

(12) **FASCÍCULO DE PATENTE DE INVENÇÃO**

(51) Classificação Internacional:

**A61K 31/18** (2007.10) **C07C 311/06** (2007.10)  
**C07C 311/20** (2007.10) **C07C 311/46** (2007.10)  
**C07C 323/40** (2007.10) **C07D 207/12** (2007.10)  
**C07D 209/08** (2007.10) **C07D 209/48** (2007.10)  
**C07D 209/88** (2007.10) **C07D 211/58** (2007.10)  
**C07D 213/75** (2007.10) **C07D 215/36** (2007.10)  
**C07D 217/04** (2007.10) **C07D 219/10** (2007.10)  
**C07D 231/16** (2007.10) **C07D 231/56** (2007.10)  
**C07D 233/68** (2007.10) **C07D 239/42** (2007.10)  
**C07D 277/56** (2007.10) **C07D 285/06** (2007.10)  
**C07D 295/12** (2007.10) **C07D 307/68** (2007.10)  
**C07D 307/91** (2007.10) **C07D 311/16** (2007.10)  
**C07D 317/66** (2007.10) **C07D 333/38** (2007.10)  
**C07D 333/72** (2007.10) **A61P 3/00** (2007.10)

(22) Data de pedido: **2000.11.21**

(30) Prioridade(s): **1999.11.26 JP 33646999**  
**1999.12.14 JP 35378699**

(43) Data de publicação do pedido: **2009.01.14**

(45) Data e BPI da concessão: **2010.05.05**  
**138/2010**

(73) Titular(es):

**SHIONOGI&CO., LTD.**  
**1-8, DOSHOMACHI 3-CHOME CHUO-KU**  
**OSAKA-SHI, OSAKA 5410045** **JP**

(72) Inventor(es):

**YASUYUKI KAWANISHI** **JP**  
**HIDEYUKI TAKENAKA** **JP**  
**KOHI HANASAKI** **JP**  
**TETSUO OKADA** **JP**

(74) Mandatário:

**JOSÉ EDUARDO LOPES VIEIRA DE SAMPAIO**  
**R DO SALITRE 195 RC DTO 1250-199 LISBOA** **PT**

(54) Epígrafe: **ANTAGONISTAS DE Y5 DE NPY**

(57) Resumo:



## **DESCRIÇÃO**

### **"ANTAGONISTAS DE Y5 de NPY"**

#### **Domínio Técnico**

A invenção presente diz respeito a uma composição farmacêutica para utilização a título de antagonista de receptores Y5 de NPY, especificamente a título de agente contra a obesidade e novos compostos com actividade anti-obesidade.

#### **Estado da Técnica à Data da Invenção**

O neuropeptido Y (doravante referido neste documento como NPY) é um péptido constituído por 36 resíduos de aminoácidos que foi isolado a partir do cérebro porcino em 1982. O NPY encontra-se largamente distribuído no sistema nervosa central e nos tecidos periféricos dos seres humanos e dos animais.

Foi descrito que o NPY possui uma actividade de estimulação do consumo de alimentos, uma actividade contra as convulsões, uma actividade de promoção da aprendizagem, uma actividade contra a ansiedade, uma actividade contra o stress, etc. no sistema nervoso central, e pode estar envolvido de forma fulcral nas doenças do sistema nervoso

central tais como a depressão, a doença de Alzheimer e a doença de Parkinson. Pensa-se que o NPY se encontra associado com as doenças cardiovasculares, uma vez que induz uma contracção dos músculos lisos tais como os dos vasos sanguíneos ou os músculos cardíacos nos tecidos periféricos. Para além disto, também se sabe que o NPY se encontra envolvido em doenças metabólicas tais como a obesidade, a diabetes, e as anormalidades hormonais (Trends in Pharmacological Sciences, Vol. **15**, 153 (1994)). Espera-se portanto que um antagonista de receptores de NPY seja um remédio para impedir ou para tratar diversas doenças envolvendo o receptor de NPY.

Os subtipos Y1, Y2, Y3, Y4, Y5, e Y6 já foram identificados a título de receptores de NPY (Trends in Pharmacological Sciences, Vol. **18**, e 372 (1997)). Foi sugerido que o receptor Y5 esteja pelo menos envolvido no comportamento de consumo alimentar e espera-se que o seu antagonista seja um agente contra a obesidade (Peptides, Vol. **18**, e 445 (1997)).

São descritos compostos de quinazolina com estruturas semelhantes às dos compostos da invenção presente e que exibem actividade antagonística em relação ao receptor de NPY nos WO 97/20.820, WO 97/20.821, WO 97/20.823 e outros semelhantes. Para além disto, está descrito que os derivados de ureia com um grupo sulfonamida e os derivados amida com um grupo sulfonilo no WO 99/64.349

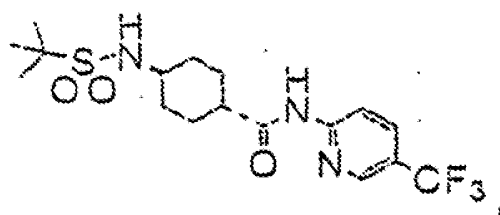
bem como os derivados de benzilsulfonamida na EP 1010691-A, possuem uma actividade antagonista face ao NPY.

Estão descritos compostos com estruturas semelhantes às dos compostos da invenção presente noa JP59-16871-1-A e no WO 97/15567. As suas actividades são bastante diferentes das dos compostos da invenção presente e aqueles documentos não sugerem a invenção presente.

### **Descrição da Invenção**

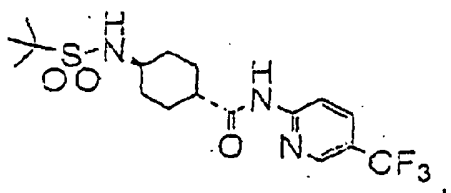
O objecto da invenção presente é proporcionar uma composição farmacêutica melhor para utilização a título de antagonista dos receptores Y5 de NPY e novos compostos possuindo essa actividade.

A invenção presente proporciona de um composto com a fórmula:



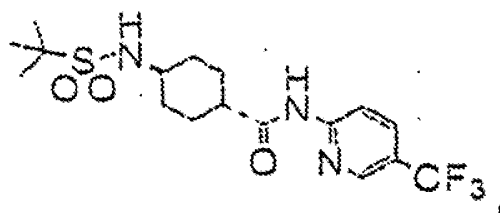
um seu sal aceitável do ponto de vista farmacêutico ou um solvato destes.

Uma composição farmacêutica que inclua um composto com a fórmula:



um seu sal aceitável do ponto de vista farmacêutico ou um solvato destes.

Um composto com a fórmula:



um seu sal aceitável do ponto de vista farmacêutico ou um solvato destes para utilização no tratamento da obesidade.

#### **Melhor Mneira de Levar a Cabo a Invenção**

Os compostos da invenção presente incluem também quaisquer dos seus sais capazes de serem formados e aceitáveis do ponto de vista farmacêutico. São exemplos de um "sal aceitável do ponto de vista farmacêutico" os sais com ácidos inorgânicos tais como ácido clorídrico, ácido sulfúrico, ácido azótico e ácido fosfórico; sais com ácidos orgânicos tais como ácido para-toluenossulfônico, ácido metanossulfônico, ácido oxálico e ácido cítrico; sais com

bases orgânicas tais como os de amónio, trimetilamónio e trietilamónio; sais com metais alcalinos tais como sódio e potássio; e sais com metais alcalino-terrosos tais como o cálcio e o magnésio.

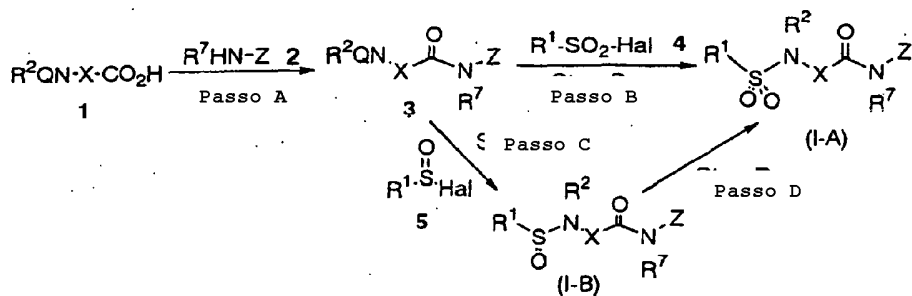
Os compostos da invenção presente incluem solvatos. Hidrato é preferível e pode coordenar-se com o composto da invenção presente um número arbitrário de moléculas de água.

Quando o composto (I) da invenção presente possui um átomo de carbono assimétrico, ele inclui os próprios racematos, todos os enantiómeros e todos os estereoisómeros, tais como os seus diastereómeros, epímeros e enantiómeros.

Quando o composto (I) da invenção presente contendo uma ou mais ligações duplas forma um isómero E ou um isómero Z, o composto (I) inclui ambos os isómeros. Quando X é cicloalquileno, o composto (I) inclui tanto o isómero cis como o isómero trans.

Por exemplo, o composto (I) da invenção presente pode ser sintetizado pelo método seguinte.

**(Compostos nos quais  $Y=CONR^7$ )**



em que Hal seja halogéneo, Q seja um grupo protector de amino e os outros símbolos são tais como acima.

### Passo A

Faz-se reagir o composto 1 com o Composto Amino 2 possuindo os substituintes pretendidos Z e  $R^7$ , num solvente apropriado, a entre  $0^\circ C$  e  $50^\circ C$  durante entre diversos minutos e diversas horas. A título de solvente, pode utilizar-se tetrahydrofurano, dimetilformamida, éter dietílico, diclorometano, tolueno, benzeno, xileno, ciclohexano, hexano, clorofórmio, acetato de etilo, acetato de butilo, pentano, heptano, dioxano, acetona, acetonitrilo, água, uma mistura de todos estes, etc.. Pode utilizar-se um activador tal como cloreto de tionilo, um halogeneto de acilo, um anidrido de ácido e um éster activado, caso seja necessário.

### Passo B

Desprotege-se o composto 3 pelo método habitual e faz-se reagir com o Halogeneto de Sulfonilo 4 que tinha o

substituente  $R^1$  pretendido num solvente adequado, a entre  $0^\circ\text{C}$  e  $50^\circ\text{C}$  durante entre diversos minutos e diversas horas para se obter o composto (I-A) no qual  $n$  é 2. Pode utilizar-se a título de solvente tetrahidrofurano, dimetilformamida, éter dietílico, diclorometano, tolueno, benzeno, xileno, ciclohexano, hexano, clorofórmio, acetato de etilo, acetato de butilo, pentano, heptano, dioxano, acetona, acetonitrilo, água e misturas de todos estes, etc..

#### **Passo C**

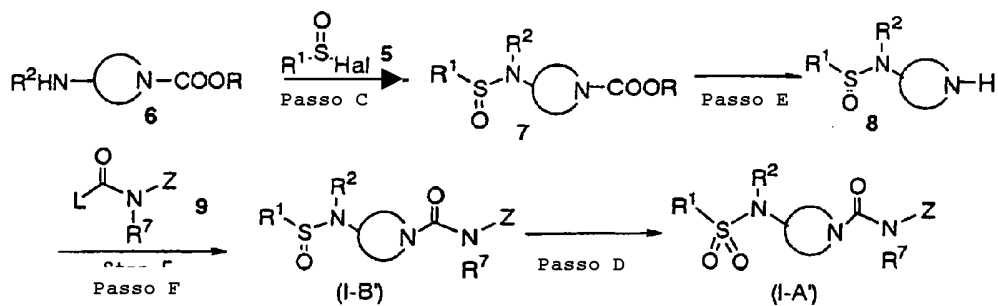
Pode sintetizar-se o Composto (I-B) no qual  $n$  é 1 fazendo reagir o Composto 3 com o Halogeneto de Sulfinilo 5 contendo o substituinte  $R^1$ . As condições reaccionais para a reacção são as mesmas que se utilizaram no Passo B.

#### **Passo D**

Oxida-se o Composto (I-B) obtido no Passo C pelo método habitual para se obter o Composto (I-A) no qual  $n$  é 2. Pode utilizar-se como oxidante ácido *m*-cloroperbenzóico, ácido peracético, peróxido de hidrogénio, ácido trifluoroperacético, periodato de sódio, hipoclorito de sódio, permanganato de potássio, etc., e pode levar-se a cabo a entre  $0^\circ\text{C}$  e  $50^\circ\text{C}$ . São exemplos de solventes, tetrahidrofurano, dimetilformamida, éter dietílico, diclorometano, tolueno, benzeno, xileno, ciclohexano, hexano, clorofórmio, acetato de etilo, acetato de butilo,

pentano, heptano, dioxano, acetona, acetonitrilo, água, metanol, etanol, isopropanol e uma mistura de todos estes.

Quando X é heterociclo-di-ilo contendo pelo menos um átomo de N e o átomo de N liga-se a  $\text{CONR}^7\text{-Z}$  no composto (I), pode empregar-se a reacção seguinte para se obter o Composto (I-A') ou (I-B'). Pode levar-se a cabo o Passo D logo após o Passo C ou o Passo E.



no qual R é alquilo inferior ou arilo e L é um grupo de saída.

#### Passo C

Faz-se reagir o Composto 5 com o Composto 6 de um modo semelhante ao Passo C acima, para se obter o Composto 7.

#### Passo E

O Composto 7 obtido desta forma é tratado com uma base num solvente adequado, para se obter o Composto 8. Por

exemplo, o hidróxido de bário, hidróxido de sódio, hidróxido de potássio, hidrazina ou propanotiolato de lítio como base. A título de solvente, pode aprovar-se o tetrahidrofurano, a dimetilformamida, o dioxano, a acetona, o acetonitrilo, o metanol, o etanol, o propanol, a água, qualquer mistura destes ou outros semelhantes. Pode levar-se a cabo a reacção a entre 0°C e 100°C durante entre diversos minutos e várias dezenas de horas.

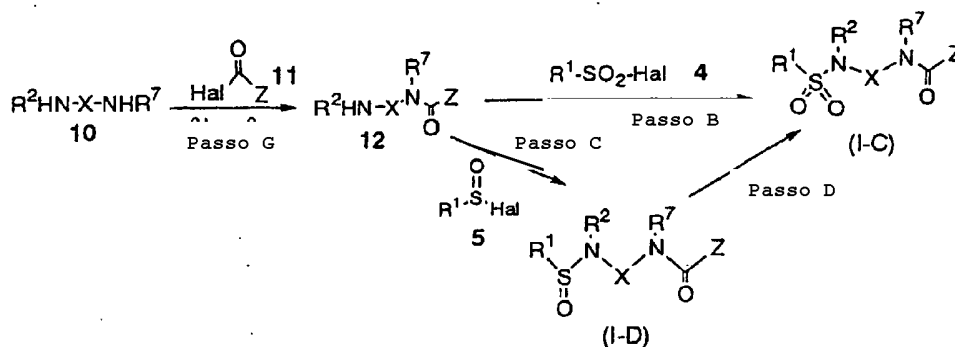
#### **Passo F**

Faz-se reagir o composto 8 com o Composto 9 contendo um grupo rejeitado e o substituinte pretendido, num solvente adequado, na presença ou na ausência de uma base, a entre 0°C e 100°C durante entre diversos minutos e diversos dias, para se obter o Composto (I-B'). São exemplos de grupo rejeitado fenoxilo, cloro e triclorometilo. São exemplos da base trietilamina, piridina, di-isopropiletilamina, hidróxido de sódio, carbonato de potássio e hidrogenocarbonato de sódio. São exemplos do solvente tetrahidrofurano, dimetilformamida, éter dietílico, diclorometano, tolueno, benzeno, xileno, ciclohexano, hexano, clorofórmio, acetato de etilo, acetato de butilo, pentano, heptano, dioxano, acetona, acetonitrilo, metanol, etanol e as misturas destes.

#### **Passo D**

Faz-se reagir o Composto (I-B') de uma maneira semelhante à do Passo D acima, para se obter o Composto (I-A').

(Composto no qual  $Y=NR^7CO$ )



em que todos os símbolos sejam tais como acima.

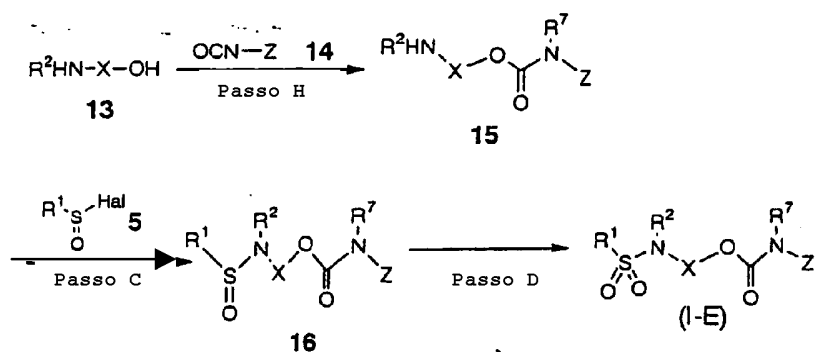
#### Passo G e Passo B

Faz-se reagir o Composto 10 com o Composto 11 nas mesmas condições reaccionais que no Passo B. Faz-se reagir o Composto 12 que desta forma se obtém de um modo semelhante ao do Passo B acima para se obter o Composto (I-C) no qual  $n=2$ .

#### Passo C e Passo D

Para se sintetizar o Composto (I-D), pode fazer-se reagir o Composto 12 obtido no Passo G de um modo semelhante aos do Passo C e do Passo D acima.

(Composto no qual  $Y=OCONR^7$ )



em que todos os símbolos são tal como acima.

#### Passo H

Faz-se reagir o Composto 13 com o Isocianato, Composto 14, contendo um substituinte Z, num solvente adequado e na presença de um catalisador apropriado, a entre  $0^\circ C$  e  $100^\circ C$  durante entre diversos minutos e diversos dias, para se obter o Composto 15. São exemplos do solvente, tetrahydrofurano, dimetilformamida, éter dietílico, diclorometano, tolueno, benzeno, xileno, ciclohexano, hexano, clorofórmio, acetato de etilo, acetato de butilo, pentano, heptano, dioxano, acetona, acetonitrilo e as misturas destes.

#### Passo C e Passo D

Faz-se reagir o Composto 15 que desta forma se obteve de modos semelhantes aos do Passo C e do Passo D para se obter o Composto (I-E) da invenção presente.

**(Composto no qual  $Y=CSNR^7$  ou  $NR^7CS$ )**

Pode sintetizar-se o Composto (I) no qual Y seja  $CSNR^7$  ou  $NR^7CS$  fazendo reagir o composto (I) no qual Y seja  $CONR^7$  ou  $NR^7CO$ , sintetizado por qualquer um dos métodos acima, com o reagente de Lawesson ou com pentassulfureto de fósforo num solvente adequado a entre 30°C e 100°C durante entre diversos minutos e várias horas. São exemplos do solvente tetrahidrofurano, dimetilformamida, éter dietílico, diclorometano, tolueno, benzeno, xileno, ciclohexano, hexano, clorofórmio, acetato de etilo, acetato de butilo, pentano, heptano, dioxano, acetona, acetonitrilo e misturas de todos estes.

Podem proteger-se os grupos amino com um grupo protector adequado da forma habitual num passo apropriado. Por exemplo, pode utilizar-se como grupo protector a ftalimida, um alcóxicarbonilo inferior, um alceniloxicarbonilo inferior, um halogenoalcóxicarbonilo inferior, um aril-alcóxil(inferior)carbonilo, um trialquilsililo, um alquilsulfonilo inferior, um halogenoalquilsulfonilo inferior, um arilsulfonilo, um alquilarcarbonilo inferior e um arilcarbonilo.

Depois da protecção do grupo amina, submete-se o composto às reacções mencionadas acima e desprotege-se o composto obtido por um tratamento com um ácido ou com uma base num solvente adequado, numa altura apropriada. São exemplos de um solvente, tetrahydrofurano, dimetilformamida, éter dietílico, diclorometano, tolueno, benzeno, xileno, ciclohexano, hexano, clorofórmio, acetato de etilo, acetato de butilo, pentano, heptano, dioxano, acetona, acetonitrilo e as misturas destes. São exemplos de bases a hidrazina, a piridina, o hidróxido de sódio e o hidróxido de potássio e são exemplos de um ácido o ácido clorídrico, o ácido trifluoroacético e o ácido fluorídrico.

O composto da invenção presente tem uma actividade antagonista do Y5 de NPY.

O antagonista de receptores Y5 de NPY da invenção presente é eficaz para todas as doenças nas quais esteja envolvido o Y5 de NPY, e é especialmente útil para impedir e/ou tratar a obesidade e para suprimir o consumo de alimentos. Para além disto, o antagonista é eficaz para impedir e/ou tratar doenças nas quais a obesidade actua como factor de risco, por exemplo, a diabetes, a hipertensão, a hiperlipidémia, a aterosclerose e a síndrome aguda de coronárias.

Para além disto, o antagonista de receptor Y5 de NPY da invenção presente tem pequena afinidade para os receptores Y1 e Y2 de NPY Y1, e é altamente selectivo para

o receptor Y5 de NPY. A NPY provoca uma acção vasoconstritora prolongada na periferia, e esta acção é sobretudo através do receptor Y1. Uma vez que o receptor Y5 não está de todo envolvido nesta acção, o antagonista do receptor Y5 de NPY apresenta um pequeno risco de induzir efeitos colaterais baseados na vasoconstrição periférica, e espera-se que seja utilizado adequadamente como um medicamento seguro.

O antagonista de receptor Y5 de NPY evidencia um efeito contra a obesidade por suprimir o consumo de alimentos. Esta é uma das características deste antagonista para não apresentar efeitos colaterais, por exemplo uma indigestão provocada por um agente contra a obesidade que iniba a digestão e a absorção, e um efeito colateral central tal como efeito anti-depressivo provocado pela inibição de um transportador de serotonina que tenha um efeito contra a obesidade.

O composto da invenção presente pode ser administrado por via oral ou parentérica como agente contra a obesidade ou anoréxico. No caso da administração por via oral, ele pode assumir qualquer uma das formas habituais tais como comprimidos, grânulos, pós, cápsulas, pílulas, soluções, xaropes, tabletes bucais e tabletes sublinguais. Quando o composto é administrado por via parentérica, qualquer uma das formas habituais é preferível, tais como, por exemplo, injeções (por exemplo, endovenosas, intramusculares), supositórios, agentes endérmicos e

vapores. É especialmente preferida a administração por via oral porque os compostos da invenção presente apresentam uma elevada capacidade de sofrer absorção quando administrados pela via oral.

Uma composição farmacêutica pode ser fabricada misturando uma quantidade eficaz de um composto da invenção presente com diversos aditivos farmacêuticos adequados para a forma de administração, tais como excipientes, aglomerantes, agentes humidificantes, desintegrantes, lubrificantes e diluentes. Quando se tratar da composição para uma injeção, pode esterilizar-se um ingrediente activo em conjunto com um veículo adequado para se obter a composição farmacêutica.

Incluem-se nos exemplos dos excipientes a lactose, a sacarose, a glucose, o amido, o carbonato de cálcio e a celulose cristalina. Incluem-se nos exemplos dos aglomerantes a metilcelulose, a carboximetilcelulose, a hidroxipropilcelulose, a gelatina e a polivinilpirrolidona. Incluem-se nos exemplos de agentes desintegrantes a carboximetilcelulose, a carboximetilcelulose sódica, o amido, o alginato de sódio, o agar e o laurilsulfato de sódio. Incluem-se nos exemplos dos lubrificantes o talco, o estearato de magnésio e o macrogol. Podem utilizar-se a título de materiais de base para os supositórios a manteiga de cacau, o macrogol, a metilcelulose, etc.. Quando a composição for fabricada sob a forma de soluções, injeções emulsionadas ou injeções de suspensões, podem adicionar-se

aceleradores da dissolução, agentes de suspensão, emulsionantes, estabilizadores, conservantes, agentes isotônicos e outros semelhantes. Para administração por via oral, podem adicionar-se agentes edulcorantes, sabores e outros semelhantes.

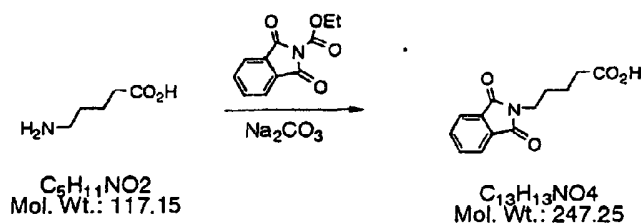
Embora a dosagem de um composto da invenção presente a título de agente contra a obesidade ou de agente anoréxico deva ser determinada levando em consideração a idade e o peso do paciente, o tipo e o grau das suas doenças, a via de administração, etc., uma dosagem habitual por via oral para um adulto é de entre 0,05 e 100 mg/kg/dia, e é preferível uma dosagem de entre 0,1 e 10 mg/kg/dia. Para administração parentérica, embora a dosagem varie pronunciadamente com as vias de administração, uma dosagem habitual é de entre 0,005 e 10 mg/kg/dia, preferivelmente de entre 0,01 e 1 mg/kg/dia. Pode administrar-se a dosagem de uma vez, ou em diversas partes ao longo do dia.

A invenção presente é explicada em mais pormenor pelos Exemplos e Experiências seguintes, que não se pretende seja limitativos do âmbito da invenção presente.

**Exemplos de Referência (não incluídos na invenção presente excepto o Composto Ia-178)**

**Exemplo 1 Síntese do Composto (I-7)**

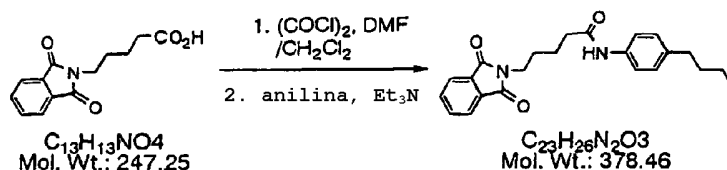
### Passo 1



Dissolveu-se carbonato de sódio (995 mg, 9,38 mmol) em 30 mL de água e adicionaram-se à solução o aminoácido utilizado como matéria-prima (1,0 g, 8,53 mmol) e N-carbetoxiftalimida (2,49 g, 11,4 mmol). Agitou-se a mistura à temperatura ambiente de um dia para o outro. Ajustou-se o pH da mistura a 1 adicionando-lhe ácido clorídrico concentrado. Lavaram-se com água os cristais precipitados e secaram-se para se obter o composto pretendido (1,72 g, rendimento de 82 %).

RMN de  $^1\text{H}$  ( $\text{CD}_3\text{OD}$ )  $\delta$  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).

### Passo 2

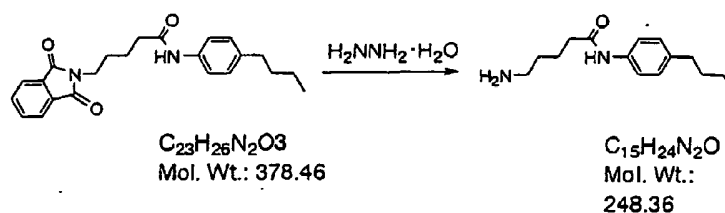


Dissolveu-se o composto obtido no Passo 1 (1,0 g, 4,0 mmol) em 5 mL de diclorometano, à temperatura ambiente.

Adicionaram-se à mistura cloreto de oxalilo (0,459 mL, 5,2 mmol) e uma quantidade vestigial de DMF, arrefecendo sobre gelo, e deixou-se reagir arrefecendo sobre gelo e à temperatura ambiente, 30 minutos para cada uma destas condições. Depois de se remover o solvente sob pressão reduzida, adicionou-se 5 mL de diclorometano. Arrefecendo sobre gelo, adicionaram-se á mistura 4-butilanilina (664 mg, 4,4 mmol) e trietilamina (0,564 mL, 4,4 mmol), e deixou-se a mistura reagir durante 30 minutos à temperatura ambiente. Verteu-se a mistura reaccional sobre água e extraiu-se com clorofórmio. Lavou-se a fase orgânica com água e secou-se sobre sulfato de magnésio anidro. Removeu-se o solvente sob pressão reduzida e purificou-se o resíduo por cromatografia sobre gel de sílica para se obter o composto pretendido (1,49 g, rendimento de 97 %).

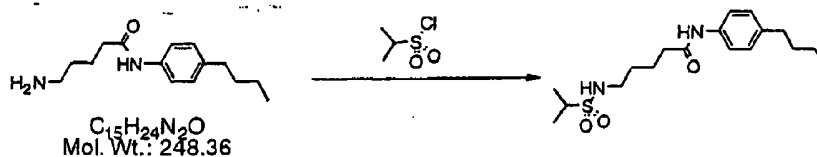
RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,91 (t, 3H,  $J = 7,5$  Hz), 1,27-1,39 (m, 2H), 1,51-1,62 (m, 2H), 1,72-1,84 (m, 4H), 2,40-2,46 (m, 2H), 2,56 (t, 2H,  $J = 7,5$  Hz), 3,76 (t, 1H,  $J = 5,7$  Hz), 7,12 (d, 2H,  $J = 7,8$  Hz), 7,33 (s, 1H), 7,42 (d, 2H,  $J = 8,1$  Hz), 7,71-7,73 (m, 2H), 7,83-7,86 (m,

### Passo 3



Depois de se dissolver o composto obtido no Passo 2 (1,49 g, 3,9 mmol) em 30 mL de etanol, adicionou-se-lhe monohidrato de hidrazina (0,591 mg, 11,8 mmol) e deixou-se reagir a 50°C durante 3 horas. Removeu-se o solvente, adicionou-se uma solução aquosa de NaOH a 1 mol/L e extraiu-se a solução com acetato de etilo. Lavou-se a fase orgânica com água e secou-se sobre sulfato de magnésio anidro. Removeu-se o solvente sob pressão reduzida e purificou-se o resíduo por cromatografia sobre gel de sílica para se obter o composto pretendido (808 mg, rendimento de 83 %).

RMN de  $^1\text{H}$  ( $\text{CD}_3\text{OD}$ )  $\delta$  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).

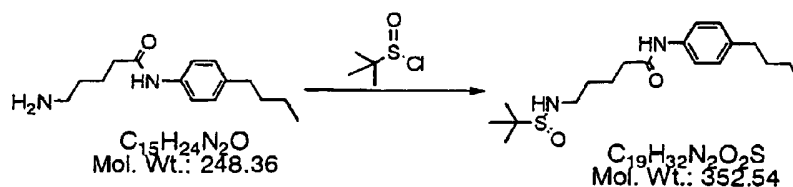


Suspendeu-se o composto obtido no Passo 3 (808 mg, 3,25 mmol) em 5 mL de diclorometano arrefecendo a mistura sobre gelo, e adicionaram-se-lhe cloreto de isopropilsulfonilo (696 mg, 4,9 mmol) e trietilamina (494 mg, 4,9 mmol). Depois de se deixar a mistura reagir arrefecendo-a sobre gelo durante uma hora, verteu-se a mistura reaccional sobre água e extraiu-se com clorofórmio.

Lavou-se a fase orgânica com água e secou-se sobre sulfato de magnésio anidro. Removeu-se o solvente sob pressão reduzida e purificou-se o resíduo por cromatografia sobre gel de sílica para se obter o composto pretendido quantitativamente.

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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).

#### Exemplo 2 Síntese do Composto (I-10)

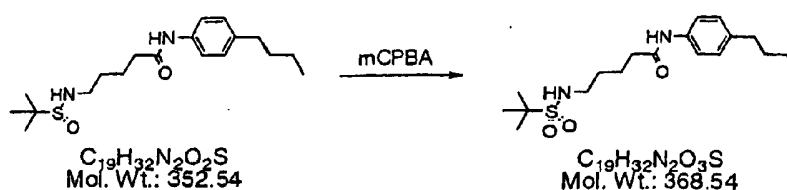


Sintetizou-se o composto pretendido de uma forma semelhante à do Passo 4 do Exemplo 1, excepto que se adicionaram cloreto de *tert*-butilsulfinilo (689 mg, 4,9 mmol) e trietilamina (494 mg, 4,9 mmol) ao composto obtido no Passo 3 do Exemplo 1.

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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).

### Exemplo 3 Síntese do Composto (I-11)



Dissolveu-se o composto obtido no Exemplo 2 (352 mg, 1,0 mmol) em 5 mL de diclorometano arrefecendo sobre gelo e adicionou-se mCPBA (259 mg, 1,5 mmol) à solução. Deixou-se a solução reagir à temperatura ambiente durante uma hora e separou-se o material insolúvel por filtração. Lavou-se o filtrado sucessivamente com uma solução de NaOH a 1 mol/L, com solução de  $Na_2S_2O_5$  e com água, e secou-se sobre sulfato de magnésio anidro. Removeu-se o solvente sob pressão reduzida e purificou-se o resíduo por cromatografia sobre gel de sílica para se obter o composto pretendido (338 mg, rendimento de 92 %).

RMN de  $^1H$  ( $CDCl_3$ )  $\delta$  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).

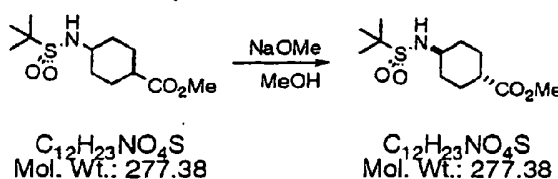
### Exemplo 4. Síntese do Composto (I-72)



Sintetizou-se a sulfonamida pretendida (uma mistura do seu isómero cis com o seu isómero trans) a partir do éster metílico utilizado como matéria-prima de modos semelhantes aos utilizados no Passo 3 do Exemplo 1 e do Exemplo 2.

isómero cis: RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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).

### Passo 3

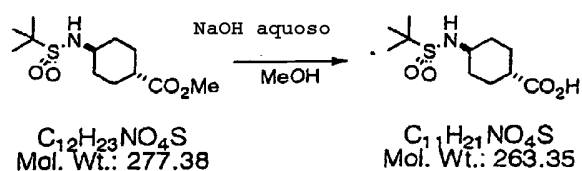


Dissolveu-se a sulfonamida utilizada como matéria-prima (19,4 g, 70,0 mmol, uma mistura do isómero cis com o isómero trans) em 30 mL de metanol. Adicionou-se à mistura metóxido de sódio a 28 % (284 mL, 140,0 mmol) e aqueceu-se ao refluxo sob agitação arrefecendo sobre gelo?. Depois de se remover o solvente, diluiu-se o resíduo com clorofórmio, e adicionou-se-lhe HCl a 1 mol/L sob arrefecimento até o pH da fase aquosa atingir 3. Extraiu-se a fase aquosa com clorofórmio, lavou-se a fase orgânica com água e secou-se sobre sulfato de magnésio anidro. Recristalizaram-se os cristais obtidos em bruto a partir de

hexano-acetato de etilo para se obter a sulfonamida pretendida (isómero trans, 7,75 g, rendimento de 40 %).

isómero trans RMN de  $^1\text{H}$  ( $\text{CD}_3\text{OD}$ )  $\delta$  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).

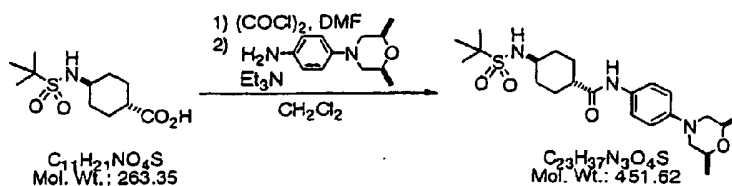
#### Passo 4



Dissolveu-se o éster metílico utilizado como matéria-prima (4,77 g, 17,2 mmol) em 95 mL de metanol e adicionou-se NaOH a 1 mol/L (43 mL, 43,0 mmol) sob agitação e arrefecendo sobre gelo. Agitou-se a mistura à temperatura ambiente de um dia para o outro e concentrou-se sob pressão reduzida. Em seguida adicionou-se HCl a 1 mol/L sob agitação até o pH da mistura atingir o valor de 3, sempre sobre arrefecimento com gelo, recolheram-se os cristais precipitados por filtração, lavaram-se com água e secaram-se. Recristalizaram-se os cristais obtidos em bruto a partir de hexano-acetato de etilo para se obter o ácido carboxílico pretendido (4,20 g, rendimento de 93 %).

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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).

### Passo 5

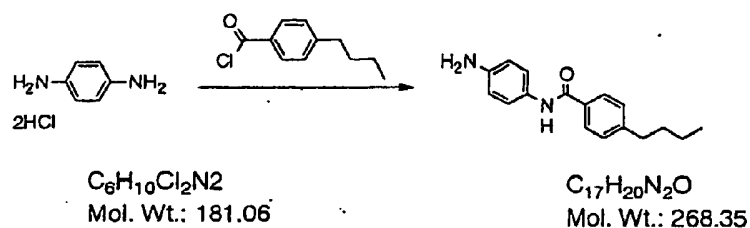


Dissolveu-se o ácido carboxílico utilizado como matéria-prima (5,86 g, 22,3 mmol) em 88 mL de diclorometano à temperatura ambiente. Adicionou-se à mistura cloreto de oxalilo (2,34 mL, 26,7 mmol) e uma quantidade catalítica de DMF enquanto se arrefecia sobre gelo e agitou-se à temperatura ambiente durante uma hora. Depois de se remover o solvente sob pressão reduzida, adicionaram-se diclorometano (115 mL), anilina substituída (5,05 g, 24,5 mmol) e trietilamina (4,65 mL, 33,4 mmol). Agitou-se a mistura à temperatura ambiente durante 2,5 horas, verteu-se sobre ela a água gelada de arrefecimento, e extraiu-se a mistura com clorofórmio. Lavou-se a fase orgânica com água e secou-se sobre sulfato de magnésio anidro. Removeu-se o solvente sob pressão reduzida e adicionaram-se ao resíduo acetato de etilo e hexano. Separaram-se os cristais precipitados por filtração para se obter a amida pretendida (7,00 g, rendimento de 70 %).

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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).

### Exemplo 5 Síntese do Composto (I-2)

#### Passo 1

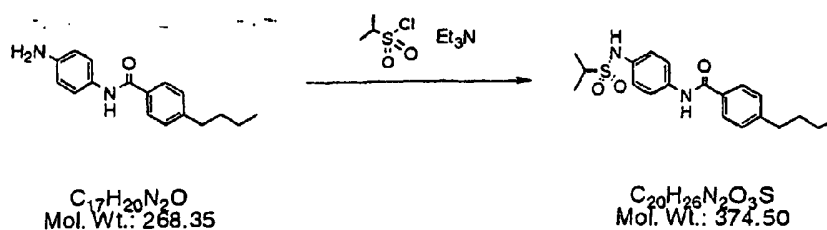


Depois de se suspender a matéria-prima, uma diamina, (461 mg, 2,5 mmol) em diclorometano arrefecendo sobre gelo, adicionou-se-lhe um cloreto de acilo (500 mg, 2,5 mmol) e trietilamina (773 mg, 7,5 mmol) e deixou-se a mistura reagir durante 30 minutos. Adicionaram-se-lhe água e diclorometano e separaram-se materiais insolúveis por filtração. Lavou-se a fase orgânica com água e secou-se sobre sulfato de magnésio anidro. Removeu-se o solvente sob pressão reduzida para se obter o composto pretendido como resíduo (100 mg, rendimento de 15 %).

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 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).

### Passo 2

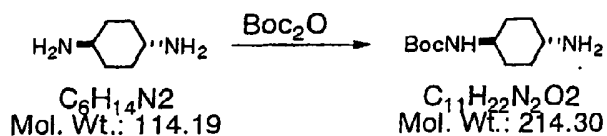


Sintetizou-se o composto pretendido de uma maneira semelhante à utilizada no Passo 4 do Exemplo 1.

RMN de  $^1H$ -NMR ( $CDCl_3$ )  $\delta$  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).

### Exemplo 6 Síntese do Composto (I-31)

#### Passo 1

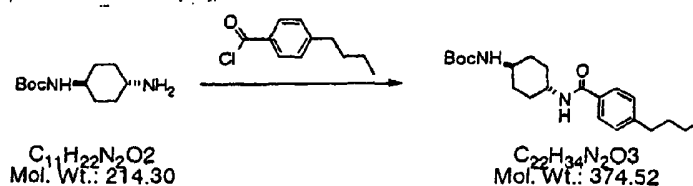


Dissolveu-se a diamina utilizada como matéria-prima (8,37 g, 73,3 mmol) em 30 mL de dioxano à temperatura

ambiente e adicionou-se-lhe uma solução de  $\text{Boc}_2\text{O}$  (2 g, 9,2 mmol) em dioxano (30 mL). Fez-se reagir a mistura à temperatura ambiente durante 3 dias e removeu-se o solvente. Adicionou-se água ao resíduo e extraiu-se a mistura com clorofórmio. Lavou-se a fase orgânica com água e secou-se sobre sulfato de magnésio anidro. Removeu-se o solvente sob pressão reduzida para se obter o composto sob a forma de um resíduo (1,8 g, rendimento de 92 % com base no  $\text{Boc}_2\text{O}$ ).

RMN de  $^1\text{H}$ -NMR ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 1H), 4,43 (s lg, 1H).

### Passo 2

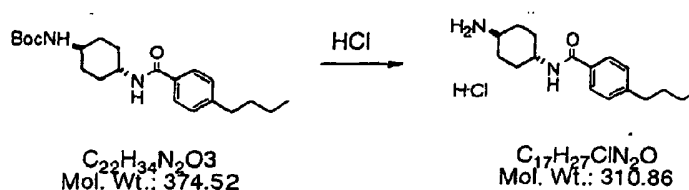


Sintetizou-se o composto pretendido de uma maneira semelhante à utilizada no Passo 1 do Exemplo 5.

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 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).

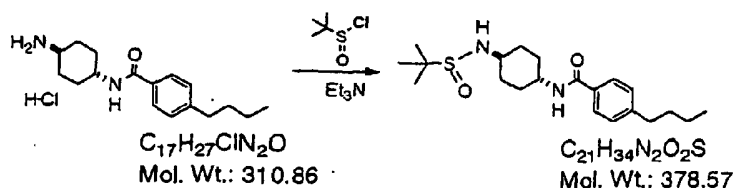
### Passo 3



Dissolveu-se o composto de Boc utilizado como matéria-prima (2,08 g, 5,55 mmol) em 20 mL de acetato de etilo enquanto se arrefecia sobre gelo e adicionou-se 20 mL de HCl/AcOEt a 4 mol/L. Fez-se reagir a mistura à temperatura ambiente durante uma hora e removeu-se o solvente sob pressão reduzida para se obter o composto pretendido sob a forma de um resíduo (1,7 g, rendimento de 98 %).

RMN de  $^1\text{H}$  ( $\text{CD}_3\text{OD}$ )  $\delta$  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 (s lg, 1H), 3,82-3,94 (m, 1H), 7,26 (d, 2H,  $J = 8,7$  Hz), 7,72 (d, 2H,  $J = 8,4$  Hz).

### Passo 4



Sintetizou-se o composto pretendido de uma maneira semelhante à do Passo 4 no Exemplo 1.

RMN de  $^1H$  ( $CDCl_3$ )  $\delta$  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 (s lg, 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).

#### Exemplo 7 Síntese do Composto (I-32)



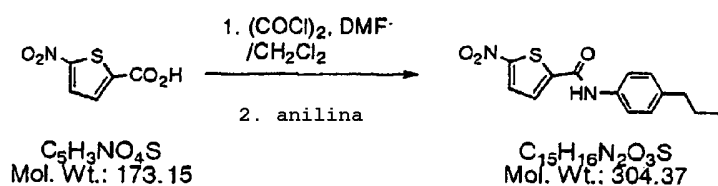
Sintetizou-se o composto pretendido a partir do composto obtido no Exemplo, de uma maneira semelhante à utilizada no Exemplo 3.

RMN de  $^1H$  ( $CDCl_3$ )  $\delta$  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).

### Exemplo 8 Síntese do Composto (I-5)

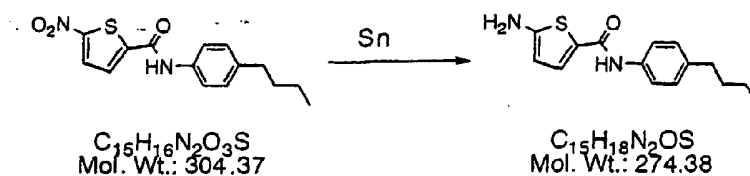
#### Passo 1



Sintetizou-se o composto pretendido de uma maneira semelhante à do Passo 2 do Exemplo 1.

RMN de  $^1H$  ( $CDCl_3$ )  $\delta$  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).

#### Passo 2

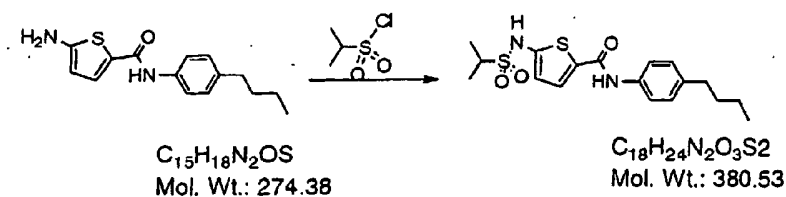


Adicionou-se a uma mistura do composto nitro utilizado como matéria-prima (593 mg, 1,95 mmol) com estanho (358 mg, 3,0 mmol), 30 mL de uma solução de HCl 6

mol/L e 6 mL de THF, e a reacção prosseguiu a 50°C durante 3 horas. Depois de arrefecer, removeu-se o solvente e neutralizou-se o resíduo com NaOH, extraíndo-se com clorofórmio. Lavou-se a fase orgânica com água e secou-se sobre sulfato de magnésio anidro. Removeu-se o solvente sob pressão reduzida e purificou-se o resíduo por cromatografia sobre gel de sílica para se obter o composto pretendido (110 mg, rendimento de 21 %).

RMN de  $^1\text{H}$ -NMR ( $\text{CDCl}_3$ )  $\delta$  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).

### Passo 3



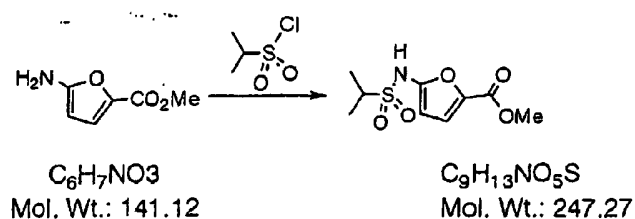
Sintetizou-se o composto pretendido de uma maneira semelhante à do Passo 4 do Exemplo 1.

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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).

### Exemplo 9 Síntese do Composto (I-4)

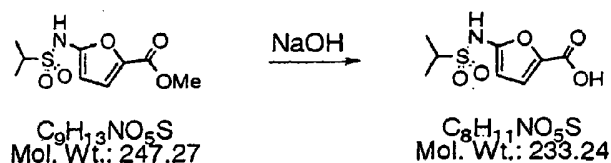
#### Passo 1



Sintetizou-se o composto pretendido de uma maneira semelhante à do Passo 4 do Exemplo 1.

RMN de  $^1H$  ( $CDCl_3$ )  $\delta$  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).

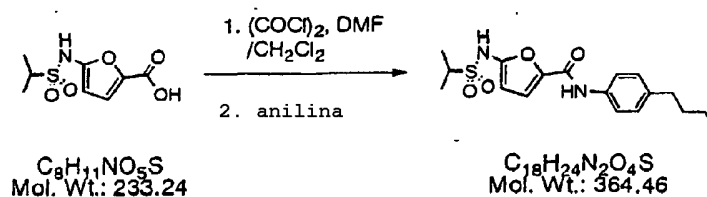
#### Passo 2



Sintetizou-se o composto pretendido de uma maneira semelhante à utilizada no Passo 4 do Exemplo 4.

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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).

### Passo 3

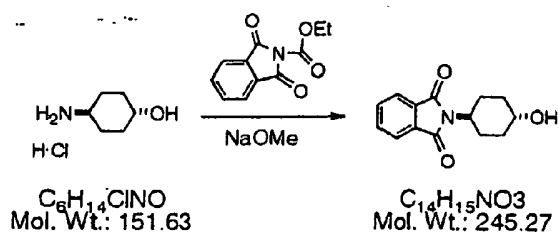


Sintetizou-se o composto pretendido de uma maneira semelhante à do Passo 2 no Exemplo 1.

RMN de  $^1\text{H}$  ( $\text{CD}_3\text{OD}$ )  $\delta$  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).

### Exemplo 10 Síntese do Composto (I-28)

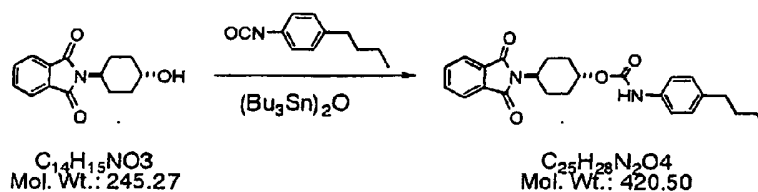
#### Passo 1



Sintetizou-se o composto pretendido de uma maneira semelhante à utilizada no Passo 1 do Exemplo 1.

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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).

### Passo 2

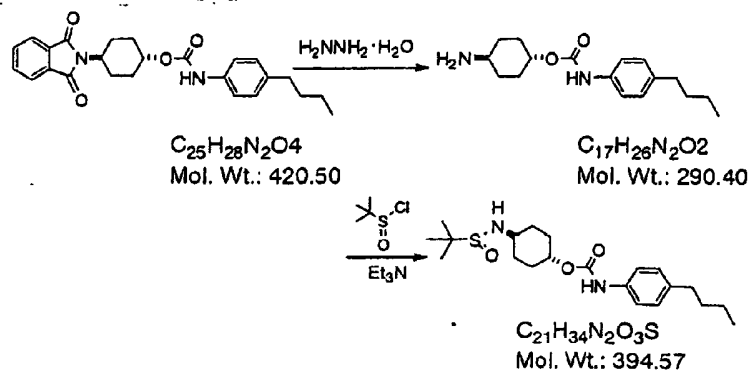


Dissolveu-se isocianato de 4-butilfenilo (2,85 g, 16,3 mmol) em 30 mL de THF, e adicionou-se o álcool utilizado como matéria-prima (1,0 g, 4,08 mmol) e óxido de bis(tributilestanho) (972 mg, 1,63 mmol). Em seguida agitou-se a mistura de um dia para o outro, removeu-se o solvente, adicionou-se água e extraiu-se a mistura com clorofórmio. Lavou-se a fase orgânica com água e secou-se sobre sulfato de magnésio anidro. Removeu-se o solvente sob pressão reduzida e purificou-se o resíduo por cromatografia sobre gel de sílica para se obter o composto pretendido (332 mg, rendimento de 19 %).

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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).

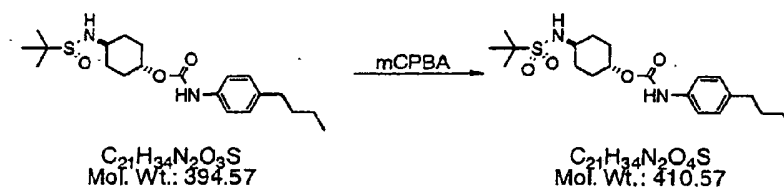
### Passo 3



Sintetizou-se o composto pretendido de maneira semelhante às utilizadas no Passo 3 do Exemplo 1 e no Exemplo 2.

RMN de  $^1H$  ( $CDCl_3$ )  $\delta$  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 = 8,1 Hz).

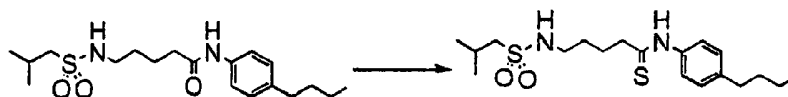
### Exemplo 11 Síntese do Composto (I-29)



Sintetizou-se o composto pretendido de uma maneira semelhante à utilizada no Exemplo 3.

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 8,4$  Hz).

#### Exemplo 12 Síntese do Composto (I-114)

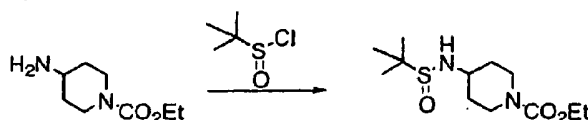


Adicionou-se reagente de Lawesson, 2,4-dissulfureto de [2,4-bis(4-metoxifenil)-1,3-ditia-2,4-difosfetano] (132 mg) a uma solução de 100 mg do Composto (I-110) sintetizado de uma maneira equivalente à utilizada no Exemplo 1, em tolueno (2,7 ml) e agitou-se a mistura a  $80^\circ\text{C}$  durante 3 horas. Concentrou-se a mistura reaccional sob pressão reduzida e purificou-se o resíduo por cromatografia sobre gel de sílica (acetato de etilo:n-hexano a 1:1) para se obterem cristais amarelo claros (82,3

mg, 79 %). Recristalizaram-se os cristais a partir de cloreto de metileno-éter di-isopropílico para se obter o composto pretendido sob a forma de agulhas incolores (50,5 mg, 48 %).

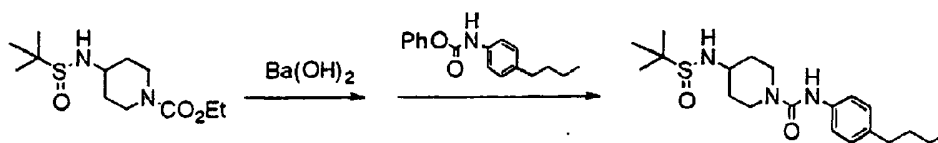
### Exemplo 13 Síntese do Composto (I-120)

#### Passo 1



Dissolveram-se 4-amino-1-piperidinacarboxilato de etilo (300 mg) e trietilamina (258 mg) em 5 mL de diclorometano. Adicionou-se à mistura 2 mL de uma solução de cloreto de t-butilsulfinilo (222 mg) em diclorometano, e agitou-se a mistura à temperatura ambiente durante 4 horas. tratou-se esta mistura com uma solução aquosa de hidrogenossulfato de potássio e com acetato de etilo. Lavou-se a fase orgânica com salmoura e secou-se sobre sulfato de magnésio anidro. Removeu-se o solvente sob pressão reduzida e purificou-se o resíduo por cromatografia sobre gel de sílica para se obterem 378 mg de 4-t-butylsulfinilamino-1-etoxicarbonilpiperidina.

#### Passo 2



Suspendeu-se numa mistura de 5 mL de 2-propanol e 5 mL de água, 378 mg de 4-t-butylsulfinilamino-1-etoxicarbonilpiperidina e adicionou-se-lhe 1,77 g de hidróxido de bário. Aqueceu-se a mistura ao refluxo com agitação e aquecimento durante 4 horas.

Diluiu-se a mistura com metanol e separou-se por filtração o material insolúvel. Removeu-se o solvente sob pressão reduzida para se obter 4-t-butylsulfinilaminopiperidina. Sem purificação adicional dissolveu-se o material obtido em 5 mL de THF, e adicionou-se-lhe 984 mg de N-fenoxicarbonil-4-butyl-anilina e 236 mg de di-isopropil-etilamina, agitando-se em seguida à temperatura ambiente de um dia para o outro. Adicionou-se à mistura uma solução aquosa de hidrogenossulfato de potássio e extraiu-se a mistura com acetato de etilo. Lavou-se a fase orgânica com salmoura e secou-se sobre sulfato de magnésio anidro. Removeu-se o solvente sob pressão reduzida e purificou-se o resíduo por cromatografia sobre gel de sílica para se obterem 291 mg de (4-t-butylfenil)amida do ácido 4-t-butylsulfinilaminopiperidina-1-carboxílico.

RMN de <sup>1</sup>H (CDCl<sub>3</sub>) δ ppm: 0,89(t, 3H, J = 7,3 Hz), 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 = 7,7 Hz), 2,89-3,04(m, 2H),

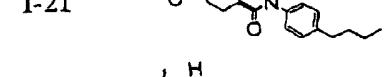
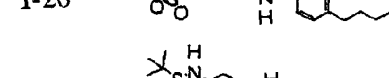
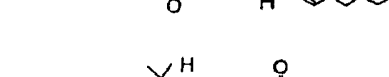
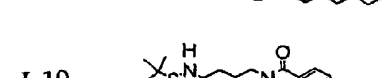
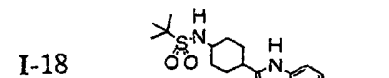
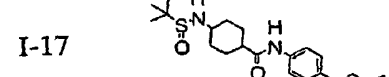
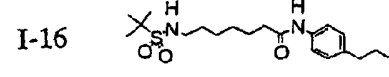
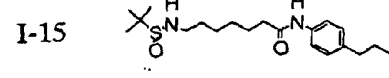
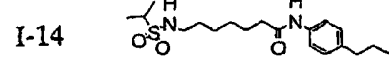
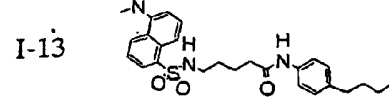
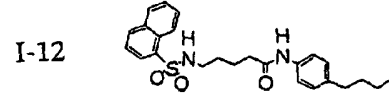
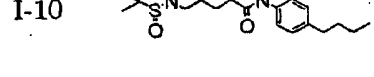
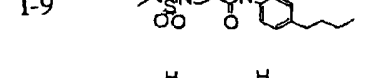
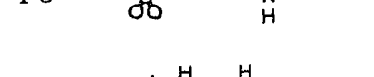
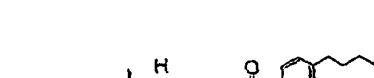
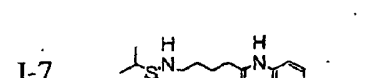
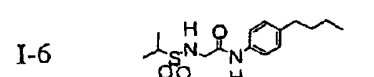
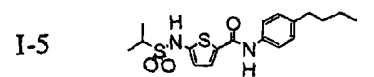
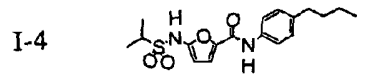
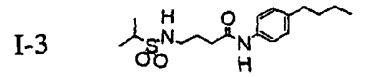
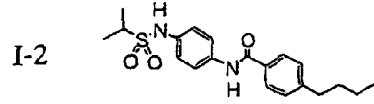
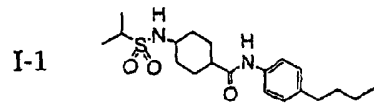
3,14(d, 1H, J = 5,2 Hz), 3,37(m, 1H), 3,96(m, 2H), 6,67(s, 1H), 7,05(d, 2H, J = 8,5 Hz), 7,22(d, 2H, J = 8,5 Hz).

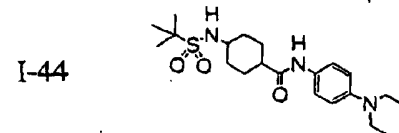
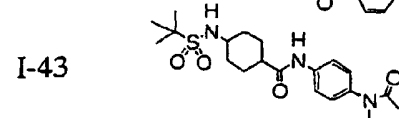
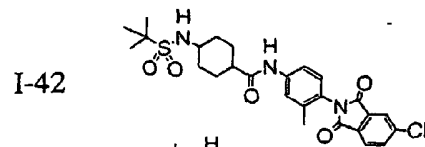
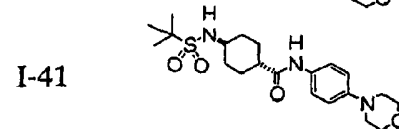
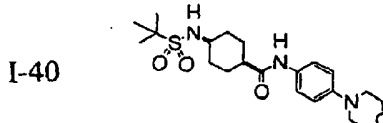
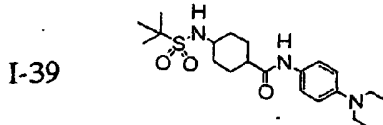
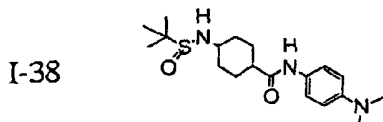
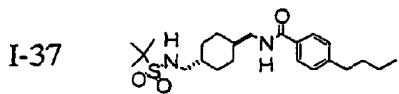
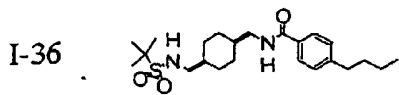
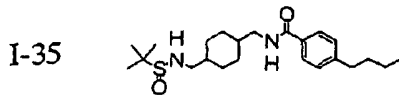
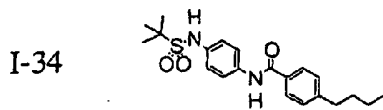
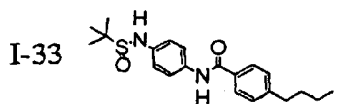
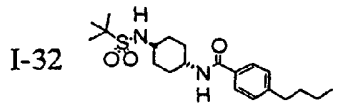
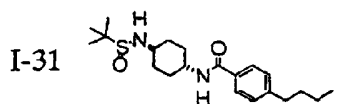
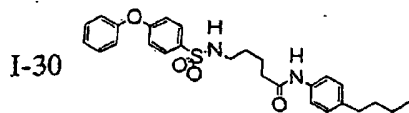
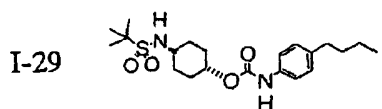
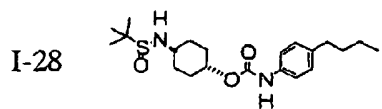
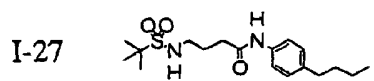
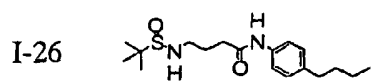
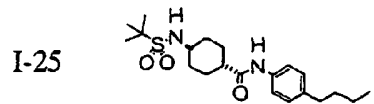
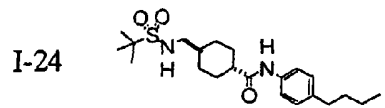
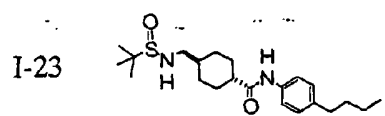
### Passo 3

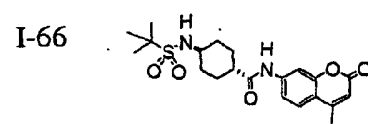
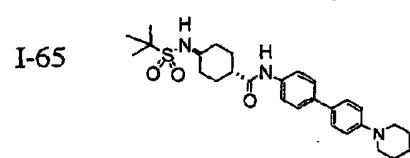
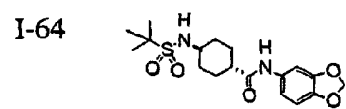
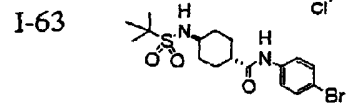
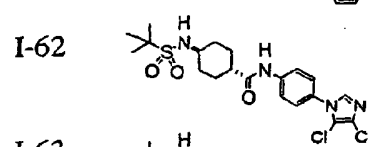
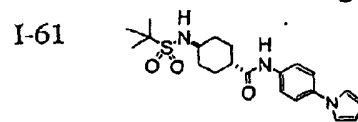
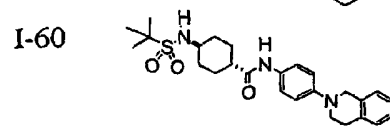
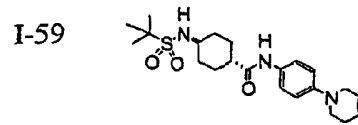
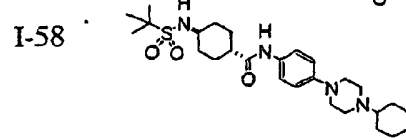
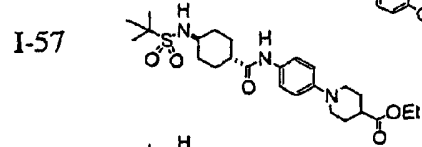
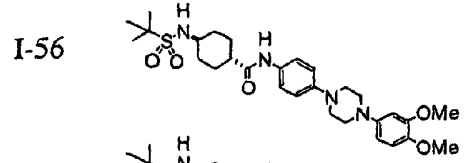
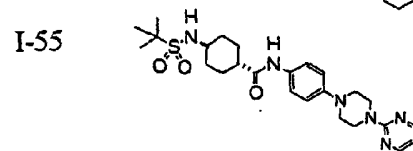
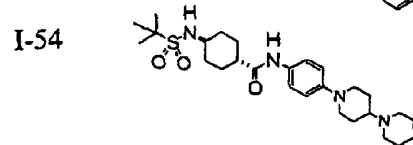
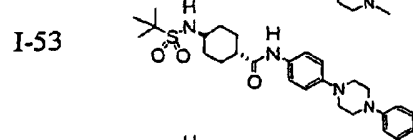
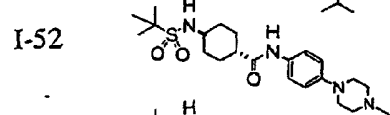
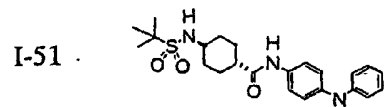
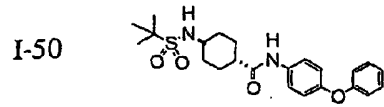
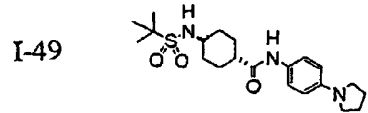
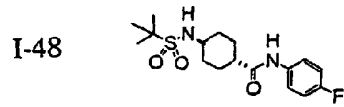
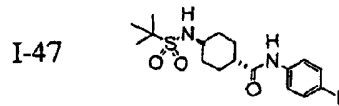
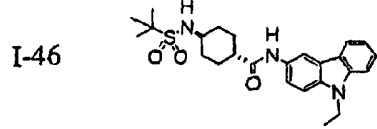
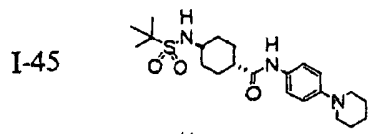


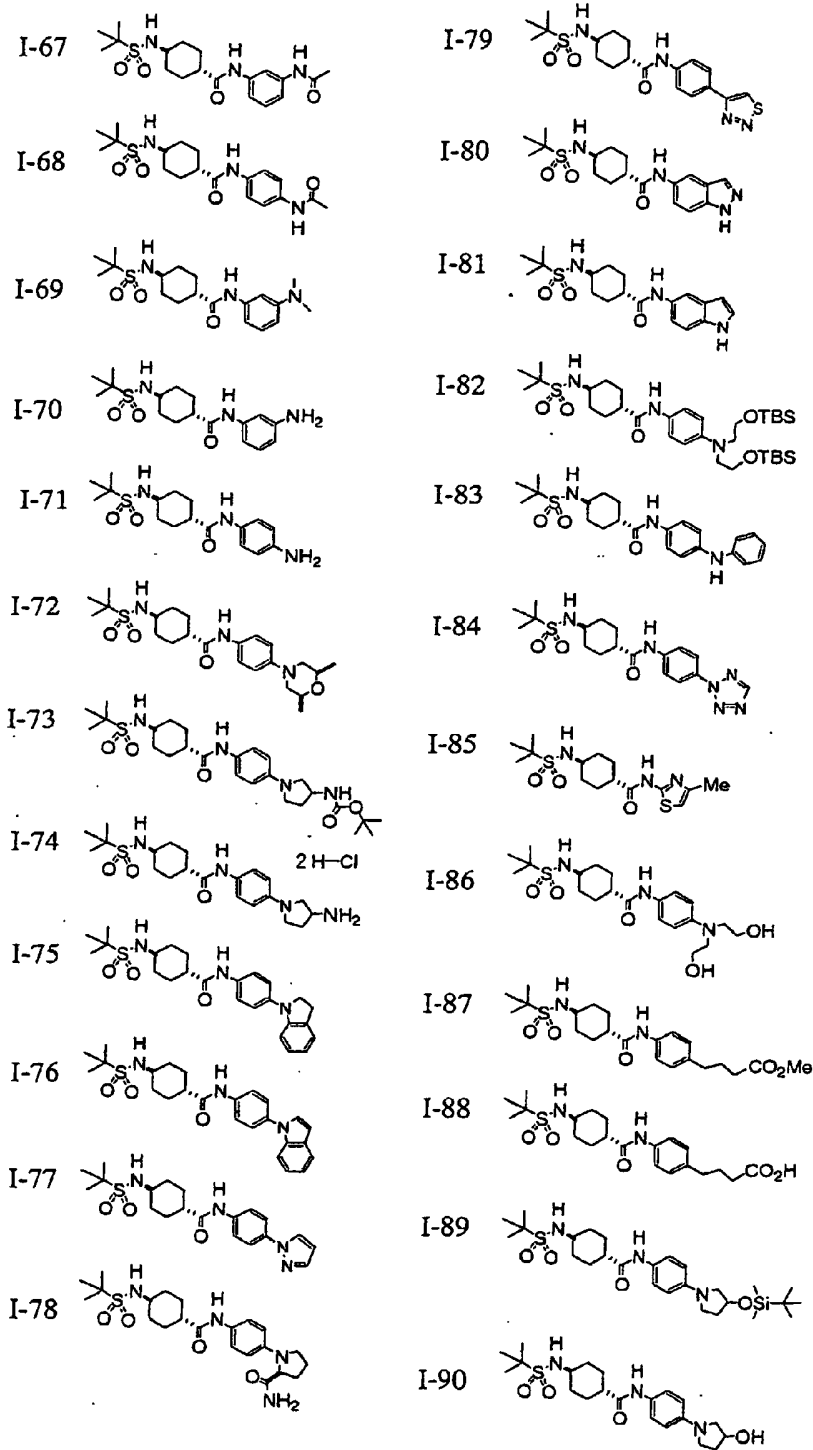
Numa mistura de 2 mL de metanol com 2 mL de cloreto de metileno, dissolveu-se 291 mg de (4-t-butilfenil)amida do ácido 4-t-butilsulfinilaminopiperidina-1-carboxílico. Adicionou-se à mistura 570 mg de MMPP (hexahidrato de monoperoxiftalato de magnésio) a 80 %, e agitou-se a mistura à temperatura ambiente durante 2 horas. Diluiu-se a solução com água e extraiu-se com acetato de etilo. Lavou-se a fase orgânica com salmoura e secou-se sobre sulfato de magnésio anidro. Removeu-se o solvente sob pressão reduzida e purificou-se o resíduo por cromatografia sobre gel de sílica para se obterem 130 mg de (4-butilfenil)amida do ácido 4-t-butilsulfonilaminopiperidina-1-carboxílico (I-120).

