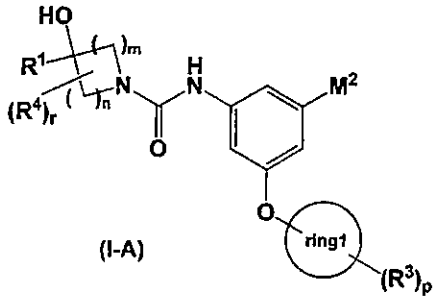
a hydrogen atom and M^1 is an oxygen atom, namely the compound represented by the general formula (I-A):

[0061]

[C 12]

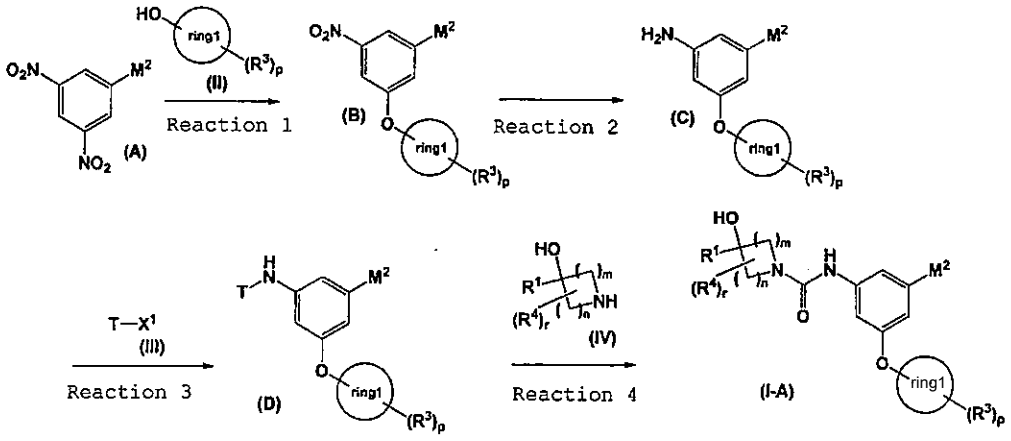


[0062] wherein all the symbols have the same meanings as above, can be produced by the reaction scheme 1 as follows:

[0063]

[C 13]

Reaction scheme 1



[0064] wherein T represents a protecting group of the amino

trimetoquinol hydrochloride, hexoprenaline sulphate, procaterol hydrochloride, tulobuterol hydrochloride, tulobuterol, pirbuterol hydrochloride, clenbuterol hydrochloride, mabuterol hydrochloride, ritodrine hydrochloride, bambuterol, dopexamine hydrochloride, meluadrine tartrate, AR-C68397, levosalbutamol, R,R-formoterol, KUR-1246, KUL-7211, AR-C89855, S-1319 and the like.

[0106] The leukotriene receptor antagonists may include, for example, pranlukast hydrate, montelukast, zafirlukast, seratrodast and the like.

[0107] The thromboxane A2 receptor antagonists may include, for example, seratrodast, ramatroban, domitroban calcium hydrate and the like.

[0108] The mediator release suppressing agents may include, for example, tranilast, cromolyn sodium, amlexanox, repirinast, ibudilast, tazanolast, pemirolast potassium and the like.

[0109] The antihistamines may include, for example, ketotifen fumarate, mequitazine, azelastine hydrochloride, oxatomide, terfenadine, emedastine fumarate, epinastine hydrochloride, astemizole, ebastine, cetirizine hydrochloride, bepotastine, fexofenadine, loratadine, desloratadine, olopatadine hydrochloride, TAK-427, ZCR-2060, NIP-530, mometasone furoate, mizolastine, BP-294, andolast, auranofin, acrivastine and the like.

[0110] The xanthine derivatives may include, for example, aminophylline, theophylline, doxofylline, cipamfylline,

6.88, 3.73 - 3.64, 3.57, 3.39, 2.10 - 1.71, 1.64 - 1.55, 1.52 - 1.26, 1.25 - 1.18.

[0148] Example 5 (6):

1-{4-[3-{[(3-cyclohexyl-3-hydroxy-1-pyrrolidinyl)carbonyl]amino}-5-(trifluoromethyl)phenoxy]phenyl}cyclobutanecarboxylic acid

TLC: Rf 0.69 (chloroform : methanol = 5:1);

^{1}H-NMR (CD_3OD): δ 7.65, 7.41, 7.29, 6.97, 6.81, 3.60 - 3.30, 2.80, 2.40, 2.00 - 1.08.

