Claims

1. Use of a connexin 43 antisense compound for treating a subject for a penetrating eye trauma, wherein the connexin 43 antisense compound is for use in a connexin 43- downregulating amount in the eye of said subject.

2. The use according to claim 1, wherein the eye trauma is chemical trauma.

3. The use according to claim 1, wherein the eye trauma is mechanical trauma.

4. The use according to claim 1, wherein the eye trauma results in corneal epithelial damage.

5. A formulation for contacting corneal cells to treat corneal damage, comprising a pluronic acid or gel, and a connexin 43 antisense compound, wherein said anti-connexin 43 antisense compound is formulated for use in an amount that is about 0.001 mg/kg of body weight.

6. A formulation for contacting corneal cells to treat corneal damage, comprising a pluronic acid or gel, and a connexin 43 antisense compound, wherein said anti-connexin 43 antisense compound is formulated for use in an amount that is between 0.001 and 0.01 mg/kg of body weight.

7. A formulation for contacting corneal cells to treat corneal damage, comprising a pluronic acid or gel, and a connexin 43 antisense compound, wherein said anti-connexin 43 antisense compound is formulated for use in an amount that is about 0.01 mg/kg of body weight.

8. The formulation according claim 5, 6, or 7, wherein said antisense compound is selected from the group consisting of antisense oligonucleotides, antisense polynucleotides, deoxyribozymes, morpholino oligonucleotides, RNAi

molecules, siRNA molecules, PNA molecules, DNAzymes, and 5'-end –mutated U1 small nuclear RNAs.

9. The formulation according claim 5, 6, or 7, wherein said antisense compound comprises a nucleobase sequence selected from SEQ ID NO:1-3.

10. The formulation according to claim 5, 6, or 7, wherein said antisense compound is targeted to about 8 nucleobases or more of a nucleic acid molecule encoding a connexin having a nucleobase sequence selected from SEQ ID NO:12.

11. The formulation according to any one of claims 5 to 10, wherein said antisense compound is an antisense oligonucleotide between 15 and 35 nucleobases in length.

12. The formulation according to claim 11, wherein said antisense compound is an antisense oligonucleotide comprising naturally occurring nucleobases and an unmodified internucleoside linkage.

13. The formulation according to claim 11, wherein said antisense compound is an antisense oligonucleotide comprising at least one modified internucleoside linkage, at least one modified sugar moiety, and/or at least one modified nucleobase.

14. The formulation according to claim 12, wherein said modified internucleoside linkage is a phosphorothioate linkage.

15. The formulation according to any one of claims 5 to 10, wherein the pluronic gel or acid comprises pluronic F127.

16. The formulation according to any one of claims 5 to 10, wherein the pluronic gel or acid further comprises up to 5% pluronic acid in phosphate buffered saline.

17. The formulation according to any one of claims 5 to 10, wherein the pluronic gel or acid further comprises up to 10% pluronic acid in phosphate buffered saline.

18. The formulation according to any one of claims 5 to 10, wherein the pluronic gel or acid further comprises up to 15% pluronic acid in phosphate buffered saline.

19. The formulation according to any one of claims 5 to 10, wherein the pluronic gel or acid further comprises up to 20% pluronic acid in phosphate buffered saline.

20. The formulation according to any one of claims 5 to 10, the pluronic gel or acid further comprises up to 25% pluronic acid in phosphate buffered saline.

21. The formulation according to any one of claims 5 to 10, wherein the pluronic gel or acid further comprises up to 30% pluronic acid in phosphate buffered saline.