Clinical trial results:
A phase III, open, single centre study to assess the safety, reactogenicity and immunogenicity of GlaxoSmithKline (GSK) Biologicals' 10-valent pneumococcal conjugate (10Pn-PD-DiT) vaccine (GSK 1024850A), when either given as a booster dose (at 15-21 months of age) in children previously primed with three doses of the 10Pn-PD-DiT vaccine, or when given as a two-dose catch-up immunization (at 15-21 and 17-23 months of age) in unprimed children, all previously enrolled in the 10PN-PD-DIT-032 primary vaccination study in Mali.

Summary

EudraCT number	2011-003711-39
Trial protocol	Outside EU/EEA
Global end of trial date	26 July 2010

Results information

Result version number	v1
This version publication date	13 April 2016
First version publication date	01 July 2015

Trial information

Trial identification

Sponsor protocol code	113166

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT00985465
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	GlaxoSmithKline Biologicals
Sponsor organisation address	Rue de l'Institut 89, Rixensart, Belgium, B-1330
Public contact	Clinical Trials Call Center, GlaxoSmithKline Biologicals, 44 2089904466, GSKClinicalSupportHD@gsk.com
Scientific contact	Clinical Trials Call Center, GlaxoSmithKline Biologicals, 44 2089904466, GSKClinicalSupportHD@gsk.com

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	No
Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial?	No
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	Yes

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	16 May 2011
Is this the analysis of the primary completion data?	Yes
Primary completion date	26 June 2010
Global end of trial reached?	Yes
Global end of trial date	26 July 2010
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To assess the safety and reactogenicity of the 10Pn-PD-DiT vaccine in terms of occurrence of adverse events with intensity grade 3 after booster vaccination

Protection of trial subjects:

All subjects were supervised after vaccination/product administration with appropriate medical treatment readily available. Vaccines were administered by qualified and trained personnel. Vaccines were administered only to eligible subjects that had no contraindications to any components of the vaccines.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	12 November 2009
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Mali: 218
Worldwide total number of subjects	218
EEA total number of subjects	0

Notes:

Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37 wk	0
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	218
Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	0

From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details:

A total of 218 subjects were enrolled (147 subjects in the 10Pn-10Pn group and 71 subjects in the DTPw-10Pn group).
A total of 210 subjects were vaccinated in the booster vaccination study (141 out of 160 from the 10Pn-10Pn group and 69 out of 78 from the DTPw-10Pn group)
.

Period 1

Period 1 title	Overall Period (overall period)
Is this the baseline period?	Yes
Allocation method	Non-randomised - controlled
Blinding used	Not blinded

Arms

Are arms mutually exclusive?	Yes
Arm title	10Pn-10Pn group

Arm description:

Subjects previously primed with the 10Pn-PD-DiT vaccine in study 10PN-PD-DIT-032 and receiving a booster dose of the 10Pn-PD-DiT vaccine at 15-21 months of age (Study Month 0).

Arm type	Experimental
Investigational medicinal product name	Pneumococcal vaccine GSK1024850A
Investigational medicinal product code	
Other name	10Pn-PD-DiT
Pharmaceutical forms	Injection
Routes of administration	Intramuscular use

Dosage and administration details:

1 dose administered by intramuscular injection in the thigh or deltoid, if the muscle size was adequate.

Arm title	DTPw-10Pn group

Arm description:

Unprimed subjects from the control group of study 10PN-PD-DIT-032, receiving a 2 dose catch-up vaccination with the 10Pn-PD-DiT vaccine during the second year of life (at 15-21 months of age [Study Month 0] and at 17-23 months of age [Study Month 2]).

Arm type	Experimental
Investigational medicinal product name	Pneumococcal vaccine GSK1024850A
Investigational medicinal product code	
Other name	10Pn-PD-DiT
Pharmaceutical forms	Injection
Routes of administration	Intramuscular use

Dosage and administration details:

2 doses administered by intramuscular injection in the thigh or deltoid, if the muscle size was adequate.

