I) 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20A;

II) 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20B;

III) 3, 7F, 19A, 22F, 33F, 6C, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20A; and

IV) 3, 7F, 19A, 22F, 33F, 6C, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20B;

wherein the composition does not comprise polysaccharide carrier protein conjugates containing polysaccharides of any other *S. pneumoniae* serotype.

In another aspect, there is provided a multivalent immunogenic composition comprising 21 distinct *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes are 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20A and the carrier protein is CRM197, and wherein the composition does not comprise polysaccharide carrier protein conjugates containing polysaccharides of any other *S. pneumoniae* serotype.

In another aspect, there is provided a multivalent immunogenic composition comprising 21 distinct *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes are 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15B, 17F, 20A, 6A, 15A, 16F, 23A, 23B, 24F, 31 and 35B, and the carrier protein is CRM197, and wherein the composition does not comprise polysaccharide carrier protein conjugates containing polysaccharides of any other *S. pneumoniae* serotype.

In another aspect, there is provided a multivalent immunogenic composition comprising 20 distinct *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes are 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15B, 17F, 20A, 6C, 15A, 16F, 23F, 24F, 31 and 35B, and the carrier protein is CRM197, and wherein the composition does not comprise polysaccharide carrier protein conjugates containing polysaccharides of any other *S. pneumoniae* serotype.

In another aspect, there is provided a multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, and wherein the *S. pneumoniae* serotypes are selected from the group consisting of:

(1) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15C, 17F, 20A, 6C, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(2) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15C, 17F, 20A, 6C, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(3) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15B, 17F, 20A, 6C, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(4) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15B, 17F, 20A, 6C, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(5) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15C, 17F, 20A 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(6) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15C, 17F, 20A, 6A, 6B, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(7) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15C, 17F, 20A, 6A, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(8) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15C, 17F, 20A 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(9) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15C, 17F, 20A, 6A, 6B, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

In another aspect, there is provided a multivalent immunogenic composition comprising 21 distinct *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes are 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, de-O-acetylated 15B, 17F, and 20A, and the carrier protein is CRM197, and wherein the composition does not comprise polysaccharide carrier protein conjugates containing polysaccharides of any other *S. pneumoniae* serotype.

In another aspect, there is provided a multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist essentially of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, de-O-acetylated 15B, 17F, and 20A, and the carrier protein is CRM197.

In another aspect, there is provided a multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist essentially of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20A, and the carrier protein is CRM197.

In another aspect, there is provided a multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist essentially of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15B, 17F, and 20A, and wherein the carrier protein is CRM197.

In another aspect, there is provided a multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, de-O-acetylated 15B, 17F, and 20A, and the carrier protein is CRM197.

In another aspect, there is provided a multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20A, and the carrier protein is CRM197.

In another aspect, there is provided a multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15B, 17F, and 20A, and wherein the carrier protein is CRM197.

In another aspect, there is provided a multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist essentially of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, de-O-acetylated 15B, 17F, and 20, and the carrier protein is CRM197.

In another aspect, there is provided a multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist essentially of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20 and the carrier protein is CRM197.

In another aspect, there is provided a multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist essentially of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15B, 17F, and 20, and wherein the carrier protein is CRM197.

In another aspect, there is provided a multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, de-O-acetylated 15B, 17F, and 20, and the carrier protein is CRM197.

In another aspect, there is provided a multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20 and the carrier protein is CRM197.

In another aspect, there is provided a multivalent immune.genic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15B, 17F, and 20, and wherein the carrier protein is CRM197.

In particular examples of the disclosure, the serotypes of *S. pneumoniae* comprise a set of serotypes selected from the group consisting of:

a) 15A, 16F, 23A, 23B, 24F, 31 and 35B;

b) 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20; and

c) 3, 7F, 19A, 22F, 33F, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20.

WHAT IS CLAIMED IS:

(1) A multivalent immunogenic composition comprising 21 distinct *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, and wherein the *S. pneumoniae* serotypes are selected from the group consisting of:

I) 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20A;

II) 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20B;

III) 3, 7F, 19A, 22F, 33F, 6C, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20A; and

IV) 3, 7F, 19A, 22F, 33F, 6C, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20B;

wherein the composition does not comprise polysaccharide carrier protein conjugates containing polysaccharides of any other *S. pneumoniae* serotype.

(2) The multivalent immunogenic composition of claim 1, wherein at least one of the polysaccharide carrier protein conjugates is formed by a conjugation reaction comprising an aprotic solvent.

(3) The multivalent immunogenic composition of claim 1, wherein each of the polysaccharide carrier protein conjugates is formed by a conjugation reaction comprising an aprotic solvent.

