

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 24683	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2019/066682	International filing date (<i>day/month/year</i>) 17 December 2019 (17-12-2019)	(Earliest) Priority Date (<i>day/month/year</i>) 19 December 2018 (19-12-2018)
Applicant MERCK SHARP & DOHME CORP.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 18 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed
☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6**bis**(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☒ **Unity of invention is lacking** (see Box No III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 1
☒ as suggested by the applicant
☐ as selected by this Authority, because the applicant failed to suggest a figure
☐ as selected by this Authority, because this figure better characterizes the invention
b. ☐ none of the figures is to be published with the abstract

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-16, 18-20, 22-24, 26-34(all partially)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

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International application No
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A. CLASSIFICATION OF SUBJECT MATTER
INV. A61K39/09 A61P31/04
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, BIOSIS, EMBASE, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2018/126229 A2 (SUTROVAX INC [US]) 5 July 2018 (2018-07-05) paragraphs [000136], [000578]; claim 35 -----	1-16, 18-20, 22-24, 26-28, 30,32-34
X	WO 2015/110942 A2 (PFIZER [US]) 30 July 2015 (2015-07-30) cited in the application example 2 ----- -/-	1-16, 18-20, 22-24, 26-28, 30,32-34



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

31 March 2020

Date of mailing of the international search report

29/06/2020

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INTERNATIONAL SEARCH REPORT

International application No

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2017/085586 A1 (PFIZER [US]) 26 May 2017 (2017-05-26) cited in the application example 3 -----	1-16, 18-20, 22-24, 26-28, 30,32-34
X	WO 2017/173415 A2 (LIFFEY BIOTECH LTD [IE]; FORREST BRUCE D [US]; LOVE JACK D [US]) 5 October 2017 (2017-10-05) example 6; table 2 -----	1-16, 18-20, 22-24, 26-28, 30,32-34
X	WO 2018/064444 A1 (BIOLOGICAL E LTD [IN]; MATUR RAMESH VENKAT [IN] ET AL.) 5 April 2018 (2018-04-05) claims 1-24 -----	1-16, 18-20, 22-24, 26-28, 30,32-34
A	DAVID COOPER ET AL: "The 13-valent pneumococcal conjugate vaccine (PCV13) elicits cross-functional opsonophagocytic killing responses in humans toserotypes 6C and 7A", VACCINE, vol. 29, no. 41, 27 September 2011 (2011-09-27), pages 7207-7211, XP028284688, ISSN: 0264-410X, DOI: 10.1016/J.VACCINE.2011.06.056 [retrieved on 2011-06-17] -----	1-16, 18-20, 22-24, 26-28, 30,32-34

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2018126229 A2	05-07-2018	AU 2017388891 A1 BR 112019013475 A2 CA 3048981 A1 CN 110366428 A EP 3562503 A2 JP 2020504760 A KR 20190103256 A US 2018333484 A1 WO 2018126229 A2	04-07-2019 27-02-2020 05-07-2018 22-10-2019 06-11-2019 13-02-2020 04-09-2019 22-11-2018 05-07-2018
WO 2015110942 A2	30-07-2015	AU 2015208822 A1 CA 2937190 A1 CN 106413747 A EP 3096786 A2 EP 3583947 A1 HK 1232133 A1 JP 6585624 B2 JP 2017504661 A JP 2019172701 A KR 20160104076 A KR 20190133066 A RU 2016127123 A US 2016324949 A1 US 2019070283 A1 WO 2015110942 A2	21-07-2016 30-07-2015 15-02-2017 30-11-2016 25-12-2019 05-01-2018 02-10-2019 09-02-2017 10-10-2019 02-09-2016 29-11-2019 28-02-2018 10-11-2016 07-03-2019 30-07-2015
WO 2017085586 A1	26-05-2017	CA 3005524 A1 EP 3377098 A1 JP 2018534307 A US 2019000952 A1 WO 2017085586 A1	26-05-2017 26-09-2018 22-11-2018 03-01-2019 26-05-2017
WO 2017173415 A2	05-10-2017	EP 3436061 A2 JP 2019513821 A US 2020113993 A1 WO 2017173415 A2	06-02-2019 30-05-2019 16-04-2020 05-10-2017
WO 2018064444 A1	05-04-2018	AU 2017336806 A1 BR 112019006278 A2 CA 3037056 A1 CL 2019000849 A1 CN 109789198 A CO 2019002955 A2 CU 20190030 A7 EA 201990838 A1 EP 3518965 A1 JP 2019529497 A KR 20190066032 A PH 12019500672 A1 US 2019224295 A1 WO 2018064444 A1	02-05-2019 02-07-2019 05-04-2018 23-09-2019 21-05-2019 11-06-2019 04-11-2019 30-08-2019 07-08-2019 17-10-2019 12-06-2019 29-07-2019 25-07-2019 05-04-2018

