Claims

1. A two-vector system comprising:

a) a first nucleic acid vector comprising an oncomodulin (OCM) promoter having at least 85% sequence identity to any one of SEQ ID NOs: 1-3 operably linked to a first polynucleotide encoding an N-terminal portion of a stereocilin protein; and

b) a second nucleic acid vector comprising a second polynucleotide encoding a C-terminal portion of a stereocilin protein.

2. The two-vector system of claim 1, wherein the first polynucleotide partially overlaps with the second polynucleotide, and wherein, when introduced into a mammalian cell, the first and second nucleic acid vectors undergo homologous recombination to form a recombined polynucleotide that encodes a full-length stereocilin protein.

3. The two-vector system of claim 1, wherein the first nucleic acid vector comprises a splice donor signal sequence positioned at a 3' end of the first polynucleotide and a first recombinogenic region positioned 3' of the splice donor signal sequence and the second nucleic acid vector comprises a second recombinogenic region, a splice acceptor signal sequence 3' of the second recombinogenic region, and the second polynucleotide 3' of the splice acceptor signal sequence.

4. The two-vector system of claim 1, wherein the first nucleic acid vector comprises a splice donor signal sequence positioned at a 3' end of the first polynucleotide and the second nucleic acid vector comprises a splice acceptor signal sequence positioned 5' of the second polynucleotide.

5. The two-vector system of any one of claims 1, 3, and 4, wherein the first and second polynucleotides do not overlap.

6. The two-vector system of claim 3 or 5, wherein the first nucleic acid vector further comprises a degradation signal sequence positioned 3' of the recombinogenic region; and wherein the second nucleic acid vector further comprises a degradation signal sequence positioned between the recombinogenic region and the splice acceptor signal sequence.

7. The two-vector system of claim 1, wherein the second nucleic acid vector further comprises an OCM promoter having at least 85% sequence identity to the nucleic acid sequence of any one of SEQ ID NOs: 1-3 operably linked to the second polynucleotide, wherein the promoter is positioned 5' of the second polynucleotide.

8. The two-vector system of claim 1 or 7, wherein the first nucleic acid vector further comprises a polynucleotide encoding an N-terminal intein (N-intein) positioned 3' of the first polynucleotide.

9. The two-vector system of claim 7 or 8, wherein the second nucleic acid vector further comprises a polynucleotide encoding a C-terminal intein (C-intein) positioned between the OCM promoter and the second polynucleotide.

10. The two-vector system of any one of claims 7-9, wherein the N-intein and C-intein are components of a split intein trans-splicing system.

11. The two-vector system of claim 10, wherein the split intein trans-splicing system is derived from a *DnaE* gene of one or more bacteria.

12. The two-vector system of any one of claims 1-11, wherein the OCM promoter has at least 85% sequence identity to SEQ ID NO: 1.

13. The two-vector system of any one of claims 1-12, wherein the stereocilin protein is a human stereocilin protein having at least 85% sequence identity to SEQ ID NO: 4, wherein the human stereocilin protein is encoded by a polynucleotide having at least 85% sequence identity to SEQ ID NO: 6.

14. The two-vector system of any one of claims 1-13, wherein the first and second vectors are adeno-associated virus (AAV) vectors, and wherein the AAV vectors have an AAV1, AAV2, AAV2quad(Y-F), AAV3, AAV4, AAV5, AAV6, AAV7, AAV8, AAV9, AAV10, rh10, rh39, rh43, rh74, Anc80, Anc80L65, DJ/8, DJ/9, 7m8, PHP.B, PHP.eb, or PHP.S capsid.

15. A human outer hair cell (OHC) comprising the two-vector system of any one of claims 1-14.

16. Use of the two-vector system of any one of claims 1-14 in the manufacture of a medicament for expressing a stereocilin protein in a human OHC.

17. Use of the two-vector system of any one of claims 1-14 in the manufacture of a medicament for treating a subject having or at risk of developing sensorineural hearing loss.

18. Use of the two-vector system of any one of claims 1-14 in the manufacture of a medicament for increasing STRC expression in a subject in need thereof.

19. The use according to claim 17 or 18, wherein the subject has or is identified as having a mutation in STRC.

20. The use according to any one of claims 17-19, wherein the two-vector system is to be administered locally to the ear.