What is claimed is:

1. A composition comprising a Signal Peptide, CUB Domain and EGF Like Domain Containing 3 (SCUBE3) protein; a C-terminus peptide thereof (SCUBE3-C); a synthetic SCUBE3 peptide (SCUBE3-PP); or a nucleic acid sequence encoding SCUBE3, SCUBE3-C, or SCUBE3-PP; and, optionally, a pharmaceutically acceptable excipient.

2. The composition of claim 1, wherein the SCUBE3-C comprises 3 cysteine-rich domains and one CUB domain *(Complement proteins C1r/C1s, Uegf and Bmp1).*

3. The composition of claim 2, wherein the SCUBE3-C peptide is produced by proteolytic cleavage of SCUBE3 with a protease.

4. The composition of claim 3, wherein the protease is one or more matrix metalloprotease (MMP) enzymes.

5. The composition of claim 1, further comprising an MMP enzyme.

6. The composition of claim 4 or 5, wherein the MMP enzyme is selected from MMP2 and MMP9.

7. The composition of claim 1, wherein the SCUBE3-PP comprises:
   (a) 3 cysteine-rich domains and a CUB domain,
   (b) a CUB domain and one cysteine-rich domain; or
   (c) a CUB domain and two cysteine-rich domains.

8. The composition of claim 7, wherein the 3 cysteine-rich domains of (a) have the amino acid sequence: GTKCVSCP QGTYYHGQTE QCVPCPAGTF QEREGQLSCD LCPGSDAHGP LGATNVTTCA GQCPPGQHSV DGFKPCQPCP RGTYQPEAGR TLCFPCGGGL TTKHEGAISF QDCDTKVQCS PGHYYNTSIH RCIRCAMGSY QPDFRQNFCS RCPGNTSTDF DGSTSVAQCK NRQ (SEQ ID NO: 7).

9. The composition of claim 7, wherein the CUB domain has the amino acid sequence: CGGELGE FTGYIESPNY PGNYPAGVEC IWNINPPPKR KILIVVPEIF LPSEDECGDV LVMRKNSSPS SITTYETCQT YERPIAFTAR SRKLWINFKT SEANSARGFQ IPYVTYDEDY

EQLVEDIVRD GRLYASENHQ EILKDKKLIK AFFEVLAHPQ NYFKYTEKHK EMLPKSFIKL LRSKVSSFLR PYK (SEQ ID NO: 2).

10. Use of a composition of any one of claims 1-9 in the manufacture of a medicament for promoting hair growth in a subject, wherein the composition is to be microinjected intradermally.

11. Use of a composition of any one of claims 1-9 in the manufacture of a medicament for promoting hair growth in a subject, wherein the composition is to be administered topically to a skin.

12. The use of claim 11, wherein the composition to be administered topically to the skin is provided following an increase in skin permeability.

13. The use of claim 12, wherein the increase in skin permeability occurs by micro-needling that is to be administered to the subject.

14. The use of any one of claims 10-13, wherein the subject is a mammalian subject.

15. The use of claim 14, wherein the subject is human.

16. The use of claim 15, wherein the subject suffers from alopecia.

17. The use of claim 16, wherein the alopecia is androgenic alopecia, female pattern hair loss, alopecia areata, traction alopecia, alopecia totalis, cicatricial alopecia, and/or alopecia universalis.

18. The use of claim 15, wherein the use generates new hair follicles, accelerates hair regrowth after a hair transplantation, chemotherapy, and/or increases the size of existing hair follicles.

19. The composition or use of any of the preceding claims, wherein the SCUBE3-PP is chemically modified.