CLAIMS

1. A formulation comprising an active peptide having a molecular weight of about 1.0 kDa to about 10.0 kDa and a viscoelastic polymer ~~hydroxypropyl methylcellulose (HPMC)~~, wherein the formulation is suitable for topical ocular delivery.

2. The formulation of claim 1, wherein the viscoelastic polymer ~~-~~ is present in the formulation at a concentration of about 0.01% (w/w) to about 2.0% (w/w) or at a concentration of about 0.05% (w/w) to about 0.5% (w/w).

~~3. The formulation of claim 2, wherein the - is present in the formulation at a concentration of about 0.05% (w/w) to about 0.5% (w/w).~~

4~~3~~. The formulation of ~~any one of claims 1-3~~claim 1 or 2, wherein the formulation further comprises sodium chloride (NaCl).

~~5. The formulation of claim 4, wherein the NaCl is present at a concentration of about 0.7% to about 1.5% (w/w).~~

6~~4~~. The formulation of any one of claims 1-~~5~~3, wherein the active peptide is present in the composition at a concentration of about 0.05% (w/w) to about 0.1% (w/w).

7~~5~~. The formulation of any one of claims 1-~~6~~4, wherein the formulation has a viscosity of about 18 to about 28 mPaS.

8~~6~~. The formulation of any one of claims 1-~~7~~5, wherein the active peptide is an alpha connexin peptide.

9~~7~~. The formulation of claim ~~8~~6, wherein the alpha connexin peptide comprises the carboxy terminal-most 4 to 30 contiguous amino acids of an alpha connexin.

~~10. The formulation of claim 9, wherein the alpha connexin peptide consists of the carboxy terminal-most 4 to 30 contiguous amino acids of an alpha connexin.~~

~~11~~8. The formulation of claim ~~9~~ 6 or 7, wherein the peptide comprises the amino acid sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, and SEQ ID NO: 5.

~~12. The formulation of claim 11, wherein the peptide comprises the amino sequence of SEQ ID NO: 2.~~

~~13~~9. The formulation of any one of claims 1-~~12~~8, wherein the peptide comprises a cellular internalization sequence.

~~14. The formulation of claim 13, wherein the cellular internalization sequence comprises an amino acid sequence of a protein selected from a group consisting of Antennapedia, TAT, HIV-Tat, Penetratin, Antp-3A (Antp mutant), Buforin II, Transportan, MAP (model amphipathic peptide), K-FGF, Ku70, Prion, pVEC, Pep-1, SynB 1, Pep-7, HN-1, BGSC (Bis-Guanidinium-Spermidine-Cholesterol) and BGTC (Bis-Guanidinium-Tren-Cholesterol).~~

~~15~~10. The formulation of claim ~~14~~9, wherein the cellular internalization sequence is Antennapedia, and wherein the sequence comprises the amino acid sequence of SEQ ID NO:7.

~~16~~11. The formulation of claim ~~15~~10, wherein the peptide comprises the amino acid sequence selected from the group consisting of SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, and SEQ ID NO:12.

~~17. The formulation of claim 16 wherein the peptide comprises the amino acid sequence of SEQ ID NO:9.~~

~~18~~12. The formulation of any one of claims 1-~~17~~11, wherein the formulation is suitable for administration via eye drop.

13. The formulation of any one of claims 1-12, wherein the viscoelastic polymer is hydroxypropyl methylcellulose (HPMC).

~~19~~14. ~~A method of treating or preventing an ocular injury in a subject in need thereof, comprising topically administering~~ Use of the~~a~~ formulation of any one of claims ~~8-18~~ 6-13 in the preparation of a medicament for treating or preventing an ocular injury ~~to the eye of the subject~~in a subject in need thereof.

~~20. The method of claim 19, wherein the formulation is administered to the immediately after the event that caused the ocular injury.~~

~~21. The method of claim 19, wherein the polypeptide is administered to the subject at least about 2 hours following the event that caused the ocular injury.~~

~~22~~15. The ~~method~~ use of ~~any one of claims 19-21~~claim 14, wherein the ocular injury is a corneal injury, a corneal defect, a corneal disease, a retinal disease, a retinal injury or a chemical or thermal burn injury.

~~23~~16. The ~~method~~ use of ~~any one of claims 19-21~~claim 14, wherein the ocular injury is caused by a burn or explosion or by a chronic disease or is secondary to an ocular surgery.

~~24. The method of any one of claim 19-21, wherein the ocular injury is a chemical or thermal burn injury.~~

~~25. The method of any one of claims 19-21, wherein the ocular injury is caused by a chronic disease.~~

~~2~~176~~6~~. The ~~method~~ use of claim ~~25~~16, wherein the chronic disease is diabetes or diabetic keratopathy.

~~27. The method of claim 26, wherein the chronic disease is diabetic keratopathy.~~

~~28. The method of claim 25, wherein the chronic disease is retinal disease.~~

~~29. The method of any one of claims 19-21, wherein the injury is secondary to an ocular surgery.~~

1830. The ~~method~~ use of ~~any one of claims 18-20~~claim 14, wherein the subject suffers from a persistent or recurrent corneal epithelial defect.

~~31. The method of claim 30, wherein the persistent corneal epithelial defect arises from dry eye disease.~~

~~32. The method of any one of claims 19-21, wherein the ocular injury is a retinal injury.~~

3319. ~~A method for accelerating corneal reepithelialization following an ocular injury in a subject, the method comprising topically administering~~ Use of the~~a~~ formulation of any one of claims ~~7-17~~6-13 in the preparation of a medicament for accelerating corneal re epithelialization following an ocular injury or a persistent or recurrent corneal epithelial defect in a subject~~to the eye of the subject~~.

3420. The ~~method~~ use of claim 3319, wherein the ocular injury results from a surgery, a chemical injury, a thermal burn injury, a corneal ~~laceration~~ injury, a retinal disease, a retinal injury, a corneal disease, a corneal defect or a chronic disease.

~~35. The method of claim 33, wherein the subject suffers from a persistent corneal epithelial defect.~~

~~36. A formulation according to any one of claims 8-18 for use in treating or preventing an ocular injury in a subject in need thereof.~~

~~37. A formulation according to any one of claims 8-18 for use in accelerating corneal reepithelialization following an ocular injury in a subject.~~

~~38. The formulation of claim 36 or 37, wherein the subject suffers from a persistent corneal epithelial defect.~~