[0149] Example 5 (7):

1-{4-[3-{[(3-cyclohexyl-3-hydroxy-1-pyrrolidinyl)carbonyl]amino}-5-(trifluoromethyl)phenoxy]phenyl}cyclopentanecarboxylic acid

[0150]

[0151]

TLC: Rf 0.46 (chloroform : methanol = 5:1);

^{1}H-NMR (CD_3OD): δ 7.65, 7.46, 7.28, 6.95, 6.80, 3.60 - 3.20, 2.60, 2.00 - 1.08.

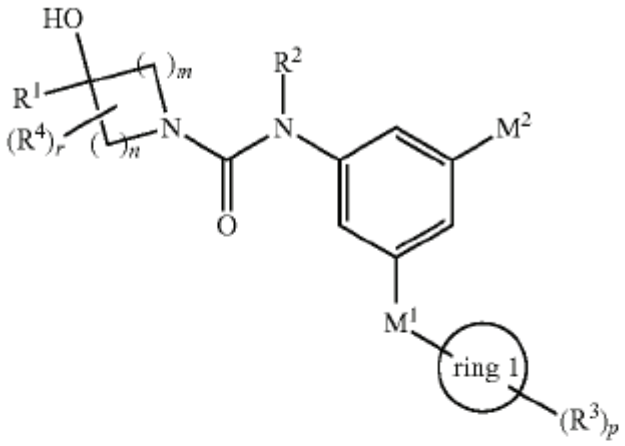
[0152] Example 6:

(+)-1-{4-[3-{[(3-cyclohexyl-3-hydroxy-1-pyrrolidinyl)carbonyl]

CLAIMS

1. A compound represented by the general formula (I):

(I)



wherein R^1 represents (1) a C1-8 alkyl group which can be substituted with 1 to 5 R^{21} groups, (2) a C2-8 alkenyl group which can be substituted with 1 to 5 R^{21} groups, (3) a C2-8 alkynyl group which can be substituted with 1 to 5 R^{21} groups or (4) a C3-7 carbocycle which can be substituted with 1 to 5 substituents selected from the group consisting of a C1-4 alkyl group, a C1-4 haloalkyl group, a C1-4 alkoxy group and a halogen atom;

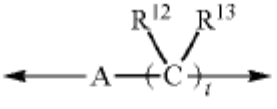
R^{21} represents (1) a halogen atom, (2) OR^{22} (in the group, R^{22} represents (1) a hydrogen atom, (2) a C1-4 alkyl group or (3) a C1-4 haloalkyl group), (3) —$NR^{23}R^{24}$ (in the group, R^{23} and R^{24} respectively and independently represent (1) a hydrogen atom or (2) a C1-4 alkyl group) or (4) an oxo group;

R^2 represents (1) a hydrogen atom, (2) a C1-4 alkyl group or (3) a C1-4 haloalkyl group;

R^3 represents (1) a halogen atom, (2) a C1-4 alkyl group, (3) a C1-4 haloalkyl group, (4) a C1-4 alkoxy group, (5) a hydroxy group, (6) -L-$CONR^6R^7$, (7) -L-SO_2R^8 or (8) -L-$COOR^9$;

R^4 represents (1) a halogen atom, (2) a C1-4 alkyl group or (3) a C1-4 haloalkyl group;

L represents (1) a bond, (2) a group represented by the formula:



wherein A represents (1) a bond or (2) an oxygen atom; R^{12} and R^{13} respectively and independently represent (1) a hydrogen atom, (2) a C1-4 alkyl group, (3) a hydroxy group or (4) NH_2 or (5) R^{12} and R^{13} together with the carbon atom to which they are attached can form a C3-7 carbocycle; and the arrow on the right hand side binds to —$CONR^6R^7$, —SO_2R^8 or —$COOR^9$, (3) a C2-4 alkenylene group, (4) a —O—C2-4 alkenylene group, (5) an oxygen atom or (6) a nitrogen atom which can be substituted with a C1-4 alkyl group;

