What is claimed is:

~~1. A non-naturally occurring collagen selected from the group consisting of jellyfish collagen, human, *Chondrosia reniformis* (kidney sponge), and *Rhincodon typus* (whale shark).~~

~~2. The non-naturally occurring collagen of claim 1, wherein the non-naturally occurring collagen is truncated.~~

1. ~~The non-naturally occurring truncated collagen of claim 2, wherein the collagen is truncated by~~ A recombinant polypeptide comprising the amino acid sequence of SEQ ID NO: 1 having an internal truncation of ~~between~~ from 50 amino acids ~~and 300~~ to 250 amino acids.

~~3.~~2. The recombinant polypeptide of claim 1, wherein the recombinant polypeptide comprises the amino acid sequence according to SEQ ID NO: 91 or a fragment thereof.

~~4.~~3. The ~~non-naturally occurring collagen~~ recombinant polypeptide of ~~any of~~ claim~~s~~ 1 ~~to 3~~, wherein the recombinant polypeptide consists of the amino acid sequence according to ~~of the collagen is selected from the group consisting of SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 14, SEQ ID NO: 16, SEQ ID NO: 18, SEQ ID NO: 20, SEQ ID NO: 74, SEQ ID NO: 76, SEQ ID NO: 78, SEQ ID NO: 80, SEQ ID NO: 82, SEQ ID NO: 84, SEQ ID NO: 86, SEQ ID NO: 89,~~ SEQ ID NO: 91~~, SEQ ID NO: 92, SEQ ID NO: 94, SEQ ID NO: 96, SEQ ID NO: 102, SEQ ID NO: 104, SEQ NO: 106, SEQ NO: SEQ ID NO: 108, SEQ ID NO:110, and SEQ ID NO: 112~~.

~~5.~~4. The ~~non-naturally occurring collagen~~ recombinant polypeptide of ~~any of~~ claim~~s~~ 1 ~~to 4~~, ~~wherein the collagen~~ further ~~comprises amino acid sequences~~ comprising one or more selected from the group consisting of: a secretion tag, a histidine tag, ~~green~~ a fluorescent protein, a protease cleavage site, and a ~~B~~beta-lactamase protein.

~~6.~~5. The ~~non-naturally occurring collagen~~ recombinant polypeptide of claim ~~5~~4, wherein the secretion tag is DsbA.

~~7.~~6. The ~~non-naturally occurring collagen~~ recombinant polypeptide of ~~any of~~ claim~~s~~ 1 ~~to 6~~, ~~wherein the collagen~~ further ~~comprises~~ comprising one or more ~~amino acid trimer repeats of the sequence glycine-glutamic acid-lysine (~~GEK~~)~~ amino acid trimer repeats, ~~and/or glycine-aspartic acid-lysine (~~one or more GDK~~)~~ trimer repeats, or a combination thereof.

~~8. The non naturally occurring collagen of claim 7, wherein the non naturally occurring collagen comprises between 2 and 50 amino acid trimer repeats.~~

~~9. The non naturally occurring collagen of any of claims 1 to 8, wherein the non naturally occurring collagen is a jellyfish collagen.~~

7. A composition comprising ~~between~~ from 0.005% w/w ~~and~~ to 30% w/w ~~the non naturally occurring collagen of any of~~ of a recombinant polypeptide according to claim~~s~~ 1 ~~to 9, wherein said composition stimulates the growth of fibroblast cells, and/or stimulates synthesis of procollagen, and/or decreases the formation of thymine-thymine (TT) dimer formation~~.

8. The composition of claim 7, wherein the recombinant polypeptide comprises the amino acid sequence according to SEQ ID NO: 91 or a fragment thereof.

~~10.~~9. The composition of claim 7, wherein the recombinant polypeptide consists of the amino acid sequence according to SEQ ID NO: 91.

~~11. The composition of claim 10, wherein the composition comprises between 0.005% and 1% non naturally occurring collagen.~~

~~12. The composition of claim 10, wherein the composition comprises between 0.01% and 1% non naturally occurring collagen.~~

~~13. The composition of claim 10, wherein the composition comprises between 0.02% and 0.5% non naturally occurring collagen.~~

~~14.~~10. The composition of ~~any of~~ claim~~s 10 to 13~~ 7, wherein the composition is ~~a~~ formulated for topical ~~composition~~ application~~, said topical composition further comprising at least one additional ingredient comprising a topical carrier and/or a preservative~~.