Number of subjects in period 1[1]	10Pn-10Pn group	DTPw-10Pn group
Started	141	69
Completed	140	66
Not completed	1	3
Consent withdrawn by subject	1	2
wrongly considered belonging to the other group	-	1

Notes:

[1] - The number of subjects reported to be in the baseline period are not the same as the worldwide number enrolled in the trial. It is expected that these numbers will be the same.
Justification: A total of 218 subjects were enrolled (147 subjects in the 10Pn-10Pn group and 71 subjects in the DTPw-10Pn group).
A total of 210 subjects were vaccinated in the booster vaccination study (141 out of 160 from the 10Pn-10Pn group and 69 out of 78 from the DTPw-10Pn group)

Baseline characteristics

Reporting groups	
Reporting group title	10Pn-10Pn group
Reporting group description:	
Subjects previously primed with the 10Pn-PD-DiT vaccine in study 10PN-PD-DIT-032 and receiving a booster dose of the 10Pn-PD-DiT vaccine at 15-21 months of age (Study Month 0).	
Reporting group title	DTPw-10Pn group
Reporting group description:	
Unprimed subjects from the control group of study 10PN-PD-DIT-032, receiving a 2 dose catch-up vaccination with the 10Pn-PD-DiT vaccine during the second year of life (at 15-21 months of age [Study Month 0] and at 17-23 months of age [Study Month 2]).	

Reporting group values	10Pn-10Pn group	DTPw-10Pn group	Total
Number of subjects	141	69	210
Age categorical			
Units: Subjects			
In utero			0
Preterm newborn infants (gestational age < 37 wks)			0
Newborns (0-27 days)			0
Infants and toddlers (28 days-23 months)			0
Children (2-11 years)			0
Adolescents (12-17 years)			0
Adults (18-64 years)			0
From 65-84 years			0
85 years and over			0
Age continuous			
Units: months			
arithmetic mean	17	16.9	
standard deviation	± 1.11	± 1.16	-
Gender categorical			
Units: Subjects			
Female	75	35	110
Male	66	34	100

End points

End points reporting groups

Reporting group title	10Pn-10Pn group

Reporting group description:

Subjects previously primed with the 10Pn-PD-DiT vaccine in study 10PN-PD-DIT-032 and receiving a booster dose of the 10Pn-PD-DiT vaccine at 15-21 months of age (Study Month 0).

Reporting group title	DTPw-10Pn group

Reporting group description:

Unprimed subjects from the control group of study 10PN-PD-DIT-032, receiving a 2 dose catch-up vaccination with the 10Pn-PD-DiT vaccine during the second year of life (at 15-21 months of age [Study Month 0] and at 17-23 months of age [Study Month 2]).

Primary: Number of subjects with Grade 3 adverse events (solicited and unsolicited)

End point title	Number of subjects with Grade 3 adverse events (solicited and unsolicited)[1][2]

End point description:

End point type	Primary

End point timeframe:

Within 31 days (Day 0 to Day 30) after booster vaccination

Notes:

[1] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: Primary endpoint contains only descriptive results

[2] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: The end point is requested only for the group receiving the booster administration

End point values	10Pn-10Pn group			
Subject group type	Reporting group			
Number of subjects analysed	141			
Units: Subjects				
Any symptom	3			
General symptoms	1			
Local symptoms	2			

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with any and Grade 3 solicited local symptoms

End point title	Number of subjects with any and Grade 3 solicited local symptoms[3]

End point description:

Assessed solicited local symptoms were pain, redness and swelling. Any = occurrence of the symptom regardless of intensity grade. Grade 3 pain = pain that prevented normal activity. Grade 3 redness/swelling = redness/swelling spreading beyond 30 millimeters (mm) of injection site.

End point type	Secondary

End point timeframe:

Within 4 days (Day 0-Day 3) after the booster dose.

Notes:

[3] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: The end point is requested only for the group receiving the booster administration

End point values	10Pn-10Pn group			
Subject group type	Reporting group			
Number of subjects analysed	141			
Units: Subjects				
Any Pain	40			
Grade 3 Pain	0			
Any Redness	17			
Grade 3 Redness	2			
Any Swelling	67			
Grade 3 Swelling	0			

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with any, Grade 3 and related solicited general symptoms.

End point title	Number of subjects with any, Grade 3 and related solicited general symptoms.[4]

End point description:

Assessed solicited general symptoms were drowsiness, fatigue, fever [defined as axillary temperature equal to or above 37.5 degrees Celsius (°C)], irritability and loss of appetite. Any = occurrence of the symptom regardless of intensity grade. Grade 3 symptom Drowsiness and Irritability = symptom that prevented normal activity. Grade 3 Loss of appetite = not eating at all. Grade 3 fever = fever > 39.5 °C. Related = symptom assessed by the investigator as related to the vaccination.