R^6 and R^7 respectively and independently represent (1) a hydrogen atom, (2) a C1-4 alkyl group, (3) a C1-4 haloalkyl group, (4) a hydroxy group, (5) —$CONR^{15}R^{16}$, (6) —$SO_2NR^{15}R^{16}$, (7) —COR^{17} or (8) —SO_2R^{17}, or R^6 and R^7 together with the nitrogen atom to which they are attached can form a 4- to 7-membered nitrogen-containing saturated heterocycle that can be substituted with a hydroxy group;

R^8 represents (1) a C1-4 alkyl group, (2) a C1-4 haloalkyl group or (3) $NR^{10}R^{11}$;

R^9 represents (1) a hydrogen atom or (2) a C1-8 alkyl group;

R^{10} and R^{11} respectively and independently represent (1) a hydrogen atom, (2) a C1-4 alkyl group, (3) —$CONR^{15}R^{16}$, (4) —$SO_2NR^{15}R^{16}$, (5) —COR^{17} or (6) —SO_2R^{17};

the ring 1 represents a benzene, cyclohexane or pyridine ring;

R^{15} and R^{16} respectively and independently represent (1) a hydrogen atom, (2) a C1-4 alkyl group or (3) a 5- to 7-membered cyclic group;

R^{17} represents (1) a C1-4 alkyl group or (2) a 5- to 7-membered cyclic group;

M^1 represents (1) a bond, (2) —C(O)—, (3) —O—, (4) —S—, (5) —C(O)O—, (6) —CH_2O— or (7) —C(O)NH—;

M^2 represents a halogen atom or a C1-4 haloalkyl group;

n represents an integer of 1 to 2;

m represents an integer of 1 to 2;

p represents an integer of 0 to 5;

r represents an integer of 0 to 4;

t represents an integer of 1 to 4;

when p is 2 or more, a plurality of R^3 groups can be the same or different;

when r is 2 or more, a plurality of R^4 groups can be the same or different; and

when t is 2 or more, a plurality of R^{12} and R^{13} groups can be respectively the same or different;

a salt thereof, a solvate thereof or an N-oxide thereof.

2. The compound according to claim **1**, wherein R^1 is (1) a C1-8 alkyl group which can be substituted with 1 to 5 R^{21} groups, or (2) a C3-7 carbocycle which can be substituted with 1 to 5 substituents selected from the group consisting of a C1-4 alkyl group, a C1-4 haloalkyl group, a C1-4 alkoxy group and a halogen atom,

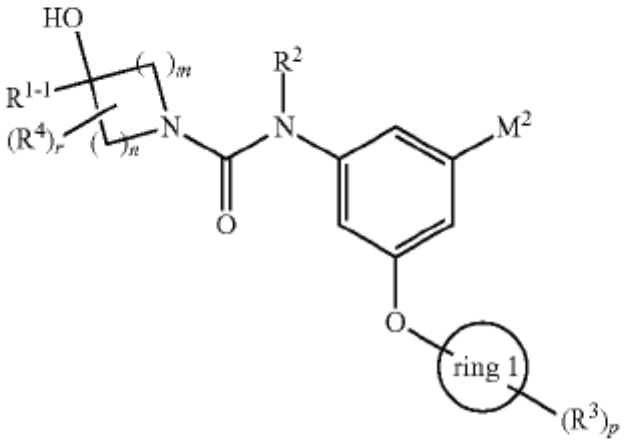
a salt thereof, a solvate thereof or an N-oxide thereof.

3. The compound according to claim **1** or **2**, wherein M is (1) —O— or (2) —C(O)O—,

a salt thereof, a solvate thereof or an N-oxide thereof.

4. The compound according to claim **1**, which is represented by the general formula (I-1):

(I-1)



wherein R^{1-1} represents (1) a C1-8 alkyl group which can be substituted with 1 to 5 R^{21} groups, or (2) a C3-7 carbocycle which can be substituted with 1 to 5 substituents selected from the group consisting of a C1-4 alkyl group, a C1-4 haloalkyl group, a C1-4 alkoxy group and a halogen atom,

a salt thereof, a solvate thereof or an N-oxide thereof.

5. The compound according to claim **4**, wherein R^2 is a hydrogen atom,

a salt thereof, a solvate thereof or an N-oxide thereof.

