CLAIMS

1. An isolated polypeptide comprising a Protein A (SpA) variant domain D, wherein the variant domain has at least one non-conservative amino acid substitution at positions corresponding to amino acids 9 and 10 of SEQ ID NO: 2, at least one non-conservative amino acid substitution at positions corresponding to amino acids 36 and 37 of SEQ ID NO:2, and an amino acid sequence that is at least 85% identical to the amino acid sequence of SEQ ID NO:2.

2. The isolated polypeptide of claim 1, wherein the variant domain D comprises amino acid substitutions at positions corresponding to amino acid 9 and 10 of SEQ ID NO: 2 and wherein the substitutions are with a lysine residue.

3. The isolated polypeptide of claim 2, wherein the variant domain D comprises amino acid substitutions at positions corresponding to amino acid 36 and 37 of SEQ ID NO:2.

4. The isolated polypeptide of claim 3, wherein the amino acid substitutions at positions corresponding to amino acid 36 and 37 of SEQ ID NO:2 are with an alanine residue.

5. The isolated polypeptide of claim 1, further comprising one or more SpA variant domain E, variant domain A, variant domain B, or variant domain C.

6. The isolated polypeptide of claim 1, comprising two or more SpA variant domains.

7. The isolated polypeptide of claim 1, further comprising a non-Protein A segment.

8. The isolated polypeptide of claim 7, wherein the non-Protein A segment is a second antigen segment.

9. The isolated polypeptide of claim 8, wherein the second antigen segment is a staphylococcal antigen segment.

10. The isolated polypeptide of claim 9, wherein the staphylococcal antigen segment is an Emp, EsxA, EsxB, EsaC, Eap, Ebh, EsaB, Coa, vWbp, vWh, Hla, SdrC, SdrD, SdrE, IsdA, IsdB, IsdC, ClfA, ClfB, and/or SasF segment.

11. A peptide composition comprising, in a pharmaceutically acceptable composition, a peptide comprising a non-toxigenic Protein A (SpA) variant domain D having two or more

mutations that attenuate the binding of the Protein A domain D to IgG, Fcγ, VH3 $F(ab)_2$, von Willebrand factor (vWF), and tumor necrosis factor α receptor 1 (TNFR1), wherein the peptide comprises a variant domain D with at least one non-conservative amino acid substitution at positions corresponding to amino acid 9 and 10 of SEQ ID NO: 2 and at least one non-conservative amino acid substitution at positions corresponding to amino acids 36 and 37 of SEQ ID NO:2, wherein the composition is capable of stimulating an immune response in a subject in need thereof, and optionally wherein the peptide composition further comprises one or more of SpA variant domain E, variant domain A, variant domain B, or variant domain C.

12. The composition of claim 11, wherein the variant domain D comprises lysine substitutions at positions corresponding to amino acid 9 and/or 10 of SEQ ID NO:2.

13. The composition of claim 11, wherein the variant domain D comprises alanine substitutions at positions corresponding to amino acid positions 36 and/or 37 of SEQ ID NO:2.

14. The composition of claim 12, wherein the variant domain D comprises an amino acid sequence at least 85% identical to SEQ ID NO:2.

15. The composition of claim 11, further comprising at least a second staphylococcal antigen.

16. The composition of claim 15, wherein the second antigen or additional antigens are selected from an EsaB, Emp, EsxA, EsxB, EsaC, Eap, Ebh, Coa, vWbp, vWh, Hla, SdrC, SdrD, SdrE, IsdA, IsdB, IsdC, ClfA, ClfB, and/or SasF peptide.

17. The composition of claim 11, wherein the composition contains less than 1% by weight of staphylococcal bacterial components other than the peptide comprising the variant SpA IgG binding domain.

18. The composition of claim 11, wherein the composition further comprises an adjuvant.

19. The composition of claim 18, wherein the SpA peptide is coupled to the adjuvant.

20. An immunogenic composition comprising an isolated peptide comprising a Protein A (SpA) variant domain D having non-conservative amino acid substitutions at positions corresponding to amino acid 9, 10, 36, and 37 of SEQ ID NO:2.

21. The composition of any one of claims 11-20, further comprising at least one other staphylococcal antigen or immunogenic fragment thereof selected from the group consisting of: Emp, EsxA, EsxB, EsaC, Eap, Ebh, EsaB, Coa, vWbp, vWh, Hla, SdrC, SdrD, SdrE, IsdA, IsdB, IsdC, ClfA, ClfB, and SasF.

