Claims

1. A composition comprising an antimicrobial polypeptide comprising Blad or an active variant thereof for use in a method of treatment of the human or animal body by therapy or prophylaxis.

2. A composition according to claim 1 for use in a method of treating or preventing an infection in or on a subject by a microorganism.

3. A composition according to claim 1 or claim 2 that further comprises a pharmaceutically acceptable carrier or diluent.

4. A composition according to any one of claims 1 to 3 that further comprises a chelating agent.

5. A composition according to any one of claims 1 to 4 for use in said method wherein the subject has a compromised immune system or is critically ill.

6. Use of a composition comprising an antimicrobial polypeptide comprising Blad or an active variant thereof to kill, or inhibit the growth of, a microorganism that is pathogenic to a human or an animal at a site that is not on or in the human or animal body.

7. A use according to claim 6 wherein said composition is used to disinfect, with respect to a human or animal pathogenic microorganism, an article that is to be ingested by, or placed directly on or in, a human or animal, or a surface that is in need thereof.

8. A use according to claim 7 wherein said article is a foodstuff or a medical device or instrument.

9. A use according to claim 7 wherein said surface is located within an environment where:

(a) medical examination, diagnosis or treatment is to take place;

(b) a foodstuff is to be prepared or otherwise handled or stored;

(c) personal washing and/or sanitation is to take place; and/or

(d) a person at particular risk of

(i) acquiring an infection by a microorganism; and/or

(ii) being unable to clear a microbial infection without medical intervention;

is situated.

10. A use according to any one of claims 6 to 9 wherein said composition further comprises a chelating agent.

11. A composition according to any one of claims 2 to 5, or a use according to any one of claims 6 to 10, wherein the microorganism is a bacterium or a fungus.

12. A composition or use according to claim 11 wherein the bacterium is a pathogenic species from one of the following genera: *Pseudomonas*, *Listeria*, *Bacillus*, *Staphylococcus* and *Salmonella*.

13. A composition or use according to claim 11 wherein the fungus is a pathogenic species from one of the following genera: *Candida*, *Aspergillus*, *Alternaria*, *Fusarium*, *Cryptococcus* and *Trichosporon*.

14. A composition or use according to claim 13 wherein the fungus can cause invasive fungal infection, preferably *Candida albicans*, *Aspergillus fumigatus* or *Alternaria alternata*.

15. A method of treating a human or animal comprising administering to a subject in need thereof a composition comprising a therapeutically effective amount of an antimicrobial polypeptide comprising Blad or an active variant thereof.

16. A method of preventing or treating an infection by a microorganism comprising administering to a subject in need thereof a composition comprising a therapeutically

effective amount of an antimicrobial polypeptide comprising Blad or an active variant thereof.

17. A method of killing, or inhibiting the growth of, a microorganism that is pathogenic to a human or an animal at a site that is not on or in the human or animal body, said method comprising administering to said site a composition comprising an effective amount of an antimicrobial polypeptide comprising Blad or an active variant thereof.

Claims

What we claim is:

1. A composition comprising an antimicrobial polypeptide comprising the Blad sequence shown in SEQ ID NO:4 or an active variant thereof for use in therapy or prophylaxis of a subject, wherein said active variant has antimicrobial activity and comprises a sequence which has at least 70% amino acid identity to either SEQ ID NO:4 or a fragment of SEQ ID NO:4 which is at least 60 amino acids in length.

2. A composition according to claim 1 for use in treating or preventing an infection in or on a subject by a microorganism.

3. A composition for use according to claim 1 or claim 2 that further comprises a pharmaceutically acceptable carrier or diluent.

4. Use of an antimicrobial polypeptide comprising the Blad sequence shown in SEQ ID NO:4 or an active variant thereof in the manufacture of a medicament for treating or preventing an infection in or on a subject by a microorganism, wherein said active variant has antimicrobial activity and comprises a sequence which has at least 70% amino acid identity to either SEQ ID NO:4 or a fragment of SEQ ID NO:4 which is at least 60 amino acids in length.