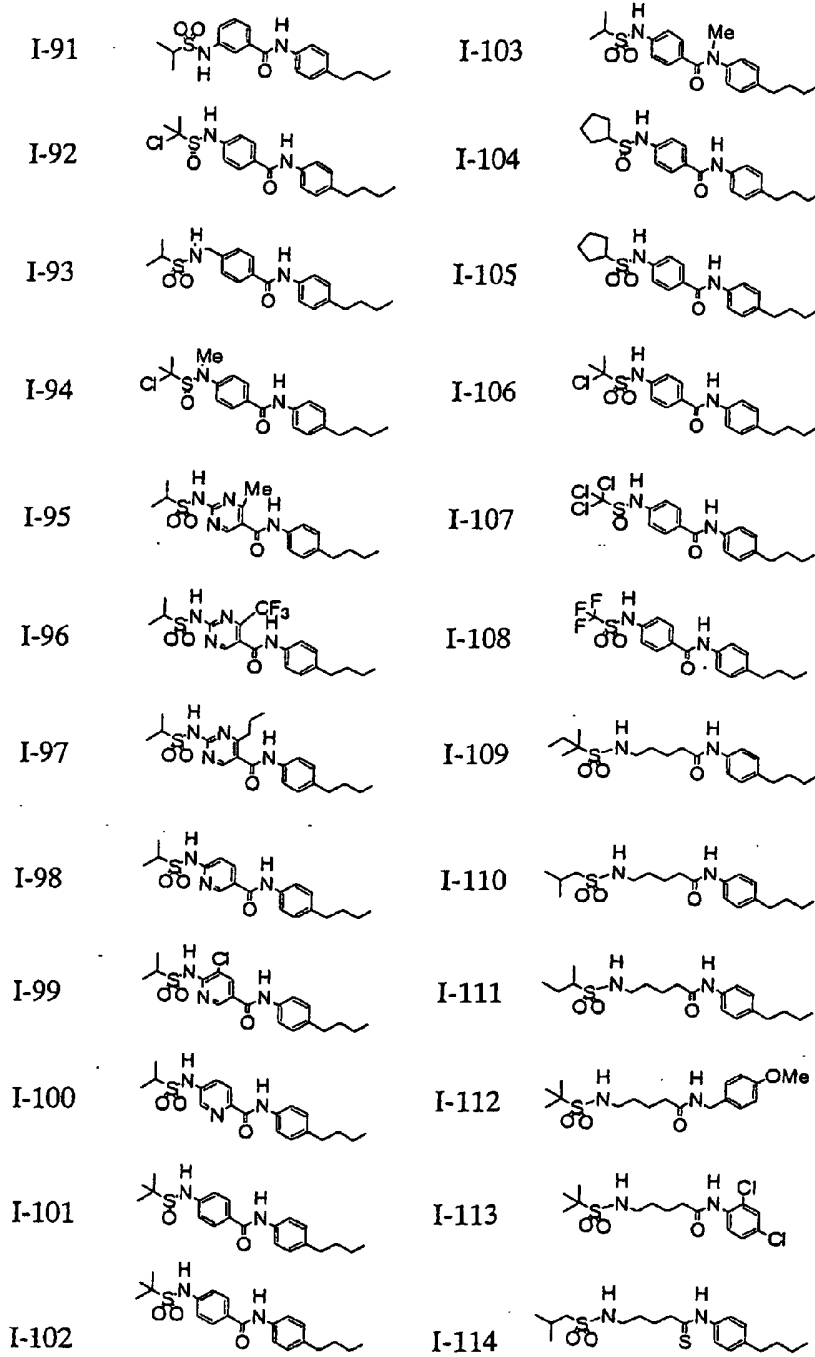
Sintetizam-se outros Compostos (I) por métodos semelhantes. Ilustram-se adiante as estruturas e as propriedades físicas deles.

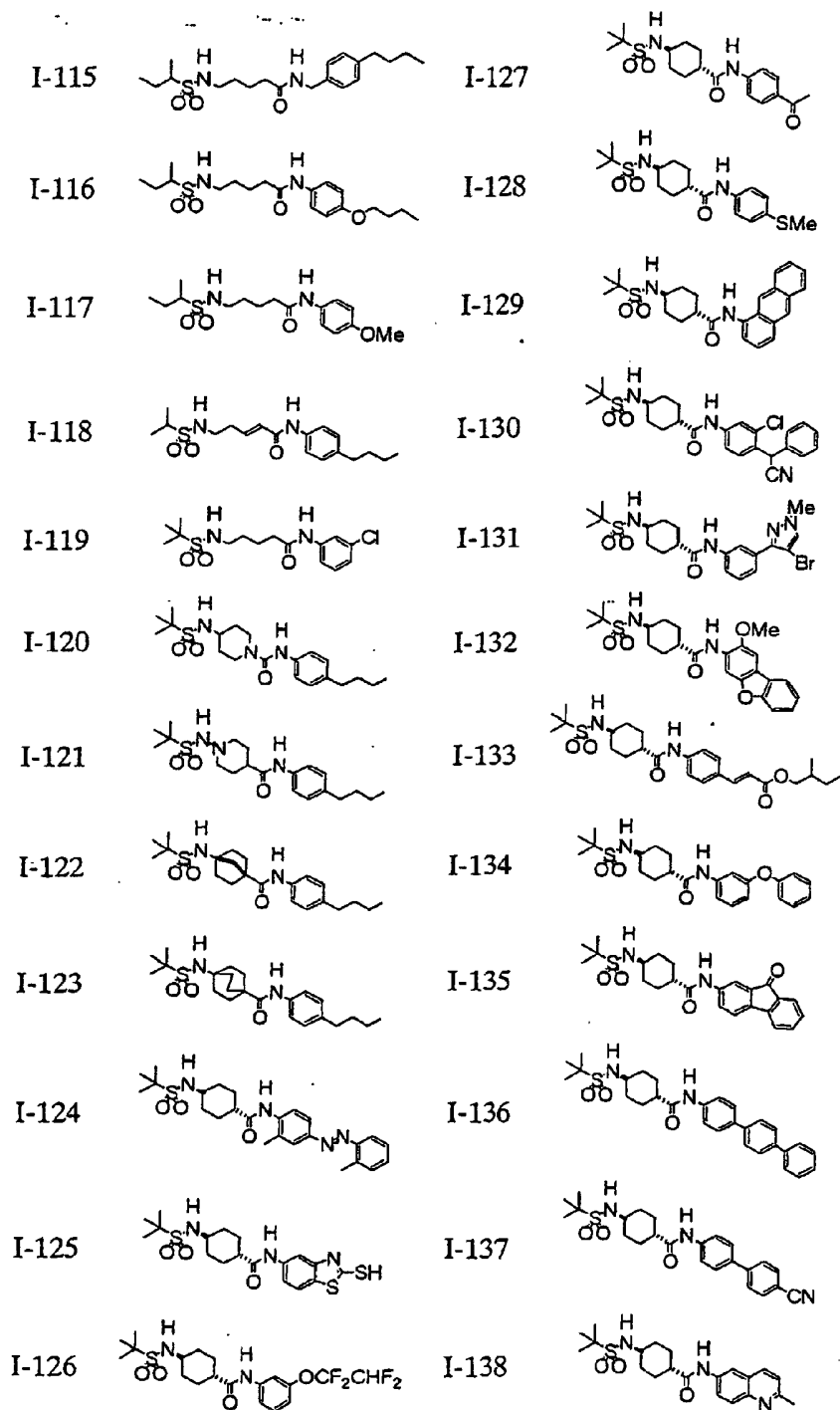


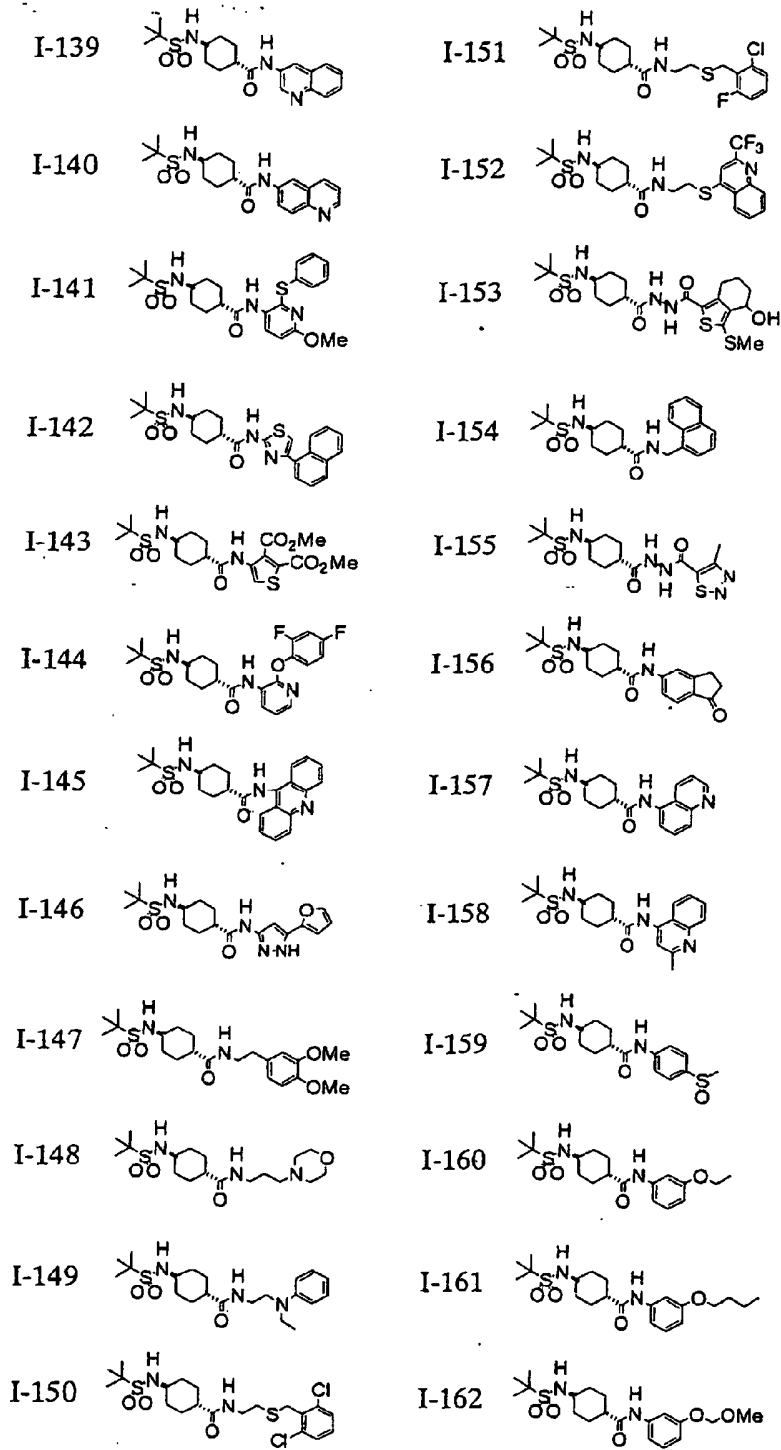


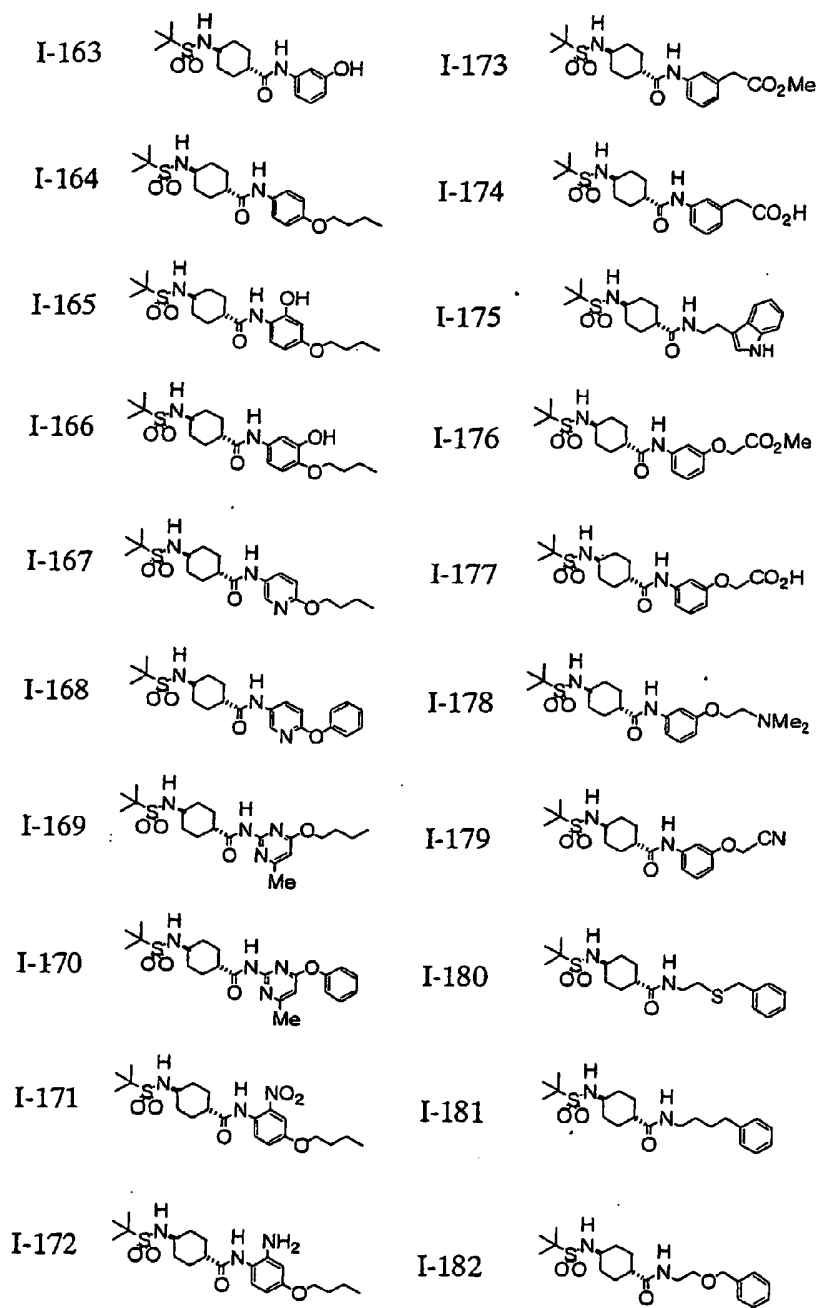


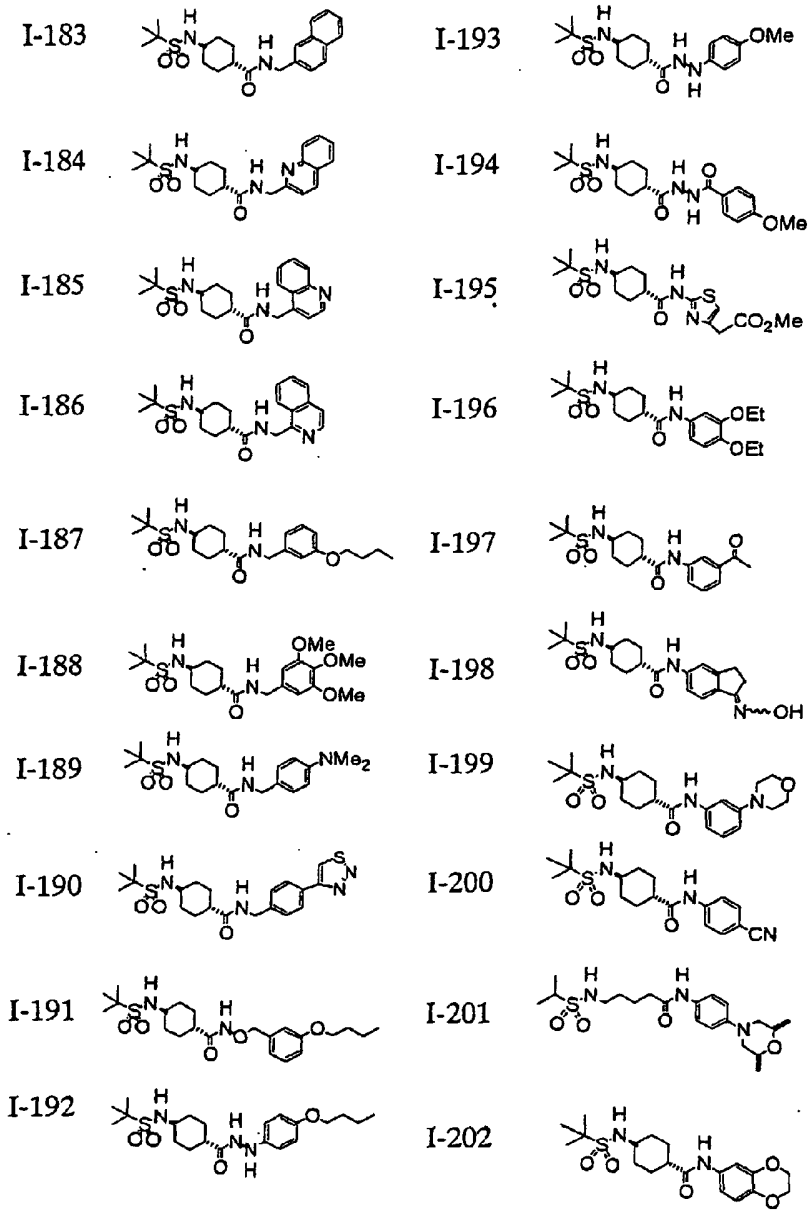


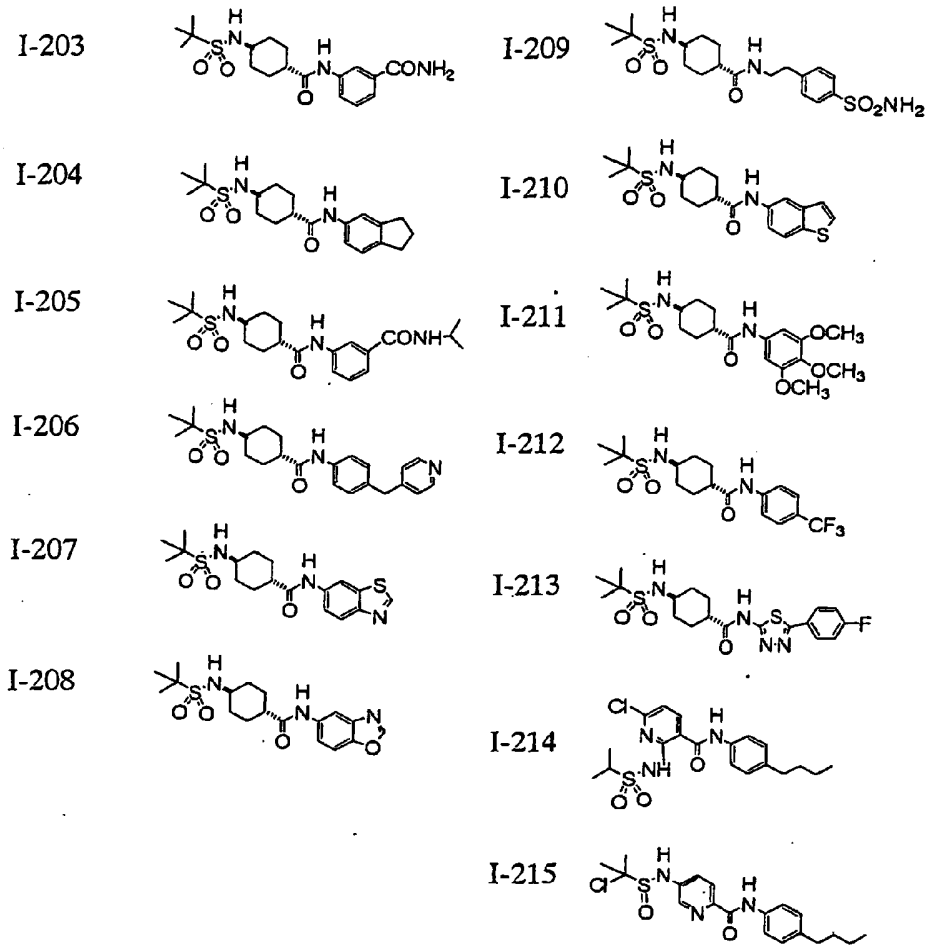


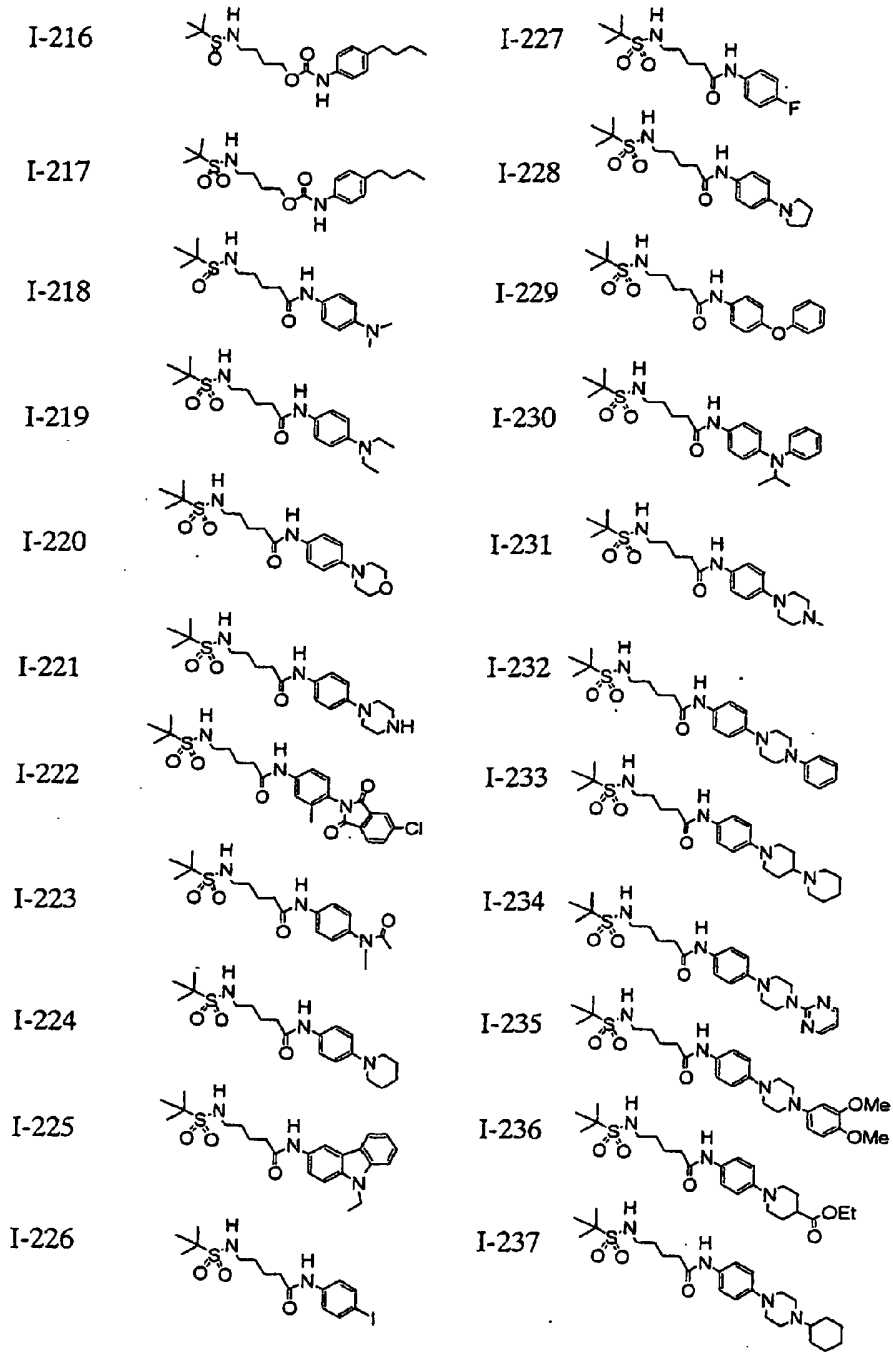


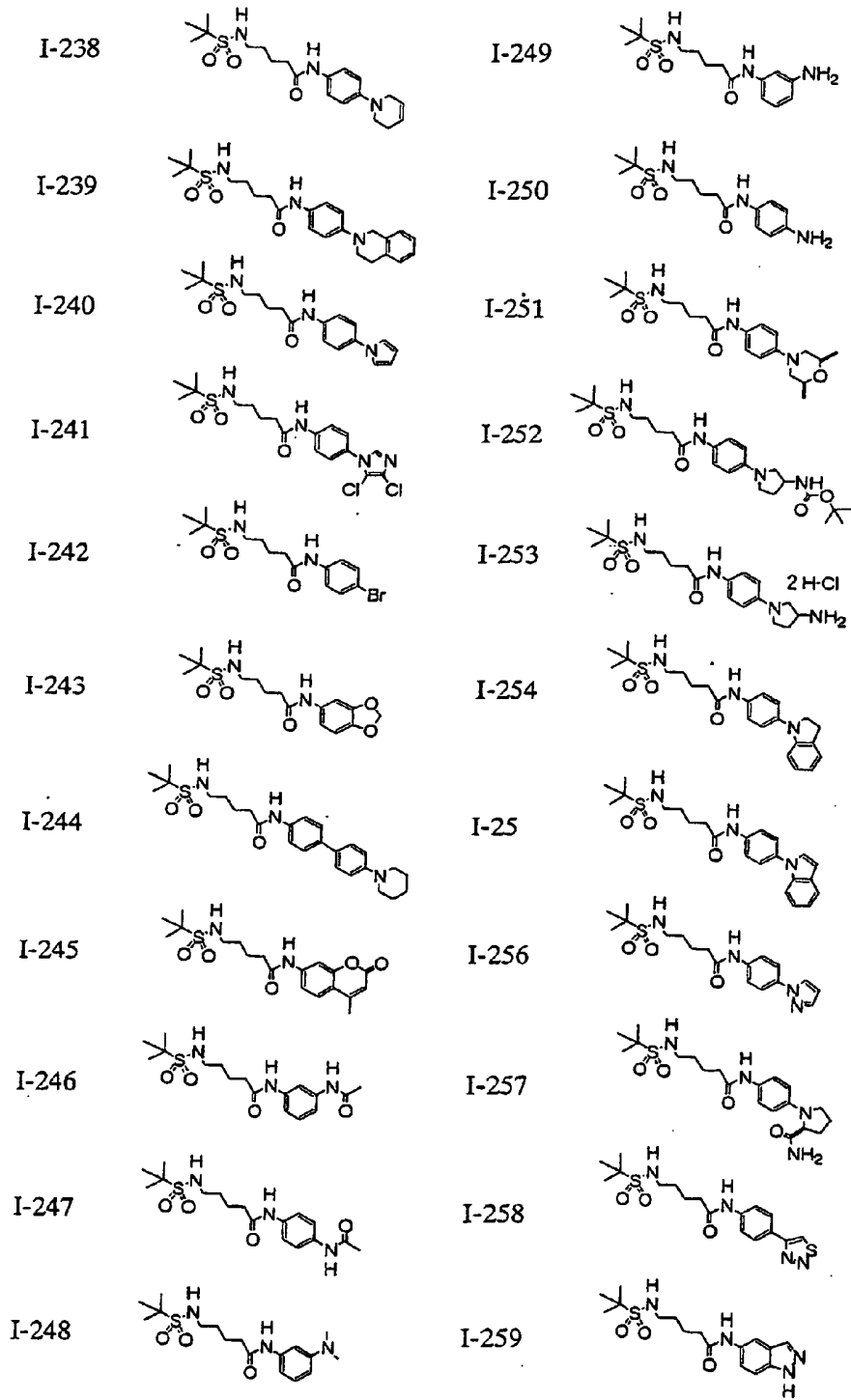


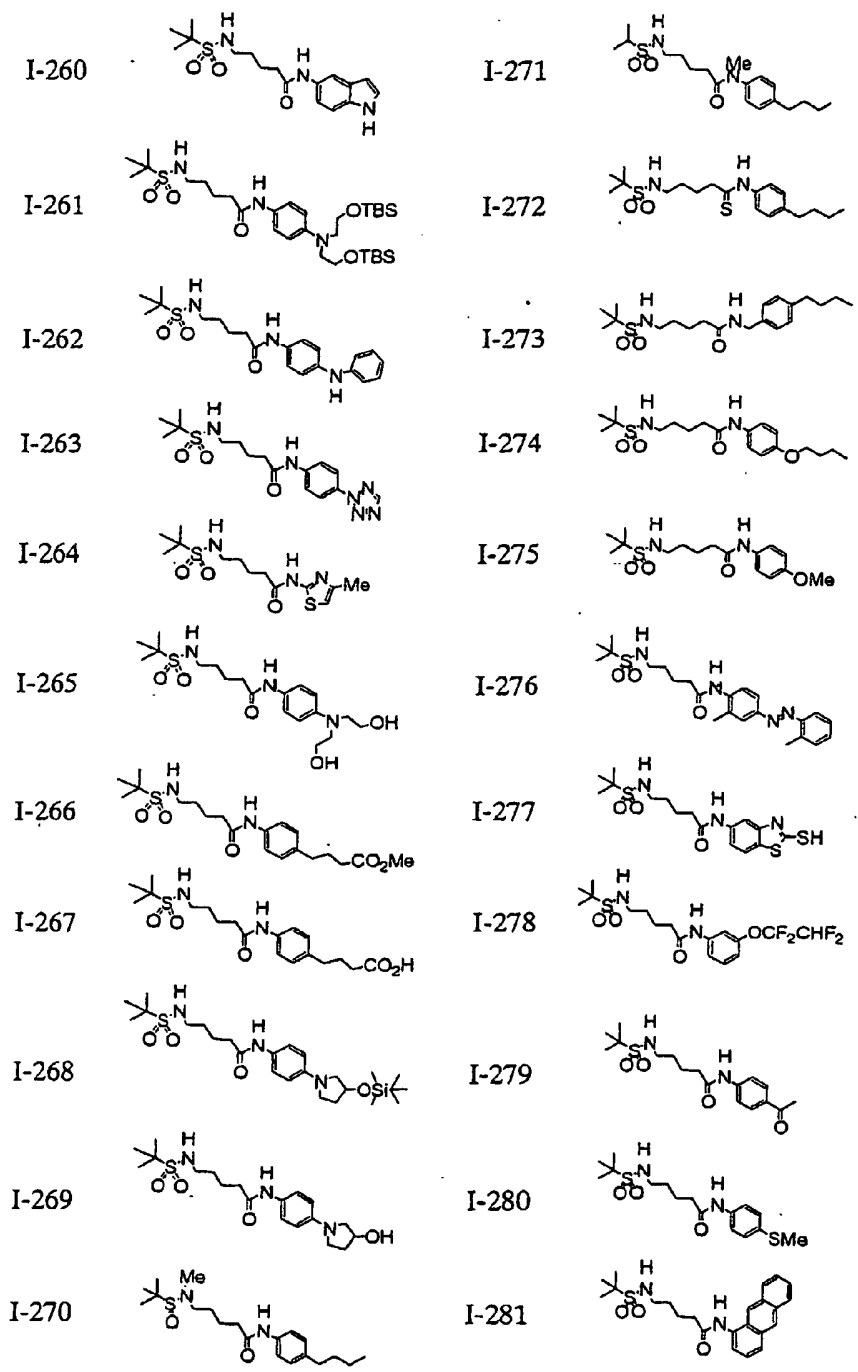


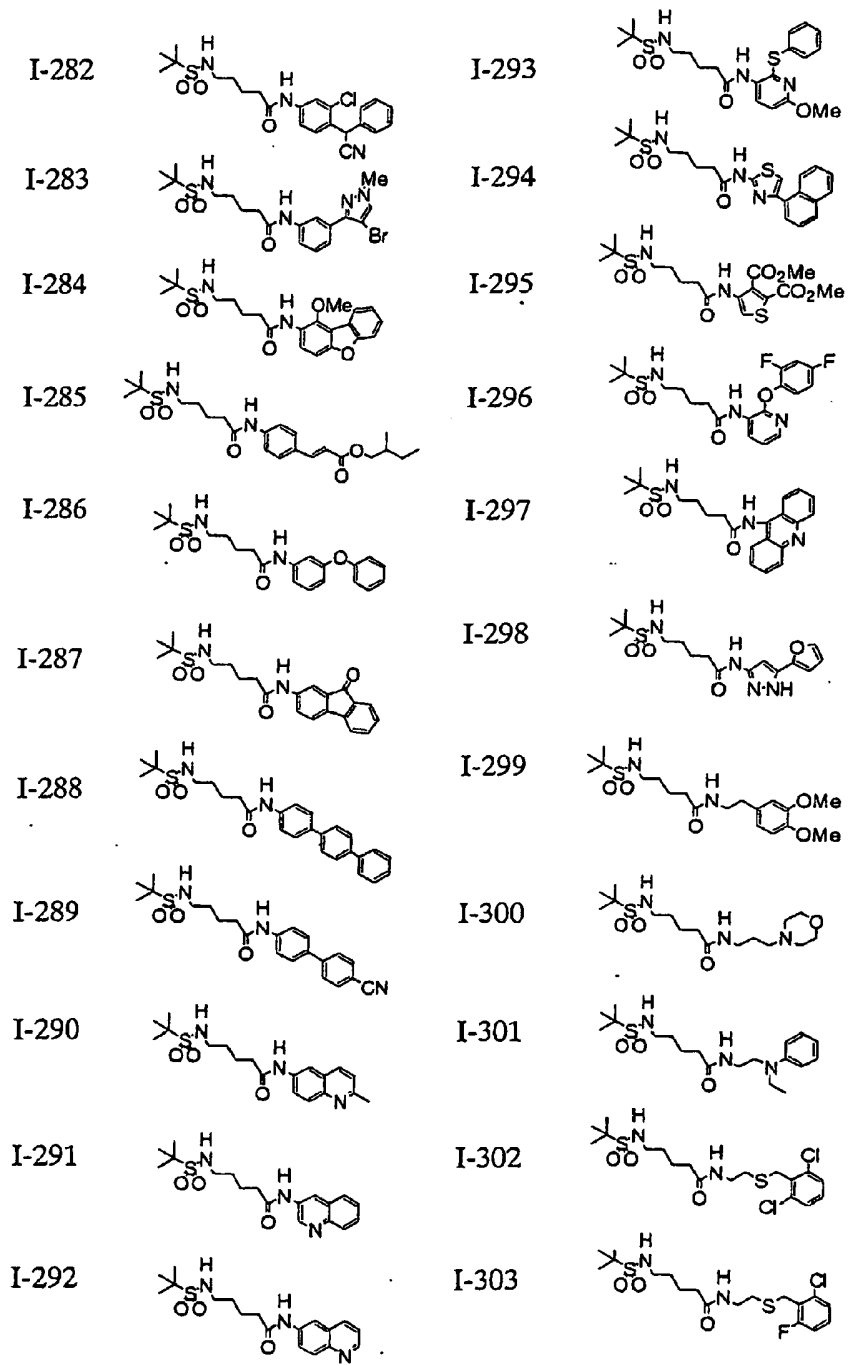


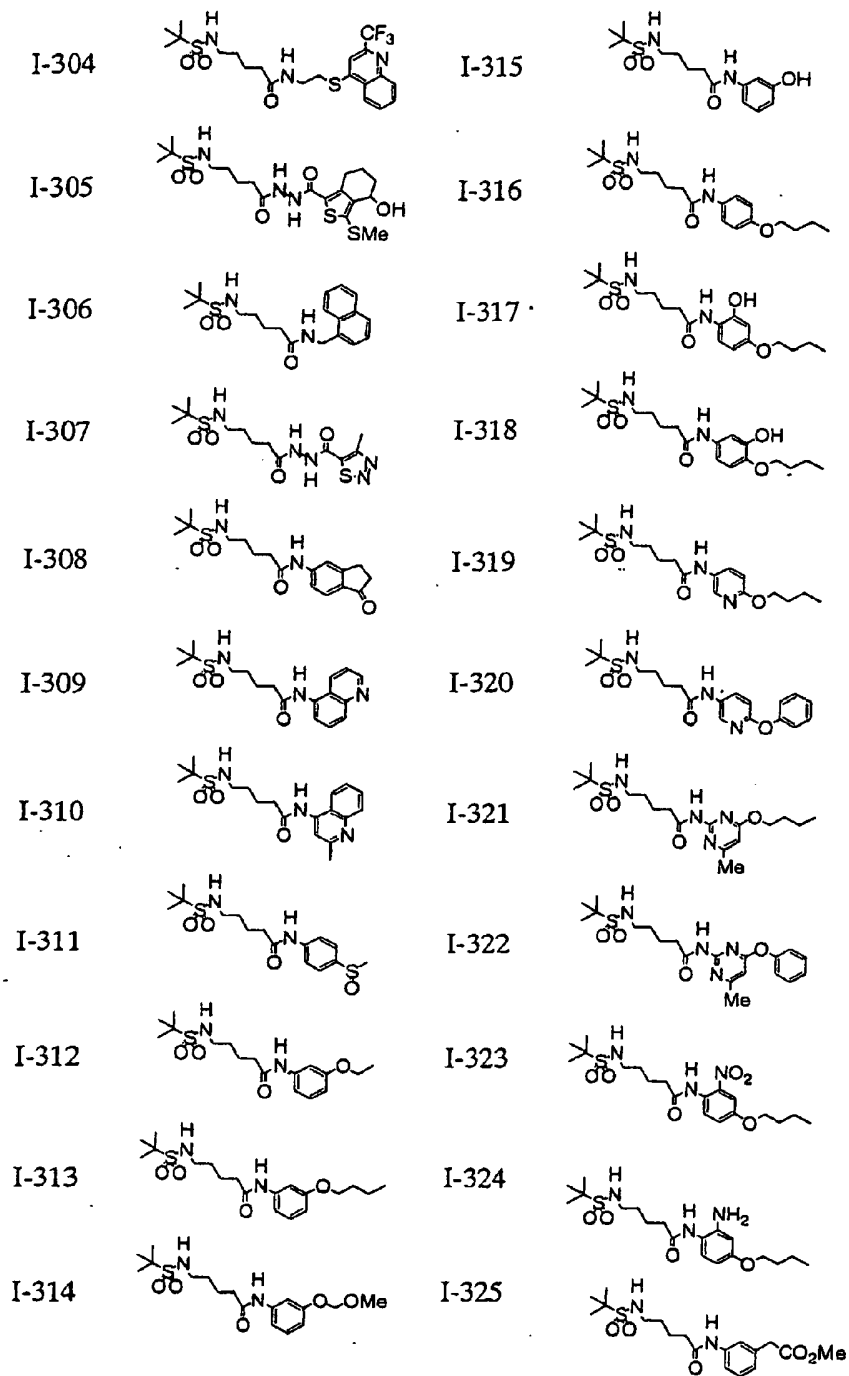


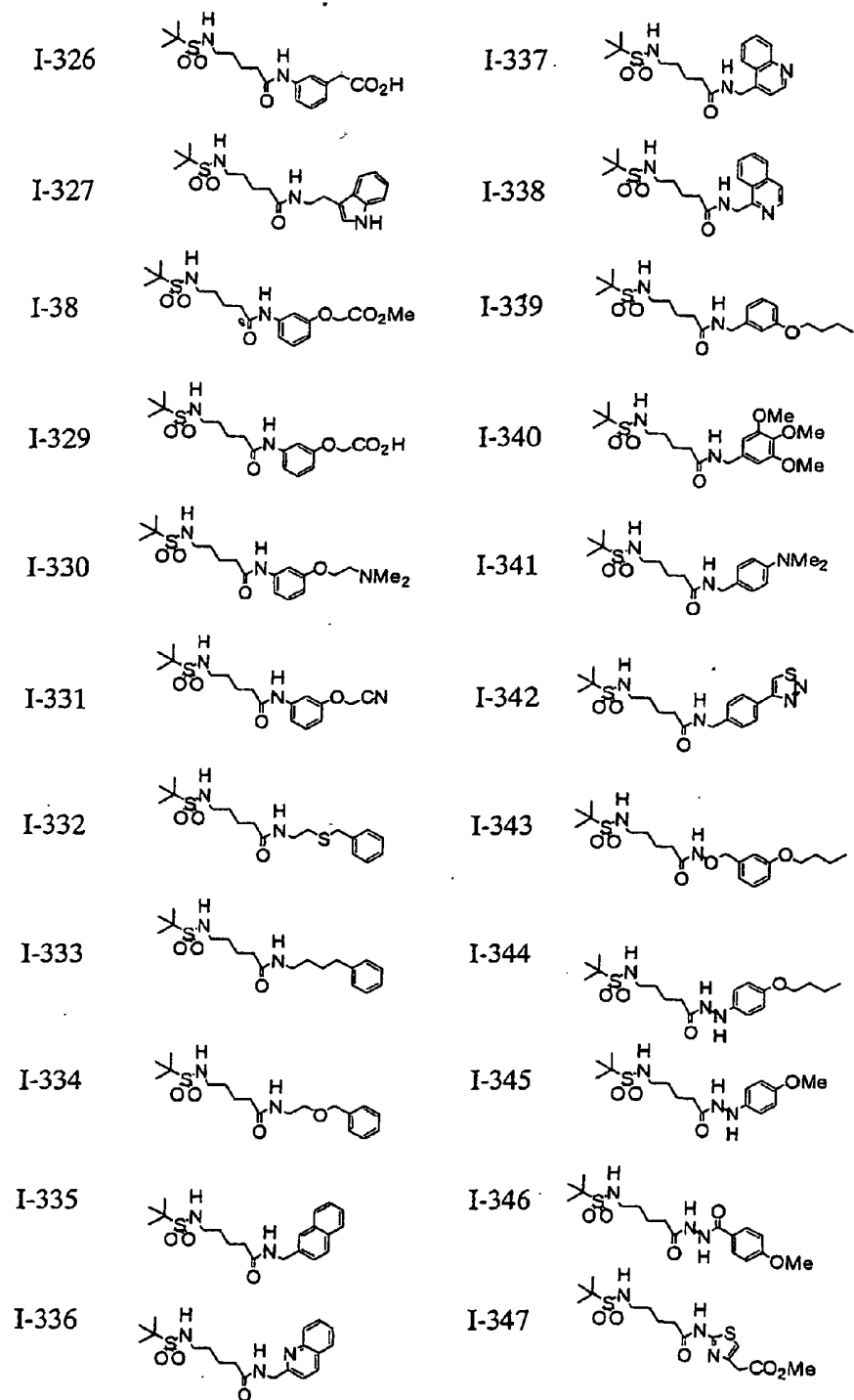


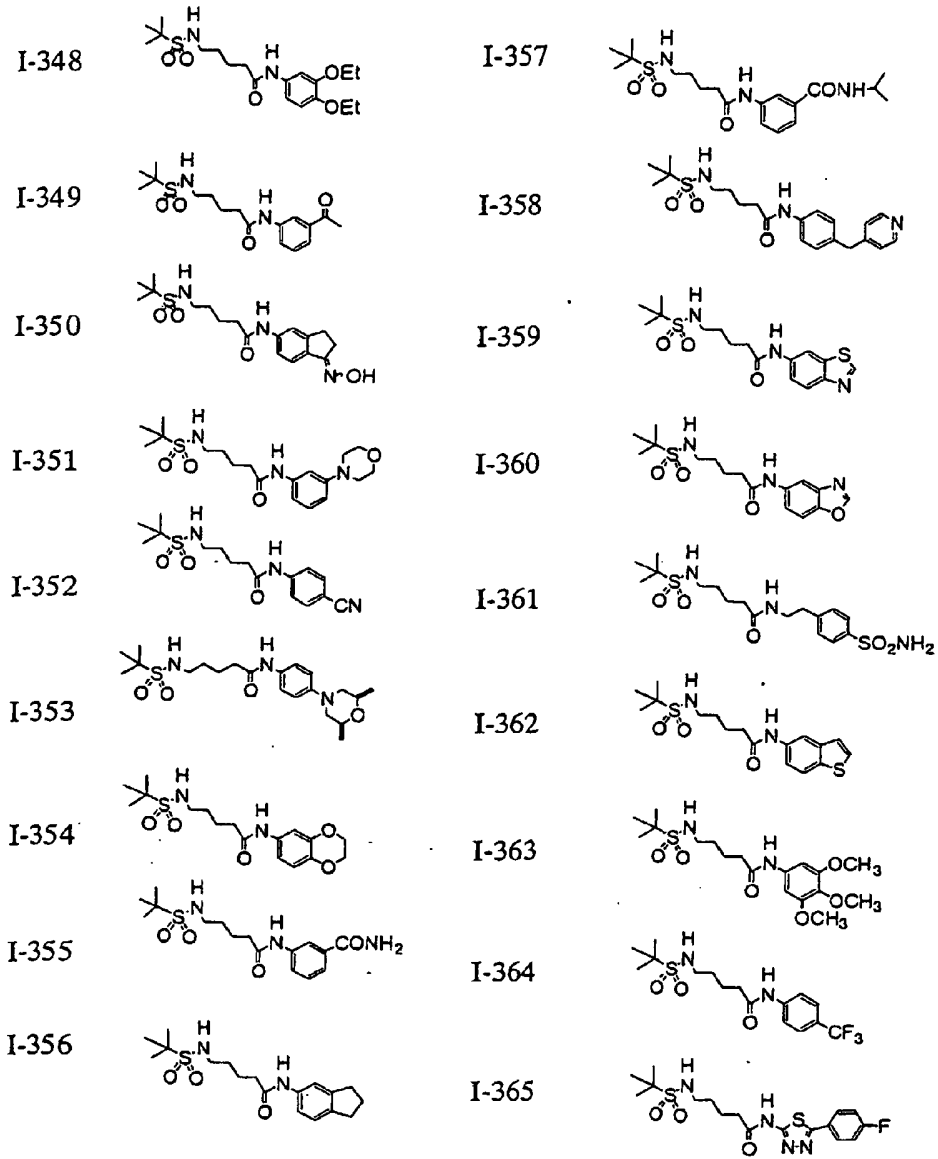


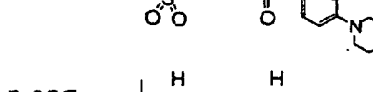
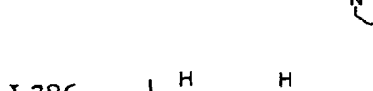
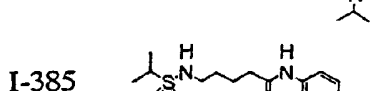
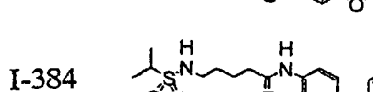
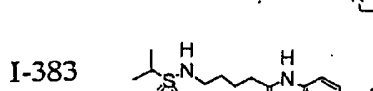
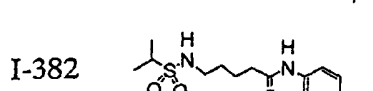
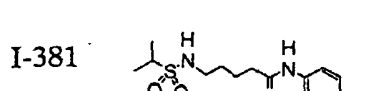
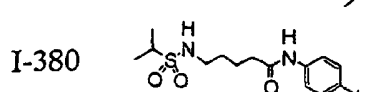
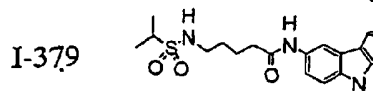
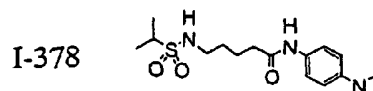
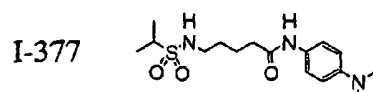
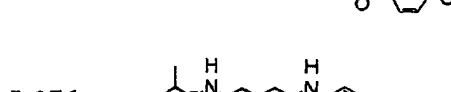
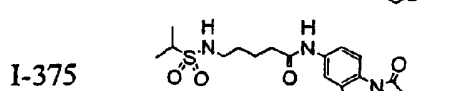
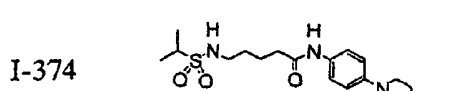
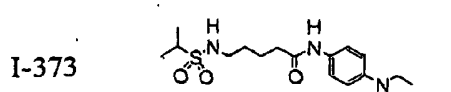
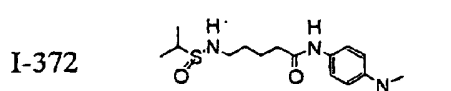
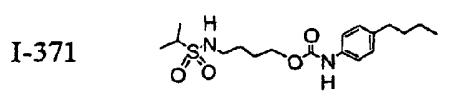
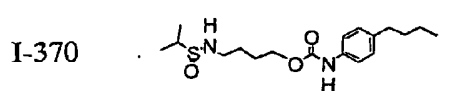
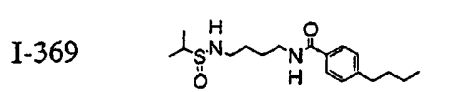
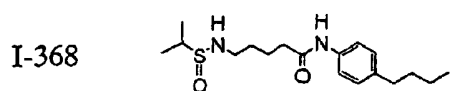
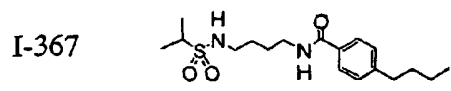
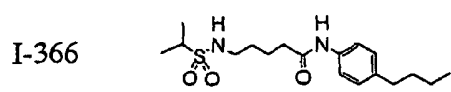


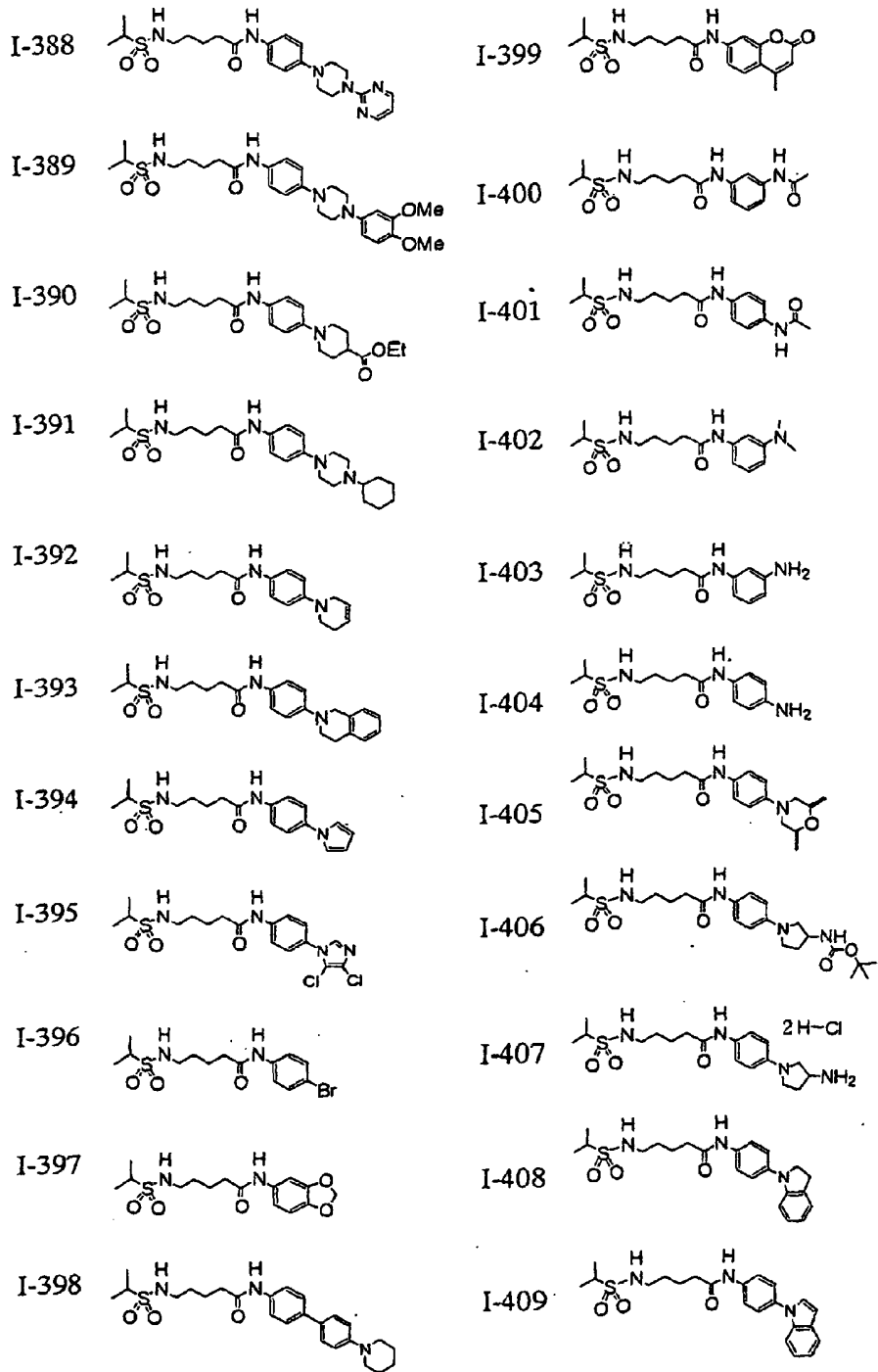


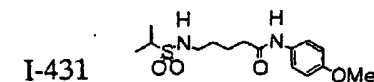
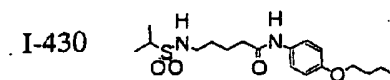
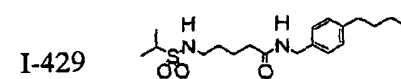
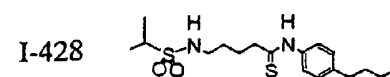
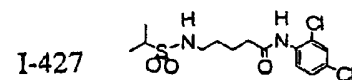
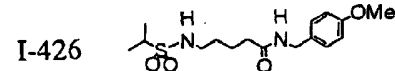
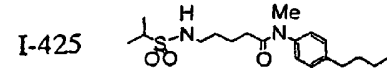
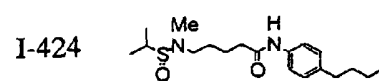
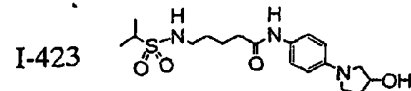
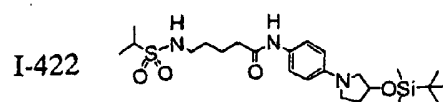
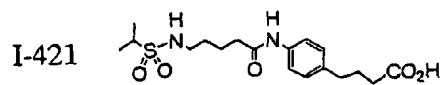
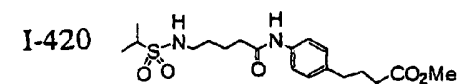
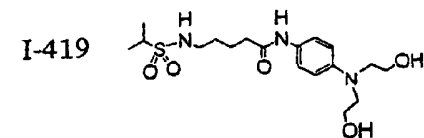
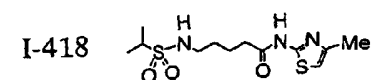
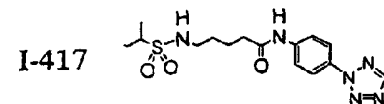
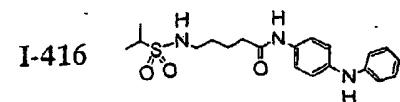
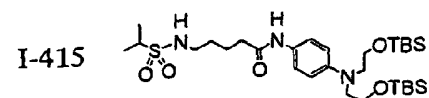
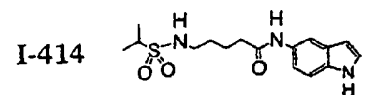
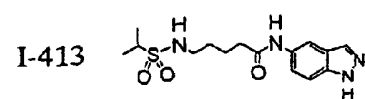
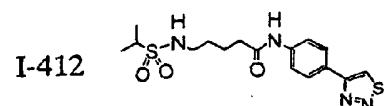
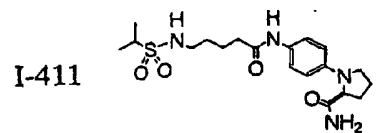
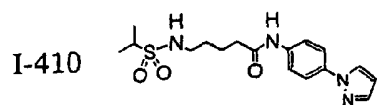


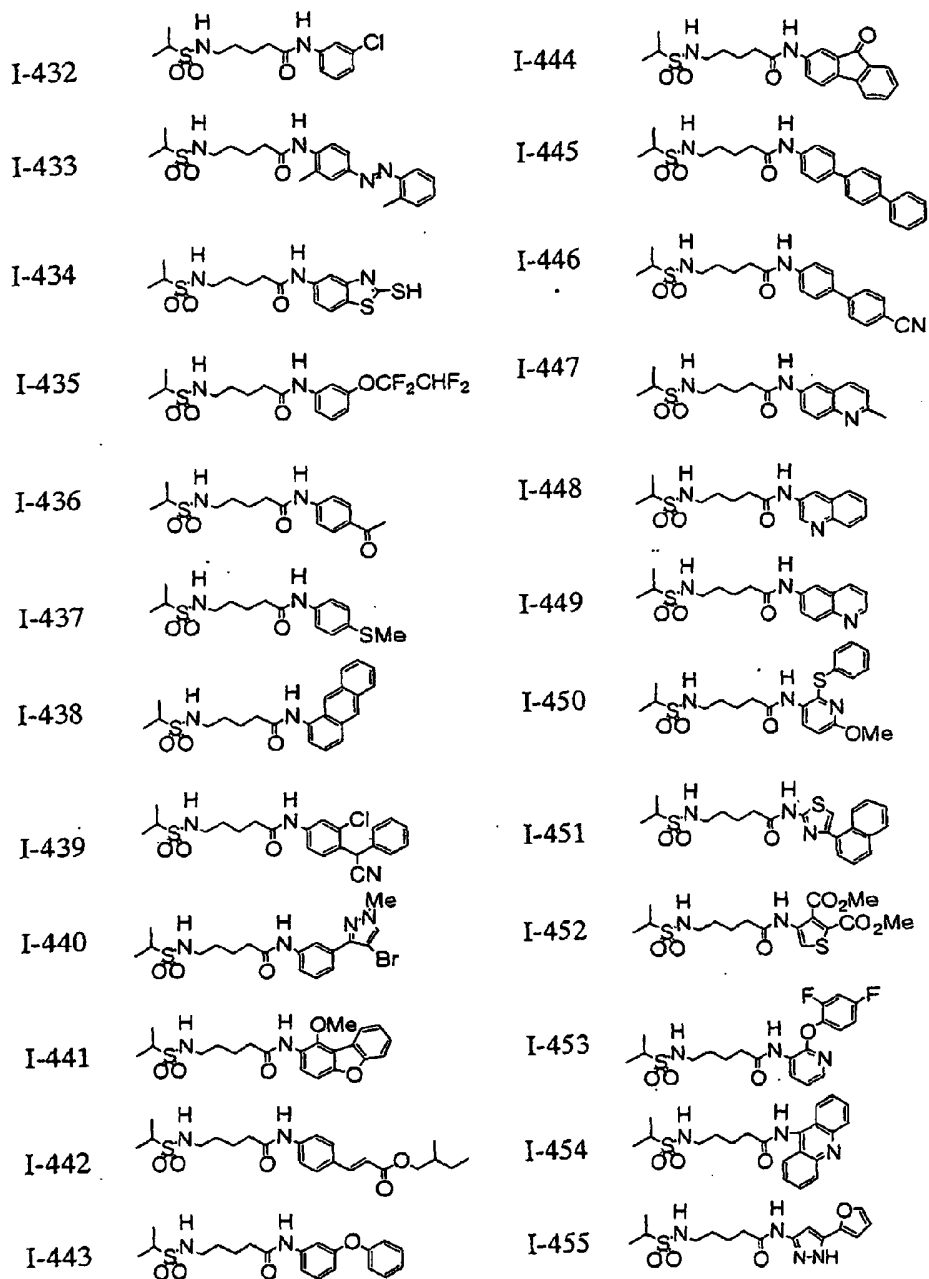


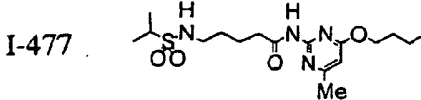
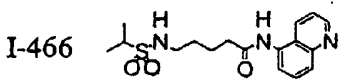
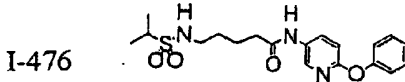
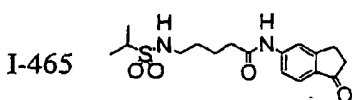
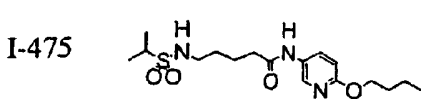
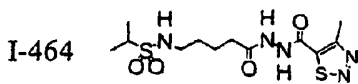
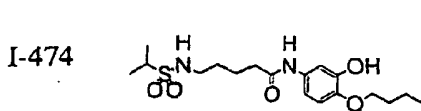
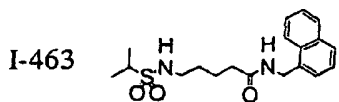
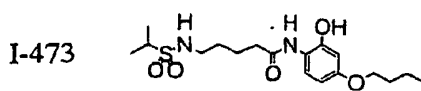
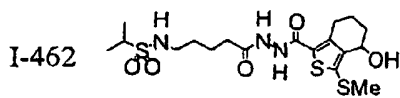
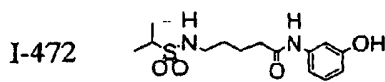
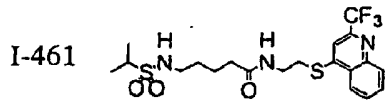
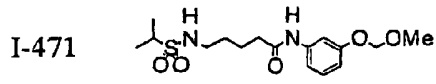
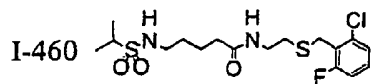
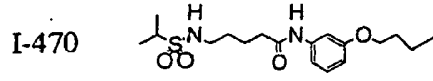
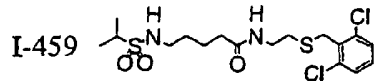
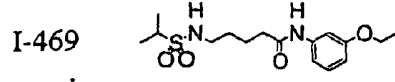
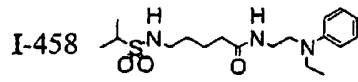
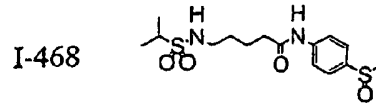
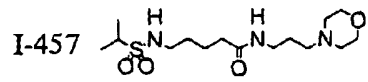
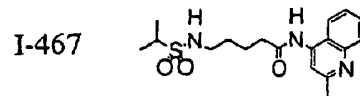
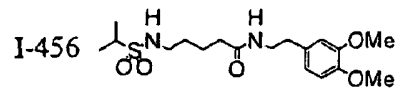