22. The composition of any one of claims 11-21, further comprising a PIA polysaccharide or oligosaccharide.

23. The composition of any one of claims 11-22 further comprising a type V and/or type VIII capsular polysaccharide or oligosaccharide from *S. aureus*.

24. The immunogenic composition of any one of claims 11-23 further comprising a staphylococcal capsular polysaccharide conjugated to a protein carrier.

25. The immunogenic composition of claim 24 wherein the protein carrier is selected from the group consisting of tetanus toxoid, diphtheria toxoid, CRM197, *Haemophilus influenzae* protein D, pneumolysin and alpha toxoid.

26. A vaccine comprising the composition of any one of claims 11-25 or the polypeptide of any one of claims 1-10 and a pharmaceutically acceptable excipient.

27. A method of making a vaccine comprising the steps of mixing antigens to make the composition of any one of claims 11-25 and adding a pharmaceutically acceptable excipient.

28. A use of the composition of any one of claims 11-25 or the polypeptide of any one of claims 1-10 in the manufacture of a vaccine for treatment or prevention of staphylococcal infection.

29. A method of preparing an immunoglobulin or a composition of immunoglobulins for use in prevention or treatment of staphylococcal infection comprising the step of isolating immunoglobulins from plasma or serum that has been obtained from a recipient that has been immunized with the vaccine of claim 26.

30. An immunoglobulin or a composition of immunoglobulins prepared by the method of claim 29, wherein the immunoglobulin or composition of immunoglobulins comprises at least one immunoglobulin specific for polypeptide comprising a Protein A (SpA) variant domain D, wherein the variant domain has at least one non-conservative amino acid substitution at positions corresponding to amino acids 9 and 10 of SEQ ID NO: 2, at least one non-conservative amino acid substitution at positions corresponding to amino acids 36 and 37 of SEQ ID NO:2, and an amino acid sequence that is at least 85% identical to the amino acid sequence of SEQ ID NO:2.

31. A pharmaceutical composition comprising the immunoglobulin or composition of immunoglobulins of claim 30 and a pharmaceutically acceptable excipient.

32. A use of the pharmaceutical composition of claim 31 in the manufacture of a medicament for the treatment or prevention of staphylococcal infection.

33. Use of a polypeptide comprising a Protein A (SpA) variant domain D having at least one non-conservative amino acid substitution at positions corresponding to amino acids 9 and 10 of SEQ ID NO: 2, at least one non-conservative amino acid substitution at positions corresponding to amino acids 36 and 37 of SEQ ID NO:2, and an amino acid sequence that is at least 85% identical to the amino acid sequence of SEQ ID NO:2 in the manufacture of a composition for eliciting an immune response against a staphylococcus bacterium in a subject, and optionally wherein the polypeptide further comprises one or more of SpA variant domain E, variant domain A, variant domain B, or variant domain C.

34. The use of claim 33, wherein the subject is to be provided with an effective amount of the SpA variant by administering to the subject a composition comprising:

i) an isolated polypeptide comprising a SpA variant domain D having at least one non-conservative amino acid substitution at positions corresponding to amino acid 9, and 10 of SEQ ID NO: 2, at least one non-conservative amino acid substitution at positions corresponding to amino acids 36 and 37 of SEQ ID NO:2, and an amino acid sequence that is at least 85% identical to the amino acid sequence of SEQ ID NO:2 , or

ii) at least one isolated recombinant nucleic acid molecule encoding an isolated polypeptide of i).

35. The use of claim 34, wherein the composition comprises an isolated SpA variant domain D polypeptide.

36. The use of claim 33, where the subject is also to be administered an adjuvant.

37. The use of claim 35, wherein the composition comprises an adjuvant.

38. The use of claim 35, wherein the SpA variant domain D is coupled to an adjuvant.

39. The use of claim 33, wherein the SpA variant domain D is at least 85% identical to SEQ ID NO:2 and has an amino acid substitution at positions corresponding to amino acids 9 and 10 of SEQ ID NO:2.

40. The use of claim 35, wherein the composition is formulated in a pharmaceutically acceptable composition.

41. The use of claim 33, wherein the staphylococcus bacterium is a *S. aureus* bacterium.

42. The use of claim 33, wherein the staphylococcus bacterium is resistant to one or more treatments.

43. The use of claim 42, wherein the bacterium is methicillin resistant.

44. The use of claim 33, wherein the composition is to be administered more than one time to the subject.

45. The use of claim 33, wherein the composition is to be administered orally, parenterally, subcutaneously, intramuscularly, or intravenously.

46. The use of claim 33, wherein the subject is to be administered a composition comprising at least a second staphylococcal antigen.