5. A use according to claim 4, wherein the medicament further comprises a pharmaceutically acceptable carrier or diluent.

6. A use according to claim 4 or claim 5, wherein the medicament further comprises a chelating agent.

7. A use according to claim 4 or 5, wherein the medicament is in a form for administration with a chelating agent.

8. A use according to claim 4 or 5, wherein when administered, the medicament is administered with a chelating agent.

9. Use of an antimicrobial polypeptide comprising the Blad sequence shown in SEQ ID NO:4 or an active variant thereof and a chelating agent in the manufacture of a medicament for treating or preventing an infection in or on a subject by a microorganism, wherein said active variant has antimicrobial activity and comprises a sequence which has at least 70% amino acid identity to either SEQ ID NO:4 or a fragment of SEQ ID NO:4 which is at least 60 amino acids in length.

10. A use according to any one of claims 4 to 9, wherein the subject has a compromised immune system or is critically ill.

11. Use of a composition as defined in claim 1 to kill, or inhibit the growth of, a microorganism that is pathogenic to a human or an animal at a site that is not on or in the human or animal body.

12. A use according to claim 11 wherein said composition is used to disinfect, with respect to a human or animal pathogenic microorganism, an article that is to be ingested by, or placed directly on or in, a human or animal, or a surface that is in need thereof.

13. A use according to claim 12 wherein said article is a foodstuff or a medical device or instrument.

14. A use according to claim 12 wherein said surface is located within an environment where:

(a) medical examination, diagnosis or treatment is to take place;

(b) a foodstuff is to be prepared or otherwise handled or stored;

(c) personal washing and/or sanitation is to take place; and/or

(d) a person at particular risk of

(i) acquiring an infection by a microorganism; and/or

(ii) being unable to clear a microbial infection without medical intervention;

is situated.

15. A use according to any one of claims 11 to 14 wherein said composition further comprises a chelating agent.

16. A composition for use according to claim 2 or claim 3, wherein the microorganism is a bacterium or a fungus.

17. A composition for use according to claim 16 wherein the bacterium is a pathogenic species from one of the following genera: *Pseudomonas*, *Listeria*, *Bacillus*, *Staphylococcus* and *Salmonella*.

18. A composition for use according to claim 16 wherein the fungus is a pathogenic species from one of the following genera: *Candida*, *Aspergillus*, *Alternaria*, *Fusarium*, *Cryptococcus* and *Trichosporon*.

19. A composition for use according to claim 18 wherein the fungus can cause invasive fungal infection, preferably *Candida albicans*, *Aspergillus fumigatus* or *Alternaria alternata*.

20. A use according to any one of claims 4 to 15, wherein the microorganism is a bacterium or a fungus.

21. A use according to claim 20 wherein the bacterium is a pathogenic species from one of the following genera: *Pseudomonas, Listeria, Bacillus, Staphylococcus* and *Salmonella*.

22. A use according to claim 20 wherein the fungus is a pathogenic species from one of the following genera: *Candida, Aspergillus, Alternaria, Fusarium, Cryptococcus* and *Trichosporon*.

23. A use according to claim 22 wherein the fungus can cause invasive fungal infection, preferably *Candida albicans, Aspergillus fumigates* or *Alternaria alternata*.

24. A method of killing, or inhibiting the growth of, a microorganism that is pathogenic to a human or an animal at a site that is not on or in the human or animal body, said method comprising administering to said site a composition as defined in claim 1.

25. A composition for use according to any one of claims 2, 3 or 16 to 19 wherein the subject has infection in the eyes, skin, on a burn, on a wound, in the upper respiratory tract, in the lungs, in the gastrointestinal tract, in the genitourinary tract, in the kidneys, in the liver, in the nervous system or in the cardiovascular system.

26. A composition for use according to claim 1, substantially as herein described with reference to any example thereof.

27. A use according to any one of claims 4, 9 and 11, substantially as herein described with reference to any example thereof.

28. A method as claimed in claim 24, substantially as herein described with reference to any example thereof.