End point type	Secondary

End point timeframe:

Within 4 days (Day 0-Day 3) after the booster dose.

Notes:

[4] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: The end point is requested only for the group receiving the booster administration

End point values	10Pn-10Pn group			
Subject group type	Reporting group			
Number of subjects analysed	141			
Units: Subjects				
Any Drowsiness	0			
Grade 3 Drowsiness	0			
Related Drowsiness	0			
Any Fever	34			
Grade 3 Fever	0			

Related Fever	31			
Any Irritability	8			
Grade 3 Irritability	0			
Related Irritability	8			
Any Loss of appetite	1			
Grade 3 Loss of appetite	0			
Related Loss of appetite	1			

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with any and Grade 3 solicited local symptoms

End point title	Number of subjects with any and Grade 3 solicited local symptoms[5]

End point description:

Assessed solicited local symptoms were pain, redness and swelling. Any = occurrence of the symptom regardless of intensity grade. Grade 3 pain = pain that prevented normal activity. Grade 3 redness/swelling = redness/swelling spreading beyond 30 millimeters (mm) of injection site.

End point type	Secondary

End point timeframe:

Within 4 days (Day 0-Day 3) after each vaccine dose.

Notes:

[5] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: The end point is requested only for the group receiving the 2 catch doses (unprimed subjects)

End point values	DTPw-10Pn group			
Subject group type	Reporting group			
Number of subjects analysed	69			
Units: Subjects				
Any Pain, Dose 1 [N=69]	22			
Grade 3 Pain, Dose 1 [N=69]	0			
Any Redness, Dose 1 [N=69]	6			
Grade 3 Redness, Dose 1 [N=69]	0			
Any Swelling, Dose 1 [N=69]	46			
Grade 3 Swelling, Dose 1 [N=69]	1			
Any Pain, Dose 2 [N=67]	7			
Grade 3 Pain, Dose 2 [N=67]	0			
Any Redness, Dose 2 [N=67]	2			
Grade 3 Redness, Dose 2 [N=67]	0			
Any Swelling, Dose 2 [N=67]	31			
Grade 3 Swelling, Dose 2 [N=67]	0			
Any Pain, Across Doses [N=69]	25			
Grade 3 Pain, Across Doses [N=69]	0			
Any Redness, Across Doses [N=69]	8			
Grade 3 Redness, Across Doses [N=69]	0			
Any Swelling, Across Doses [N=69]	55			
Grade 3 Swelling, Across Doses [N=69]	1			

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with any, Grade 3 and related solicited general symptoms.

End point title	Number of subjects with any, Grade 3 and related solicited general symptoms.[6]

End point description:

Assessed solicited general symptoms were drowsiness, fatigue, fever [defined as axillary temperature equal to or above 37.5 degrees Celsius (°C)], irritability and loss of appetite. Any = occurrence of the symptom regardless of intensity grade. Grade 3 symptom Drowsiness and Irritability = symptom that prevented normal activity. Grade 3 Loss of appetite = not eating at all. Grade 3 fever = fever > 39.5 °C. Related = symptom assessed by the investigator as related to the vaccination.

End point type	Secondary

End point timeframe:

Within 4 days (Day 0-Day 3) after each vaccine dose.

Notes:

[6] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: The end point is requested only for the group receiving the 2 catch doses (unprimed subjects)

End point values	DTPw-10Pn group			
Subject group type	Reporting group			
Number of subjects analysed	69			
Units: Subjects				
Any Drowsiness, Dose 1 [N=69]	1			
Grade 3 Drowsiness, Dose 1 [N=69]	0			
Related Drowsiness, Dose 1 [N=69]	1			
Any Fever, Dose 1 [N=69]	21			
Grade 3 Fever, Dose 1 [N=69]	0			
Related Fever, Dose 1 [N=69]	19			
Any Irritability, Dose 1 [N=69]	3			
Grade 3 Irritability, Dose 1 [N=69]	0			
Related Irritability, Dose 1 [N=69]	3			
Any Loss of appetite, Dose 1 [N=69]	1			
Grade 3 Loss of appetite, Dose 1 [N=69]	0			
Related Loss of appetite, Dose 1 [N=69]	0			
Any Drowsiness, Dose 2 [N=67]	0			
Grade 3 Drowsiness, Dose 2 [N=67]	0			
Related Drowsiness, Dose 2 [N=67]	0			
Any Fever, Dose 2 [N=67]	17			
Grade 3 Fever, Dose 2 [N=67]	1			
Related Fever, Dose 2 [N=67]	15			
Any Irritability, Dose 2 [N=67]	3			

