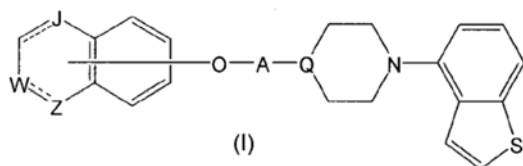


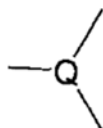
CLAIMS:

1. A compound represented by the formula (I),

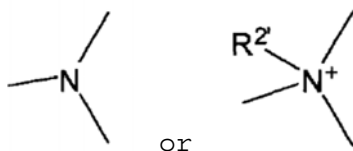


wherein

A is a C1-6 alkylene group;

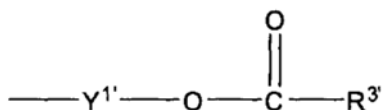


in the monocyclic heterocycle containing Q is



wherein

R^{2'} is the following group



wherein

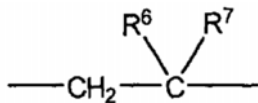
Y^{1'} is a C1-6 alkylene group,

R^{3'} is

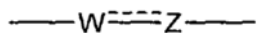
- (1) a C1-30 alkyl group,
- (2) a C3-20 cycloalkyl group optionally substituted by a C1-6 alkyl group,
- (3) a phenyl group,
- (4) a phenyl C1-6 alkyl group
- (5) a C1-6 alkoxy group,
- (6) a C3-20 cycloalkyloxy group,
- (7) an amino group optionally having 1 or 2 substituents selected from the group consisting of a C1-30 alkyl group and a phenyl C1-6 alkyl group, or
- (8) a piperidyl group optionally having a piperidyl group;

-----J

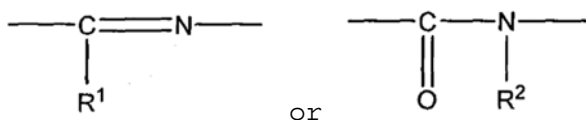
at the 3-position and the 4-position of the bicyclic heterocycle skeleton containing Z and W is -CH=CH- or



wherein R⁶ and R⁷ are the same or different and each is a hydrogen or a C1-6 alkyl group;



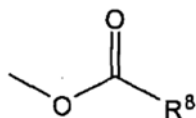
is



wherein

R¹ is

a C1-6 alkoxy C1-6 alkoxy group,
 a phosphonoxy C1-6 alkoxy group,
 a phenyl C1-6 alkoxy C1-6 alkoxy group,
 a phosphonoxy group optionally having 1 or 2 C1-6 alkyl groups,
 the following group

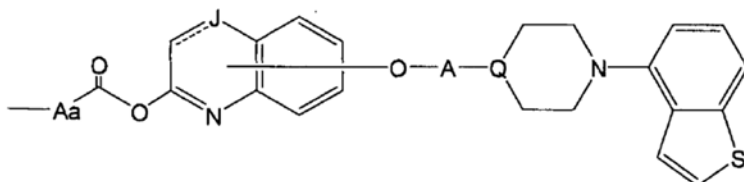


wherein

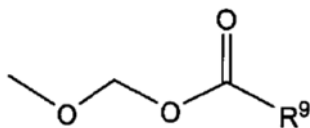
R⁸ is

- (1) a C1-30 alkyl group,
- (2) a hydroxy-substituted C1-6 alkyl group,
- (3) a C3-20 cycloalkyl group,
- (4) a phenyl group,
- (5) a phenyl C1-6 alkyl group,
- (6) a C2-30 alkenyl group,
- (7) a C1-6 alkoxy group,
- (8) a C3-20 cycloalkyloxy group,
- (9) a C1-6 alkoxy C1-6 alkoxy group,

- (10) an amino group optionally having 1 or 2 substituents selected from the group consisting of a C1-30 alkyl group and a hydroxy-substituted C1-6 alkyl group,
- (11) a piperidyl group optionally having a piperidyl group,
- (12) a piperazinyl group optionally having a C1-6 alkyl group,
- or
- (13) the following group



wherein Aa is a C1-30 alkylene group, and other symbols are as defined above, or
the following group



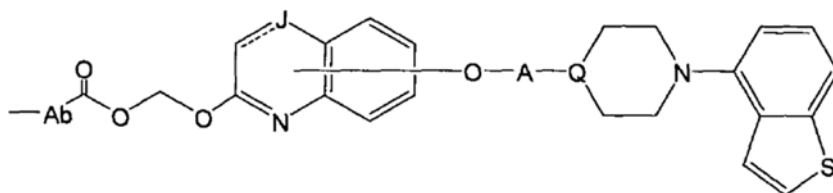
wherein

R⁹ is

- (1) a C1-30 alkyl group,
- (2) a hydroxy-substituted C1-6 alkyl group,
- (3) a C3-20 cycloalkyl group,
- (4) a phenyl group,
- (5) a phenyl C1-6 alkyl group,
- (6) a C2-30 alkenyl group,
- (7) a C1-6 alkoxy group,
- (8) a C3-20 cycloalkyloxy group,
- (9) a C1-6 alkoxy C1-6 alkoxy group,
- (10) a phenyloxy group,
- (11) an amino group optionally having 1 or 2 substituents selected from the group consisting of a C1-30 alkyl group and a hydroxy-substituted C1-6 alkyl group,
- (12) a piperidyl group optionally having a piperidyl group,
- (13) a piperazinyl group optionally having a C1-6 alkyl group,

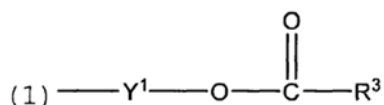
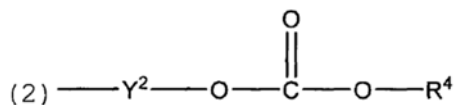
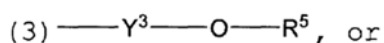
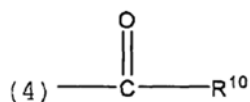
or

(14) the following group



wherein Ab is a C1-30 alkylene group, and other symbols are as defined above;

R² is a hydrogen or the following group



wherein

Y¹ is a C1-6 alkylene group optionally substituted by

- (1) a C1-6 alkoxy carbonyl group or
- (2) a C1-6 alkyl group,

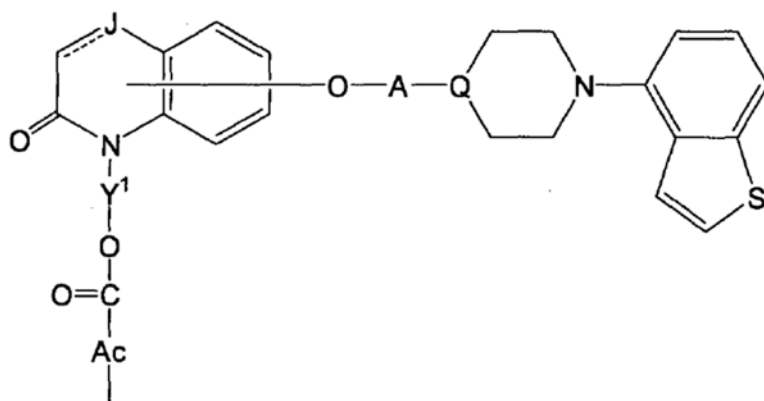
Y² is a C1-6 alkylene group,

Y³ is a single bond or a C1-6 alkylene group optionally substituted by a C1-6 alkyl group,

R³ is

- (1) a C1-30 alkyl group,
- (2) a halogen-substituted C1-6 alkyl group,
- (3) a C2-30 alkenyl group,
- (4) an amino C1-6 alkyl group,
- (5) a C3-20 cycloalkyl group,
- (6) a phenyl group,

- (7) a phenyl C1-6 alkyl group,
 - (8) a piperidyl group optionally having 1 or 2 substituents selected from the group consisting of a C1-6 alkyl group and a piperidyl group,
 - (9) a halogen-substituted piperidyl group,
 - (10) a morpholinyl group,
 - (11) a pyrrolidinyl group,
 - (12) a tetrahydropyranyl group,
 - (13) a furyl group,
 - (14) a thienyl group,
 - (15) a pyridyl group,
 - (16) a pyrimidinyl group,
 - (17) a pyridazinyl group,
 - (18) a benzofuryl group,
 - (19) a quinolyl group,
 - (20) a C1-6 alkoxy carbonyl C1-6 alkyl group,
 - (21) a C1-6 alkoxy C1-6 alkoxy C1-6 alkyl group,
 - (22) a C1-6 alkoxy C1-6 alkoxy C1-6 alkoxy C1-6 alkyl group,
 - (23) an amino group optionally having 1 or 2 substituents selected from the group consisting of a C1-30 alkyl group, a C3-20 cycloalkyl group, a C3-20 cycloalkyl C1-6 alkyl group, a C2-6 alkenyl group, a halogen-substituted C1-6 alkyl group, a C1-6 alkoxy group, a C1-6 alkoxy C1-6 alkyl group, a C1-6 alkoxy carbonyl C1-6 alkyl group, a phenyl C1-6 alkyl group, a phenyl C1-6 alkoxy group, a furyl C1-6 alkyl group, a pyridyl C1-6 alkyl group, a hydroxy-substituted C1-6 alkyl group,
 - (24) an amino C1-6 alkyl group optionally having a C1-6 alkyl carbonyl group,
 - (25) a piperazinyl group optionally having a C1-6 alkyl group,
- or
- (26) the following group



wherein Ac is a C1-30 alkylene group, and other symbols are as defined above,

R⁴ is

- (1) a C1-30 alkyl group,
- (2) a phenyl group,
- (3) a phenyl C1-6 alkyl group,
- (4) a halogen-substituted C1-6 alkyl group, or
- (5) a C3-20 cycloalkyl group,

R⁵ is

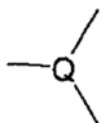
- (1) a hydrogen,
- (2) a C1-6 alkyl group,
- (3) a halogen-substituted C1-6 alkyl group,
- (4) a phenyl C1-6 alkyl group,
- (5) a phenyl C1-6 alkoxy C1-6 alkyl group,
- (6) a tri-C1-6 alkylsilyl group,
- (7) a tetrahydropyranyl group, or
- (8) a phosphono group,

