CLAIMS

1. A cyclic peptide consisting of MTD12813 (SEQ ID NO. 2).

2. The cyclic peptide of claim 1, wherein the cyclic peptide provides improved survival when applied systemically in a murine sepsis model relative to a θ-defensin.

3. The cyclic peptide of claim 1, wherein the cyclic peptide provides a biphasic response on application to a murine model of sepsis, wherein the biphasic response comprises a first phase of recruitment of host effector cells having antimicrobial activity and a second phase of moderation of host inflammatory response.

4. The cyclic peptide of claim 1, wherein the cyclic peptide has a Tumor Necrosis Factor-alpha Converting Enzyme (TACE) inhibiting activity.

5. The cyclic peptide of claim 1, wherein the cyclic peptide suppresses at least one of expression, processing, and release of Tumor Necrosis Factor-alpha (TNF).

6. The cyclic peptide of claim 1, wherein the cyclic peptide retains activity following exposure to environmental extremes of temperature, low pH, freezing and/or thawing, and dissolution in a biological matrix.

7. The cyclic peptide of claim 6, wherein the biological matrix is selected from the group consisting of blood, plasma, and serum.

8. The cyclic peptide of claim 1, wherein the cyclic peptide is non-immunogenic at doses effective to treat or prevent sepsis and/or septic shock.

9. The cyclic peptide of claim 1, wherein the cyclic peptide activates a host immune system to enhance host clearance of pathogens.

10. The cyclic peptide of claim 1, wherein the cyclic peptide is characterized by an activity that modulates inflammation to enhance disease resolution and survival at doses effective to treat or prevent septic shock.

11. A cyclic peptide consisting of MTD12813 (SEQ ID NO. 2) for use in the treatment or prevention of sepsis and/or septic shock.

12. The cyclic peptide for use of claim 11, wherein the cyclic peptide provides improved survival when applied systemically in a murine sepsis model relative to a θ-defensin.

13. The cyclic peptide for use of claim 11, wherein the cyclic peptide provides a biphasic response on application to a murine model of sepsis, wherein the biphasic response comprises a first phase of recruitment of host effector cells having antimicrobial activity and a second phase of moderation of host inflammatory response.

14. The cyclic peptide for use of claim 11, wherein the cyclic peptide has a TACE inhibiting activity.

15. The cyclic peptide for use of claim 11, wherein the cyclic peptide suppresses at least one of expression, processing, and release of TNF.

16. The cyclic peptide for use of claim 11, wherein the cyclic peptide retains activity following exposure to environmental extremes of temperature, low pH, freezing and/or thawing, and dissolution in a biological matrix.

17. The cyclic peptide for use of claim 16, wherein the biological matrix is selected from the group consisting of blood, plasma, and serum.

18. The cyclic peptide for use of claim 11, wherein the cyclic peptide is non-immunogenic at doses effective to treat or prevent septic shock.

19. The cyclic peptide for use of claim 11, wherein the cyclic peptide activates a host immune system to enhance host clearance of pathogens.

20. The cyclic peptide for use of claim 11, wherein the cyclic peptide is characterized by an activity that modulates inflammation to enhance disease resolution and survival at doses effective to treat or prevent septic shock.

21. Use of a cyclic peptide consisting of MTD12813 (SEQ ID NO. 2) in the manufacture of a medicament for the treatment or prevention of septic shock.

22. The use of claim 21, wherein the cyclic peptide provides improved survival when applied systemically in a murine sepsis model relative to a θ-defensin.

23. The use of claim 21, wherein the cyclic peptide provides a biphasic response on application to a murine model of sepsis, wherein the biphasic response comprises a first phase of recruitment of host effector cells having antimicrobial activity and a second phase of moderation of host inflammatory response.

24. The use of claim 21, wherein the cyclic peptide has a TACE inhibiting activity.

25. The use of claim 21, wherein the cyclic peptide suppresses at least one of expression, processing, and release of TNF.

26. The use of claim 21, wherein the cyclic peptide retains activity following exposure to environmental extremes of temperature, low pH, freezing and/or thawing, and dissolution in a biological matrix.

27. The use of claim 26, wherein the biological matrix is selected from the group consisting of blood, plasma, and serum.

28. The use of claim 21, wherein the cyclic peptide is non-immunogenic at doses effective to treat or prevent septic shock.

29. The use of claim 21, wherein the cyclic peptide activates a host immune system to enhance host clearance of pathogens.

30. The use of claim 21, wherein the cyclic peptide is characterized by an activity that modulates inflammation to enhance disease resolution and survival at doses effective to treat or prevent sepsis and/or septic shock.