Claims:

1. An antibody that specifically binds to a cancer-cell associated or transforming-associated peptide sequence having from 7 to about 50 amino acids and including:

(1) at least one lysine residue located at a first terminus of said peptide sequence and at least one lysine residue or at least one histidine residue located at a second terminus of said peptide sequence;

(2) a first lysine residue located six to ten residues from a second lysine residue;

(3) at least one histidine residue; and

(4) at least 6% lysine residues.

2. An antibody cocktail comprising a plurality of isolated antibodies of claim 1.

3. The antibody cocktail of claim 2, wherein the peptide sequence is a transforming-associated peptide sequence.

4. The antibody cocktail of claim 2, wherein the peptide sequence is a cancer-cell associated peptide sequence.

5. The isolated antibody of claim 1, wherein said peptide sequence is a transforming-associated peptide sequence.

6. The isolated antibody of claim 1, wherein said peptide sequence is a cancer-cell associated peptide sequence.

7. The isolated antibody of claim 6, wherein said cancer-cell associated peptide sequence is a glioma peptide sequence.8. The isolated antibody of claim 1 wherein said peptide sequence comprises at least one peptide sequence of SEQ ID NO(s): 1 and 66-89.

9. The isolated antibody of claim 1, wherein said peptide sequence consists of one peptide sequence of SEQ ID NO(s): 1 and 66-89.

10. An isolated antibody that specifically binds to a peptide sequence of 7 to 50 amino acid residues comprising at least one of SEQ ID NO(s): 66-89.

CLAIMS

1. An isolated or synthesized Replikin peptide consisting of 7 to about 50 amino acids wherein said Replikin peptide consists of a motif comprising:

(1) at least one lysine residue located at a first terminus of said motif and at least one lysine residue or at least one histidine residue located at a second terminus of said motif;

(2) a first lysine residue located six to ten residues from a second lysine residue;

(3) at least one histidine residue; and

(4) at least 6% lysine residues,

and wherein said Replikin peptide is not isolated from a human, a human immunodeficiency virus, or an arenavirus.

2. The isolated or synthesized Replikin peptide of claim 1 wherein said peptide amino acid sequence consists of 7 to 25 amino acid residues.

3. The isolated or synthesized Replikin peptide of claim 1 wherein said peptide amino acid sequence consists of 7 to 16 amino acid residues.

4. An isolated or synthesized viral Replikin peptide consisting of 7 to about 50 amino acids wherein said Replikin peptide consists of a motif comprising:

(1) at least one lysine residue located at a first terminus of said motif and at least one lysine residue or at least one histidine residue located at a second terminus of said motif;

(2) a first lysine residue located six to ten residues from a second lysine residue;

(3) at least one histidine residue; and

(4) at least 6% lysine residues,

and wherein said Replikin peptide is not isolated from a human immunodeficiency virus or an arenavirus.

5. An isolated or synthesized viral Replikin peptide consisting of 7 to about 50 amino acids wherein said viral Replikin peptide consists of a motif comprising:

(1) at least one lysine residue located at a first terminus of said motif and at least one lysine residue or at least one histidine residue located at a second terminus of said motif;

(2) a first lysine residue located six to ten residues from a second lysine residue;

(3) at least one histidine residue; and

(4) at least 6% lysine residues,

and wherein said peptide is a human immunodeficiency virus (HIV) peptide of SEQ ID NO:613, a hepatitis virus peptide, a maize streak virus peptide, a herpes virus peptide, a bovine herpes virus peptide, a meleagrid herpes virus peptide, a feline immunodeficiency virus peptide, a foot and mouth disease virus peptide, a rous sarcoma virus peptide, an avian sarcoma virus peptide, a neuroblastoma RAS viral oncogene peptide, a polyoma virus peptide, a sindbis peptide, a human papilloma virus peptide, a myelomonocytic tumor virus peptide, a murine acute leukaemia peptide, a human T-cell lymphotropic virus peptide, or a tomato leaf curl virus peptide.

