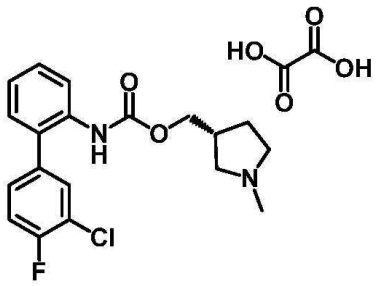
CLAIMS

1. An (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate represented by a following formula 1:

[Formula 1]



2. The (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, according to claim 1, wherein the said (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate is a crystal.

3. A form I of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, wherein an X-ray powder diffraction (XRPD) pattern comprises at least three diffraction peaks selected from the group consisting of diffraction angles 2θ of 13.402±0.2°, 14.300±0.2°, 18.519±0.2°, 19.577±0.2° and 21.499±0.2°.

4. The form I of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, according to claim 3, wherein the XRPD pattern further comprises at least one diffraction peak selected from the group consisting of diffraction angles 2θ of 7.182±0.2°, 8.379±0.2°, 8.679±0.2°, 11.180±0.2°, 16.320±0.2°, 16.659±0.2°, 17.321±0.2°, 17.861±0.2°, 20.632±0.2°, 22.180±0.2°, 22.922±0.2°, 23.339±0.2°, 24.019±0.2°, 24.297±0.2°, 24.699±0.2°, 25.441±0.2°, 27.239±0.2° and 29.880±0.2°.

5. The form I of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, according to claim 3, wherein such form I has an onset temperature of 121.85℃ (±0.5℃) and an endothermic peak of 126.96℃ (±0.5℃) during a differential scanning

calorimetry (DSC) analysis, if a heating rate is 20℃ /min.

6. A method for preparing the form I of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, wherein the method comprises steps of: dissolving a free base of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate in acetone; inserting oxalic acid into the said solution and stirring the resulting mixture; and crystallizing the resulting mixture by means of methyl-t-butyl ether.

7. A form II of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, wherein the XRPD pattern comprises at least three diffraction peaks selected from the group consisting of diffraction angles 2θ of 13.439±0.2°, 14.481±0.2°, 18.501±0.2°, 21.779±0.2° and 23.358±0.2°.

8. The form II of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, according to claim 7, wherein the XRPD pattern further comprises at least one diffraction peak selected from the group consisting of diffraction angles 2θ of 8.360±0.2°, 11.340±0.2°, 16.401±0.2°, 16.739±0.2°, 17.360±0.2°, 17.938±0.2°, 22.179±0.2°, 24.299±0.2°, 24.641±0.2°, 25.500±0.2°, 26.422±0.2°, 27.260±0.2°, 28.201±0.2° and 29.878±0.2°.

9. The form II of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, according to claim 7, wherein such form II has the onset temperature of 127.39℃ (±0.5℃) and the endothermic peak of 130.20℃ (±0.5℃) during the DSC analysis, if the heating rate is 20℃/min.

10. A method for preparing the form II of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, wherein the method includes a step of recrystallizing the form I of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate by means of a recrystallization solvent selected from the group consisting of dichloromethane; acetone; heptane; methylethylketone; acetonitrile; and a mixture thereof.

11. A form III of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, wherein the XRPD pattern comprises at least three diffraction peaks selected from the group consisting of diffraction angles 2θ of 10.720±0.2°, 11.018±0.2°, 14.239±0.2°, 17.880±0.2° and 21.440±0.2°.

12. The form III of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, according to claim 11, wherein the XRPD pattern further comprises at least one diffraction peak selected from the group consisting of diffraction angles 2θ of 8.700±0.2°, 13.098±0.2°, 14.959±0.2°, 15.382±0.2°, 16.701±0.2°, 17.309±0.2°, 18.680±0.2°, 19.561±0.2°, 20.560±0.2°, 22.042±0.2°, 22.762±0.2°, 23.940±0.2°, 24.141±0.2°, 26.855±0.2°, 27.379±0.2° and 29.006±0.2°.

13. The form III of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, according to claim 11, wherein such form III has the onset temperature of 123.68℃ (±0.5℃) and the endothermic peak of 128.37℃ (±0.5℃) during the DSC analysis, if the heating rate is 20℃/min.

14. A method for preparing the form III of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, wherein the method includes the step of recrystallizing the form I of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate by means of the recrystallization solvent selected from the group consisting of ethanol; methyl-t-butyl ether; heptane; 1,4-dioxane; isopropyl acetate; dichloromethane; isopropanol; and a mixture thereof.

15. A form IV of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, wherein the XRPD pattern comprises at least three diffraction peaks selected from the group consisting of diffraction angles 2θ of 16.642±0.2°, 17.839±0.2°, 20.981±0.2°, 21.580±0.2° and 22.701±0.2°.