R¹⁰ is

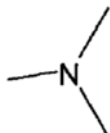
- (2) a C2-30 alkenyl group,
- (4) a phenyl C1-6 alkyl group,
- (5) a hydroxy-substituted C1-6 alkyl group,
- (6) a C3-20 cycloalkyl group,
- (7) an amino C1-6 alkyl group optionally having 1 or 2 substituents selected from the group consisting of an amino C1-6 alkylcarbonyl group and a C1-6 alkylcarbonyl group,

- (8) a pyrrolidinyl group optionally having an amino C1-6 alkylcarbonyl group,
- (9) an alkoxy group,
- (10) a C1-6 alkoxy C1-6 alkoxy C1-6 alkyl group,
- (11) a C1-6 alkoxy C1-6 alkoxy C1-6 alkoxy C1-6 alkyl group,
- (12) a phenyl C1-6 alkoxy group,
- (13) an amino group optionally having 1 or 2 substituents selected from the group consisting of a C1-30 alkyl group, a hydroxy-substituted C1-6 alkyl group and a phenyl C1-6 alkyl group,
- (14) a morpholino group,
- (15) a piperazinyl group optionally having a C1-6 alkyl group,
- (16) a piperidyl group optionally having a piperidyl group, or
- (17) a C3-20 cycloalkyloxy group;

provided when



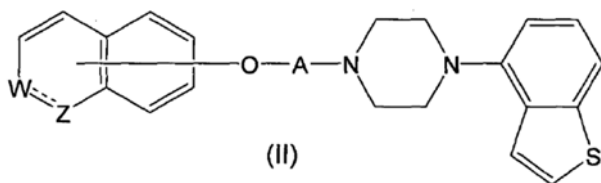
is



, then

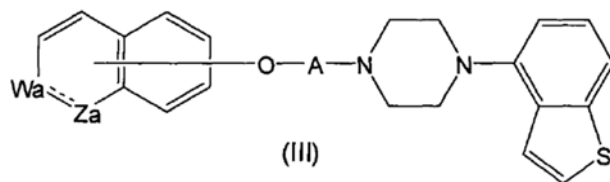
R^2 is not a hydrogen,
or a salt thereof.

2. The compound according to claim 1, which is represented by the formula (II)

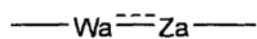


wherein each symbol is as defined in claim 1, or a salt thereof.

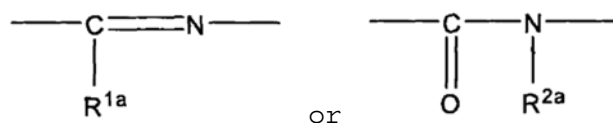
3. The compound according to claim 1, which is represented by the formula (III)



wherein

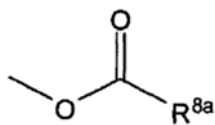


is



wherein

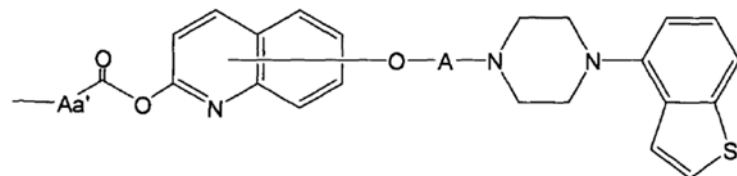
R^{1a} is the following group



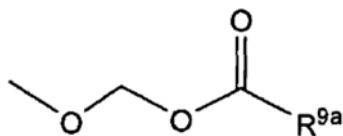
wherein

R^{8a} is

- (1) a C1-30 alkyl group,
- (2) a C3-20 cycloalkyl group,
- (3) a C1-6 alkoxy group,
- (4) a C3-20 cycloalkyloxy group,
- (5) a C1-6 alkoxy C1-6 alkoxy group,
- (6) an amino group optionally having 1 or 2 substituents selected from the group consisting of a C1-30 alkyl group and a hydroxy-substituted C1-6 alkyl group, or
- (7) the following group



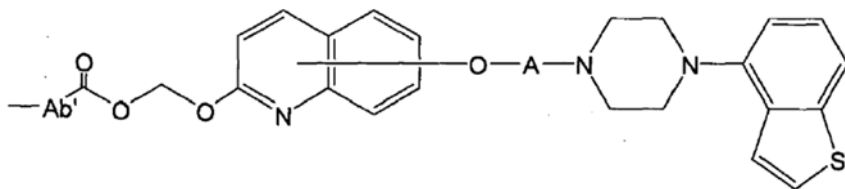
wherein Aa' is a C1-30 alkylene group, and other symbol is as defined in claim 1, or the following group



wherein

R^{9a} is

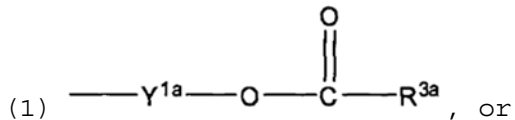
- (1) a C1-30 alkyl group,
- (2) a hydroxy-substituted C1-6 alkyl group,
- (3) a C3-20 cycloalkyl group,
- (4) a C1-6 alkoxy group,
- (5) a C3-20 cycloalkyloxy group,
- (6) a C1-6 alkoxy C1-6 alkoxy group,
- (7) a phenyloxy group,
- (8) an amino group optionally having 1 or 2 substituents selected from the group consisting of a C1-30 alkyl group,
- (9) a piperidyl group optionally having a piperidyl group,
- (10) a piperazinyl group optionally having a C1-6 alkyl group, or
- (11) the following group

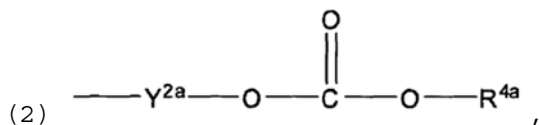


wherein Ab' is a C1-30 alkylene group, and other symbol is as defined in claim 1;

R^{2a} is

the following group





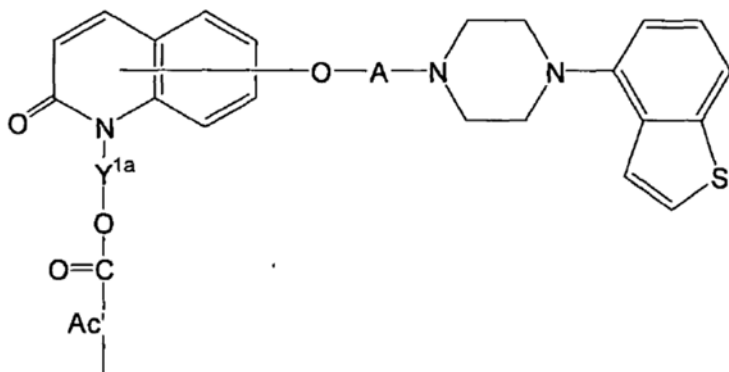
wherein

Y^{1a} is a C1-6 alkylene group,

Y^{2a} is a C1-6 alkylene group,

R^{3a} is

- (1) a C1-30 alkyl group,
- (2) a C3-20 cycloalkyl group,
- (3) a piperidyl group optionally having 1 or 2 substituents selected from the group consisting of a C1-6 alkyl group,
- (4) a tetrahydropyranyl group,
- (5) a C1-6 alkoxy carbonyl C1-6 alkyl group,
- (6) a C1-6 alkoxy C1-6 alkoxy C1-6 alkyl group,
- (7) an amino C1-6 alkyl group optionally having a C1-6 alkyl carbonyl group, or
- (8) the following group



wherein Ac' is a C1-30 alkylene group, Y^{1a} is a C1-6 alkylene group and other symbols are as defined in claim 1,

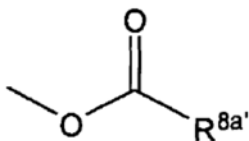
R^{4a} is

- (1) a C1-30 alkyl group, or
- (2) a C3-20 cycloalkyl group; and

A is a C1-6 alkylene group,
or a salt thereof.

4. The compound according to claim 2, wherein R^1 is

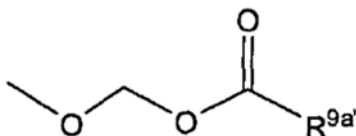
the following group



wherein

$\text{R}^{8a'}$ is

- (1) a C1-30 alkyl group,
 - (2) a C3-20 cycloalkyl group,
 - (3) a C1-6 alkoxy group,
 - (4) a C3-20 cycloalkyloxy group,
 - (5) a C1-6 alkoxy C1-6 alkoxy group, or
 - (6) an amino group optionally having 1 or 2 substituents selected from the group consisting of a C1-30 alkyl group and a hydroxy-substituted C1-6 alkyl group, or
- the following group



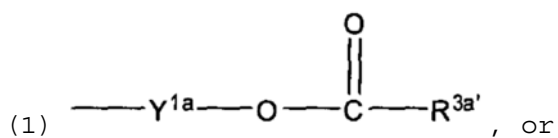
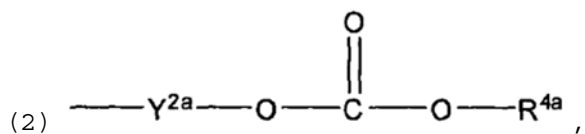
wherein

$\text{R}^{9a'}$ is

- (1) a C1-30 alkyl group,
- (2) a hydroxy-substituted C1-6 alkyl group,
- (3) a C3-20 cycloalkyl group,
- (4) a C1-6 alkoxy group,
- (5) a C3-20 cycloalkyloxy group,
- (6) a C1-6 alkoxy C1-6 alkoxy group,
- (7) a phenyloxy group,
- (8) an amino group optionally having 1 or 2 substituents selected from the group consisting of a C1-30 alkyl group,
- (9) a piperidyl group optionally having a piperidyl group, or
- (10) a piperazinyl group optionally having a C1-6 alkyl group;

R^2 is

the following group



wherein

Y^{1a} is a C1-6 alkylene group,

Y^{2a} is a C1-6 alkylene group,

R^{3a'} is

(1) a C1-30 alkyl group,

(2) a C3-20 cycloalkyl group,

(3) a piperidyl group optionally having 1 or 2 substituents selected from the group consisting of a C1-6 alkyl group,

