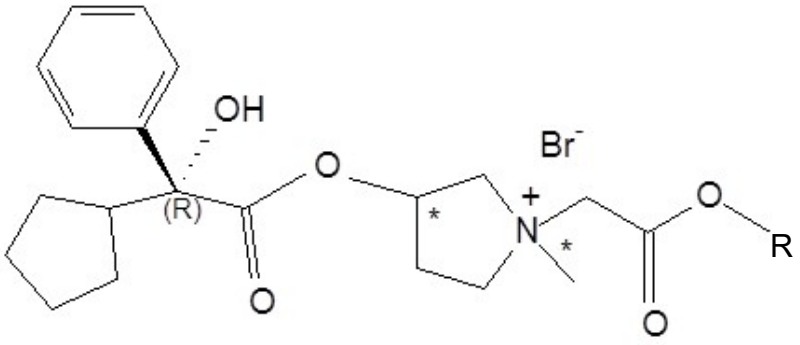
WHAT IS CLAIMED IS:

1. Use of at least one compound having the formula:



(2)

wherein R is methyl or ethyl, said compound having the R stereoisomeric configuration at the 2 position and the R, S or RS stereoisomeric configuration at the 1' and 3' positions, or being a mixture thereof, in the preparation of an intra-oral medicament composition comprising said at least one compound and at least one pharmaceutically acceptable non-toxic carrier or excipient, for treatment of sialorrhea intra-orally, in an amount of compound of formula (2) of from about 1 mg to about 10 mg per adult dose, or from about 0.02 mg/kg to about 1.0 mg/kg per pediatric dose.

2. Use according to claim 1, wherein the compound of formula (2) is selected from the group consisting of:

(iii) (2R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(methoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(iv) (2R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(ethoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(v) (2R,3'R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(methoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(vi) (2R,3'S) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(methoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(vii) (2R,3'R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(ethoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(viii) (2R,3'S) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(ethoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(ix) (2R,1'R,3'S) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(ethoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(x) (2R,1'S,3'S) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(ethoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(xi) (2R,1'R,3'R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(ethoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(xii) (2R,1'S,3'R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(ethoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(xiii) (2R,1'R,3'S) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(methoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(xiv) (2R,1'S,3'S) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(methoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(xv) (2R,1'R,3'R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(methoxycarbonylmethyl)-1-methylpyrrolidinium bromide; and

(xvi) (2R,1'S,3'R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(methoxycarbonylmethyl)-1-methylpyrrolidinium bromide.

3. Use according to claim 1 or 2, wherein the compound of formula (2) is (2R,3'R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(ethoxycarbonylmethyl)-1-methylpyrrolidinium bromide or (2R,3'R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(methoxycarbonylmethyl)-1-methylpyrrolidium bromide.

4. Use according to any one of claims 1 to 3, wherein the compound of formula (2) is present in an amount of from about 1 mg to about 2 mg per adult dose.

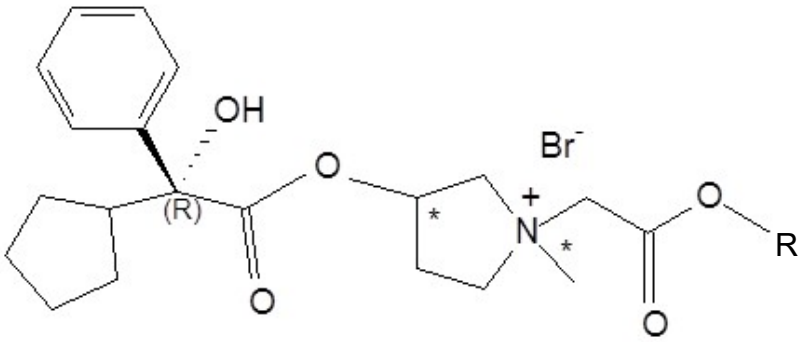
5. Use according to any one of claims 1 to 3, wherein the compound of formula (2) is present in an amount of from about 0.02 mg/kg to about 1.0 mg/kg per pediatric dose.

6. Use according to any one of claims 1 to 5, wherein the treatment is carried out from 1 to 3 times daily.

7. Use according to claim 5, wherein the treatment is carried out twice daily, in the morning and afternoon, about 6 to 8 hours apart.