47. The use of claim 46, wherein the second staphylococcal antigen or additional antigens are selected from the group consisting of Emp, EsxA, EsxB, EsaC, Eap, Ebh, EsaB, Coa, vWbp, vWh, Hla, SdrC, SdrD, SdrE, IsdA, IsdB, IsdC, ClfA, ClfB, and SasF.

48. The use of claim 34, wherein the composition comprises a recombinant nucleic acid molecule encoding the SpA variant domain D.

49. The use of claim 48, wherein the composition includes a recombinant, non-staphylococcus bacterium expressing the SpA variant domain D.

50. The use of claim 49, wherein the recombinant non-staphylococcus bacterium is a Salmonella.

51. The use of claim 33, wherein the subject is a mammal.

52. The use of claim 33, wherein the subject is human.

53. The use of claim 33, wherein the immune response is a protective immune response.

54. Use of an isolated peptide comprising a Protein A (SpA) variant domain D having at least one non-conservative amino acid substitution at positions corresponding to amino acid 9 and 10 of SEQ ID NO:2, at least one non-conservative amino acid substitution at positions corresponding to amino acids 36 and 37 of SEQ ID NO:2, and an amino acid sequence that is at least 85% identical to the amino acid sequence of SEQ ID NO:2 in the manufacture of a medicament for treating a staphylococcal infection in a subject having or suspected of having a staphylococcal infection or for preventing a staphylococcal infection in a subject at risk of developing a staphylococcal infection, and optionally wherein the peptide further comprises one or more of SpA variant domain E, variant domain A, variant domain B, or variant domain C..

55. The use of claim 54, wherein the subject is diagnosed with a persistent staphylococcal infection.

56. The use of claim 54, wherein the peptide elicits production of an antibody that binds Protein A in the subject.

57. The use of claim 54, wherein the SpA IgG binding domain is at least 85% identical to SEQ ID NO:2 and has amino acid substitutions at positions corresponding to amino acid positions 9, 10, 36, and 37 of SEQ ID NO:2.

58. The use of claim 56, wherein the peptide is to be administered with an adjuvant.

59. The use of claim 58, wherein the peptide is coupled to the adjuvant.

60. The use of claim 54, wherein the peptide is formulated in a pharmaceutically acceptable composition.

61. The use of claim 54, wherein at least a second staphylococcal antigen is to be administered.

62. The use of claim 61, wherein the second staphylococcal antigen is to be administered concurrently with the peptide.

63. The use of claim 62, wherein the second staphylococcal antigen and the peptide are to be administered in the same composition.

64. The use of claim 62, wherein the second staphylococcal antigen is fused with the peptide.

65. The use of claim 61, wherein the second staphylococcal antigen or additional antigens are selected from the group consisting of Emp, EsxA, EsxB, EsaC, Eap, Ebh, EsaB, Coa, vWbp, vWh, Hla, SdrC, SdrD, SdrE, IsdA, IsdB, IsdC, ClfA, ClfB, and SasF peptide.

66. The use of claim 54, wherein the staphylococcal infection is a *Staphylococcus aureus* infection.

67. The use of claim 54, wherein the peptide is to be administered orally, parenterally, transdermally, transmucosally, subcutaneously, intramuscularly, or by inhalation.

68. The use of claim 54, wherein the peptide is to be administered more than one time to the subject.

69. The use of claim 54, wherein the subject is a mammal.

70. The use of claim 54, wherein the subject is human.

71. Use of a Protein A (SpA) variant comprising at least one variant domain D having non-conservative amino acid substitution at positions corresponding to amino acid 9, 10, 36 and 37 of SEQ ID NO:2 and at least 85% sequence identity to SEQ ID NO: 2 in the manufacture of a composition for eliciting an immune response against a staphylococcus bacterium in a subject, and optionally wherein SpA variant further comprises one or more of SpA variant domain E, variant domain A, variant domain B, or variant domain C..

72. The use of claim 71, wherein the subject is to be provided with an effective amount of a SpA variant by administering to the subject a composition comprising:

i) an isolated polypeptide comprising a SpA variant domain D having at least one non-conservative amino acid substitution at positions corresponding to amino acid 9, and 10 of SEQ ID NO: 2, at least one non-conservative amino acid substitution at positions corresponding to amino acids 36 and 37 of SEQ ID NO:2, and an amino acid sequence that is at least 85% identical to the amino acid sequence of SEQ ID NO:2 , or

ii) at least one isolated recombinant nucleic acid molecule encoding an isolated polypeptide of i)

73. The use of claim 72, wherein the composition comprises an isolated SpA variant domain D polypeptide.

74. The use of claim 71, where the subject is also to be administered an adjuvant.

75. The use of claim 73, wherein the composition comprises an adjuvant.

76. The use of claim 73, wherein the SpA variant is coupled to an adjuvant.

77. The use of claim 71, wherein the SpA variant domain D is at least 85% identical to SEQ ID NO:2 and comprises an amino acid substitution at positions corresponding to amino acid 9, 10, 36 and 37 of SEQ ID NO:2.