Grade 3 Irritability, Dose 2 [N=67]	0			
Related Irritability, Dose 2 [N=67]	3			
Any Loss of appetite, Dose 2 [N=67]	1			
Grade 3 Loss of appetite, Dose 2 [N=67]	0			
Related Loss of appetite, Dose 2 [N=67]	1			
Any Drowsiness, Across Doses [N=69]	1			
Grade 3 Drowsiness, Across Doses [N=69]	0			
Related Drowsiness, Across Doses [N=69]	1			
Any Fever, Across Doses [N=69]	34			
Grade 3 Fever, Across Doses [N=69]	1			
Related Fever, Across Doses [N=69]	30			
Any Irritability, Across Doses [N=69]	6			
Grade 3 Irritability, Across Doses [N=69]	0			
Related Irritability, Across Doses [N=69]	6			
Any Loss of appetite, Across Doses [N=69]	2			
Grade 3 Loss of appetite, Across Doses [N=69]	0			
Related Loss of appetite, Across Doses [N=69]	1			

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with any unsolicited adverse events (AEs).

End point title	Number of subjects with any unsolicited adverse events (AEs).

End point description:

An unsolicited AE covers any untoward medical occurrence in a clinical investigation subject temporally associated with the use of a medicinal product, whether or not considered related to the medicinal product and reported in addition to those solicited during the clinical study and any solicited symptom with onset outside the specified period of follow-up for solicited symptoms. Any was defined as the occurrence of any unsolicited AE regardless of intensity grade or relation to vaccination.

End point type	Secondary

End point timeframe:

Within 31 days (Day 0-Day 30) after each vaccine dose.

End point values	10Pn-10Pn group	DTPw-10Pn group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	141	69		
Units: Subjects				
Any AEs	95	57		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with serious adverse events (SAEs).

End point title	Number of subjects with serious adverse events (SAEs).

End point description:

Serious adverse events (SAEs) assessed include medical occurrences that result in death, are life threatening, require hospitalization or prolongation of hospitalization or result in disability/incapacity.

End point type	Secondary

End point timeframe:

During the entire study period.

End point values	10Pn-10Pn group	DTPw-10Pn group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	141	69		
Units: Subjects				
Any SAEs	0	0		

Statistical analyses

No statistical analyses for this end point

Secondary: Concentrations of antibodies against vaccine pneumococcal serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F

End point title	Concentrations of antibodies against vaccine pneumococcal serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F

End point description:

Vaccine pneumococcal serotypes assessed were serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F. Concentrations were expressed as geometric mean concentrations (GMCs) in microgram per milliliter (µg/mL). Pneumococcal serotype specific total imunoglobuline G (IgG) antibodies were measured by 22F-inhibition Enzyme-linked immunosorbent assay (ELISA). The cut-off of the assay was 0.05 µg/mL.

End point type	Secondary

End point timeframe:

Prior to (PRE) and one month after (POST) the booster immunization in the 10Pn-10Pn Group and prior to (PRE) the first dose and one month after (POST) dose 2 in the DTPw-10pn Group.