8. An intra-oral composition, said composition comprising:

(a) at least one compound having the formula:



(2)

wherein R is methyl or ethyl, said compound having the R stereoisomeric configuration at the 2 position and the R, S or RS stereoisomeric configuration at the 1' and 3' positions, or being a mixture thereof; and either

(b) anhydrous ethanol or the dried residue of an about 15% to about 50% solution or suspension of the compound of formula (2) in anhydrous ethanol; or

(c) at least one anhydrous, non-toxic pharmaceutically acceptable carrier or excipient;

provided that said intra-oral composition or at least the portion(s) thereof which is/are in contact with said compound, is/are anhydrous and that said composition comprises from about 1 mg to about 10 mg per dose of the compound of formula (2), said composition being in the form of a solid or film which is capable of dissolving in the mouth.

9. The composition according to claim 8, further comprising at least one gelling or viscosity-controlling or film-forming or mucoadhesive ingredient, and/or wherein the carrier or excipient comprises a cyclodextrin.

10. The composition according to claim 8 or 9, wherein the compound of formula (2) is selected from the group consisting of:

(iii) (2R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(methoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(iv) (2R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(ethoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(v) (2R,3'R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(methoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(vi) (2R,3'S) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(methoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(vii) (2R,3'R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(ethoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(viii) (2R,3'S) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(ethoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(ix) (2R,1'R,3'S) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(ethoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(x) (2R,1'S,3'S) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(ethoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(xi) (2R,1'R,3'R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(ethoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(xii) (2R,1'S,3'R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(ethoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(xiii) (2R,1'R,3'S) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(methoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(xiv) (2R,1'S,3'S) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(methoxycarbonylmethyl)-1-methylpyrrolidinium bromide;

(xv) (2R,1'R,3'R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(methoxycarbonylmethyl)-1-methylpyrrolidinium bromide; and

(xvi) (2R,1'S,3'R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(methoxycarbonylmethyl)-1-methylpyrrolidinium bromide.

11. The composition according to any one of claims 8 to 10, wherein the compound of formula (2) is (2R, 3'R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(ethoxycarbonylmethyl)-1-methylpyrrolidinium bromide or (2R,3'R) 3-(2-cyclopentyl-2-phenyl-2-hydroxyacetoxy)-1-(methoxycarbonylmethyl)-1-methylpyrrolidium bromide.

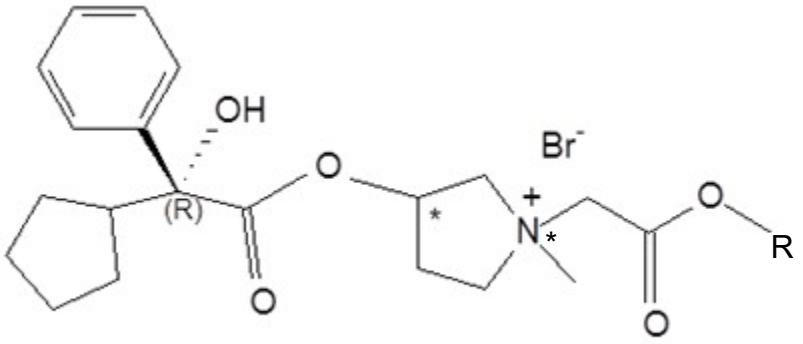
12. The composition according to any one of claims 8 to 11, wherein the compound of formula (2) is present in an amount of from about 1 mg to about 2 mg per dose.

13. The composition according to claim 10 or 11, wherein the compound of formula (2) is from about 1% to about 20% of the composition.

14. The composition according to claim 9, wherein the gelling or viscosity-controlling or film-forming or mucoadhesive ingredient is hydroxypropyl cellulose, and/or wherein the cyclodextrin comprises one or more members selected from the group consisting of α-cyclodextrin, β-cyclodextrin, γ-cyclodextrin, randomly methylated β-cyclodextrin, hydroxypropyl-β-cyclodextrin, hydroxyethyl-β-cyclodextrin, hydroxypropyl-γ-cyclodextrin, hydroxyethyl-γ-cyclodextrin and sulfobutylated-β-cyclodextrin.

15. The composition according to any one of claims 8 to 14, said composition being in the form of a buccal film or in the form of an intra-oral solid which is a candy or gum.

16. Use of at least one compound having the formula:



(2)

wherein R is methyl or ethyl, said compound having the R stereoisomeric configuration at the 2 position and the R, S or RS stereoisomeric configuration at the 1' and 3' positions, or being a mixture thereof, in the preparation of an intra-oral composition according to any one of claims 8 to 15, for treatment of sialorrhea intra-orally, in an amount of compound of formula (2) of from about 1 mg to about 10 mg per adult dose, or from about 0.02 mg/kg to about 1.0 mg/kg per pediatric dose.