78. The use of claim 73, wherein the composition is formulated in a pharmaceutically acceptable composition.

79. The use of claim 71, wherein the staphylococcus bacterium is a *S. aureus* bacterium.

80. The use of claim 71, wherein the staphylococcus bacterium is resistant to one or more treatments.

81. The use of claim 80, wherein the bacterium is methicillin resistant.

82. The use of claim 71, wherein the composition is to be administered more than one time to the subject.

83. The use of claim 71, wherein the composition is to be administered orally, parenterally, subcutaneously, intramuscularly, or intravenously.

84. The use of claim 71, wherein the subject is to be administered a composition comprising at least a second staphylococcal antigen.

85. The use of claim 84, wherein the second staphylococcal antigen or additional antigens are selected from Emp, EsxA, EsxB, EsaC, Eap, Ebh, EsaB, Coa, vWbp, vWh, Hla, SdrC, SdrD, SdrE, IsdA, IsdB, IsdC, ClfA, ClfB, and SasF.

86. The use of claim 72, wherein the composition comprises a recombinant nucleic acid molecule encoding the SpA variant domain D.

87. The use of claim 86, wherein the composition includes a recombinant, non-staphylococcus bacterium expressing the SpA variant domain D.

88. The use of claim 87, wherein the recombinant non-staphylococcus bacterium is a Salmonella bacterium.

89. The use of claim 71, wherein the subject is a mammal.

90. The use of claim 71, wherein the subject is human.

91. The use of claim 71, wherein the immune response is a protective immune response.

92. The use of claim 71, wherein the SpA variant comprises five SpA variant domains corresponding to IgG binding domains A, B, C, D, and E, wherein each domain has four non-conservative amino acid substitutions at positions corresponding to amino acid 9, 10, 36 and 37 of SEQ ID NO:2.

93. Use of an isolated peptide comprising a Protein A (SpA) variant domain D having non-conservative amino acid substitutions at positions corresponding to amino acid 9, 10, 36 and 37 of SEQ ID NO:2 and at least 85% sequence identity to SEQ ID NO: 2, in the manufacture of a medicament for treating a staphylococcal infection in a subject having or suspected of having a staphylococcal infection or for preventing a staphylococcal infection in a subject at risk of developing a staphylococcal infection, and optionally wherein the polypeptide further comprises one or more of SpA variant domain E, variant domain A, variant domain B, or variant domain C.

94. The use of claim 93, wherein the subject is diagnosed with a persistent staphylococcal infection.

95. The use of claim 93, wherein the peptide elicits production of an antibody that binds Protein A in the subject.

96. The use of claim 95, wherein the variant domain D is at least 80% identical to SEQ ID NO:2 and has amino acid substitutions at positions corresponding to amino acids 9, 10, 36 and 37 of SEQ ID NO:2.

97. The use of claim 95, wherein the peptide is to be administered with an adjuvant.

98. The use of claim 97, wherein the peptide is coupled to the adjuvant.

99. The use of claim 93, wherein the peptide is formulated in a pharmaceutically acceptable composition.

100. The use of claim 93, wherein at least a second staphylococcal antigen is to be administered.

101. The use of claim 100, wherein the second staphylococcal antigen is to be administered concurrently with the peptide.

102. The use of claim 101, wherein the second staphylococcal antigen and the peptide are to be administered in the same composition.

103. The use of claim 101, wherein the second staphylococcal antigen is fused with the peptide.

104. The use of claim 100, wherein the second staphylococcal antigen or additional antigens are selected from Emp, EsxA, EsxB, EsaC, Eap, Ebh, EsaB, Coa, vWbp, vWh, Hla, SdrC, SdrD, SdrE, IsdA, IsdB, IsdC, ClfA, ClfB, and SasF peptide.

105. The use of claim 93, wherein the staphylococcal infection is a *Staphylococcus aureus* infection.

106. The use of claim 93, wherein the peptide is to be administered orally, parenterally, transdermally, transmucosally, subcutaneously, intramuscularly, or by inhalation.