(4) The multivalent immunogenic composition of claim 3, wherein the aprotic solvent is dimethylsulfoxide (DMSO).

(5) The multivalent immunogenic composition of claim 1, wherein the carrier protein is selected from the group consisting of Outer Membrane Protein Complex (OMPC), tetanus toxoid, diphtheria toxoid, protein D and CRM197.

(6) The multivalent immunogenic composition of claim 5, wherein the carrier protein is CRM197.

(7) The multivalent immunogenic composition of claim 1, wherein the composition further comprises an adjuvant.

(8) The multivalent immunogenic composition of claim 1, wherein the composition does not comprise an adjuvant.

(9) A multivalent immunogenic composition comprising 21 distinct *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes are 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20A and the carrier protein is CRM197, and wherein the composition does not comprise polysaccharide carrier protein conjugates containing polysaccharides of any other *S. pneumoniae* serotype.

(10) The multivalent immunogenic composition of claim 9, wherein each of the polysaccharide carrier protein conjugates is formed by a conjugation reaction comprising an aprotic solvent, wherein the aprotic solvent is dimethylsulfoxide (DMSO).

(11) The multivalent immunogenic composition of claim 9, wherein the composition does not comprise an adjuvant.

(12) A multivalent immunogenic composition comprising 21 distinct *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes are 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15B, 17F, 20A, 6A, 15A, 16F, 23A, 23B, 24F, 31 and 35B, and the carrier protein is CRM197, and wherein the composition does not comprise polysaccharide carrier protein conjugates containing polysaccharides of any other *S. pneumoniae* serotype.

(13) The multivalent immunogenic composition of claim 12, wherein each of the polysaccharide carrier protein conjugates is formed by a conjugation reaction comprising an aprotic solvent, wherein the aprotic solvent is dimethylsulfoxide (DMSO).

(14) The multivalent immunogenic composition of claim 12, wherein the composition does not comprise an adjuvant.

(15) A multivalent immunogenic composition comprising 20 distinct *S.*

pneumoniae polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes are 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15B, 17F, 20A, 6C, 15A, 16F, 23F, 24F, 31 and 35B, and the carrier protein is CRM197, and wherein the composition does not comprise polysaccharide carrier protein conjugates containing polysaccharides of any other *S. pneumoniae* serotype.

(16) The multivalent immunogenic composition of claim 15, wherein each of the polysaccharide carrier protein conjugates is formed by a conjugation reaction comprising an aprotic solvent, wherein the aprotic solvent is dimethylsulfoxide (DMSO).

(17) The multivalent immunogenic composition of claim 15, wherein the composition does not comprise an adjuvant.

(18) A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, and wherein the *S. pneumoniae* serotypes are selected from the group consisting of:

(1) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15C, 17F, 20A, 6C, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(2) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15C, 17F, 20A, 6C, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(3) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15B, 17F, 20A, 6C, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(4) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15B, 17F, 20A, 6C, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(5) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15C, 17F, 20A 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(6) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15C, 17F, 20A, 6A, 6B, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(7) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15C, 17F, 20A, 6A, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(8) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15C, 17F, 20A 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(9) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15C, 17F, 20A, 6A, 6B, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(10) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15C, 17F, 20A, 6A, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(11) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15B, 17F, 20A 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(12) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15B, 17F, 20A, 6A, 6B, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(13) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15B, 17F, 20A, 6A, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(14) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15B, 17F, 20A 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(15) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15B, 17F, 20A, 6A, 6B, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(16) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15B, 17F, 20A, 6A, 15A, 16F, 23A, 23B, 24F, 31 and 35B,

(17) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15C, 17F, 20A, 6C, 15A, 16F, 23F, 24F, 31 and 35B,

(18) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15C, 17F, 20A, 6C, 15A, 16F, 23F, 24F, 31 and 35B,

(19) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15B, 17F, 20A, 6C, 15A, 16F, 23F, 24F, 31 and 35B,

(20) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15B, 17F, 20A, 6C, 15A, 16F, 23F, 24F, 31 and 35B,

(21) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15C, 17F, 20A, 15A, 16F, 23F, 24F, 31 and 35B,

(22) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15C, 17F, 20A, 6A, 6B, 15A, 16F, 23F, 24F, 31 and 35B,

(23) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15C, 17F, 20A, 6A, 15A, 16F, 23F, 24F, 31 and 35B,

(24) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15C, 17F, 20A, 15A, 16F, 23F, 24F, 31 and 35B,

(25) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15C, 17F, 20A, 6A, 6B, 15A, 16F, 23F, 24F, 31 and 35B,

(26) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15C, 17F, 20A, 6A, 15A, 16F, 23F, 24F, 31 and 35B,

(27) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15B, 17F, 20A, 15A, 16F, 23F, 24F, 31 and 35B,