End point values	10Pn-10Pn group	DTPw-10Pn group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	140	59		
Units: µg/mL				
geometric mean (confidence interval 95%)				
Anti-1, PRE [N=140,59]	0.28 (0.23 to 0.35)	0.04 (0.03 to 0.05)		
Anti-1, POST [N=139,57]	5.85 (5.07 to 6.76)	3.2 (2.68 to 3.84)		
Anti-4, PRE [N=140,59]	0.32 (0.26 to 0.38)	0.06 (0.04 to 0.09)		
Anti-4, POST [N=139,57]	10.44 (9.31 to 11.71)	6.54 (5.47 to 7.82)		
Anti-5, PRE [N=140,59]	0.37 (0.32 to 0.43)	0.04 (0.03 to 0.05)		
Anti-5, POST [N=139,57]	6.07 (5.2 to 7.1)	3.05 (2.4 to 3.87)		
Anti-6B, PRE [N=140,59]	0.66 (0.55 to 0.8)	0.03 (0.03 to 0.04)		
Anti-6B, POST [N=139,57]	4.44 (3.69 to 5.33)	0.78 (0.57 to 1.08)		
Anti-7F, PRE [N=140,59]	0.68 (0.59 to 0.8)	0.04 (0.03 to 0.06)		
Anti-7F, POST [N=139,57]	7.82 (6.92 to 8.85)	4.5 (3.8 to 5.33)		
Anti-9V, PRE [N=140,59]	0.73 (0.61 to 0.87)	0.03 (0.03 to 0.04)		
Anti-9V, POST [N=139,57]	7.99 (6.86 to 9.3)	1.48 (1.2 to 1.83)		
Anti-14, PRE [N=140,59]	0.9 (0.73 to 1.09)	0.11 (0.09 to 0.14)		
Anti-14, POST [N=139,57]	9.75 (8.02 to 11.85)	4.51 (3.63 to 5.61)		
Anti-18C, PRE [N=140,59]	0.92 (0.79 to 1.07)	0.05 (0.04 to 0.07)		
Anti-18C, POST [N=139,57]	23.99 (20.29 to 28.37)	10.95 (8.5 to 14.1)		
Anti-19F, PRE [N=140,59]	0.82 (0.66 to 1.04)	0.09 (0.06 to 0.14)		
Anti-19F, POST [N=139,57]	12.96 (10.96 to 15.34)	8.52 (5.58 to 13)		
Anti-23F, PRE [N=140,59]	0.35 (0.28 to 0.45)	0.03 (0.03 to 0.04)		
Anti-23F, POST [N=139,57]	4.25 (3.54 to 5.11)	1.05 (0.74 to 1.49)		

Statistical analyses

No statistical analyses for this end point

Secondary: Opsonophagocytic activity against pneumococcal serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F

End point title	Opsonophagocytic activity against pneumococcal serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F

End point description:

The cut-off of the assay is an opsonic titre of 8.

End point type	Secondary

End point timeframe:

Prior to (PRE) and one month after (POST) the booster immunization in the 10Pn-10Pn Group and prior to (PRE) the first dose and one month after (POST) dose 2 in the DTPw-10pn Group.

End point values	10Pn-10Pn group	DTPw-10Pn group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	139	58		
Units: Titers				
geometric mean (confidence interval 95%)				
Opsono-1, PRE [N=139,58]	9.3 (7.3 to 11.8)	5.8 (4.3 to 7.8)		
Opsono-1, POST [N=139,57]	661.7 (513.5 to 852.6)	108.7 (79.5 to 148.6)		
Opsono-4, PRE [N=139,57]	24 (16.7 to 34.6)	11.8 (6.3 to 22.1)		
Opsono-4, POST [N=139,55]	6541.7 (5468.5 to 7825.6)	2716.7 (2149 to 3434.2)		
Opsono-5, PRE [N=133,58]	9 (7.4 to 10.9)	4.3 (3.7 to 5)		
Opsono-5, POST [N=139,57]	340.5 (272.2 to 426)	71.9 (51.8 to 99.7)		
Opsono-6B, PRE [N=116,46]	82.6 (50.5 to 135.1)	38.7 (16.2 to 92)		
Opsono-6B, POST [N=134,50]	1729 (1361.9 to 2194.9)	1202.9 (701.3 to 2063)		
Opsono-7F, PRE [N=133,51]]	3230.6 (2588.4 to 4032.1)	2454.4 (1587.3 to 3795.1)		
Opsono-7F, POST [N=136,57]	9116.9 (7679.8 to 10822.9)	9161.1 (7254.1 to 11569.4)		
Opsono-9V, PRE [N=100,44]	407.9 (265.3 to 627)	138.2 (63.2 to 302.6)		
Opsono-9V, POST [N=111,43]	3640.4 (2859 to 4635.3)	4596.5 (3519.4 to 6003.3)		
Opsono-14, PRE [N=112,36]]	84.3 (53.4 to 132.9)	18.8 (8.4 to 42.3)		
Opsono-14, POST [N=109,41]	3281.8 (2488.4 to 4328.2)	2246.1 (1621.5 to 3111.1)		
Opsono-18C, PRE [N=95,33]	6 (4.8 to 7.5)	6.4 (4 to 10.3)		
Opsono-18C, POST [N=106,38]	2413.2 (1925.5 to 3024.6)	2045.3 (1161.5 to 3601.8)		
Opsono-19F, PRE [N=124,57]	12.8 (9.3 to 17.7)	4.8 (3.7 to 6.3)		
Opsono-19F, POST [N=127,47]	1084.2 (828.9 to 1418.1)	693.7 (350.8 to 1371.6)		
Opsono-23F, PRE [N=132,49]	90.7 (52.7 to 156.2)	30.4 (12.9 to 71.4)		