107. The use of claim 93, wherein the peptide is to be administered more than one time to the subject.

108. The use of claim 93, wherein the subject is a mammal.

109. The use of claim 93, wherein the subject is human.

110. The use of claim 93, wherein the peptide comprises five variant domains corresponding to IgG binding domains A, B, C, D, and E, wherein each domain has four non-conservative amino acid substitutions at positions corresponding to amino acids 9, 10, 36 and 37 of SEQ ID NO:2.

111. The isolated polypeptide of claim 1, wherein the polypeptide is non-toxigenic and stimulates an immune response against staphylococcal Protein A and/or bacteria expressing such.

112. The isolated polypeptide of claim 1, the peptide composition of claim 14, the immunoglobulin or the composition of immunoglobulins of claim 30, the use of the polypeptide of claim 33, the use of the peptide of claim 54 or 93, or the use of the Protein A (SpA) variant of claim 71, wherein the Protein A (SpA) variant domain D has an amino acid sequence that is at least 90% identical to the amino acid sequence of SEQ ID NO:2.

CLAIMS

1. An isolated polypeptide comprising a Protein A (SpA) IgG binding domain wherein the IgG binding domain has an amino acid substitution at positions corresponding to amino acid 9 and 10 of SEQ ID NO: 2 and an amino acid sequence that is at least 70% identical to the amino acid sequence of SEQ ID NO:2.

2. The isolated polypeptide of claim 1, wherein the amino acid substitution at positions corresponding to amino acid 9 and 10 of SEQ ID NO: 2 is a lysine residue.

3. The isolated polypeptide of claim 2, wherein the amino acid sequence of the IgG binding domain comprises an amino acid substitution at positions corresponding to amino acid 36 and 37 of SEQ ID NO:2.

4. The isolated polypeptide of claim 3, wherein the amino acid sequence of the IgG binding domain comprises an alanine residue substitution at positions corresponding to amino acid 36 and 37 of SEQ ID NO:2.

5. The isolated polypeptide of claim 1, further comprising one or more SpA IgG binding domains corresponding to SpA E domain, A domain, B domain, or C domain with at least one amino acid substitution at positions corresponding to amino acid 9, 10, 36 and 37 of SEQ ID NO:2 and an amino acid sequence that is at least 70% identical to the amino acid sequence of SEQ ID NO:2.

6. The isolated polypeptide of claim 1, comprising two or more variant SpA IgG binding domains.

7. The isolated polypeptide of claim 1, further comprising a non-Protein A segment.

8. The isolated polypeptide of claim 7, wherein the non-Protein A segment is a second antigen segment.

9. The isolated polypeptide of claim 8, wherein the second antigen segment is a staphylococcal antigen segment.

10. The isolated polypeptide of claim 9, wherein the staphylococcal antigen segment is an Emp, EsxA, EsxB, EsaC, Eap, Ebh, EsaB, Coa, vWbp, vWh, Hla, SdrC, SdrD, SdrE, IsdA, IsdB, IsdC, ClfA, ClfB, and/or SasF segment.

11. A peptide composition comprising, in a pharmaceutically acceptable composition, a non-toxigenic variant Protein A (SpA) peptide having one or more mutations that attenuate the binding of the Protein A domain D to IgG Fcγ, VH3 $F(ab)_2$, von Willebrand factor (vWF), and tumor necrosis factor α receptor 1 (TNFR1), wherein the variant SpA comprises an IgG binding domain with one or more amino acid substitution at positions corresponding to amino acid 9 and 10 of SEQ ID NO:2 and an amino acid sequence that is at least 70% identical to the amino acid sequence of SEQ ID NO:2 and wherein the composition is capable of stimulating an immune response in a subject in need thereof.

12. The composition of claim 11, wherein the IgG binding domain comprises a lysine substitution at positions corresponding to amino acid 9 and 10 of SEQ ID NO:2.

13. The composition of claim 11, wherein the IgG binding domain further comprises amino acid substitutions at positions corresponding to amino acid positions 36 and 37 of SEQ ID NO:2.

14. The composition of claim 12, wherein the IgG binding domain comprises an amino acid sequence at least 80% identical to SEQ ID NO:2.

15. The composition of claim 11, further comprising at least a second staphylococcal antigen.

16. The composition of claim 15, wherein the second antigen or additional antigens are selected from an EsaB, Emp, EsxA, EsxB, EsaC, Eap, Ebh, Coa, vWbp, vWh, Hla, SdrC, SdrD, SdrE, IsdA, IsdB, IsdC, ClfA, ClfB, and/or SasF peptide.