(4) a tetrahydropyranyl group,

(5) a C1-6 alkoxy carbonyl C1-6 alkyl group,

(6) a C1-6 alkoxy C1-6 alkoxy C1-6 alkyl group,

(7) an amino C1-6 alkyl group optionally having a C1-6 alkyl carbonyl group,

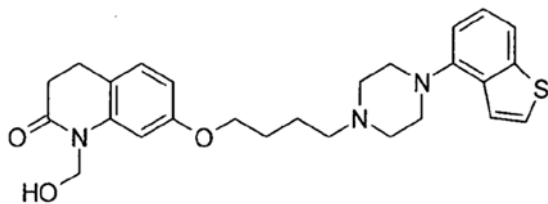
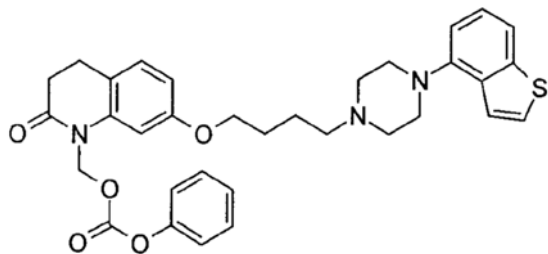
R^{4a} is

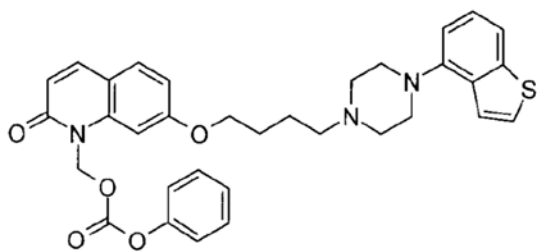
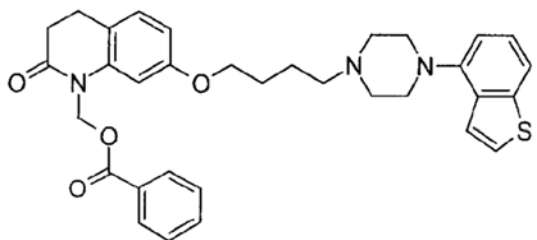
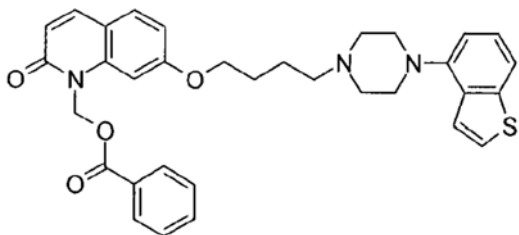
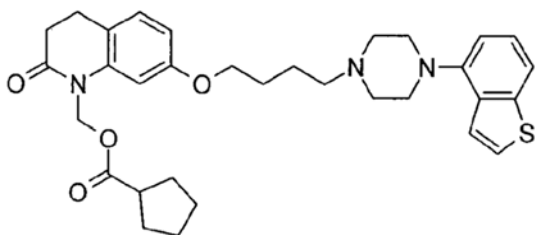
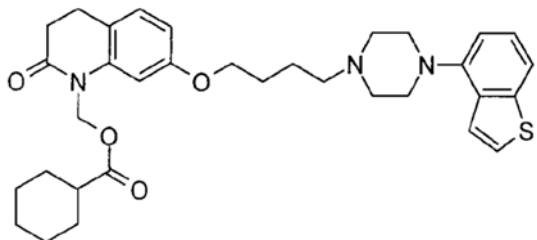
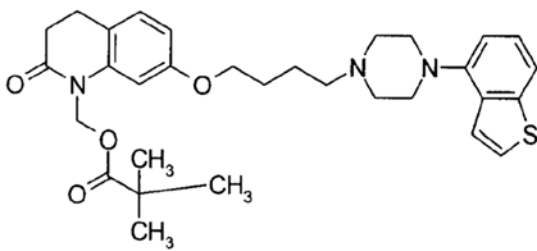
(1) a C1-30 alkyl group, or

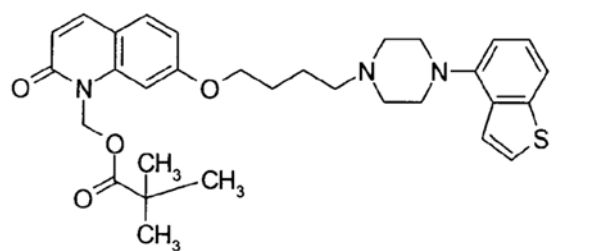
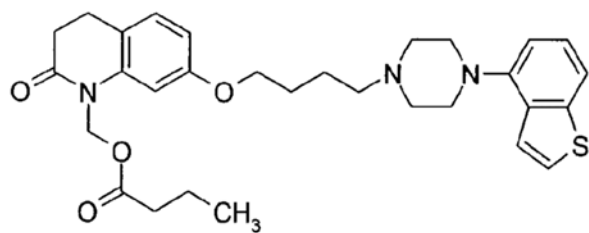
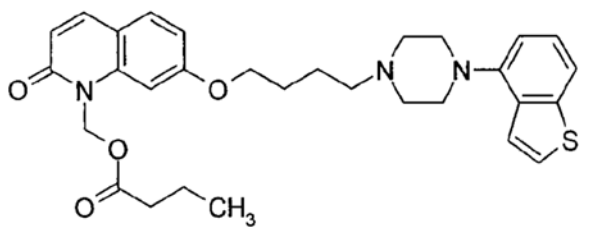
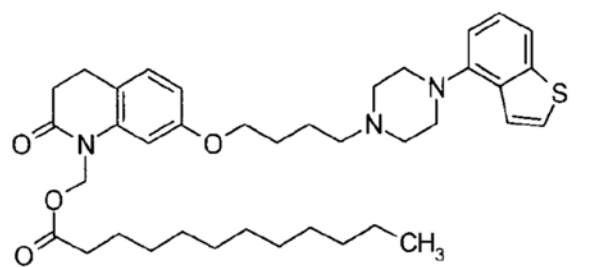
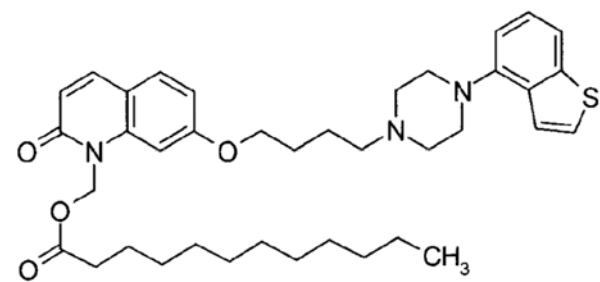
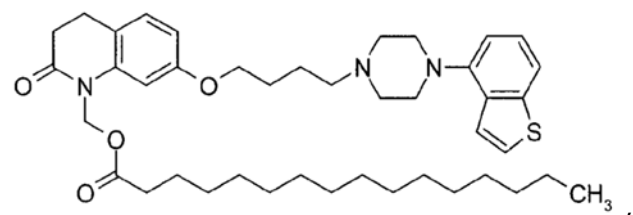
(2) a C3-20 cycloalkyl group;

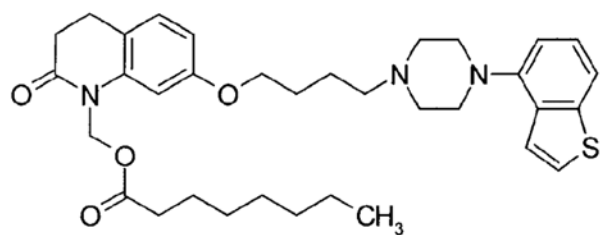
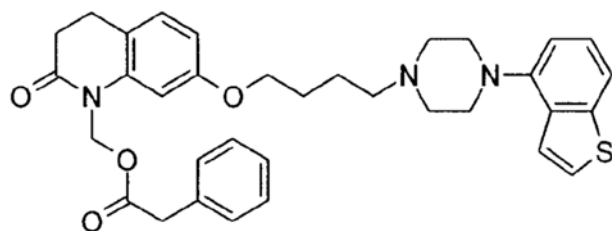
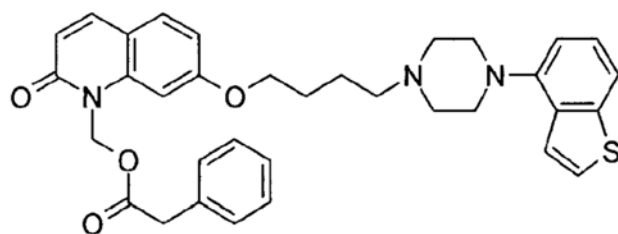
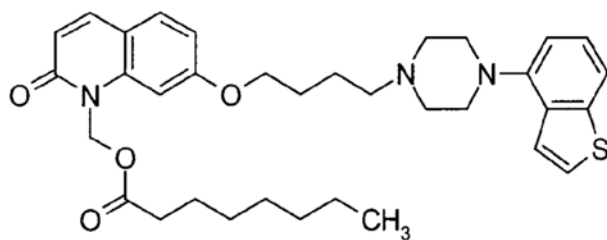
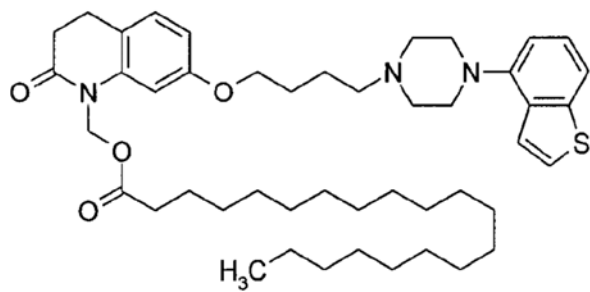
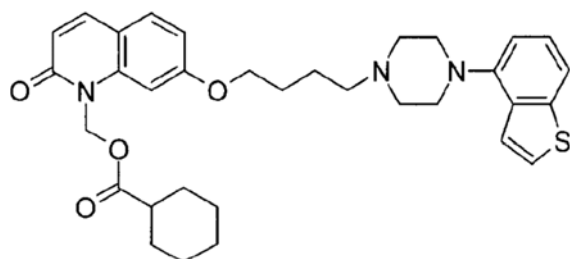
or a salt thereof.