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: a) 1, 3, 4, 5, 6A, 6B, 7F, 9V, 10A, 12F, 14, 15A, De0Ac15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

2. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of b) 1, 3, 4, 5, 6A, 6B, 7F, 9V, 10A, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

3. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: c) 1, 3, 4, 5, 6A, 6B, 7F, 8, 9V, 10A, 12F, 14, 15A, De0Ac15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

4. claims: 17(completely); 1-16, 18-20, 22-24, 26-34(partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: d) 1, 3, 4, 5, 6A, 6B, 7F, 8, 9V, 10A, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

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5. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: e) 1, 3, 4, 5, 6A, 6B, 7F, 8, 9V, 10A, 12F, 14, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

6. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of f) 1, 3, 4, 5, 6A, 6B, 7F, 8, 9V, 10A, 11A, 12F, 14, 15A, De0Ac15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

7. claims: 21(completely); 1-16, 18-20, 22-24, 26-34(partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of g) 1, 3, 4, 5, 6A, 6B, 7F, 8, 9V, 10A, 11A, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

8. claims: 25(completely); 1-16, 18-20, 22-24, 26-34(partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of h) 1, 3, 4, 5, 6A, 6B, 7F, 8, 9V, 10A, 11A, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

9. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S.

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pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: i) 1, 3, 4, 5, 6A, 6B, 7F, 8, 9V, 10A, 11A, 12F, 14, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

10. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of j) 1, 3, 4, 5, 6A, 7F, 9V, 10A, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

11. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: k) 1, 3, 4, 5, 6B, 7F, 9V, 10A, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

12. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: l) 1, 3, 4, 5, 6C, 7F, 9V, 10A, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

13. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and

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wherein the polysaccharide protein conjugates include polysaccharides of a group of *S. pneumoniae* serotypes selected from the group consisting of: m) 1, 3, 4, 5, 6A, 7F, 8, 9V, 10A, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

14. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a *S. pneumoniae* serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of *S. pneumoniae* serotypes selected from the group consisting of: n) 1, 3, 4, 5, 6B, 7F, 8, 9V, 10A, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

15. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a *S. pneumoniae* serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of *S. pneumoniae* serotypes selected from the group consisting of: o) 1, 3, 4, 5, 6C, 7F, 8, 9V, 10A, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

16. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a *S. pneumoniae* serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of *S. pneumoniae* serotypes selected from the group consisting of: p) 1, 3, 4, 5, 6A, 7F, 8, 9V, 10A, 11A, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

17. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a *S. pneumoniae* serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of *S. pneumoniae* serotypes selected from the group consisting of: q) 1, 3, 4, 5, 6B,

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7F, 8, 9V, 10A, 11A, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

18. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: r) 1, 3, 4, 5, 6C, 7F, 8, 9V, 10A, 11A, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

19. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: s) 1, 3, 4, 5, 6A, 7F, 9V, 10A, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

20. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: t) 1, 3, 4, 5, 6B, 7F, 9V, 10A, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

21. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: u) 1, 3, 4, 5, 6C, 7F, 9V, 10A, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

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22. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: v) 1, 3, 4, 5, 6A, 7F, 8, 9V, 10A, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

23. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: w) 1, 3, 4, 5, 6B, 7F, 8, 9V, 10A, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

24. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: x) 1, 3, 4, 5, 6C, 7F, 8, 9V, 10A, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

25. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: y) 1, 3, 4, 5, 6A, 7F, 8, 9V, 10A, 11A, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

26. claims: 1-16, 18-20, 22-24, 26-34(all partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: z) 1, 3, 4, 5, 6B, 7F, 8, 9V, 10A, 11A, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

27. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: aa) 1, 3, 4, 5, 6C, 7F, 8, 9V, 10A, 11A, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F and 35B and related subject-matter.

28. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: bb) 1, 3, 4, 5, 6A, 6B, 7F, 9V, 12F, 14, 15A, de0-15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

29. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: cc) 1, 3, 4, 5, 6A, 6B, 7F, 9V, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

30. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S.