17. The composition of claim 11, wherein the composition contains less than 1% by weight of staphylococcal bacterial components other than the peptide comprising the variant SpA IgG binding domain.

18. The composition of claim 11, wherein the composition further comprises an adjuvant.

19. The composition of claim 18, wherein the SpA peptide is coupled to the adjuvant.

20. An immunogenic composition comprising an isolated peptide comprising a Protein A (SpA) variant IgG binding domain having an amino acid substitution at positions corresponding to amino acid 9, 10, 36, and 37 of SEQ ID NO:2.

21. The composition of any one of claims 1-20, further comprising at least one other staphylococcal antigen or immunogenic fragment thereof selected from the group consisting of: Emp, EsxA, EsxB, EsaC, Eap, Ebh, EsaB, Coa, vWbp, vWh, Hla, SdrC, SdrD, SdrE, IsdA, IsdB, IsdC, ClfA, ClfB, and SasF.

22. The composition of any one of claims 1-21, further comprising a PIA polysaccharide or oligosaccharide.

23. The composition of any one of claims 11-22 further comprising a type V and/or type VIII capsular polysaccharide or oligosaccharide from *S. aureus*.

24. The immunogenic composition of any one of claims 11-23 further comprising a staphylococcal capsular polysaccharide conjugated to a protein carrier.

25. The immunogenic composition of claim 24 wherein the protein carrier is selected from the group consisting of tetanus toxoid, diphtheria toxoid, CRM197, *Haemophilus influenzae* protein D, pneumolysin and alpha toxoid.

26. A vaccine comprising the composition of any one of claims 11-25 and a pharmaceutically acceptable excipient.

27. A method of making a vaccine comprising the steps of mixing antigens to make the composition of any one of claims 11-25 and adding a pharmaceutically acceptable excipient.

28. A use of the composition of any one of claims 11-25 in the manufacture of a vaccine for treatment or prevention of staphylococcal infection.

29. A method of preparing an immunoglobulin for use in prevention or treatment of staphylococcal infection comprising the step of isolating immunoglobulin from plasma or serum that has been obtained from a recipient that has been immunized with the vaccine of claim 26.

30. An immunoglobulin prepared by the method of claim 29.

31. A pharmaceutical composition comprising the immunoglobulin of claim 30 and a pharmaceutically acceptable excipient.

32. A use of the pharmaceutical composition of claim 31 in the manufacture of a medicament for the treatment or prevention of staphylococcal infection.

33. Use of a Protein A (SpA) variant comprising an IgG binding domain having an amino acid substitution at positions corresponding to amino acid 9 and 10 of SEQ ID NO:2 and an amino acid sequence that is at least 70% identical to the amino acid sequence of SEQ ID NO:2 in the manufacture of a composition for eliciting an immune response against a staphylococcus bacterium in a subject.

34. The use of claim 33, wherein the subject is to be provided with an effective amount of the SpA variant by administering to the subject a composition comprising:

i) an isolated SpA variant comprising an IgG binding domain having an amino acid substitution at positions corresponding to amino acid 9 and 10 of SEQ ID NO:2, or

ii) at least one isolated recombinant nucleic acid molecule encoding a SpA variant comprising an IgG binding domain having an amino acid substitution at positions corresponding to amino acid 9 and 10 of SEQ ID NO:2.

35. The use of claim 34, wherein the composition comprises an isolated SpA variant.

36. The use of claim 33, where the subject is also to be administered an adjuvant.

37. The use of claim 35, wherein the composition comprises an adjuvant.

38. The use of claim 35, wherein the SpA variant is coupled to an adjuvant.

39. The use of claim 33, wherein the IgG binding domain is at least 70% identical to SEQ ID NO:2 and has an amino acid substitution at positions corresponding to amino acid 9 and 10 of SEQ ID NO:2.

40. The use of claim 35, wherein the composition is formulated in a pharmaceutically acceptable composition.

41. The use of claim 33, wherein the staphylococcus bacterium is a *S. aureus* bacterium.

42. The use of claim 33, wherein the staphyococcus bacterium is resistant to one or more treatments.

43. The use of claim 42, wherein the bacterium is methicillin resistant.

44. The use of claim 33, wherein the composition is to be administered more than one time to the subject.

45. The use of claim 33, wherein the composition is to be administered orally, parenterally, subcutaneously, intramuscularly, or intravenously.

46. The use of claim 33, wherein the subject is to be administered a composition comprising at least a second staphylococcal antigen.