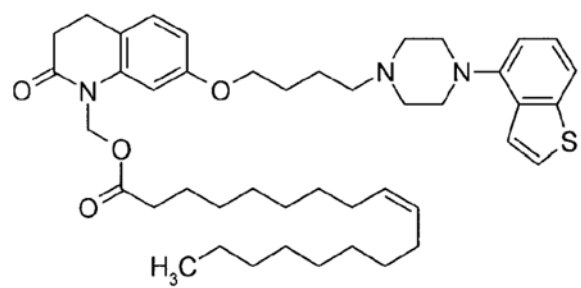
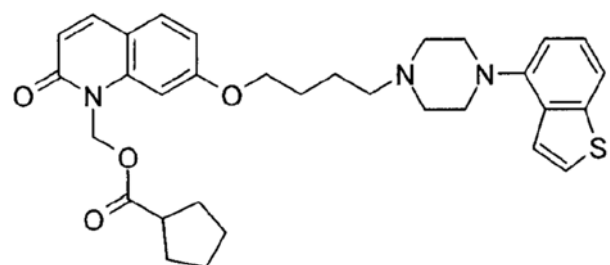
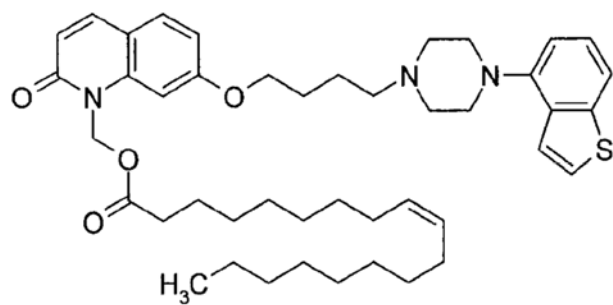
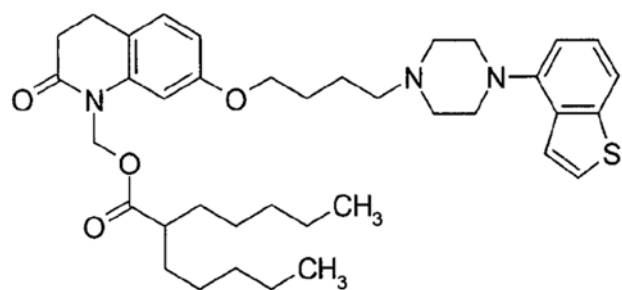
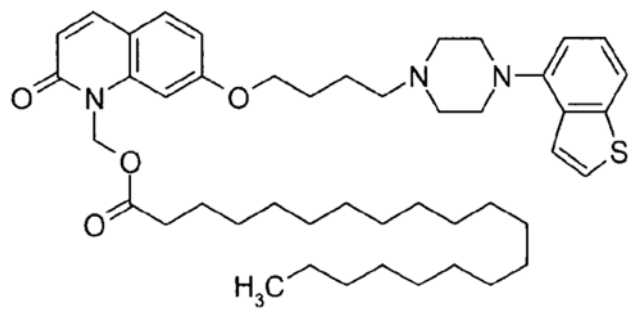
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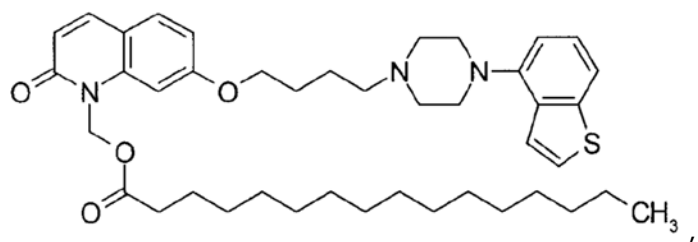
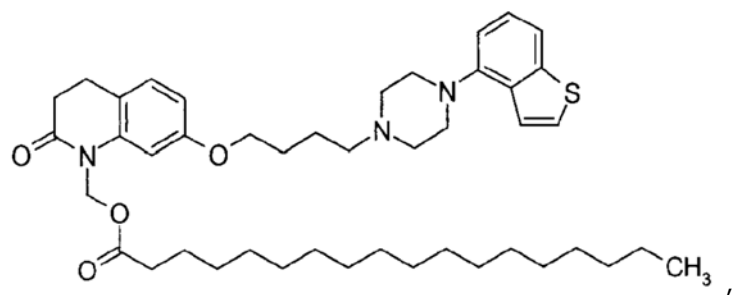
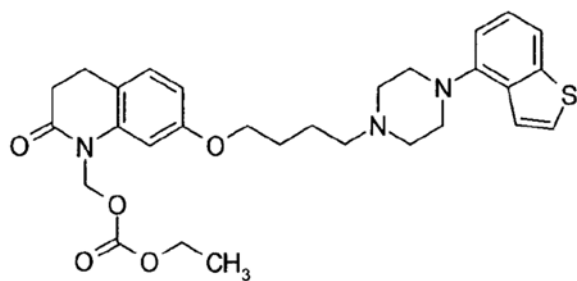
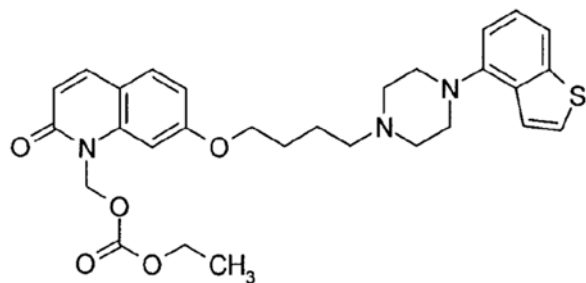
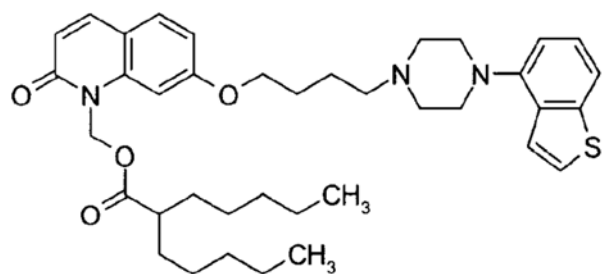
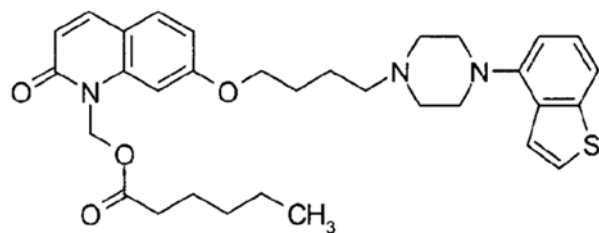


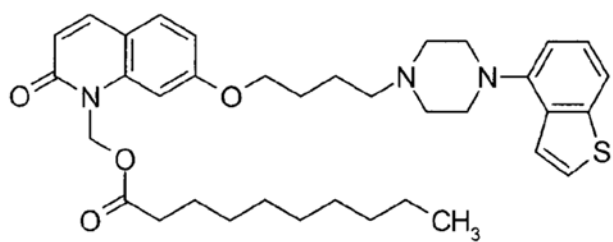
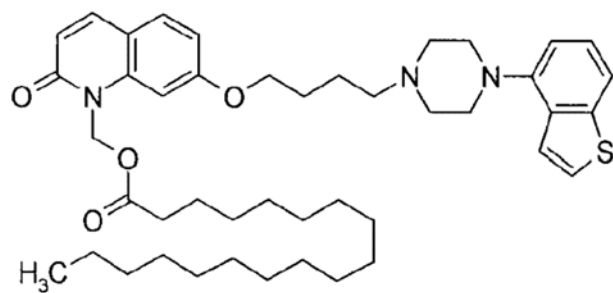
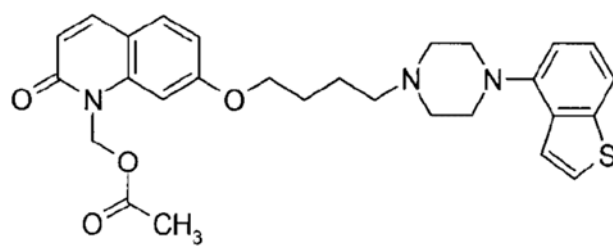
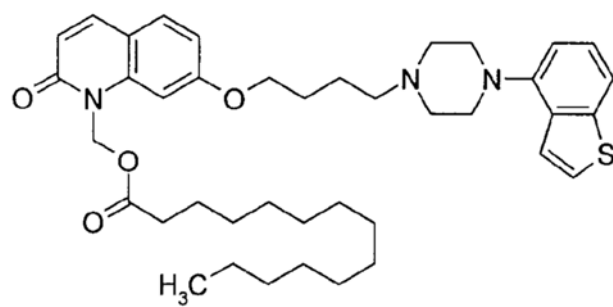
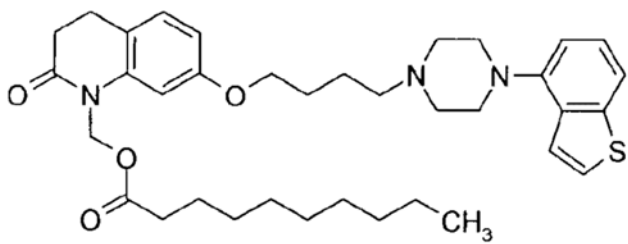
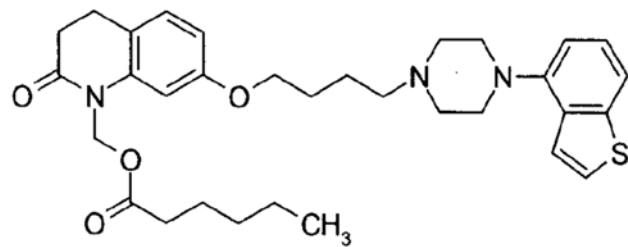


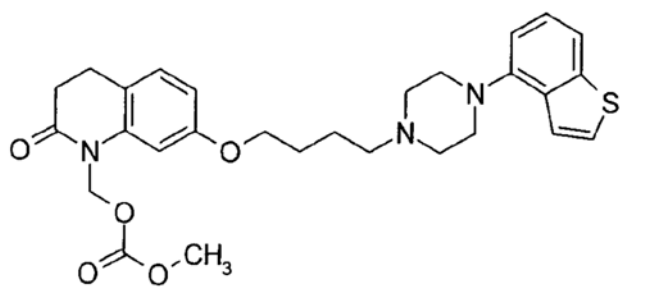
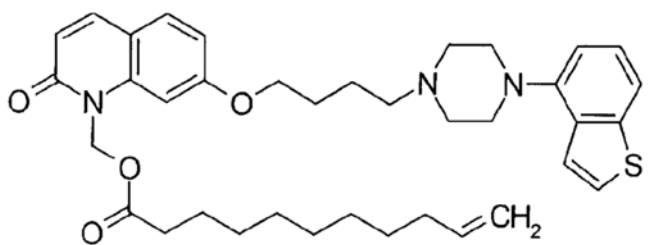
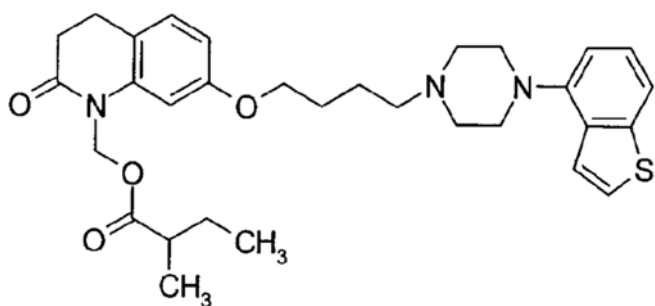
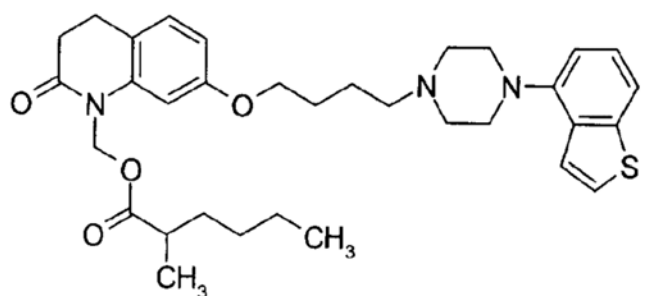
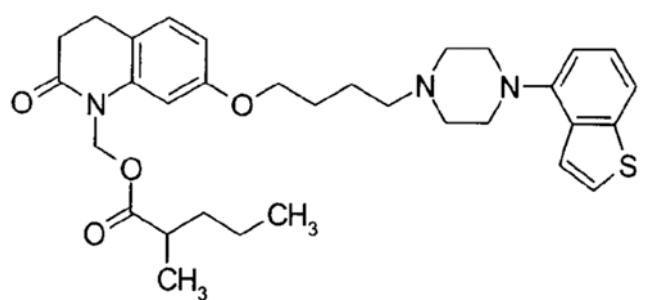


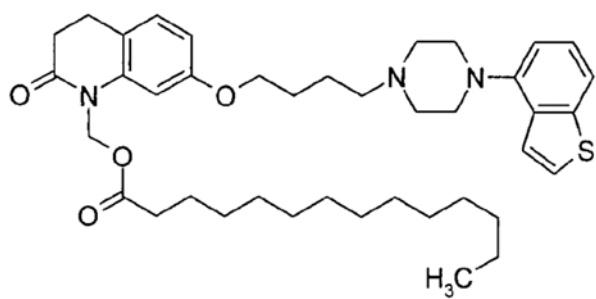
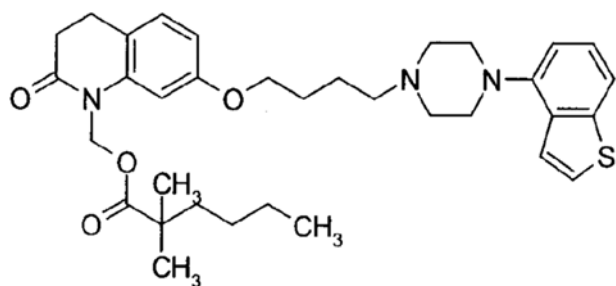
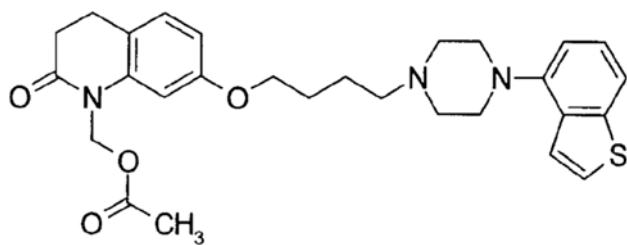
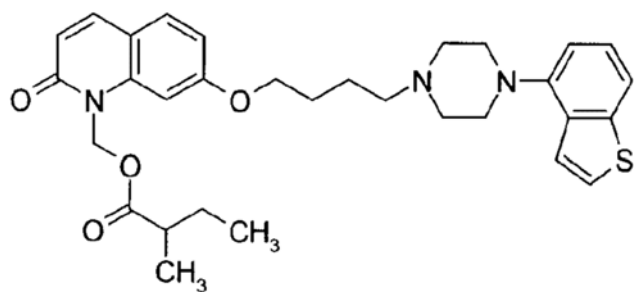
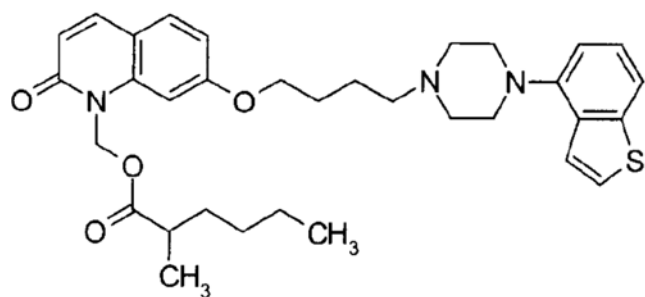


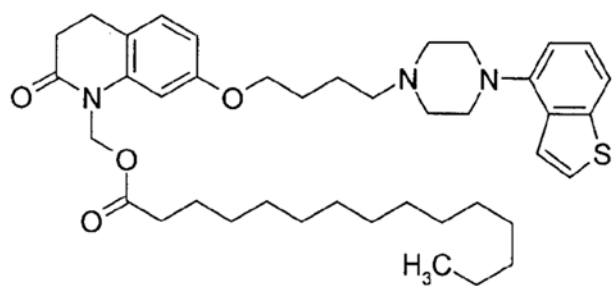
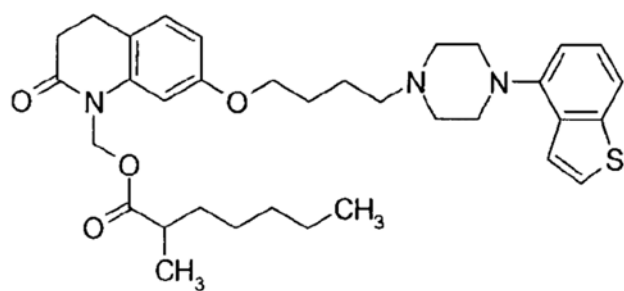
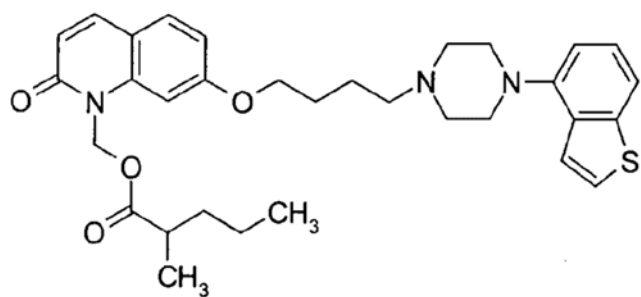
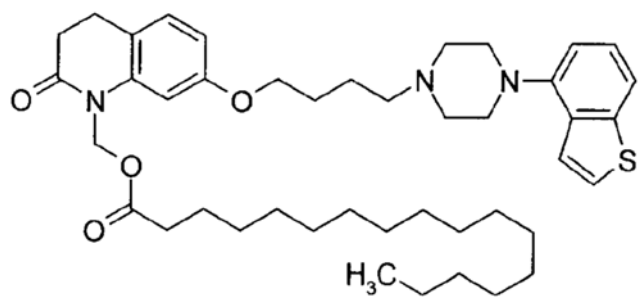
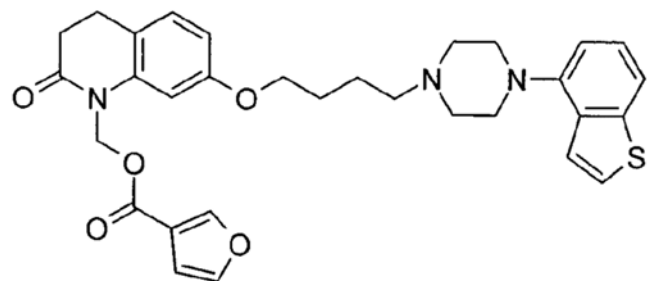