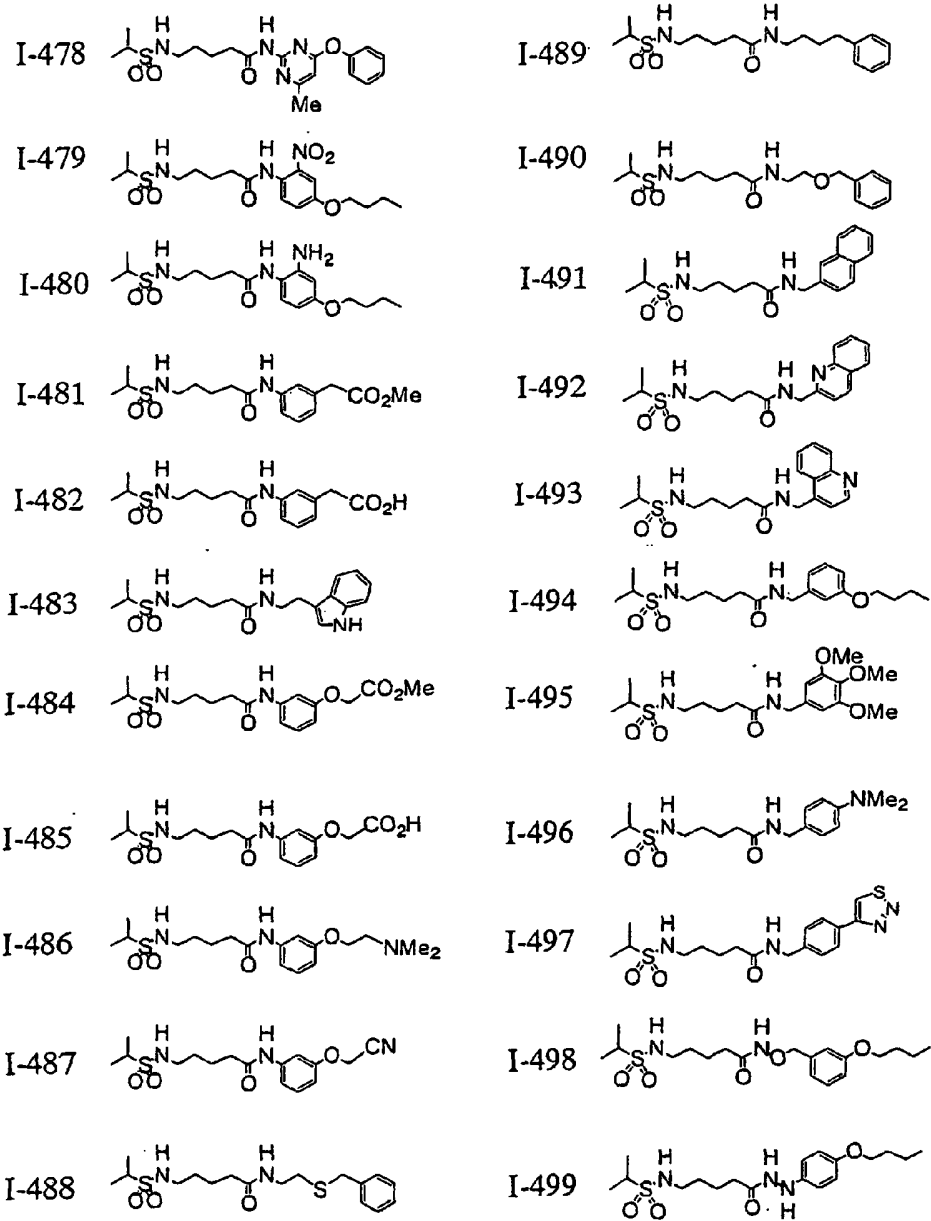


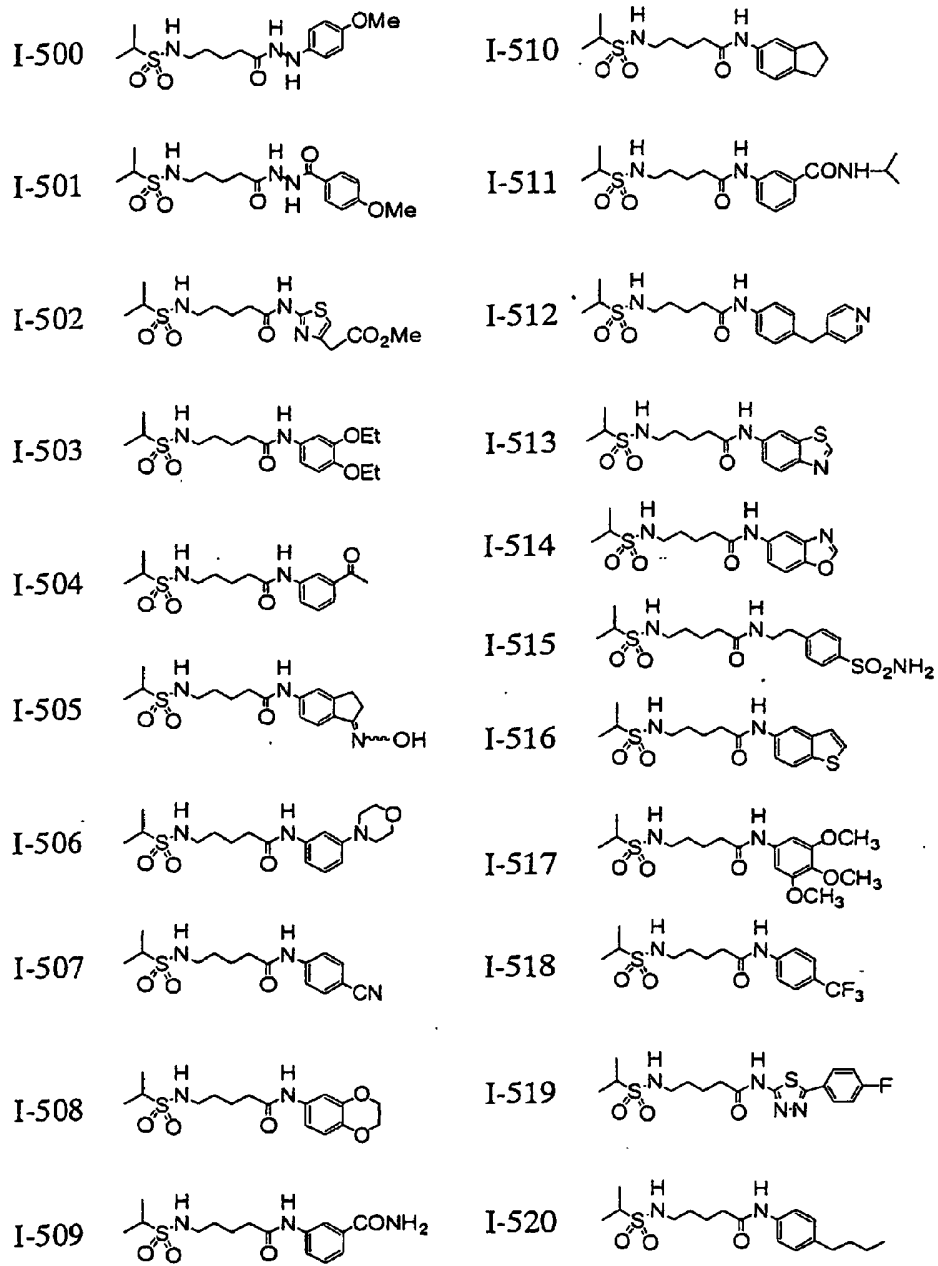


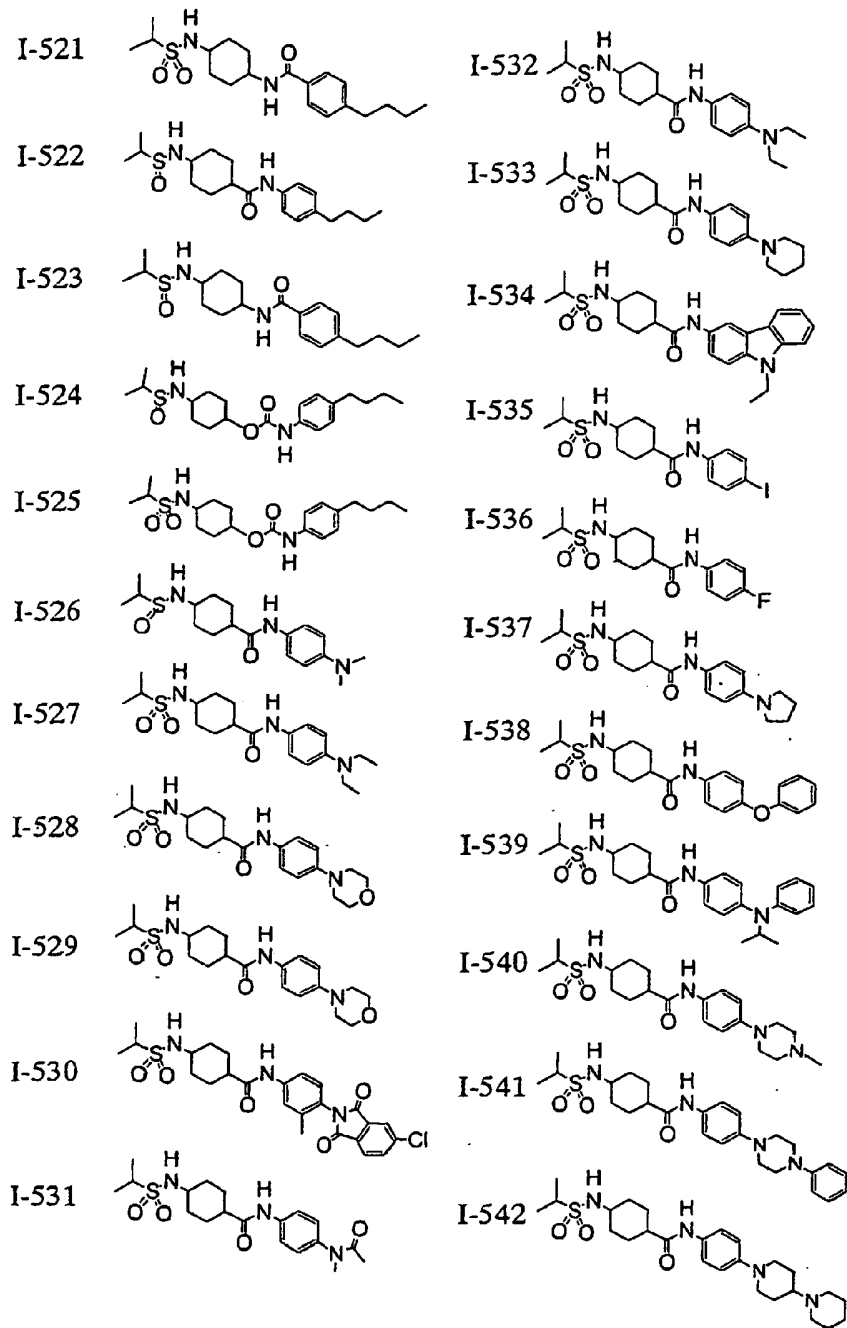


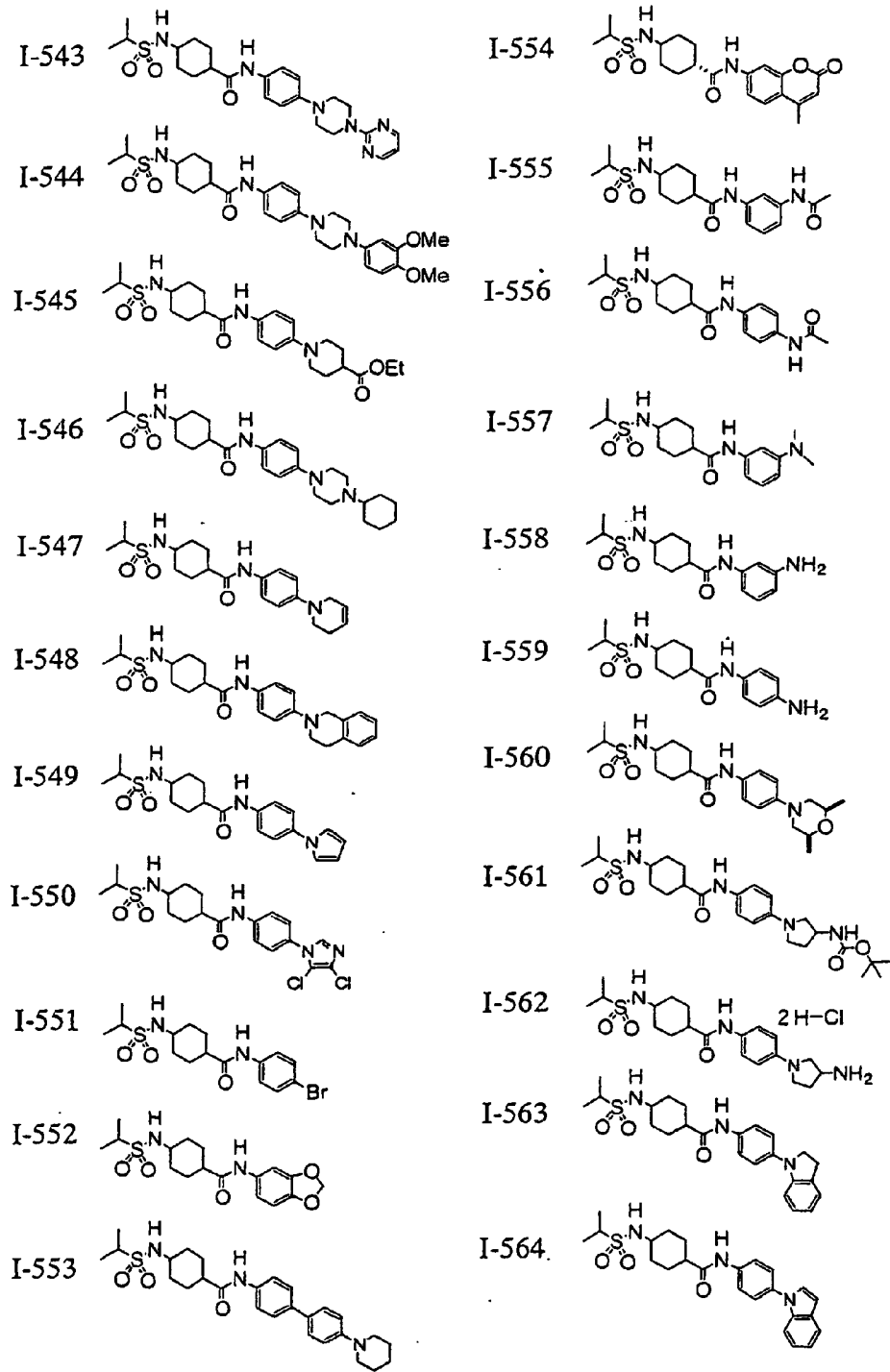


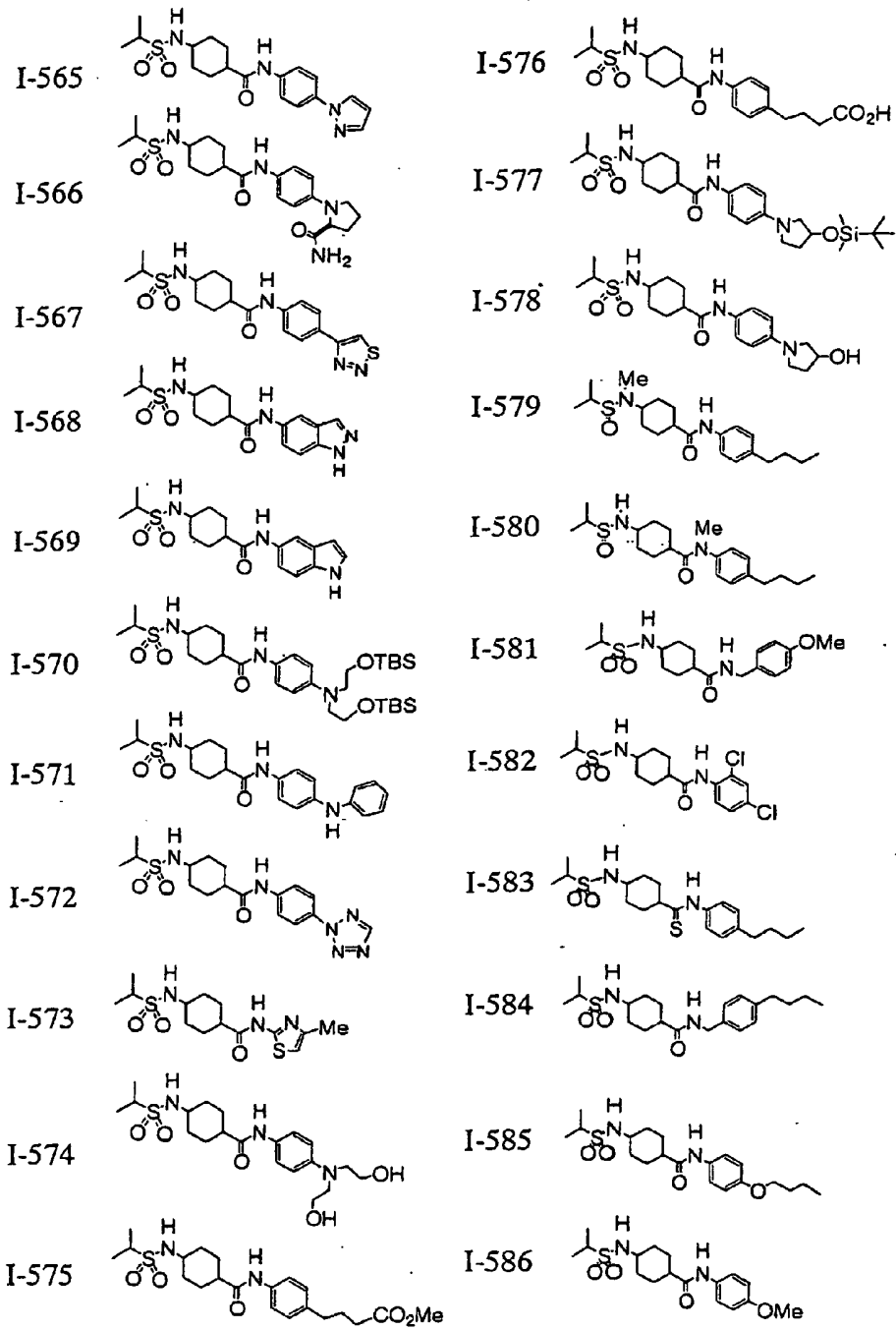


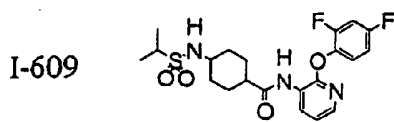
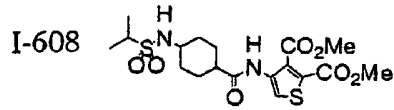
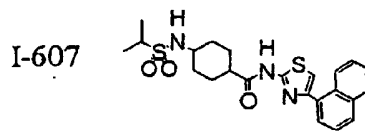
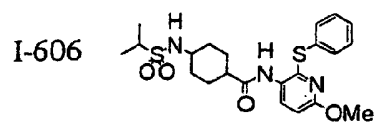
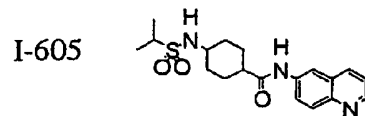
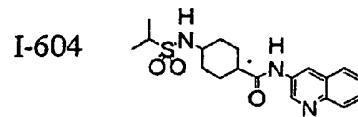
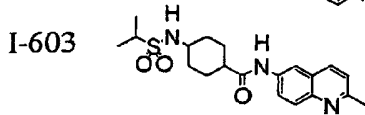
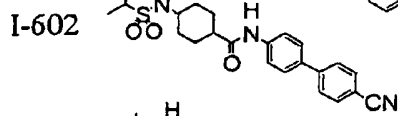
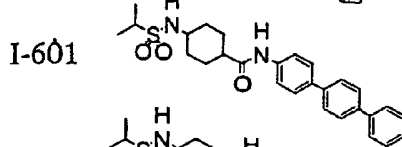
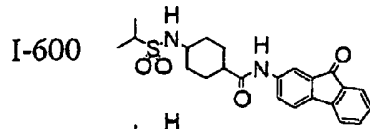
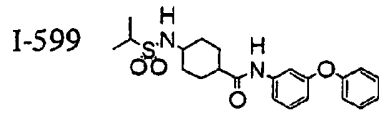
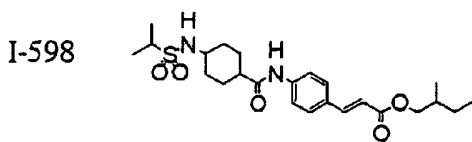
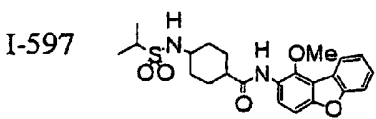
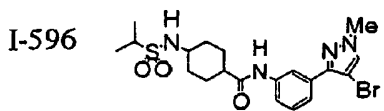
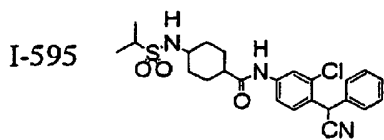
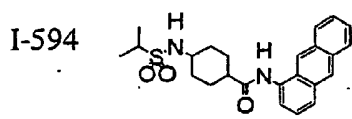
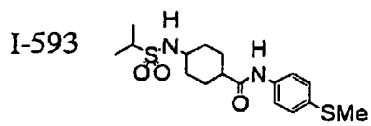
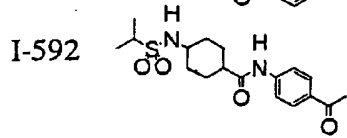
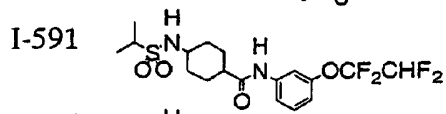
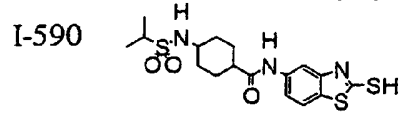
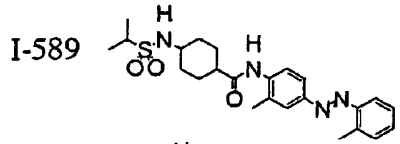
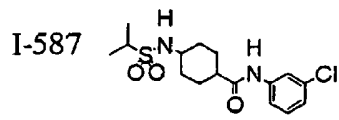


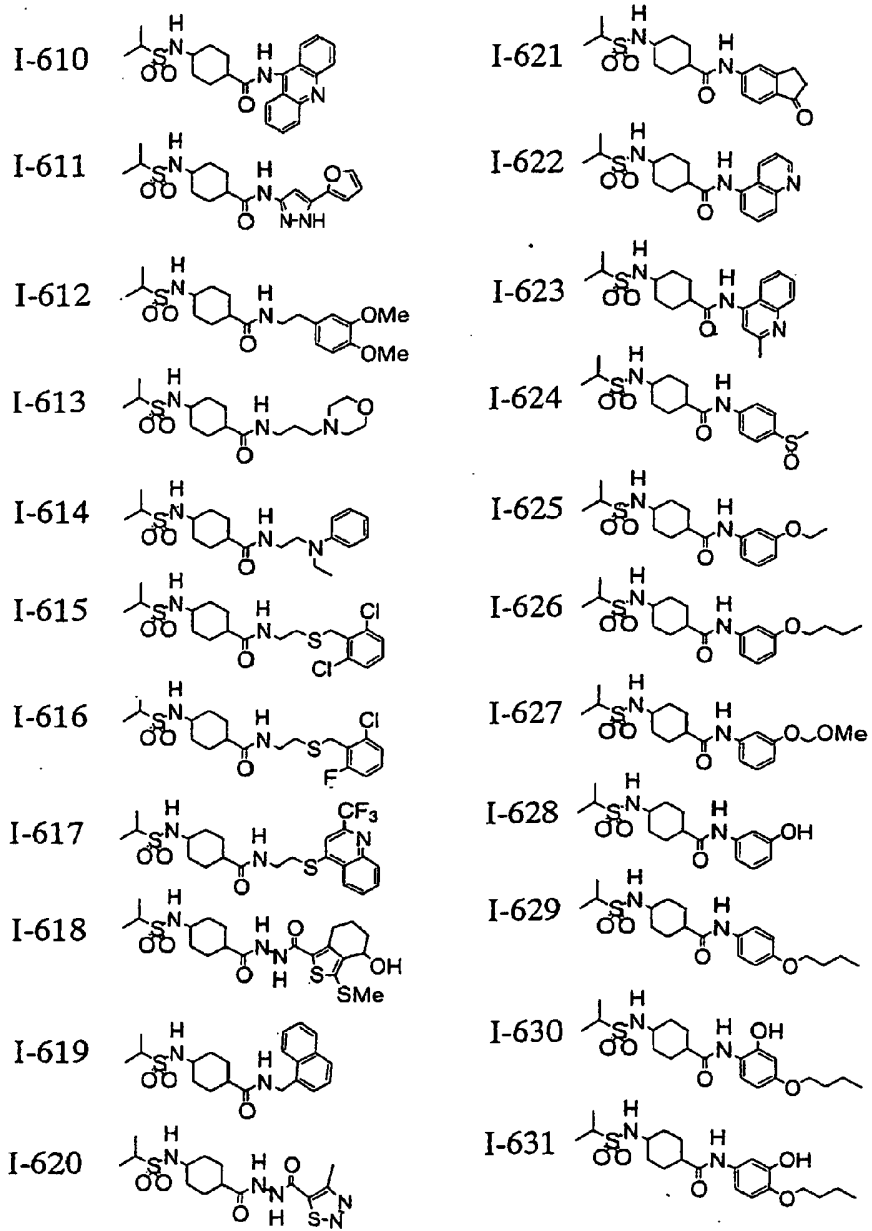


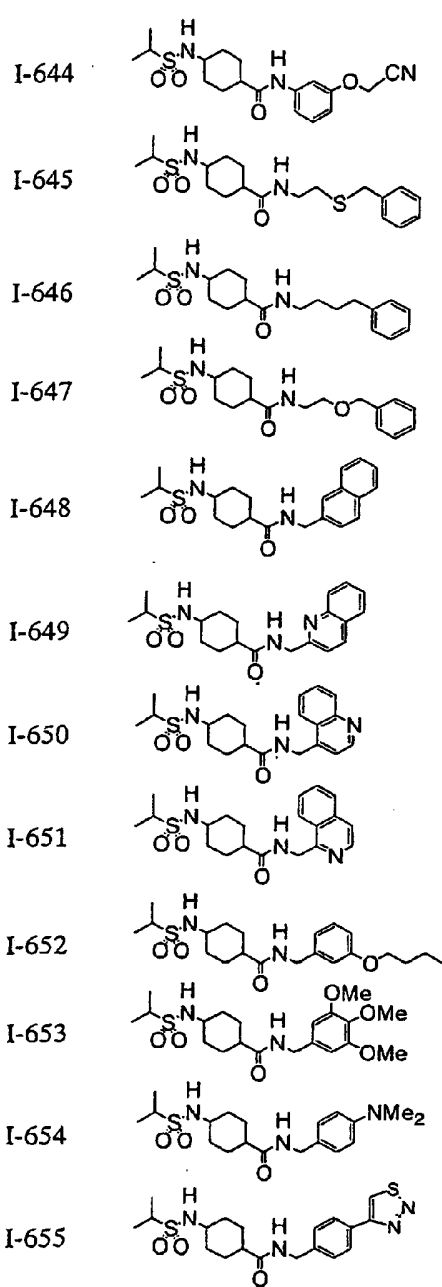
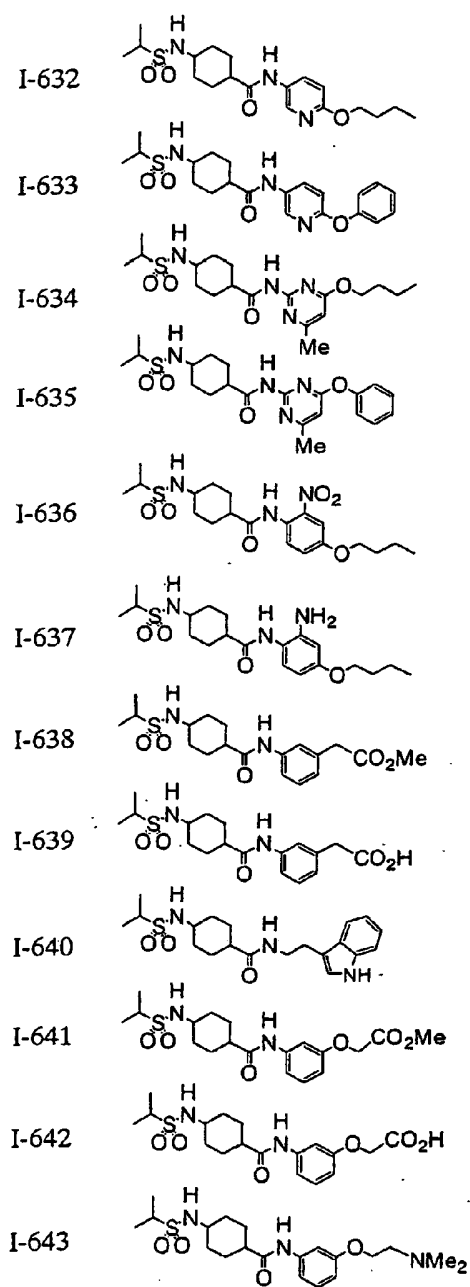


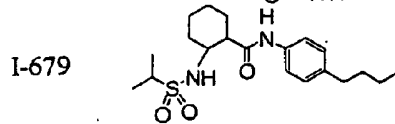
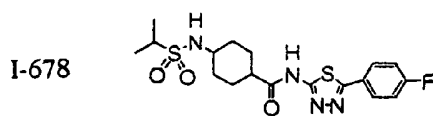
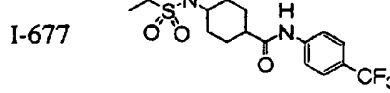
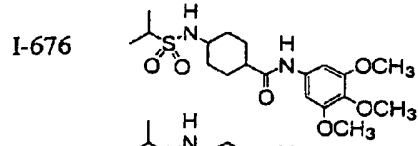
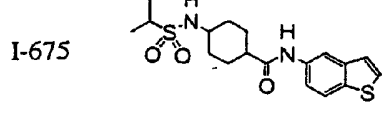
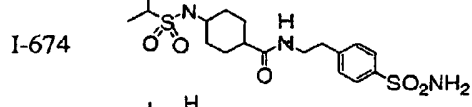
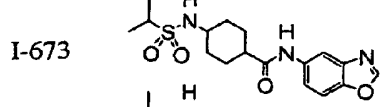
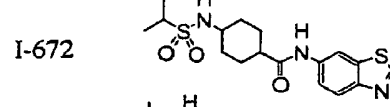
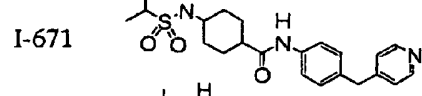
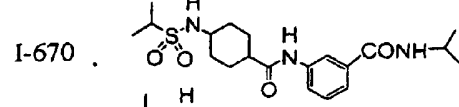
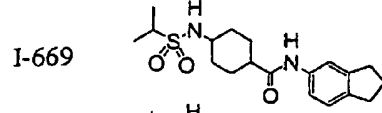
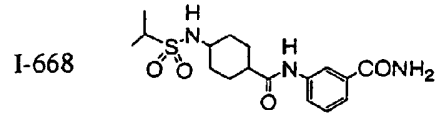
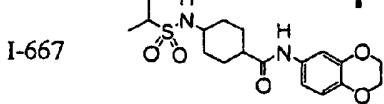
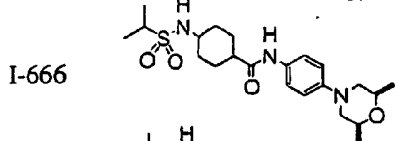
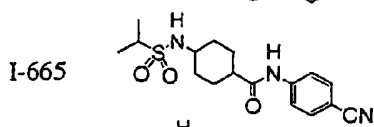
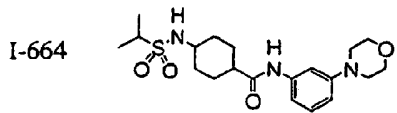
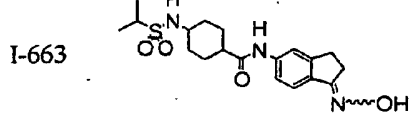
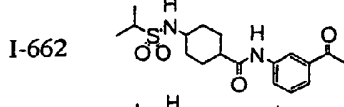
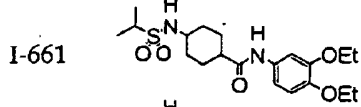
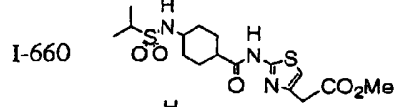
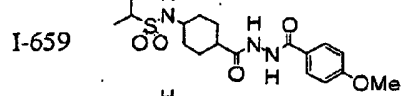
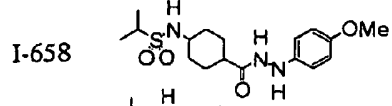
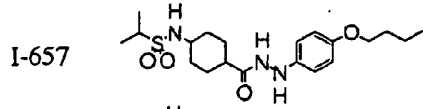
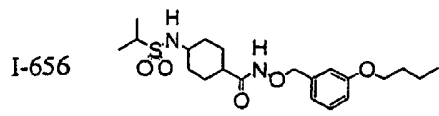


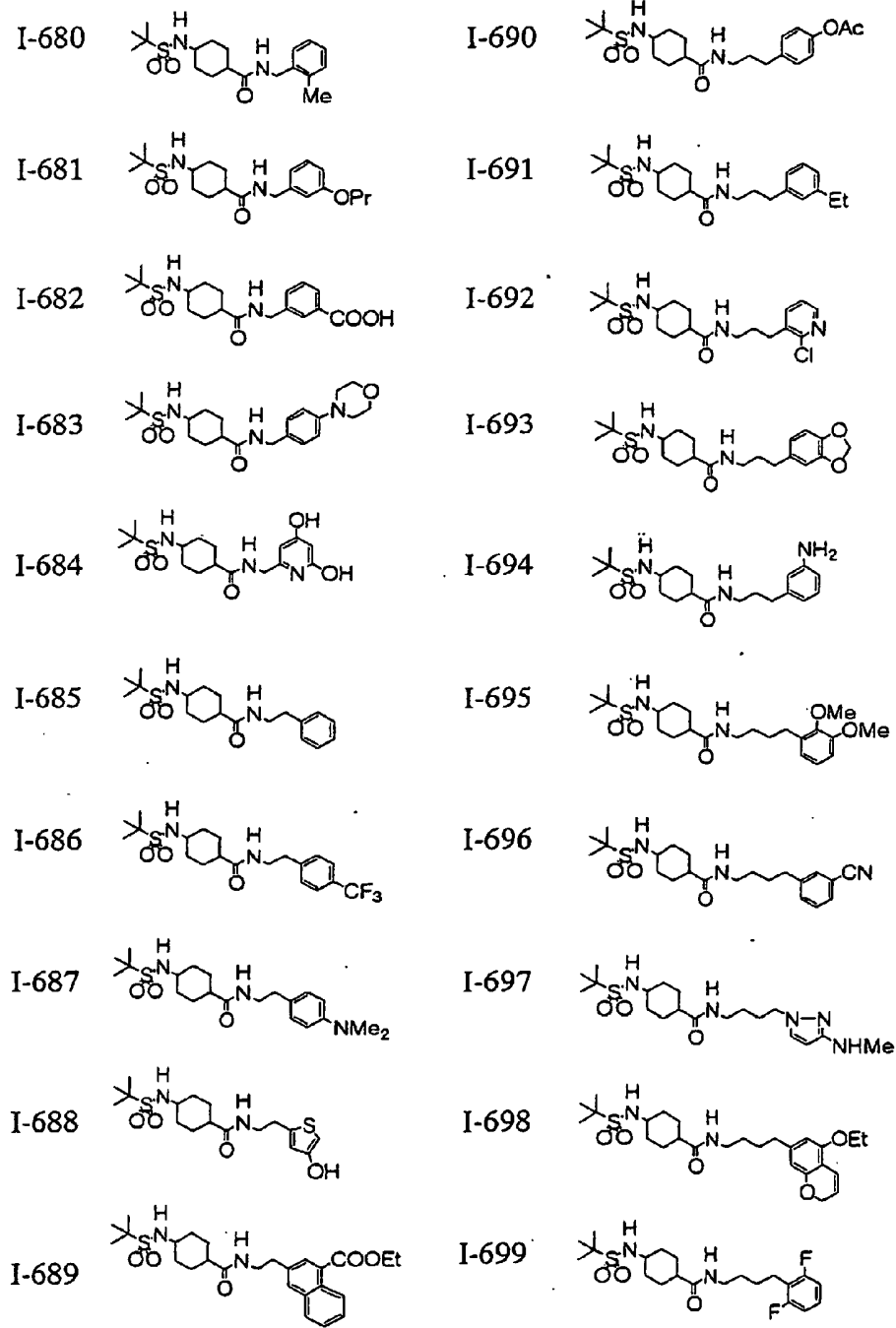


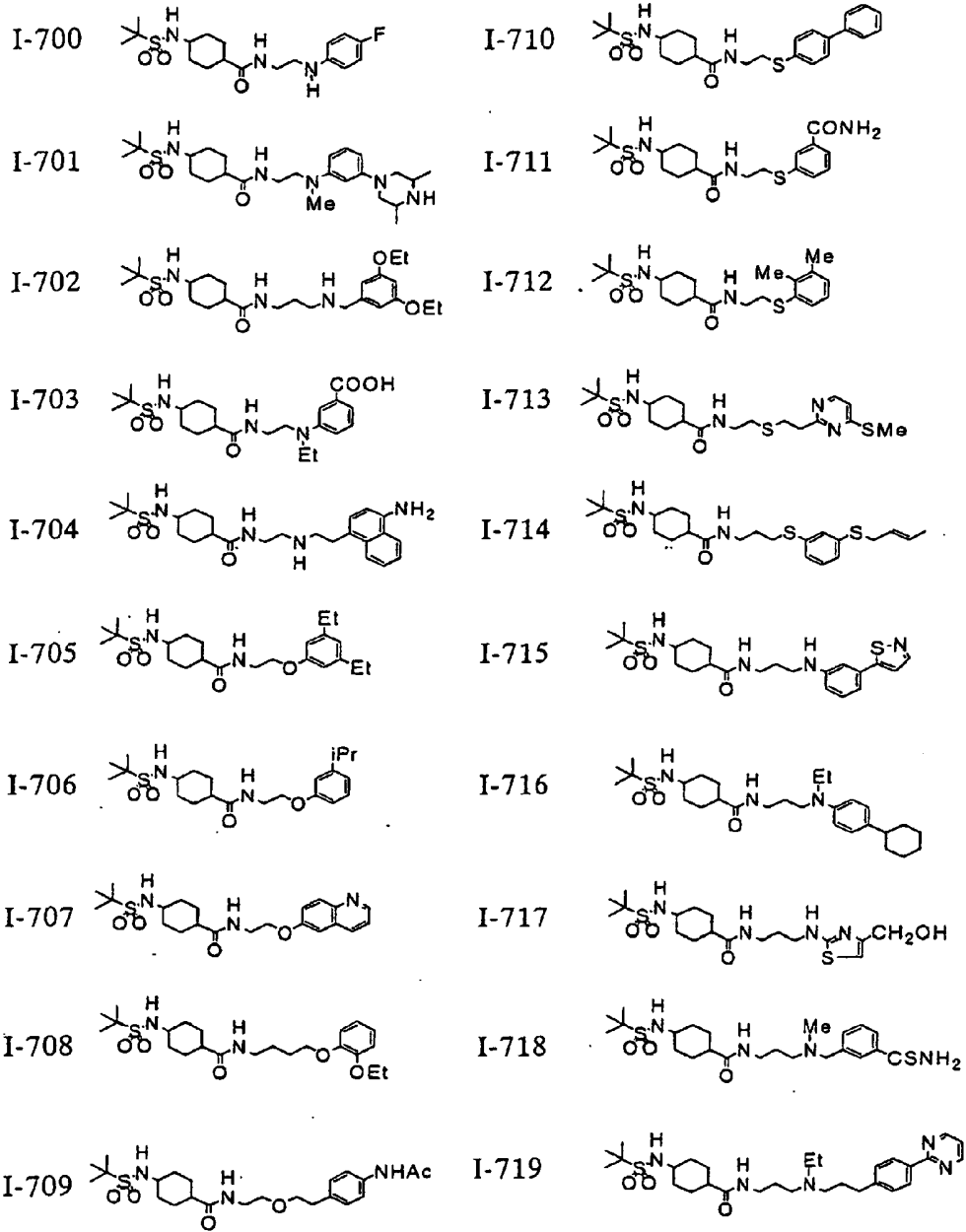


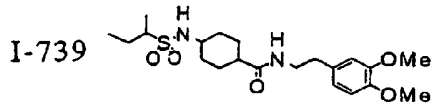
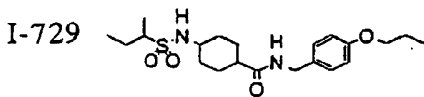
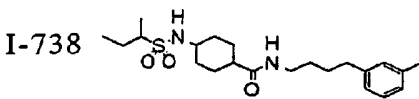
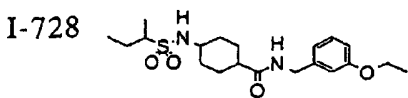
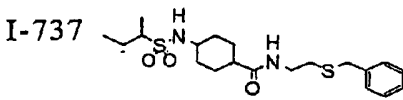
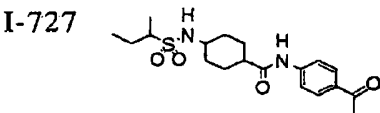
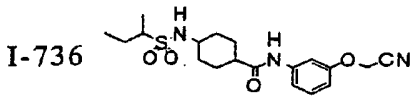
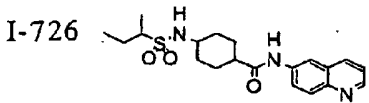
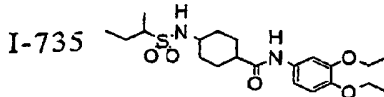
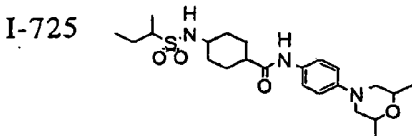
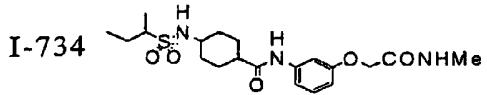
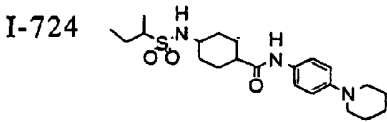
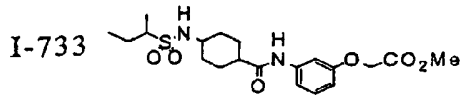
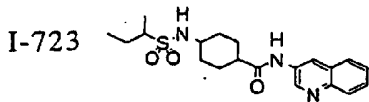
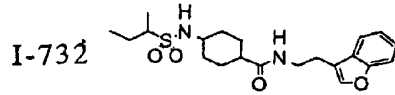
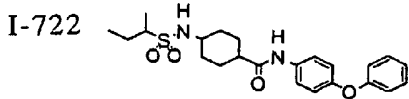
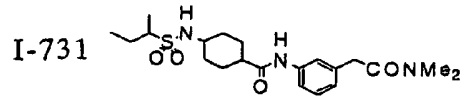
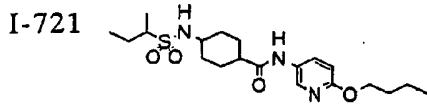
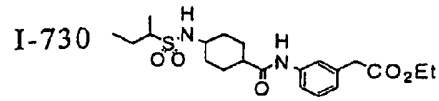
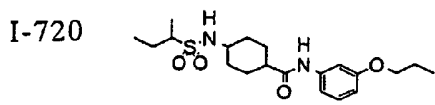


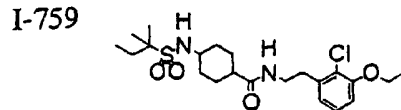
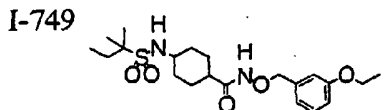
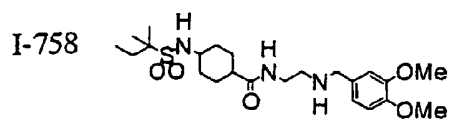
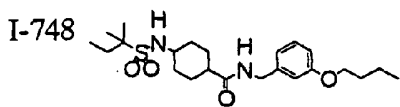
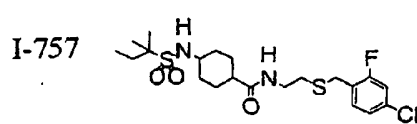
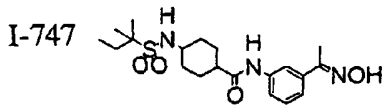
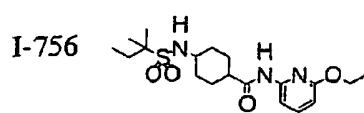
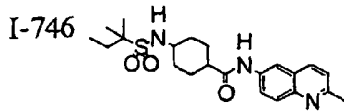
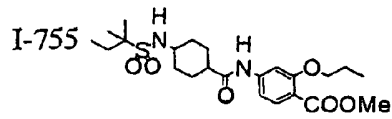
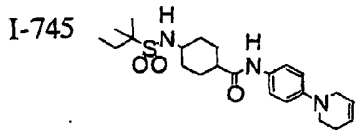
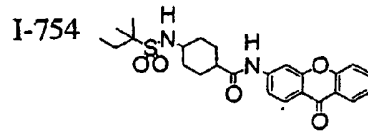
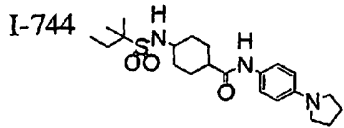
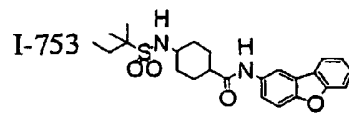
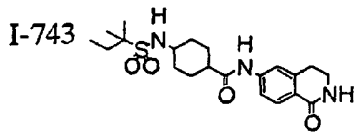
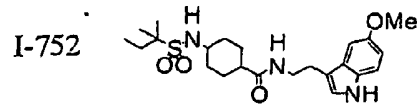
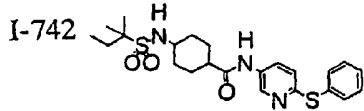
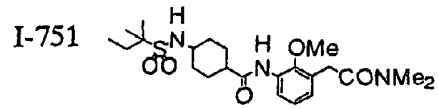
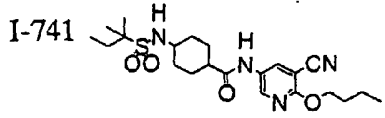
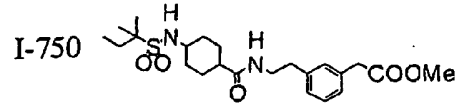
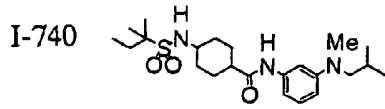


