CLAIMS

1. An immunogenic composition comprising at least two different proteins or immunogenic fragments thereof selected from at least two groups of proteins or immunogenic fragments selected from the following groups:

   Group a) at least one staphylococcal extracellular component binding protein or immunogenic fragment thereof selected from the group consisting of SdrG, laminin receptor, EbhA, EbhB, Elastin binding protein (EbpS), EFB (FIB), SBI, autolysin, ClfA, SdrC, SdrH, Lipase GehD, FnbA, FnbB, Cna, ClfB, FbpA, Npase, IsaA/PisA, SsaA, EPB, SSP-1, SSP-2, HBP, Vitronectin binding protein, coagulase, and MAP;

   Group b) at least one staphylococcal transporter protein or immunogenic fragment thereof selected from the group consisting of Immunodominant ABC transporter, IsdA, IsdB, Mg2+ transporter, SitC and Ni ABC transporter;

   Group c) at least one staphylococcal regulator of virulence, toxin or immunogenic fragment thereof selected from the group consisting of alpha toxin (Hla), alpha toxin H35R mutant, RNA III activating protein (RAP).

2. The immunogenic composition of claim 1 wherein at least one protein or immunogenic fragment is selected from group a).

3. The immunogenic composition of claim 1 or 2 wherein at least one protein or immunogenic fragment is selected from group b).

4. The immunogenic composition of claims 1-3 wherein at least one protein or immunogenic fragment is selected from group c).

5. The immunogenic composition of claims 1-4 wherein at least one protein or immunogenic fragment is selected from group a), group b) and group c).

6. The immunogenic composition of claims 1-5 comprising at least one protein or immunogenic fragment from S. aureus.

7. The immunogenic composition of claims 1-6 comprising at least one protein or immunogenic fragment from S. epidermidis.

8. The immunogenic composition of claims 1-7 further comprising a PIA polysaccharide or oligosaccharide.

9. The immunogenic composition of claims 1-8 further comprising type V and/or type VIII capsular polysaccharide or loigosaccharide from S. aureus.

10. The immunegenic composition of claims 1-9 further comprising Type I, and/or Type II and/or Type III capsular polysaccharide or oligosaccharide from S. epidermidis.

11. The immunogenic composition of claims 1-10 further comprising lipoteichoic acid from a Gram positive bacterium.

12. The immunogenic composition of claim 11 wherein the lipoteichoic acid is extracted from a staphylococcal bacterium.

13. The immunogenic composition of claims 8-12 wherein a staphylococcal capsular polysaccharide is conjugated to a protein carrier.

14. The immunogenic composition of claims 11-13 wherein the lipoteichoic acid is conjugated to a protein carrier.

15. The immunogenic composition of claims 13-14 wherein the protein carrier is selected from the group consisting of tetanus toxoid, diphtheria toxoid, CRM197, *Haemophilus influenzae* protein D, pneumolysin and alpha toxoid.

16. The immunogenic composition of claims 1-15 which is capable of generating an effective immune response against both *S.aureus* and *S. epidermidis*.

17. A vaccine comprising the immunogenic composition of claims 1-16 and a pharmaceutically acceptable excipient.

18. A method of making a vaccine comprising the steps of mixing antigens to make the immunogenic composition of claims 1-16 and adding a pharmaceutically acceptable excipient.

19. A method of preventing or treating staphylococcal infection comprising the step of administering the vaccine of claim 17 to a patient in need thereof.

20. A use of the immunogenic composition of claims 1-16 in the manufacture of a vaccine for treatment or prevention of staphylococcal infection.

21. A method of preparing an immune globulin for use in prevention or treatment of staphylococcal infection comprising the steps of immunising a recipient with the vaccine of claim 17 and isolating immune globulin from the recipient.

22. A pharmaceutical composition comprising two or more monoclonal antibodies or fragments thereof which are reactive against at least two constituents of the immunogenic composition of any one of claims 1-16 wherein the at least two constituents are selected from at least 2 of groups a), b) and c).

23. A pharmaceutical composition comprising the immune globulin of claim 22 and a pharmaceutically acceptable excipient.

24. A method for treatment or prevention of staphylococcal infection comprising a step of administering to a patient an effective amount of the pharmaceutical composition of claim 22 or 23.

25. A use of the pharmaceutical composition of claim 22 or 23 in the manufacture of a medicament for the treatment or prevention of staphylococcal infection.

CLAIMS

1. An immunogenic composition comprising:

Group a) at least one isolated staphylococcal extracellular component binding protein or immunogenic fragment thereof wherein the said protein is selected from the group consisting of SdrG, laminin receptor, EbhA, EbhB, Elastin binding protein (EbpS), EFB (FIB), SBI, autolysin, ClfA, SdrC, SdrH, Lipase, GehD, FnbA, FnbB, Cna, ClfB, FbpA, Npase, IsaA/PisA, SsaA, EPB, SSP-1, SSP-2, HBP, Vitronectin binding protein, coagulase, and MAP; and

Group c) at least one isolated staphylococcal regulator of virulence, toxin or immunogenic fragment thereof wherein the said regulator or toxin is selected from the group consisting of alpha toxin (HIa), alpha toxin H35L mutant, alpha toxin H35R mutant and RNA III activating protein (RAP).

2. The immunogenic composition of claim 1 further comprising Group b) at least one isolated staphylococcal transporter protein or immunogenic fragment thereof wherein the said protein is selected from the group consisting of Immunodominant ABC transporter, IsdA, IsdB, Mg2+ transporter, SitC and Ni ABC transporter.

3. The immunogenic composition of claim 1 or 2 comprising:

- ClfA or an immunogenic fragment thereof, and
- alpha toxin (HIa), alpha toxin H35L mutant or alpha toxin H35R mutant or immunogenic fragment thereof.

4. The immunogenic composition of any one of claims 1 to 3 comprising at least one protein or immunogenic fragment from *S. aureus*.

5. The immunogenic composition of any one of claims 1 to 4 comprising at least one protein or immunogenic fragment from *S. epidermidis*.

6. The immunogenic composition of any one of claims 1 to 5 further comprising a PIA polysaccharide or oligosaccharide.

7. The immunogenic composition of any one of claims 1 to 6 further comprising type V and/or type VIII capsular polysaccharide or oligosaccharide from *S. aureus*.

8. The immunogenic composition of any one of claims 1 to 7 further comprising Type I and/or Type II and/or Type III capsular polysaccharide or oligosaccharide from *S. epidermidis.*

9. The immunogenic composition of any one of claims 6 to 10 wherein a staphylococcal capsular polysaccharide is conjugated to a protein carrier.

10. The immunogenic composition of claim 9 wherein the protein carrier is selected from the group consisting of tetanus toxoid, diphtheria toxoid, CRM197, *Haemophilus influenzae* protein D, pneumolysin and alpha toxoid.

11. A vaccine comprising the immunogenic composition of any one of claims 1 to 10 and a pharmaceutically acceptable excipient.

12. A method of making a vaccine comprising the steps of mixing antigens to make the immunogenic composition of any one of claims 1 to 10 and adding a pharmaceutically acceptable excipient.

13. A use of the immunogenic composition of any one of claims 1 to 10 in the manufacture of a vaccine for treatment or prevention of staphylococcal infection.