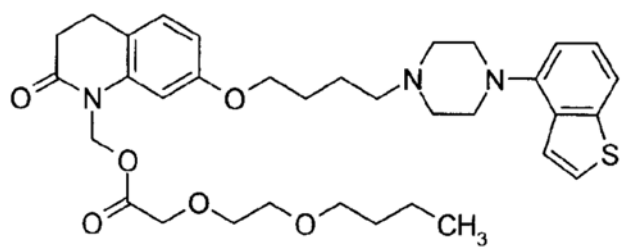
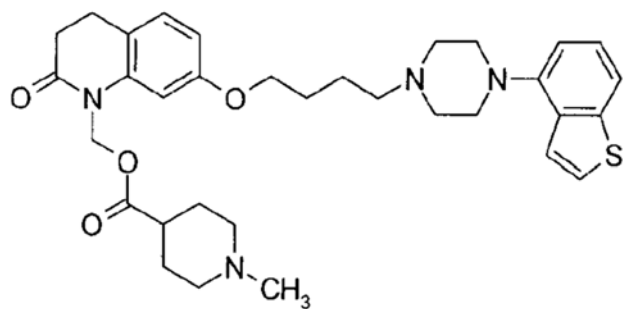
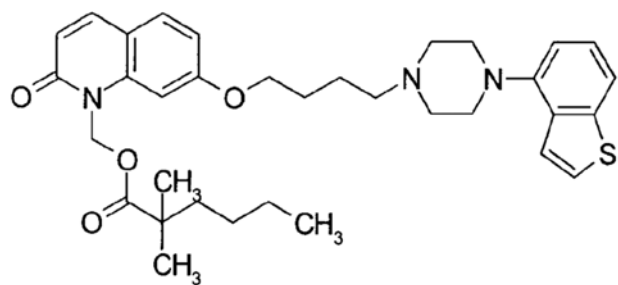
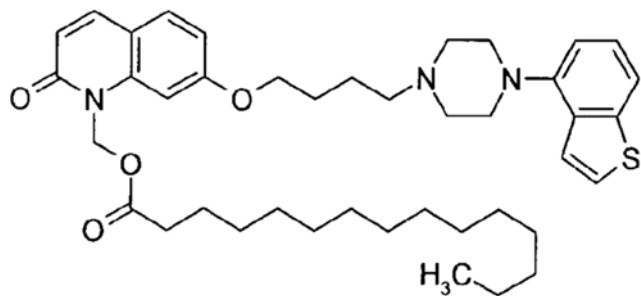
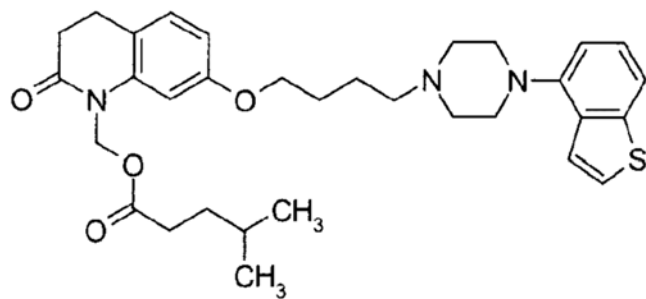


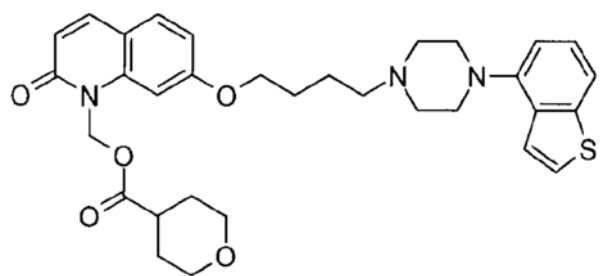
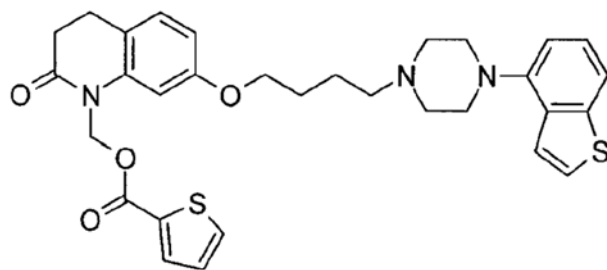
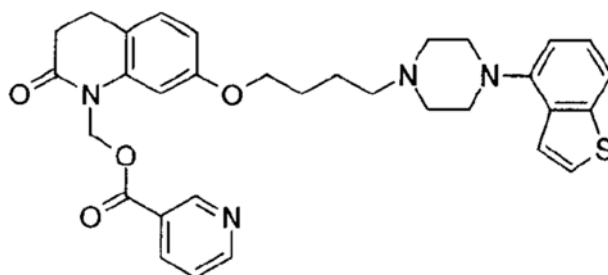
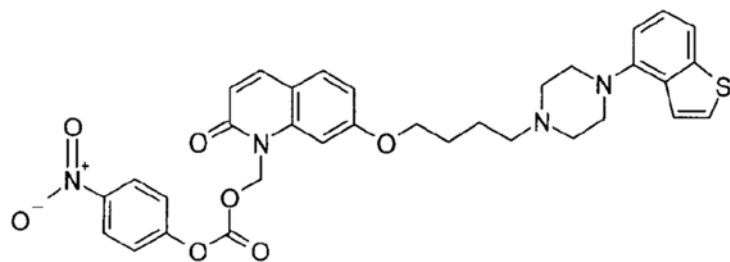
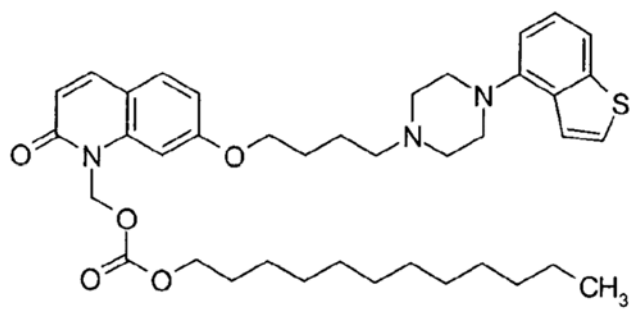


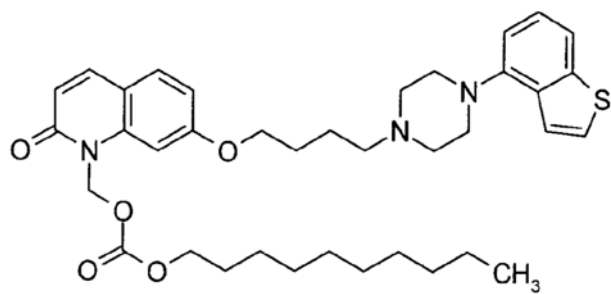
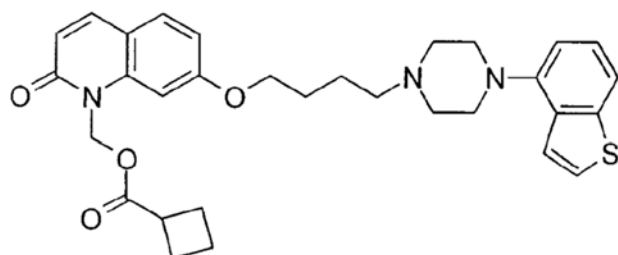
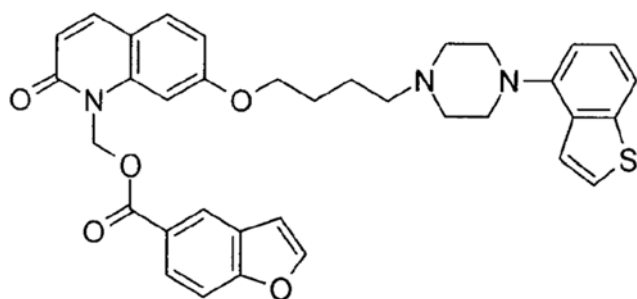
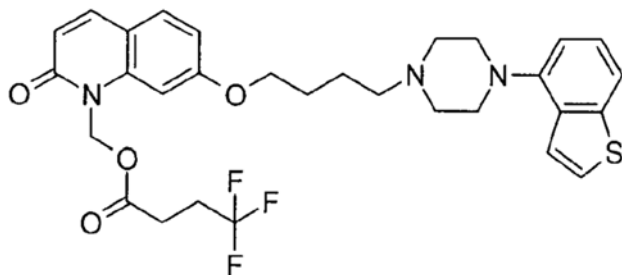
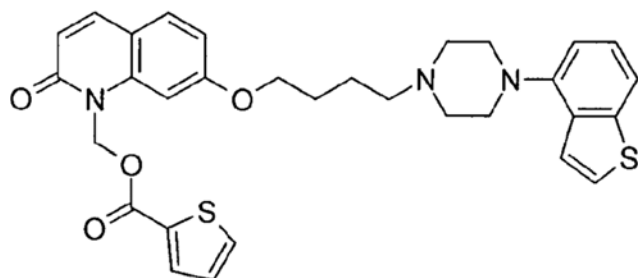


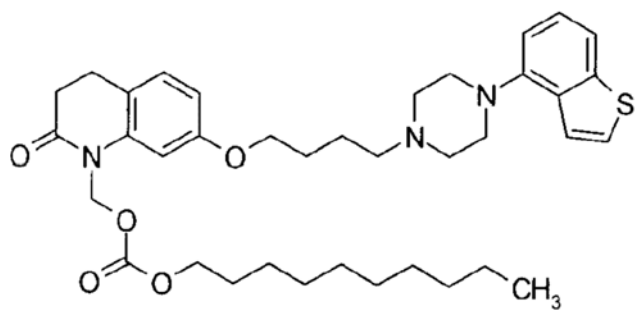
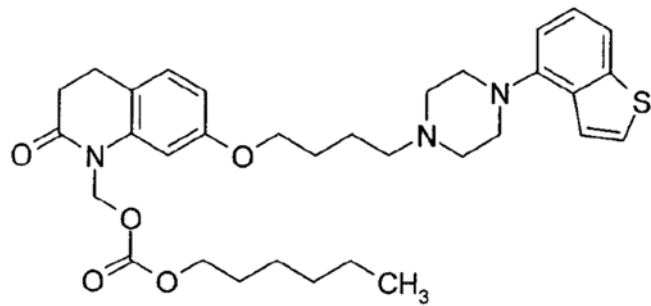
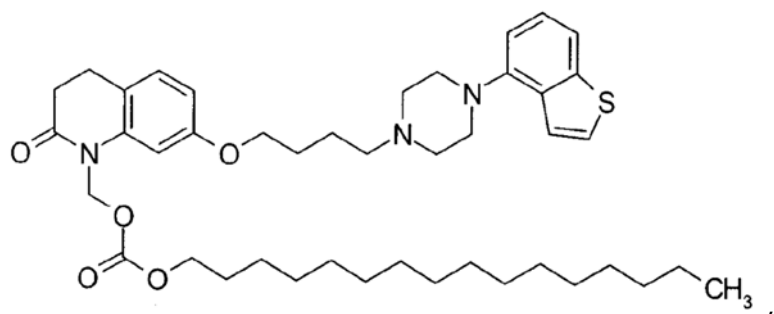
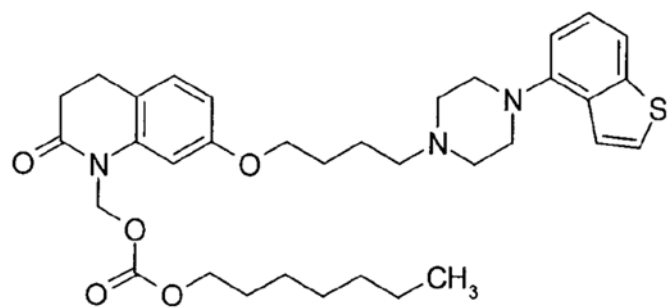
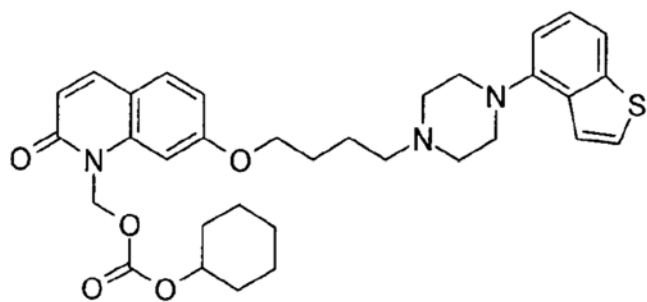