Opsono-23F, POST [N=137,57]	3476.4 (2706.8 to 4464.7)	3571 (2793.4 to 4565.1)		

Statistical analyses

No statistical analyses for this end point

Secondary: Concentrations of antibodies against cross-reactive pneumococcal serotypes 6A and 19A

End point title	Concentrations of antibodies against cross-reactive pneumococcal serotypes 6A and 19A

End point description:

Cross-reactive pneumococcal serotypes assessed were serotypes 6A and 19A. Concentrations were expressed as geometric mean concentrations (GMCs) in microgram per millilitre (µg/mL). The antibody concentrations against the cross-reactive pneumococcal serotypes 6A and 19A were determined by 22Finhibition Enzyme-linked immunosorbent assay (ELISA). The cut-off of the assay was 0.05 µg/mL.

End point type	Secondary

End point timeframe:

Prior to (PRE) and one month after (POST) the booster immunization in the 10Pn-10Pn Group and prior to (PRE) the first dose and one month after (POST) dose 2 in the DTPw-10pn Group.

End point values	10Pn-10Pn group	DTPw-10Pn group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	140	59		
Units: µg/mL				
geometric mean (confidence interval 95%)				
Anti-6A, PRE [N=140,59]	0.13 (0.11 to 0.17)	0.04 (0.03 to 0.05)		
Anti-6A, POST [N=139,57]	0.55 (0.42 to 0.73)	0.1 (0.07 to 0.14)		
Anti-19A, PRE [N=140,58]	0.16 (0.13 to 0.22)	0.06 (0.04 to 0.09)		
Anti-19A, POST [N=130,57]	1.13 (0.83 to 1.53)	1.36 (0.91 to 2.03)		

Statistical analyses

No statistical analyses for this end point

Secondary: Opsonophagocytic activity against cross-reactive pneumococcal serotypes 6A and 19A

End point title	Opsonophagocytic activity against cross-reactive pneumococcal serotypes 6A and 19A

End point description:

The cut-off of the assay is an opsonic titre of 8.

End point type	Secondary

End point timeframe:

Prior to (PRE) and one month after (POST) the booster immunization in the 10Pn-10Pn Group and prior to (PRE) the first dose and one month after (POST) dose 2 in the DTPw-10pn Group.

End point values	10Pn-10Pn group	DTPw-10Pn group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	138	58		
Units: Titers				
geometric mean (confidence interval 95%)				
Opsono-6A, PRE [N=127,54]	18.7 (12.2 to 28.6)	24 (12.5 to 46.3)		
Opsono-6A, POST [N=126,48]	100.7 (60.4 to 168)	106.3 (46.3 to 244)		
Opsono-19A, PRE [N=138,58]	6.2 (5.1 to 7.6)	5.9 (4.2 to 8.3)		
Opsono-19A [N=134,54]	91.5 (60.4 to 138.5)	171.2 (94.2 to 311.3)		

Statistical analyses

No statistical analyses for this end point

Secondary: Concentrations of antibodies against protein D (PD).

End point title	Concentrations of antibodies against protein D (PD).

End point description:

Anti-PD antibodies were determined using an ELISA assay. Concentrations were expressed as geometric mean concentrations (GMCs) in ELISA units per milliliter (EL.U/mL). Concentration of specific PD antibodies was determined, using a standard reference serum. The cut-off of the assay is 100 ELISA units per milliliter (EL.U/mL).