6. The peptide according to claim 5, wherein said viral peptide has the sequence as set forth in SEQ ID NO:613.

7. An isolated or synthesized bacterial Replikin peptide consisting of 7 to about 50 amino acids wherein said Replikin peptide consists of a motif comprising:

(1) at least one lysine residue located at a first terminus of said motif and at least one lysine residue or at least one histidine residue located at a second terminus of said motif;

(2) a first lysine residue located six to ten residues from a second lysine residue;

(3) at least one histidine residue; and

(4) at least 6% lysine residues.

8. The peptide of claim 7, wherein said bacterial peptide is a Helicobacter peptide.

9. The peptide of claim 8, wherein said Helicobacter peptide is a Helicobacter pylori peptide.

10. The peptide of claim 7, wherein said bacterial peptide is a Staphylococcus peptide.

11. The peptide of claim 10, wherein said Staphylococcus peptide is a Staphylococcus aureus peptide.

12. The peptide of claim 7, wherein said bacterial peptide is a Legionella peptide.

13. The peptide of claim 12, wherein said Legionella peptide is a Legionella pneumophilia peptide.

14. The peptide of claim 7, wherein said bacterial peptide is an Acetobacter peptide, an Actinomyces peptide, an Aerobacter peptide, an Arthrobacter peptide, an Azotobacter peptide, a Bacillus peptide, a Brevibacterium peptide, a Clostridium peptide, a Corynebacterium peptide, an Erwinia peptide, an Escheria peptide, a Klebsiella peptide, a Lactobacillus peptide, a Nocardia peptide, a Proteus peptide, a Pseudomonas peptide, a Rhizobium peptide, a Salmonella peptide, a Serratia peptide, a Staphylococcus peptide, a Streptococcus peptide, a Haemophilus peptide, a Flavobacterium peptide, a Methylomonas peptide, a Micrococcus peptide, a Mycobacterium peptide, a Micronomospora peptide, a Mycoplasma peptide, a Neisseria peptide, a Streptomyces peptide, a Streptosporangium peptide, a Streptovirticillium peptide, a Vibrio peptide or a Xanthomas peptide.

15. An isolated or synthesized fungal Replikin peptide consisting of 7 to about 50 amino acids wherein said Replikin peptide comprises a motif comprising:

(1) at least one lysine residue located at a first terminus of said motif and at least one lysine residue or at least one histidine residue located at a second terminus of said motif;

(2) a first lysine residue located six to ten residues from a second lysine residue;

(3) at least one histidine residue; and

(4) at least 6% lysine residues

16. The peptide of claim 15, wherein said fungal peptide is a Penicillium peptide.

17. The peptide of claim 16, wherein said Penicillium peptide is a Penicillium marneffei peptide.

18. The peptide of claim 15, wherein said fungal peptide is an Ophiostoma peptide.

19. The peptide of claim 18, wherein said Ophiostoma peptide is an Ophiostoma novo-ulmi peptide.

20. The peptide of claim 15, wherein said fungal peptide is a Diseula peptide, a Candida peptide, an Absidia peptide, an Aspergillus peptide, a Cephalosporium peptide, a Fusarium peptide, a Hansenula peptide, a Mucor peptide, a Paecilomyces peptide, a Pichia peptide, a Rhizopus peptide, a Saccaromyces peptide, a Torulopsis peptide, a Trichoderma peptide, an Erysiphe peptide or a Phytophthora infenstans peptide.

21. An isolated or synthesized algal Replikin peptide consisting of 7 to about 50 amino acids wherein said Replikin peptide comprises a motif comprising:

(1) at least one lysine residue located at a first terminus of said motif and at least one lysine residue or at least one histidine residue located at a second terminus of said motif;

(2) a first lysine residue located six to ten residues from a second lysine residue;

(3) at least one histidine residue; and

(4) at least 6% lysine residues.