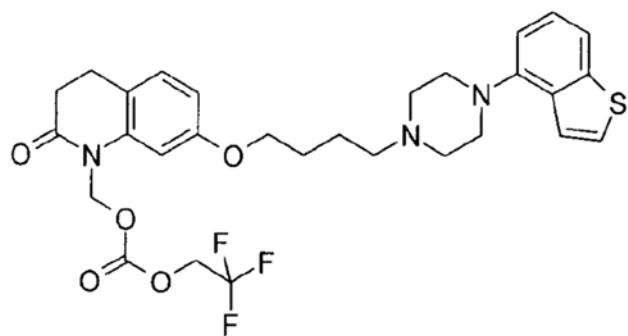
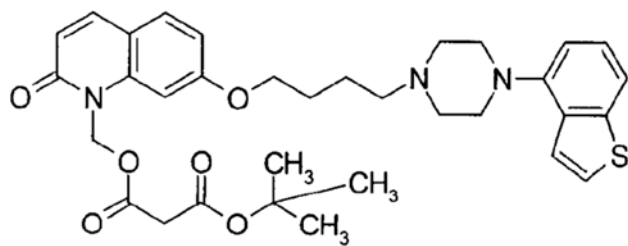
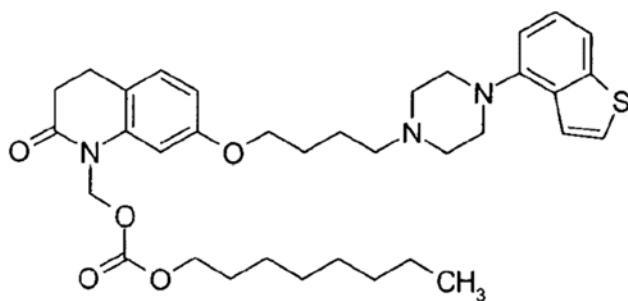
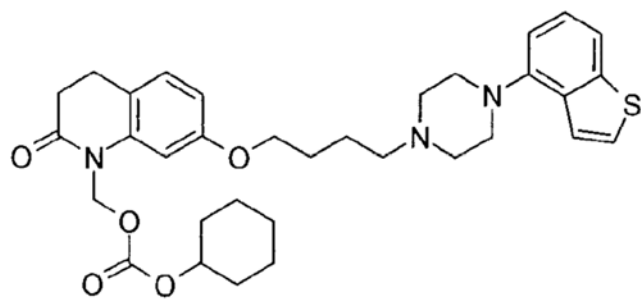
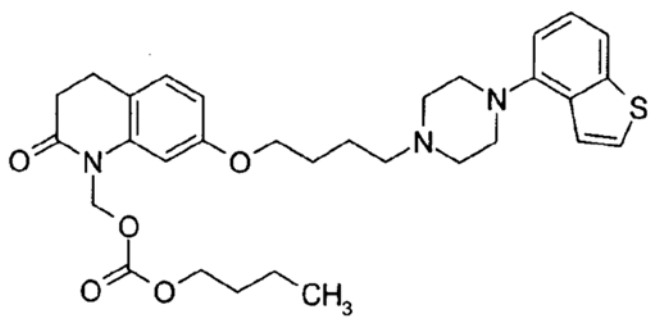


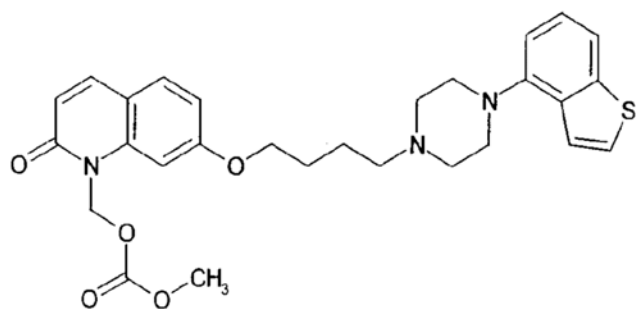
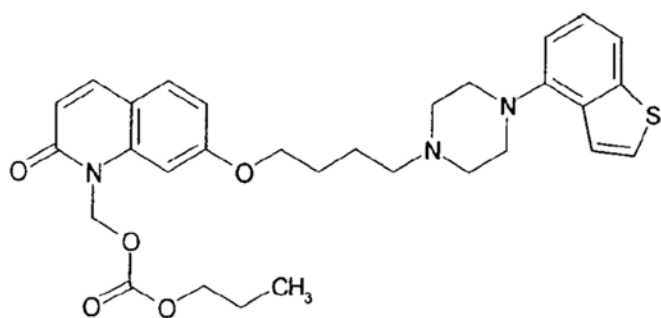
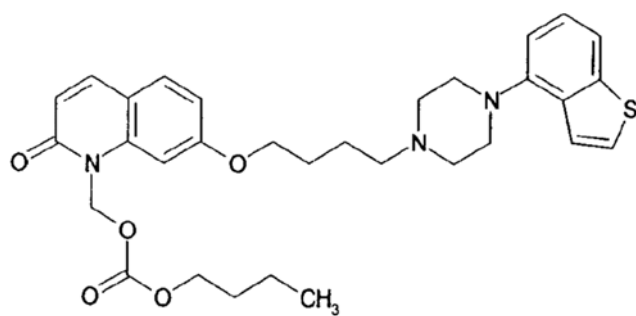
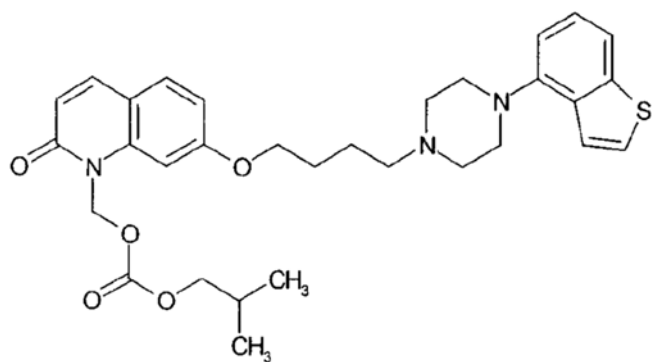
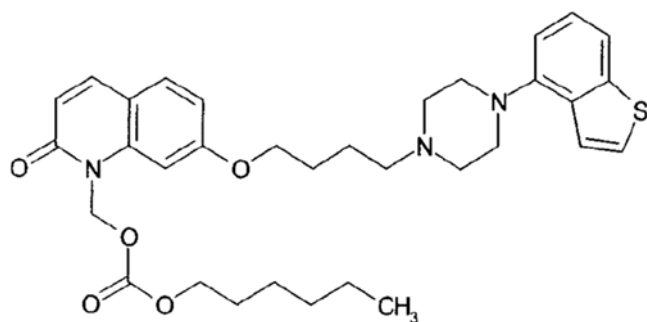


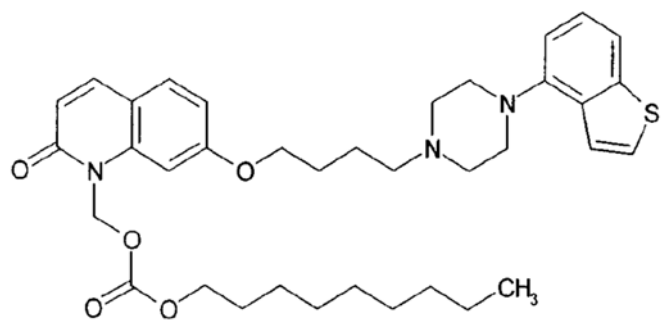
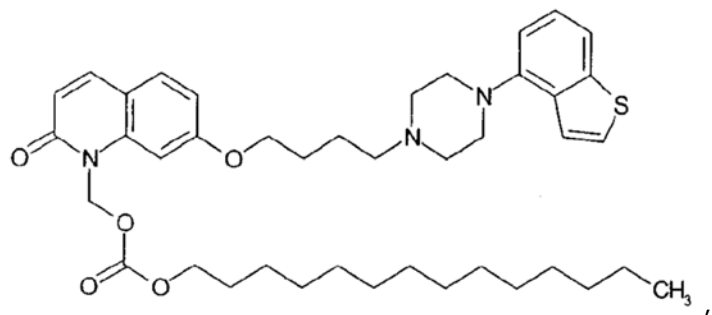
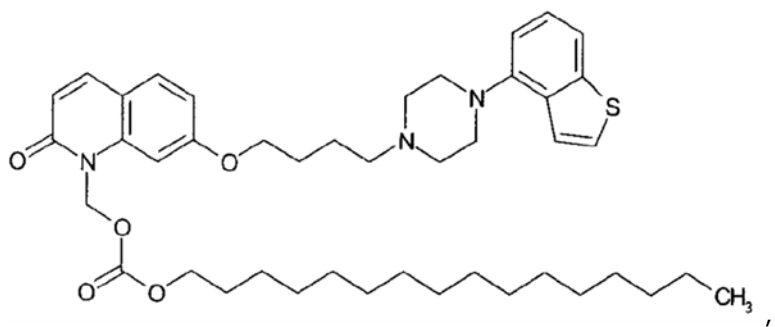
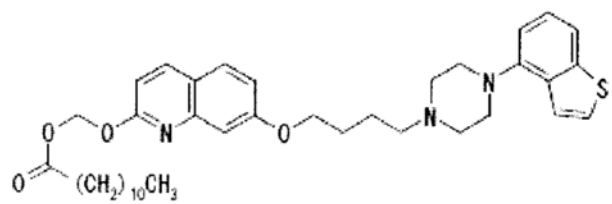
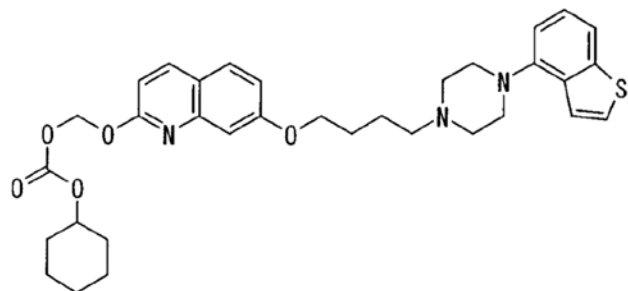