16. The form IV of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, according to claim 15, wherein the XRPD pattern further comprises at least one diffraction peak selected from the group consisting of diffraction angles 2θ of 8.355±0.2°, 11.415±0.2°, 13.419±0.2°, 13.956±0.2°, 15.619±0.2°, 18.579±0.2°, 23.219±0.2°, 24.720±0.2°, 26.478±0.2°, 27.195±0.2°, 28.143±0.2° and 29.172±0.2°.

17. The form IV of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, according to claim 15, wherein such form IV has the onset temperature of 120.60℃ (±0.5℃) and the endothermic peak of 126.88℃ (±0.5℃) during the DSC analysis, if the heating rate is 20℃/min.

18. A method for preparing the form IV of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, wherein the method includes the step of recrystallizing the form I of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate by means of 1,4-dioxane.

19. A form V of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, wherein the XRPD pattern comprises at least three diffraction peaks selected from the group consisting of diffraction angles 2θ of 10.925±0.2°, 14.200±0.2°, 20.559±0.2° and 21.396±0.2°.

20. The form V of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, according to claim 19, wherein the XRPD pattern further comprises at least one diffraction peak selected from the group consisting of diffraction angles 2θ of 7.049±0.2°, 8.592±0.2°, 16.081±0.2°, 17.226±0.2°, 17.840±0.2° and 19.565±0.2°.

21. A method for preparing the form V of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, wherein the method comprises the step of recrystallizing the form II of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate by means of butanol.

22. A form VI of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, wherein the XRPD pattern comprises at least three diffraction peaks selected from the group consisting of diffraction angles 2θ of 10.127±0.2°, 10.893±0.2°, 11.751±0.2° and 17.978±0.2°.

23. The form VI of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, according to claim 22, wherein the XRPD pattern further comprises at least one diffraction peak selected from the group consisting of diffraction angles 2θ of 7.150±0.2°, 14.362±0.2°, 14.654±0.2°, 15.251±0.2° and 16.360±0.2°.

24. A method for preparing the form VI of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, wherein the method comprises the step of recrystallizing the form II of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate by means of methanol.

25. A form VII of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, wherein the XRPD pattern comprises at least three diffraction peaks selected from the group consisting of diffraction angles 2θ of 8.169±0.2°, 8.847±0.2°, 11.071±0.2° and 13.156±0.2°.

26. The form VII of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, according to claim 25, wherein the XRPD pattern further comprises at least one diffraction peak selected from the group consisting of diffraction angles 2θ of 13.345±0.2°, 14.220±0.2°, 15.828±0.2°, 16.486±0.2° and 17.186±0.2°.

27. A method for preparing the form VII of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, wherein the method comprises the step of recrystallizing the form II of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate by means of the recrystallization solvent selected from the group consisting of ethanol; benzene; and a mixture thereof.

28. A form VIII of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, wherein the XRPD pattern comprises at least three diffraction peaks selected from the group consisting of diffraction angles 2θ of 8.903±0.2°, 13.090±0.2°, 14.347±0.2° and 15.871±0.2°.

29. The form VIII of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, according to claim 28, wherein the XRPD pattern further comprises at least one diffraction peak selected from the group consisting of diffraction angles 2θ of 6.720±0.2°, 10.646±0.2°, 11.683±0.2°, 13.490±0.2° and 17.941±0.2°.

30. A method for preparing the form VIII of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate, wherein the method comprises the step of recrystallizing the form II of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate by means of the recrystallization solvent selected from the group consisting of ethanol; benzene; and a mixture thereof.

31. A pharmaceutical composition comprising (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate according to any one of claims 1 to 5, 7 to 9, 11 to 13, 15 to 17, 19, 20, 22, 23, 25, 26, 28 and 29 and at least one pharmaceutically acceptable carrier.

32. Use of (R)-(1-methylpyrrolidine-3-yl)methyl(3'-chloro-4'-fluoro-[1,1'-biphenyl]-2-yl)carbamate oxalate according to any one of claims 1 to 5, 7 to 9, 11 to 13, 15 to 17, 19, 20, 22, 23, 25, 26, 28 and 29 in the manufacture of a medicament for preventing or treating a disease selected from the group of consisting of a chronic obstructive pulmonary disease, asthma, irritable bowel syndrome, urinary incontinence, rhinitis, spasmodic colitis, chronic cystitis, Alzheimer's disease, senile dementia, glaucoma, schizophrenia, gastroesophageal reflux disease, cardiac arrhythmia, hypersalivation syndrome, enuresis, nervous pollakiuria, neurogenic bladder, unstable bladder, cystospasm and pollakisuria.