~~15.~~11. The composition of claim ~~14~~ 10, wherein the ~~topical~~ composition ~~is a mask~~ comprises a topical carrier, a preservative, or both.

~~16.~~12. The ~~topical~~ composition of claim~~s 14 or 15~~ 11, wherein the topical carrier is selected from the group consisting of: a liposome, a biodegradable microcapsule, a lotion, a spray, an aerosol, a dusting powder, a biodegradable polymer, a mineral oil, a triglyceride oil, a silicone oil, glycerin, glycerin monostearate, an alcohol~~s~~, an emulsifying agent~~s~~, a liquid petroleum, a white petrolatum, propylene glycol, polyoxyethylene, polyoxypropylene, wax, sorbitan monostearate, polysorbate, cetyl ester wax, cetearyl alcohol, 2-octyldodecanol, benzyl alcohol, cyclomethicone, cyclopentasiloxane, ~~and~~ water, and any combination thereof.

13. The ~~topical~~ composition of ~~any of~~ claim~~s 14 to 16~~ 11, wherein the preservative is selected from the group consisting of: tocopherol, diiodomethyl-p-tolylsulfone, 2-~~B~~bromo-2-nitropropane-1,3-diol, cis isomer 1-(3-chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride, glutaraldehyde, 4,4-dimethyl oxazolidine, 7-~~E~~ethylbicyclooxazolidine, methyl paraben, sorbic acid, ~~Germaben II,~~ rosemary extract, ~~and~~ ethylenediaminetetraacetic acid (EDTA), and any combination thereof.

~~17.~~14. The composition of claim 10, wherein the composition is a cosmetic.

~~18. A method of decreasing skin damage, promoting the repair of damaged skin, protecting the skin against UV damage, or increasing viability of skin cells, the method comprising the step of applying the composition of any of claims 1 to 17 to the skin or skin cell of a subject.~~

~~19. The method of claim 18, wherein the viability of fibroblast cells present in the subject's skin is increased.~~

~~20. The method of claim 18, wherein the synthesis of procollagen by fibroblast cells present in the subject's skin is increased.~~

~~21. A non naturally occurring elastin selected from the group consisting of a jellyfish elastin, human elastin, *Chondrosia reniformis* (kidney sponge) elastin, or *Rhincodon typus* elastin.~~

~~22. The non naturally occurring elastin of claim 21, wherein the non naturally occurring elastin is truncated.~~

~~23. The non naturally occurring truncated elastin of claim 22, wherein the elastin is truncated by a truncation of at least 50 amino acids.~~

~~24. The non naturally occurring elastin of any of claims 21 to 23, wherein the amino acid sequence of the elastin is selected from the group consisting of SEQ ID NO: 31, SEQ ID NO: 33, SEQ ID NO: 35, SEQ ID NO: 37, SEQ ID NO: 39, SEQ ID NO: 41, SEQ ID NO: 43, SEQ ID NO: 45, SEQ ID NO: 47, SEQ ID NO: 49, SEQ ID NO: 51, SEQ ID NO: 53, SEQ ID NO: 55, SEQ ID NO: 57, SEQ NO: 59, SEQ ID NO: 61, SEQ ID NO: 63, SEQ ID NO: 65, SEQ ID NO: 67, SEQ ID NO: 69, SEQ ID NO: 71, SEQ ID NO: 98, and SEQ ID NO: 100.~~

~~25. The non naturally occurring elastin of any of claims 21 to 24, wherein the elastin further comprises amino acid sequences selected from the group consisting of a secretion tag, histidine tag, green fluorescent protein, protease cleavage site, and a Beta lactamase protein.~~

~~26. The non-naturally occurring elastin of claim 25, wherein the secretion tag is DsbA.~~

~~27. The non-naturally occurring elastin of any of claims 21 to 26, wherein the elastin further comprises one or more amino acid trimer repeats of the sequence glycine-glutamic acid-lysine (GEK) and/or glycine-aspartic acid-lysine (GDK).~~

~~28. The non-naturally occurring elastin of claim 27, wherein the non-naturally occurring elastin comprises between 2 and 50 amino acid trimer repeats.~~