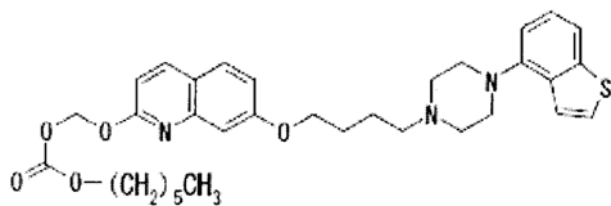
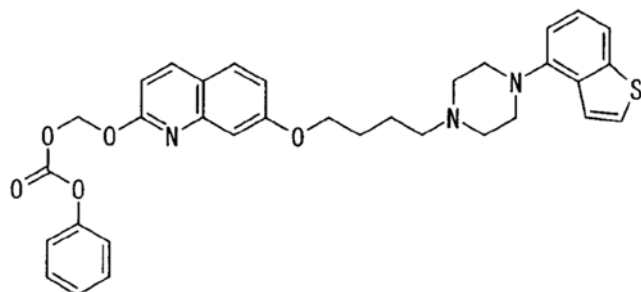
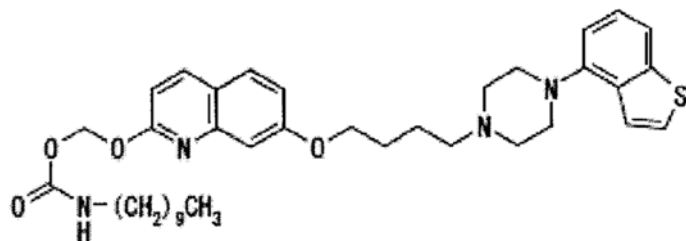




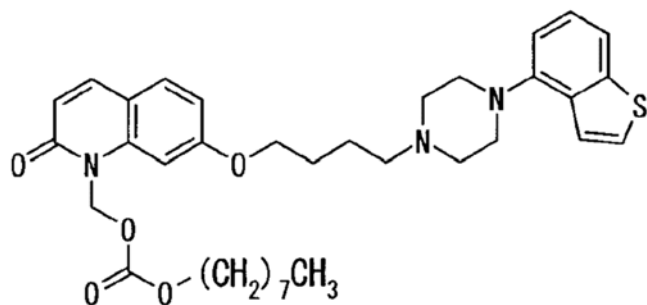






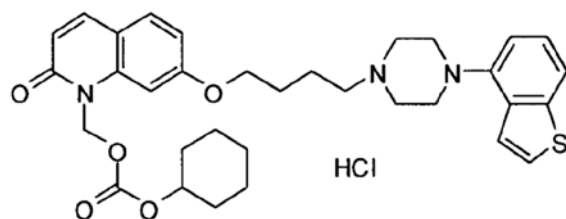


, or



or a pharmaceutically acceptable salt thereof.

6. The compound



HCl

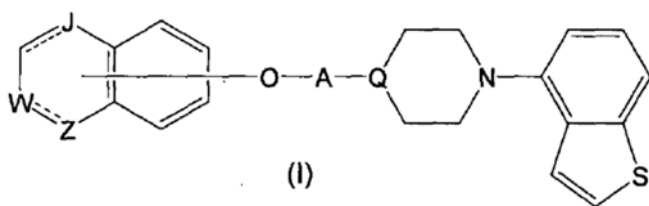
7. The compound according to claim 1, 2, 3, or 4, wherein the salt is a pharmaceutically acceptable salt.

8. A pharmaceutical composition comprising the compound as defined in claim 1, 2, 3, 4, or 5, or a pharmaceutically acceptable salt thereof, or the compound as defined in claim 6, and a pharmaceutically acceptable diluent and/or a carrier.
9. A prophylactic and/or therapeutic agent for a central neurological disease, comprising the compound as defined in claim 1, 2, 3, 4, or 5, or a pharmaceutically acceptable salt thereof, or the compound as defined in claim 6, and a pharmaceutically acceptable diluent and/or carrier.
10. The agent according to claim 9, wherein the central neurological disease is selected from the group consisting of schizophrenia, treatment-resistant, refractory or chronic schizophrenia, emotional disturbance, psychotic disorder, mood disorder, bipolar disorder, mania, depression, endogenous depression, major depression, melancholic and treatment-resistant depression, dysthymic disorder, cyclothymic disorder, anxiety disorder, somatoform disorder, factitious disorder, dissociative disorder, sexual disorder, eating disorder, sleep disorder, adjustment disorder, substance-related disorder, anhedonia, delirium, Alzheimer's disease, Parkinson disease, cognitive impairment, cognitive impairment associated with neurodegenerative diseases, cognitive impairment caused by neurodegenerative diseases, cognitive impairment in schizophrenia, cognitive impairment caused by treatment-resistant, refractory or chronic schizophrenia, vomiting, motion sickness, obesity, migraine, pain, mental retardation, autistic disorder, Tourette's disorder, tic disorder, attention deficit hyperactivity disorder, conduct disorder and Down's syndrome.
11. The compound as defined in claim 1, 2, 3, 4, or 5, or a pharmaceutically acceptable salt thereof, or the compound as defined in claim 6, for use as a medicament.
12. The compound as defined in claim 1, 2, 3, 4, or 5, or a pharmaceutically acceptable salt thereof, or the compound as defined

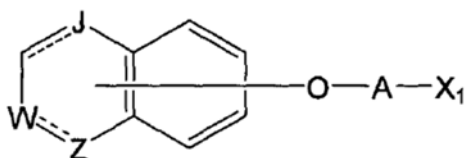
in claim 6, for use in preventing and/or treating a central neurological disease.

13. The compound according to claim 12, wherein the central neurological disease is selected from the group consisting of schizophrenia, treatment-resistant, refractory or chronic schizophrenia, emotional disturbance, psychotic disorder, mood disorder, bipolar disorder, mania, depression, endogenous depression, major depression, melancholic and treatment-resistant depression, dysthymic disorder, cyclothymic disorder, anxiety disorder, somatoform disorder, factitious disorder, dissociative disorder, sexual disorder, eating disorder, sleep disorder, adjustment disorder, substance-related disorder, anhedonia, delirium, Alzheimer's disease, Parkinson disease, cognitive impairment, cognitive impairment associated with neurodegenerative diseases, cognitive impairment caused by neurodegenerative diseases, cognitive impairment in schizophrenia, cognitive impairment caused by treatment-resistant, refractory or chronic schizophrenia, vomiting, motion sickness, obesity, migraine, pain, mental retardation, autistic disorder, Tourette's disorder, tic disorder, attention deficit hyperactivity disorder, conduct disorder and Down's syndrome.

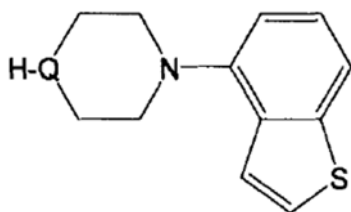
14. A method of producing a compound represented by the formula (I)



wherein A, J, Q, W and Z are each as defined in claim 1, or a salt thereof, comprising reacting a compound represented by the formula



wherein X_1 is a halogen atom or a group that causes a substitution reaction similar to that by a halogen atom, and A, J, W and Z are each as defined in claim 1, or a salt thereof, with a compound represented by



wherein Q is as defined in claim 1, or a salt thereof.

15. Use of the compound as defined in claim 1, 2, 3, 4, or 5, or a pharmaceutically acceptable salt thereof, or the compound as defined in claim 6, in the manufacture of a medicament for preventing and/or treating a central neurological disease.

16. The use according to claim 15, wherein the central neurological disease is selected from the group consisting of schizophrenia, treatment-resistant, refractory or chronic schizophrenia, emotional disturbance, psychotic disorder, mood disorder, bipolar disorder, mania, depression, endogenous depression, major depression, melancholic and treatment-resistant depression, dysthymic disorder, cyclothymic disorder, anxiety disorder, somatoform disorder, factitious disorder, dissociative disorder, sexual disorder, eating disorder, sleep disorder, adjustment disorder, substance-related disorder, anhedonia, delirium, Alzheimer's disease, Parkinson disease, cognitive impairment, cognitive impairment associated with neurodegenerative diseases, cognitive impairment caused by neurodegenerative diseases, cognitive impairment in schizophrenia, cognitive impairment caused by treatment-resistant, refractory or chronic schizophrenia, vomiting, motion sickness, obesity, migraine, pain, mental retardation, autistic disorder, Tourette's disorder, tic disorder, attention deficit hyperactivity disorder, conduct disorder and Down's syndrome.