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pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of *S. pneumoniae* serotypes selected from the group consisting of: dd) 1, 3, 4, 5, 6A, 6B, 7F, 8, 9V, 12F, 14, 15A, de0-15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

31. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a *S. pneumoniae* serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of *S. pneumoniae* serotypes selected from the group consisting of: ee) 1, 3, 4, 5, 6A, 6B, 7F, 8, 9V, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

32. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a *S. pneumoniae* serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of *S. pneumoniae* serotypes selected from the group consisting of: ff) 1, 3, 4, 5, 6A, 6B, 7F, 8, 9V, 12F, 14, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

33. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a *S. pneumoniae* serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of *S. pneumoniae* serotypes selected from the group consisting of: gg) 1, 3, 4, 5, 6A, 6B, 7F, 8, 9V, 11A, 12F, 14, 15A, de0-15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

34. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a *S. pneumoniae* serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include

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polysaccharides of a group of *S. pneumoniae* serotypes selected from the group consisting of: hh) 1, 3, 4, 5, 6A, 6B, 7F, 8, 9V, 11A, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

35. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a *S. pneumoniae* serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of *S. pneumoniae* serotypes selected from the group consisting of: ii) 1, 3, 4, 5, 6A, 6B, 7F, 8, 9V, 11A, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

36. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a *S. pneumoniae* serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of *S. pneumoniae* serotypes selected from the group consisting of: jj) 1, 3, 4, 5, 6A, 6B, 7F, 8, 9V, 11A, 12F, 14, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

37. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a *S. pneumoniae* serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of *S. pneumoniae* serotypes selected from the group consisting of: kk) 1, 3, 4, 5, 6A, 7F, 9V, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

38. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a *S. pneumoniae* serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of *S. pneumoniae* serotypes selected from the group consisting of: ll) 1, 3, 4, 5, 6B, 7F, 9V, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F,

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24F, 33F, 35B and 39 and related subject-matter.

39. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: mm) 1, 3, 4, 5, 6C, 7F, 9V, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

40. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: nn) 1, 3, 4, 5, 6A, 7F, 8, 9V, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

41. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: oo) 1, 3, 4, 5, 6B, 7F, 8, 9V, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

42. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: pp) 1, 3, 4, 5, 6C, 7F, 8, 9V, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

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43. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: qq) 1, 3, 4, 5, 6A, 7F, 8, 9V, 11A, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

44. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: rr) 1, 3, 4, 5, 6B, 7F, 8, 9V, 11A, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

45. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: ss) 1, 3, 4, 5, 6C, 7F, 8, 9V, 11A, 12F, 14, 15A, 15C, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

46. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: tt) 1, 3, 4, 5, 6A, 7F, 9V, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

47. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S.

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pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: uu) 1, 3, 4, 5, 6B, 7F, 9V, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

48. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: vv) 1, 3, 4, 5, 6C, 7F, 9V, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

49. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: ww) 1, 3, 4, 5, 6A, 7F, 8, 9V, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

50. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of S. pneumoniae serotypes selected from the group consisting of: xx) 1, 3, 4, 5, 6B, 7F, 8, 9V, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

51. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising S. pneumoniae polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a S. pneumoniae serotype conjugated to a carrier protein, and

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wherein the polysaccharide protein conjugates include polysaccharides of a group of *S. pneumoniae* serotypes selected from the group consisting of: yy) 1, 3, 4, 5, 6C, 7F, 8, 9V, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

52. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a *S. pneumoniae* serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of *S. pneumoniae* serotypes selected from the group consisting of: zz) 1, 3, 4, 5, 6A, 7F, 8, 9V, 11A, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

53. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a *S. pneumoniae* serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of *S. pneumoniae* serotypes selected from the group consisting of: aaa) 1, 3, 4, 5, 6B, 7F, 8, 9V, 11A, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.

54. claims: 1-16, 18-20, 22-24, 26-34(all partially)

A multivalent immunogenic composition comprising *S. pneumoniae* polysaccharide protein conjugates, wherein each of the conjugates comprises a polysaccharide from a *S. pneumoniae* serotype conjugated to a carrier protein, and wherein the polysaccharide protein conjugates include polysaccharides of a group of *S. pneumoniae* serotypes selected from the group consisting of: bbb) 1, 3, 4, 5, 6C, 7F, 8, 9V, 11A, 12F, 14, 15A, 15B, 18C, 19A, 19F, 22F, 23B, 23F, 24F, 33F, 35B and 39 and related subject-matter.
