WHAT IS CLAIMED IS:

1. Use of varenicline, in the manufacture of a medicament

to increase an amount or concentration of one or more lacrimal proteins in a human,

wherein the medicament is to be administered into a nasal cavity of the human, and

wherein between 5 micrograms and 1000 micrograms of varenicline are administered into the nasal cavity of the human.

2. The use according to claim 1, wherein the one or more lacrimal proteins are selected from the group consisting of epithelial growth factor, lactoferin, lacritin, prolactin, adrenocorticotropic, leucine enkephalin, ALS2CL, ARHGEF19, KIAA1109, PLXNA1, POLG, WIPI1, ZMIZ2 or other proteins of the tear proteome.

3. A pharmaceutical formulation comprising varenicline, for use in increasing the amount or concentration of one or more lacrimal proteins in a human,

wherein between 5 micrograms and 1000 micrograms of varenicline are administered nasally to the human.

4. The use according to claim 3, wherein the pharmaceutical formulation comprises one or more substances selected from protein kinase C (PKC) or factors that upregulate or up-modulate PKC, cAMP-dependent protein kinase (PKA) or factors that upregulate or up-modulate PKA, and calcineurin inhibitors.

5. The use according to claim 4, wherein the calcineurin inhibitors are selected from cyclosporine, pimecrolimus, and tacrolimus.

6. The use according to any one of claims 1 to 5, wherein the medicament is to be administered to the human prior to or after LASIK eye surgery.

7. The use according to any one of claims 1 to 6, wherein varenicline does not cross the blood-brain barrier in a pharmacologically relevant concentration.

8. The use according to any one of claims 1 to 7, wherein varenicline is to be administered in an amount that is not systemically bioavailable.

9. The use according to any one of claims 1 to 8, wherein varenicline is to be administered in an amount that does not result in undesired psychoactive side effects.

10. The use according to any one of claims 1 to 9, wherein varenicline is to be administered in an amount that does not result in undesired systemic side effects.

11. The use according to any one of claims 1 to 10, wherein the medicament is to be co-administered with one or more substances that prevent entry or reduce entry of a nicotinic acetylcholine receptor into a desensitized state, or facilitate recovery of the nicotinic acetylcholine receptor from the desensitized state.

12. The use according to claim 11, wherein the one or more substances are selected from protein kinase C (PKC) or factors that upregulate or up-modulate PKC, cAMP-dependent protein kinase (PKA) or factors that upregulate or up-modulate PKA, and calcineurin inhibitors.

13. The use according to claim 12, wherein the calcineurin inhibitor is selected from cyclosporine, pimecrolimus, and tacrolimus.

14. The use according to any one of claims 1 to 13, wherein between 5 micrograms and 100 micrograms of varenicline are to be administered into the nasal cavity of the human.

15. The use according to any one of claims 1 to 13, wherein between 5 micrograms and 50 micrograms of varenicline are to be administered into the nasal cavity of the human.

16. The use according to any one of claims 1 to 13, wherein between 5 micrograms and 600 micrograms of varenicline are to be administered into the nasal cavity of the human.

17. The use according to any one of claims 1 to 13, wherein between 100 micrograms and 750 micrograms of varenicline are to be administered into the nasal cavity of the human.

18. The use according to any one of claims 1 to 13, wherein between 150 micrograms and 600 micrograms of varenicline are to be administered into the nasal cavity of the human.

19. The use according to any one of claims 1 to 18, wherein varenicline is to be administered at least once daily.

20. The use according to any one of claims 1 to 18, wherein varenicline is to be administered at least twice daily.

21. The use according to any one of claims 1 to 18, wherein varenicline is to be administered at least once weekly.

22. The use according to any one of claims 1 to 21, wherein varenicline is to be administered into the nasal cavity as a liquid, suspension, aerosol, gel, ointment, dry powder, cream, paste, lotion, or balm.

23. The use according to any one of claims 1 to 22, wherein varenicline is to be administered into the nasal cavity by a syringe, dropper, bottle nebulizer, atomization pump, inhaler, powder spray device, vaporizer, patch, medicated stick, pipette, or jet of liquid.

24. The use according to any one of claims 1 to 23, wherein varenicline is to be administered in combination with use of a medical device.

25. The use according to claim 24, wherein varenicline is to be administered in combination with use of a punctal plug.

26. The use according to any one of claims 1 to 25, wherein a trigeminal nerve is activated.

27. The use according to any one of claims 1 to 26, wherein an anterior ethmoidal nerve is activated.

28. The use according to any one of claims 1 to 27, wherein a nasolacrimal reflex is activated.

29. The use according to any one of claims 1 to 28, wherein the human has a Schirmer tear test score of ≤ 10 mm/5 minutes in at least one eye prior to the administration of varenicline.

30. The use according to claim 29, wherein the Schirmer tear test is performed with topical anaesthetic.

31. The use according to claims 29 or 30, wherein the Schirmer tear test is performed without nasal stimulation.

32. The use according to claims 29 or 30, wherein the Schirmer tear test is performed with nasal stimulation.

33. The use according to any one of claims 1 to 32, wherein the medicament comprises about 2 mg/mL of varenicline.

34. The use according to any one of claims 1 to 32, wherein the medicament comprises about 1 mg/mL of varenicline.

35. Use of products containing varenicline and one or more substances that prevent entry or reduce entry of a nicotinic acetylcholine receptor into a desensitized state, or facilitate recovery of the nicotinic acetylcholine receptor from the desensitized state in the manufacture of a combined medicament

to increase an amount or concentration of one or more lacrimal proteins in a human;

wherein the product comprises between 5 micrograms and 1000 micrograms of varenicline, per dose; and

wherein the product comprises a nasal formulation of varenicline.

36. The use according to claim 35, wherein the one or more lacrimal proteins are selected from the group consisting of epithelial growth factor, lactoferin, lacritin, prolactin, adrenocorticotropic, leucine enkephalin, ALS2CL, ARHGEF19, KIAA1109, PLXNA1, POLG, WIPI1, ZMIZ2 or other proteins of the tear proteome.

37. The use in accordance with any one of claims 35 to 36, wherein the one or more substances are selected from protein kinase C (PKC) or factors that upregulate or up-modulate PKC, cAMP-dependent protein kinase (PKA) or factors that upregulate or up-modulate PKA, and calcineurin inhibitors.

38. The use in accordance with claim 37, wherein the calcineurin inhibitors are selected from cyclosporine, pimecrolimus, and tacrolimus.