(28) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15B, 17F, 20A, 6A, 6B, 15A, 16F, 23F, 24F, 31 and 35B,

(29) 3, 7F, 19A, 22F, 33F, 8, 9N, 10A, 11A, 12F, 15B, 17F, 20A, 6A, 15A, 16F, 23F, 24F, 31 and 35B,

(30) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15B, 17F, 20A, 15A, 16F, 23F, 24F, 31 and 35B,

(31) 3, 7F, 19A, 22F, 33F, 8, 9N, 39, 11A, 12F, 15B, 17F, 20A, 6A, 6B, 15A, 16F, 23F, 24F, 31 and 35B,

(32) 3, 7F, 19A, 22F, 33F,8, 9N, 39, 11A, 12F, 15B, 17F, 20A, 6A, 15A, 16F, 23F, 24F, 31 and 35B,

(33) 3, 7F, 19A, 22F, 33F, 6C, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20B,

(34) 3, 7F, 19A, 22F, 33F, 6C, 15A, 16F, 23A, 23B, 24B, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20A,

(35) 3, 7F, 19A, 22F, 33F, 6C, 15A, 16F, 23A, 23B, 24B, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20B,

(36) 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20B,

(37) 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24B, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20A,

(38) 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24B, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20B,

(39) 3, 7F, 19A, 22F, 33F, 6C, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20,

(40) 3, 7F, 19A, 22F, 33F, 6C, 15A, 16F, 23A, 23B, 24B, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20,

(41) 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20, and

(42) 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24B, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20,

wherein the composition does not comprise polysaccharide carrier protein conjugates containing polysaccharides of any other *S. pneumoniae* serotype.

(19) The multivalent immunogenic composition of claim 18, wherein at least one of the polysaccharide carrier protein conjugates is formed by a conjugation reaction comprising an aprotic solvent.

(20) The multivalent immunogenic composition of claim 18, wherein each of the polysaccharide carrier protein conjugates is formed by a conjugation reaction comprising an aprotic solvent.

(21) The multivalent immunogenic composition of claim 19 or 20, wherein the aprotic solvent is dimethylsulfoxide (DMSO).

(22) The multivalent immunogenic composition of claim 18, wherein the carrier protein is selected from the group consisting of Outer Membrane Protein Complex (OMPC), tetanus toxoid, diphtheria toxoid, protein D and CRM197.

(23) The multivalent immunogenic composition of claim 22, wherein the carrier protein is CRM197.

(24) The multivalent immunogenic composition of any of claims 18 to 23, wherein the composition further comprises an adjuvant.

(25) The multivalent immunogenic composition of any of claims 18 to 23, wherein the composition does not comprise an adjuvant.

(26) The multivalent immunogenic composition of any of claims 18 to 25, wherein the *S. pneumoniae* serotype 15C polysaccharide is a de-O-acetylated *S. pneumoniae* serotype 15B polysaccharide.

(27) The multivalent immunogenic composition of claims 1-8, wherein the *S. pneumoniae* serotype 15C polysaccharide is a de-O-acetylated *S. pneumoniae* serotype 15B polysaccharide.

(28) The multivalent immunogenic composition of any of claims 9 to 11, wherein the *S. pneumoniae* serotype 15C polysaccharide is a de-O-acetylated *S. pneumoniae* serotype 15B polysaccharide.

(29) The multivalent immunogenic composition of claim 26, wherein the de-O-acetylated 15B polysaccharide has an O-Acetyl content per repeating unit of less than 5%.

(30) The multivalent immunogenic composition of claim 27, wherein the de-O-acetylated 15B polysaccharide has an O-Acetyl content per repeating unit of less than 5%.

(31) The multivalent immunogenic composition of claim 28, wherein the de-O-acetylated 15B polysaccharide has an O-Acetyl content per repeating unit of less than 5%.

(32) A multivalent immunogenic composition comprising 21 distinct *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes are 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, de-O-acetylated 15B, 17F, and 20A, and the carrier protein is CRM197, and wherein the composition does not comprise polysaccharide carrier protein conjugates containing polysaccharides of any other *S. pneumoniae* serotype.

(33) The multivalent immunogenic composition of claim 32, wherein the de-O-acetylated 15B polysaccharide has an O-Acetyl content per repeating unit of less than 5%.

(34) A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist essentially of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, de-O-acetylated 15B, 17F, and 20A, and the carrier protein is CRM197.

(35) The multivalent immunogenic composition of claim 34, wherein the de-O-acetylated 15B polysaccharide has an O-Acetyl content per repeating unit of less than 5%.

(36) A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist essentially of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20A, and the carrier protein is CRM197.

(37) A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein

the *S. pneumoniae* serotypes consist essentially of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15B, 17F, and 20A, and wherein the carrier protein is CRM197.

