupe alkylcarbamoyle en $C_1$-$C_{10}$, (xiv) un groupe cycloalkylearbamoyle, (xv) un groupe thiocarbamoyle, (xvi) un groupe alkylthiocarbamoyle en $C_1$-$C_{10}$, (xvii) un groupe alkylsulfinyle en $C_1$-$C_{10}$, (xviii) un groupe alkylsulfonyle en $C_1$-$C_{10}$, (xix) un groupe sulfamoyle, (xx) un groupe alkylsulfamoyle en $C_1$-$C_{10}$, et (xxi) un groupe cycloalkylsulfamoyle;

(7) les groupes (i) à (v) suivants, qui sont éventuellement substitués par le groupe de substituants β, un groupe alkyle en $C_1$-$C_{10}$, un groupe (alcoxy en $C_1$-$C_{10}$)alkyle en $C_1$-$C_{10}$, un groupe hydroxyalkyle en $C_1$-$C_{10}$ éventuellement protégé, un groupe halogénoalkyle en $C_1$-$C_{10}$, un groupe alkylsulfonyle inférieur et/ou un groupe arylsulfo-

nyle,

(i) un groupe cycloalkyle, (ii) un groupe cycloalcényle, (iii) un groupe cycloalkyloxy, (iv) un groupe amino et (v) un groupe alkylènedioxy ; et

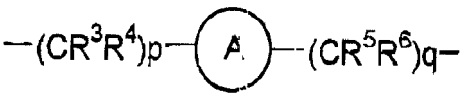
(8) les groupes (i) à (xii) suivants, qui sont éventuellement substitués par le groupe de substituants β, un groupe alkyle en $C_1$-$C_{10}$, un groupe halogénoalkyle en $C_1$-$C_{10}$ et/ou Un groupe oxo,

(i) un groupe phényle, (ii) un groupe naphtyle, (iii) un groupe phénoxy, (iv) un groupe phényl(alcoxy en $C_1$-$C_{10}$), (v) un groupe phénylthio, (vi) un groupe phényl(alkylthio en $C_1$-$C_{10}$), (vii) un groupe phénylazo, (viii) un groupe hétérocyclyle, (ix) un groupe hétérocyclyloxy, (x) un groupe hétérocyclylthio, (xi) un groupe hétérocyclylcarbonyle et (xii) un groupe hétérocyclylsulfonyle;

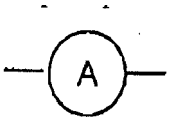
« un groupe de substituants β » est un groupe constitué par un atome d'halogène, les groupes hydroxy éventuellement protégé, mercapto, alcoxy en $C_1$-$C_{10}$, alcényle en $C_2$-$C_{10}$, amino, alkylamino en $C_1$-$C_{10}$, alcoxycarbonylamino en $C_1$-$C_{10}$, alkylthio en $C_1$-$C_{10}$, acyle, carboxy, alcoxycarbonyle en $C_1$-$C_{10}$, carbamoyle, cyano, cycloalkyle, phényle, phénoxy, alkylphényle en $C_1$-$C_{10}$, alcoxyphényle en $C_1$-$C_{10}$, halogénophényle, naphtyle et hétérocyclyle ;
les substituants pour le «groupe alkyle en $C_1$-$C_{10}$ éventuellement substitué » représentés par n'importe quel autre groupe que Z sont un ou plusieurs substituants choisis parmi le groupe de substituants β ;
les substituants pour le « groupe alcoxy en $C_1$-$C_{10}$ éventuellement substitué » sont un ou plusieurs substituants choisis parmi le groupe de substituants β ;
les substituants pour le « groupe cycloalkyle éventuellement substitué » sont un ou plusieurs substituants choisis parmi le groupe de substituants α ;
les substituants pour le « groupe alcenyle inférieur éventuellement substitué » sont un atome d'halogène, les groupes alcoxy inférieur, alcényle inférieur, amino, alkylamino inférieur, alcoxycarbonylamino inférieur, alkylthio inférieur, acyle, carboxy, alcoxycarbonyle inférieur, carbamoyle, cyano, cycloalkyle, phényle, alkylphényle inférieur, alcoxyphényle inférieur, naphtyle et/ou hétérocyclyle ;
les substituants pour le « groupe cycloalcényle éventuellement substitué » sont un ou plusieurs substituants choisis parmi le groupe de substituants β;
les substituants pour le « groupe amino éventuellement substitué » sont le groupe de substituants β, un groupe benzoyle éventuellement substitué et/ou un groupe hétérocyclylcarbonyle éventuellement substitué où les substituants sont un groupe hydroxy, un groupe alkyle en $C_1$-$C_{10}$, un groupe alcoxy inférieur et/ou un groupe alkylthio en $C_1$-$C_{10}$;
le terme « aryle éventuellement substitué » et « phényle éventuellement substitué » représentés par Z comprend les groupes « aryle » et « phényle » ci-dessus respectivement, qui peuvent être substitués par le groupe de substituants α ou un groupe alkyle en $C_1$-$C_{10}$ qui peut être substitué par un ou plusieurs groupes choisis parmi le groupe de substituants α ;
les substituants pour « un groupe aryle éventuellement substitué » et « un groupe phényle éventuellement substitué » représemés par n'importe quel groupe autre que Z sont un ou plusieurs groupes choisis parmi le groupe de substituants β;
le terme « groupe carbocyclyle éventuellement substitué » comprend un groupe « cycloalkyle éventuellement substitué », un groupe « cycloalcényle éventuellement substitué », un groupe « bicycloalkyle éventuellement substitué » et un groupe « aryle éventuellement substitué » ;
les substituants pour le « groupe hétérocyclyle éventuellement substitué» sont les mêmes que ceux pour le « groupe aryle éventuellement substitué » ci-dessus ;
et un ou plusieurs groupes choisis parmi le groupe de substituants β sont les substituants pour les groupes «alkylène en $C_1$-$C_6$ éventuellement substitué », « alcénylène en $C_2$-$C_6$ éventuellement substitué», «cycloalkylène éventuellement substitué », « cyclohexylène éventuellement substitué », « bicycloalkylène éventuellement substitué », « cycloaleénylene éventuellement substitué », « phénylène éventuellement substitué », « hétérocyclediyle éventuellement substitué» et « pipéridinylène éventuellement substitué ».

