

Claims

1. A composition comprising :
 - i. 0.01 to 0.2 % w/w protease;
 - ii. 50 to 70 % w/w glycerol;
 - iii. 0.0 to 0.1 % w/w hyaluronic acid; and
 - iv. 0.01 to 0.2 % w/w salt comprising a divalent cation.
2. The composition according to claim 1 comprising 0.002 to 0.1 % w/w hyaluronic acid.
3. The composition according to any one of the preceding claims, wherein the divalent cation is calcium.
4. The composition according to any one of the preceding claims, wherein the composition further comprises 0.1 to 0.4 % w/w buffer.
5. The composition according to claim 4, wherein the buffer is selected from the group consisting of Tris and MOPS.
6. The composition according to any one of the preceding claims, wherein the composition further comprises a monosaccharide.
7. The composition according to claim 6, wherein the monosaccharide is mannose.
8. The composition according to any one of the preceding claims, wherein the composition further comprises collagen.
9. The composition according to any one of the preceding claims, wherein the composition comprises or consists essentially of:
 - i. 0.02 to 0.09 % w/w protease;
 - ii. 50 to 62 % w/w glycerol;
 - iii. 0.0 to 0.04 % w/w hyaluronic acid;

- iv. 0.01 to 0.1 % w/w CaCl_2 ;
- v. 0.1 to 0.4 % w/w Tris or MOPS;
- vi. 0.0 to 0.2 % w/w mannose; and
- vii. 0.0 to 0.3 % w/w collagen.

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10. The composition according to any one of the preceding claims, wherein the composition comprises or consists essentially of:

- i. 0.02 to 0.09 % w/w protease;
- ii. 50 to 62 % w/w glycerol
- iii. 0.002 to 0.04 % w/w hyaluronic acid;
- iv. 0.01 to 0.1 % w/w CaCl_2 ;
- v. 0.1 to 0.4 % w/w Tris or MOPS;
- vi. 0.01 to 0.2 % w/w mannose; and
- vii. 0.01 to 0.3 % w/w collagen.

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11. The composition according to claim 8, wherein the composition comprises or consists essentially of:

- i. 0.04 % w/w protease;
- ii. 60 % w/w glycerol;
- iii. 0.2 % w/w hyaluronic acid;
- iv. 0.01 %w/w calcium dichloride; and
- v. 0.1 % w/w Tris or MOPS.

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12. The composition according to claim 8, wherein the composition comprises or consists essentially of:

- vi. 0.04 % w/w protease;
- vii. 60 % w/w glycerol;
- viii. 0.02 % w/w hyaluronic acid;
- ix. 0.01 %w/w calcium dichloride; and
- x. 0.1 % w/w Tris or MOPS.

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13. The composition according to any one of the preceding claims, wherein the protease is trypsin.

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14. The composition according to any one of the preceding claims, wherein the pH of the formulation is between 6.0 to 7.5, such as 6.2 to 7.4.
- 5 15. The composition according to any one of the preceding claims, wherein the composition further comprises water.
- 10 16. The composition according to any one of the preceding claims, wherein the composition is in the form of a spray, a gel, a cream, lotion, an ointment, a foam, or a dental chew.
17. A composition according to any one of the preceding claims for use in medicine.
18. A composition comprising
- 15 v. a protease;
- vi. glycerol;
- vii. hyaluronic acid; and
- viii. a divalent cation,
- for use in the treatment of a condition selected from the group consisting of microbial infections, dermatological conditions and oral conditions, in and/or on
- 20 a mammal.
19. The composition for use according to claim 18, wherein the microbial infection is selected from the group consisting of bacterial infections, fungal infections, yeast infections and viral infections.
- 25 20. The composition for use according to claim 18, wherein the dermatological condition is a skin infection.
21. The composition for use according to claim 18, wherein the dermatological
- 30 condition is an inflammatory skin disease.
22. The composition for use according to claim 21, wherein the inflammatory skin disease is selected from the group consisting of atopic dermatitis, psoriasis, rosacea and acne.
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23. The composition for use according to claim 18, wherein the oral condition is an oral infection.
- 5 24. The composition for use according to claim 18, wherein the oral condition is a dental infection.
25. The composition for use according to claim 18, wherein the mammal is a dog, cat, horse or a human.
- 10 26. The composition for use according to claims 17 to 25, wherein the protease is trypsin.
27. The composition for use according to claims 17 to 26, wherein the divalent cation is calcium.
- 15 28. The composition according to claims 17 to 27, wherein the composition further comprises a buffer.
29. The composition according to claim 28, wherein the buffer is selected from the group consisting of Tris and MOPS.
- 20 30. The composition according to claims 17 to 29, wherein the composition further comprises a monosaccharide.
- 25 31. The composition according to claim 30, wherein the monosaccharide is mannose.
32. The composition for use according to claims 17 to 31, wherein the composition further comprises collagen.
- 30 33. The composition for use according to claims 17 to 32, wherein the pH of the formulation is between 6.0 and 7.5, such as between 6.2 and 7.4.
- 35 34. The composition according to claims 17 to 33, wherein the composition further comprises water.

35. The composition according to claims 17 to 34, wherein the composition is in the form of a spray, a gel, a cream, lotion, an ointment, a foam, or a dental chew.
- 5 36. The composition for use according to any one of claims 17 to 35, wherein the composition is for topical use.
37. A composition comprising
- i. a protease;
 - 10 ii. glycerol;
 - iii. hyaluronic acid; and
 - iv. calcium dichloride,
- for cosmetic use, in and/or on a mammal.
- 15 38. The composition for use according to claim 37, wherein the mammal is a dog, cat, horse or a human.
39. The composition for use according to claims 37 to 38, wherein the protease is trypsin.
- 20 40. The composition for use according to claims 37 to 39, wherein the divalent cation is calcium.
41. The composition according to claims 37 to 40, wherein the composition further comprises a buffer.
- 25 42. The composition according to claim 41, wherein the buffer is selected from the group consisting of Tris and MOPS.
- 30 43. The composition according to claims 37 to 42, wherein the composition further comprises a monosaccharide.
44. The composition according to claim 43, wherein the monosaccharide is mannose.

45. The composition for use according to claims 37 to 44, wherein the composition further comprises collagen.
- 5 46. The composition for use according to claims 37 to 45, wherein the pH of the formulation is between 6.0 and 7.5, such as between 6.2 and 7.4.
47. The composition according to claims 37 to 46, wherein the composition further comprises water.
- 10 48. The composition according to claims 37 to 47, wherein the composition is in the form of a spray, a gel, a cream, lotion, an ointment, a foam, or a dental chew.
49. The composition for use according to any one of claims 37 to 48, wherein the composition is for topical use.
- 15 50. A method for prevention and/or reduction of biofilm formation, wherein the method comprises administration of a composition according to any one of the preceding claims.
- 20 51. The method according to claim 50, wherein the biofilm is a biofilm in or on a mammal.
52. The method according to claim 50, wherein the biofilm is a biofilm of a biological surface.
- 25 53. A method for increasing microbial diversity, wherein the method comprises administration of a composition according to any one of the preceding claims.
- 30 54. A method of manufacturing the composition according to any one of claims 1 to 16 comprising mixing the components at 25°C, in the following order:
- i. glycerol
 - ii. buffer;
 - iii. hyaluronic acid; and
 - iv. protease.
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