myopia is less than would have otherwise been (e.g., -5.00D rather than -10.00D), would have a major beneficial impact on the life of the patient.

BRIEF SUMMARY

[0005] This application relates to using compositions comprising very low concentration of atropine to prevent or delay onset of myopia, before myopia occurs, or preventing or reducing the progression of myopia.

[0005a] In an aspect, there is provided the use of a composition comprising about 0.01% atropine for the manufacture of a medicament for delaying the onset of myopia in a subject.

[0005b] In another aspect, there is provided the use of a composition comprising about 0.01%atropine for the manufacture of a medicament for reducing or preventing myopia progression in a subject, wherein the composition is to be administered no more frequently than once every two days, once every three days, or once every four days, wherein the other administration of the composition reduces the change in refraction by at least 10%.

[0006] In one example, this disclosure provides a method for preventing or delaying the onset of myopia comprising administering to a subject in an eye a composition comprising less than 0.025% atropine. In some embodiments, the atropine is present in the form of atropine sulphate. In some embodiments, composition comprises about 0.01% atropine. In some embodiments, wherein the composition comprises about 0.001% to 0.0249% atropine. In some embodiments, the composition comprising about 0.001%, 0.002%, 0.003%, 0.004%, 0.005%, 0.006%, 0.007%, 0.008%, 0.009%, 0.01 %, 0.011%, 0.012%, 0.013%, 0.014%, 0.015%, 0.016%, 0.017%, 0.018%, 0.019%, 0.02%, 0.021%, 0.022%, 0.023%, 0.024%, 0.0245% or 0.0249% atropine. In some embodiments, the subject is 4 to 21 years old. In some embodiments, the subject is 5 to 9 years old. In some embodiments, the subject has pre-myopia.

[0007] In some embodiments, the composition is administered every other day, or at least once daily, or at least twice daily. In some embodiments, each administration is performed by instilling at least one drop, at least two drops, or at least three drops to the eye, wherein each drop contains about 20-100 microliter liquid. In some embodiments, the administration continues for the period of at least six months, one year, two years, three years, four years, five years, six years, seven years, ten years or longer.

[0008] In some embodiments, the composition further comprises at least one pharmaceutically acceptable excipient. In some embodiments, at least one pharmaceutically acceptable excipient is selected from the group consisting of benzalkonium chloride and hydroxypropyl methylcellulose. In some embodiments, benzalkonium chloride is present in the composition at a concentration of about 0.01%. In

WHAT IS CLAIMED IS:

1. Use of a composition comprising about 0.01% atropine for the manufacture of a medicament for delaying the onset of myopia in a subject.

2. The use of claim 1, wherein the atropine is present in the form of atropine salt.

3 . The use of claim 2, wherein the atropine salt is atropine sulfate or atropine acetate.

4. The use of claim 1, wherein the composition is to be administered every other day, or at least once daily, or at least twice daily.

5. The use of claim 1, wherein each administration is to be performed by instilling at least one drop, at least two drops, or at least three drops to the eye, wherein each drop contains about 20-100 microliter liquid.

6. The use of claim 1, wherein the adminstration is to be continued for the period of at least six months, one year, two years, three years, four years, five years, six years, seven years, ten years or longer.

7. The use of claim 1, wherein the composition further comprises at least one pharmaceutically acceptable excipient.

8. The use of claim 1, wherein the at least one pharmaceutically acceptable excipient is selected from the group consisting of benzalkonium chloride and hydroxypropyl methylcellulose.

9. The use of claim 8, wherein the benzalkonium chloride is present in the composition at a concentration of about 0.01% or wherein the hydroxypropyl methylcellulose is present in the composition at a concentration of about 1%.

10. The use of claim 1, wherein the composition contains no preservatives.

11. The use of claim 1, wherein the subject is at least 5 years old.

12. The use according to claim 1, wherein the Spherical Equivalent (SE) of the eye is within the range of from +1.00D to -0.49D before administration of the composition.

13 The use of claim 1, wherein the subject has no astigmatism or has astigmatism of not more than 1.50D as measured by cycloplegic or non-cycloplegic autorefraction before administration of the composition, or

wherein the pupil of the eye has no dilation or a dilation of no greater than 0.2 mm during the period of administration of the composition, or

wherein the eye has no loss of accommodation or a loss of accommodation of no greater than 9D.

14. The use of claim 1, wherein the subject has at least one myopic parent.

15. The use of claim 1, wherein the onset of myopia is delayed for greater than 6 months, 12 months, 18 months, two years, three years, five years, six years, eight years, or longer.

16. Use of a composition comprising about 0.01% atropine for the manufacture of a medicament for reducing or preventing myopia progression in a subject, wherein the composition is to be administered no more frequently than once every two days, once every three days, or once every four days, wherein the other administration of the composition reduces the change in refraction by at least 10%.

17. The use of claim 16, wherein each administration is to be performed by instilling at least one drop, at least two drops, or at least three drops to the eye, wherein each drop contains about 20-100 microliter liquid.

18. The use of claim 16, wherein the SE of the eye is less than -1.50D before adminstration of the composition.

19. The use of claim 16, wherein the subject is between 5 and 9 years old.

20. The use of claim 16, wherein the mean change of SE during a two year period following the start of administration of the composition is reduced by at least 20% as compared to controls.

21. The use of claim 1 or 16, wherein no preservative excipients are present in the composition.