6. The compound according to claim **4**, which is 2-{3-[3-{[(3-cyclohexyl-3-hydroxy-1-pyrrolidinyl)carbonyl]amino}-5-(trifluoromethyl)phenoxy]phenyl}-2-methylpropanoic acid, 4-cyclopentyl-4-hydroxy-N-[3-{4-[(methylsulphonyl)carbamoyl]phenoxy}-5-(trifluoromethyl)phenyl]-1-piperidine carboxamide, 4-cyclopentyl-N-[3-{4-[(ethylsulphonyl)carbamoyl]phenoxy}-5-(trifluoromethyl)phenyl]-4-hydroxy-1-piperidine carboxamide, 1-{4-[3-{[(3-cyclohexyl-3-hydroxy-1-pyrrolidinyl)carbonyl]amino}-5-(trifluoromethyl)phenoxy]phenyl}cyclopropanecarboxylic acid, 2-{4-[3-{[(3-cyclohexyl-3-hydroxy-1-pyrrolidinyl)carbonyl]amino}-5-(trifluoromethyl)phenoxy]phenoxy}-2-methylpropanoic acid, 1-{4-[3-{[(3-cyclohexyl-3-hydroxy-1-pyrrolidinyl)carbonyl]amino}-5-(trifluoromethyl)phenoxy]phenoxy}cyclopropanecarboxylic acid, 1-{4-[3-{[(3-cyclohexyl-3-hydroxy-1-pyrrolidinyl)carbonyl]amino}-5-(trifluoromethyl)phenoxy]phenyl}cyclobutanecarboxylic acid, 1-{4-[3-{[(3-cyclohexyl-3-hydroxy-1-pyrrolidinyl)carbonyl]amino}-5-(trifluoromethyl)phenoxy]phenyl}cyclopentanecarboxylic acid, 1-{4-[3-chloro-5-({[4-(4-fluorophenyl)-4-hydroxy-1-piperidinyl]carbonyl}amino)phenoxy]phenoxy}cyclopropanecarboxylic acid or 2-[4-(3-fluoro-5-{[(4-hydroxy-4-isobutyl-1-piperidinyl)carbonyl]amino}phenoxy)phenyl]-2-methylpropanoic acid,

a salt thereof, a solvate thereof or an N-oxide thereof.

7. The compound according to claim **4**, which is 4-cyclopentyl-4-hydroxy-N-[3-{4-[(methylsulphonyl)carbamoyl]phenoxy}-5-(trifluoromethyl)phenyl]-1-piperidine carboxamide or 1-{4-[3-{[(3-cyclohexyl-3-hydroxy-1-pyrrolidinyl)carbonyl]amino}-5-(trifluoromethyl)phenoxy]phenyl}cyclopentanecarboxylic acid,

a salt thereof, a solvate thereof or an N-oxide thereof.

8. A pharmaceutical composition comprising the compound represented by the general formula (I), the salt thereof, the solvate thereof or the N-oxide thereof according to claim **1**.

9. The compound according to claim 1, which is 2-(4-{[3-{[(4-hydroxy-4-isobutyl-1-piperidinyl)carbonyl]amino}-5-(trifluoromethyl)benzoyl[oxy}phenyl)-2-methylpropanoic acid, a salt thereof, a solvate thereof or an N-oxide thereof.

10. The compound according to claim 4, which is
(+)-1-{4-[3-{[(3-cyclohexyl-3-hydroxy- 1-pyrrolidinyl) carbonyl]amino}-5-(trifluoromethyl)phenoxy] phenyl}cyclobutanecarboxylic acid,
(−)-1-{4-[3-{[(3-cyclohexyl-3-hydroxy-1-pyrrolidinyl) carbonyl]amino}-5-(trifluoromethyl)phenoxy] phenyl}cyclobutanecarboxylic acid,
(+)-2-{3-[3-{[(3-cyclohexyl-3-hydroxy-1-pyrrolidinyl) carbonyl]amino}-5-(trifluoromethyl)phenoxy]phenyl}-2-methylpropanoic acid, or
(−)-2-{3-[3-{[(3-cyclohexyl-3-hydroxy-1-pyrrolidinyl) carbonyl]amino}-5-(trifluoromethyl)phenoxy]phenyl}-2-methylpropanoic acid,
a salt thereof, a solvate thereof or an N-oxide thereof.