~~29. The non-naturally occurring elastin of any of claims 21 to 28, wherein the non-naturally occurring elastin is a human.~~

~~30. A composition comprising between 0.005% and 30%w/w the w non-naturally occurring elastin of any of claims 21 to 29, wherein said composition stimulates the growth of fibroblast cells, and/or stimulates synthesis of procollagen.~~

~~31. The composition of claim 30, wherein the composition comprises between 0.005% and 1% non-naturally occurring elastin.~~

~~32. The composition of claim 30, wherein the composition comprises between 0.01% and 1% non-naturally occurring elastin.~~

~~33. The composition of claim 30, wherein the composition comprises between 0.02% and 0.5% non-naturally occurring Elastin.~~

~~34. The composition of any of claims 30 to 33, wherein the composition is a topical composition, said topical composition further comprising at least one additional ingredient comprising a topical carrier and/or a preservative.~~

~~35. The composition of claim 34, wherein the topical composition is a mask.~~

~~36. The topical composition of claim 34 or 35, wherein the topical carrier is selected from the group consisting of liposome, biodegradable microcapsule, lotion, spray, aerosol, dusting powder, biodegradable polymer, mineral oil, triglyceride oil, silicone oil, glycerin, glycerin monostearate, alcohols, emulsifying agents, liquid petroleum, white petrolatum, propylene glycol, polyoxyethylene, polyoxypropylene, wax, sorbitan monostearate, polysorbate, cetyl ester wax, cetearyl alcohol, 2-octyldodecanol, benzyl alcohol, cyclomethicone, cyclopentasiloxane, and water.~~

~~37. The topical composition of any of claims 34 to 36, wherein the preservative is selected from the group consisting of tocopherol, diiodomethyl p-tolylsulfone, 2-Bromo-2-nitropropane-1,3-diol, glutaraldehyde, 4,4-dimethyl~~

~~oxazolidine, 7 Ethylbicyclooxazolidine, methyl paraben, sorbic acid, Germaben II, rosemary extract, and EDTA.~~

~~38.~~15. ~~A method of decreasing skin damage, promoting the repair of damaged skin, or protecting skin against UV damage, the method comprising the step of applying the~~ Use of the composition ~~of any of~~ according to claim~~s 21 to 37~~ 10 in the manufacture of a medicament for treating the skin of a subject, wherein the medicament is to be administered to the skin of ~~a~~ the subject.

~~39.~~16. The ~~method~~ use of claim ~~38~~15, wherein the treatment results in an increase in ~~the~~ viability of fibroblast~~s cells or~~, keratinocytes~~, present in the subject's skin is increased~~ or both, of the subject after exposure to ultraviolet (UV) radiation.

~~40. The method of claim 38, wherein the synthesis of procollagen by fibroblast cells present in the subject's skin is increased.~~

~~41. A polynucleotide encoding a non naturally occurring collagen, wherein the polynucleotide is selected from the group consisting of SEQ ID NO: 9, SEQ ID NO: 11, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 19 SEQ ID NO: 73, SEQ ID NO: 75, SEQ ID NO: 77, SEQ ID NO: 79, SEQ ID NO: 81, SEQ ID NO: 83, SEQ ID NO: 85 SEQ ID NO: 90, SEQ ID NO: 93, SEQ ID NO: 95, SEQ ID NO: 97, SEQ ID NO: 103, SEQ ID NO: 105, SEQ ID NO: 107, SEQ ID NO: 109, SEQ ID NO:111, SEQ ID NO: 113, and SEQ ID NO:105.~~

~~42. The polynucleotide of claim 41, wherein the polynucleotide is a vector.~~

~~43. The polynucleotide of claim 41 or 42, wherein the polynucleotide further comprises nucleic acids selected from the group consisting of nucleic acids that encode a secretion tag, histidine tag, green fluorescent protein, protease cleavage site, and a Beta-lactamase protein.~~

~~44. The polynucleotide of any of claims 41 to 43, wherein the polynucleotide further comprises polynucleotides that encode one or more amino acid trimer repeats of the sequence glycine-glutamic acid-lysine (GEK) and/or glycine-aspartic acid-lysine (GDK).~~