(38) A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, de-O-acetylated 15B, 17F, and 20A, and the carrier protein is CRM197.

(39) The multivalent immunogenic composition of claim 38, wherein the de-O-acetylated 15B polysaccharide has an O-Acetyl content per repeating unit of less than 5%.

(40) A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20A, and the carrier protein is CRM197.

(41) A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15B, 17F, and 20A, and wherein the carrier protein is CRM197.

(42) A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist essentially of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, de-O-acetylated 15B, 17F, and 20, and the carrier protein is CRM197.

(43) The multivalent immunogenic composition of claim 42, wherein the de-O-acetylated 15B polysaccharide has an O-Acetyl content per repeating unit of less than 5%.

(44) A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist essentially of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20 and the carrier protein is CRM197.

(45) A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist essentially of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15B, 17F, and 20, and wherein the carrier protein is CRM197.

(46) A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, de-O-acetylated 15B, 17F, and 20, and the carrier protein is CRM197.

(47) The multivalent immunogenic composition of claim 46, wherein the de-O-acetylated 15B polysaccharide has an O-Acetyl content per repeating unit of less than 5%.

(48) A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15C, 17F, and 20 and the carrier protein is CRM197.

(49) A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide carrier protein conjugates, wherein each of the conjugates comprises a polysaccharide of a particular *S. pneumoniae* serotype conjugated to a carrier protein, wherein the *S. pneumoniae* serotypes consist of 3, 7F, 19A, 22F, 33F, 6A, 15A, 16F, 23A, 23B, 24F, 31, 35B, 8, 9N, 10A, 11A, 12F, 15B, 17F, and 20, and wherein the carrier protein is CRM197.

(50) Use of the multivalent immunogenic composition of any of claims 1 to 49 in the manufacture of a medicament for inducing a protective immune response in a human patient.

(51) The use of claim 50, wherein the patient was previously treated with a multivalent pneumococcal vaccine.

(52) The use of claim 50 or 51, wherein two or more doses of the multivalent immunogenic composition is to be administered to the patient.

(53) The use of claim 52, wherein the amount of time between doses is from about 4 weeks to about 1 year.

(54) The use of any of claims 50 to 53, wherein three doses are to be administered to the patient and the patient is immunocompromised.

(55) The use of any of claims 50 to 54, wherein a multivalent pneumococcal vaccine is to be administered to the patient in any order, and the multivalent immunogenic composition and the multivalent pneumococcal vaccine are not the same.

(56) The use of claim 55, wherein the multivalent pneumococcal vaccine is comprised of multiple S. pneumonia polysaccharide carrier protein conjugates wherein each of the conjugates comprises polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein.

(57) The use of claim 55 or 56, wherein the multivalent immunogenic composition and the multivalent pneumococcal vaccine are to be administered concurrently.

(58) The use of claim 55 or 56, wherein the amount of time between administration of the multivalent immunogenic composition and the multivalent pneumococcal vaccine is from about 4 weeks to about 1 year.

(59) The use of any of claims 55, 56 or 58, wherein the multivalent immunogenic composition is to be administered before the multivalent pneumococcal vaccine.

(60) The use of any of claims 55, 56 or 58, wherein the multivalent pneumococcal vaccine is to be administered before the multivalent immunogenic composition.

(61) The use of any of claims 50 to 60, wherein the patient is 50 years of age or older.

(62) The use of any of claims 50 to 60, wherein the patient is between 2 and 18 years of age.

(63) The use of any of claims 50 to 60, wherein the patient is 18 years of age or older.

(64) The use of any of claims 50 to 60, wherein the patient is 65 years of age or older.

(65) The use of any of claims 50 to 64, wherein the patient is immunocompromised.

(66) The use of any of claims 50 to 65, wherein the multivalent immunogenic composition is to be administered by subcutaneous or intramuscular injection.

(67) The use of any of claims 50 to 66, wherein the multivalent immunogenic composition is to be administered concomitantly with a vaccine against influenza.

(68) Use of the multivalent immunogenic composition of any of claims 1 to 49 in the manufacture of a medicament for the prevention of pneumococcal pneumoniae and invasive disease in adults 18 years of age and older.

(69) Use of the multivalent immunogenic composition of any of claims 1 to 49 in the manufacture of a medicament for the prevention of pneumococcal pneumoniae and invasive disease caused by the 24 Streptococcus pneumoniae strains (3, 6A, 6C, 7F, 8, 9N, 10A, 11A, 12F, 15A, 15B, 15C, 16F, 17F, 19A, 20A, 20B, 22F, 23A, 23B, 24F, 31, 33F, and 35B).

(70) The multivalent immunogenic composition of any of claims 1 to to 49 for use as a medicament.