22. The peptide of claim 21, wherein said algal peptide is a Caldophera peptide, an Isolepisprolifera peptide, a Porphyra peptide, a Chondrus peptide, a Gracilaria peptide, a Gelidium peptide, a Caulerpa peptide, a Laurencia peptide, a Cladophexa peptide, a Sargassum peptide, a Penicillos peptide, a Halimeda peptide, a Laminaria peptide, a Fucus peptide, an Ascophyllum peptide, an Undari peptide, a Rhodymenia peptide, a Macrocystic peptide, an Eucheuma peptide, an Ahnfeltia peptide or a

Pteroclaisa peptide.

23. An isolated or synthesized yeast Replikin peptide consisting of 7 to about 50 amino acids wherein said Replikin peptide comprises a motif comprising:

(1) at least one lysine residue located at a first terminus of said motif and at least one lysine residue or at least one histidine residue located at a second terminus of said motif;

(2) a first lysine residue located six to ten residues from a second lysine residue;

(3) at least one histidine residue; and

(4) at least 6% lysine residues.

24. The peptide of claim 23, wherein said yeast peptide is a Saccharomyces peptide, a Cryptococcus peptide, a Cryptococcus neofonnas peptide, or a Schizosaccharomyces peptide.

25. An isolated or synthesized amoeba Replikin peptide consisting of 7 to about 50 amino acids wherein said Replikin peptide comprises a motif comprising:

(1) at least one lysine residue located at a first terminus of said motif and at least one lysine residue or at least one histidine residue located at a second terminus of said motif;

(2) a first lysine residue located six to ten residues from a second lysine residue;

(3) at least one histidine residue; and

(4) at least 6% lysine residues

26. The peptide of claim 25, wherein said amoeba peptide is an Entamoeba invadens peptide, an Amoebidae peptide, an Acanthamoeba peptide, or a Naegleria peptide.

27. An isolated or synthesized plant Replikin peptide consisting of 7 to about

50 amino acids wherein said Replikin peptide consists of a motif comprising:

(1) at least one lysine residue located at a first terminus of said motif and at least one lysine residue or at least one histidine residue located at a second terminus of said motif;

(2) a first lysine residue located six to ten residues from a second lysine residue;

(3) at least one histidine residue; and

(4) at least 6% lysine residues.

28. The peptide of claim 27, wherein said plant peptide is a wheat peptide, a rice peptide, or a maize peptide.

29. The peptide of claim 28, wherein said peptide is a wheat peptide, and said wheat peptide is an Ubiquitin activating enzyme peptide.

30. The peptide of claim 27, wherein said peptide is a PsaB wheat peptide, or a PsaA wheat peptide.

31. An isolated or synthesized structural replication-associated Replikin peptide consisting of 7 to about 50 amino acids wherein said Replikin peptide comprises a motif comprising:

(1) at least one lysine residue located at a first terminus of said motif and at least one lysine residue or at least one histidine residue located at a second terminus of said motif;

(2) a first lysine residue located six to ten residues from a second lysine residue;

(3) at least one histidine residue; and

(4) at least 6% lysine residues.

32. The peptide of claim 31, wherein said structural replication-associated peptide is a PMC1 peptide, a nucleolar scleroderma antigen, a fibrillarin peptide, a SPOP

peptide, a Centromere protein C peptide, a CTCBF, KU antigen peptide, an ATP synthase peptide, a FBRL nuclear peptide, a HP1Hs-alpha peptide, a PM/Sc1 nucleolar peptide, or an amyloid beta A4 precursor peptide.

33. An isolated or synthesized tumor virus associated Replikin peptide consisting of 7 to about 50 amino acids wherein said Replikin peptide comprises a motif comprising:

(1) at least one lysine residue located at a first terminus of said motif and at least one lysine residue or at least one histidine residue located at a second terminus of said motif;

(2) a first lysine residue located six to ten residues from a second lysine residue;

(3) at least one histidine residue; and

(4) at least 6% lysine residues.