**17.** Composé selon la revendication 16, dans laquelle $R^2$ est un atome d'hydrogène ou un groupe alkyle en $C_1$-$C_{10}$ et Z est un groupe alkyle en $C_1$-$C_{10}$ éventuellement substitué, un groupe alcényle en $C_2$-$C_{10}$ éventuellement substitué, un groupe alcoxy en $C_1$-$C_{10}$ éventuellement substitué, un groupe carbocyclyle éventuellement substitué, un groupe hétérocyclyle éventuellement substitué ou un groupe amino éventuellement substitué, à condition que $R^1$ soit un groupe alkyle en $C_3$-$C_{10}$ éventuellement substitué lorsque Z est un groupe amino éventuellement substitué, où le groupe carbocyclyle et le groupe hétérocyclyle sont définis comme ci-dessus et les substituants éventuels sont définis comme ci-dessus.

**18.** Composé selon la revendication 16, dans laquelle $R^1$ est un groupe alkyle en $C_1$-$C_{10}$ éventuellement substitué ou un groupe cycloalkyle en $C_3$-$C_8$ éventuellement substitué, X est un groupe alkylène en $C_2$-$C_6$ éventuellement substitué, un groupe alcénylène en $C_2$-$C_6$ éventuellement substitué ou



où p et q valent 0,



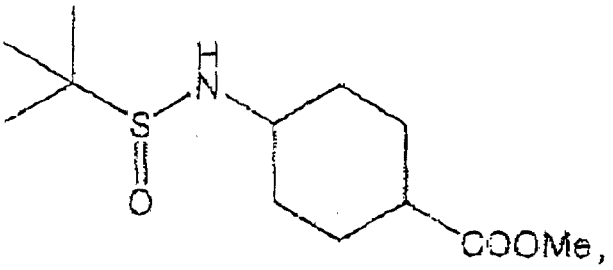
est un groupe cycloalkylène en $C_3$-$C_8$ éventuellement substitué, un groupe cycloalcénylène en $C_3$-$C_8$ éventuellement substitué, un groupe bicycloalkylène en $C_5$-$C_8$ éventuellement substitué, un groupe arylène éventuellement substitué ou un groupe hétérocyclediyle éventuellement substitué, et,
Z est un groupe alkyle en $C_1$-$C_{10}$ éventuellement substitué, un groupe carbocyclyle éventuellement substitué ou un groupe hétérocyclyle éventuellement substitué, où le groupe arylène, le groupe hétérocyclediyle, le groupe hétérocyclyle sont définis comme ci-dessus et les substituants éventuels sont définis comme ci-dessus.

**19.** Composé selon l'une quelconque des revendications 16 à 18, dans laquelle $R^1$ est un groupe alkyle en $C_3$-$C_{10}$ éventuellement substitué, où les substituants éventuels sont définis comme ci-dessus.

**20.** Composé selon l'une quelconque des revendications 16 à 19, en tant qu'agent contre l'obésité.

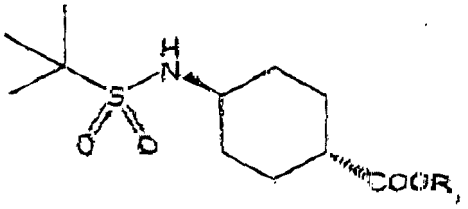
**21.** Composé selon l'une quelconque des revendications 16 à 19, en tant qu'agent anorexigène.

**22.** Composé de formule :



dans laquelle n vaut 2.

**23.** Composé de formule :



dans laquelle R est un atome d'hydrogène ou un groupe méthyle.

## REFERENCES CITED IN THE DESCRIPTION

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