47. The use of claim 46, wherein the second staphylococcal antigen or additional antigens are selected from the group consisting of Emp, EsxA, EsxB, EsaC, Eap, Ebh, EsaB, Coa, vWbp, vWh, Hla, SdrC, SdrD, SdrE, IsdA, IsdB, IsdC, ClfA, ClfB, and SasF.

48. The use of claim 34, wherein the composition comprises a recombinant nucleic acid molecule encoding the SpA variant.

49. The use of claim 48, wherein the composition includes a recombinant, non-staphylococcus bacterium expressing the SpA variant.

50. The use of claim 49, wherein the recombinant non-staphylococcus bacterium is a Salmonella.

51. The use of claim 33, wherein the subject is a mammal.

52. The use of claim 33, wherein the subject is human.

53. The use of claim 33, wherein the immune response is a protective immune response.

54. Use of an isolated peptide comprising a Protein A (SpA) IgG binding domain having an amino acid substitution at positions corresponding to amino acid 9 and 10

of SEQ ID NO:2 and an amino acid sequence that is at least 70% identical to the amino acid sequence of SEQ ID NO:2 in the manufacture of a medicament for treating a staphylococcal infection in a subject having or suspected of having a staphylococcal infection or for preventing a staphylococcal infection in a subject at risk of developing a staphylococcal infection.

55. The use of claim 54, wherein the subject is diagnosed with a persistent staphylococcal infection.

56. The use of claim 54, wherein the peptide elicits production of an antibody that binds Protein A in the subject.

57. The use of claim 60, wherein the SpA IgG binding domain is at least 80% identical to SEQ ID NO:2 and has an amino acid substitution at positions corresponding to amino acid positions 9 and 10 of SEQ ID NO:2.

58. The use of claim 56, wherein the peptide is to be administered with an adjuvant.

59. The use of claim 58, wherein the peptide is coupled to the adjuvant.

60. The use of claim 54, wherein the peptide is formulated in a pharmaceutically acceptable composition.

61. The use of claim 54, wherein at least a second staphylococcal antigen is to be administered.

62. The use of claim 61, wherein the second staphylococcal antigen is to be administered concurrently with the peptide.

63. The use of claim 62, wherein the second staphylococcal antigen and the peptide are to be administered in the same composition.

64. The use of claim 62, wherein the second staphylococcal antigen is fused with the peptide.

65. The use of claim 61, wherein the second staphylococcal antigen or additional antigens are selected from the group consisting of Emp, EsxA, EsxB, EsaC, Eap, Ebh, EsaB, Coa, vWbp, vWh, Hla, SdrC, SdrD, SdrE, IsdA, IsdB, IsdC, ClfA, ClfB, and SasF peptide.

66. The use of claim 54, wherein the staphylococcal infection is a *Staphylococcus aureus* infection.

67. The use of claim 54, wherein the peptide is to be administered orally, parenterally, transdermally, transmucosally, subcutaneously, intramuscularly or by inhalation.

68. The use of claim 54, wherein the petpide is to be administered more than one time to the subject.

69. The use of claim 54, wherein the subject is a mammal.

70. The use of claim 54, wherein the subject is human.

71. Use of a Protein A (SpA) variant comprising at least one IgG binding domain having an amino acid substitution at positions corresponding to amino acid 9, 10, 36 and 37 of SEQ ID NO:2 and at least 70% sequence identity to SEQ ID NO: 2 in the manufacture of a composition for eliciting an immune response against a staphylococcus bacterium in a subject.

72. The use of claim 71, wherein the subject is to be provided with an effective amount of a SpA variant by administering to the subject a composition comprising:

i) an isolated SpA variant comprising at least one IgG binding domain having an amino acid substitution at positions corresponding to amino acid 9, 10, 36 and 37 of SEQ ID NO:2 and at least 70% sequence identity to SEQ ID NO: 2, or

ii) at least one isolated recombinant nucleic acid molecule encoding a SpA variant comprising at least one IgG binding domain having an amino acid substitution at positions corresponding to amino acid 9, 10, 36 and 37 of SEQ ID NO:2 and at least 70% sequence identity to SEQ ID NO: 2.

73. The use of claim 72, wherein the composition comprises an isolated SpA variant.

74. The use of claim 71, where the subject is also to be administered an adjuvant.

75. The use of claim 73, wherein the composition comprises an adjuvant.

76. The use of claim 73, wherein the SpA variant is coupled to an adjuvant.

77. The use of claim 71, wherein the IgG binding domain is at least 80% identical to SEQ ID NO:2 and comprises an amino acid substitution at positions corresponding to amino acid 9, 10, 36 and 37 of SEQ ID NO:2.