~~45. A host cell comprising the polynucleotide of any of claims 41 or 45.~~

~~46. The host cell of claim 48, wherein the host cell traffics the non-naturally occurring collagen to the periplasmic space of the host cell.~~

~~47. The host cell of claim 45 or 46, wherein the host cell produces jellyfish collagen.~~

48. The host cell of any of claims 45 to 47, wherein the host cell is gram negative bacteria.

49. The method of claim 48, wherein the host cell is *E. coli*.

50. The method of claim 49, wherein the *E. coli* is a switched *E. coli*.

51. A method of producing a non-naturally occurring collagen, the method comprising the steps of:

a. cultivating the host cell of any of claims 45 to 50 in a culture medium; and

b. isolating the non-naturally occurring collagen from the host cell.

52. A polynucleotide encoding a non-naturally occurring elastin, wherein the polynucleotide is selected from the group consisting of SEQ ID NO: 34, SEQ ID NO: 36, SEQ ID NO: 38, SEQ ID NO: 40, SEQ ID NO: 42, SEQ ID NO: 44, SEQ ID NO: 46, SEQ ID NO: 48, SEQ ID NO: 50, SEQ ID NO: 52, SEQ ID NO: 54, SEQ ID NO: 56, SEQ ID NO: 58, SEQ ID NO: 60, SEQ ID NO: 62, SEQ ID NO: 64, SEQ ID NO: 66, SEQ ID NO: 68, SEQ ID NO: 70, SEQ ID NO: 72, SEQ ID NO: 99, and SEQ ID NO:101.

53. The polynucleotide of claim 52, wherein the polynucleotide is a vector.

54. The polynucleotide of claim 52 or 53, wherein the polynucleotide further comprises nucleic acids selected from the group consisting of nucleic acids that encode a secretion tag, histidine tag, green fluorescent protein, protease cleavage site, and a Beta-lactamase protein.

55. The polynucleotide of any of claims 52 to 54, wherein the polynucleotide further comprises polynucleotides that encode one or more amino acid trimer repeats of the sequence glycine-glutamic acid-lysine (GEK) and/or glycine-aspartic acid-lysine (GDK).

56. A host cell comprising the polynucleotide of any of claims 52 to 55.

57. The host cell of claim 56, wherein the host cell traffics the non-naturally occurring collagen to the periplasmic space of the host cell.

58. The host cell of claim 56 or 57, wherein the host cell produces jellyfish collagen.

59. The host cell of any of claims 56 to 58, wherein the host cell is gram negative bacteria.

60. The method of claim 59, wherein the host cell is *E. coli*.

~~61. The method of claim 60, wherein the *E. coli* is a switched *E. coli*.~~

~~62. A method of producing a non naturally occurring elastin, the method comprising the steps of:~~

~~a. cultivating the host cell of any of claims 56 to 61 in a culture medium; and~~

~~b. isolating the non naturally occurring collagen from the host cell.~~

17. The use of claim 15, wherein the treatment results in an increase in viability of keratinocytes, fibroblasts, or both, of the subject after exposure to urban dust.

~~63.~~18. ~~A method of~~ The use of claim 15, wherein the treatment results in a ~~decreasing the~~ decrease in production of inflammatory cytokines ~~by a skin cell, the method comprising the step of applying the composition of any of claims 1 to 17 to the skin cell~~.

~~64. The method of claim 63, wherein the inflammatory cytokine is IL-1a.~~

~~65. The method of claim 63, wherein the skin cell is a keratinocyte.~~

~~66. A method of increasing viability of skin cells, the method comprising the step of applying the composition of any of claims 1 to 17 to the skin or skin cell of a subject.~~

~~67. The method of claim 66, wherein the viability of keratinocytes present in the subject's skin is increased.~~

~~68. The method of claim 66, wherein the viability of fibroblasts present in the subject's skin is increased.~~

~~69. A method of protecting skin cells against the effects of exposure to urban dust, the method comprising the step of applying the composition of any of claims 1 to 17 to skin cells, wherein the viability of the skin cells is increased.~~

~~70.~~19. ~~The method of claim 69, wherein the skin cell is a keratinocyte or a fibroblast~~ The use of claim 15, wherein the subject is a human.

20. The composition according to claim 10 for use in therapy.