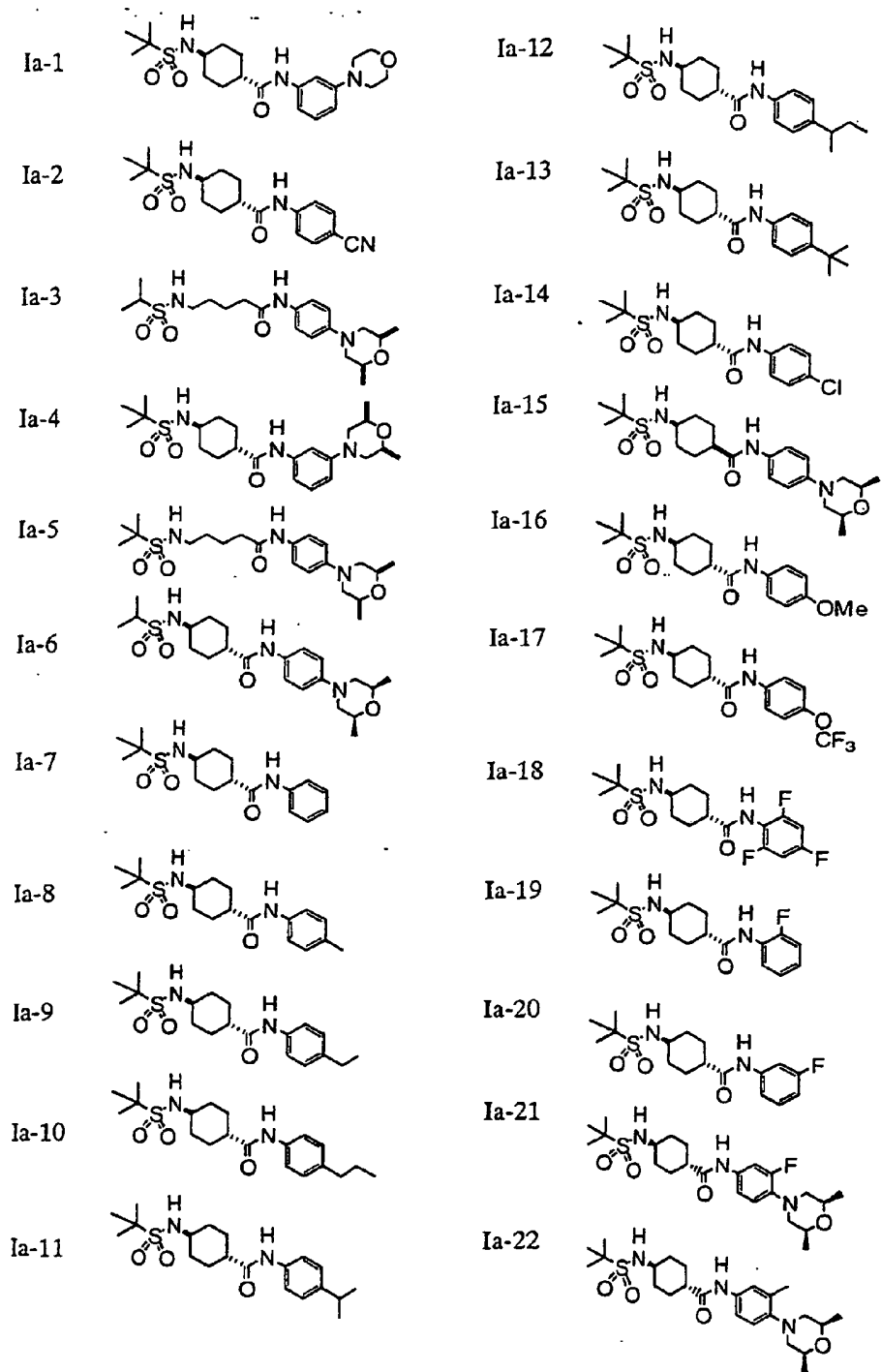


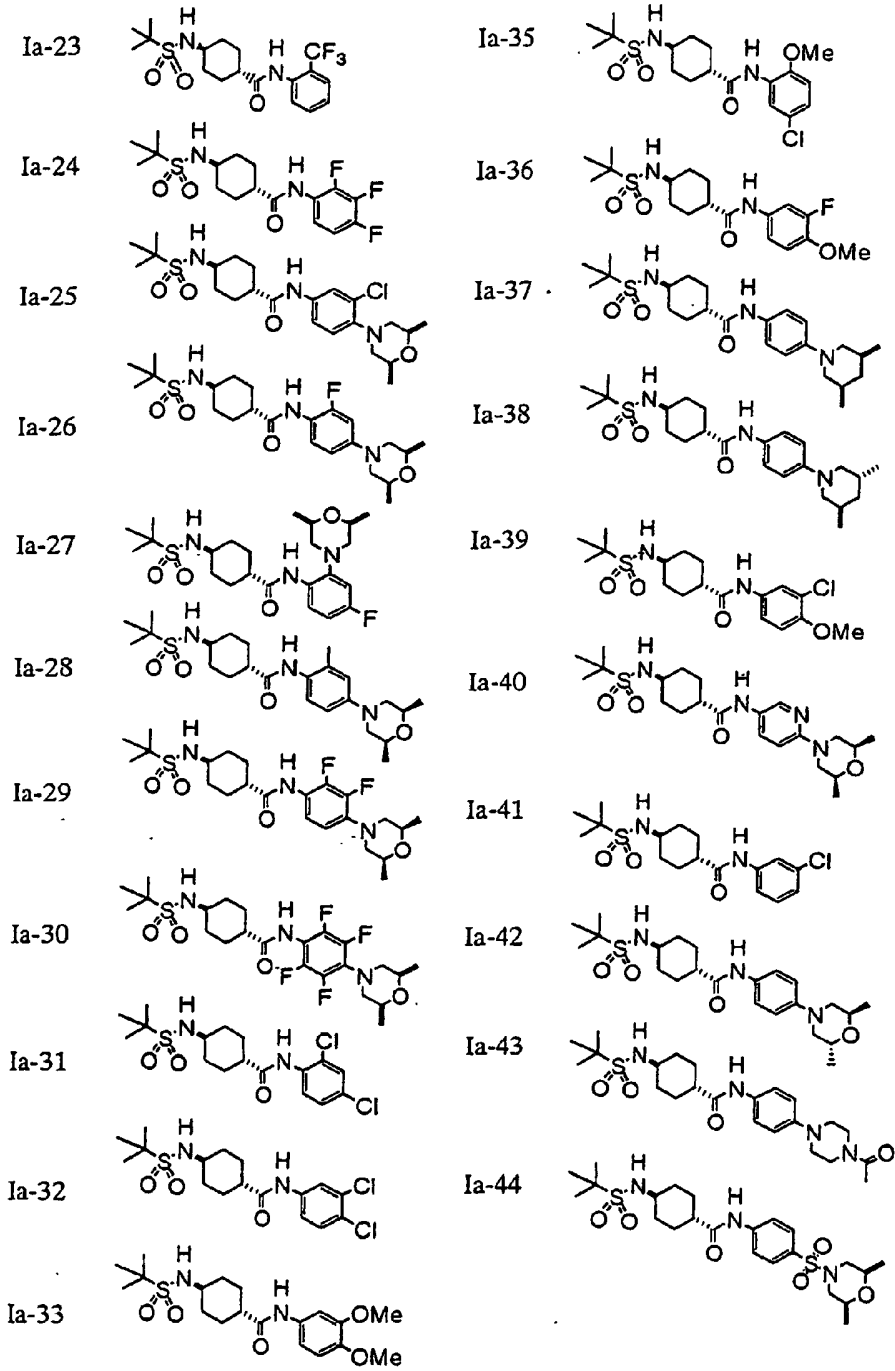


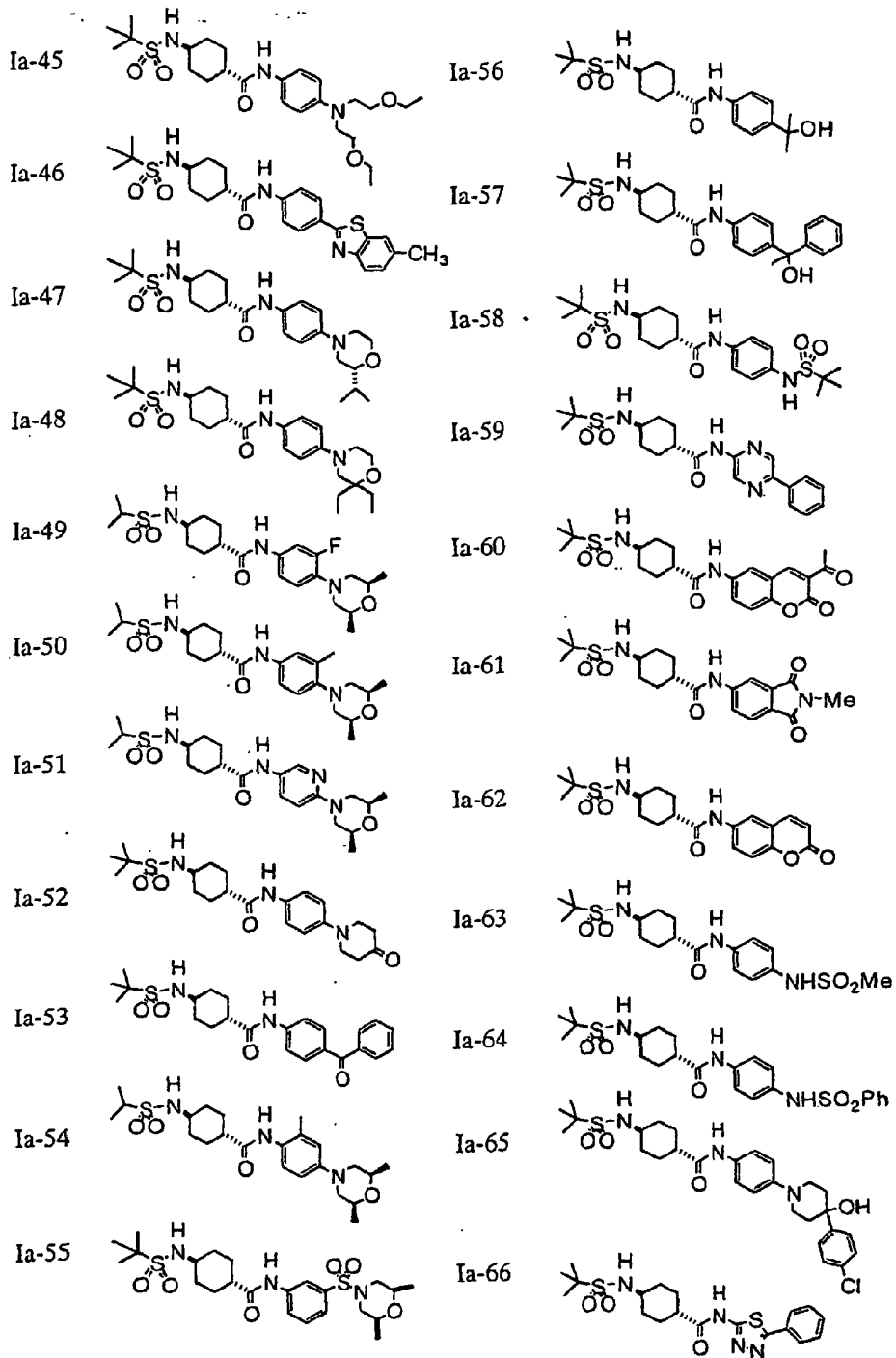


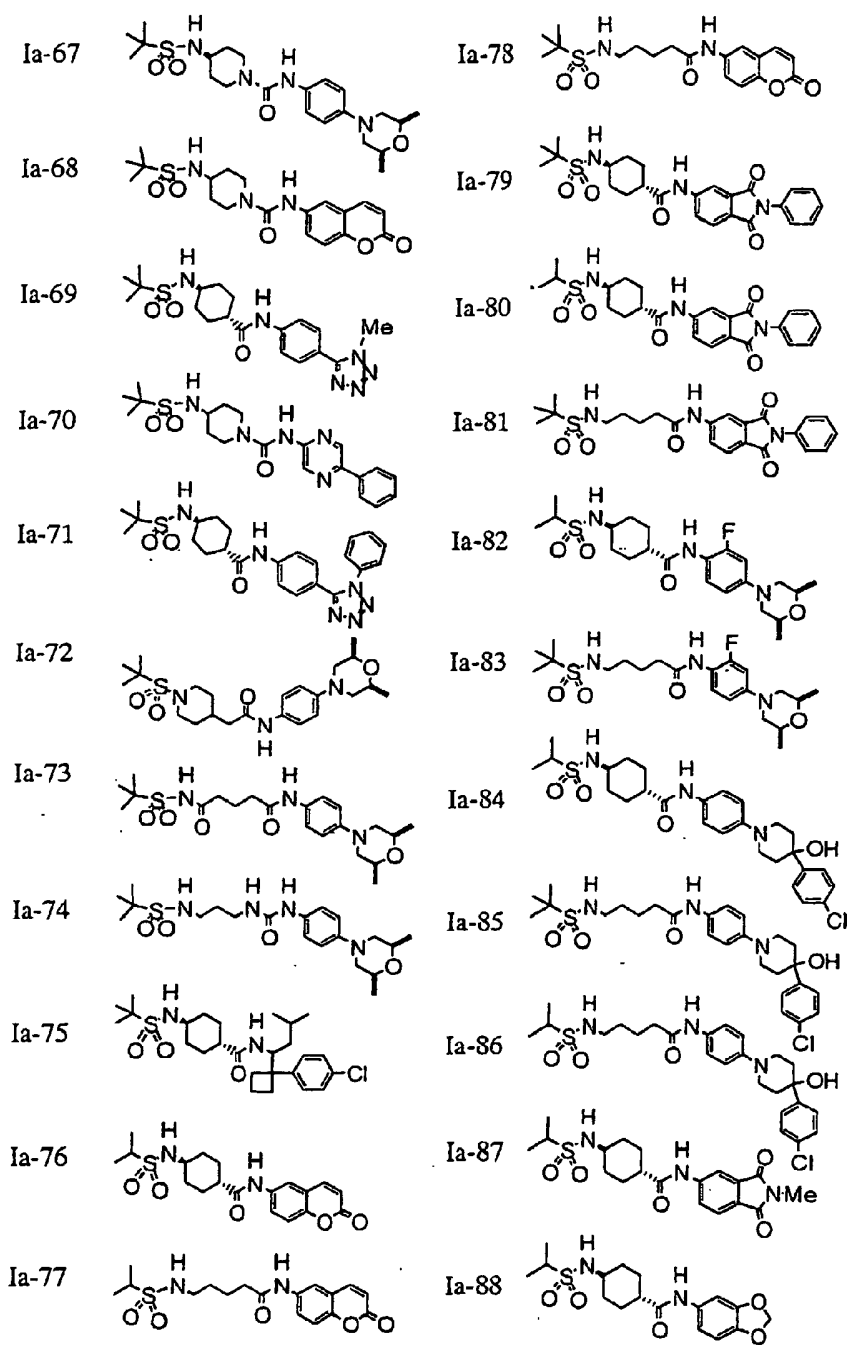


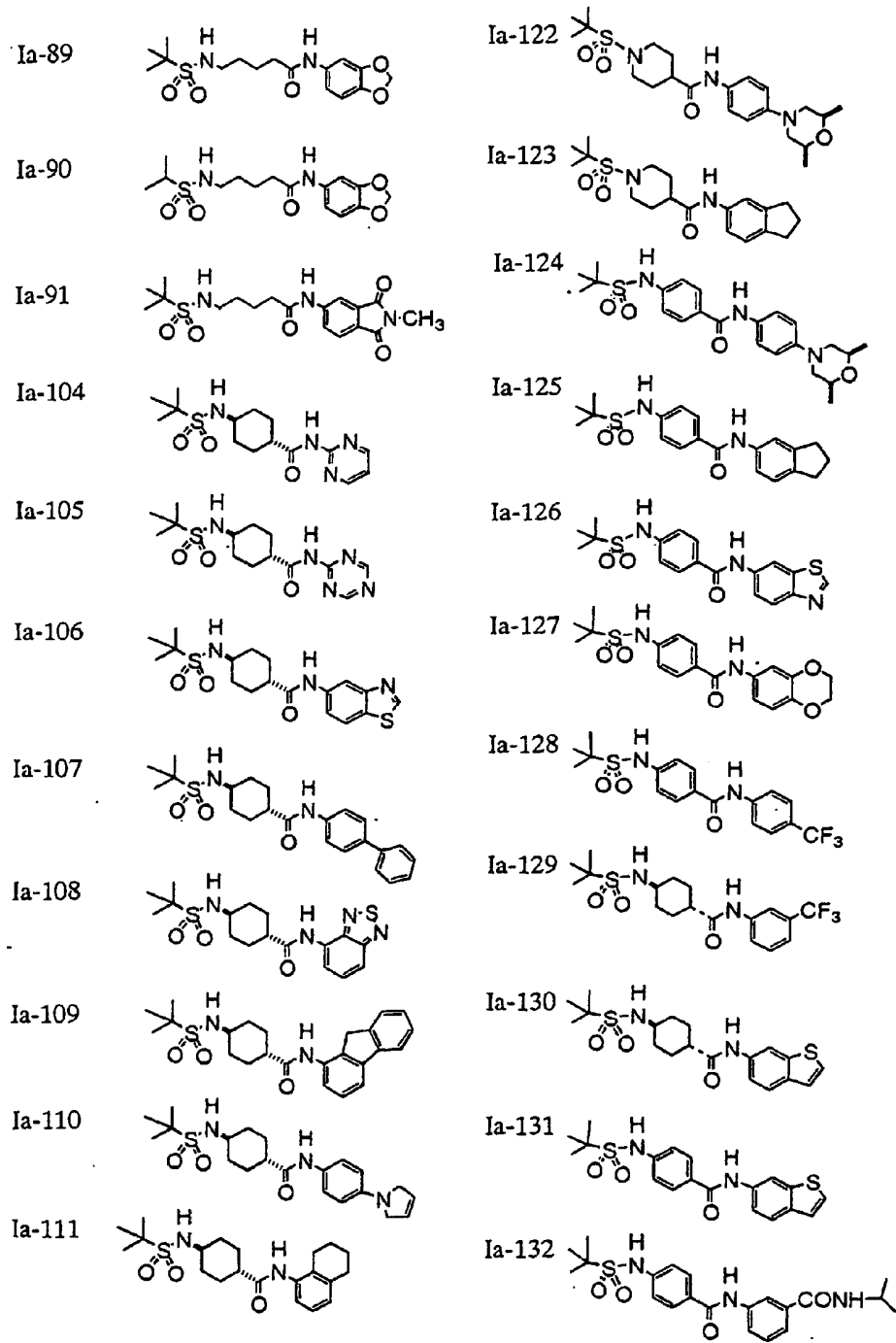


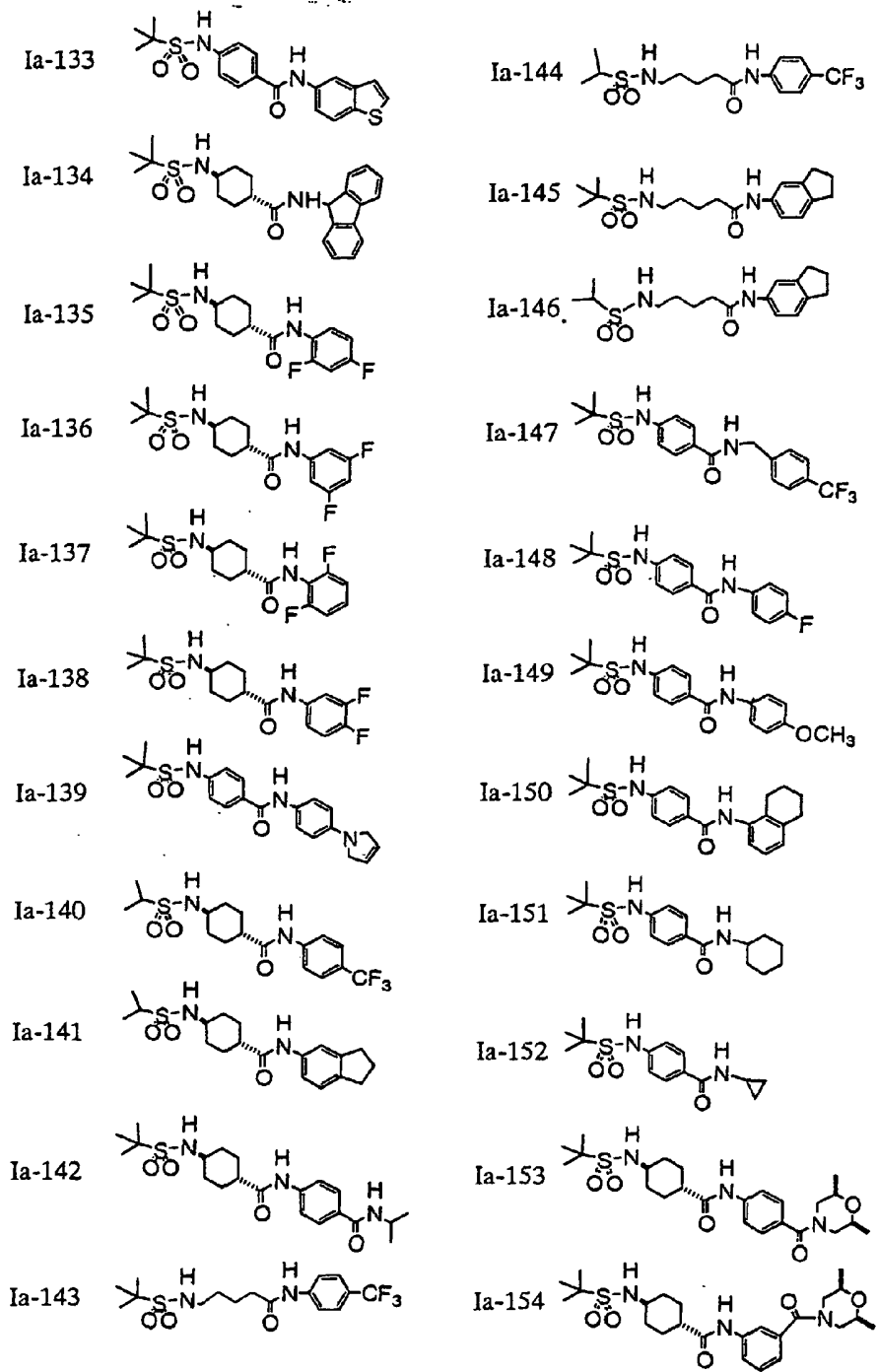


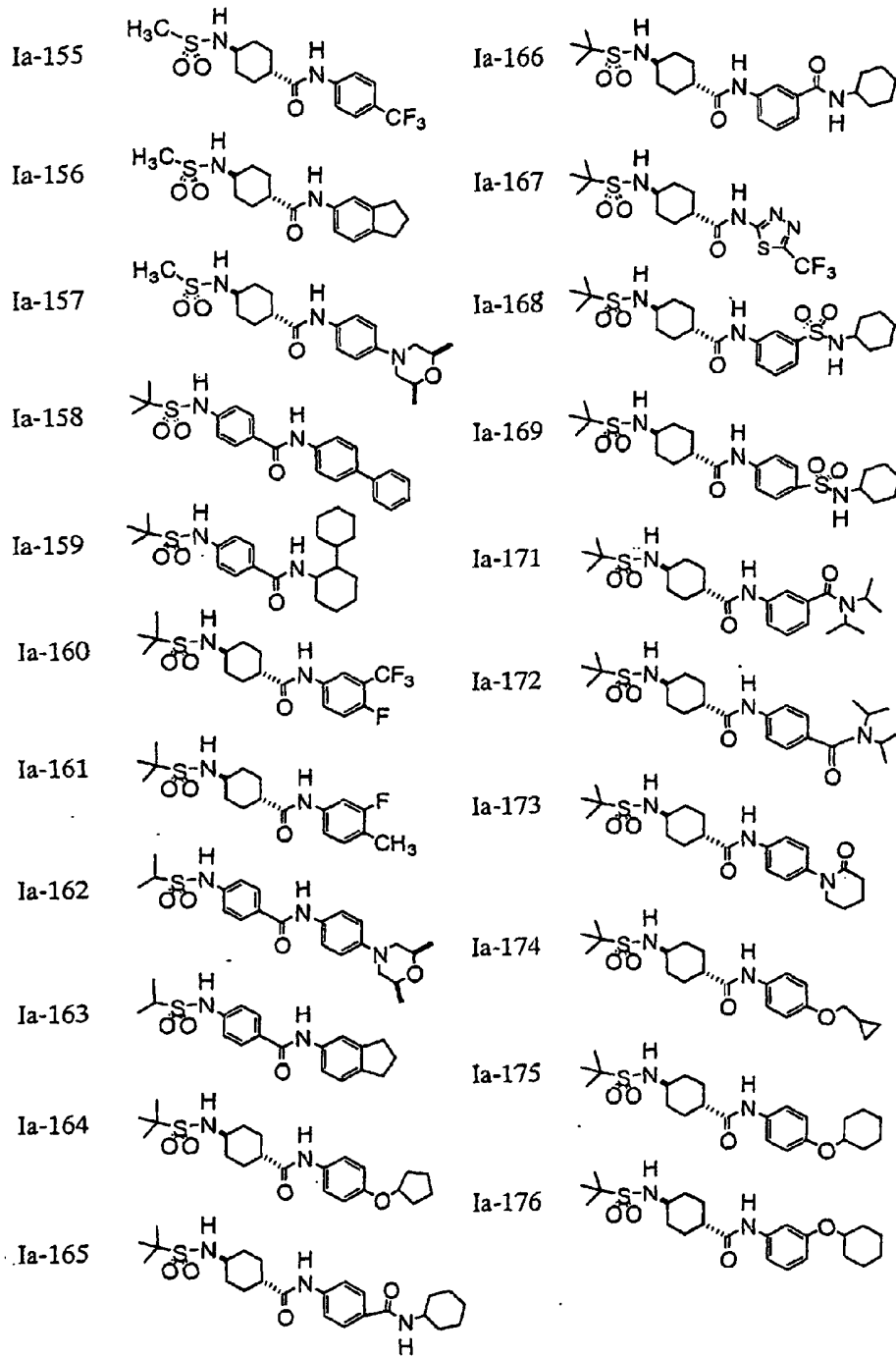


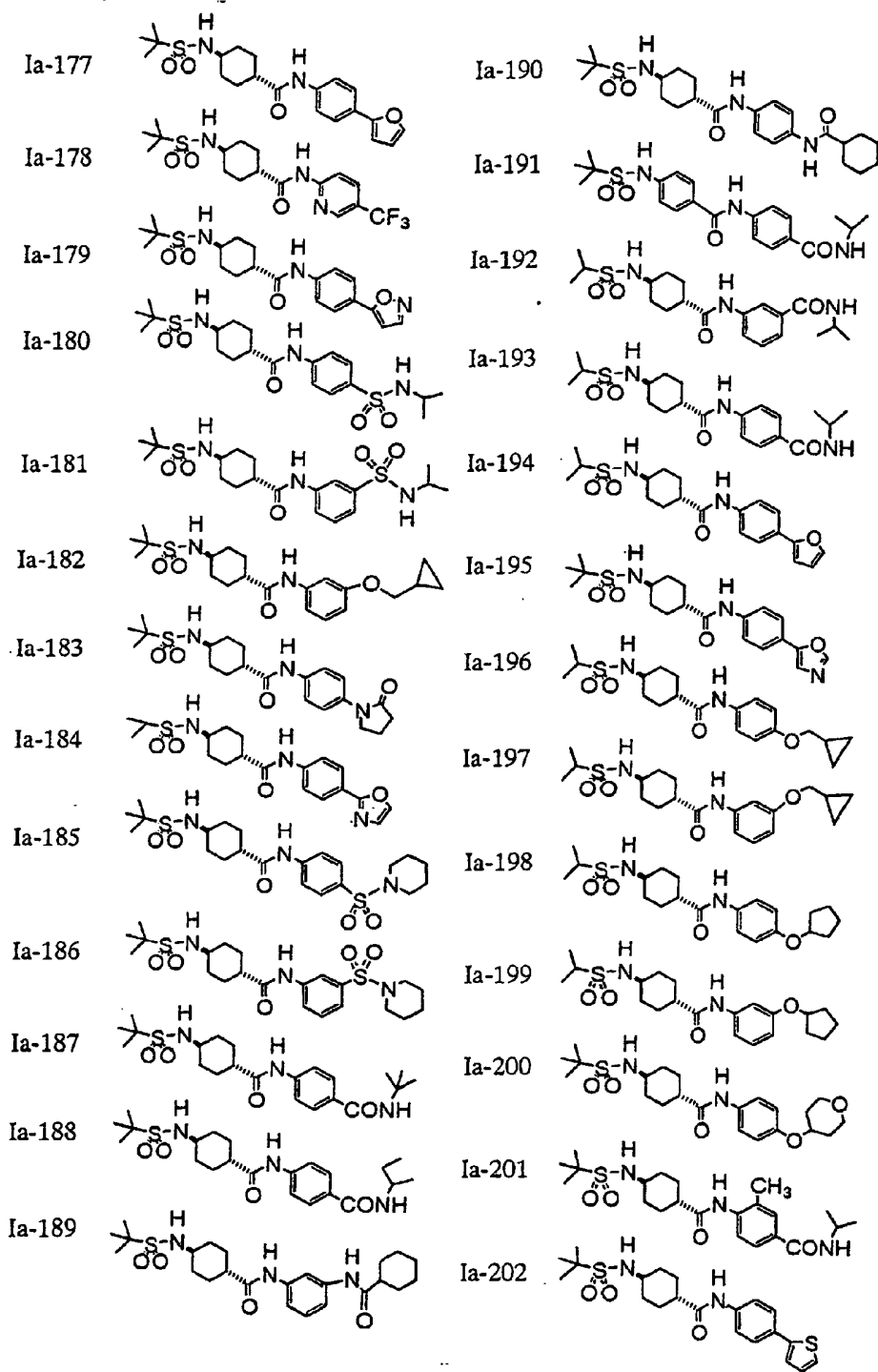


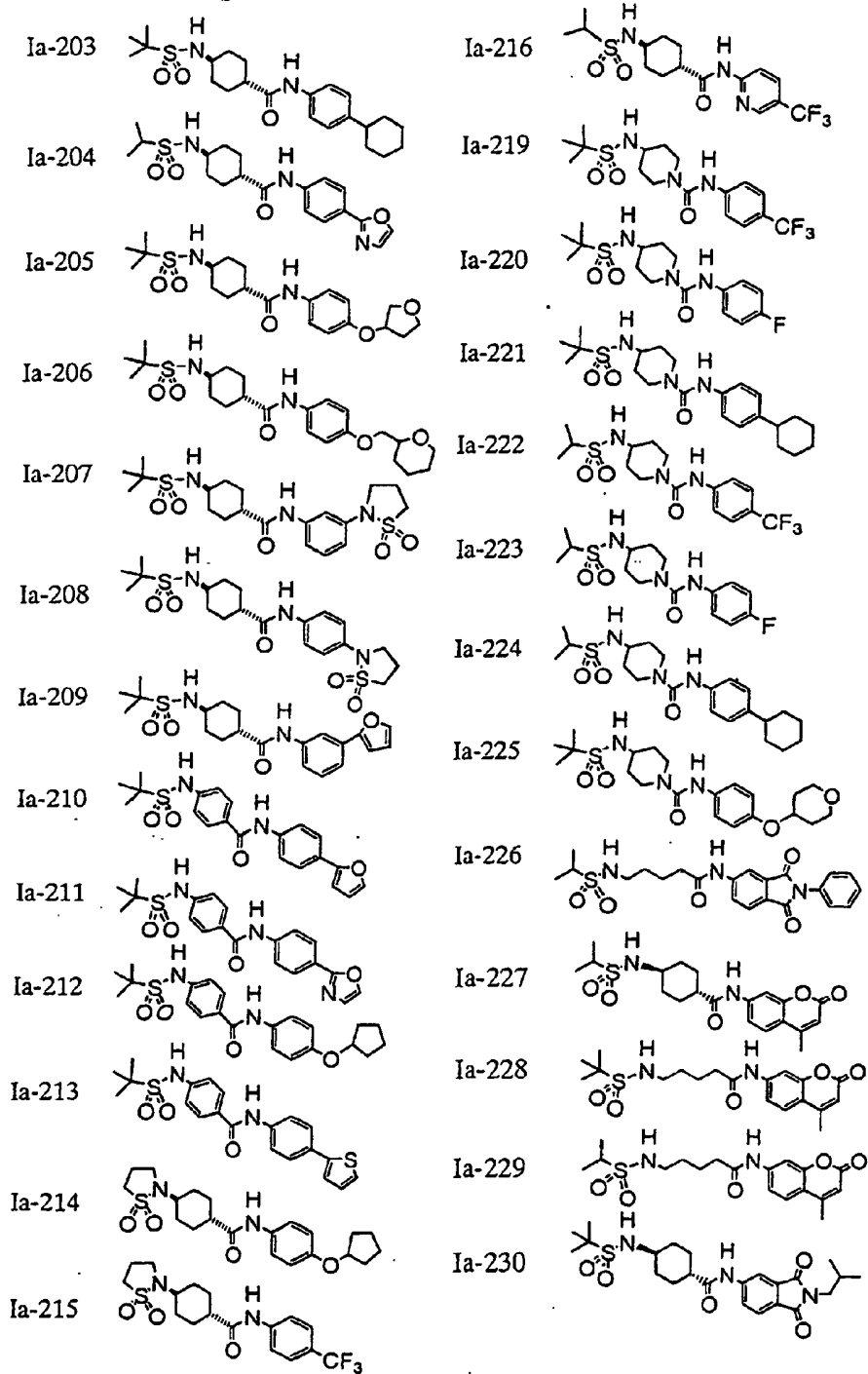


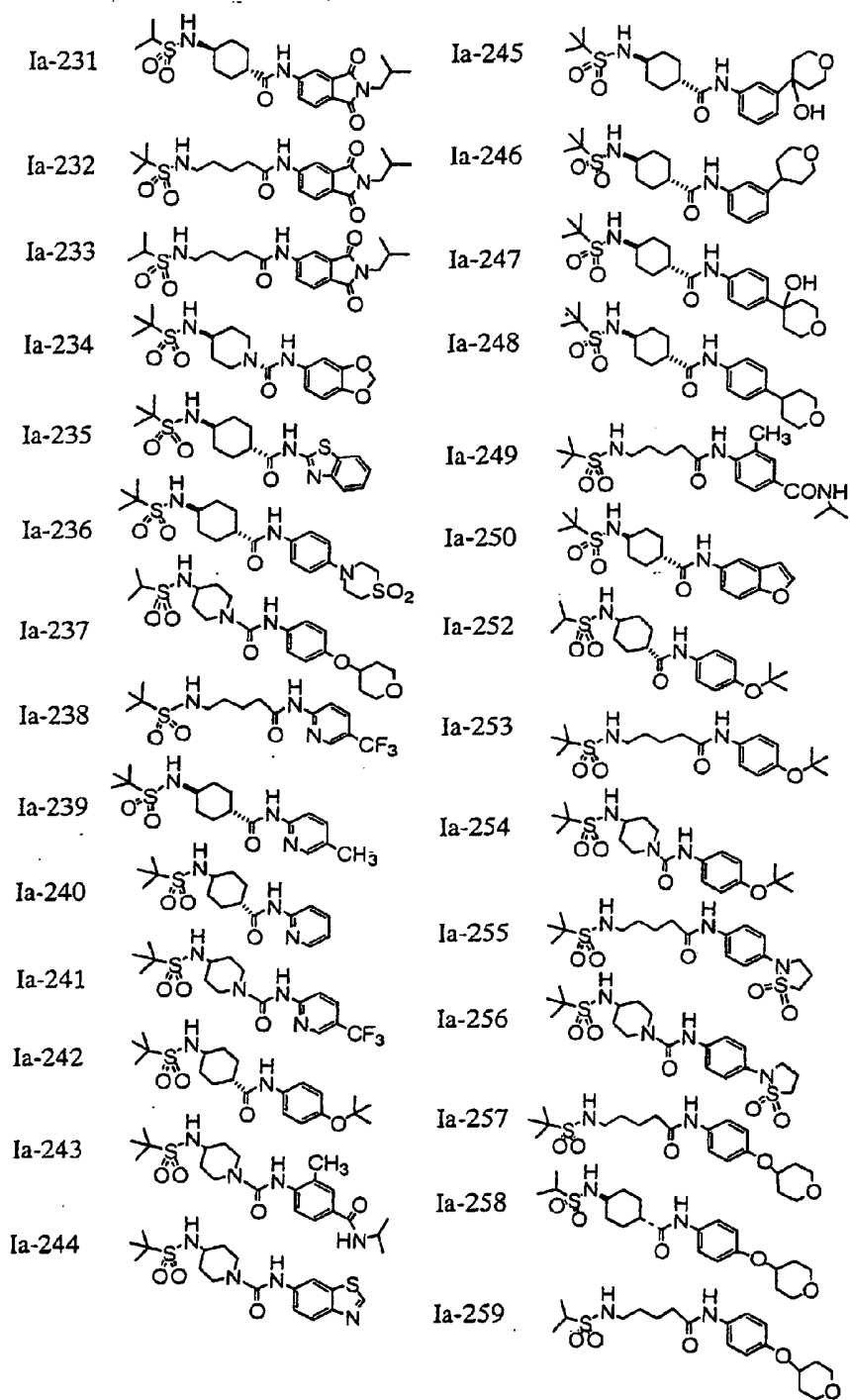


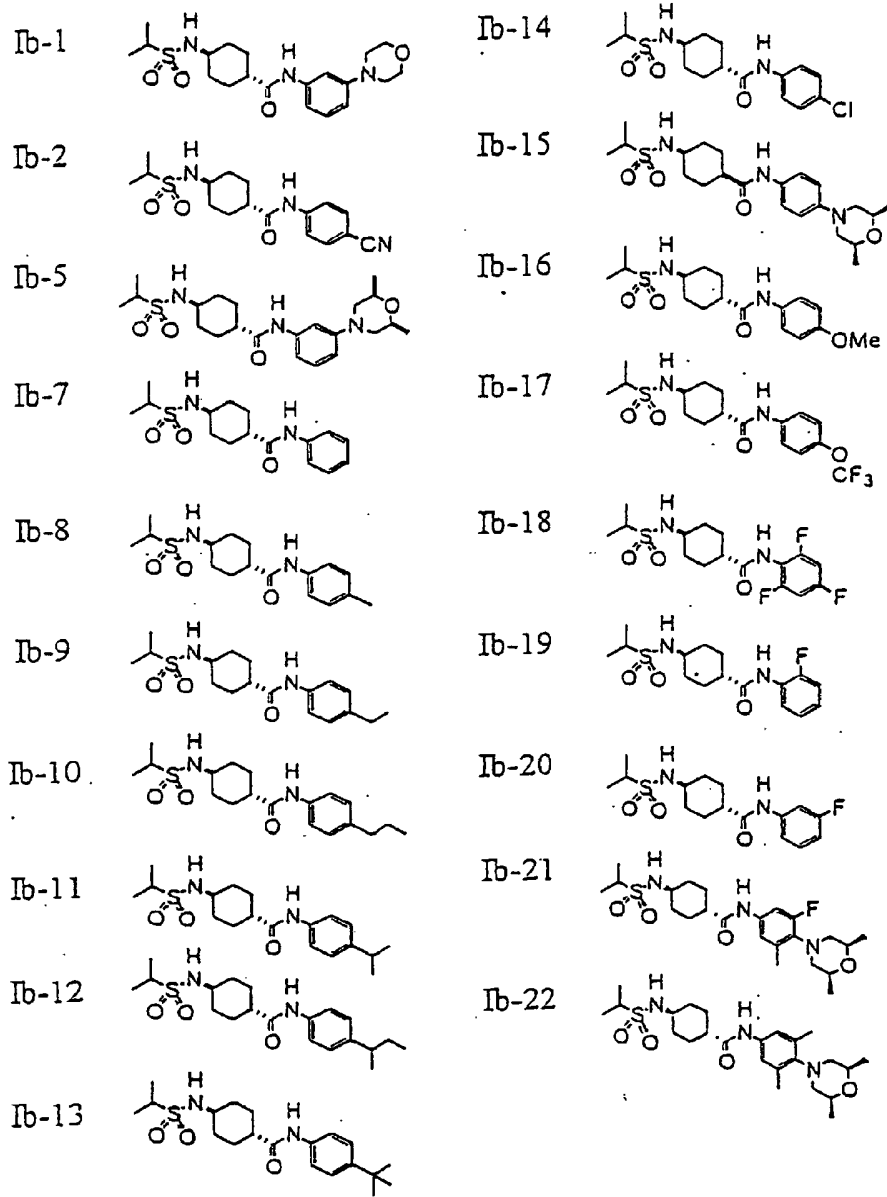


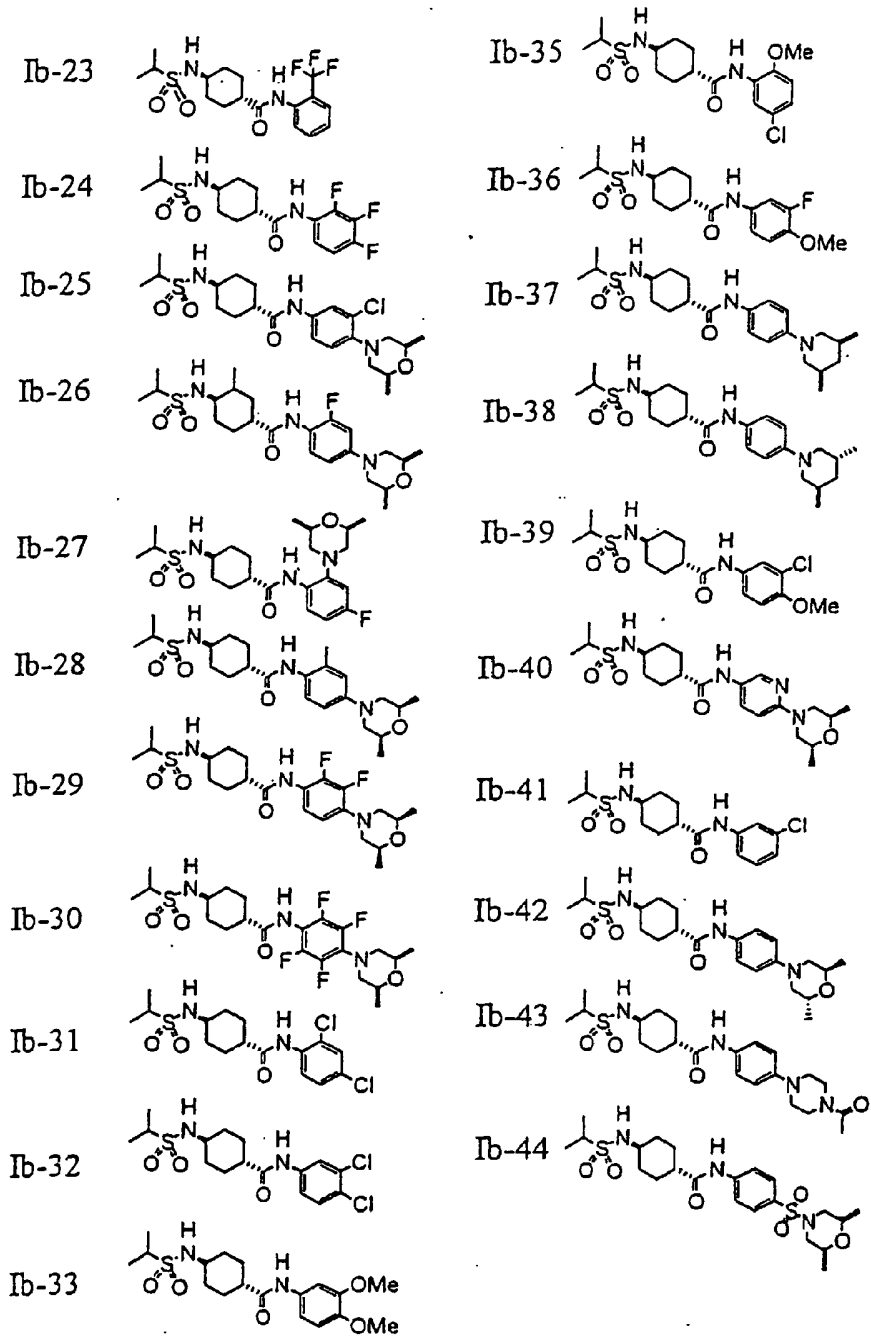


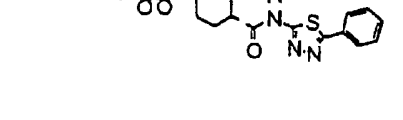
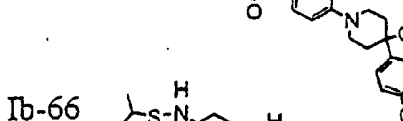
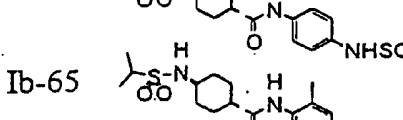
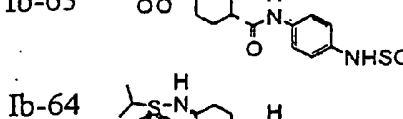
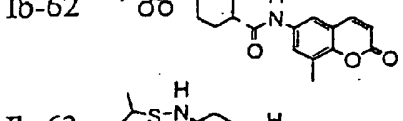
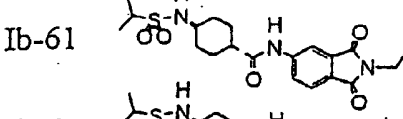
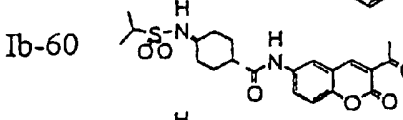
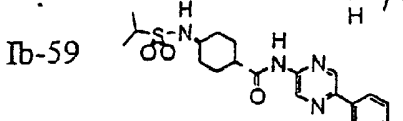
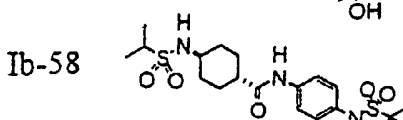
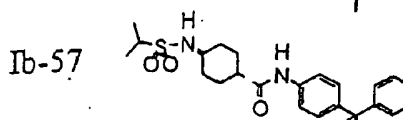
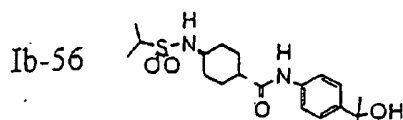
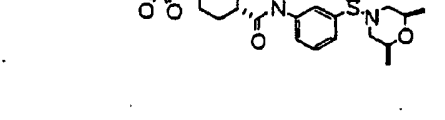
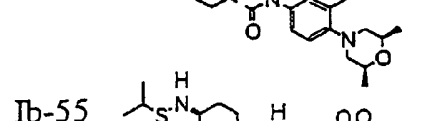
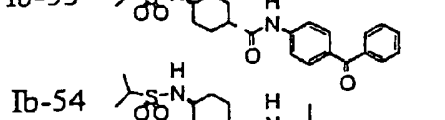
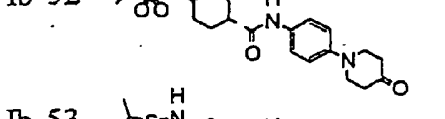
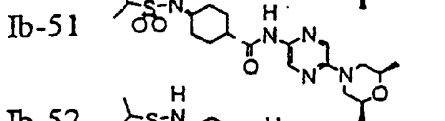
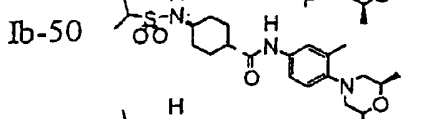
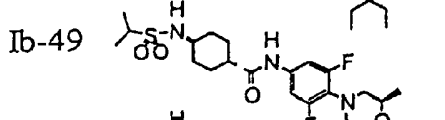
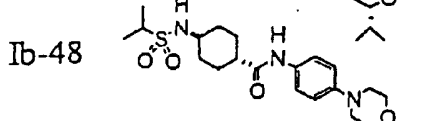
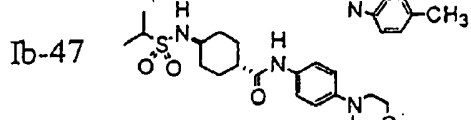
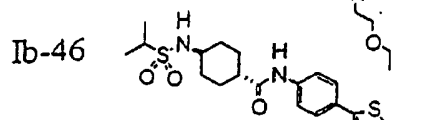
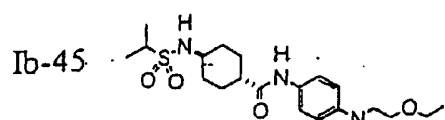


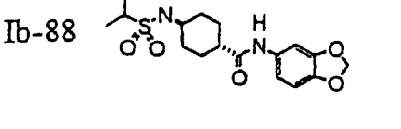
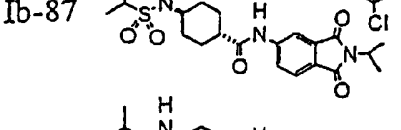
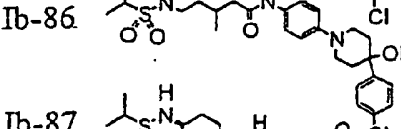
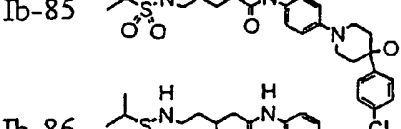
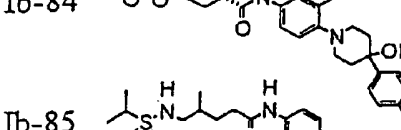
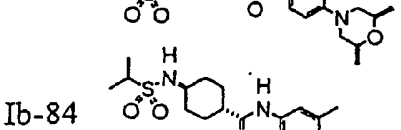
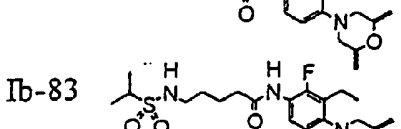
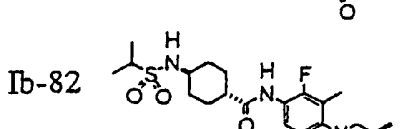
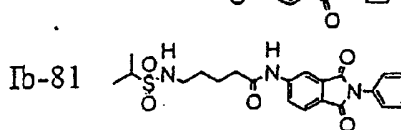
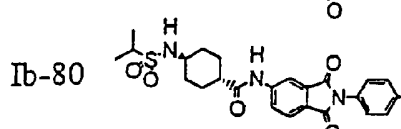
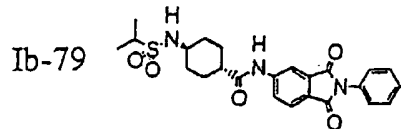
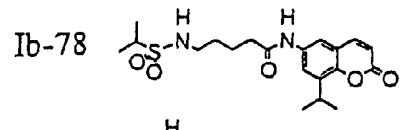
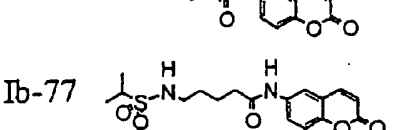
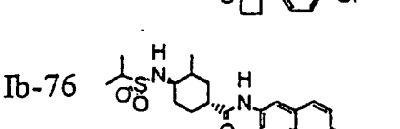
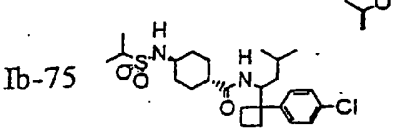
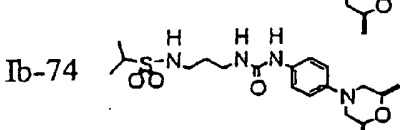
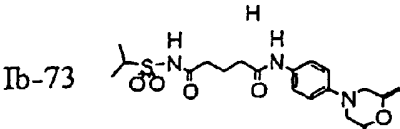
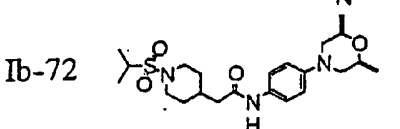
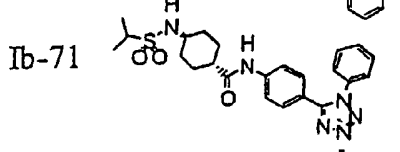
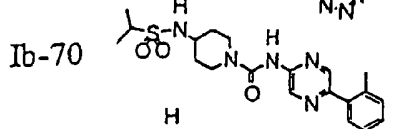
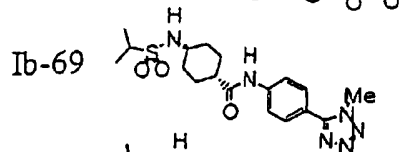
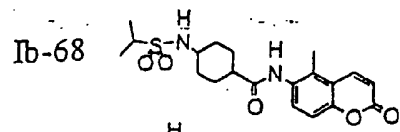


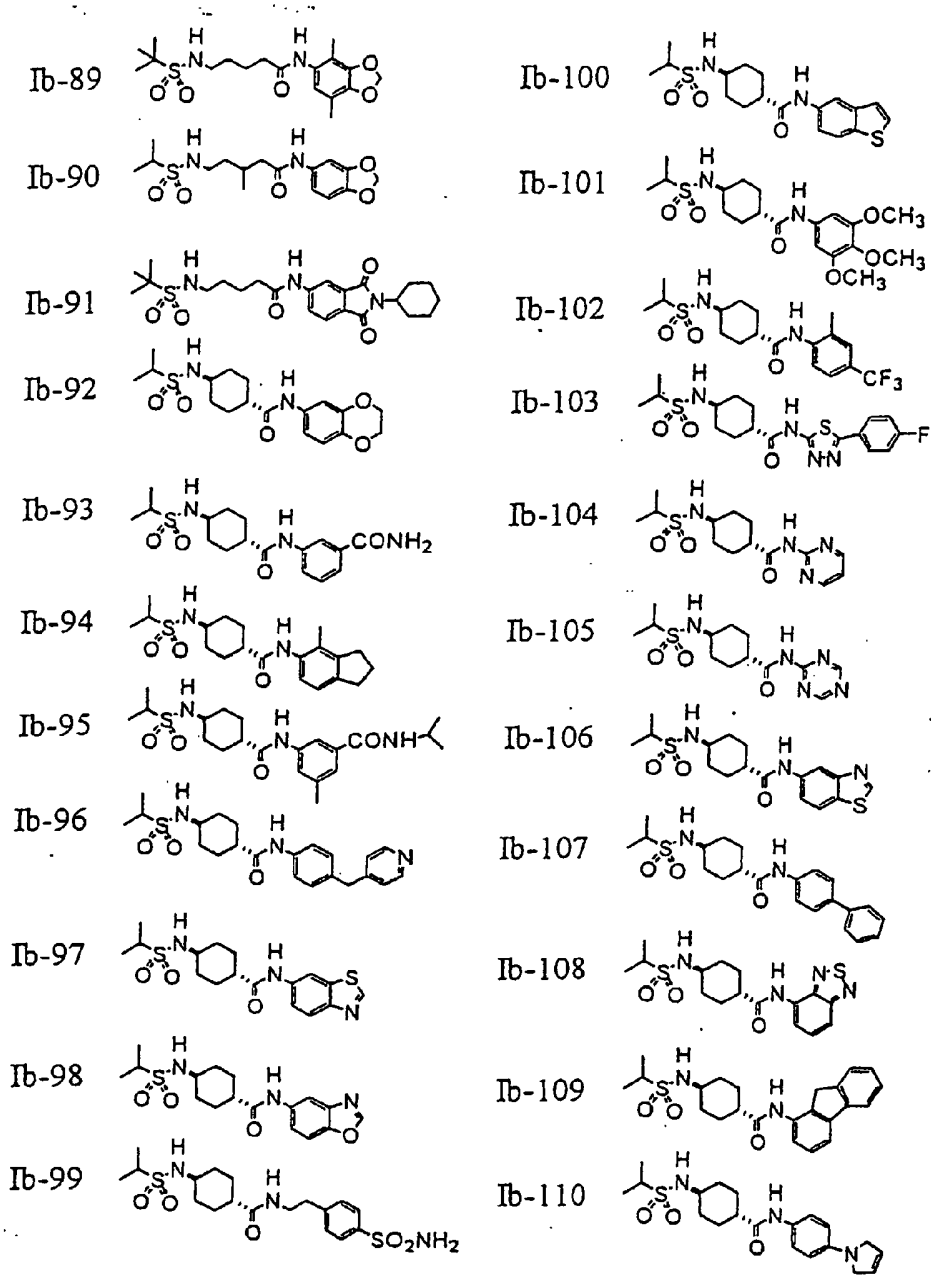


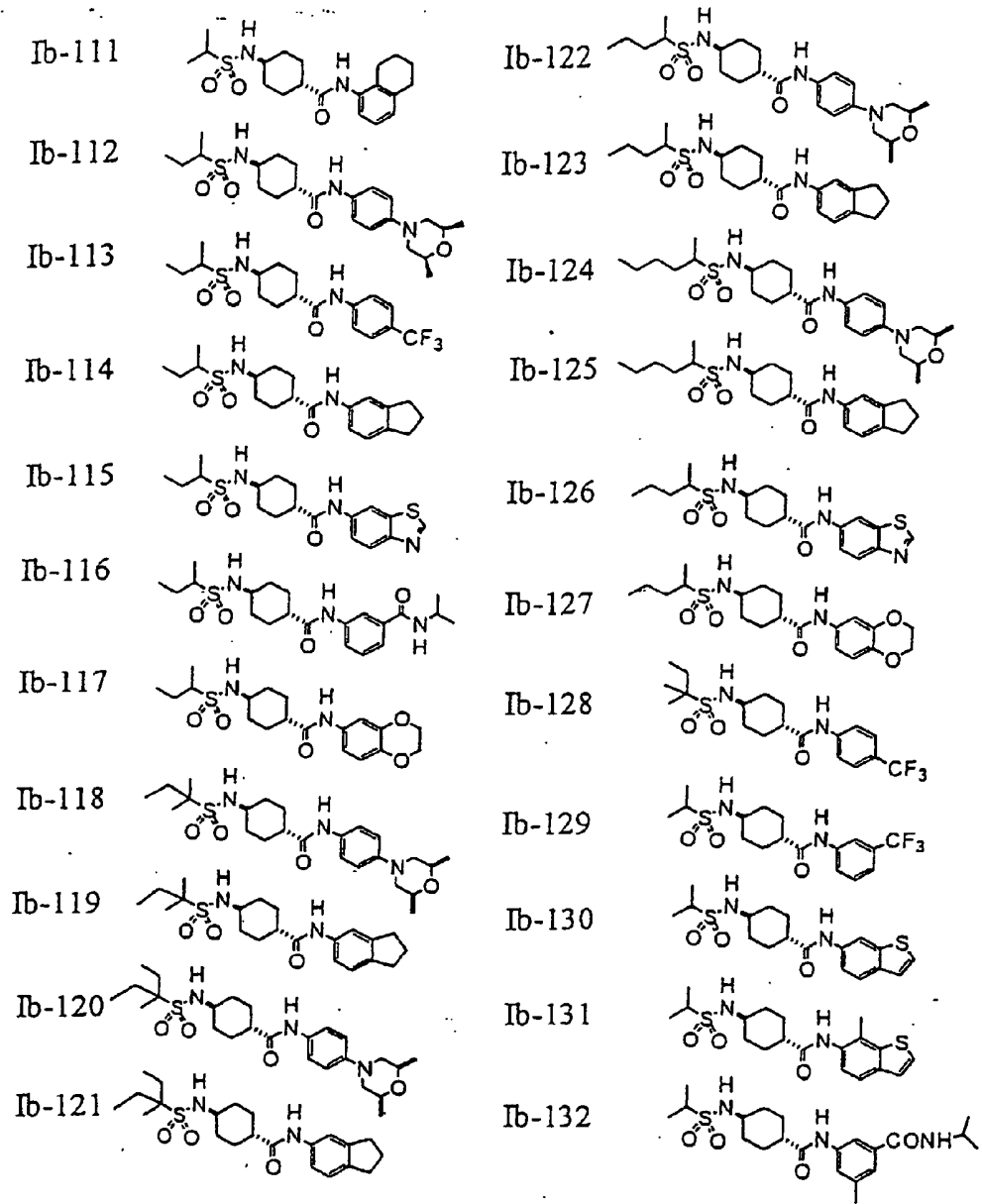


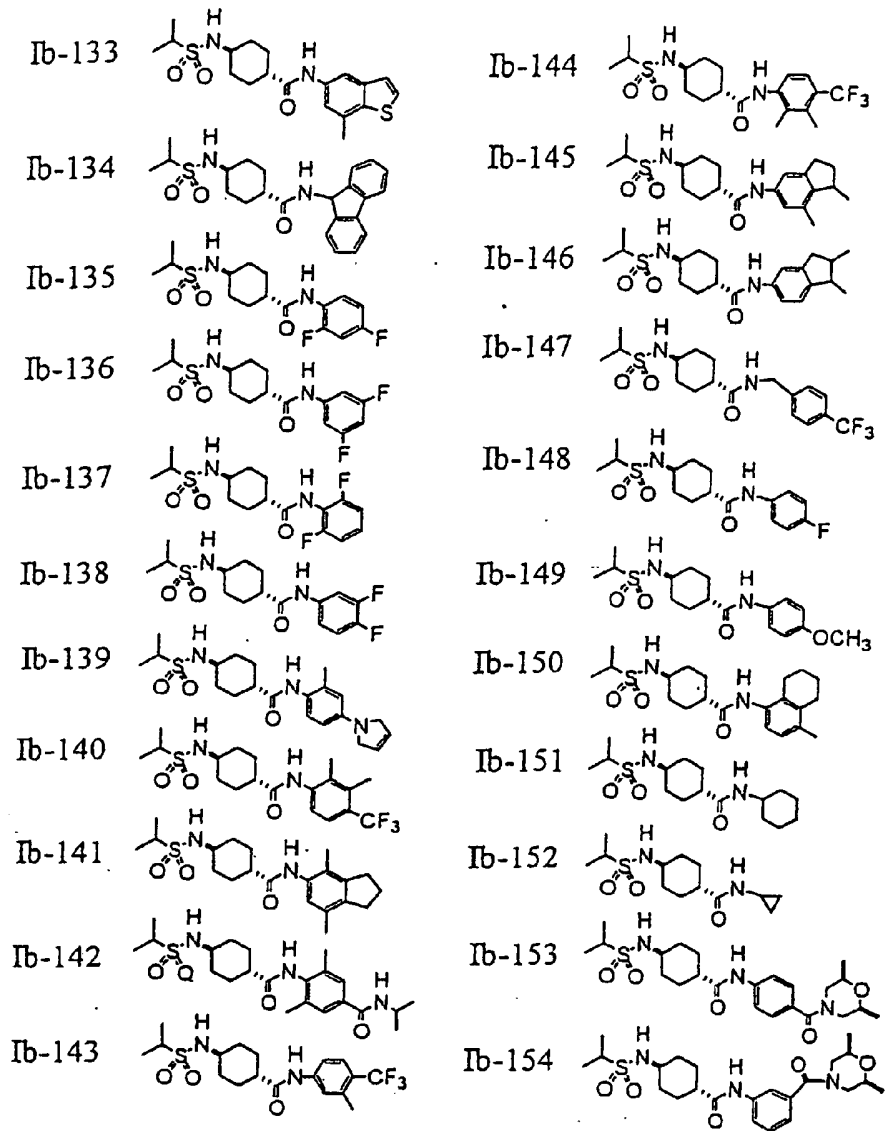


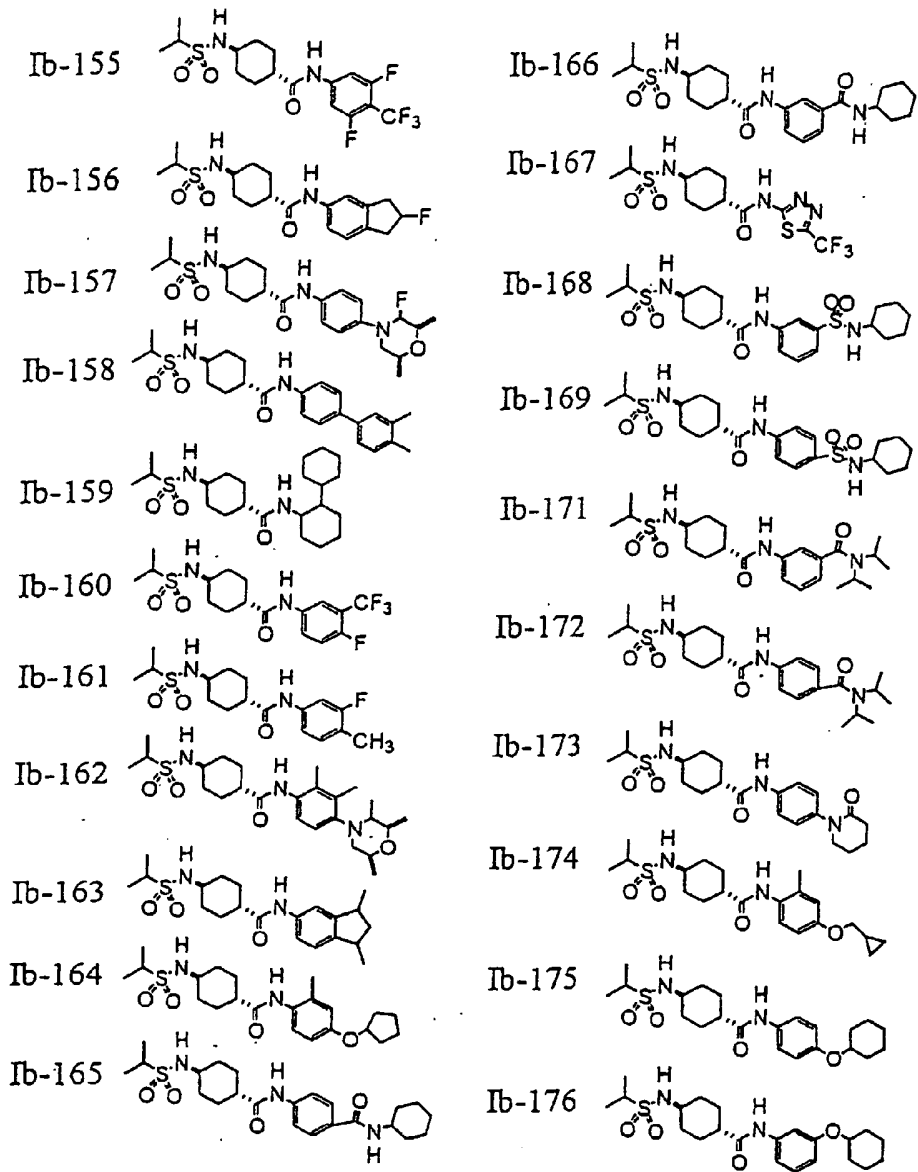


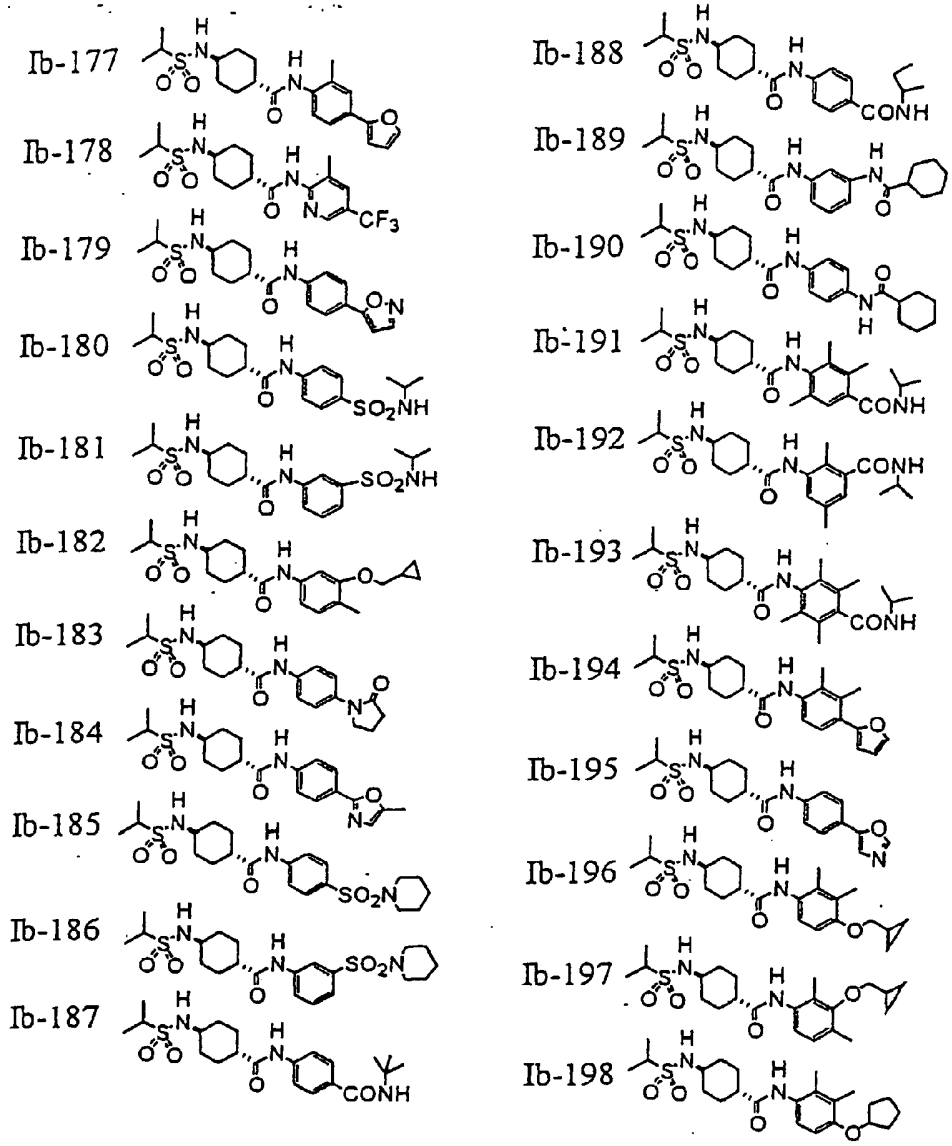


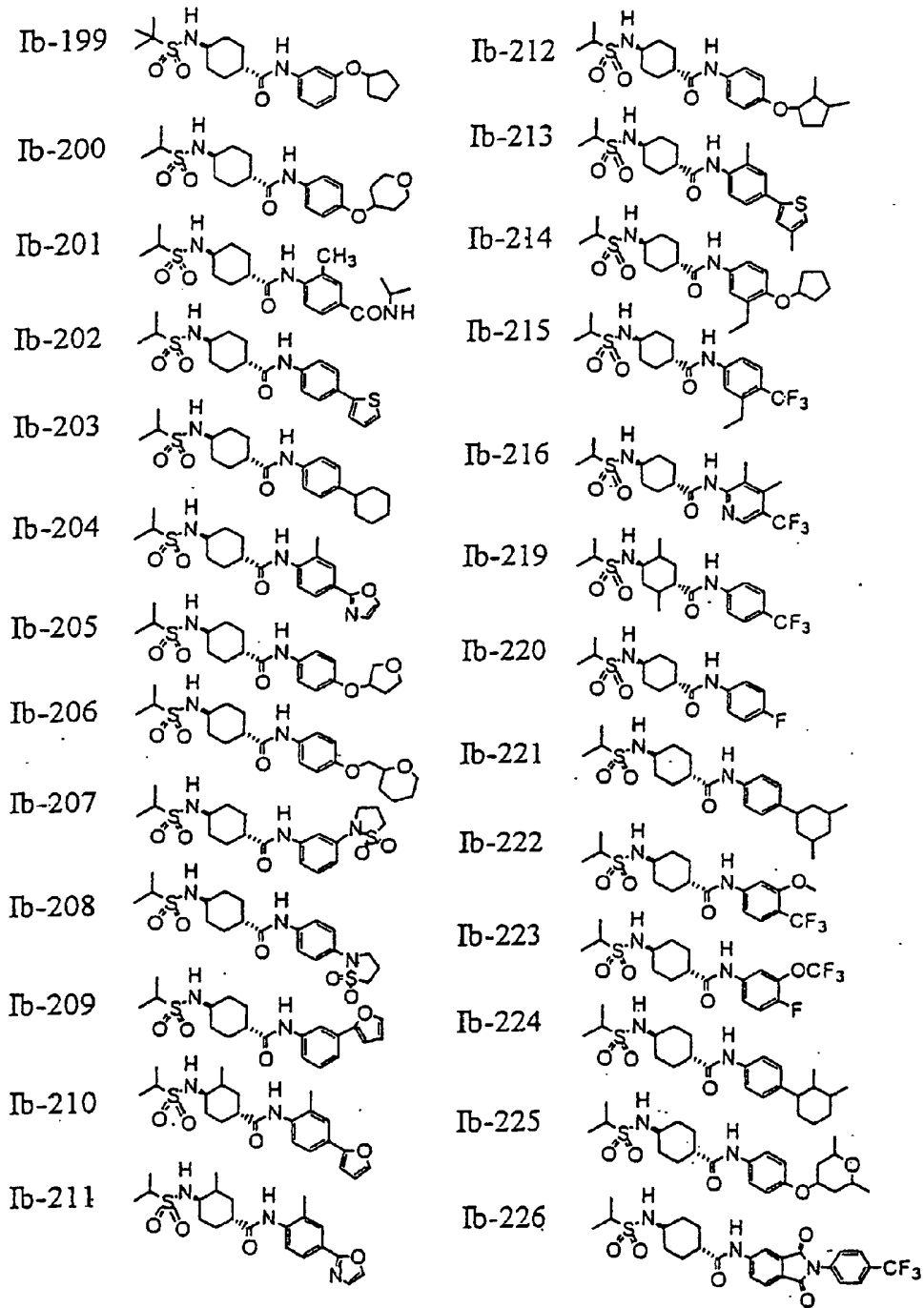


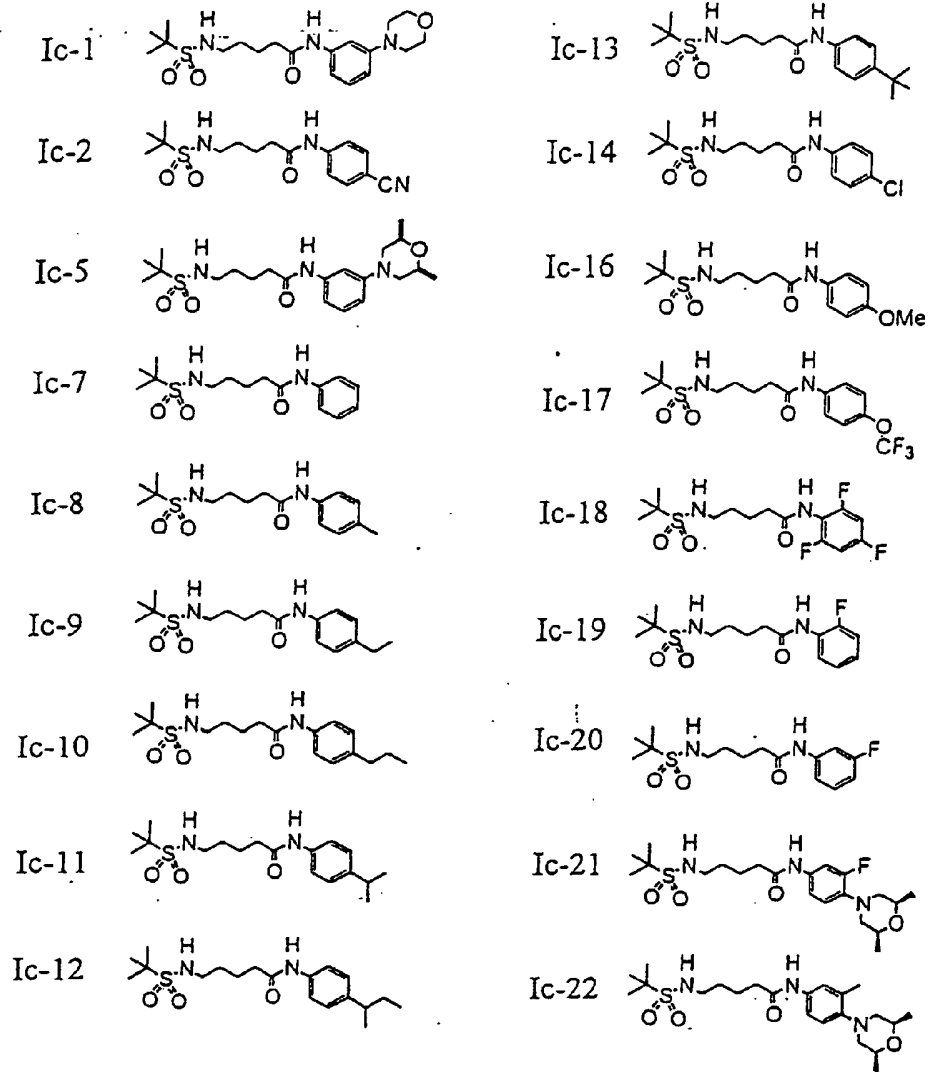


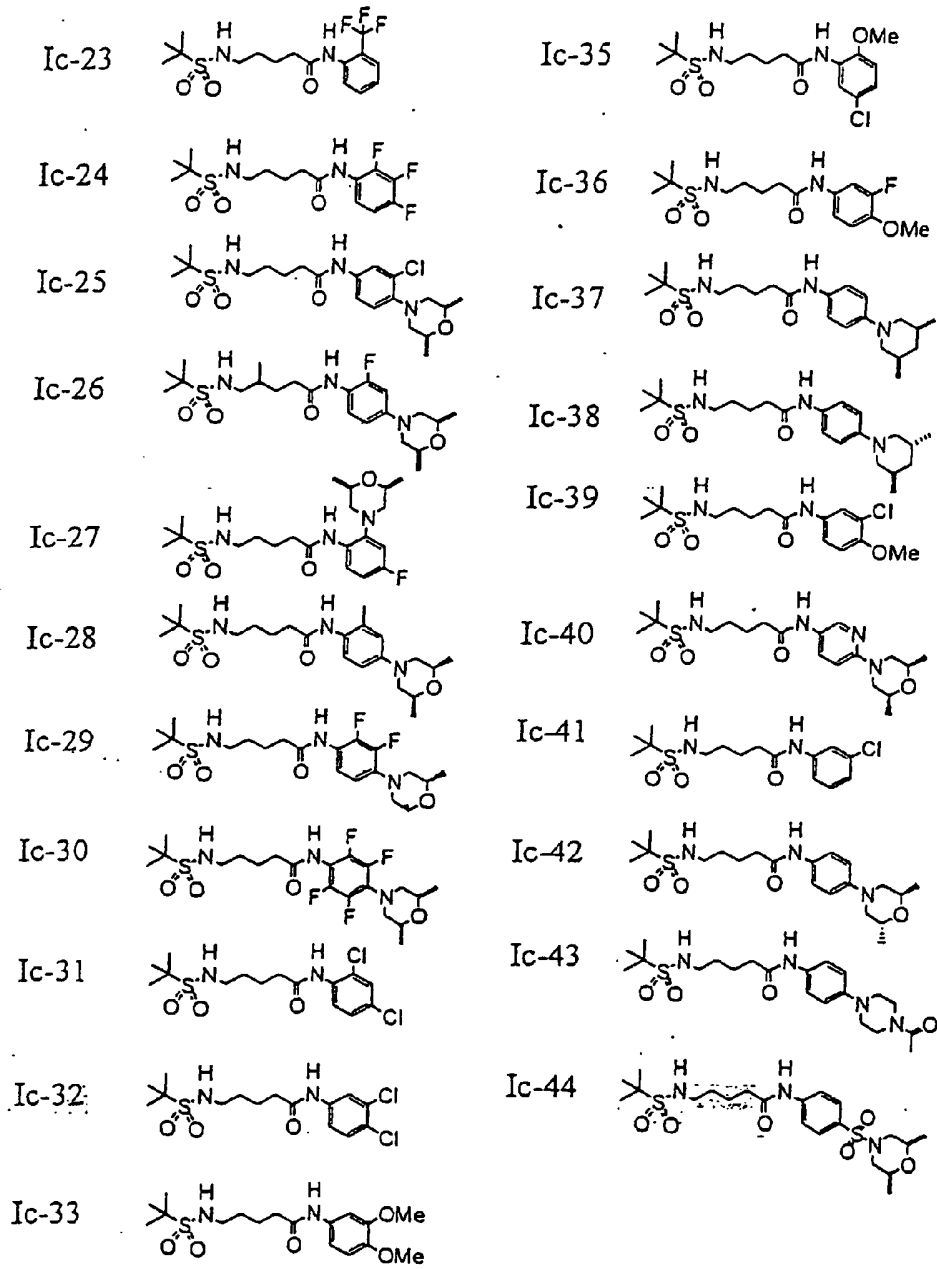


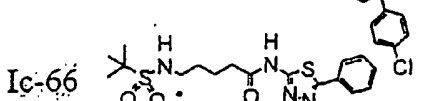
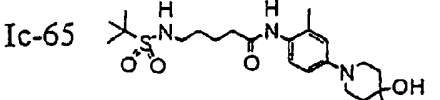
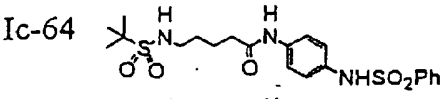
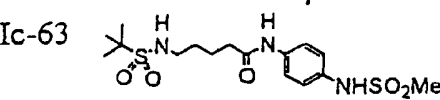
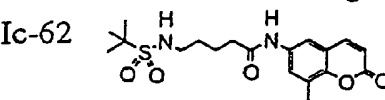
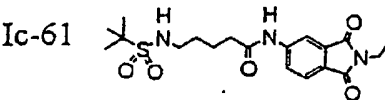
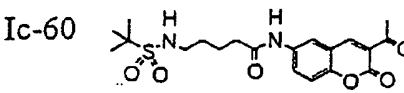
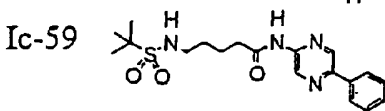
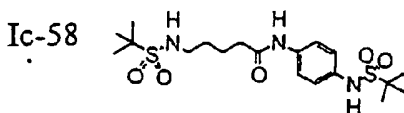
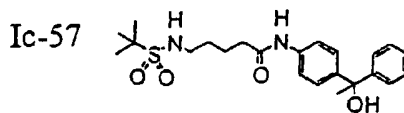
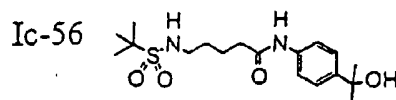
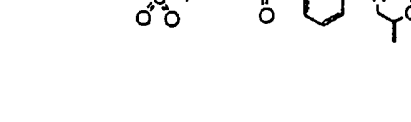
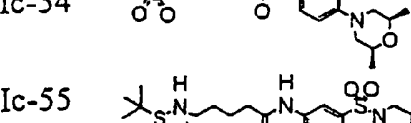
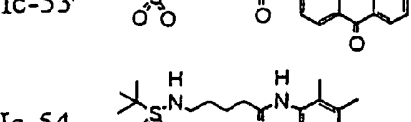
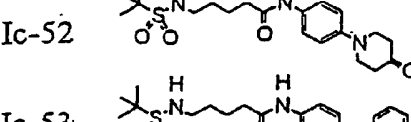
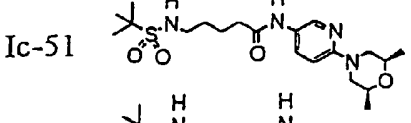
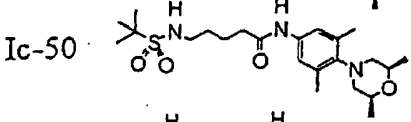
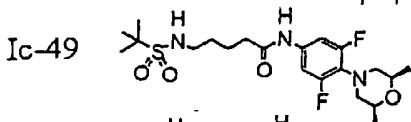
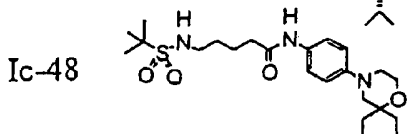
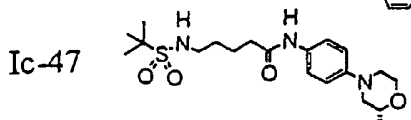
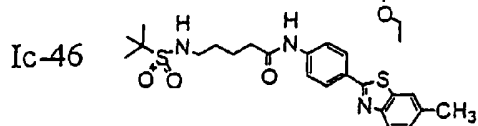
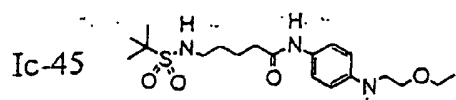


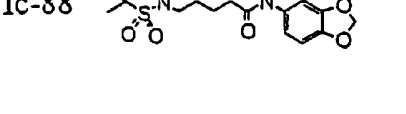
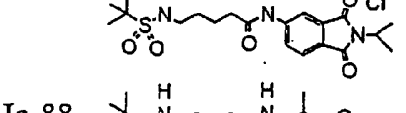
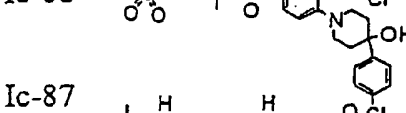
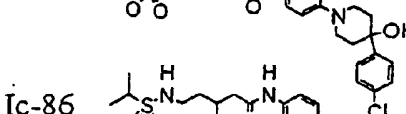
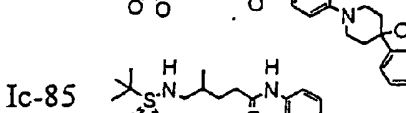
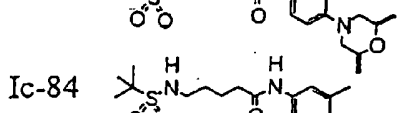
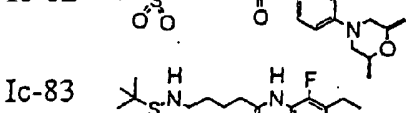
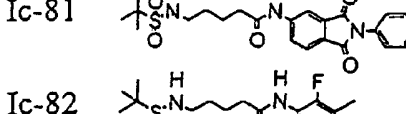
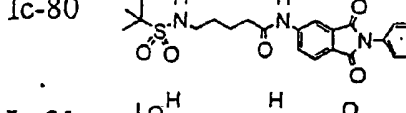
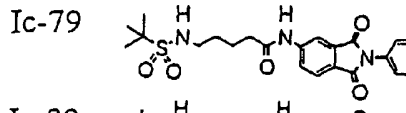
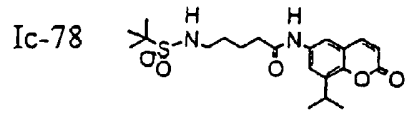
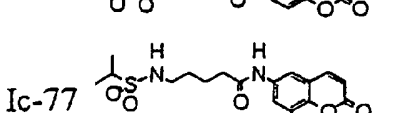
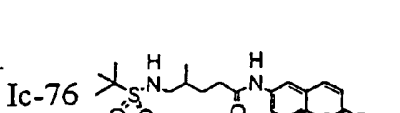
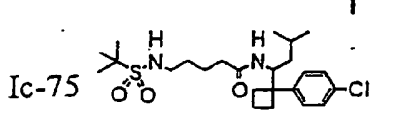
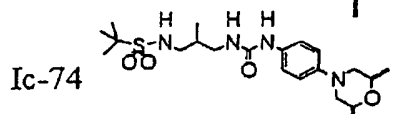
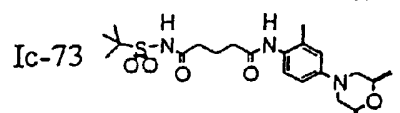
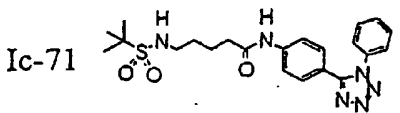
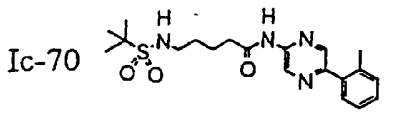
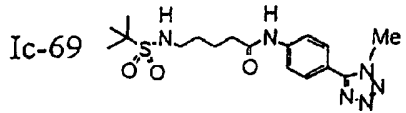
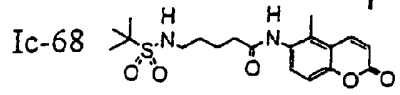
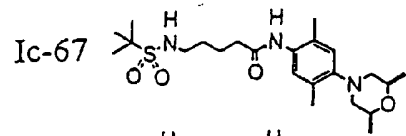


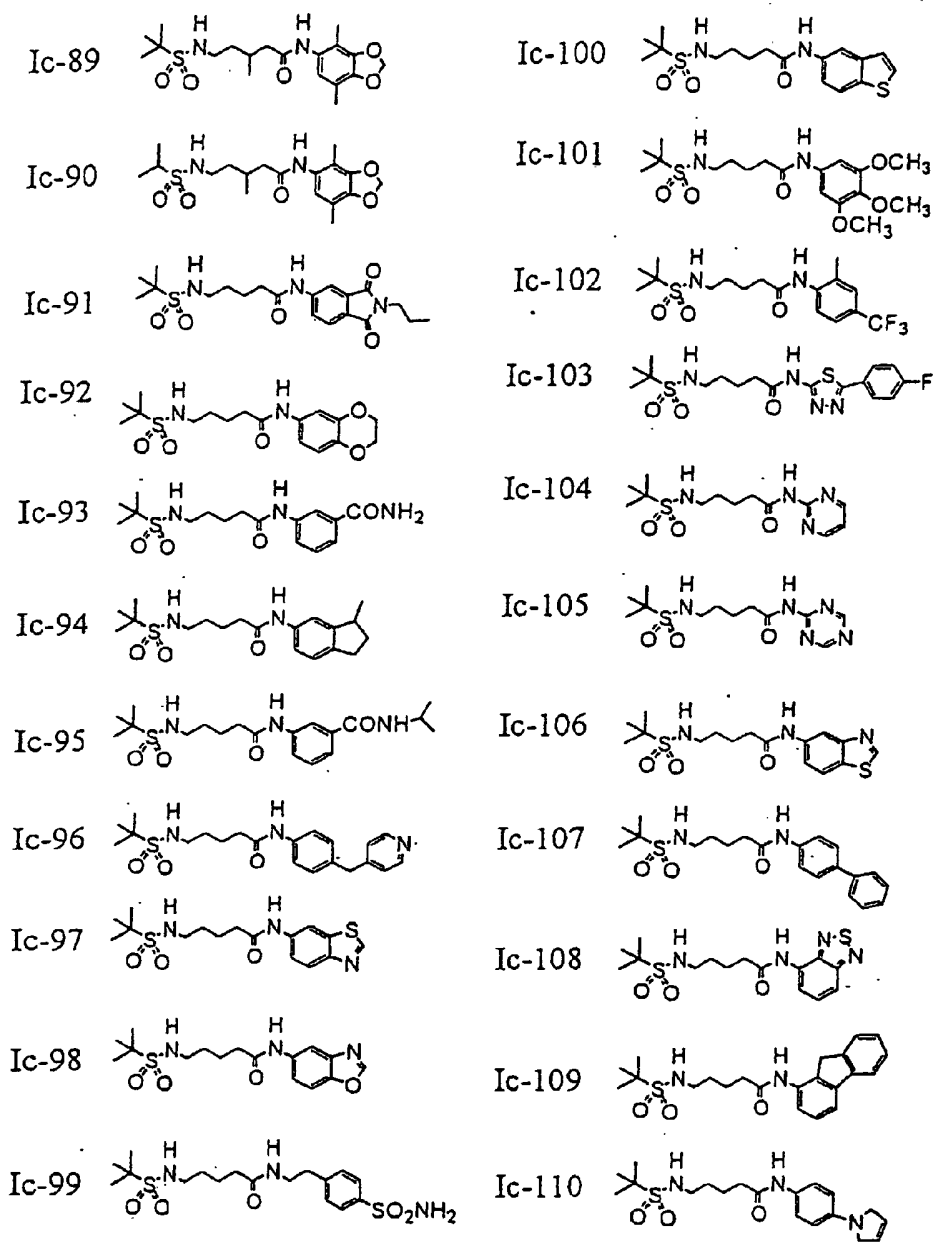


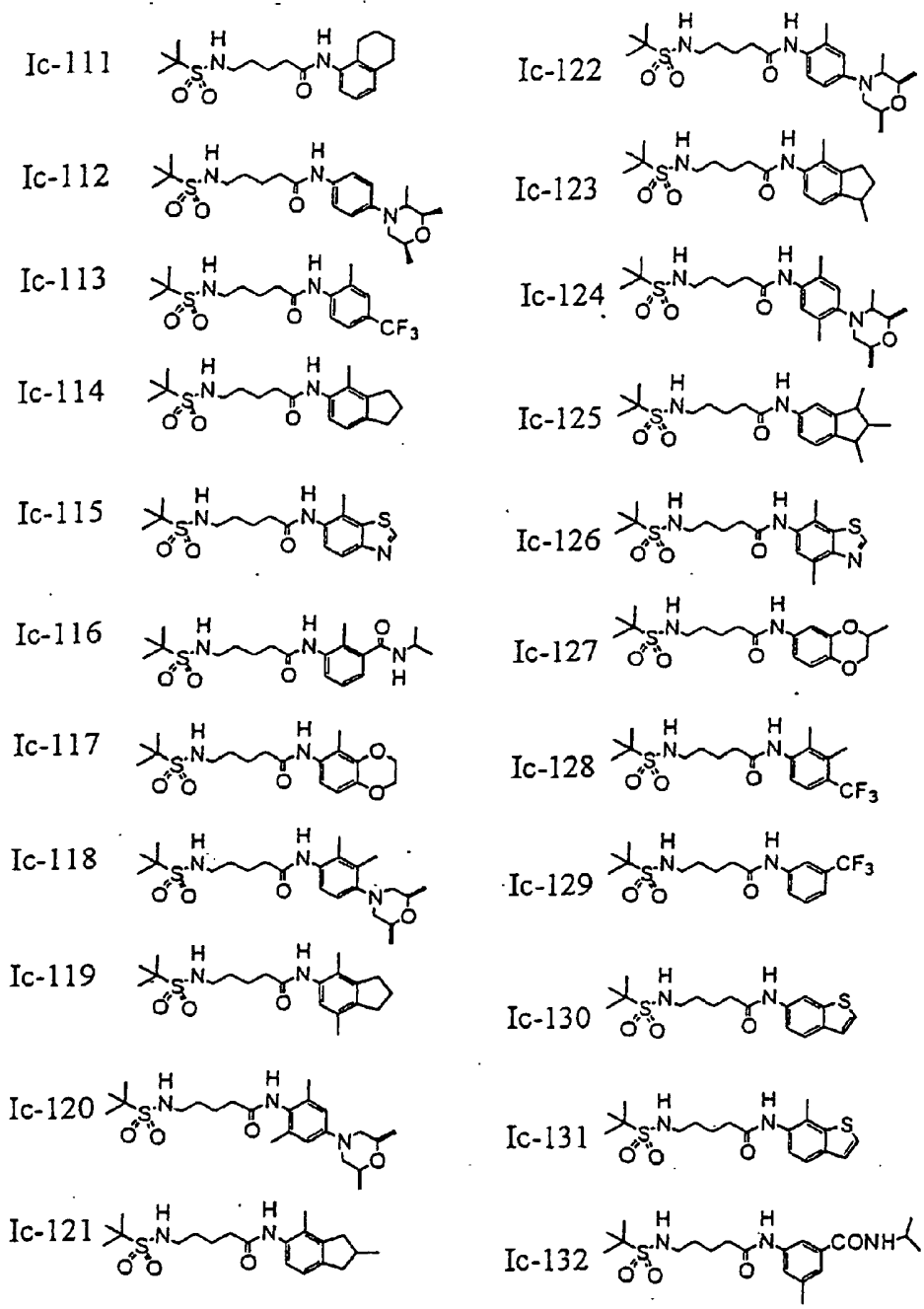


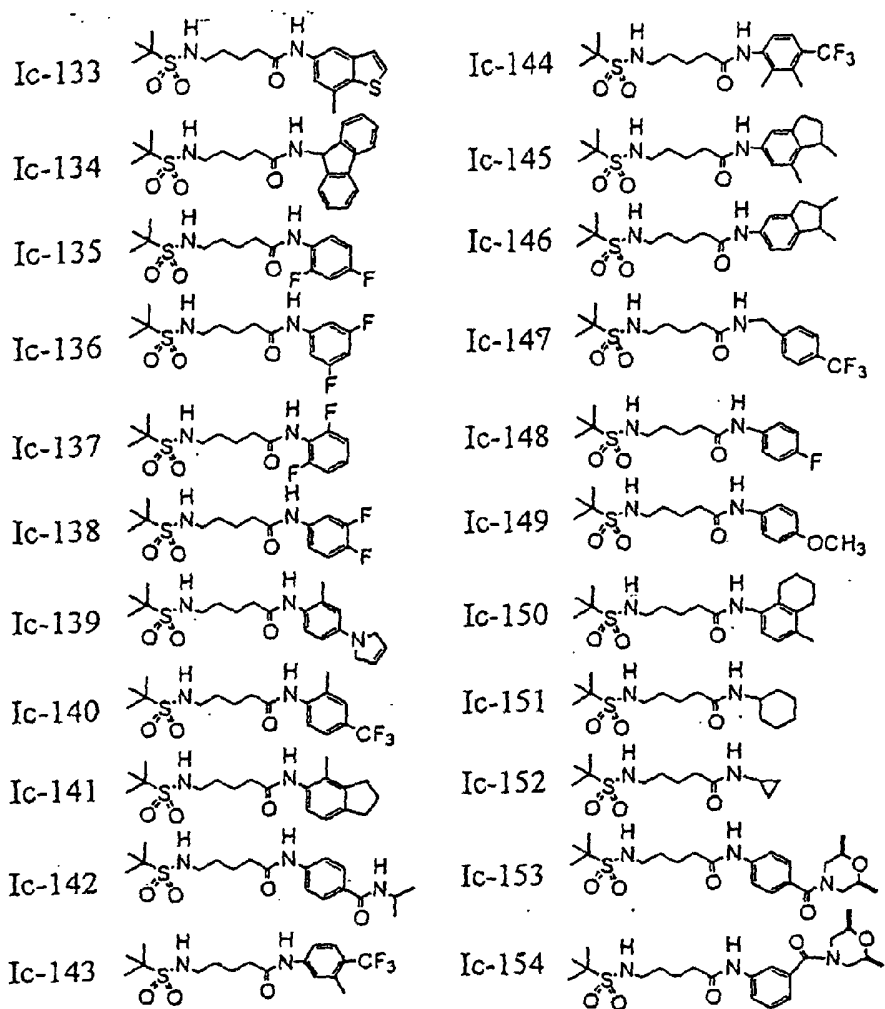


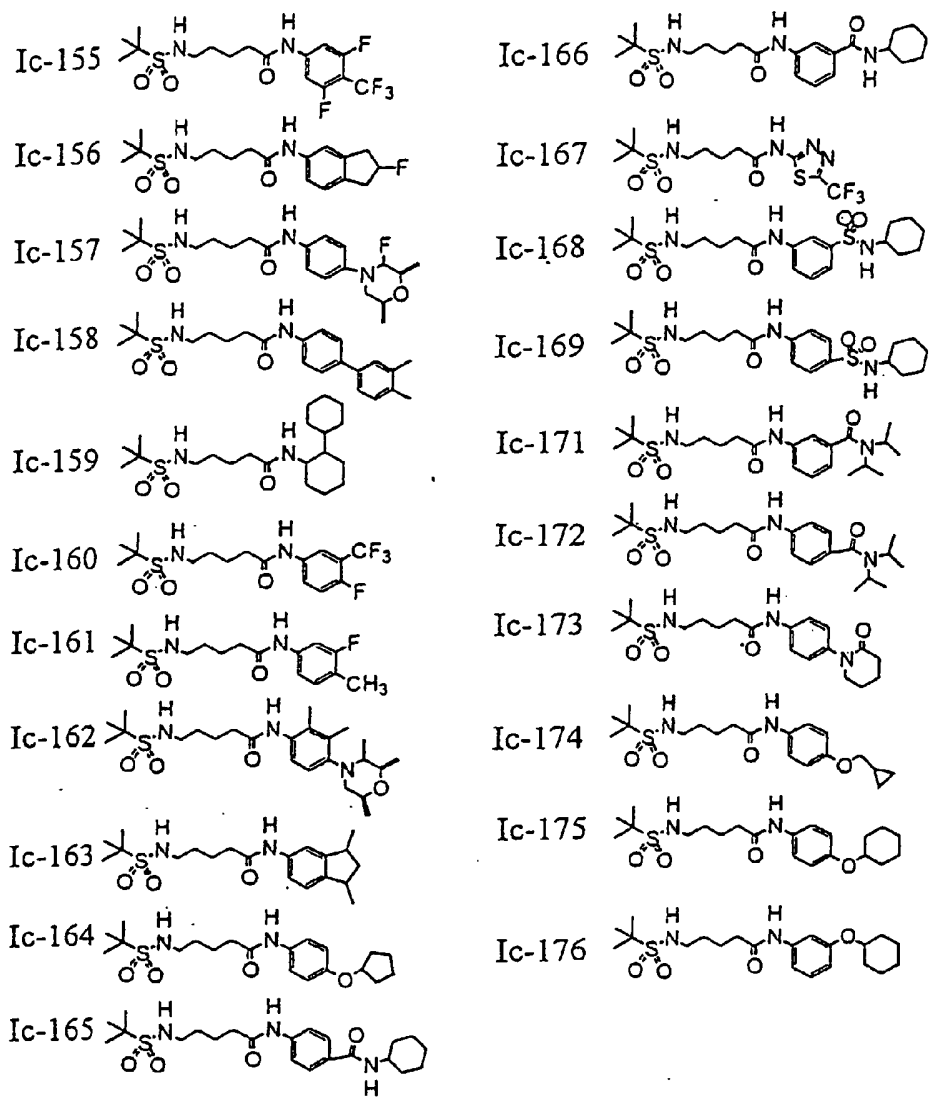


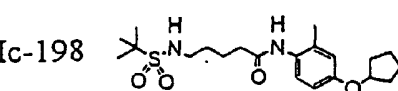
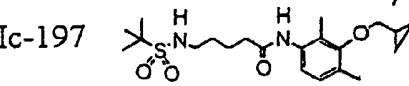
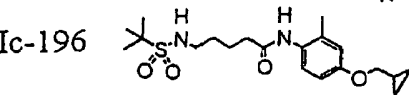
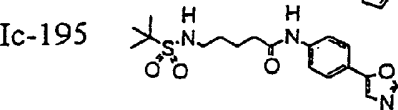
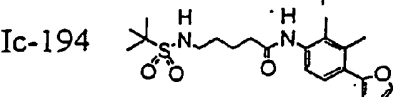
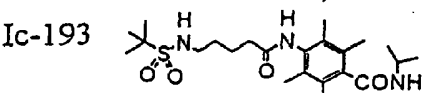
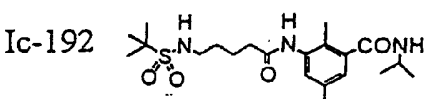
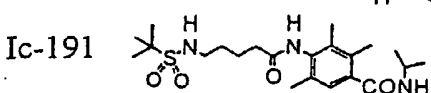
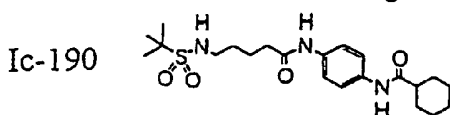
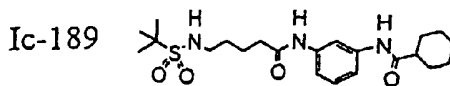
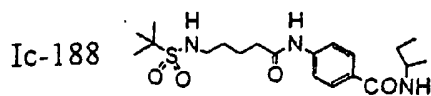
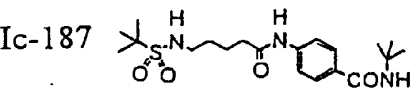
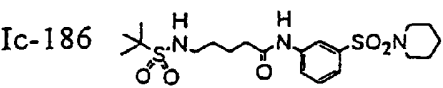
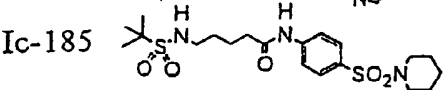
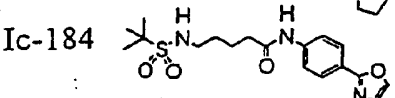
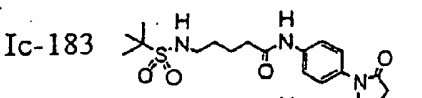
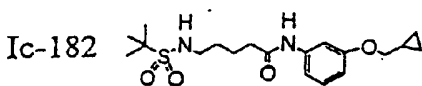
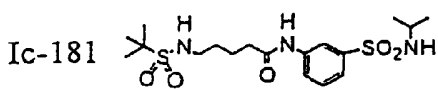
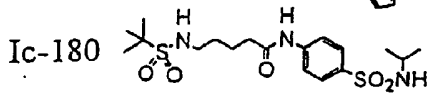
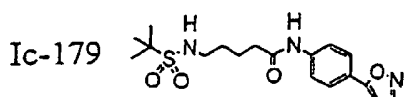
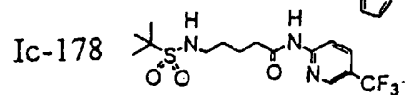
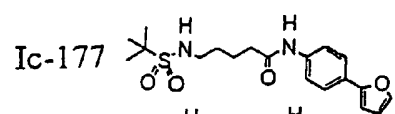


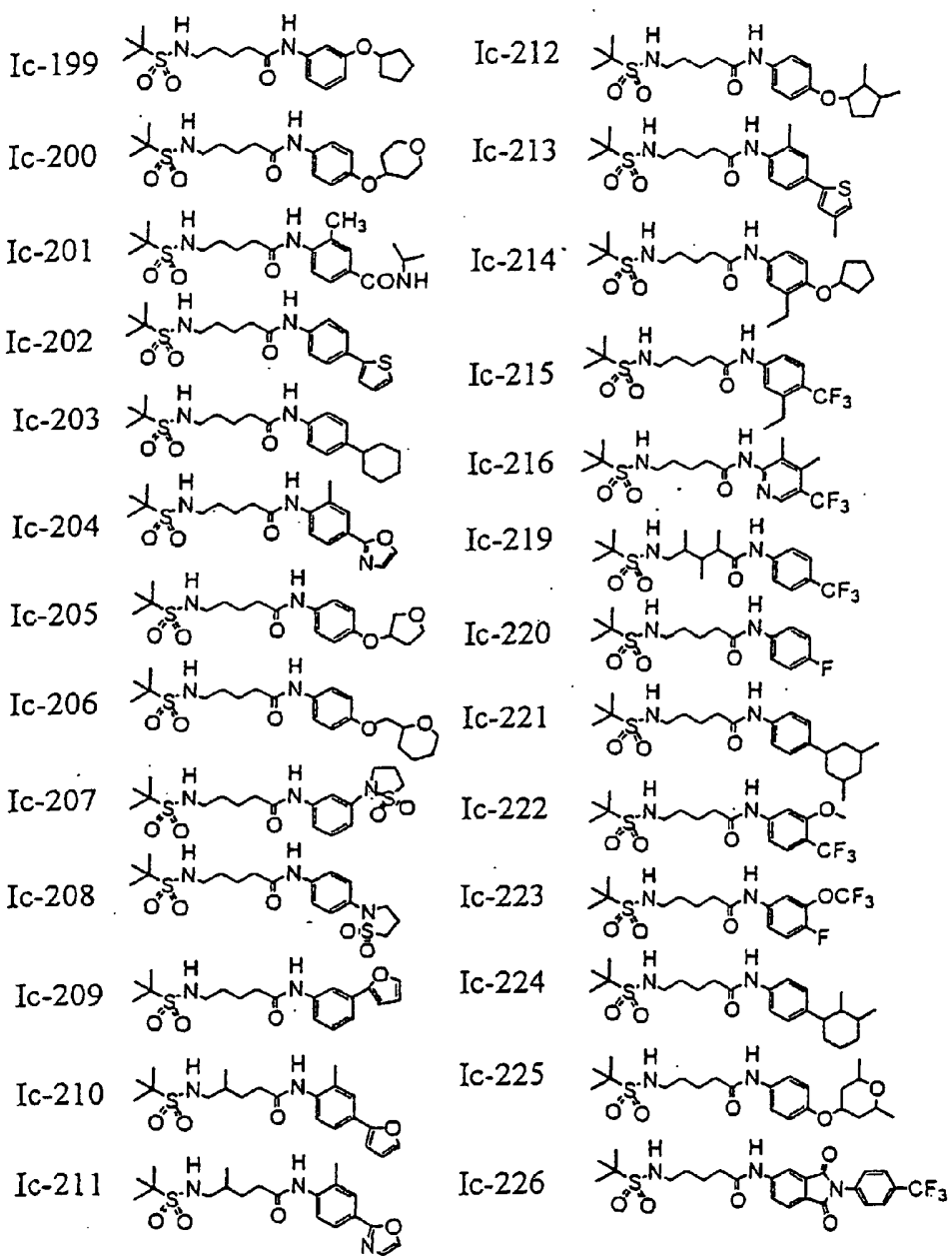


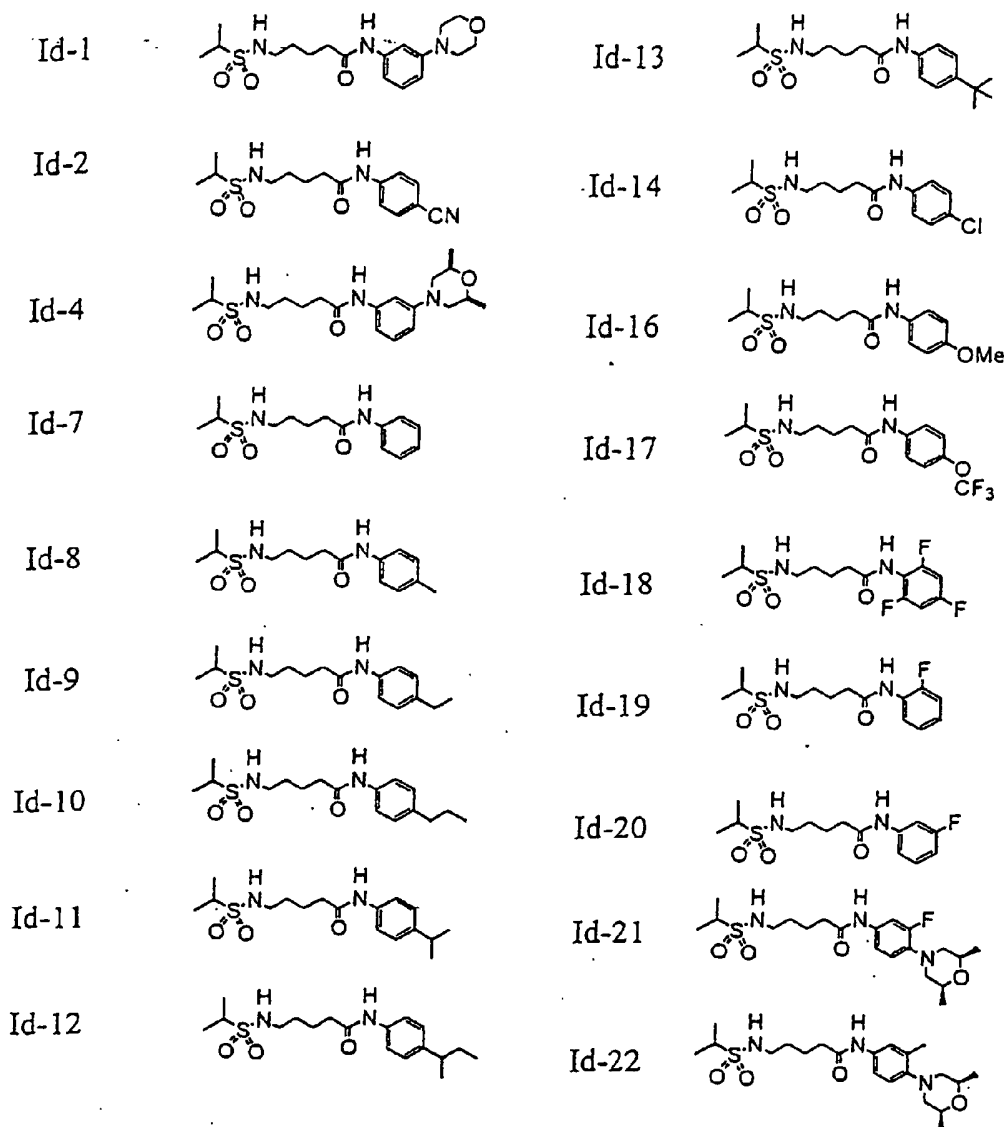


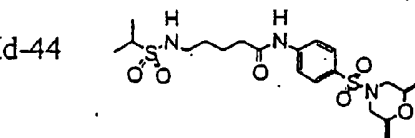
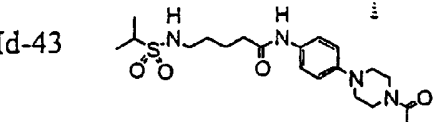
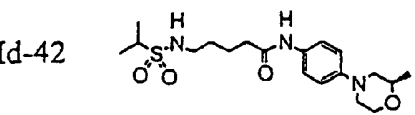
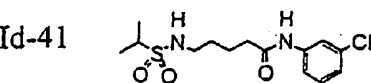
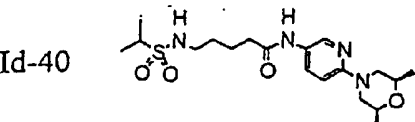
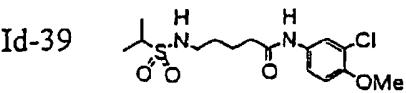
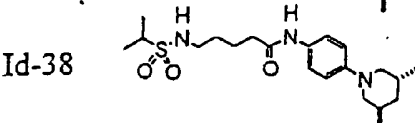
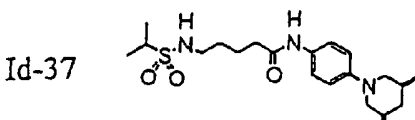
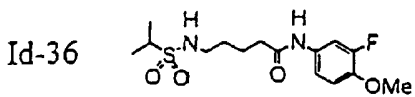
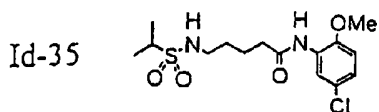
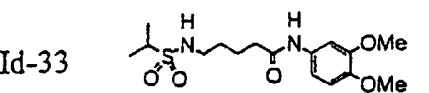
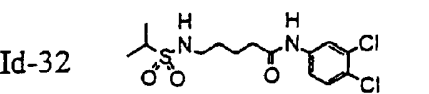
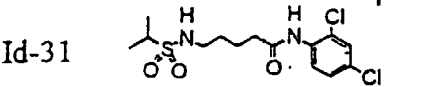
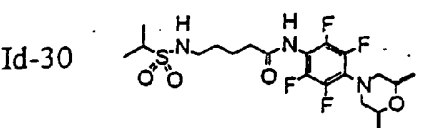
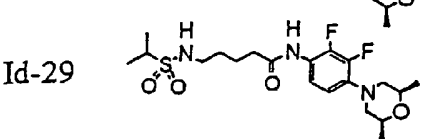
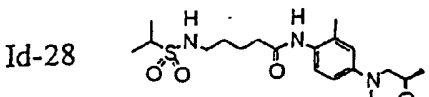
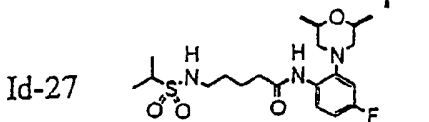
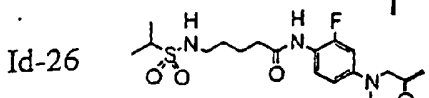
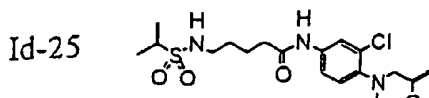
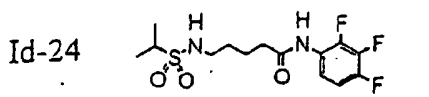
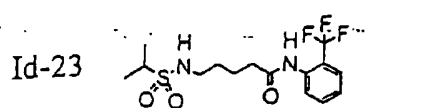


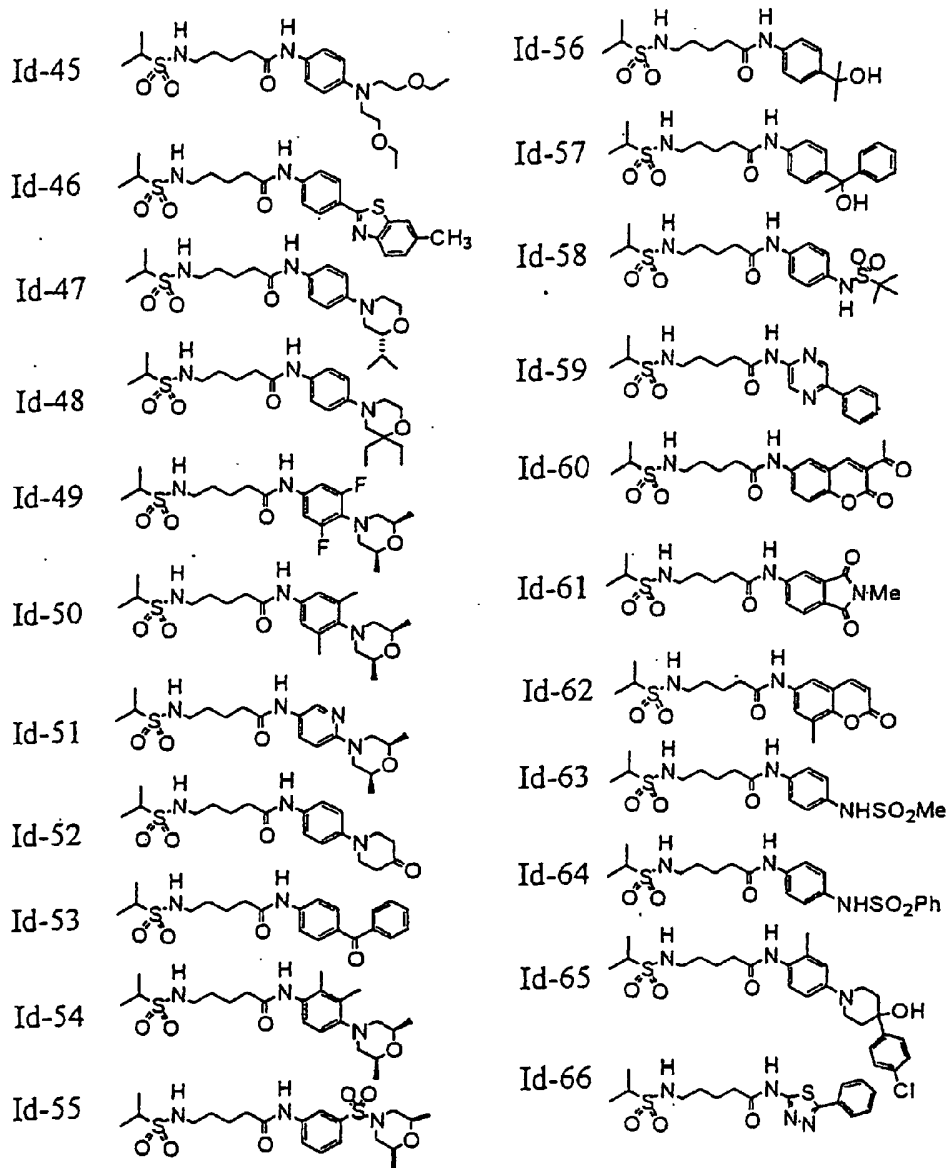


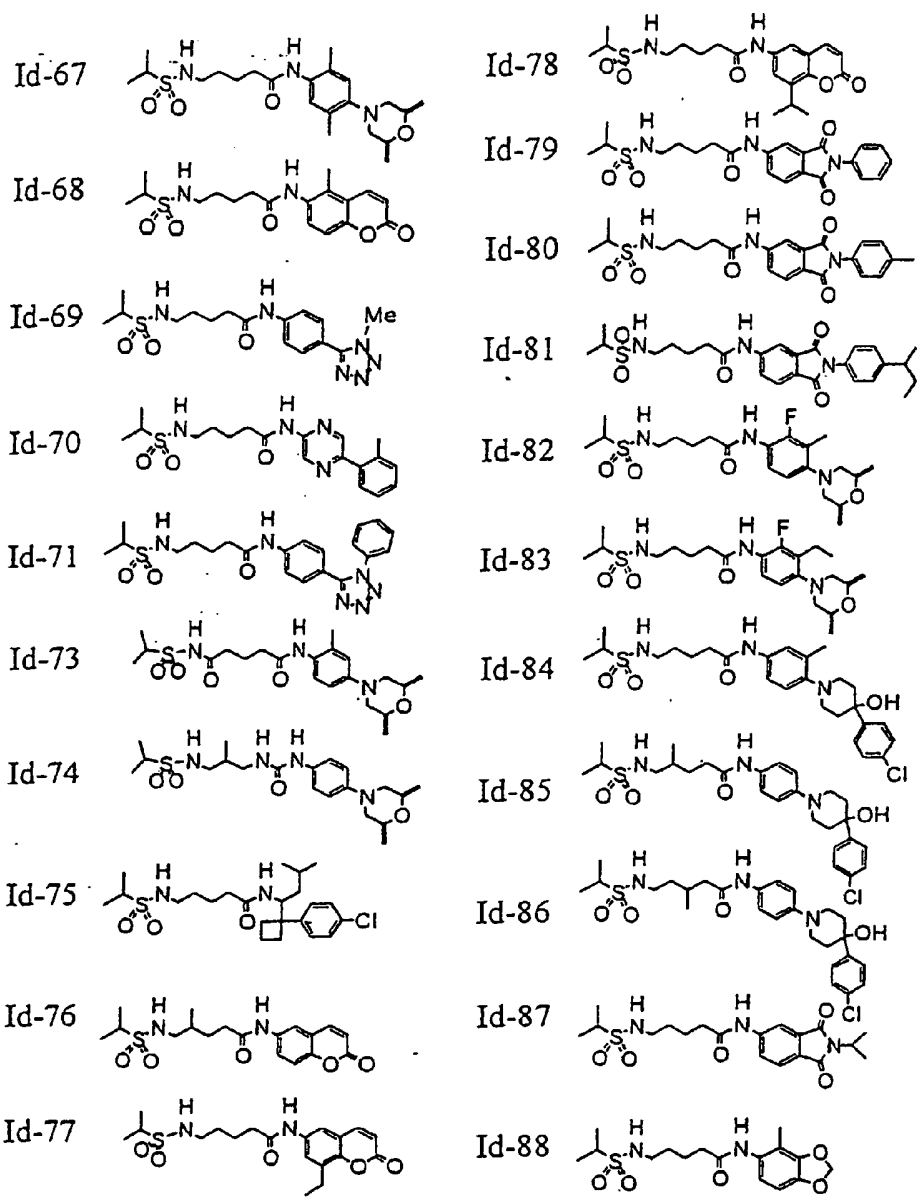


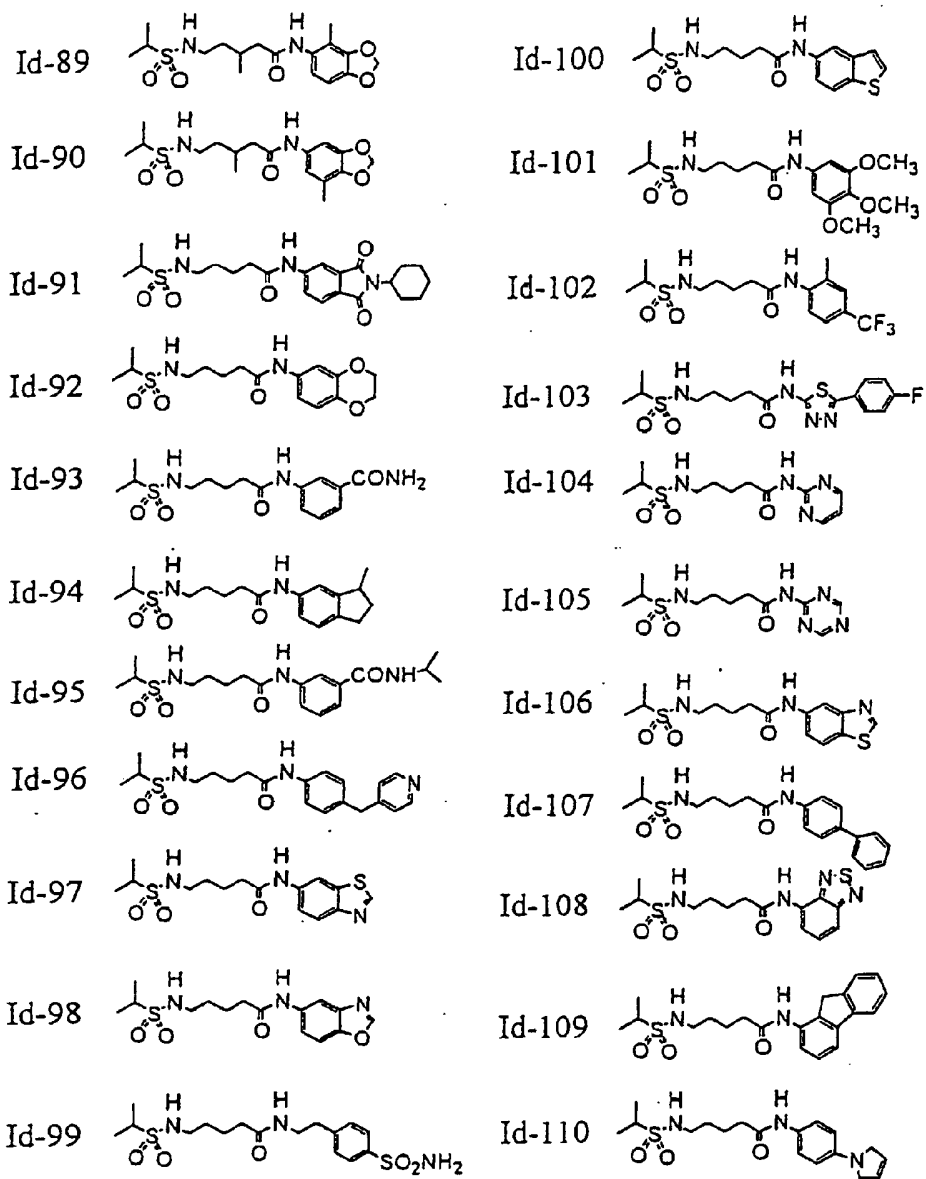


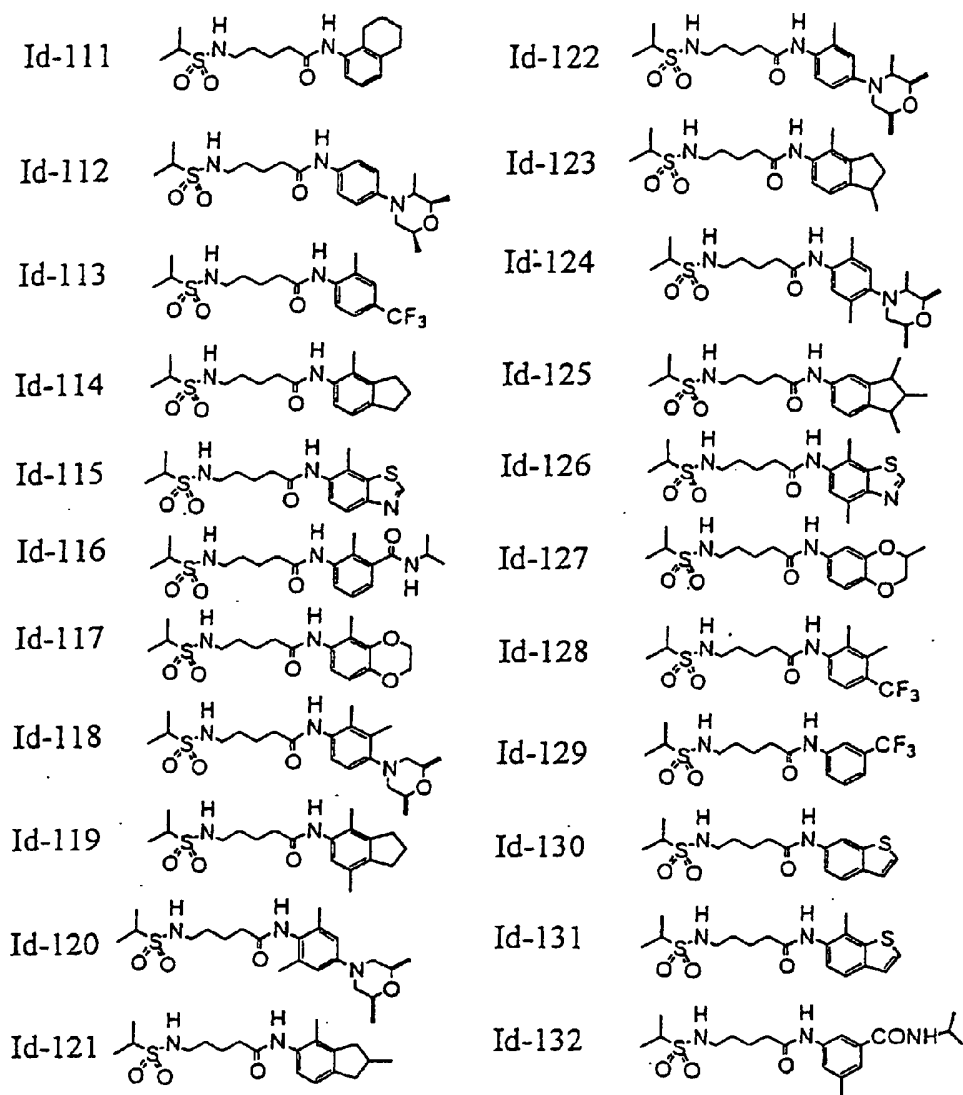


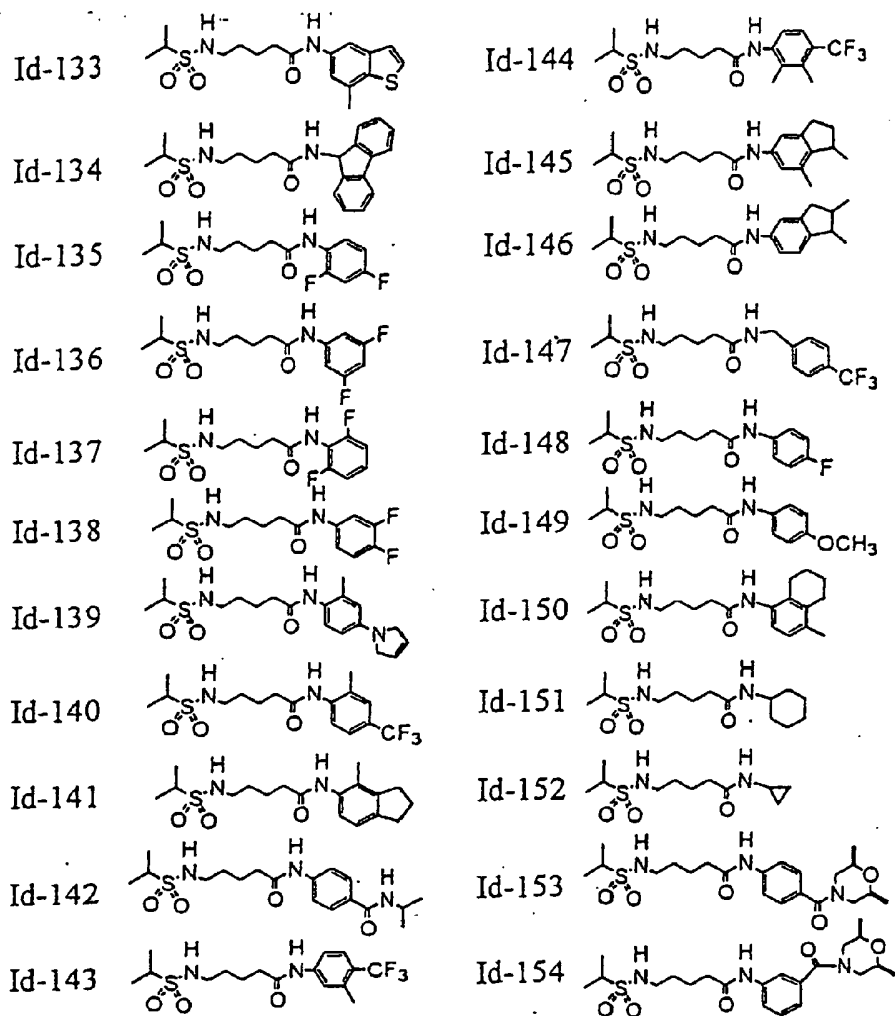


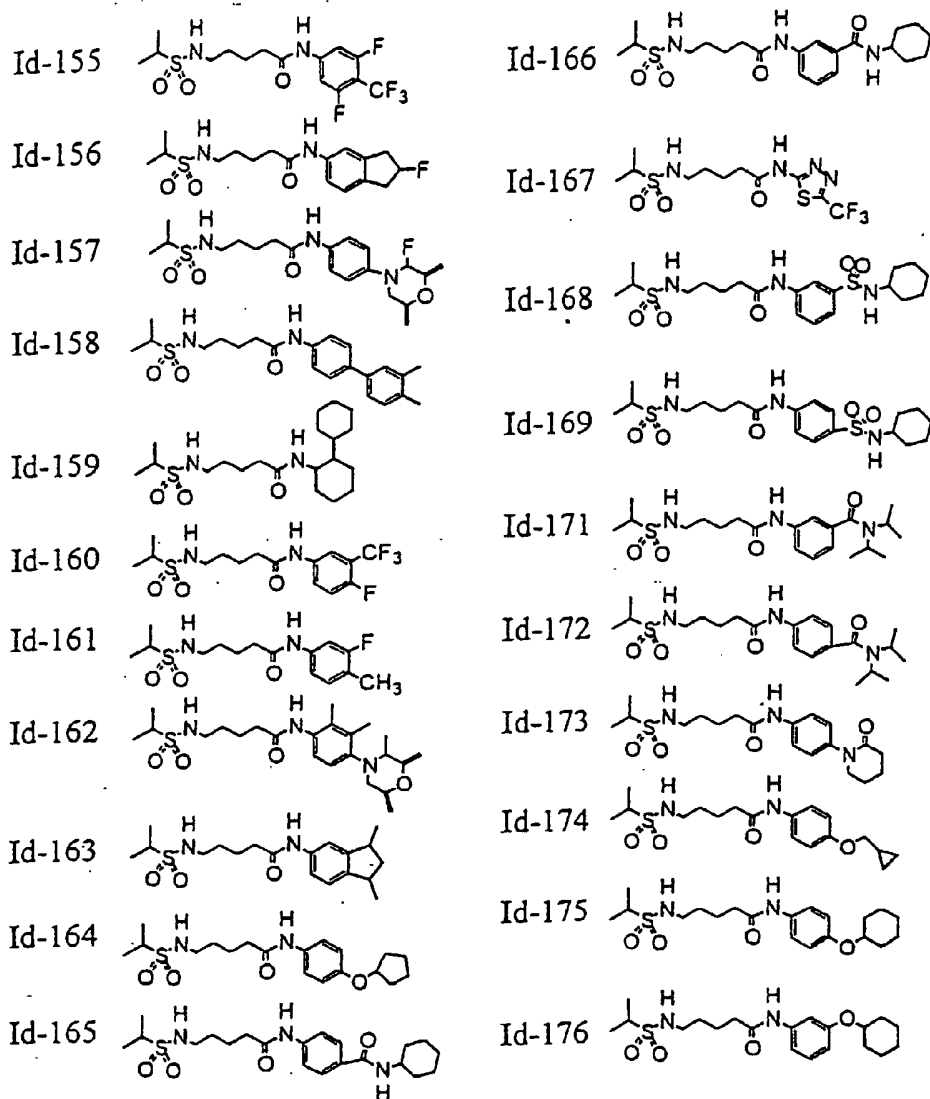


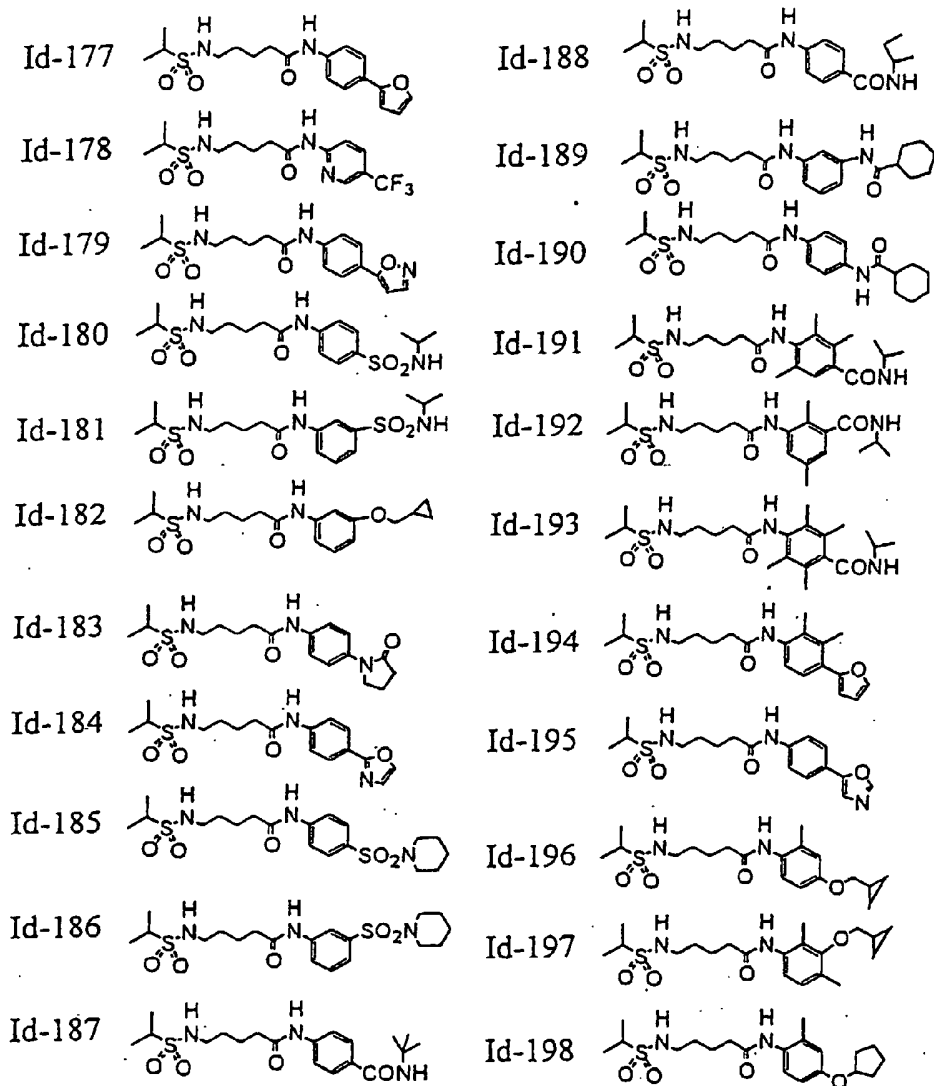


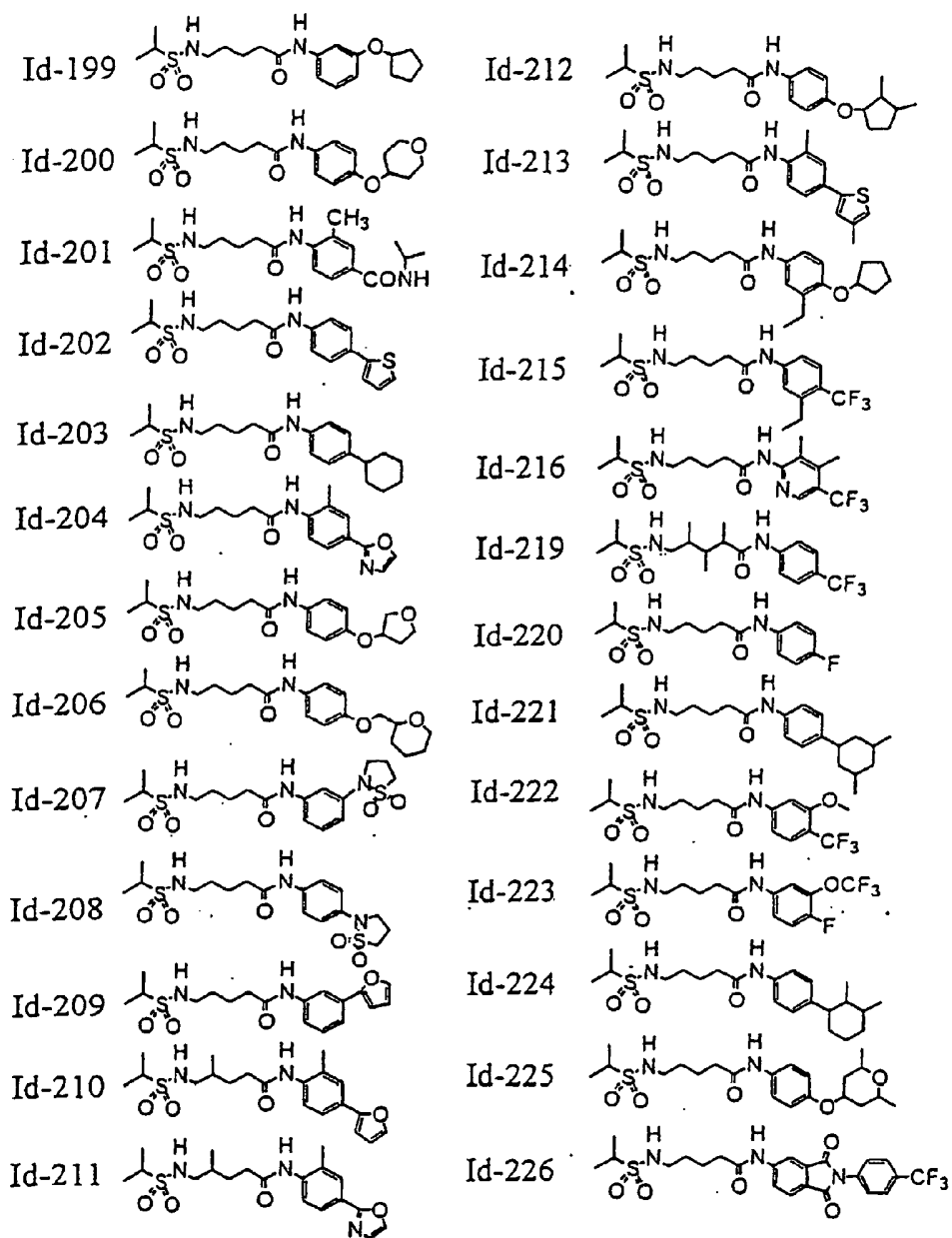


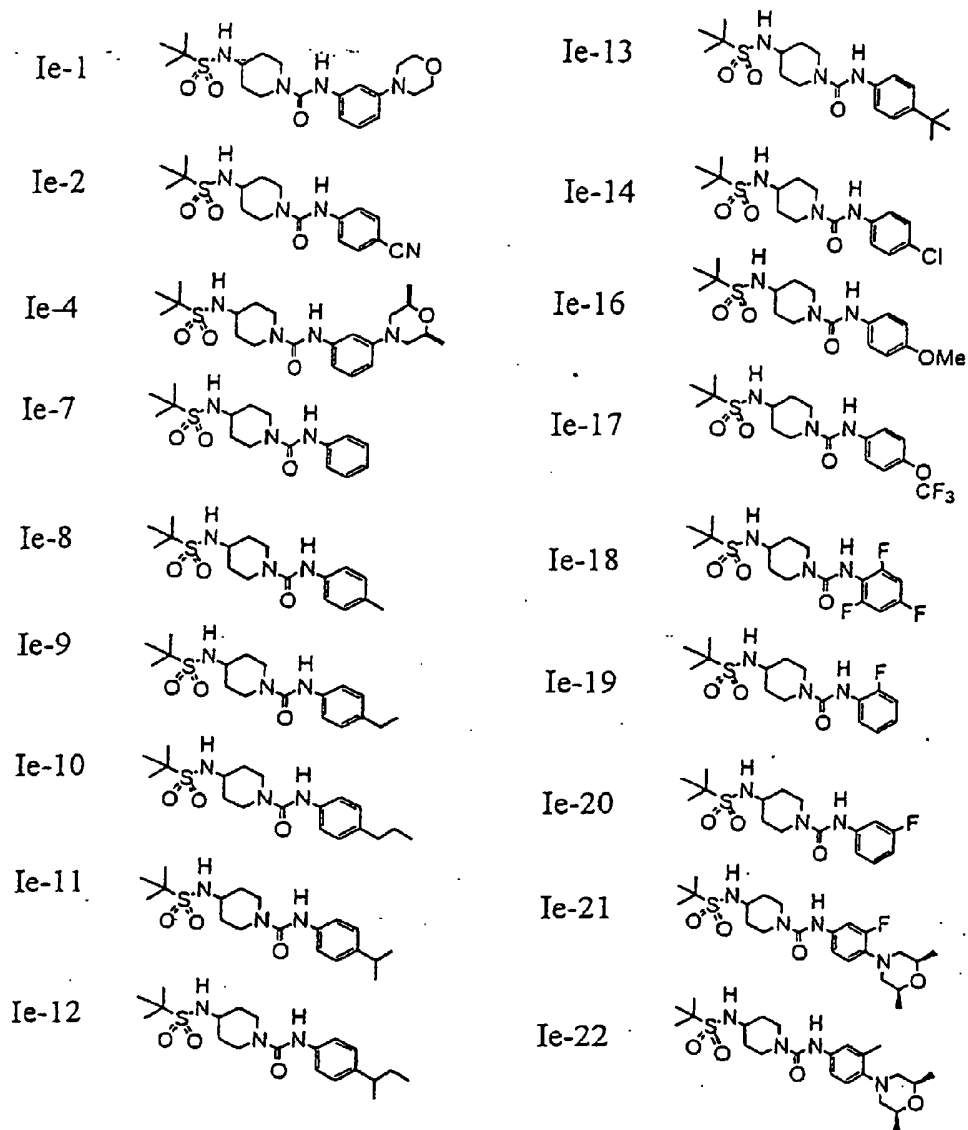


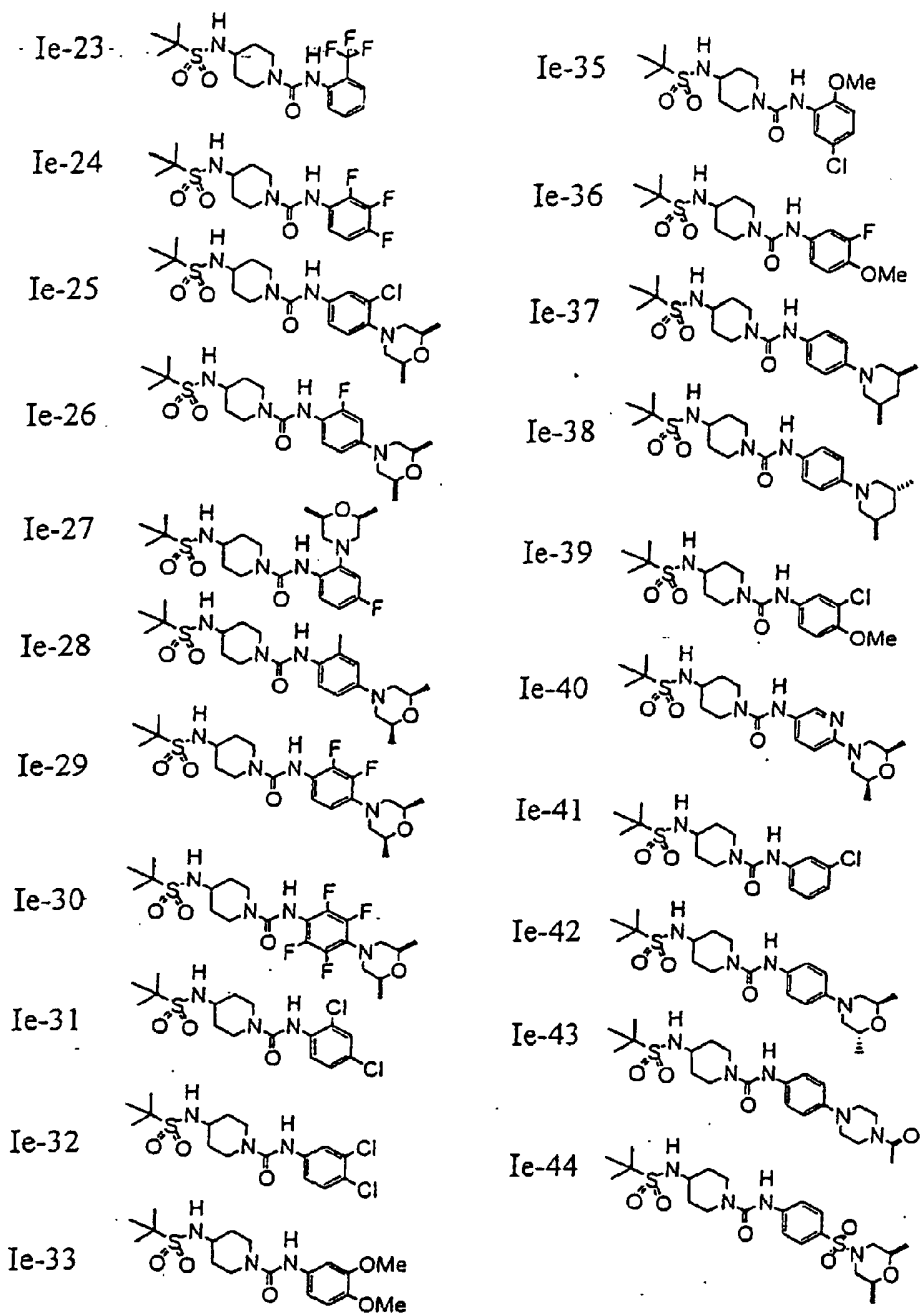


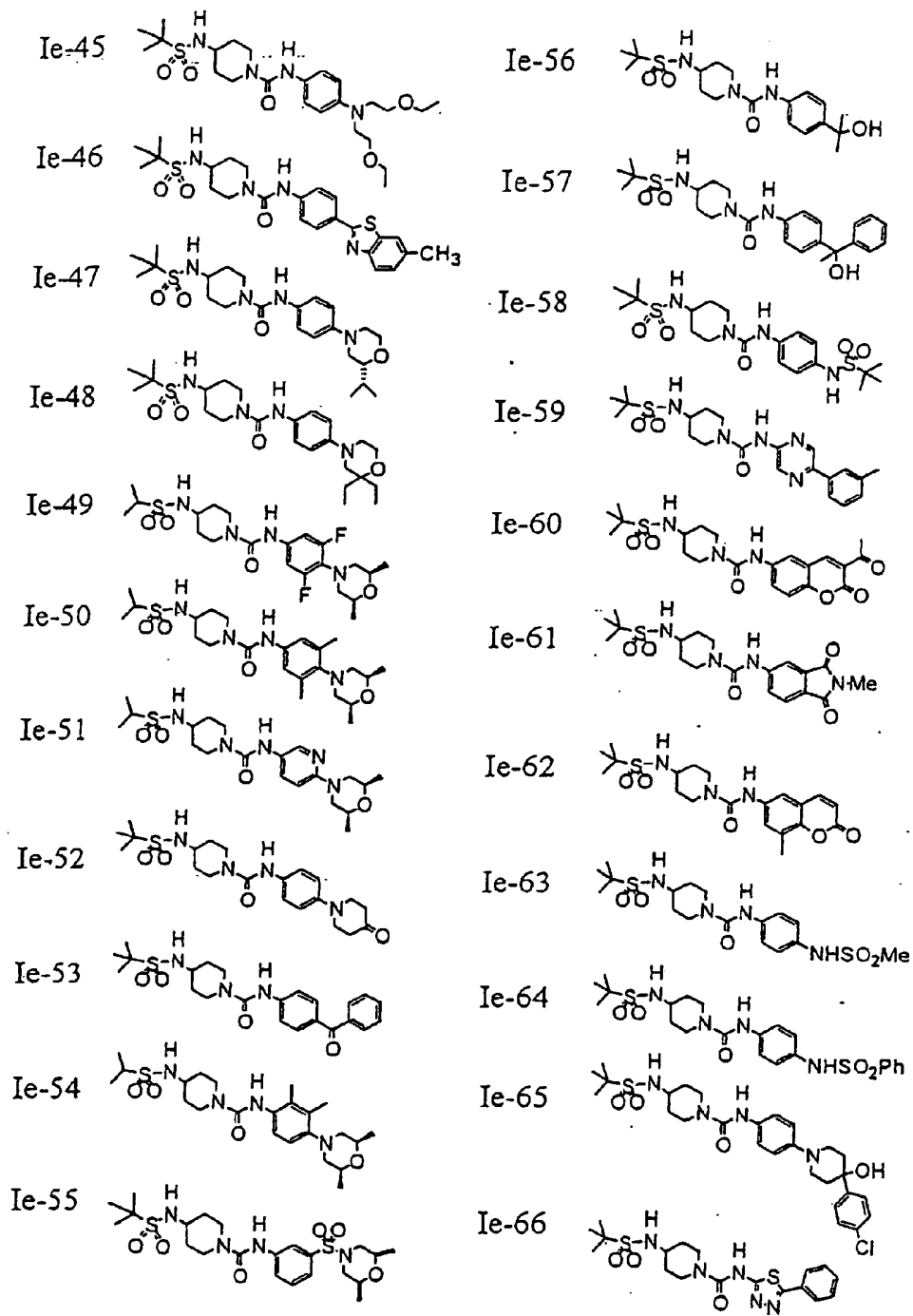


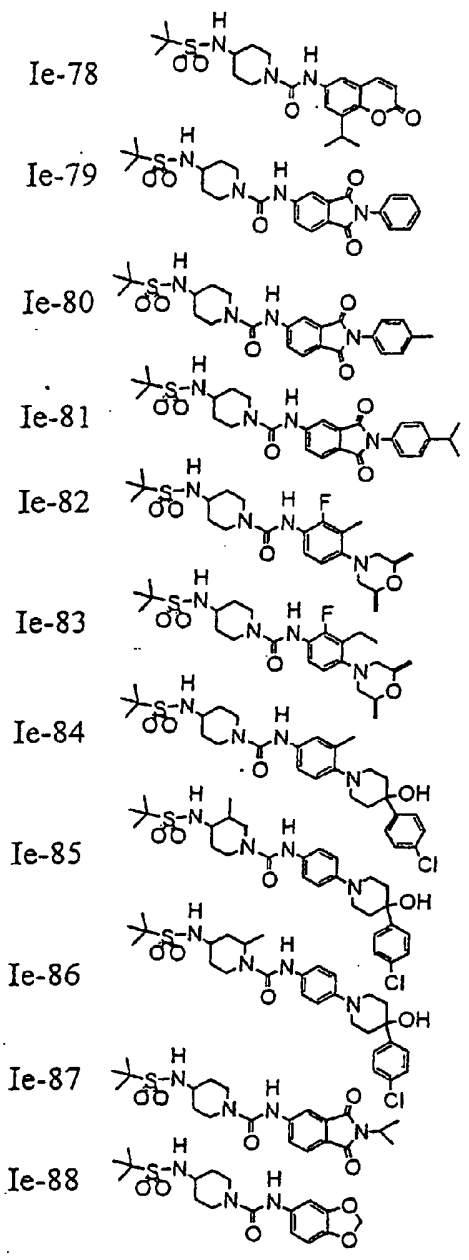
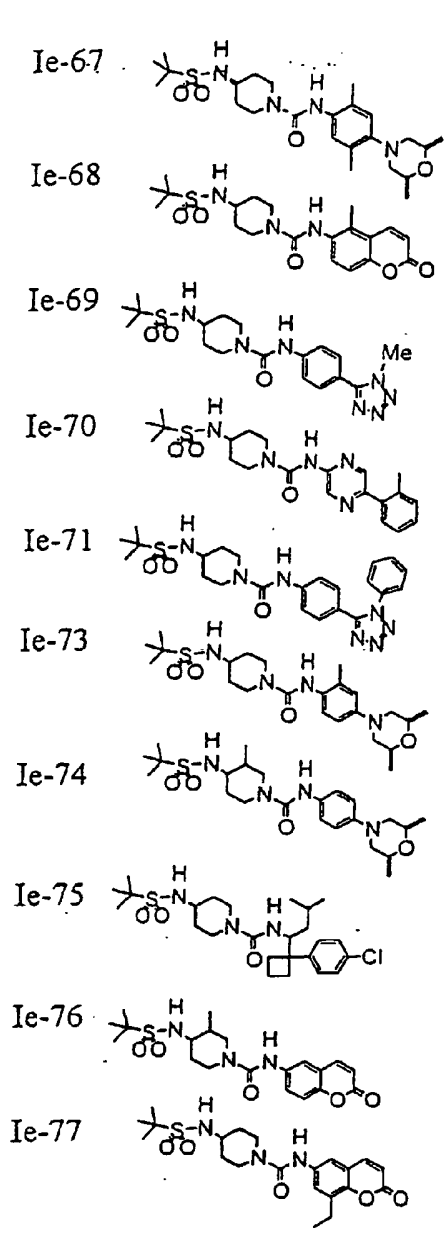


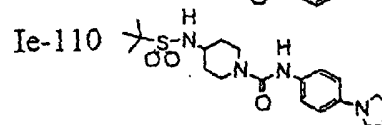
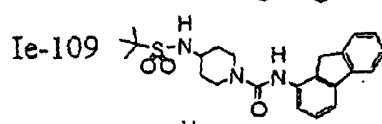
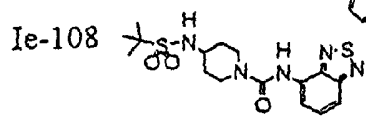
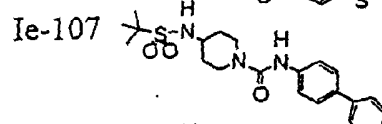
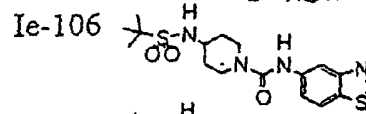
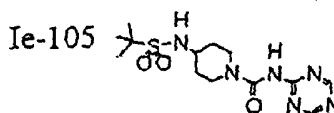
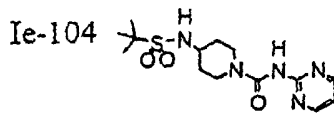
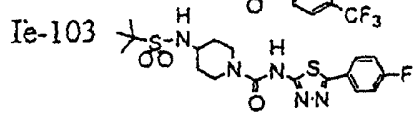
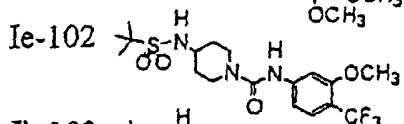
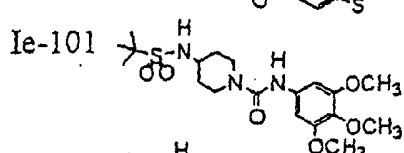
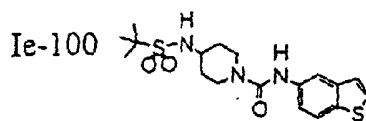
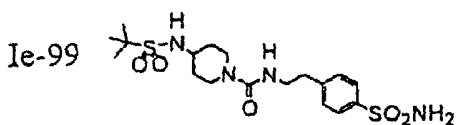
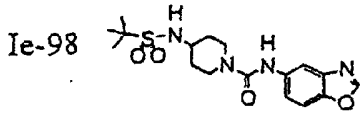
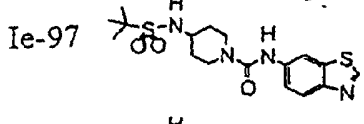
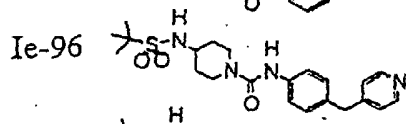
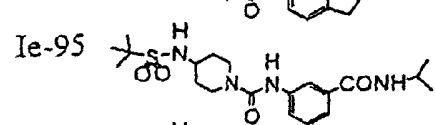
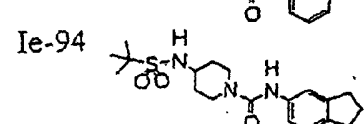
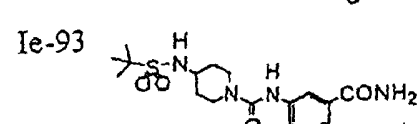
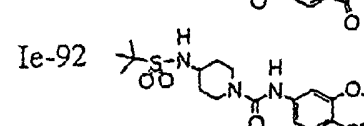
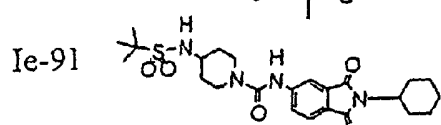
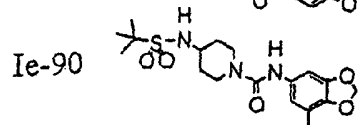
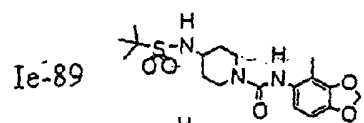


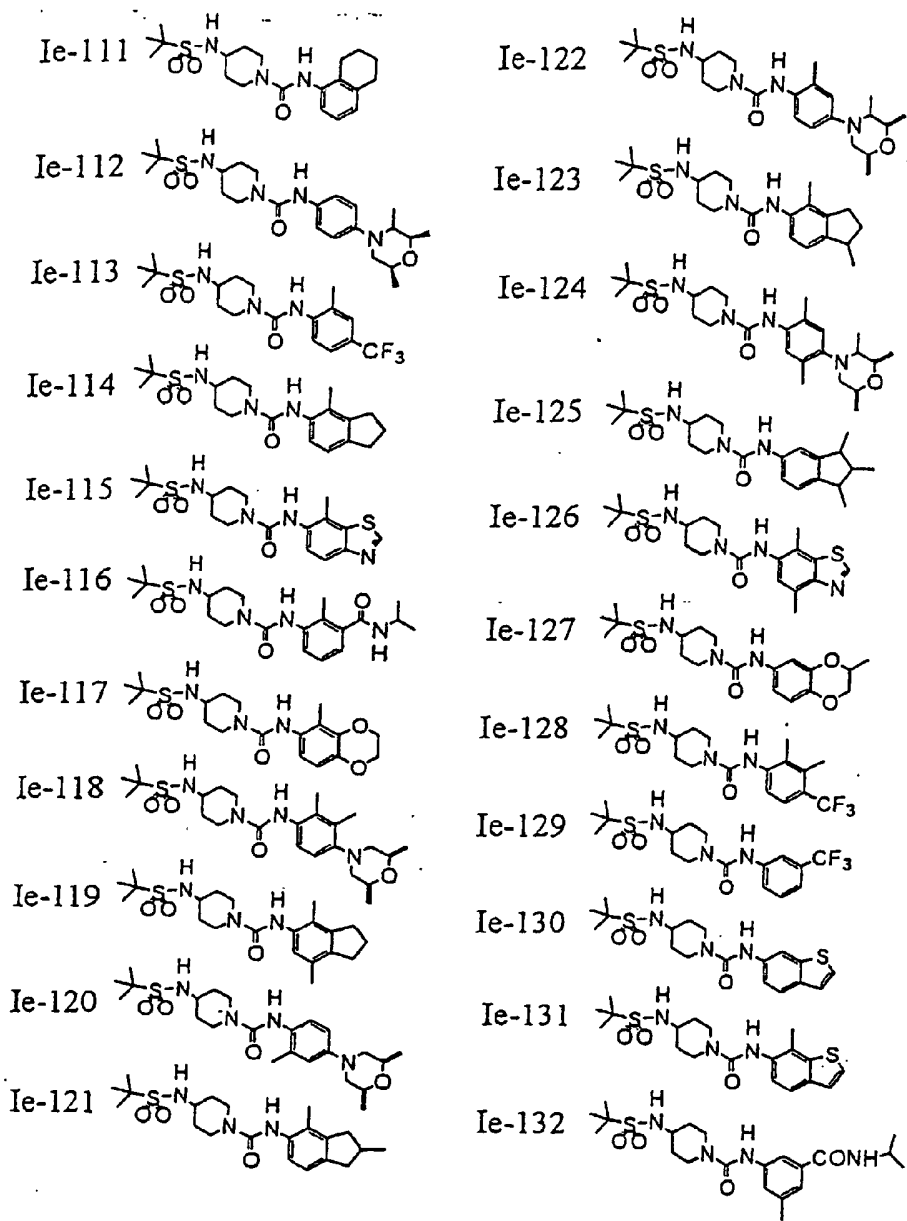


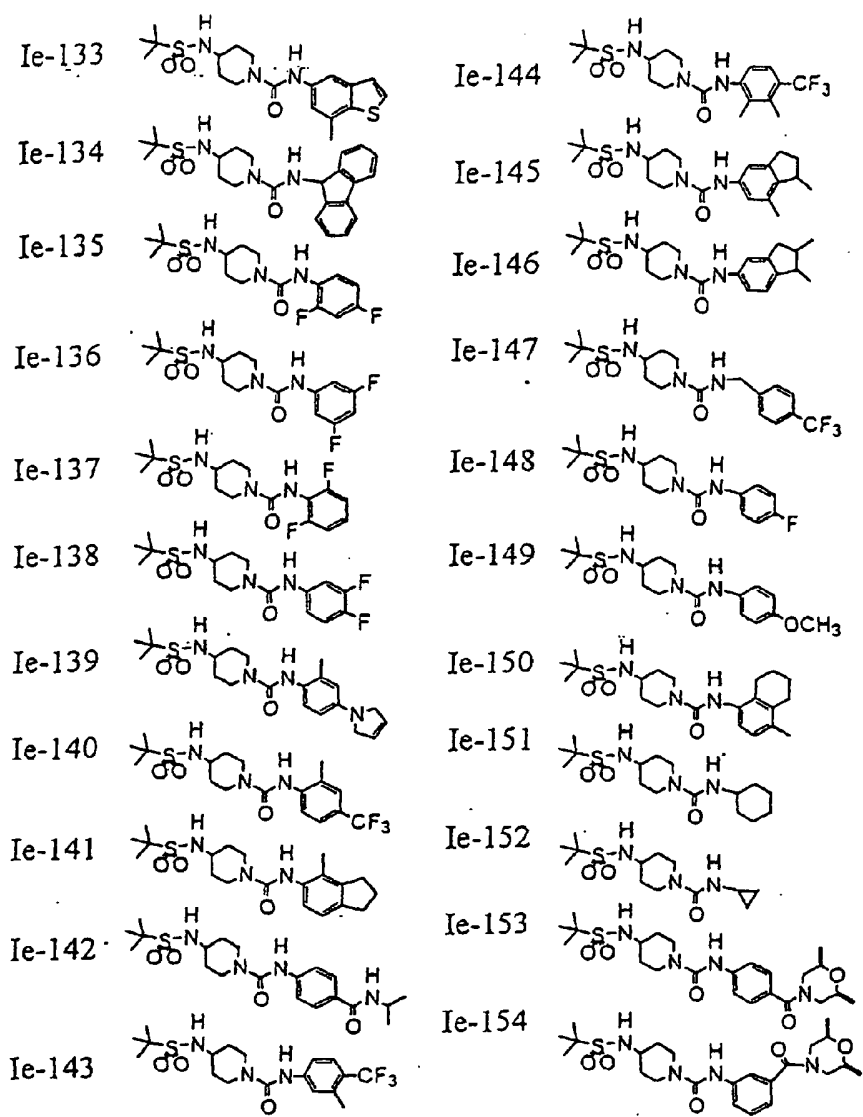


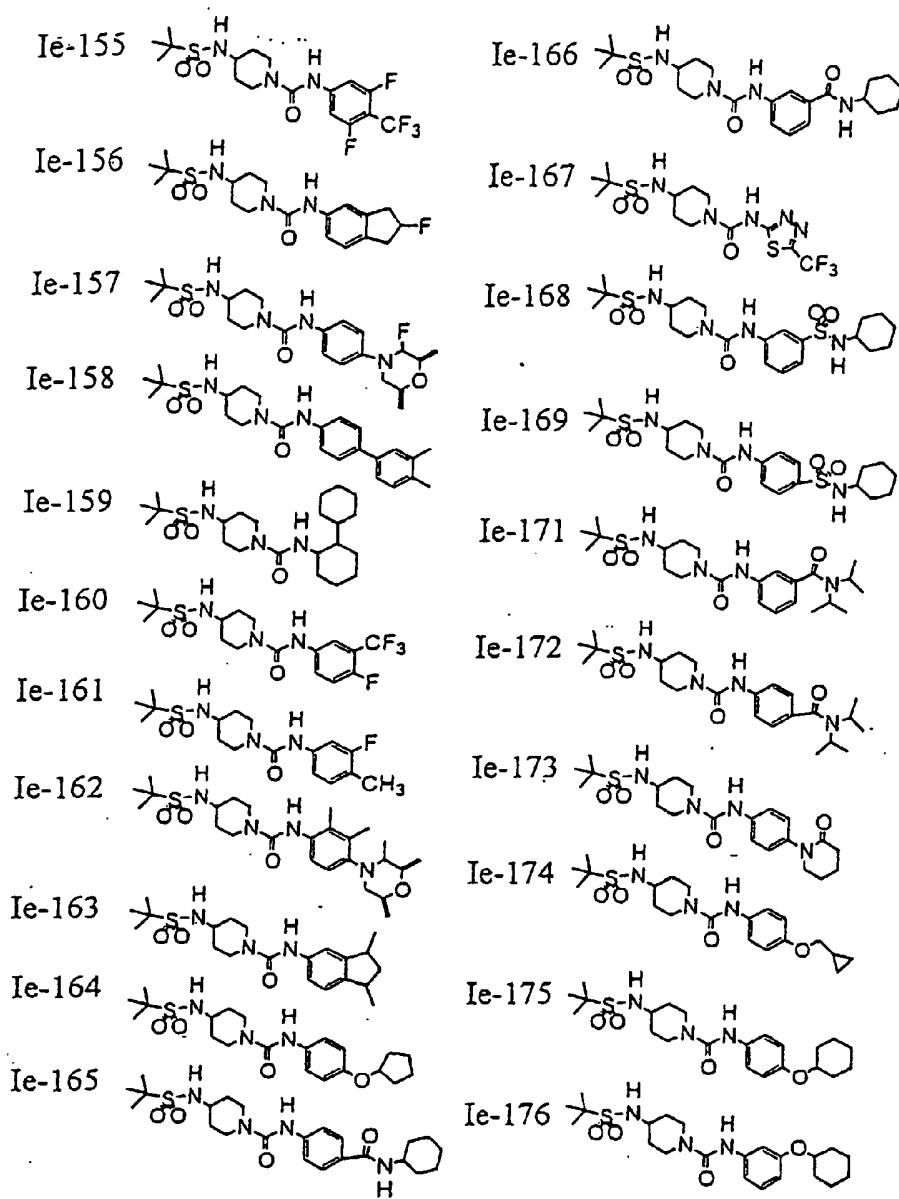


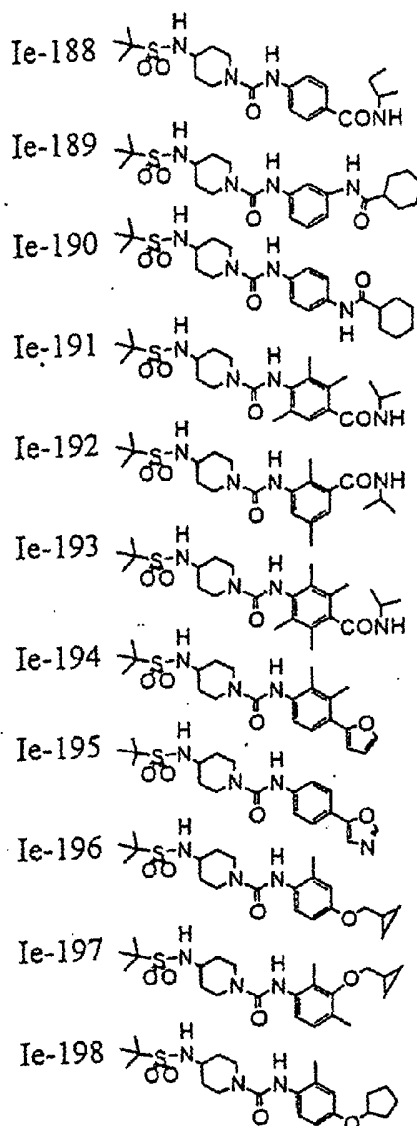
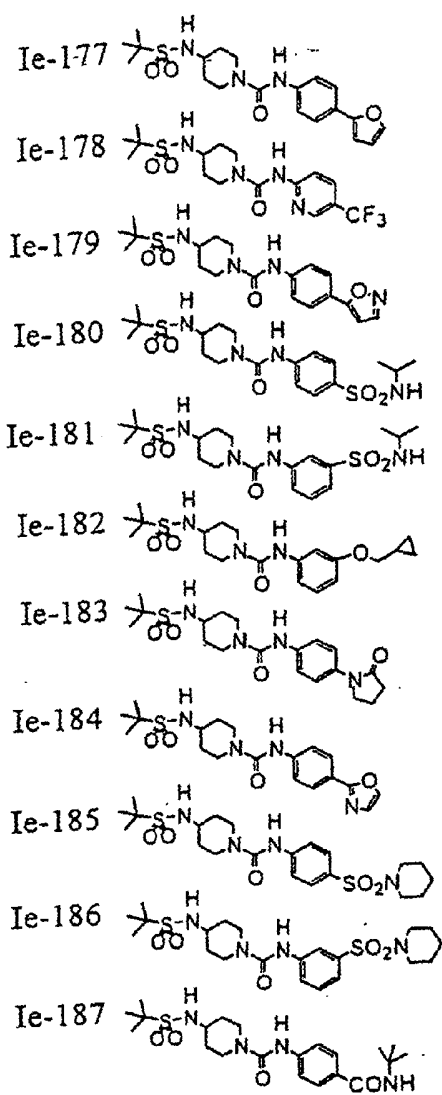


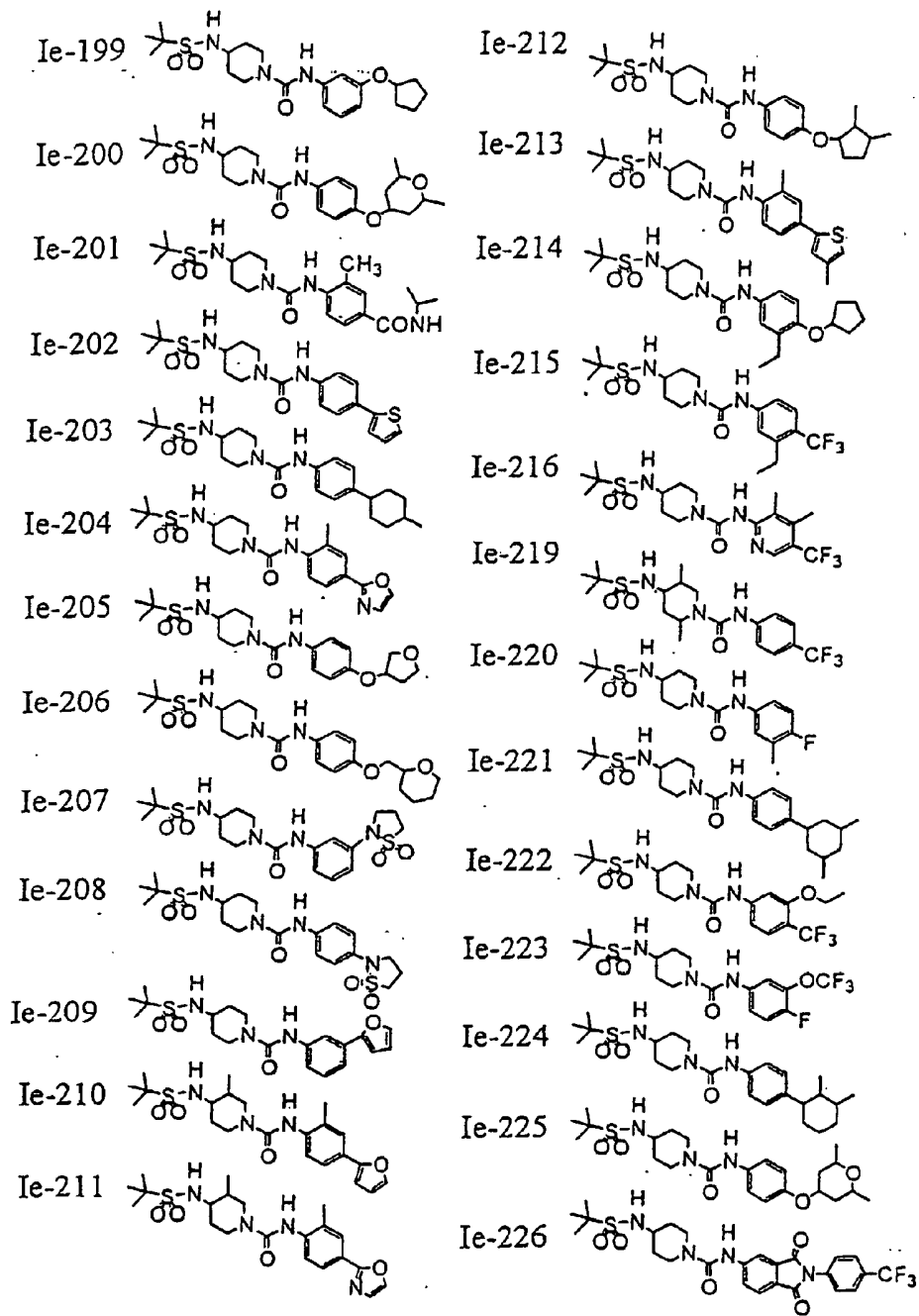


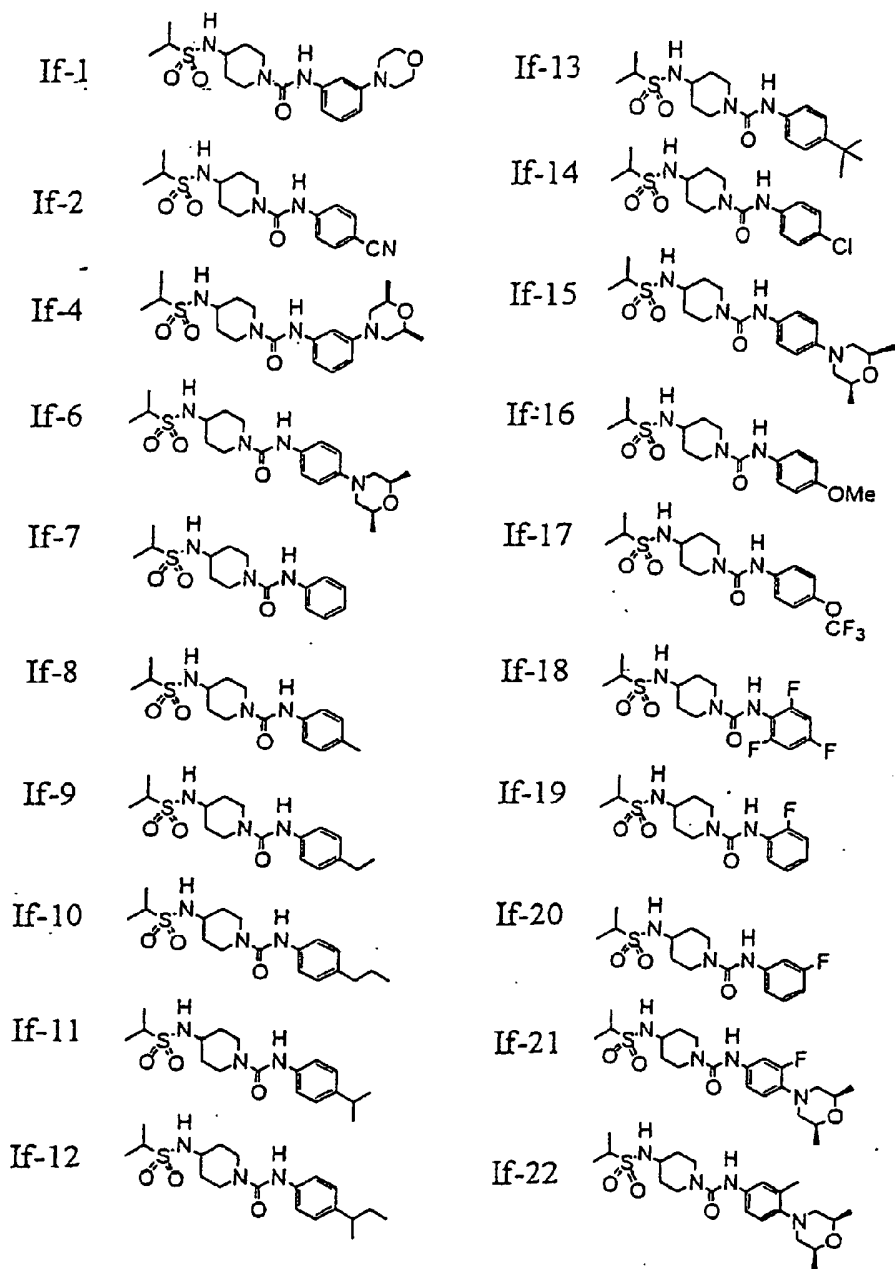


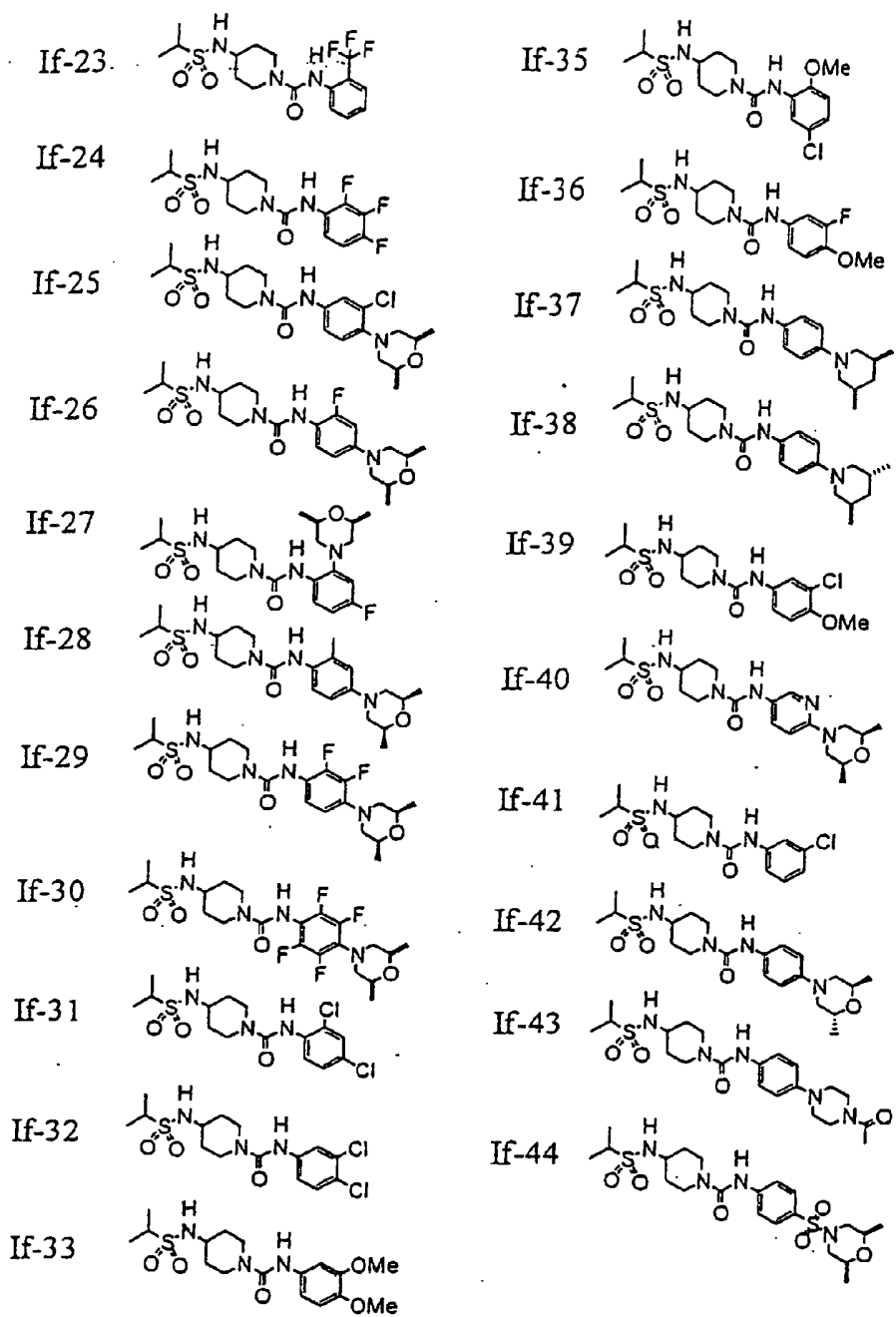


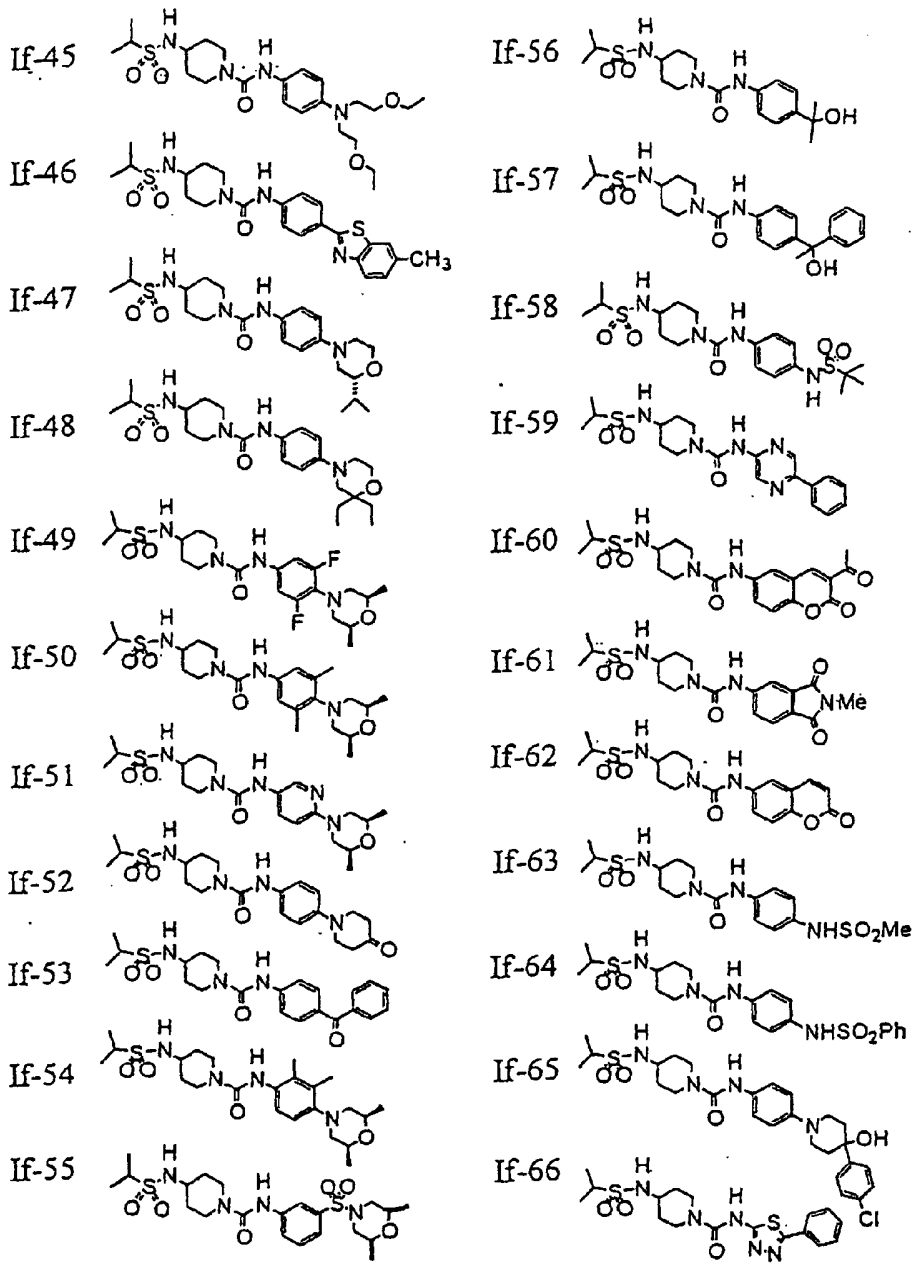


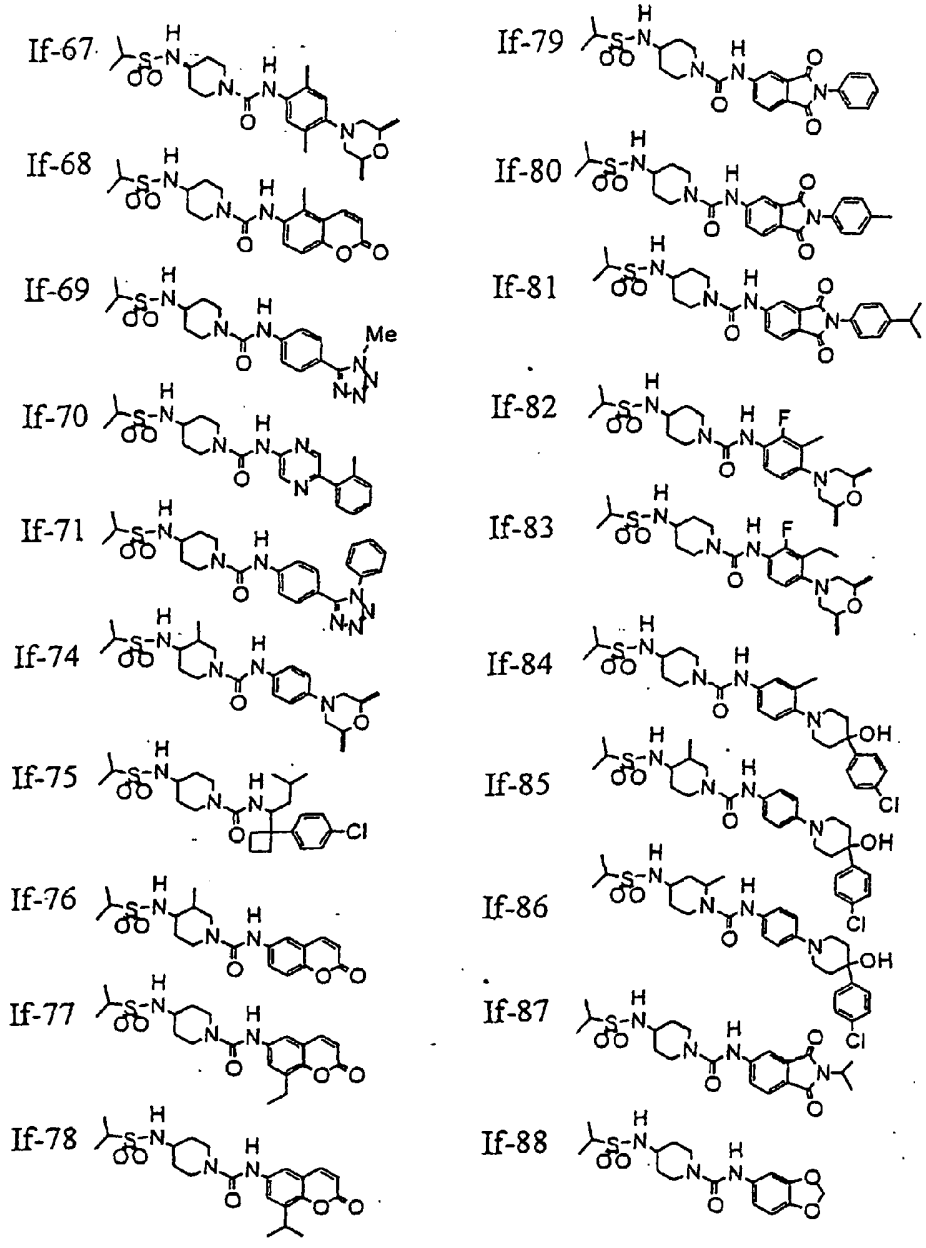


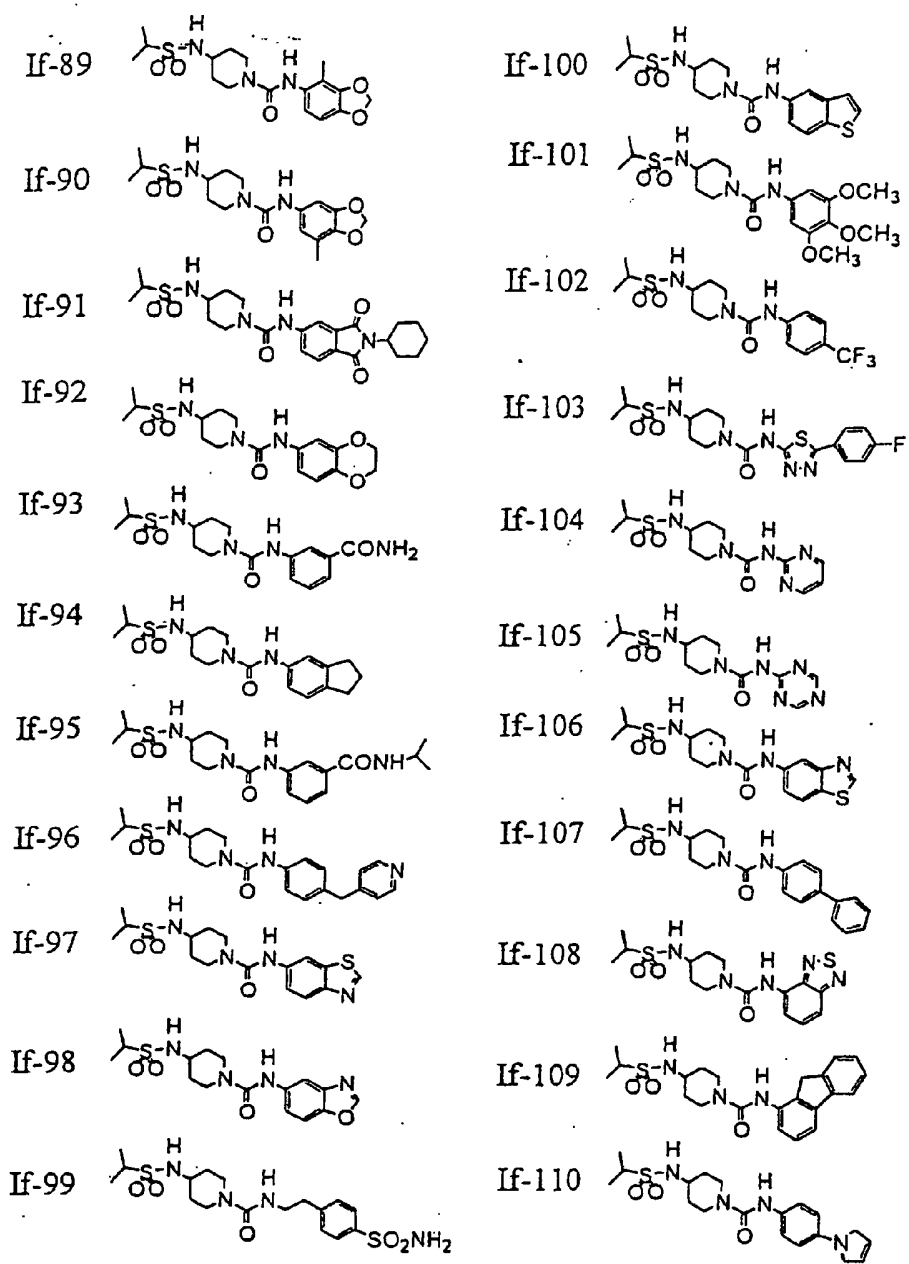


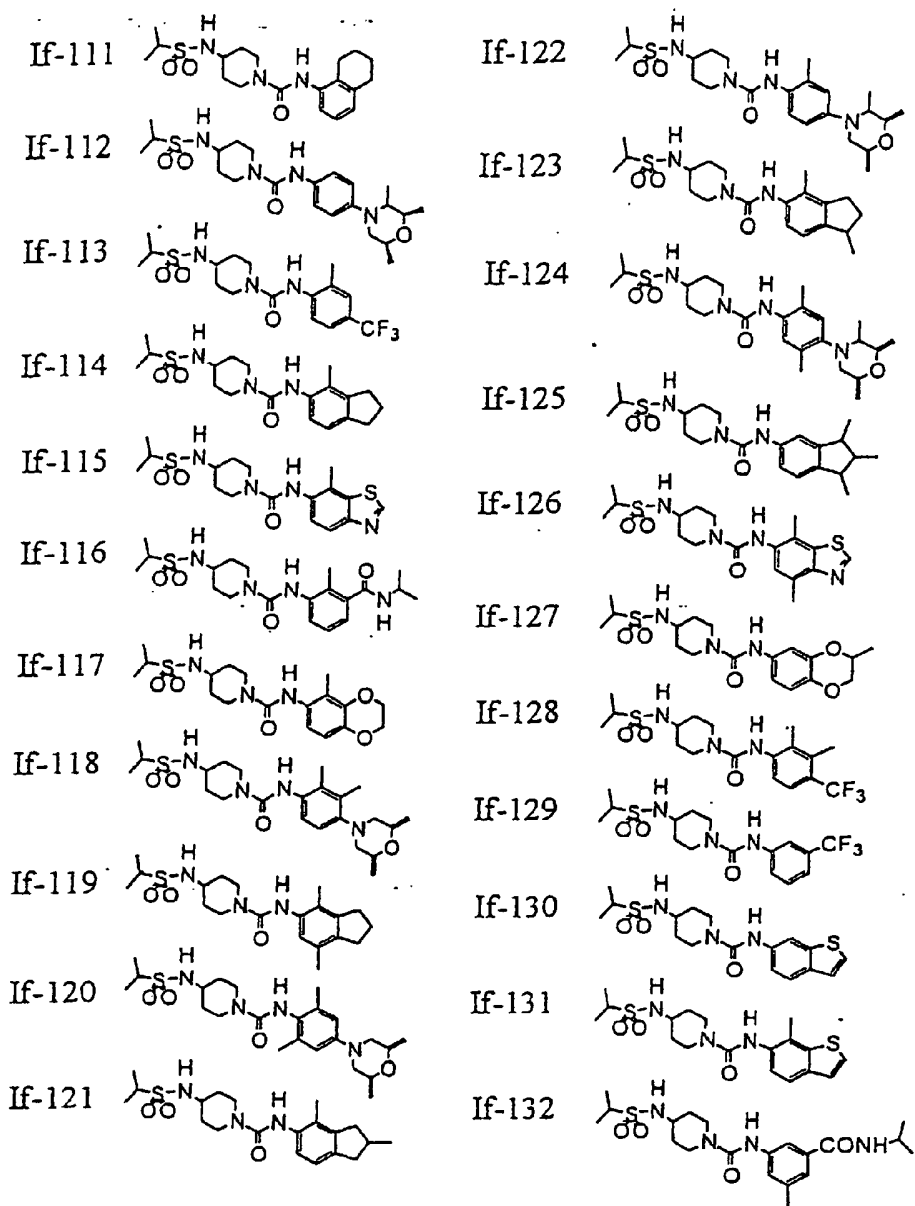


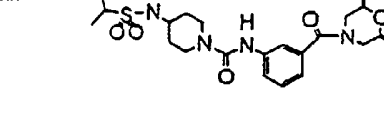
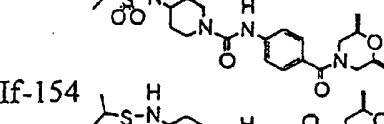
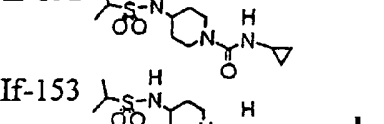
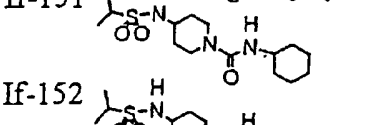
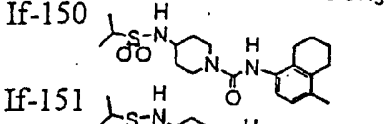
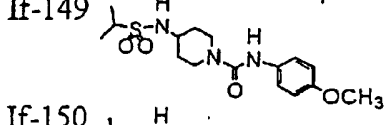
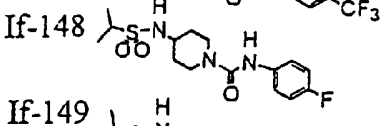
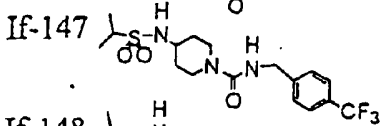
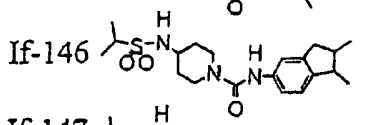
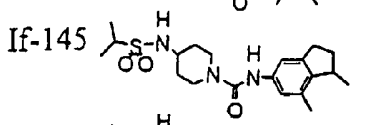
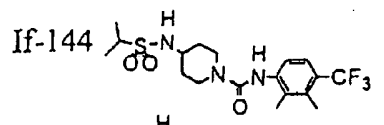
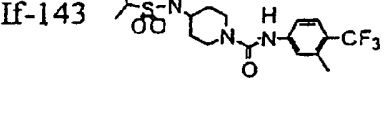
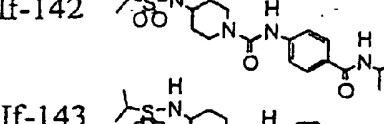
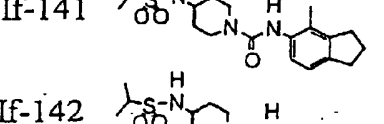
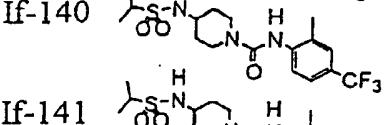
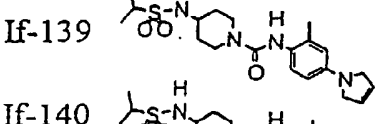
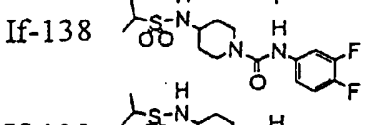
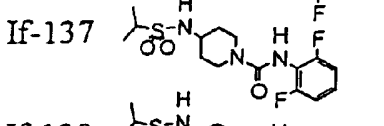
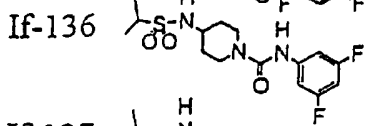
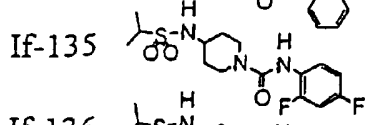
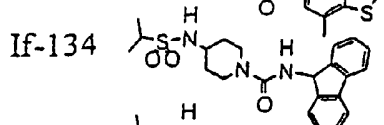
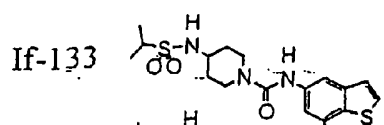


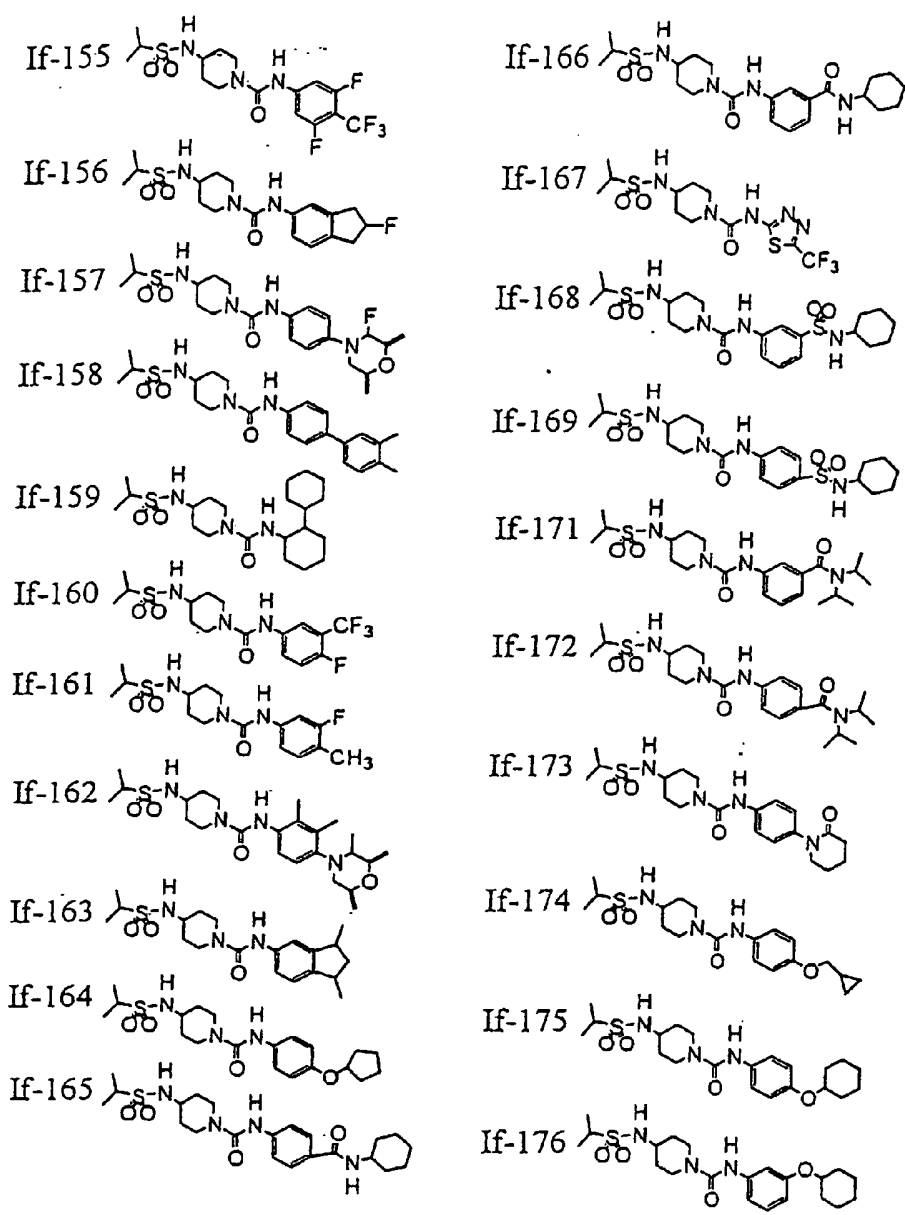


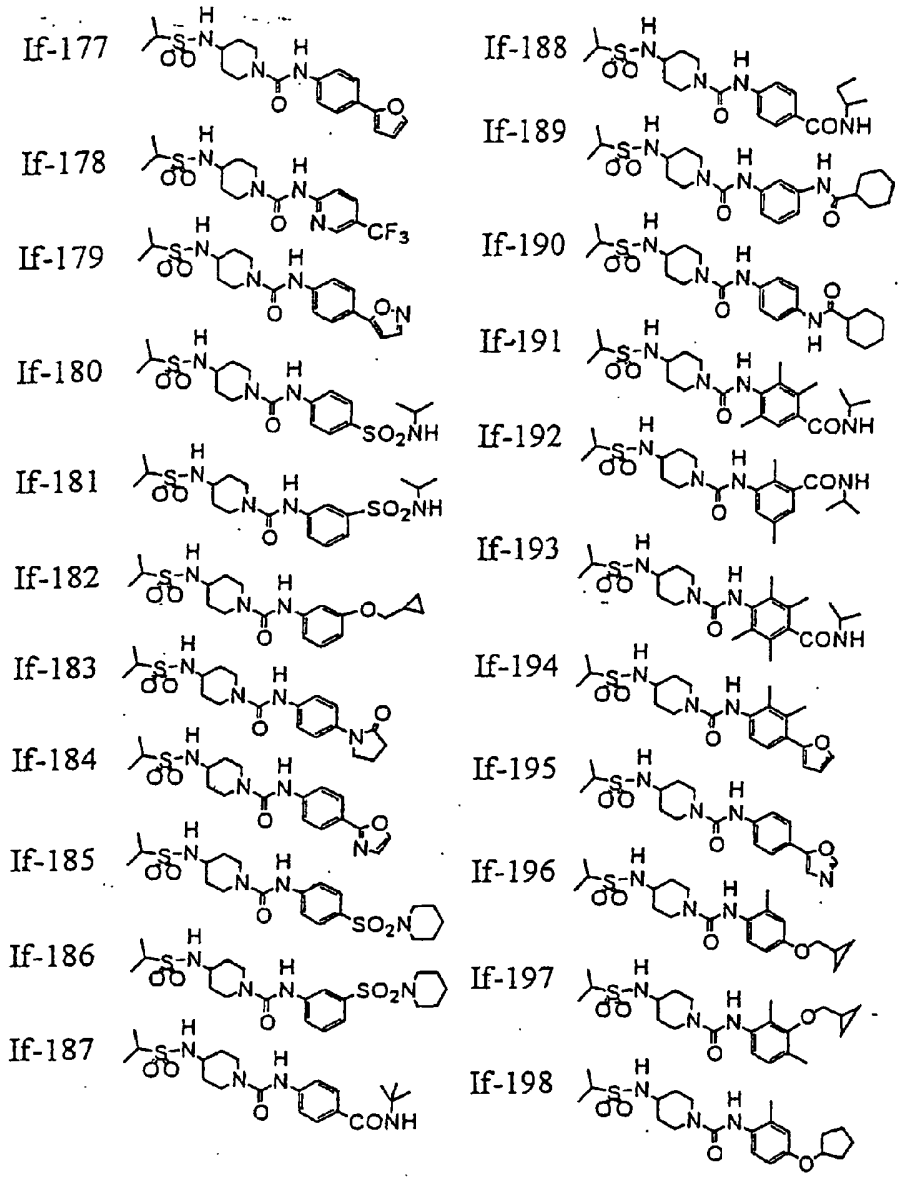


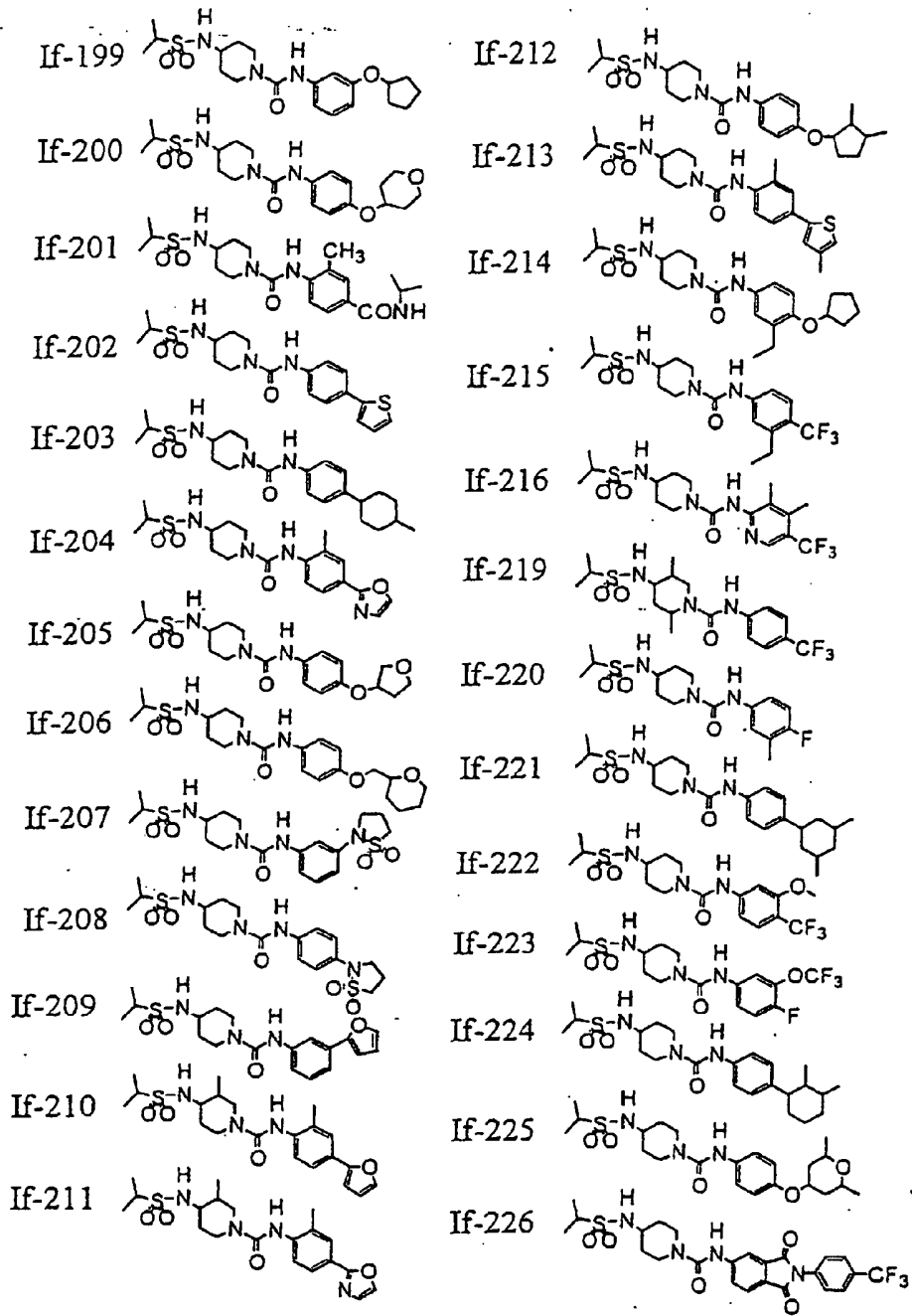


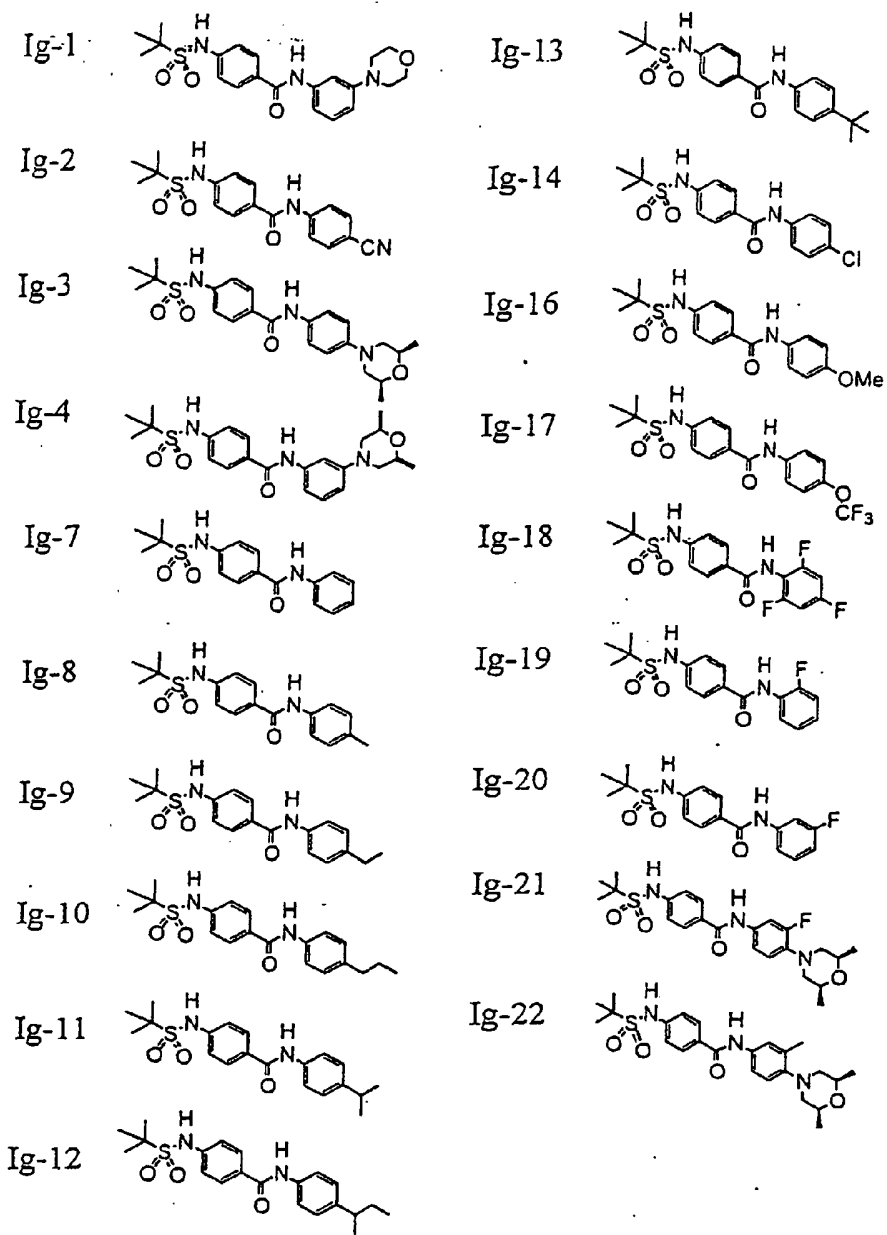


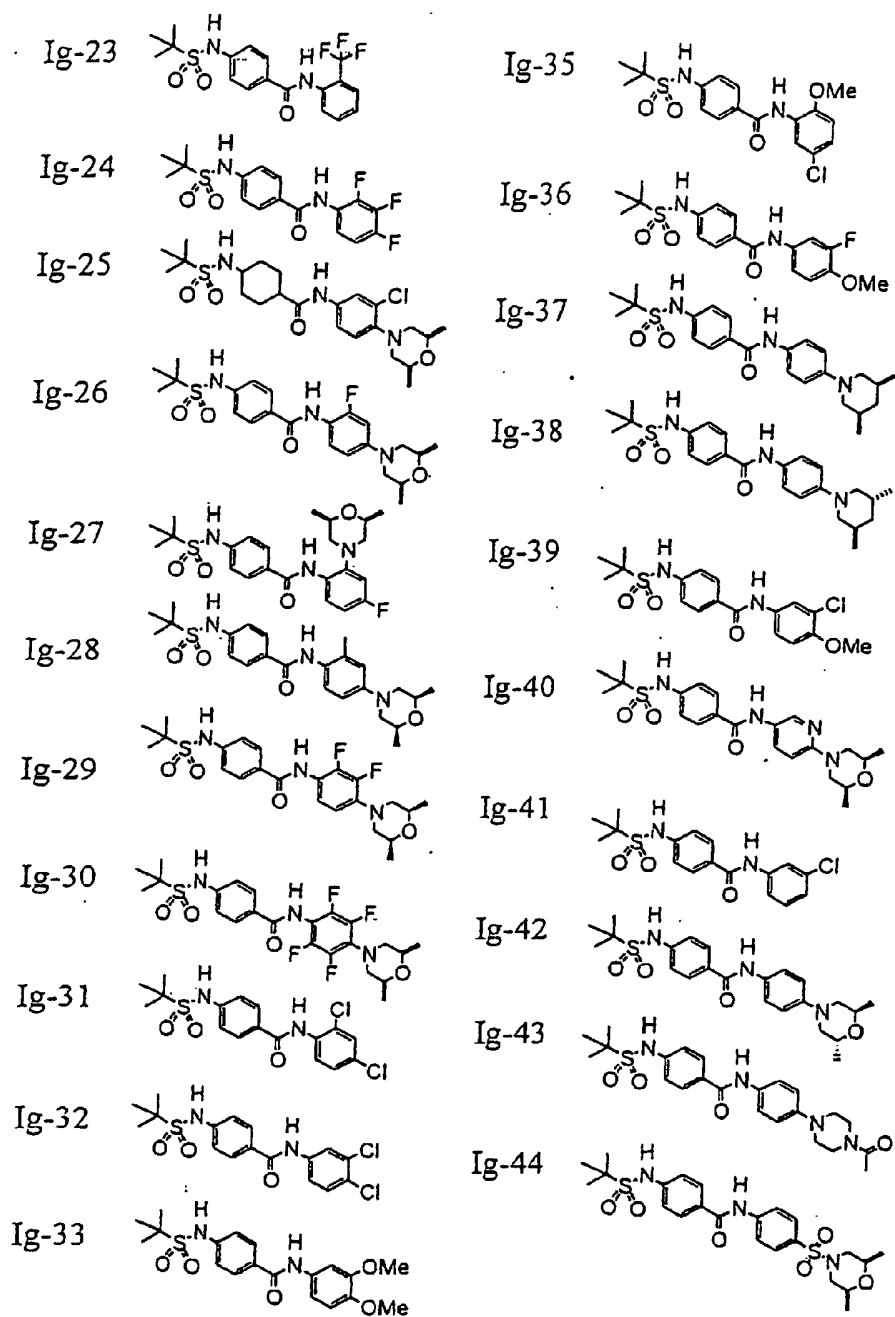


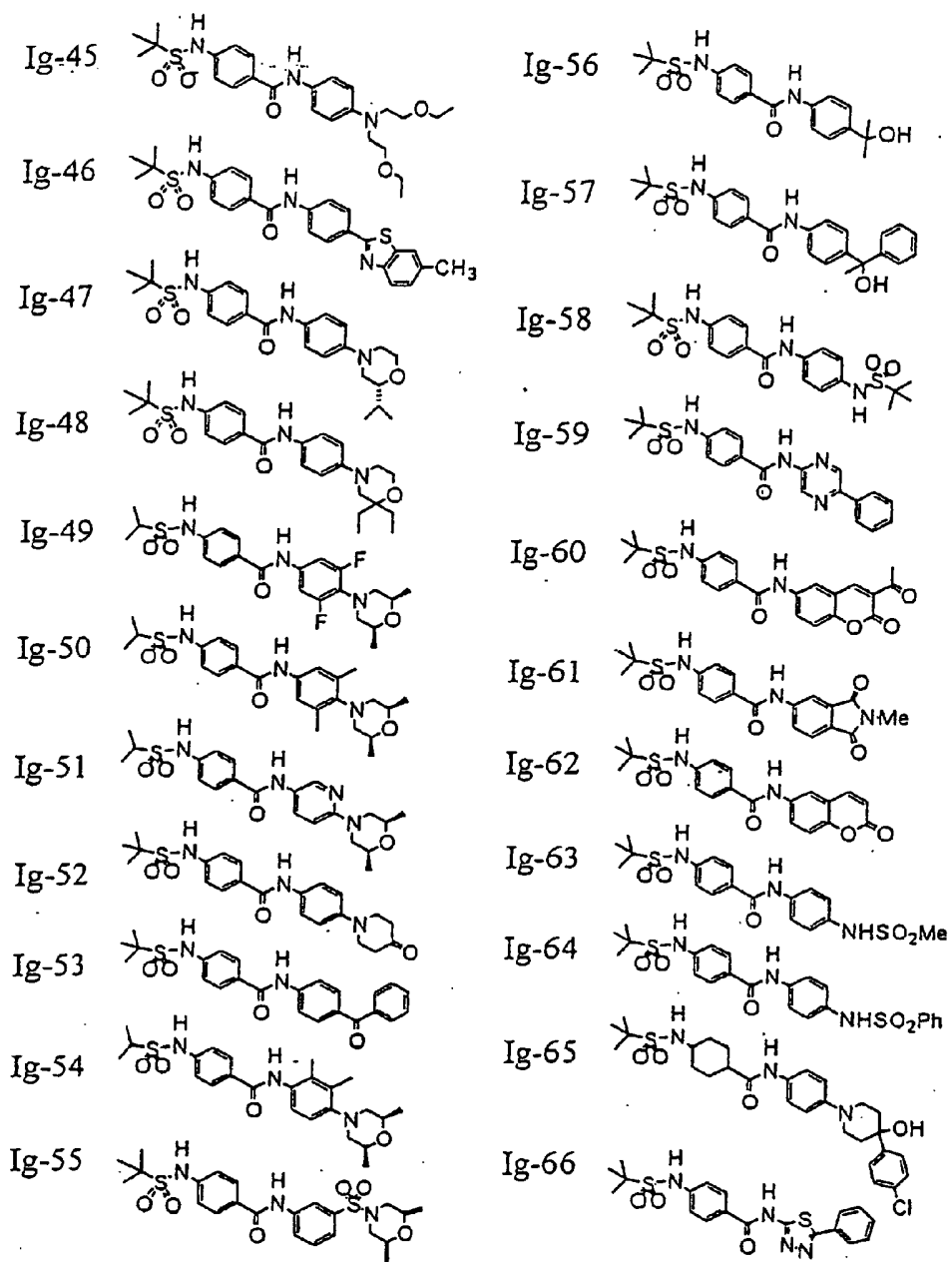


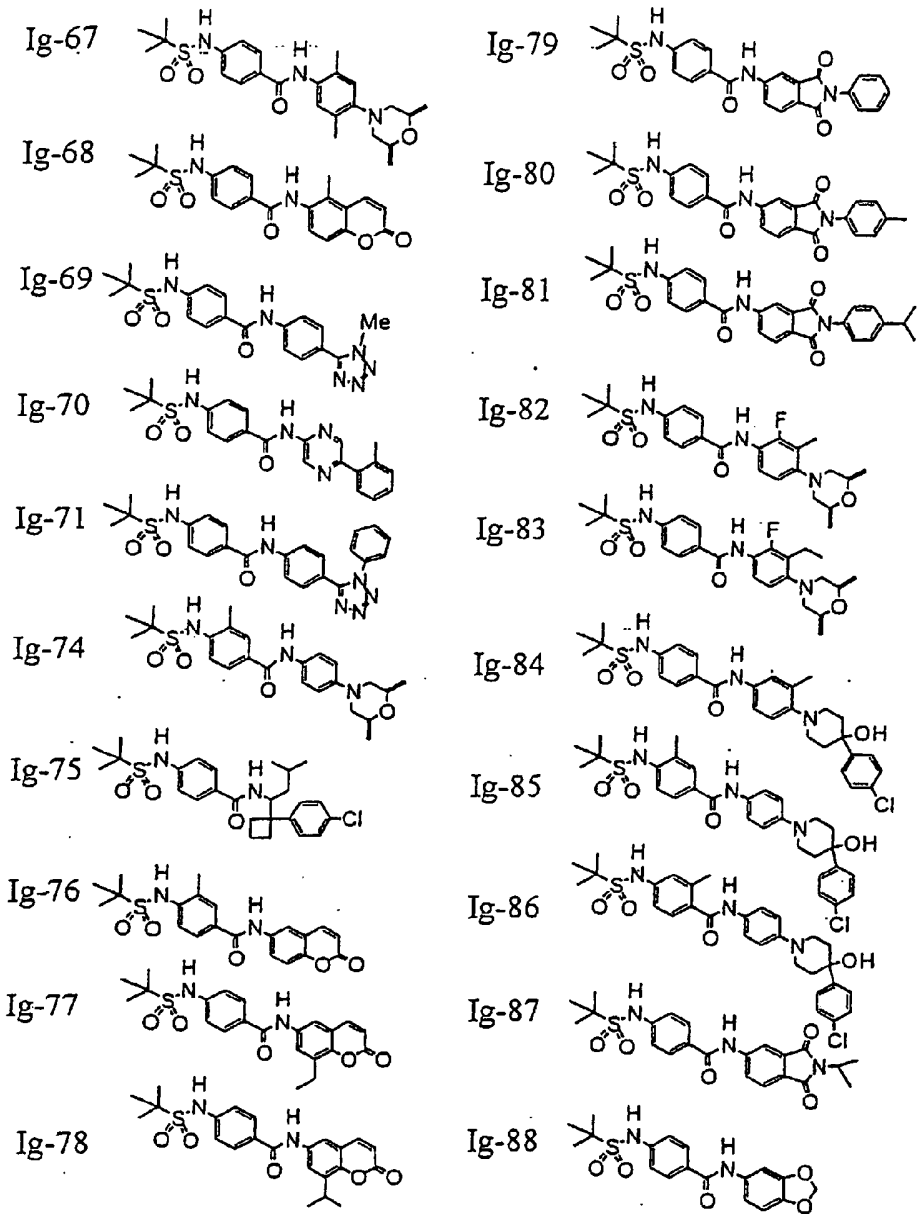


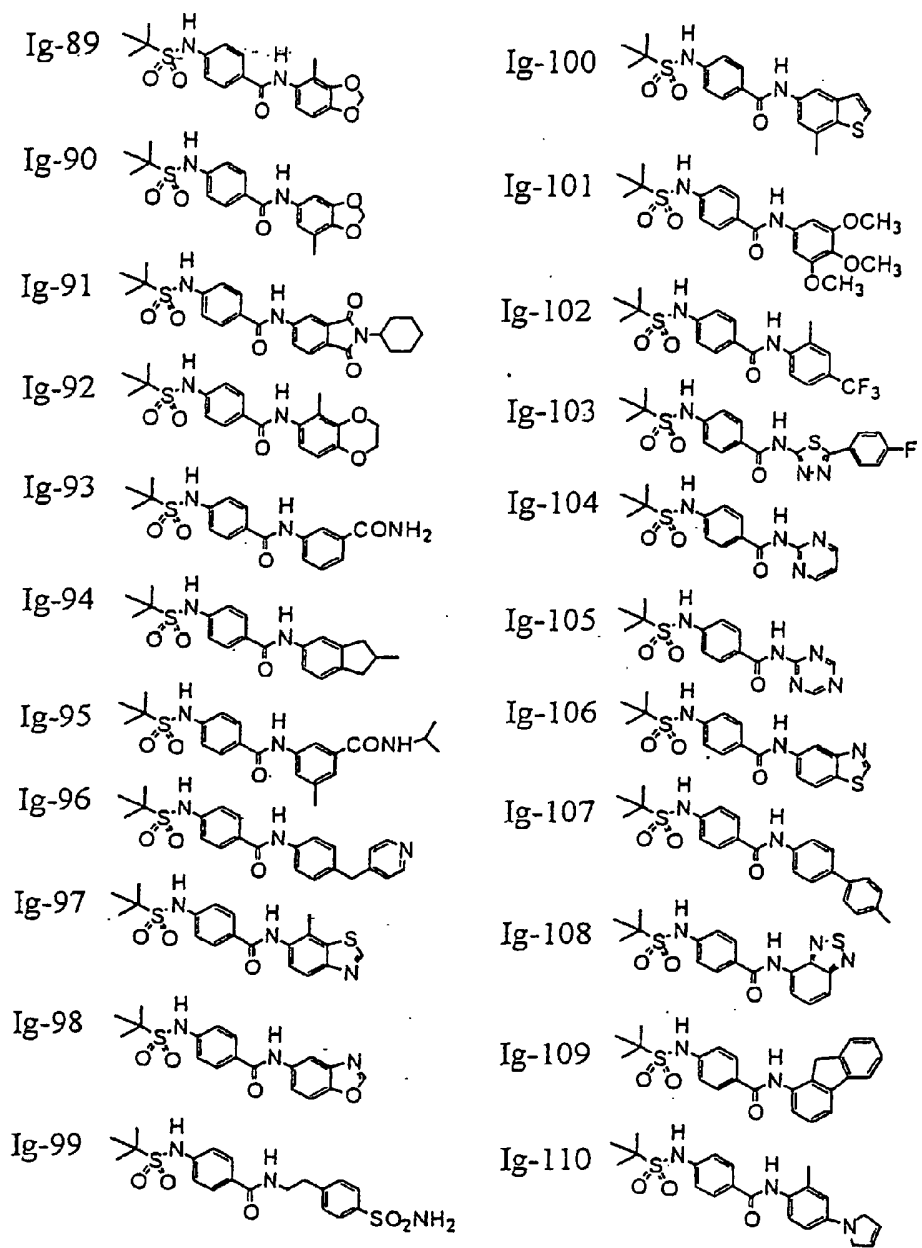


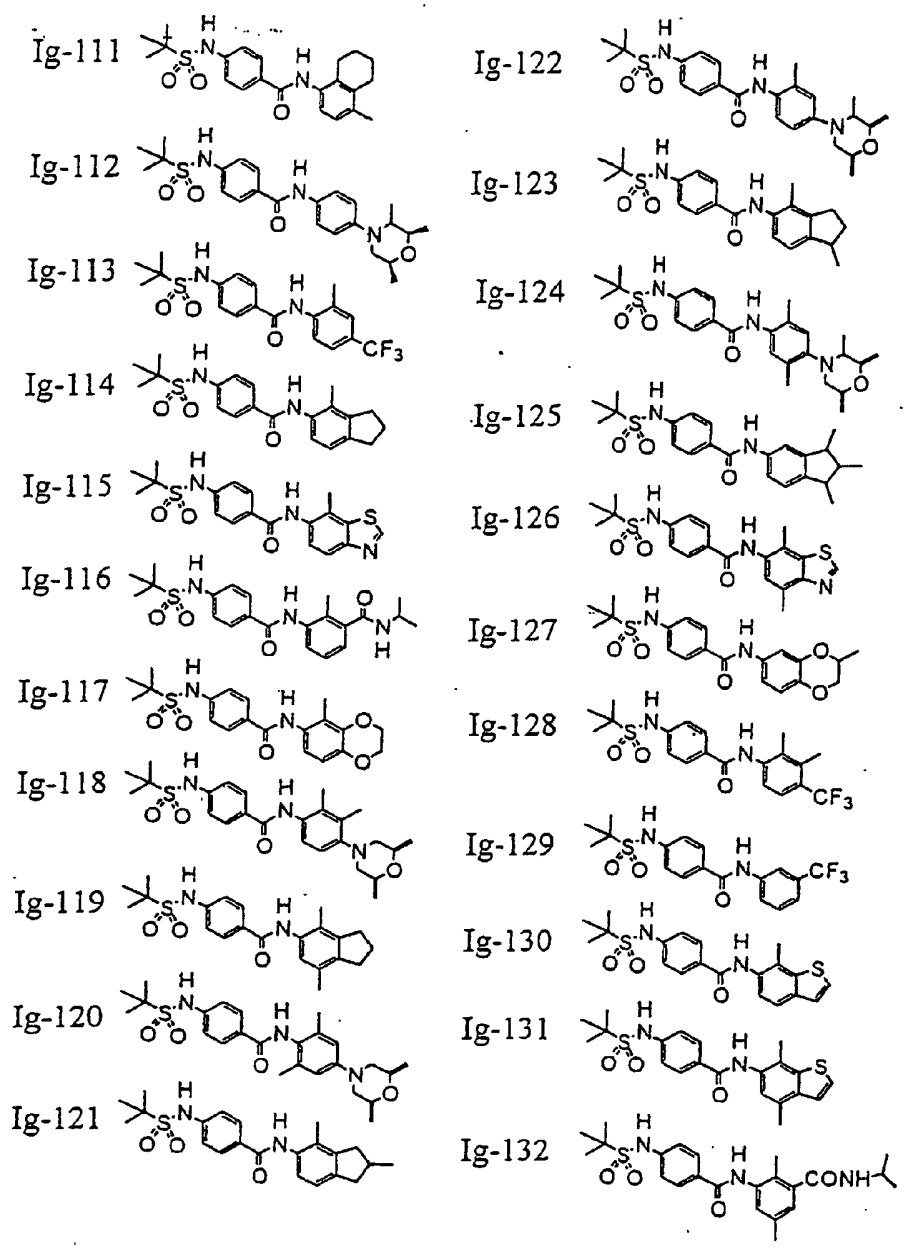


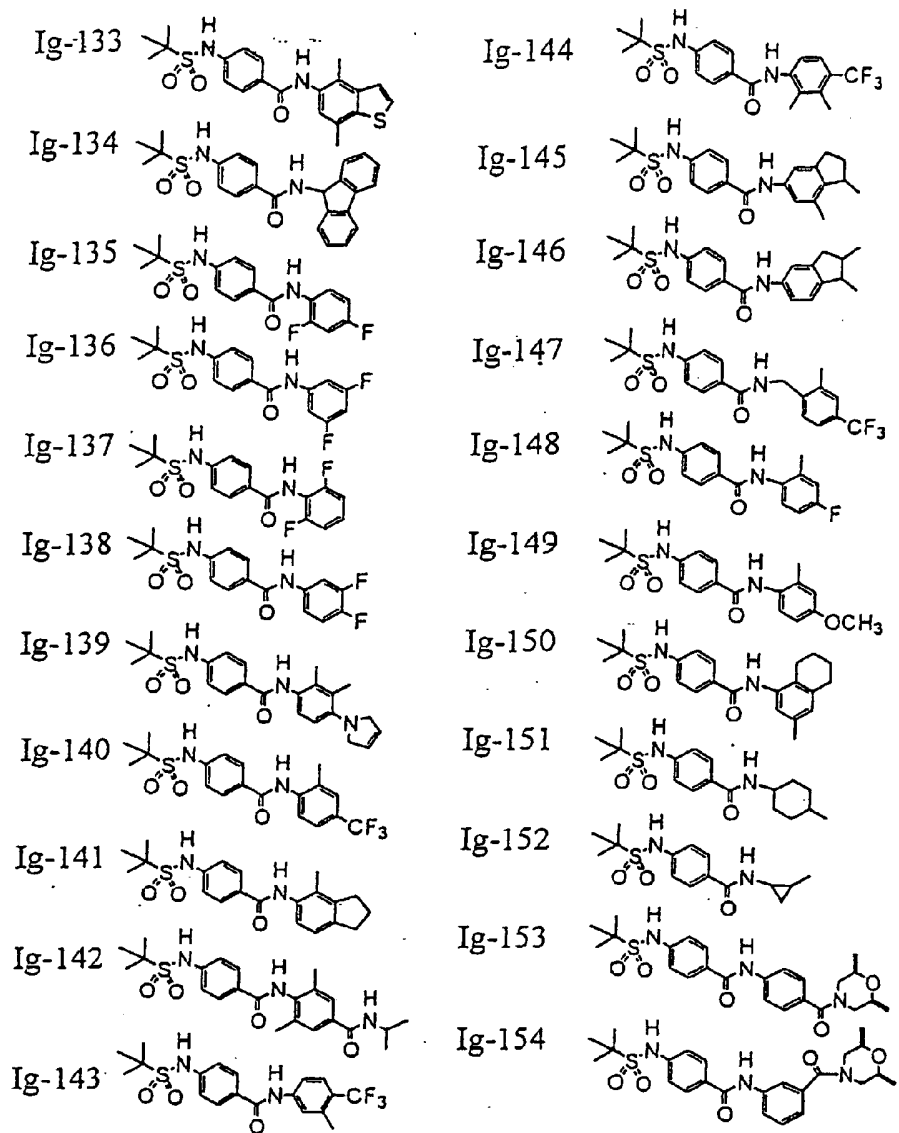


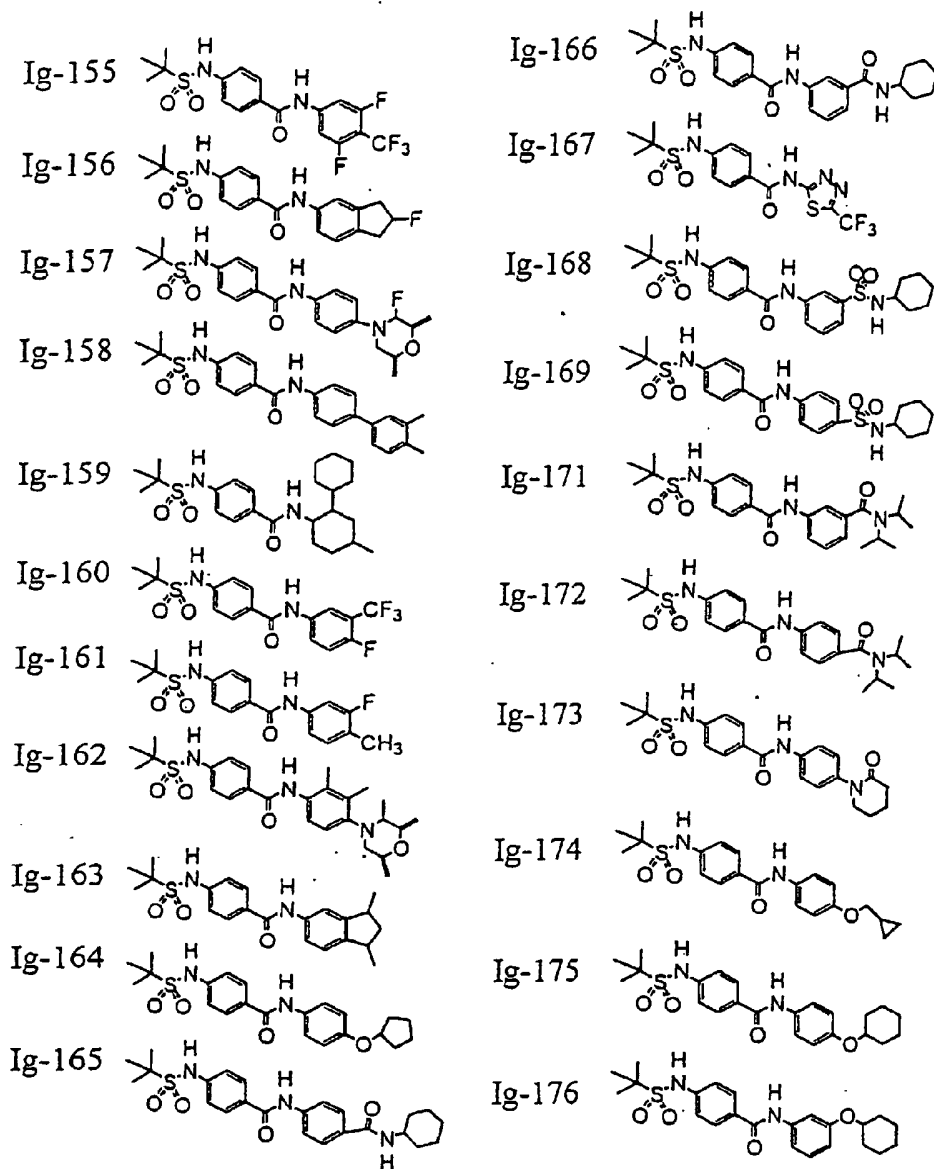


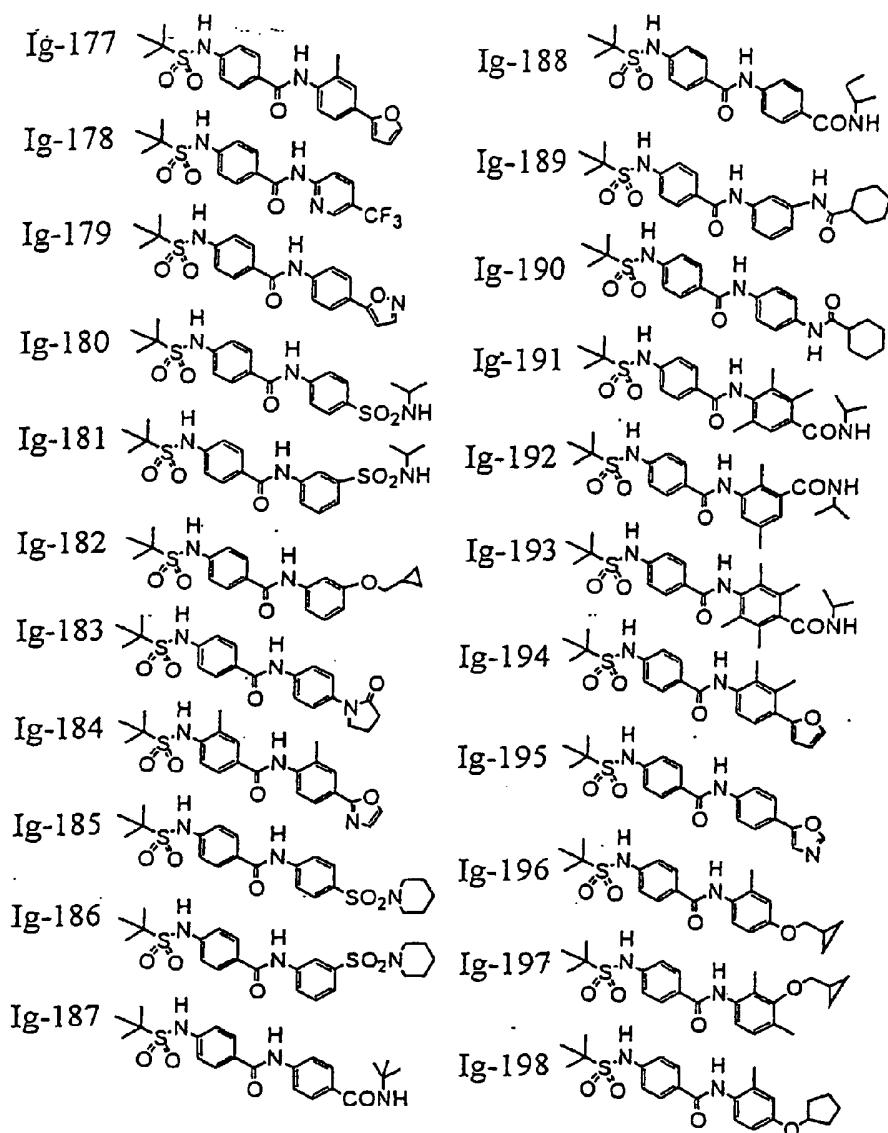


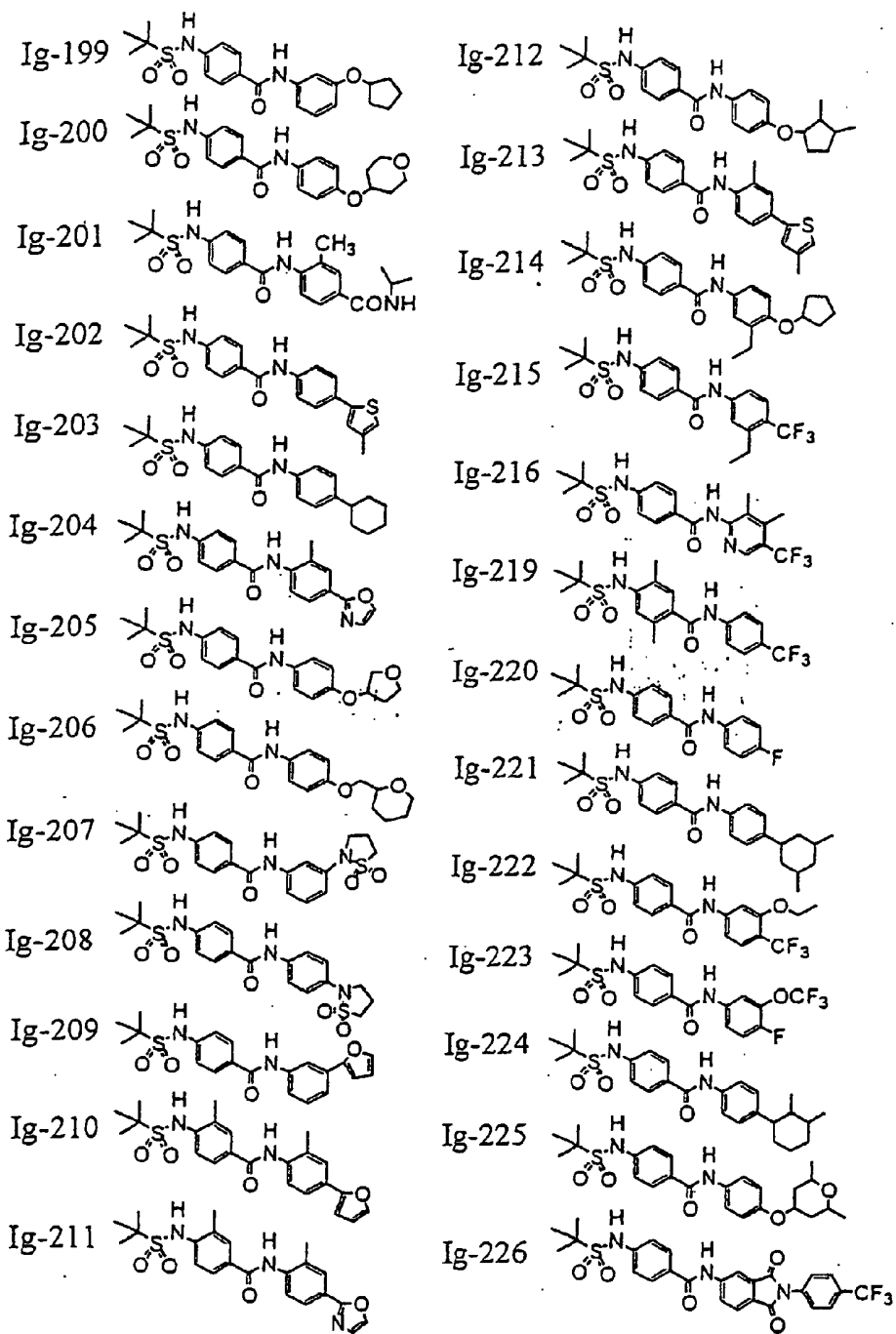


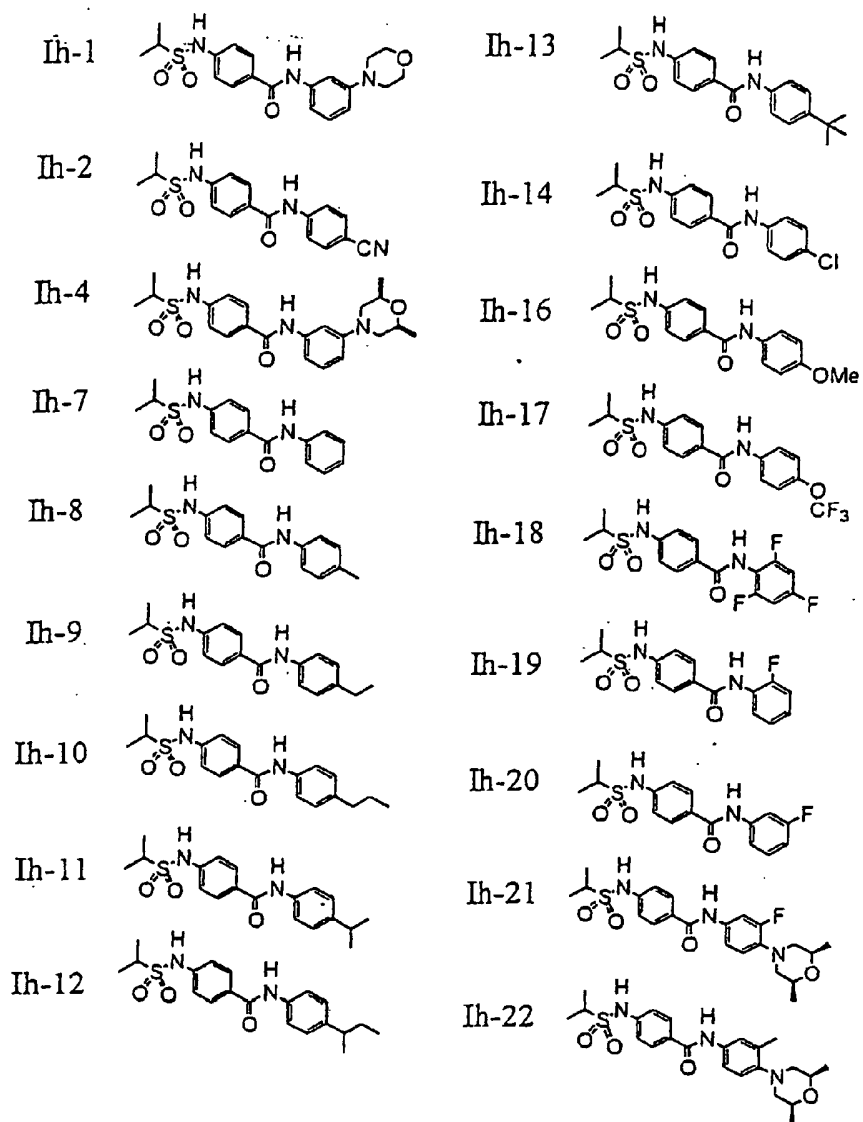


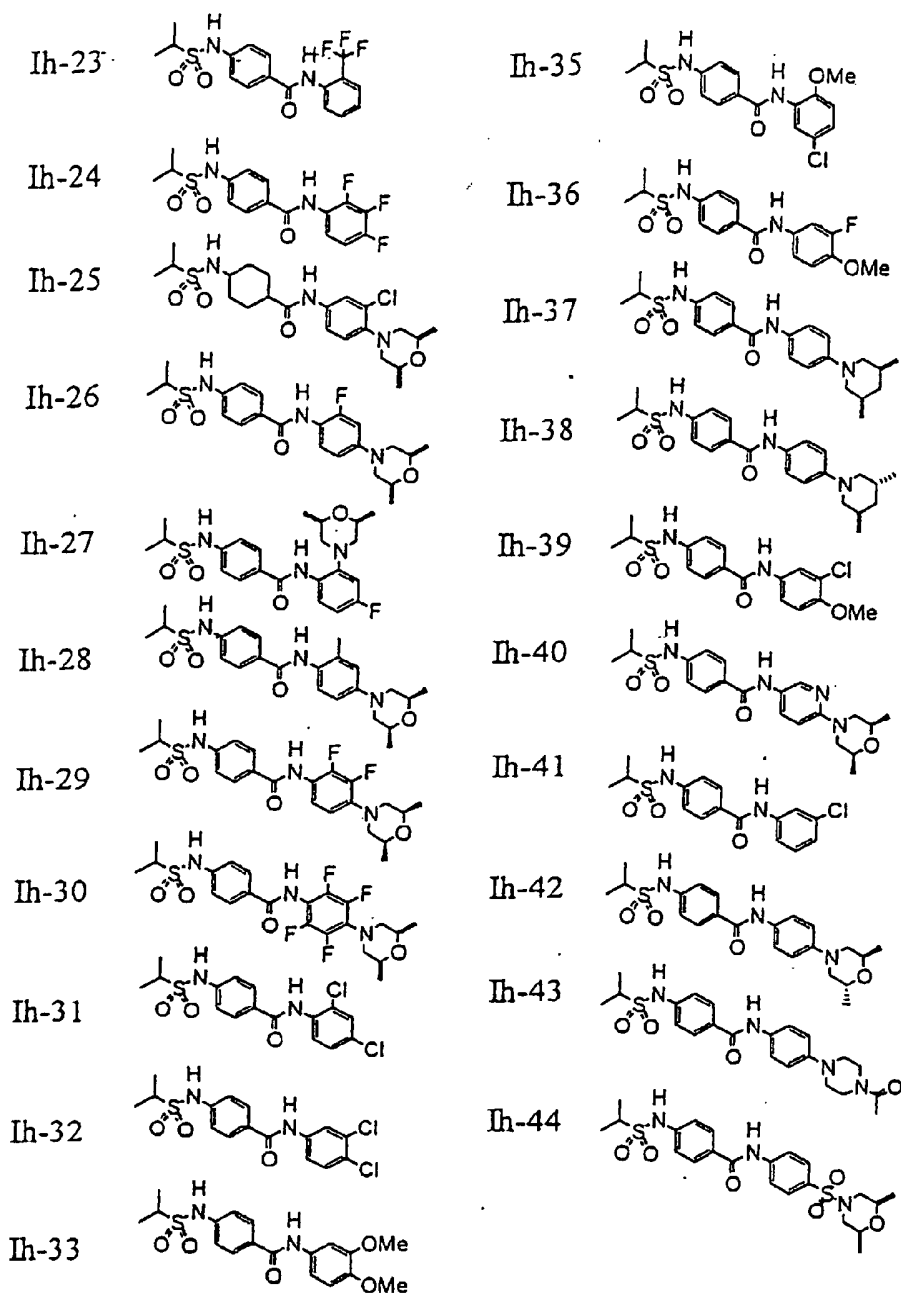


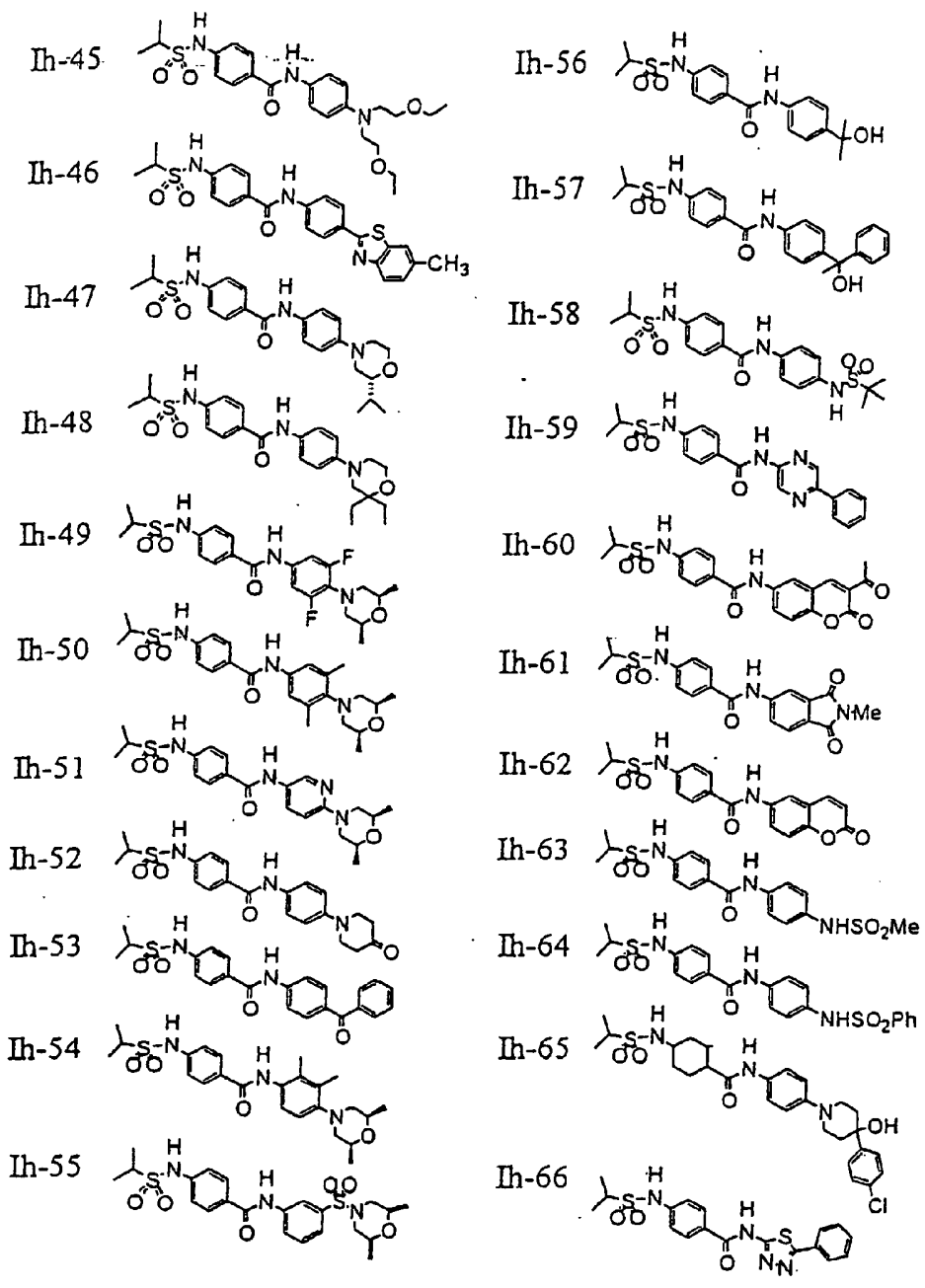


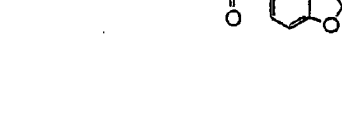
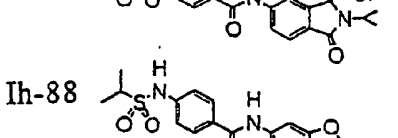
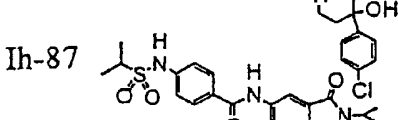
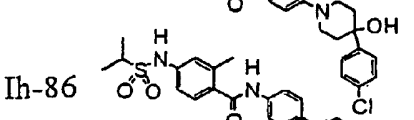
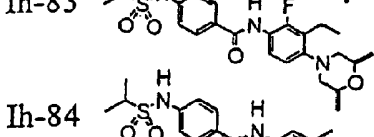
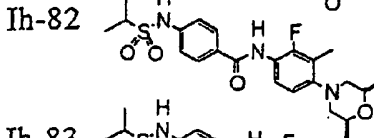
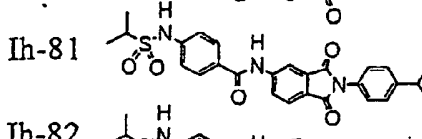
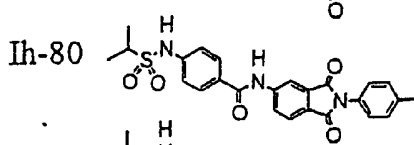
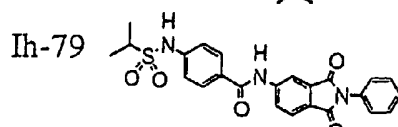
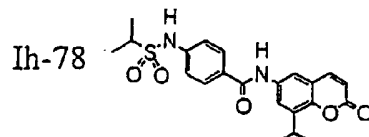
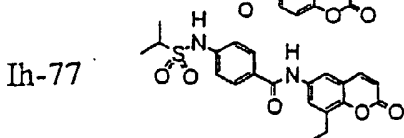
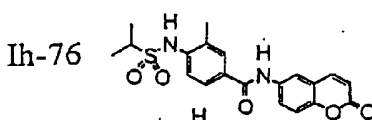
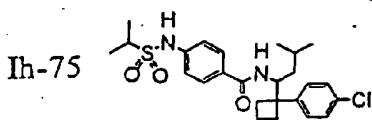
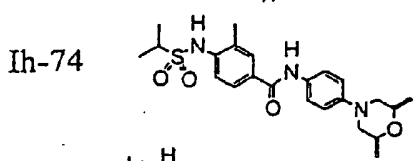
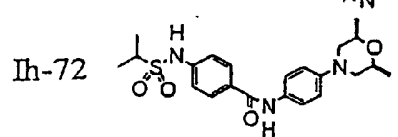
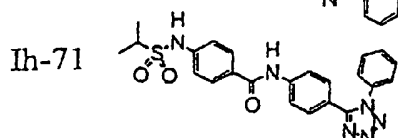
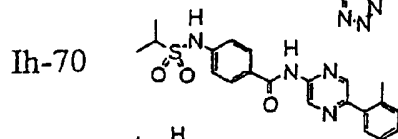
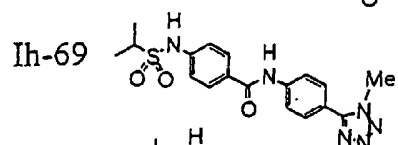
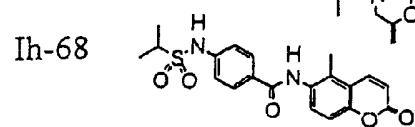
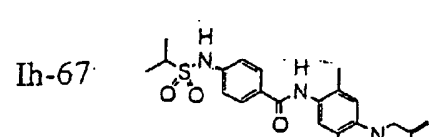


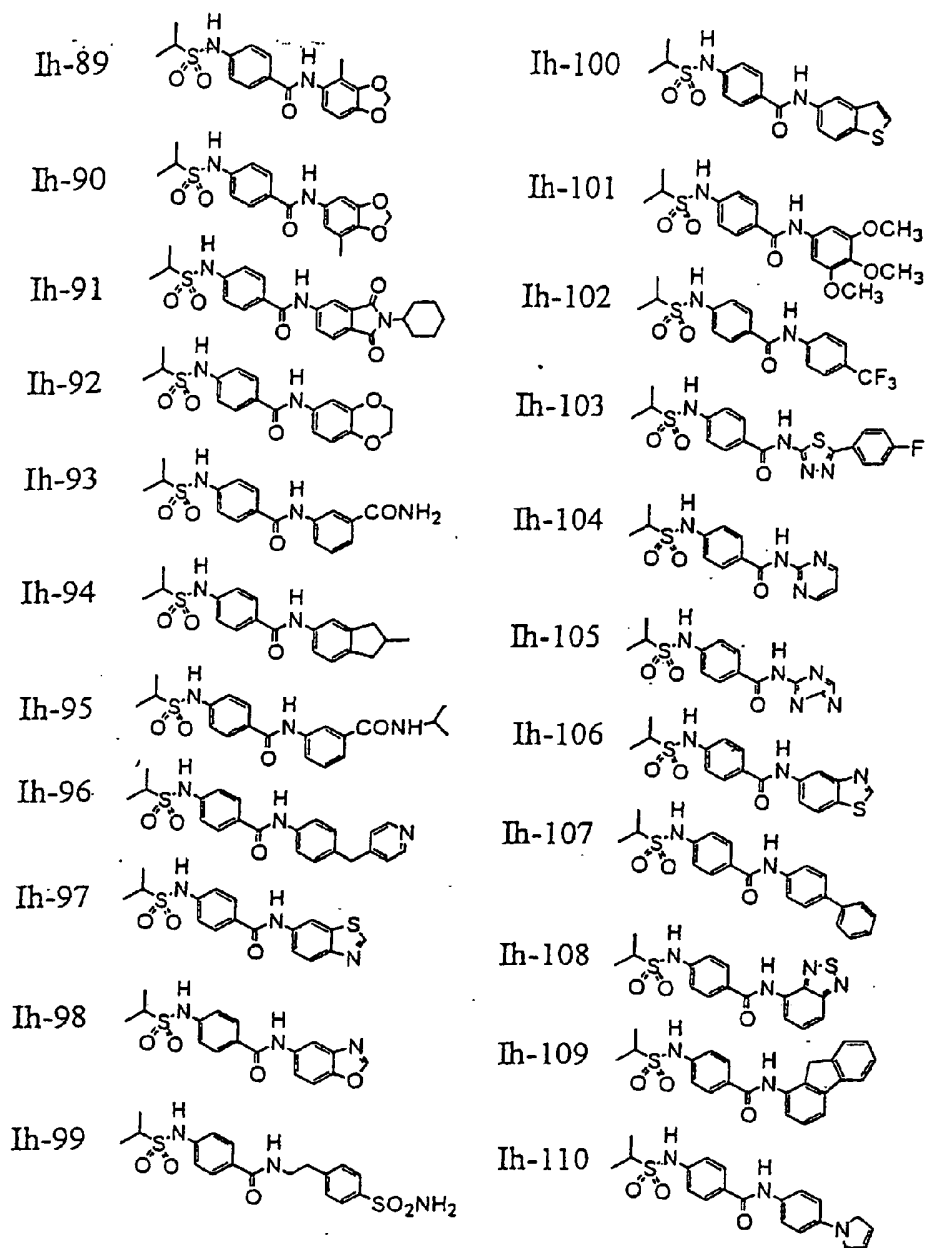


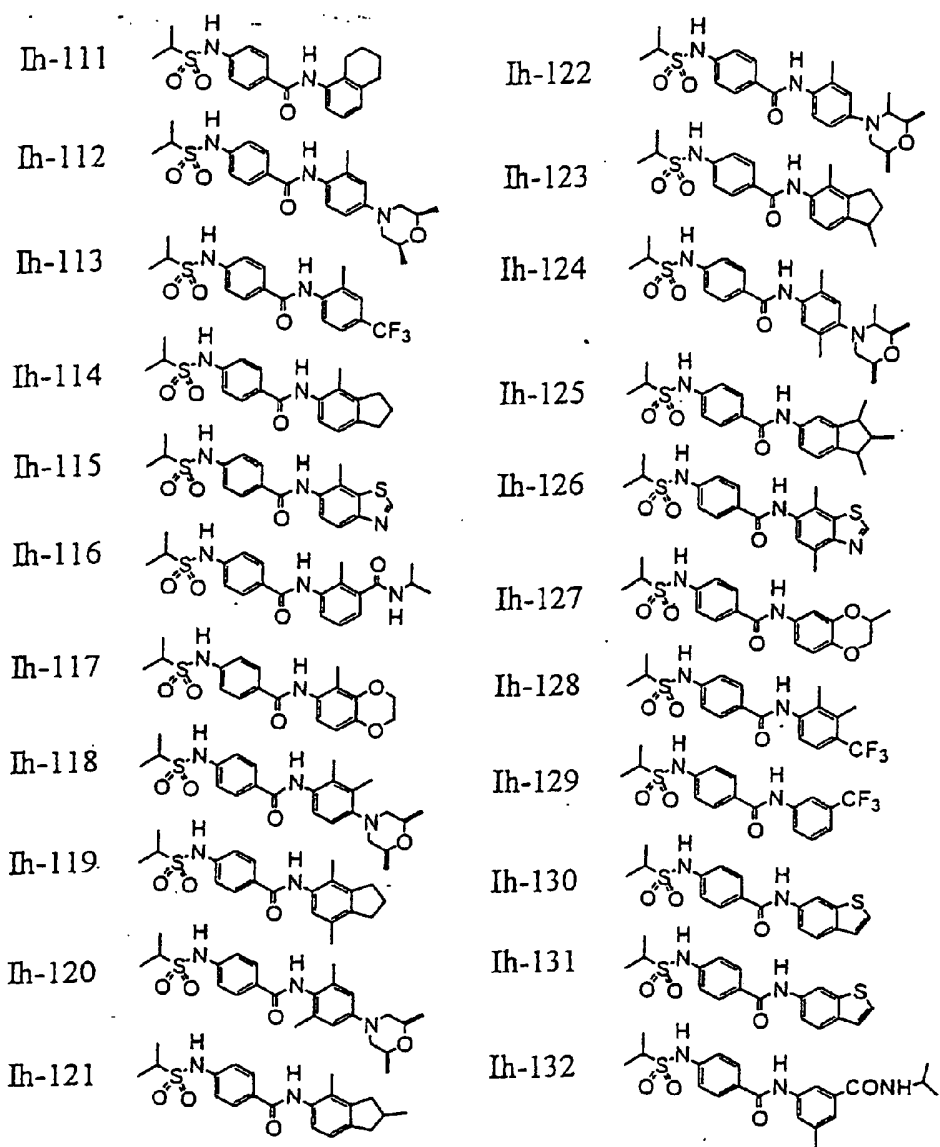


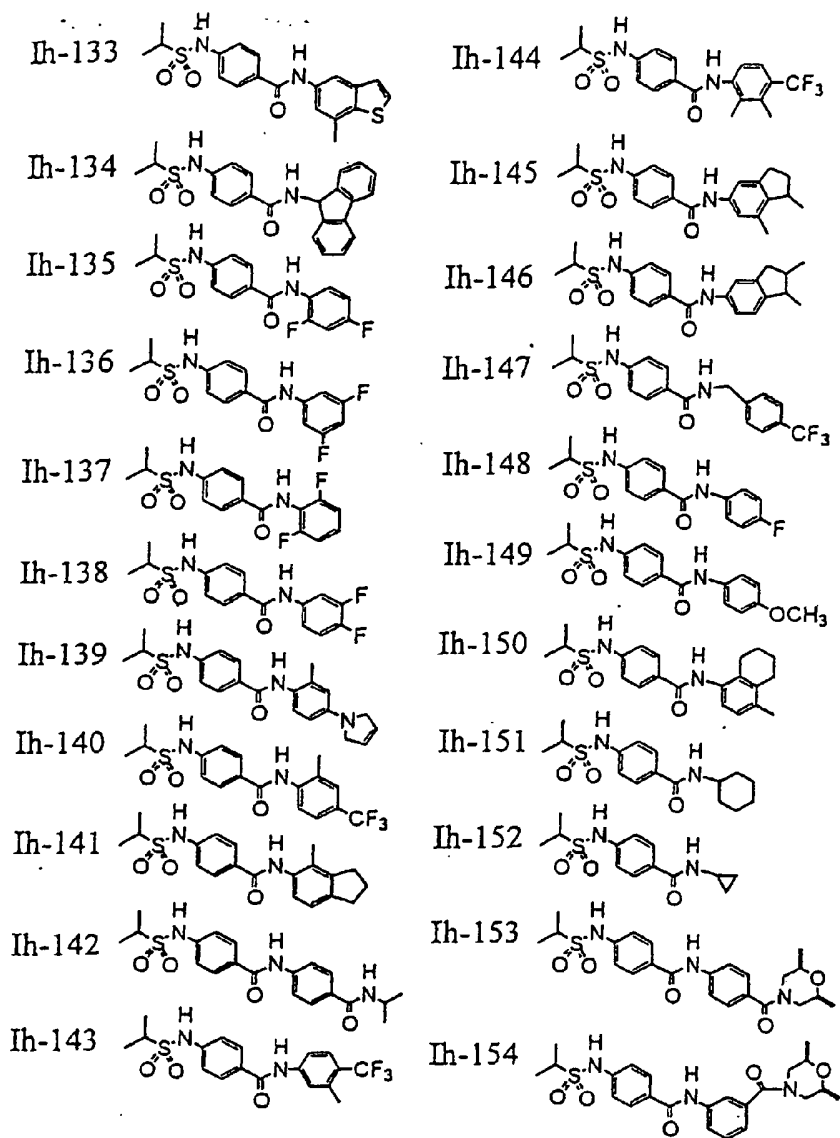


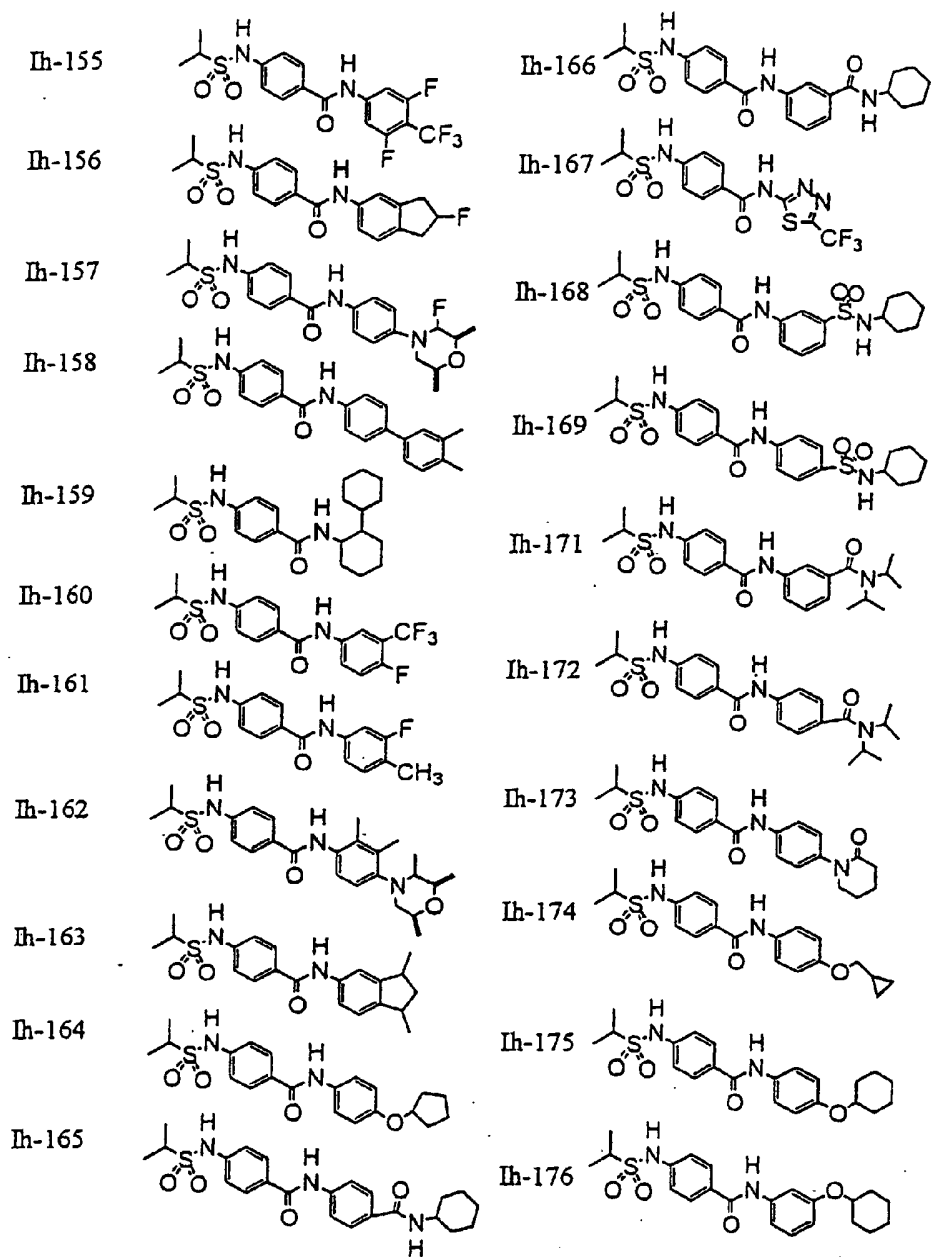


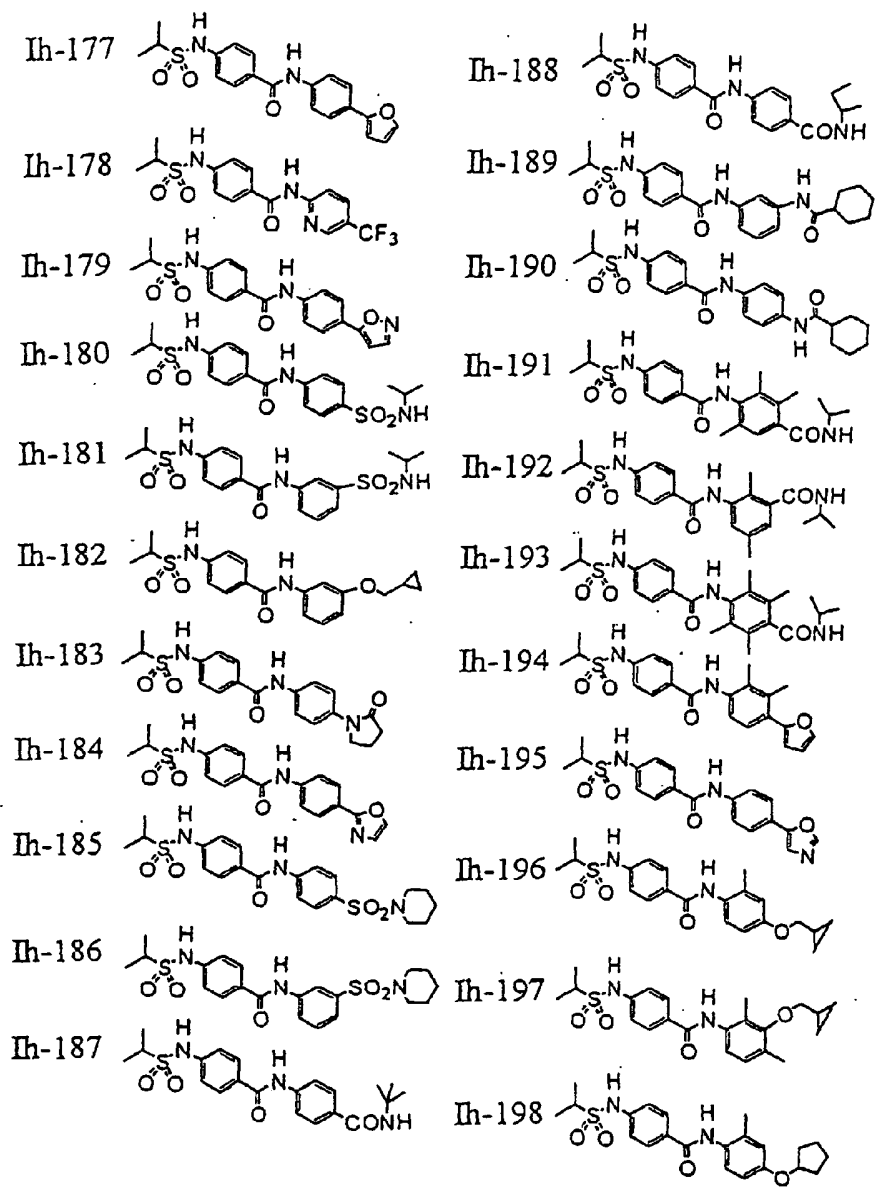


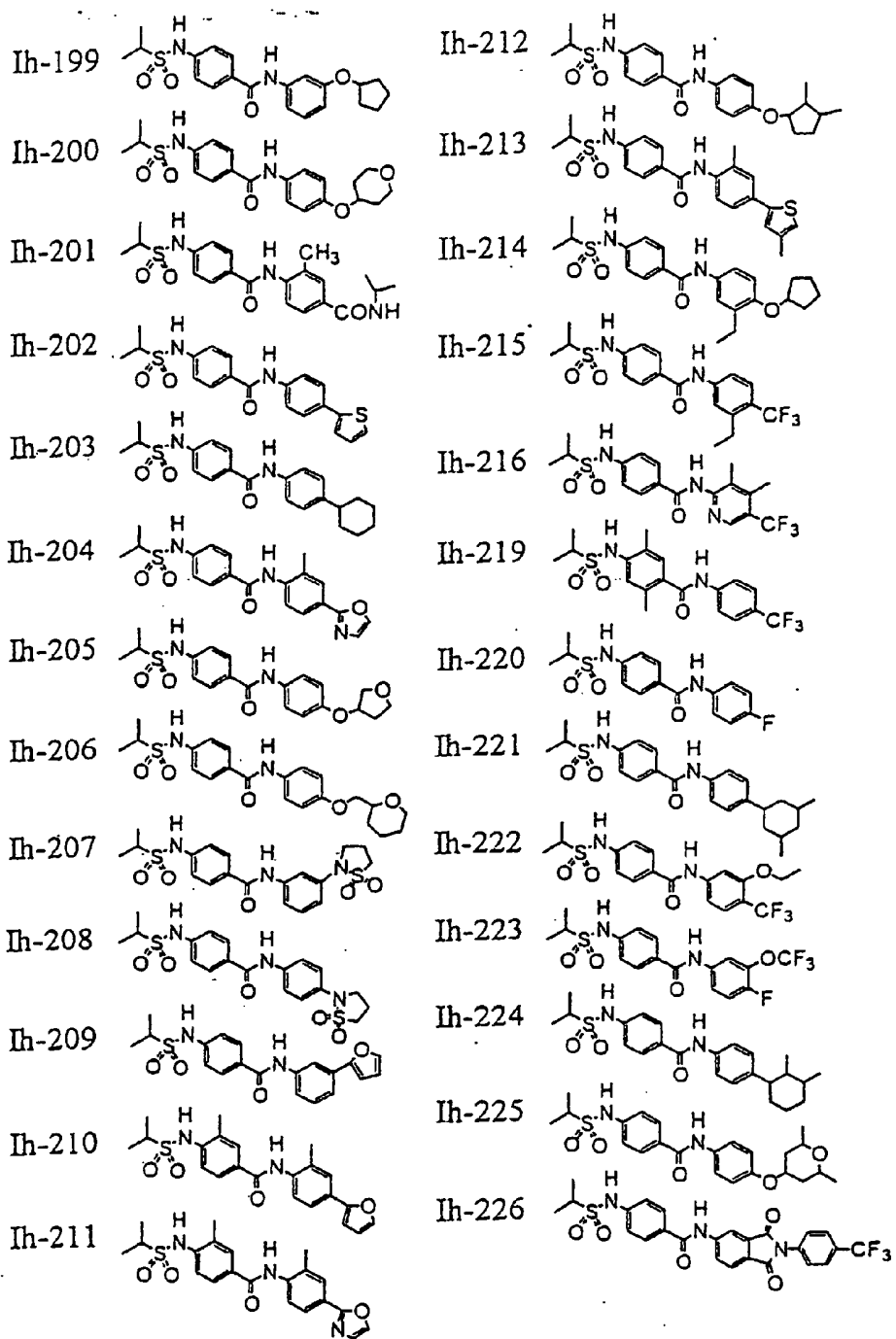












I-2

RMN de  $^1\text{H-NMR}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (quinteto, 2H,  $J = 7,5$  Hz), 1,96 (quinteto, 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 (s lg, 1H), 7,12 (d, 2H,  $J = 8,1$  Hz), 7,43 (d, 2H,  $J = 8,4$  Hz), 7,64 (s, 1H).

I-4

RMN de  $^1\text{H}$  ( $\text{CD}_3\text{OD}$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (quinteto, 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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 128-129°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

(s lg, 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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 1H), 7,10 (d, 2H,  $J = 8,4$  Hz), 7,41-7,44 (m, 3H).

I-15

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 2H), 7,11 (d, 2H,  $J = 7,8$  Hz), 7,43 (d, 2H,  $J = 7,8$  Hz), 7,59 (s, 1H).

I-16

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (quarteto, 2H,  $J = 6,6$  Hz), 3,48 (quarteto, 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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 1H), 3,57 (s lg, 1H), 7,12 (d, 2H,  $J = 8,4$  Hz), 7,41 (d, 2H,  $J = 7,8$  Hz).

I-22

pf: 78-79°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 232-233°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (quinteto, 2H,  $J = 6,3$  Hz), 2,50 (t, 2H,  $J = 6,9$  Hz), 2,56 (t, 2H,  $J = 7,8$  Hz), 3,31 (quarteto, 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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 8,1$  Hz).

I-29

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 8,4$  Hz).

I-30

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CD}_3\text{OD}$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 1H), 6,89 (d, 2H,  $J = 9,0$  Hz), 7,42 (d, 2H,  $J = 8,7$  Hz).

I-41

pf:  $>278^\circ\text{C}$  (dec.)

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 1H), 7,13 (d, 2H,  $J = 9,0$  Hz), 7,64 (d, 2H,  $J = 8,4$  Hz), 7,81 (s, H).

I-44

pf: 235-236°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 1H), 7,31 (d, 2H,  $J = 7,8$  Hz).

I-45

pf: >268 °C (dec.)

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: > 272°C (dec.)

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 270°C (dec.)

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 252-253 C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 278-279°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 276-277°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: > 300°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: > 215°C (dec.)

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: > 290°C (dec.)

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: > 232°C (dec.)

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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

pf: 284-285°C (dec.)

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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), 7,79 (s, 1H), 7,40 (d, 2H,  $J = 8,7$  Hz).

I-58

pf: > 299°C (dec.)

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: > 270°C (dec.)

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 247-250°C (dec.)

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 280-281°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 260-262°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 248°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 272-275°C (dec.)

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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

pf: 293-296°C (dec.)

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: > 300°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 248-249°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: > 300°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 199-201°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 227-230°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 270-272°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 262-263°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 218-219°C

RMN de  $^1\text{H}$  ( $\text{CD}_3\text{OD}$ )  $\delta$  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

pf: 295-296°C (dec.)

RMN de  $^1\text{H}$  ( $\text{CD}_3\text{OD}$ )  $\delta$  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

pf: 250-251°C

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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

pf: 265-266°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 281°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: > 300°C (dec.)

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 248-250°C (dec.)

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: > 300°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 261-262°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 264-265°C

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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

pf: 257°C (dec.)

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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

pf: 256-258°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 228-230°C

RMN de  $^1\text{H}$  ( $\text{CD}_3\text{OD}$ )  $\delta$  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

pf: 183-184°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 217-218°C

RMN de  $^1\text{H}$  ( $\text{CD}_3\text{OD}$ )  $\delta$  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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: amorfo

RMN de  $^1\text{H}$  ( $\text{CD}_3\text{OD}$ )  $\delta$  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 (s lg, 1H), 6,50 (d, 2H,  $J = 9,0$  Hz), 7,29 (d, 2H,  $J = 9,0$  Hz).

I-91

pf: 105-106°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (septeto, 1H,  $J = 6.9$  Hz), 7.12 (d, 2H,  $J = 8.6$  Hz), 7.32 (t, 1H,  $J = 7.8$  Hz), 7.45 (d lg, 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

pf: 163-164°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 1H), 8,18 (d, 2H,  $J = 8,4$  Hz), 8,77 (s, 1H).

I-93

pf: 173°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (septeto, 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

pf: 159-160°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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), 2,60 (t, 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 (s lg, 1H), 7,84 (d, 2H,  $J = 8,8$  Hz), 8,77 (s, 1H).

I-95

pf: 177-178°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,94 (t, 3H,  $J = 7,2$  Hz), 1,31-1,48 (m, 8H), 1,54-1,66 (m, 2H), 2,55 (s, 3H), 2,62 (t, 2H,  $J = 7,6$  Hz), 3,92 (septeto, 1H,  $J = 6,6$  Hz), 7,20 (d, 2H,  $J = 8,45$  Hz), 7,74 (d, 2H,  $J = 8,5$  Hz), 9,01 (s lg, 1H), 9,17 (s, 1H).

I-96

pf: 220-223°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,93 (t, 3H,  $J = 7,3$  Hz), 1,28-1,42 (m, 2H), 1,50 (d, 6H,  $J = 6,8$  Hz), 1,54-1,65 (m, 2H), 2,62 (t, 2H,  $J = 7,6$  Hz), 4,08 (septeto, 1H,  $J = 7,1$  Hz), 7,20 (d, 2H,  $J = 8,5$  Hz), 7,48 (d, 2H,  $J = 8,5$  Hz), 7,71 (s lg, 1H), 8,51 (s lg, 1H), 8,95 (s, 1H).

I-97

pf: 195-197°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,91 (t, 3H,  $J = 7,6$  Hz), 0,94 (t, 3H,  $J = 7,3$  Hz), 1,32-1,44 (m, 6H), 1,54-1,64 (m, 2H), 1,66-1,78 (m, 2H), 2,62 (t, 2H,  $J = 7,7$  Hz), 2,86 (s lg, 2H), 3,98 (septeto, 1H,  $J = 7,1$  Hz), 7,19 (d, 2H,  $J = 8,5$  Hz), 7,63 (d, 2H,  $J = 8,4$  Hz), 8,72 (s lg, 1H), 8,81 (s lg, 1H).

I-98

pf: 216-218°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3 + \text{CD}_3\text{OD}$ )  $\delta$  ppm: 0,93 (t, 3H,  $J = 7,4$  Hz), 1,29-1,40 (m, 2H), 1,43 (d, 2H,  $J = 6,9$  Hz), 1,51-1,63 (m, 2H), 2,60 (t, 2H,  $J = 7,8$  Hz), 3,65 (septeto; 1H,  $J = 6,9$  Hz), 7,18 (d, 2H,  $J = 8,5$  Hz), 7,22 (d, 1H,  $J = 8,8$  Hz), 7,55 (d, 2H,  $J = 8,5$  Hz), 8,18 (dd, 1H,  $J = 8,8, 2,4$  Hz), 8,63 (d, 1H,  $J = 2,4$  Hz).

I-99

pf: 201-202°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,93 (t, 3H,  $J = 7,3$  Hz), 1,22-1,40 (m, 2H), 1,49 (d, 2H,  $J = 7,1$  Hz), 1,51-1,63 (m, 2H), 2,59 (t, 2H,  $J = 7,7$  Hz), 4,22 (septeto, 1H,  $J = 7,1$  Hz), 7,16 (d, 2H,  $J = 8,4$  Hz), 7,41 (s lg, 1H), 7,52 (d, 2H,  $J = 8,4$  Hz), 8,10 (s lg, 1H), 8,13 (d, 1H,  $J = 2,2$  Hz), 8,61 (s lg, 1H).

I-100

pf: 160-162°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,93 (t, 3H,  $J = 7,3$  Hz), 1,22-1,42 (m, 2H), 1,45 (d, 2H,  $J = 6,9$  Hz), 1,51-1,63 (m, 2H), 2,61 (t, 2H,  $J = 7,8$  Hz), 3,37 (septeto, 1H,  $J = 6,9$  Hz), 6,89 (s lg, 1H), 7,19 (d, 2H,  $J = 8,4$  Hz), 7,65 (d, 2H,  $J = 8,4$  Hz), 7,80 (dd, 1H,  $J = 8,4, 2,4$  Hz), 8,27 (d, 1H,  $J = 8,4$  Hz), 8,45 (d, 1H,  $J = 2,4$  Hz), 9,75 (s lg, 1H).

I-101, I-214

pf: 192-194°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,93 (t, 3H,  $J = 7,3$  Hz), 1,27-1,41 (m, 2H), 1,35 (s, 9H), 1,50-1,66 (m, 2H), 2,60 (t, 2H,  $J = 7,6$  Hz), 5,58 (s lg, 1H), 7,07 (d, 2H,  $J =$

8,5 Hz), 7,17 (d, 2H, J = 8,5 Hz), 7,52 (d, 2H, J = 8,5 Hz), 7,71 (s lg, 1H), 7,79 (d, 2H, J = 8,5 Hz).

I-102

pf: 216-217°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,93 (t, 3H, J = 7,3 Hz), 1,26-1,42 (m, 2H), 1,45 (s, 9H), 1,70-1,83 (m, 2H), 2,60 (t, 2H, J = 7,7 Hz), 6,42 (s lg, 1H), 7,18 (d, 2H, J = 8,5 Hz), 7,35 (d, 2H, J = 8,5 Hz), 7,51 (d, 2H, J = 8,5 Hz), 7,68 (s lg, 1H), 7,82 (d, 2H, J = 8,5 Hz).

I-103

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (septeto, 1H, J = 6,9 Hz), 3,46 (s, 3H), 6,76 (s lg, 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

pf: 182-183°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,93 (t, 3H, J = 7,3 Hz), 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 = 7,6 Hz), 3,39 (m,

1H), 6,16 (s lg, 1H), 7,07 (d, 2H, J = 8,5 Hz), 7,16 (d, 2H, J = 8,5 Hz), 7,52 (d, 2H, J = 8,5 Hz), 7,74 (s lg, 1H), 7,77 (d, 2H, J = 8,5 Hz).

I-105

pf: 190-191°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,93 (t, 3H, J = 7,3 Hz), 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 = 7,6 Hz), 3,59 (m, 1H), 6,53 (s lg, 1H), 7,18 (d, 2H, J = 8,5 Hz), 7,31 (d, 2H, J = 8,5 Hz), 7,52 (d, 2H, J = 8,5 Hz), 7,67 (s lg, 1H), 7,84 (d, 2H, J = 8,5 Hz).

I-106

pf: 194-197°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,93 (t, 3H, J = 7,3 Hz), 1,22-1,41 (m, 2H), 1,53-1,65 (m, 2H), 1,90 (s, 6H), 2,60 (t, 2H, J = 7,8 Hz), 6,86 (s lg, 1H), 7,18 (d, 2H, J = 8,5 Hz), 7,43 (d, 2H, J = 8,5 Hz), 7,51 (d, 2H, J = 8,5 Hz), 7,71 (s lg, 1H), 7,84 (d, 2H, J = 8,5 Hz).

I-107

pf: 211-212°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,93 (t, 3H,  $J = 7,3$  Hz), 1,24-1,40 (m, 2H), 1,50-1,62 (m, 2H), 2,60 (t, 2H,  $J = 7,6$  Hz), 6,19 (s lg, 1H), 7,17 (d, 2H,  $J = 8,5$  Hz), 7,18 (d, 2H,  $J = 8,5$  Hz), 7,51 (d, 2H,  $J = 8,5$  Hz), 7,66 (s lg, 1H), 7,86 (d, 2H,  $J = 8,5$  Hz).

I-108

pf: 298-300°C

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  ppm: 0,90 (t, 3H,  $J = 7,3$  Hz), 1,22-1,39 (m, 2H), 1,48-1,60 (m, 2H), 2,54 (t, 2H,  $J = 7,3$  Hz), 7,04 (d, 2H,  $J = 8,8$  Hz), 7,12 (d, 2H,  $J = 8,5$  Hz), 7,64 (d, 2H,  $J = 8,5$  Hz), 7,69 (d, 2H,  $J = 8,8$  Hz), 9,80 (s, 1H).

I-109

pf: 122-123°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,90 (t, 3H,  $J = 7,4$  Hz), 0,97 (t, 3H,  $J = 7,7$  Hz), 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,  $J = 7,1$  Hz), 2,55 (t, 2H,  $J = 7,6$  Hz), 3,19 (q, 1H,  $J = 6,0$  Hz), 4,60 (s lg, 1H), 7,08 (d, 2H,  $J = 8,5$  Hz), 7,42 (d, 2H,  $J = 8,5$  Hz), 7,85 (s, 1H).

I-110

pf: 109-110°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,91 (t, 3H,  $J = 7,4$  Hz), 1,10 (d, 6H,  $J = 6,7$  Hz), 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,  $J = 7,0$  Hz), 2,57 (t, 2H,  $J = 7,7$  Hz), 2,90 (d, 2H,  $J = 6,6$  Hz), 3,16 (s lg, 1H), 4,24 (s lg, 1H), 7,12 (d, 2H,  $J = 8,5$  Hz), 7,40 (d, 2H,  $J = 8,5$  Hz).

I-111

pf: 64-65°C

RMN de  $^1\text{H}$ , ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,91 (t, 3H,  $J = 7,3$  Hz), 1,02 (t, 3H,  $J = 7,5$  Hz), 1,35 (d, 3H,  $J = 6,7$  Hz), 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,  $J = 7,3$  Hz), 2,56 (t, 2H,  $J = 7,6$  Hz), 2,91 (m, 1H), 3,16 (s lg, 2H), 4,42 (s lg, 1H), 7,11 (d, 2H,  $J = 8,5$  Hz), 7,42 (d, 2H,  $J = 8,5$  Hz), 7,47 (s lg, 1H).

I-112

pf: 79-80°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 1,36 (s, 9H), 1,52-1,62 (m, 2H), 1,67-1,76 (m, 2H), 2,22 (t, 2H,  $J = 7,4$  Hz), 3,16 (q, 2H,  $J = 6,3$  Hz), 3,78 (s, 3H), 4,33 (d, 2H,  $J = 5,4$

Hz), 4,62 (s lg, 1H), 6,20 (s lg, 1H), 6,85 (d, 2H, J = 8,8 Hz), 7,19 (d, 2H, J = 8,8 Hz).

I-113

pf: 125-126°C

RMN de  $^1\text{H}$ , ( $\text{CDCl}_3$ )  $\delta$  ppm: 1,38 (s, 9H), 1,62-1,70 (m, 2H), 1,76-1,88 (m, 2H), 2,46 (t, 2H, J = 7,4 Hz), 3,22 (q, 2H, J = 6,1 Hz), 4,22 (t, 1H, J = 6,1 Hz), 7,24 (dd, 1H, J = 8,9, 2,3 Hz), 7,36 (d, 1H, J = 2,3 Hz), 7,65 (s lg, 1H), 8,29 (d, 1H, J = 8,9 Hz).

I-114

pf: 89-91°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,92 (t, 3H, J = 7,0 Hz), 1,06 (d, 6H, J = 7,0 Hz), 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 = 7,7 Hz), 2,84 (t, 2H, J = 7,7 Hz), 2,93 (d, 2H, J = 6,3 Hz), 3,20 (t, 2H, J = 6,6 Hz), 4,30 (s lg, 1H), 7,19 (d, 2H, J = 8,5 Hz), 7,63 (d, 2H, J = 8,5 Hz), 9,15 (s lg, 1H).

I-115

pf: 94-95°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,92 (t, 3H,  $J = 7,5$  Hz), 1,03 (t, 3H,  $J = 7,5$  Hz), 1,23-1,40 (m, 5H), 1,42-1,65 (m, 6H), 1,75 (m, 1H), 2,02 (m, 1H), 2,24 (t, 2H,  $J = 7,0$  Hz), 2,59 (t, 2H,  $J = 8,0$  Hz), 2,90 (m, 1H), 3,14 (q, 2H,  $J = 6,6$  Hz), 4,20 (m, 1H), 4,40 (d, 2H,  $J = 5,4$  Hz), 5,70 (s lg, 1H), 7,14 (d, 2H,  $J = 8,1$  Hz), 7,18 (d, 2H,  $J = 8,1$  Hz).

I-116

pf: 89-91°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,97 (t, 3H,  $J = 7,3$  Hz), 1,02 (t, 3H,  $J = 7,5$  Hz), 1,35 (d, 3H,  $J = 7,0$  Hz), 1,40-1,90 (m, 9H), 2,04 (m, 1H), 2,37 (t, 2H,  $J = 7,0$  Hz), 2,90 (m, 1H), 3,17 (q, 2H,  $J = 6,6$  Hz), 3,93 (t, 2H,  $J = 6,6$  Hz), 4,32 (m, 1H), 6,84 (d, 2H,  $J = 9,0$  Hz), 7,31 (s lg, 1H), 7,40 (d, 2H,  $J = 9,0$  Hz).

I-117

pf: 110-111°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 1,02 (t, 3H,  $J = 7,5$  Hz), 1,34 (d, 3H,  $J = 6,6$  Hz), 1,45-1,70 (m, 3H), 1,75-1,85 (m, 2H), 2,05 (m, 1H), 2,36 (t, 2H,  $J = 7,5$  Hz), 2,90 (m, 1H), 3,16 (q, 2H,  $J = 6,6$  Hz), 3,78 (s, 3H), 4,50 (m, 1H), 6,84 (d, 2H,  $J = 6,8$  Hz), 7,42 (d, 2H,  $J = 6,8$  Hz), 7,48 (s lg, 1H).

I-118

pf: 113-115°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,92 (t, 3H,  $J = 7,0$  Hz), 1,20-1,34 (m, 1H), 1,37 (d, 6H,  $J = 7,0$  Hz), 1,48-1,70 (m, 3H), 2,43 (q, 2H,  $J = 6,6$  Hz), 2,58 (t, 2H,  $J = 7,7$  Hz), 3,10-3,31 (m, 3H), 4,75 (m, 1H), 6,04 (d, 1H,  $J = 15,0$  Hz), 6,77 (dt, 1H,  $J = 7,7, 15,0$  Hz), 7,14 (d, 2H,  $J = 8,4$  Hz), 7,55 (d, 2H,  $J = 8,4$  Hz), 7,85 (s lg, 1H).

I-119

pf: 139-140°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 1,19 (s, 9H), 1,47 (m, 2H), 1,61 (m, 2H), 2,18 (t, 2H,  $J = 7,6$  Hz), 3,03 (q, 2H,  $J = 6,3$  Hz), 4,09 (t, 1H,  $J = 5,9$  Hz), 6,85 (d lg, 1H,  $J = 8,0$  Hz), 7,00 (t, 1H,  $J = 8,0$  Hz), 7,16 (d lg, 1H,  $J = 8,0$ ), 7,48 (s lg, 1H), 7,57 (s lg, 1H).

I-120

pf: 183°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,91 (t, 3H,  $J = 7,3$  Hz), 1,20-1,58 (m, 6H), 1,40 (s, 9H), 2,07 (dd, 1H,  $J = 12,9, 3,1$  Hz), 2,52 (t, 2H,  $J = 7,7$  Hz), 2,95 (dd, 2H,  $J =$

11,5, 2,5 Hz), 3,46 (m, 1H), 3,88-4,07 (m, 3H), 6,47 (s, 1H), 7,08 (d, 2H, J = 8,5 Hz), 7,22 (d, 2H, J = 8,5 Hz).

I-121

pf: 163-166°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,91 (t, 3H, J = 7,3 Hz), 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, 3,7 Hz), 2,37 (t, 2H, J = 7,6 Hz), 3,43 (d lg, 2H, J = 10,4 Hz), 4,80 (s, 1H), 7,12 (d, 2H, J = 8,4 Hz), 7,14 (s, 1H), 7,39 (d, 2H, J = 8,4 Hz).

I-122

pf: 188-189°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,91 (t, 3H, J = 7,5 Hz), 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 = 7,5 Hz), 3,99 (s lg, 1H), 7,10 (s lg, 1H), 7,12 (d, 2H, J = 6,5 Hz), 7,41 (d, 2H, J = 6,5 Hz).

I-123

pf: 197-198°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,91 (t, 3H,  $J = 7,5$  Hz), 1,24-1,40 (m, 2H), 1,39 (s, 9H), 1,50-1,70 (m, 2H), 1,99 (s lg, 12H), 2,56 (t, 2H,  $J = 7,5$  Hz), 3,47 (s lg, 1H), 7,10 (s, 1H), 7,11 (d, 2H,  $J = 8,5$  Hz), 7,38 (d, 2H,  $J = 8,5$  Hz).

I-124

pf: 258-260°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 8,4$  Hz), 7,08 (s lg, 1H), 7,24 (m, 1H), 7,33 (m, 2H), 7,60 (d, 1H,  $J = 8,1$  Hz), 7,77 (s, 1H), 7,80 (d, 1H,  $J = 8,4$  Hz), 8,14 (m, 1H).

I-125

pf: 297-299°C

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  ppm: 1,27 (s, 9H), 1,28-1,56 (m, 4H), 1,80-2,01 (m, 4H), 2,47 (m, 1H), 2,76 (s lg, 1H), 3,05 (m, 2H), 6,78 (d, 1H,  $J = 9,0$  Hz), 7,23 (d, 1H,  $J = 9,0$  Hz), 7,46 (dd, 1H,  $J = 2,0, 9,0$  Hz), 8,03 (d, 1H,  $J = 2,0$  Hz).

I-126

pf: 198-199°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,6$  Hz), 5,89 (tt, 1H,  $J = 3,0, 50,0$  Hz), 6,97 (d, 1H,  $J = 7,8$  Hz), 7,21 (s, 1H), 7,30,7,40 (m, 2H), 7,55 (s, 1H).

I-127

pf: 262-264°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 8,7$  Hz), 7,28 (s lg, 1H), 7,62 (d, 2H,  $J = 8,7$  Hz), 7,94 (d, 2H,  $J = 8,7$  Hz).

I-128

pf: 252-254°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 1H), 7,23 (d, 2H,  $J = 9,0$  Hz), 7,44 (d, 2H,  $J = 9,0$  Hz).

I-129

pf: > 300°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3 + \text{CD}_3\text{OD}$ )  $\delta$  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,  $J = 6,7$  Hz), 7,88 (d, 1H,  $J = 8,5$  Hz), 7,98-8,07 (m, 2H), 8,44 (s, 1H), 8,46 (s, 1H).

I-130

pf: 123-124°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,5$  Hz), 5,59 (s, 1H), 7,17 (s, 1H), 7,30-7,37 (m, 6H), 7,41 (d, 1H,  $J = 8,5$  Hz), 7,84 (d, 1H,  $J = 2,1$  Hz).

1-131

pf: 202-204°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 7,9$  Hz), 7,12 (d, 1H,  $J = 7,8$  Hz), 7,40 (t, 1H,  $J = 7,8$  Hz), 7,51 (s, 3H), 7,61 (d, 1H,  $J = 7,8$  Hz), 7,71 (s, 1H), 8,21 (s lg, 1H).

I-132

pf: 236-237°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,5$  Hz), 4,02 (s, 3H), 7,30 (td, 1H,  $J = 7,3, 1,1$  Hz), 7,36 (s, 1H), 7,39 (td, 1H,  $J = 7,3, 1,5$  Hz), 7,53 (d lg, 1H,  $J = 7,3$  Hz), 7,84 (d lg, 1H,  $J = 7,3$  Hz), 8,05 (s, 1H), 8,73 (s, 1H).

I-133

pf: 198-200°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,93 (t, 3H,  $J = 7,3$  Hz), 0,97 (t, 3H,  $J = 6,7$  Hz), 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,  $J = 10,7, 6,7$  Hz), 4,09 (dd, 1H,  $J = 10,7, 6,1$  Hz), 4,27 (d, 1H,  $J = 9,8$  Hz), 6,37 (d, 1H,  $J = 15,9$  Hz), 7,47 (d, 2H,  $J = 8,5$  Hz), 7,59 (d, 2H,  $J = 8,5$  Hz), 7,62 (d, 1H,  $J = 15,9$  Hz), 7,83 (s lg, 1H).

I-134

pf: 212-213°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,6$  Hz), 6,74 (m,

1H), 7,02 (d, 2H, J = 7,4 Hz), 7,11 (t, 1H, J = 7,4 Hz),  
7,13-7,19 (m, 2H), 7,22-7,26 (m, 2H), 7,34 (t, 2H, J = 7,4  
Hz).

I-135

pf: 294-296°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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 = 9,0 Hz), 7,31 (t, 1H, J = 7,5  
Hz), 7,54-7,72 (m, 5H), 7,94 (s lg, 1H).

I-136

pf: > 300°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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 = 8,7 Hz), 7,38 (t, 1H, J = 7,2 Hz),  
7,48 (t, 2H, J = 7,2 Hz), 7,62-7,81 (m, 10H), 9,93 (s lg,  
1H).

I-137

pf: 291-292°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 = 9,3 Hz), 7,20 (s lg, 1H), 7,53-7,74 (m, 8H).

I-138

pf: 259-262°C

RMN de  $^1\text{H}$  ( $\text{CD}_3\text{OD}$ )  $\delta$  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 = 8,4 Hz), 8,12 (d, 1H, J = 9,0 Hz), 8,39 (d, 1H, J = 9,0 Hz), 8,72 (s, 1H), 8,92 (d, 1H, J = 8,4 Hz), 10,4 (s, 1H).

I-139

pf: 265-268°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 1,25-1,40 (m, 2H), 1,40 (s, 9H), 1,68-1,81 (m, 2H), 2,05-2,10 (m, 2H), 2,23-2,37 (m, 3H), 3,32 (m, 1H), 4,27 (d, 1H, J = 9,1 Hz), 7,53 (t, 1H, J = 7,9 Hz), 7,63 (td, 1H, J = 7,9, 1,4 Hz), 7,77 (d, 1H, J = 7,9 Hz), 8,03 (d, 1H, J = 7,9 Hz), 8,37 (s lg, 1H), 8,85-8,86 (m, 2H).

I-140

pf: 258-260°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,0$  Hz), 8,11 (d, 1H,  $J = 9,0$  Hz), 8,40 (s lg, 1H), 8,83 (s, 1H).

I-141

pf: 205-206°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,6$  Hz), 3,70 (s, 3H), 6,64 (d, 1H,  $J = 8,8$  Hz), 7,28-7,41 (m, 5H), 7,45 (s lg, 1H), 8,26 (d, 1H,  $J = 8,8$  Hz).

I-142

pf: 277-280°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,6$  Hz), 7,18 (s, 1H), 7,50-7,59 (m, 4H), 7,77 (dd, 1H,  $J = 7,4, 1,0$  Hz), 7,91-7,98 (m, 2H), 8,39 (dd, 1H,  $J = 7,4, 1,9$  Hz).

I-143

pf: 202-203°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,5$  Hz), 8,15 (s, 1H), 9,56 (s, 1H).

I-144

pf: 177-178°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,1$  Hz), 6,90-7,03 (m, 3H), 7,25 (m, 1H), 7,77 (dd, 1H,  $J = 4,9, 1,7$  Hz), 7,81 (s lg, 1H), 8,72 (dd, 1H,  $J = 7,8, 1,5$  Hz).

I-145

pf: > 300°C

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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,  $J = 8,8$  Hz), 7,62 (t, 2H,  $J = 8,5$  Hz), 7,86 (t, 2H,  $J = 8,5$  Hz), 7,89 (d, 2H,  $J = 8,5$  Hz), 8,16 (d, 2H,  $J = 8,5$  Hz).

I-146

pf: 240-242°C

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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 (s lg, 1H), 6,74-6,79 (m, 3H), 7,74 (s, 1H), 10,32 (s, 1H), 12,80 (s, 1H).

I-147

pf: 167-169°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 6,9$  Hz), 3,24 (m, 1H), 3,49 (dt, 2H,  $J = 6,3, 6,9$  Hz), 3,58 (d, 1H,  $J = 8,7$  Hz), 3,87 (s, 6H), 5,40 (s lg, 1H), 6,71 (m, 2H), 6,82 (d, 1H,  $J = 8,7$  Hz).

I-148

pf: 171-172°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 6,0$  Hz), 3,63 (d, 1H,  $J = 9,0$  Hz), 3,72 (t, 4H,  $J = 4,6$  Hz), 6,77 (s lg, 1H).

I-149

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 1,20-1,36 (m, 2H), 1,28 (t, 3H,  $J = 7,2$  Hz), 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,  $J = 7,2$  Hz), 7,40-7,52 (m, 3H), 8,18 (s lg, 1H).

I-150

pf: 203-204°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 6,0$  Hz), 3,26 (m, 1H), 3,49 (q, 2H,  $J = 6,0$  Hz), 3,61 (m, 1H), 4,03 (s, 2H), 5,88 (s lg, 1H), 7,15 (dd, 1H,  $J = 7,0, 8,8$  Hz), 7,30-7,35 (m, 2H).

I-151

pf: 181-183°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 6,0$  Hz), 3,28 (m, 1H), 3,47 (q, 2H,  $J = 6,0$  Hz), 3,58 (d, 1H,  $J = 9,9$  Hz), 3,87 (s, 2H), 5,83 (s lg, 1H), 7,00 (m, 1H), 7,20 (m, 2H).

I-152

pf: 222-224°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 6,4$  Hz), 3,66 (dt, 3H,  $J = 6,0, 6,4$  Hz), 5,87 (t, 1H,  $J = 6,0$  Hz), 7,58 (s, 1H), 7,68 (dd, 1H,  $J = 7,0, 8,5$  Hz), 7,83 (dd, 1H,  $J = 7,0, 8,5$  Hz), 8,19 (t, 2H,  $J = 8,5$  Hz).

I-153

pf: 207-209°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,5$  Hz), 4,94 (t, 1H,  $J = 4,0$  Hz), 8,42 (d, 1H,  $J = 5,5$  Hz), 8,97 (d, 1H,  $J = 5,5$  Hz).

I-154

pf: 184-185°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 1H), 7,42 (d, 2H,  $J = 5,5$  Hz), 7,52 (m, 2H), 7,78 (m, 1H), 7,82 (m, 1H), 7,95 (d, 1H,  $J = 7,0$  Hz).

I-155

pf: 208-210°C

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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,  $J = 8,5$  Hz), 10,00 (s, 1H), 10,66 (s, 1H).

I-156

pf: 256-257°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 6,0$  Hz), 3,11 (t, 2H,  $J = 6,0$  Hz), 3,30 (m, 1H), 3,61 (d, 1H,  $J = 9,3$  Hz), 7,21 (d, 1H,  $J = 8,0$  Hz), 7,31 (s, 1H), 7,70 (d, 1H,  $J = 8,0$  Hz), 7,99 (s, 1H).

I-157

pf: 269-271°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 4,0, 8,0$  Hz), 7,53 (slg, 1H), 7,72 (t, 1H,  $J = 8,0$  Hz), 7,83 (d, 1H,  $J = 8,0$  Hz), 8,02 (d, 1H,  $J = 8,0$  Hz), 8,18 (d, 1H,  $J = 8,0$  Hz), 8,93 (d, 1H,  $J = 4,0$  Hz).

I-158

pf: 253-255°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,2$  Hz), 7,52 (t, 1H,  $J = 7,0$  Hz), 7,62-7,80 (m, 2H), 7,94 (s lg, 1H), 8,05 (d, 1H,  $J = 8,5$  Hz), 8,20 (s, 1H).

I-159

pf: 253-255°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,0$  Hz), 7,41 (s lg, 1H), 7,61 (d, 2H,  $J = 9,0$  Hz), 7,70 (d, 2H,  $J = 9,0$  Hz).

I-160

pf: 211-212°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 1,20-1,32 (m, 2H), 1,39 (t, 3H,  $J = 7,0$  Hz), 1,40 (s, 9H), 1,55-1,79 (m, 2H), 1,98-2,35 (m, 5H), 3,31 (m, 1H), 3,65 (d, 1H,  $J = 9,5$  Hz), 4,03 (q, 2H,  $J = 7,0$  Hz), 6,64 (d, 1H,  $J = 8,0$  Hz), 6,92 (d, 1H,  $J = 8,0$  Hz), 7,10 (s, 1H), 7,19 (t, 1H,  $J = 8,0$  Hz), 7,30 (s lg, 1H).

I-161

pf: 202-203°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,96 (t, 1H,  $J = 7,3$  Hz), 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,  $J = 8,5$  Hz), 3,96 (t, 2H,  $J = 6,4$  Hz), 6,64 (d, 1H,  $J = 8,0$  Hz), 6,90 (d, 1H,  $J = 8,0$  Hz), 7,11 (s, 1H), 7,19 (t, 1H,  $J = 8,0$  Hz), 7,31 (s lg, 1H).

I-162

pf: 177-180°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,5$  Hz), 5,15 (s, 2H), 6,77 (d, 1H,  $J = 8,0$  Hz), 7,10-7,23 (m, 2H), 7,34 (s, 1H), 7,58 (s, 1H).

I-163

pf: 175-178°C

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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,  $J = 8,5$  Hz), 7,18 (m, 2H), 7,38 (s, 1H), 9,81 (s, 1H).

I-164

pf: 232-233°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,97 (t, 3H,  $J = 7,3$  Hz), 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,  $J = 9,6$  Hz), 4,25 (t, 2H,  $J = 6,8$  Hz), 6,71 (d, 1H,  $J = 8,4$  Hz), 7,01 (s lg, 1H), 7,91 (dd, 1H,  $J = 8,4, 3,3$  Hz), 8,08 (d, 1H,  $J = 3,3$  Hz).

I-165

pf: 199-200°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,96 (t, 3H,  $J = 7,4$  Hz), 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,  $J = 9,1$  Hz), 3,91 (t, 2H,  $J = 6,6$  Hz), 6,41 (dd, 1H,  $J = 8,8, 2,5$  Hz), 6,55 (d, 1H,  $J = 2,5$  Hz), 6,82 (d, 1H,  $J = 8,8$  Hz), 7,43 (s, 1H), 8,95 (s, 1H).

I-166

pf: 215-218°C

$^1\text{H}$  ( $\text{CDCl}_3 + \text{CD}_3\text{OD}$ )  $\delta$  ppm: 0,97 (t, 3H,  $J = 7,4$  Hz), 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,  $J = 6,6$  Hz), 6,78 (d, 1H,  $J = 8,8$  Hz), 6,98 (dd, 1H,  $J = 8,8, 2,5$  Hz), 7,09 (d, 1H,  $J = 8,8$  Hz).

I-167

pf: 212-213°C

$^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,96 (t, 3H,  $J = 7,5$  Hz), 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,  $J = 9,0$  Hz), 4,25 (t, 2H,  $J = 6,8$  Hz), 6,71 (d, 1H,  $J = 8,4$  Hz), 7,01 (s lg, 1H), 7,91 (dd, 1H,  $J = 8,4, 3,3$  Hz), 8,08 (d, 1H,  $J = 3,3$  Hz).

I-168

pf: 230-232°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,3$  Hz), 6,89 (d, 1H,  $J = 9,4$  Hz), 7,10 (d lg, 2H,  $J = 7,4$  Hz), 7,12 (s lg, 1H), 7,18 (t, 1H,  $J = 7,4$  Hz), 7,36 (t lg, 2H,  $J = 7,4$  Hz), 8,09-8,15 (m, 2H).

I-169

pf: 159-160°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 1H), 3,32 (m, 1H), 3,86 (s lg, 1H), 4,30 (t, 2H,  $J = 6,5$  Hz), 6,25 (s, 1H), 7,92 (s lg, 1H).

I-170

pf: 180-181°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,2$  Hz), 6,38 (s, 1H), 7,15 (m, 2H), 7,28 (m, 1H), 7,45 (m, 2H), 7,84 (s lg, 1H).

I-171

pf: 173-174°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,98 (t, 3H,  $J = 7,5$  Hz), 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,  $J = 9,5$  Hz), 3,99 (t, 2H,  $J = 6,4$

Hz), 7,22 (dd, 1H, J = 9,4, 2,7 Hz), 7,66 (d, 1H, J = 2,7 Hz), 8,63 (d, 1H, J = 9,4 Hz), 10,17 (s, 1H).

I-172

pf: 238-242°C

RMN de  $^1\text{H}$ -NMF ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,96 (t, 3H, J = 7,3 Hz), 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 = 9,4 Hz), 3,84 (s lg, 2H), 3,90 (t, 2H, J = 6,4 Hz), 6,32-6,35 (m, 2H), 6,96 (s lg, 1H), 6,97 (d, 1H, J = 9,4 Hz).

I-173

pf: 165-166°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 1H), 7,01 (d, 1H, J = 8,0 Hz), 7,25 (t, 1H, J = 8,0 Hz), 7,43 (d, 1H, J = 8,0 Hz), 7,49 (s lg, 1H), 7,51 (s lg, 1H).

I-174

pf: 264-265°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3 + \text{CD}_3\text{OD}$ )  $\delta$  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,  $J = 7,5$  Hz), 7,26 (t, 1H,  $J = 7,5$  Hz), 7,42 (s lg, 1H), 7,50 (d, 1H,  $J = 7,5$  Hz).

I-175

pf: 90-94°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 6,4$  Hz), 3,21 (m, 1H), 3,58 (m, 2H), 3,84 (d, 1H,  $J = 9,3$  Hz), 5,56 (s lg, 1H), 7,01 (s, 1H), 7,11 (t, 1H,  $J = 7,5$  Hz), 7,21 (t, 1H,  $J = 7,5$  Hz), 7,38 (d, 1H,  $J = 7,5$  Hz), 7,59 (d, 1H,  $J = 7,5$  Hz), 8,24 (s lg, 1H).

I-176

pf: 116-118°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 8,0$  Hz), 7,00 (d, 1H,  $J = 8,5$  Hz), 7,15-7,24 (m, 2H), 7,32 (s lg, 1H).

I-177

pf: 219-220°C

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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,  $J = 8,5$  Hz), 7,16 (m, 2H), 7,28 (s lg, 1H), 9,87 (s lg, 1H).

I-178

pf: 170-173°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 5,5$  Hz), 6,68 (d, 1H,  $J = 8,0$  Hz), 6,94 (d, 1H,  $J = 7,5$  Hz), 7,15-7,23 (m, 2H), 7,33 (s lg, 1H).

I-179

pf: 191-193°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 8,0$  Hz), 7,04 (d, 1H,  $J = 8,0$  Hz), 7,20-7,31 (m, 2H), 7,48 (s lg, 1H).

I-180

pf: 174-176°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 6,5$  Hz), 3,25 (m, 1H), 3,37 (dt, 2H,  $J = 5,5, 6,5$  Hz), 3,60 (d, 1H,  $J = 9,5$  Hz), 3,71 (s, 2H), 5,73 (s lg, 1H), 7,20-7,40 (m, 5H).

I-181

pf: 176-178°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 7,0$  Hz), 3,25 (dt, 2H,  $J = 6,0, 7,0$  Hz), 3,27 (m, 1H), 3,63 (m, 1H), 5,35 (s lg, 1H), 7,17 (m, 3H), 7,29 (m; 2H).

I-182

pf: 152-154°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 5,0, 5,0$  Hz), 3,55 (t, 2H,  $J = 5,0$  Hz), 3,60 (m, 1H), 4,51 (s, 2H), 5,81 (s lg, 1H), 7,29-7,40 (m, 5H).

I-183

pf: 208-211°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,2$  Hz), 4,59 (d, 2H,  $J = 5,8$  Hz), 5,76 (s lg, 1H), 7,37 (dd, 1H,  $J = 8,4, 2,0$  Hz), 7,46-7,52 (m, 2H), 7,69 (s lg, 1H), 7,78-7,83 (m, 3H).

I-184

pf: 180-182°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,6$  Hz), 4,77 (d, 2H,  $J = 4,9$  Hz), 7,43 (d, 1H,  $J = 8,6$  Hz), 7,46 (s lg, 1H), 7,61 (t, 1H,  $J = 7,7$  Hz), 7,73 (t, 1H,  $J = 7,7$  Hz), 7,87 (t, 1H,  $J = 7,7$  Hz), 8,20 (t, 1H,  $J = 7,7$  Hz), 8,24 (d, 1H,  $J = 8,6$  Hz).

I-185

pf: 260-261°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,3$

Hz), 4,95 (d, 2H,  $J = 6,0$  Hz), 5,85 (s lg, 1H), 7,33 (d, 1H,  $J = 4,8$  Hz), 7,62 (dd, 1H,  $J = 8,4, 6,9$  Hz), 7,75 (dd, 1H,  $J = 8,1, 6,9$  Hz), 8,00 (d, 1H,  $J = 8,1$  Hz), 8,20 (d, 1H,  $J = 8,4$  Hz), 8,42 (d, 1H,  $J = 4,8$  Hz).

I-186

pf: 231-233°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,3$  Hz), 5,04 (d, 2H,  $J = 4,1$  Hz), 7,61 (d, 1H,  $J = 5,8$  Hz), 7,63 (s lg, 1H), 7,65 (dd, 1H,  $J = 8,2, 6,9$  Hz), 7,73 (dd, 1H,  $J = 8,5, 6,9$  Hz), 7,86 (d, 1H,  $J = 8,2$  Hz), 8,10 (d, 1H,  $J = 8,5$  Hz), 8,42 (d, 1H,  $J = 5,8$  Hz).

I-187

pf: 184-187°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,5$  Hz), 3,93 (t, 2H,  $J = 6,4$  Hz), 4,39 (d, 2H,  $J = 5,5$  Hz), 5,67 (s lg, 1H), 6,79-6,83 (m, 3H), 7,23 (t, 1H,  $J = 7,6$  Hz).

I-188

pf: 224-226°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 1,16-1,31 (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,  $J = 9,8$  Hz), 4,34 (d, 2H,  $J = 5,8$  Hz), 5,96 (s lg, 1H), 6,47 (s, 2H).

I-189

pf: 217-218°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,5$  Hz), 4,30 (d, 2H,  $J = 5,5$  Hz), 5,73 (s lg, 1H), 6,69 (d, 2H,  $J = 8,9$  Hz), 7,12 (d, 2H,  $J = 8,9$  Hz).

I-190

pf: sólido amorfo

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,2$  Hz), 4,51 (d, 2H,  $J = 5,8$  Hz), 5,82 (s lg, 1H), 7,40 (d, 2H,  $J = 8,5$  Hz), 8,02 (d, 2H,  $J = 8,5$  Hz), 8,64 (s, 1H).

I-191

pf: 126-128°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 4,5$  Hz), 4,16 (s lg, 1H), 4,85 (s, 2H), 6,82-6,95 (m, 3H), 7,26 (t, 1H,  $J = 7,8$  Hz), 8,54 (s lg, 1H).

I-192

pf: 178-181°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $J = 9,5$  Hz), 3,89 (t, 2H,  $J = 6,6$  Hz), 6,00 (s lg, 1H), 6,78 (s, 4H), 7,35 (s lg, 1H).

I-193

pf: 187-188°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3 + \text{CD}_3\text{OD}$ )  $\delta$  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

pf: 251-253°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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,  $J = 8,2$  Hz), 7,01 (d, 2H,  $J = 8,8$  Hz), 7,85 (d, 2H,  $J = 8,8$  Hz), 9,72 (s lg, 1H), 8,64 (s lg, 1H).

I-195

pf: 183-185°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 1H).

I-196

pf: 185-187°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 211-213°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 268-269°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 1H).

I-199 pf: 221-224°C

I-200 pf: 237-240°C

I-201 pf: 87-90°C

I-202 pf: 222-223°C

I-203 pf: 255-257°C

I-204 pf: 234-236°C

I-205 pf: 208-210°C

I-206 pf: 217-218°C

I-207 pf: 275-279°C

I-208 pf: 248-250°C

I-209 pf: 256-258°C

I-210 pf: 270-271°C

I-211 pf: 219-220°C

I-212 pf: 260-261°C

I-213 pf: >300 °C

I-214

pf: 206-207°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (septeto, 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

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,93 (t, 3H,  $J = 7,3$  Hz), 1,30-1,41 (m, 2H), 1,52-1,63 (m, 2H), 1,95 (s, 6H), 2,61 (t, 2H,  $J = 7,8$  Hz), 6,99 (s lg, 1H), 7,20 (d, 2H,  $J = 8,5$  Hz), 7,65 (d, 2H,  $J = 8,5$  Hz), 7,93 (dd, 1H,  $J = 8,5, 2,5$  Hz), 8,28 (d, 1H,  $J = 8,5$  Hz), 8,55 (d, 1H,  $J = 2,5$  Hz), 9,76 (s lg, 1H).

Ia-1

pf: 221-224°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 87-90°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 233-234°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 125-126°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 229-230°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (quinteto, 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 (s lg, 1H), 7,39 (d, 2H,  $J = 9,3$  Hz).

Ia-7

pf: 253-254°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 257-258°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 231-232°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 233-234°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 243-244°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 246-247°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 278-279°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 263-264°C

RMN de  $^1\text{H}$  ( $\text{DMSO}$ )  $\delta$  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

pf: 209-210°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (lg, 1H), 7,41 (d, 2H,  $J = 8,1$  Hz).

Ia-16

pf: 238-240°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 245-246°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 240-241°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 240-241 C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 239-240°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 259-260°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3/\text{DMSO}$ )  $\delta$  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

pf: 234-235°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 1H), 7,27 (s lg, 1H), 7,36 (s lg, 1H).

Ia-23

pf: 195-196°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 1H), 7,52-7,63 (m, 2H), 8,17 (d, 1H,  $J = 8,7$  Hz).

Ia-24

pf: 209-210°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 278-281°C

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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

pf: 253-255°C

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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

pf: 223-226°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 237-238°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 1H), 7,50 (d, 1H,  $J = 9,6$  Hz).

Ia-29

pf: 208-209°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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,  $\text{HH} = 6,6, 6,6$  Hz), 7,16 (s lg, 1H), 7,89 (dd, 1H, JFH,  $\text{HH} = 9,0, 9,0$  Hz).

Ia-30

pf: 284-287°C

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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

pf: 200-201°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 260-261°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3/\text{DMSO}$ )  $\delta$  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

pf: 227°C

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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

pf: 214-216°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 241-242°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3/\text{DMSO}$ )  $\delta$  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,  $\text{HH} = 9,3, 9,3$  Hz), 7,24 (d, 1H,  $J = 8,7$  Hz), 7,55 (d, 1H, JFH = 13,5 Hz), 9,32 (s, 1H).

Ia-37

pf: 248-249°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 237-238°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 234-235°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 257-258°C

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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

pf: 245-246°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3/\text{DMSO}$ )  $\delta$  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

pf: 294-295°C

RMN de  $^1\text{H}$  ( $\text{DMSO}-d_6$ )  $\delta$  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

pf: 250-252°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 193°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf > 300°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 236-237°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 228-229°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 1H), 7,37 (d, 2H,  $J = 7,8$  Hz).

Ia-49

pf: 262-263°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3/\text{DMSO}$ )  $\delta$  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 (s lg,  
1H), 6,73-6,98 (m, 1H), 7,14-7,25 (m, 1H), 7,52 (d, 1H,  $J_{\text{FH}} = 13,5$  Hz), 8,86 (s lg, 1H).

Ia-50

pf: 232-233°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (septeto, 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

pf: 211-212°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (quinteto, 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

pf: 247-249°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 234-235°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 235-236°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (septeto, 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

pf: 185-186°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 229-230°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 211-212°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3/\text{DMSO}$ )  $\delta$  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 (s lg, 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

pf: 298-299°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 253-254°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 213-214°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 274-275°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 235-236°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 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

pf: 277-279°C

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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

pf: 259-260°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 292-293°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf > 300°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 199-200°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 237-239°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3/\text{DMSO}$ )  $\delta$  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

pf: 259-260°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 259-260°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 228.229°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3/\text{DMSO}$ )  $\delta$  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

pf: 169-170°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 236-237°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3/\text{DMSO}$ )  $\delta$  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 (s lg, 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 (s lg, 1H).

Ia-77

pf: 117-118°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (s lg, 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 (s lg, 1H).

Ia-78

pf: 138-139°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 1,41 (s, 9H), 1,64 (quinteto, 2H,  $J = 6,6$  Hz), 1,84 (quinteto, 2H,  $J = 7,3$  Hz), 2,42 (t, 2H,  $J = 7,5$  Hz), 3,26 (q, 2H,  $J = 6,5$  Hz), 4,59 (s lg, 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 (s lg, 1H).

Ia-79

pf: 289-290°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 239-240°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 205-206°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3/\text{DMSO}$ )  $\delta$  ppm: 1,40 (s, 9H), 1,66 (quinteto, 2H,  $J = 7,0$  Hz), 1,85 (quinteto, 2H,  $J = 7,2$  Hz), 2,45 (t, 2H,  $J = 7,5$  Hz), 3,24 (t, 2H,  $J = 6,5$  Hz), 5,17 (s lg, 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

pf: 216-217°C

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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

pf: 118-119°C

RMN de  $^1\text{H}$  ( $\text{DMSO-d}_6$ )  $\delta$  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

pf: 265-267°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 185-186°C

$^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 162-164°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 245-247°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 208-209°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 142-143°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 100°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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 (quinteto, 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

pf: 189-190°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 238-241°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s 1g, 1H), 6,79 (d, 1H,  $J=8,2$ ), 7,15 (t, 1H,  $J=4,8$ ), 8,64 (d, 2H,  $J=4,8$ ).

Ia-105

pf: 232-234°C

$^1\text{H}$  (DMSO)  $\delta$  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

pf: 226-228°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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), 7,61 (dd, 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

pf: 282-283°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 191-192°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 283-285°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 263-265°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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,

$J = 8,7 \text{ Hz}$ ), 6,77 (d, 1H,  $J = 8,7 \text{ Hz}$ ), 7,39 (d, 2H,  $J = 9,0 \text{ Hz}$ ), 9,44 (s, 1H).

Ia-111

pf: 239-241°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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,  $J = 9,0 \text{ Hz}$ ), 6,88 (d, 1H,  $J = 6,9 \text{ Hz}$ ), 7,02 (t, 1H,  $J = 7,5 \text{ Hz}$ ), 7,13 (d, 1H,  $J = 7,5 \text{ Hz}$ ), 8,98 (s, 1H).

Ia-124

pf: 247-249°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  ppm: 1,15 (d, 6H,  $J = 6,3 \text{ Hz}$ ), 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,  $J = 8,7 \text{ Hz}$ ), 7,59 (d, 2H,  $J = 9,0 \text{ Hz}$ ), 7,38 (d, 2H,  $J = 9,0 \text{ Hz}$ ), 7,87 (d, 2H,  $J = 8,7 \text{ Hz}$ ), 9,92 (s lg, 1H), 9,98 (s lg, 1H).

Ia-125

pf: 228-232°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H), 7,87 (d, 2H,  $J = 9,0$  Hz), 9,99 (s lg, 2H).

Ia-126

pf: 244-246°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  ppm: 1,31 (s, 9H), 7,42 (d, 2H,  $J = 8,4$  Hz), 7,81 (dd, 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 (s lg, 1H), 10,39 (s lg, 1H).

Ia-127

pf: 238-239°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  ppm: 1,30 (s, 9H), 4,18-4,27 (m, 4H), 6,81 (d, 1H,  $J = 8,4$  Hz), 7,16 (dd, 1H,  $J = 2,7$  Hz, 9,0 Hz), 7,34-7,42 (m, 3H), 7,85 (d, 2H,  $J = 8,4$  Hz), 9,94 (s lg, 1H), 9,99 (s lg, 1H).

Ia-128

pf: 286-287°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H), 10,44 (s lg, 1H).

Ia-129

pf: 232-234°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 274-277°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (dd, 1H,  $J = 0,9$  Hz, 5,7 Hz), 7,43 (dd, 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 (s lg, 1H).

Ia-131

pf: 259-260°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (dd, 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 (s lg, 1H), 10,27 (s lg, 1H).

Ia-132

pf: 265-266°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H), 8,20 (d, 1H,  $J = 7,5$  Hz), 10,03 (s lg, 1H), 10,25 (s lg, 1H).

Ia-133

pf: 249-250°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  ppm: 1,31 (s, 9H), 7,41 (d, 2H,  $J = 8,7$  Hz), 7,45 (d, 1H,  $J = 5,4$  Hz), 7,67 (dd, 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 (s lg, 1H), 10,23 (s lg, 1H).

Ia-134

pf: 305-306°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 220-222°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 263-264°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 260-262°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 270-273°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 267-270°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H), 9,97 (s lg, 1H).

Ia-140

pf: 227-229°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-141

pf: 205-207°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (dd, 1H,  $J = 2,1$  Hz, 8,1 Hz), 7,51 (s, 1H), 9,67 (s lg, 1H).

Ia-142

pf: 295-296°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 146-147°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 138-140°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 134-136°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 135-137°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 206-207 °C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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,  $J = 8,7$  Hz), 9,02 (t, 1H,  $J = 5,7$  Hz), 9,97 (s lg, 1H).

Ia-148

pf: 250-251°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  ppm: 1,30 (s, 9H), 7,18 (t, 2H,  $J = 9,3$  Hz), 7,40 (d, 2H,  $J = 8,7$  Hz), 7,76 (dd, 2H,  $J = 5,1$  Hz,  $9,3$  Hz), 7,88 (d, 2H,  $J = 9,0$  Hz), 10,02 (s lg, 1H), 10,17 (s lg, 1H).

Ia-149

pf: 220-222°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 264-266°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 235-236°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 244-246°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-153

pf > 300 °C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 247-249°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 258-259°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 250-253°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 259-262°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 298-300°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H), 10,22 (s lg, 1H).

Ia-159

pf: 278-281°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-160

pf: 227-228°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (dd, 1H,  $J = 2,4$  Hz, 6,3 Hz), 10,17 (s lg, 1H).

Ia-161

pf: 259-260°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-162

pf: 222-226°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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,  $J = 9,0$  Hz), 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 (s lg, 1H).

Ia-163

pf: 197-200°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (dd, 1H,  $J = 1,8$  Hz, 8,1 Hz), 7,64 (s lg, 1H), 7,90 (d, 2H,  $J = 8,7$  Hz), 9,99 (s lg, 1H), 10,13 (s lg, 1H).

Ia-164

pf: 145-247°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf > 300°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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,  $J = 8,1$  Hz), 10,00 (s lg, 1H).

Ia-166

pf: 200-201°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-167

pf: 282-285°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-168

pf: 120-124°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  ppm: 0,94-1,66 (m, 14H), 1,27 (s, 9H), 1,80-2,04 (m, 4H), 2,25 (m, 1H), 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 (s lg, 1H).

Ia-169

pf: 256-257°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-171

pf: 242-244°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf > 310°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 279-281°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 258-262°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 246-248°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 200-202°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 266-268°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-178

pf: 223-224°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (dd, 1H,  $J = 2,4$  Hz,  $9,0$  Hz), 8,27 (d, 1H,  $J = 9,0$  Hz), 8,70 (m, 1H), 10,85 (s lg, 1H).

Ia-179

pf: 224-227°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-180

pf: 226-227°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-181

pf: 191-192°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-182

pf: 192-193°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf > 310°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 281-283°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-185

pf: 226-227°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-186

pf: 148-150°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-187

pf > 310°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 285-292°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 278-281°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf > 310°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 275-277°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H), 10,30 (s lg, 1H).

Ia-192

pf: 204-205°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-193

pf: 285-286°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-194

pf: 248-250°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-195

pf: 271-275°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-196

pf: 226-228°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 173-175°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 233-235°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 185-186°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 235-237°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 300-301°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-202

pf: 269-270°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-203

pf: 271-273°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-204

pf: 250-251°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-205

pf: 239-240°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 236-238°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 224-226°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 275-277°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 214-215°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-210

pf: 272-275°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H), 10,22 (s lg, 1H).

Ia-211

pf: 251-255°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H), 10,38 (s lg, 1H).

Ia-212

pf: 241-244°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H), 9,99 (s lg, 1H).

Ia-213

pf: 283-286°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  ppm: 1,31 (s, 9H), 7,12 (dd, 1H,  $J = 3,6$  Hz, 5,1 Hz), 7,41 (d, 2H,  $J = 9,0$  Hz), 7,46 (m, 1H), 7,50 (dd, 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 (s lg, 1H), 10,22 (s lg, 1H).

Ia-216

pf: 224-225°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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

pf: 270-272°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-220

pf: 187-189 °C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (dd, 2H,  $J = 4,8$  Hz,  $9,0$  Hz), 8,53 (s lg, 1H).

Ia-221

pf: 260-262°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-222

pf: 265-267°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-223

pf: 183-186°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (dd, 2H,  $J = 4,8$  Hz, 9,0 Hz), 8,53 (s lg, 1H).

Ia-224

pf: 232-234°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-225

pf: 222-224°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-226

pf: 194-195°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3/\text{DMSO}$ )  $\delta$  ppm: 1,39 (d, 6H,  $J = 7,2$  Hz), 1,66 (quinteto, 2H,  $J = 6,8$  Hz), 1,87 (quinteto, 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 (s lg, 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

pf > 300°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 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

pf: 168-169°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  ppm: 1,26 (s, 9H), 1,49 (quinteto, 2H,  $J = 7,5$  Hz), 1,64 (quinteto, 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

pf: 174-175°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (septeto, 1H,  $J = 6,5$  Hz), 6,26 (s, 1H), 6,99 (s lg, 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

pf: 194-195°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 221-222°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (septeto, 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

pf: 196-197°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  ppm: 0,93 (d, 6H,  $J = 6,6$  Hz), 1,42 (s, 1H), 1,60-1,70 (m, 2H), 1,88 (quinteto, 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

pf: 151-152°C

RMN de  $^1\text{H}$  ( $\text{CDCl}_3$ )  $\delta$  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 (quinteto, 2H,  $J = 7,3$  Hz), 2,03-2,16 (m, 1H), 2,47 (t, 2H,  $J = 7,5$  Hz), 3,21 (septeto, 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

pf: 219-220°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 280-282°C

RMN de  $^1\text{H}$  (DMSO- $d_6$ )  $\delta$  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

pf: 204-205°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-238

pf: 128-130°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (dd, 1H,  $J = 2,1$  Hz, 8,7 Hz), 8,29 (d, 1H,  $J = 8,7$  Hz), 8,70 (m, 1H), 10,91 (s lg, 1H).

Ia-239

pf: 256-258°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (dd, 1H,  $J = 2,4$  Hz, 8,4 Hz), 7,97 (d, 1H,  $J = 8,4$  Hz), 8,12 (m, 1H), 10,26 (s lg, 1H).

Ia-240

pf: 288-290°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-241

pf: 249-250°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (dd, 1H,  $J = 2,1$  Hz,  $9,0$  Hz), 8,60 (s, 1H), 9,76 (s lg, 1H).

Ia-242

pf: 250-252°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

136-0290

pf: 250-252°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (s lg, 1H).

Ia-244

pf: 211-213°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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 (dd, 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 (s lg, 1H), 9,19 (s, 1H).

Ia-245

pf: 196-197 °C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 242-244°C

RMN de  $^1\text{H}$  (DMSO)  $\delta$  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

pf: 242-245°C

RMN de <sup>1</sup>H (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 (s lg, 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

pf: 272-274°C

RMN de <sup>1</sup>H (CDCl<sub>3</sub>) 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 pf: 174-176 °C

Ia-250 pf: 255-257 °C

Ia-252 pf: 249-251 °C

Ia-253 pf: 120-121 °C

Ia-254 pf: 236-237 °C

Ia-255 pf: 172-174 °C

Ia-256 pf: 257-259 °C

Ia-257 pf: 179-180 °C

Ia-258 pf: 227-229 °C

Ia-259 pf: 135-136 °C

### **Experiência 1 Afinidade para o receptor Y5 de NPY**

Clonou-se a sequência de cADN que codifica para um receptor humano Y5 de NPY (WO 96/16.542) no vector de expressão pME18S (Takebe *et al.*, Mol. Cell. Biol. **8**, 8957). Transfectou-se o vector de expressão obtido em células hospedeiras CHO utilizando um reagente Lipofect AMINE (Marca Registada, Gico BRL Co., Lda.), de acordo com um protocolo que integra instruções para se obterem as células que expressam o receptor Y5 de NPY de um modo estável.

Incubaram-se as membranas preparadas a partir das células CHO expressando o receptor Y5 de NPY, o composto da invenção presente e 30.000 cpm de péptido YY-[<sup>125</sup>I] (60 pM de concentração final: Amersham), no tampão da experiência (tampão de HEPES-Hanks 20 mM contendo 0,1 % de albumina de soro de bovino, pH 7,4), a 25°C durante 2 horas, e depois filtrou-se a mistura através de um filtro em vidro GF/C tratado com polietilenoimina. Depois de se lavar o filtro em vidro com tampão Tris-HCl 50 mM (pH 7,4), mediu-se a radioactividade no filtro com um contador gama. Detectou-se a ligação não específica na presença de 200 nM de péptido YY. Calculou-se a concentração do composto em teste que inibia especificamente em 50 % a ligação do péptido YY (valor de IC<sub>50</sub>), (Inui, A. *et al.* Endocrinology **131**, 2090 -

2096 (1992)). Os resultados estão listados nas Tabelas 1 e 2.

O composto da invenção presente inibia a ligação do péptido YY (homólogo da NPY) aos receptores Y5 de NPY. Por outras palavras, o composto da invenção presente evidenciava afinidade para o receptor Y5 de NPY.

#### **Experiência 2 Actividade de produção de cAMP em células CHO**

Depois de se incubarem células CHO que expressavam o receptor Y5 de NPY humano na presença de isobutilmetilxantina 2,5 mM (SIGMA) a 37°C durante 20 minutos, adicionou-se o composto da invenção presente e incubou-se durante 5 minutos. Em seguida adicionaram-se 50 nM de NPY e 10 µM de forskolina (SIGMA) às células e incubou-se durante mais 30 minutos. Terminada a reacção por adição de HCl 1 N, mediu-se a quantidade de cAMP no sobrenadante com o estojo EIA (Amersham LIFE SCIENCE). Considerou-se que a actividade inibitória da NPY contra o CAMP estimulado pela forskolina era 100 % e calcularam-se os valores das concentrações correspondentes a 50 % de inibição (valor de IC<sub>50</sub>) dos compostos da invenção presente contra a actividade de NPY. Os resultados estão listados nas Tabelas 1 a 4.

Tabela 1

Composto	valor de IC <sub>50</sub> da ligação	cAMP IC <sub>50</sub> (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

Tabela 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

Tabela 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	68
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

Tabela 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	-

Tal como se evidencia nas Tabelas 1 a 4, os compostos da invenção presente apresentam actividade antagonista em relação ao receptor Y5 de NPY.

### Experiência 3

Utilizando as membranas preparadas a partir de células humanas que expressavam Y1 (de neuroblastoma humano, SK-N-MC) e as membranas preparadas a partir de células de expressão de Y2 (neuroblastoma humano, SMS-KAN), levou-se a cabo a experiência de um modo semelhante ao utilizado na Experiência 1, para se determinar a afinidade em relação ao receptor Y1 de NPY e em relação ao receptor Y2 de NPY.

Os valores de IC<sub>50</sub> para a ligação ao receptor Y1 de NPY e ao receptor Y2, dos compostos 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 e Ia-200, foram de 100.000 nM ou maiores, e todos estes compostos eram selectivos em relação ao receptor Y5 de NPY.

**Exemplo de Formulação 1 Comprimidos**

Composto (I-1)	15
	mg
Amido	15
	mg
Lactose	15
	mg
Celulose Cristalina	19
	mg
Poli(álcool vinílico)	3
	mg
Água destilada	30
	mL
Estearato de Cálcio	3
	mg

Depois de se misturarem até à uniformidade todos os ingredientes acima excepto o estearato de cálcio, mói-se a mistura e granula-se, e seca-se para se obterem grânulos com dimensões adequadas. Depois de se adicionar estearato de cálcio aos grânulos, formam-se comprimidos por moldagem e compressão.

**Exemplo de Formulação 2 Cápsulas**

Composto (I-2)	10
	mg
Estearato de magnésio	10
	mg
Lactose	80
	mg

Depois de se misturarem os ingredientes acima para se obterem pós ou grânulos, estes são utilizados como enchimento das cápsulas.

#### **Exemplo de Formulação 3 Grânulos**

Composto (I-3)	30
	g
Lactose	26
	5 g
Estearato de magnésio	5
	g

Depois de se misturarem os ingredientes acima uniformemente, e de os enformar por moldagem sob compressão, mói-se o produto obtido, granula-se e peneira-se para se preparar um volume adequado de grânulos.

#### **Aplicabilidade Industrial**

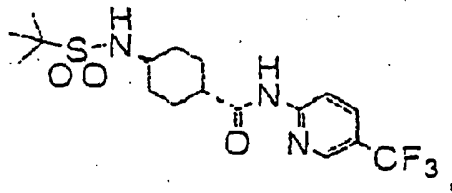
Tal como se mostrou nas Experiências acima, os

compostos da invenção presente apresentam uma actividade antagonista em relação ao receptor Y5 de NPY. Os compostos da invenção presente são portanto úteis como agentes contra a obesidade, e anoréxicos.

Lisboa, 13 de Julho de 2010.

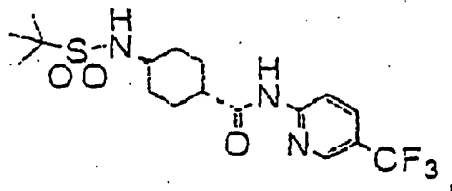
## REIVINDICAÇÕES

1. Um composto com a fórmula:



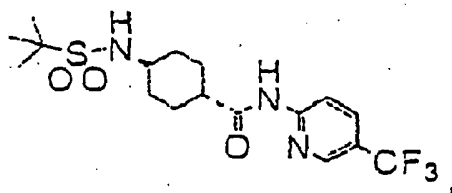
um seu sal ou solvato aceitável do ponto de vista farmacêutico.

2. Uma composição farmacêutica que inclua um composto com a fórmula:



um seu sal ou solvato aceitável do ponto de vista farmacêutico.

3. Um composto com a fórmula:



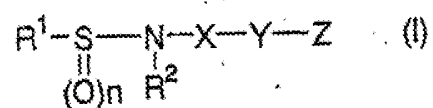
um seu sal ou solvato aceitável do ponto de vista farmacêutico, para utilização no tratamento da obesidade.

Lisboa, 13 de Julho de 2010.

**RESUMO**

**"ANTAGONISTAS DE Y5 DE NPY"**

A invenção presente proporciona uma composição farmacêutica para utilização a título de antagonista dos receptores Y5 de NPY, que inclua um composto com a fórmula (I):



na qual

R<sup>1</sup> seja alquilo inferior, cicloalquilo, ou outro semelhante,

R<sup>2</sup> seja hidrogénio, alquilo inferior, ou outro semelhante,

n seja 0, 1 ou 2,

X seja alquileno inferior, alcenileno inferior, cicloalquileno, ou outro semelhante,

Y seja CONR<sup>7</sup>, CSNR<sup>7</sup>, NR<sup>7</sup>CO, NR<sup>7</sup>CS, ou outro

semelhante,

Z seja alquilo inferior, carbocíclico substituído opcionalmente, heterocíclico substituído opcionalmente, ou outro semelhante, e R<sup>7</sup> seja hidrogénio ou alquilo inferior,

um seu precursor, sal aceitável do ponto de vista farmacêutico, ou solvato.