34. An isolated or synthesized transforming-associated Replikin peptide consisting of 7 to about 50 amino acids wherein said Replikin peptide comprises a motif comprising:

(1) at least one lysine residue located at a first terminus of said motif and at least one lysine residue or at least one histidine residue located at a second terminus of said motif;

(2) a first lysine residue located six to ten residues from a second lysine residue;

(3) at least one histidine residue; and

(4) at least 6% lysine residues.

35. An isolated or synthesized cancer-cell associated Replikin peptide consisting of 7 to about 50 amino acids wherein said Replikin peptide consists of a motif comprising:

(1) at least one lysine residue located at a first terminus of said motif and at least one lysine residue or at least one histidine residue located at a second

terminus of said motif;

(2) a first lysine residue located six to ten residues from a second lysine residue;

(2) at least one histidine residue; and

(3) at least 6% lysine residues.

36. An antibody that specifically binds to a viral peptide of claim 4.

37 An antibody that specifically binds to a bacterial peptide of claim 7.

38. An antibody that specifically binds to a fungal peptide of claim 15.

39. An antibody that specifically binds to a yeast peptide or polypeptide of claim 23.

40. An antibody that specifically binds to an amoeba peptide or polypeptide of claim 25.

41. A composition comprising the antibody of any one of claims 36, 37, 38, 39 or 40 and a pharmaceutically acceptable carrier or adjuvant.

42. An antibody cocktail comprising a plurality of antibodies, wherein each of the antibodies specifically binds to a viral peptide of claim 4.

43. An antibody cocktail comprising a plurality of antibodies, wherein each of the antibodies specifically binds to a bacterial peptide of claim 7.

44. An antibody cocktail comprising a plurality of antibodies, wherein each of the antibodies specifically binds to a fungal peptide of claim 15.

45. An antibody cocktail comprising a plurality of antibodies, wherein each of the antibodies specifically binds to a yeast peptide of claim 23.

46. An antibody cocktail comprising a plurality of antibodies, wherein each of the antibodies specifically binds to an amoeba peptide of claim 25.

47. Use of a composition comprising at least one viral Replikin peptide of claim 4 for the preparation of a pharmaceutical composition for stimulating the immune system of a subject to produce antibodies that bind specifically to viral Replikins.

48. Use of a composition comprising at least one non-immune-based organic agent that specifically targets viral Replikin sequences of claim 4.

49. The use of claim 48, wherein the agent is a nucleic acid.

50. The use of claim 49, wherein the nucleic acid is in antisense configuration.

51. The use of claim 48, wherein the composition is administered as an approximately 1 mg dosage form.

52. Use of at least one proteolytic enzyme; and at least one antibody specific for at least one isolated Plasmodium falciparum Replikin peptide wherein said Replikin peptide consists of 7 to about 50 amino acids comprising a motif comprising:

(1) at least one lysine residue located at a first terminus of said motif and at least one lysine residue or at least one histidine residue located at a second terminus of said motif;

(2) a first lysine residue located six to ten residues from a second lysine residue;

(3) at least one histidine residue; and

(4) at least 6% lysine residues,

for the preparation of a pharmaceutical composition for a dual treatment method of treating malaria.

53. The use of claim 52, wherein a plurality of antibodies specific for Plasmodium falciparum Replikins are administered.

54. Use of at least one proteolytic enzyme; and a preventive or therapeutic vaccine comprising at least one isolated Plasmodium falciparum Replikin peptide wherein said Replikin peptide consists of 7 to about 50 amino acids and comprises a Replikin motif comprising:

(1) at least one lysine residue located at a first terminus of said motif and at least one lysine residue or at least one histidine residue located at a second terminus of said motif;

(2) a first lysine residue located six to ten residues from a second lysine residue;

(3) at least one histidine residue; and

(4) at least 6% lysine residues,

for the preparation of a vaccine for treating malaria.

55. The use of claim 54, wherein the vaccine comprises a plurality of Replikin peptides specific for Plasmodium falciparum.

56. The use of claim 54, wherein the vaccine comprises overlapping Replikin motifs.

57. A peptide of any one of claims 15 to 26 or 31 to 34 which consists of said motif.