78. The use of claim 73, wherein the composition is formulated in a pharmaceutically acceptable composition.

79. The use of claim 71, wherein the staphylococcus bacterium is a *S. aureus* bacterium.

80. The use of claim 71, wherein the staphyococcus bacterium is resistant to one or more treatments.

81. The use of claim 80, wherein the bacterium is methicillin resistant.

82. The use of claim 71, wherein the composition is to be administered more than one time to the subject.

83. The use of claim 71, wherein the composition is to be administered orally, parenterally, subcutaneously, intramuscularly, or intravenously.

84. The use of claim 71, wherein the subject is to be administered a composition comprising at least a second staphylococcal antigen.

85. The use of claim 84, wherein the second staphylococcal antigen or additional antigens are selected fromEmp, EsxA, EsxB, EsaC, Eap, Ebh, EsaB, Coa, vWbp, vWh, Hla, SdrC, SdrD, SdrE, IsdA, IsdB, IsdC, ClfA, ClfB, and SasF.

86. The use of claim 72, wherein the composition comprises a recombinant nucleic acid molecule encoding the SpA variant.

87. The use of claim 86, wherein the composition includes a recombinant, non-staphylococcus bacterium expressing the SpA variant.

88. The use of claim 87, wherein the recombinant non-staphylococcus bacterium is a Salmonella bacterium.

89. The use of claim 71, wherein the subject is a mammal.

90. The use of claim 71, wherein the subject is human.

91. The use of claim 71, wherein the immune response is a protective immune response.

92. The use of claim 71, wherein the SpA variant comprises five SpA IgG binding domains corresponding to IgG binding domains A, B, C, D, and E, wherein each domain has an amino acid substitution at positions corresponding to amino acid 9, 10, 36 and 37 of SEQ ID NO:2 and at least 70% sequence identity to SEQ ID NO: 2.

93. Use of an isolated peptide comprising a Protein A (SpA) IgG binding domain having an amino acid substitution at positions corresponding to amino acid 9, 10, 36 and 37 of SEQ ID NO:2 and at least 70% sequence identity to SEQ ID NO: 2, in the manufacture of a medicament for treating a staphylococcal infection in a subject having or suspected of having a staphylococcal infection or for preventing a staphylococcal infection in a subject at risk of developing a staphylococcal infection.

94. The use of claim 93, wherein the subject is diagnosed with a persistent staphylococcal infection.

95. The use of claim 93, wherein the peptide elicits production of an antibody that binds Protein A in the subject.

96. The use of claim 95, wherein the IgG binding domain is at least 80% identical to SEQ ID NO:2 and has an amino acid substitution at positions corresponding to amino acid 9, 10, 36 and 37 of SEQ ID NO:2.

97. The use of claim 95, wherein the peptide is to be administered with an adjuvant.

98. The use of claim 97, wherein the peptide is coupled to the adjuvant.

99. The use of claim 93, wherein the peptide is formulated in a pharmaceutically acceptable composition.

100. The use of claim 93, wherein at least a second staphylococcal antigen is to be administered.

101. The use of claim 100, wherein the second staphylococcal antigen is to be administered concurrently with the peptide.

102. The use of claim 101, wherein the second staphylococcal antigen and the peptide are to be administered in the same composition.

103. The use of claim 101, wherein the second staphylococcal antigen is fused with the peptide.

104. The use of claim 100, wherein the second staphylococcal antigen or additional antigens are selected from Emp, EsxA, EsxB, EsaC, Eap, Ebh, EsaB, Coa, vWbp, vWh, Hla, SdrC, SdrD, SdrE, IsdA, IsdB, IsdC, ClfA, ClfB, and SasF peptide.

105. The use of claim 93, wherein the staphylococcal infection is a *Staphylococcus aureus* infection.

106. The use of claim 93, wherein the peptide is to be administered orally, parenterally, transdermally, transmucosally, subcutaneously, intramuscularly, or by inhalation.

107. The use of claim 93, wherein the petpide is to be administered more than one time to the subject.

108. The use of claim 93, wherein the subject is a mammal.

109. The use of claim 93, wherein the subject is human.

110. The use of claim 93, wherein the peptide comprises five SpA IgG binding domains corresponding to IgG binding domains A, B, C, D, and E, wherein each domain has an amino acid substitution at positions corresponding to amino acid 9, 10, 36 and 37 of SEQ ID NO:2 and at least 70% sequence identity to SEQ ID NO: 2.