End point type	Secondary

End point timeframe:

Prior to (PRE) and one month after (POST) the booster immunization in the 10Pn-10Pn Group and prior to (PRE) the first dose and one month after (POST) dose 2 in the DTPw-10pn Group.

End point values	10Pn-10Pn group	DTPw-10Pn group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	139	59		
Units: EL.U/mL				
geometric mean (confidence interval 95%)				
Anti-PD, PRE (N=139, 59)	301.1 (257.7 to 351.8)	62.1 (54.9 to 70.3)		
Anti-PD, POST (N =139, 56)	3710.1 (3109 to 4427.4)	839.3 (643.5 to 1094.6)		

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Solicited adverse events: within 4 days (Day 0-Day 3) after each vaccine dose.
Unsolicited AEs:within 31 days (Day 0-Day 30) after each vaccine dose.
SAEs: during the entire study period.

Adverse event reporting additional description:

The occurrence of reported AEs (all/related) was not available and is encoded as equal to the number of subjects affected.

Assessment type	Non-systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	14.0

Reporting groups

Reporting group title	10Pn-10Pn group

Reporting group description:

Subjects previously primed with the 10Pn-PD-DiT vaccine in study 10PN-PD-DIT-032 and receiving a booster dose of the 10Pn-PD-DiT vaccine at 15-21 months of age (Study Month 0).

Reporting group title	DTPw-10Pn group

Reporting group description:

Unprimed subjects from the control group of study 10PN-PD-DIT-032, receiving a 2 dose catch-up vaccination with the 10Pn-PD-DiT vaccine during the second year of life (at 15-21 months of age [Study Month 0] and at 17-23 months of age [Study Month 2]).

Serious adverse events	10Pn-10Pn group	DTPw-10Pn group	
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 141 (0.00%)	0 / 69 (0.00%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	

Frequency threshold for reporting non-serious adverse events: 5 %

Non-serious adverse events	10Pn-10Pn group	DTPw-10Pn group	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	95 / 141 (67.38%)	57 / 69 (82.61%)	
Injury, poisoning and procedural complications			
Wound			
subjects affected / exposed	1 / 141 (0.71%)	6 / 69 (8.70%)	
occurrences (all)	1	6	
Surgical and medical procedures			

Circumcision			
subjects affected / exposed	1 / 141 (0.71%)	4 / 69 (5.80%)	
occurrences (all)	1	4	
General disorders and administration site conditions			
Pain			
alternative assessment type: Systematic			
subjects affected / exposed	40 / 141 (28.37%)	25 / 69 (36.23%)	
occurrences (all)	40	25	
Redness			
alternative assessment type: Systematic			
subjects affected / exposed	17 / 141 (12.06%)	8 / 69 (11.59%)	
occurrences (all)	17	8	
Swelling			
alternative assessment type: Systematic			
subjects affected / exposed	67 / 141 (47.52%)	55 / 69 (79.71%)	
occurrences (all)	67	55	
Fever (Axillary)			
alternative assessment type: Systematic			
subjects affected / exposed	34 / 141 (24.11%)	34 / 69 (49.28%)	
occurrences (all)	34	34	
Irritability			
alternative assessment type: Systematic			
subjects affected / exposed	8 / 141 (5.67%)	6 / 69 (8.70%)	
occurrences (all)	8	6	
Injection site induration			
subjects affected / exposed	5 / 141 (3.55%)	10 / 69 (14.49%)	
occurrences (all)	5	10	
Gastrointestinal disorders			
Enteritis			
subjects affected / exposed	6 / 141 (4.26%)	8 / 69 (11.59%)	
occurrences (all)	6	8	
Respiratory, thoracic and mediastinal disorders			
Allergic bronchitis			
subjects affected / exposed	38 / 141 (26.95%)	22 / 69 (31.88%)	
occurrences (all)	38	22	

Infections and infestations			
Rhinitis			
subjects affected / exposed	26 / 141 (18.44%)	14 / 69 (20.29%)	
occurrences (all)	26	14	
Gastroenteritis			
subjects affected / exposed	12 / 141 (8.51%)	15 / 69 (21.74%)	
occurrences (all)	12	15	
Skin infection			
subjects affected / exposed	9 / 141 (6.38%)	3 / 69 (4.35%)	
occurrences (all)	9	3	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? No

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported