Clinical trial results:
Immunogenicity of the Intramuscular Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine Without Adjuvant in Healthy Adult Subjects

Summary

EudraCT number	2010-018991-25
Trial protocol	FR
Global end of trial date	21 September 2010

Results information

Result version number	v1 (current)
This version publication date	16 February 2016
First version publication date	27 March 2015

Trial information

Trial identification

Sponsor protocol code	GPF18

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT01089660
WHO universal trial number (UTN)	U1111-1112-8378

Notes:

Sponsors

Sponsor organisation name	Sanofi Pasteur SA
Sponsor organisation address	2, avenue Pont Pasteur, Lyon cedex 07, France, 69367
Public contact	Director, Clinical Development, Sanofi Pasteur SA, 33 4 37 37 58 50, stephanie.pepin@sanofipasteur.com
Scientific contact	Director, Clinical Development, Sanofi Pasteur SA, 33 4 37 37 58 50, stephanie.pepin@sanofipasteur.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?	No

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	23 December 2010
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	21 September 2010
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

• To describe the immune response of the inactivated, split-virion swine-origin A/H1N1influenza vaccine without adjuvant in each group

Protection of trial subjects:

Only subjects that met all the study inclusion and none of the exclusion criteria were randomized and vaccinated in the study. Vaccinations were performed by qualified and trained study personnel. Subjects with allergy to any of the vaccine components were not vaccinated. After vaccination, subjects were also kept under clinical observation for 30 minutes to ensure their safety. Appropriate medical equipment was also available on site in case of any immediate allergic reactions.

Background therapy:

Not applicable

Evidence for comparator:

Not applicable

Actual start date of recruitment	16 March 2010
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	France: 202
Worldwide total number of subjects	202
EEA total number of subjects	202

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)	0
Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	202

From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

Study subjects were enrolled from 16 March 2010 to 19 March 2010 at 2 clinical centers in France.

Pre-assignment

Screening details:

A total of 202 subjects who met all of the inclusion criteria and none of the exclusion criteria were enrolled and vaccinated.

Period 1

Period 1 title	Overall trial (overall period)
Is this the baseline period?	Yes
Allocation method	Not applicable
Blinding used	Not blinded

Blinding implementation details:

Not applicable

Arms

Are arms mutually exclusive?	Yes
Arm title	9 µg HA

Arm description:

Subjects aged 18 to 60 years who received 9 µg (0.3 mL) of hemagglutinin (HA) of non-adjuvanted pandemic A/H1N1 influenza vaccine on Day 0.

Arm type	Experimental
Investigational medicinal product name	Swine A/H1N1 Influenza Vaccine (split virion, inactivated)
Investigational medicinal product code	448
Other name	
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

0.3 mL (9 µg), intramuscular to be injected into the deltoid area, single injection on Day 0.

Arm title	15 µg HA

Arm description:

Subjects aged 18 to 60 years who received 15 µg (0.5 mL) of hemagglutinin (HA) of non-adjuvanted pandemic A/H1N1 influenza vaccine on Day 0.

Arm type	Experimental
Investigational medicinal product name	Swine A/H1N1 Influenza Vaccine (split virion, inactivated)
Investigational medicinal product code	448
Other name	
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

0.5 mL (15 µg), intramuscular to be injected into the deltoid area, single injection on Day 0.

Number of subjects in period 1	9 µg HA	15 µg HA
Started	102	100
Completed	101	99
Not completed	1	1
Consent withdrawn by subject	1	1

Baseline characteristics

Reporting groups	
Reporting group title	9 µg HA
Reporting group description:	
Subjects aged 18 to 60 years who received 9 µg (0.3 mL) of hemagglutinin (HA) of non-adjuvanted pandemic A/H1N1 influenza vaccine on Day 0.	
Reporting group title	15 µg HA
Reporting group description:	
Subjects aged 18 to 60 years who received 15 µg (0.5 mL) of hemagglutinin (HA) of non-adjuvanted pandemic A/H1N1 influenza vaccine on Day 0.	

Reporting group values	9 µg HA	15 µg HA	Total
Number of subjects	102	100	202
Age categorical Units: Subjects			
In utero	0	0	0
Preterm newborn infants (gestational age < 37 wks)	0	0	0
Newborns (0-27 days)	0	0	0
Infants and toddlers (28 days-23 months)	0	0	0
Children (2-11 years)	0	0	0
Adolescents (12-17 years)	0	0	0
Adults (18-64 years)	102	100	202
From 65-84 years	0	0	0
85 years and over	0	0	0
Age continuous Units: years			
arithmetic mean	44.3	43.9	
standard deviation	± 12.1	± 12.3	-
Gender categorical Units: Subjects			
Female	73	66	139
Male	29	34	63
History of seasonal influenza vaccination during the 2009-2010 season Units: Subjects			
Yes	9	6	15
No	93	94	187

End points

End points reporting groups

Reporting group title	9 µg HA
Reporting group description:	
Subjects aged 18 to 60 years who received 9 µg (0.3 mL) of hemagglutinin (HA) of non-adjuvanted pandemic A/H1N1 influenza vaccine on Day 0.	
Reporting group title	15 µg HA
Reporting group description:	
Subjects aged 18 to 60 years who received 15 µg (0.5 mL) of hemagglutinin (HA) of non-adjuvanted pandemic A/H1N1 influenza vaccine on Day 0.	

Primary: Geometric Mean Titers (GMTs) of Antibody Assayed by HAI Method Against A/California (H1N1) Influenza Strain in Healthy Adult Subjects Following Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine

End point title	Geometric Mean Titers (GMTs) of Antibody Assayed by HAI Method Against A/California (H1N1) Influenza Strain in Healthy Adult Subjects Following Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine[1]
End point description:	
Anti-hemagglutinin (HA) antibody (Ab) titers against the swine-origin A/H1N1 strain measured with the hemagglutination inhibition (HAI) method.	
End point type	Primary
End point timeframe:	
Day 0 (pre-vaccination) and Day 21 post-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: Descriptive analyses were performed based on the study groups and the study vaccine administered for this outcome.

End point values	9 µg HA	15 µg HA		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	102	100		
Units: Titers (1/dil)				
geometric mean (confidence interval 95%)				
Day 0 (pre-vaccination)	11.3 (8.62 to 14.7)	8.38 (6.89 to 10.2)		
Day 21 (post-vaccination)	563 (422 to 752)	801 (612 to 1047)		

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of Healthy Adult Subjects with Detectable Antibody titers ≥ 10 (1/dil) Assayed by HAI Method Against A/California (H1N1) Influenza Strain Following Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine

End point title	Percentage of Healthy Adult Subjects with Detectable Antibody titers ≥ 10 (1/dil) Assayed by HAI Method Against A/California (H1N1) Influenza Strain Following Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine[2]

End point description:

Anti-hemagglutinin (HA) antibody (Ab) titers against the swine-origin A/H1N1 strain measured with the hemagglutination inhibition (HAI) method. Detectable antibody titers were defined as titers ≥10 (1/dil) on Day 0 and 21.

End point type	Primary

End point timeframe:

Day 0 (pre-vaccination) and Day 21 post-vaccination

Notes:

[2] - 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: Descriptive analyses were performed based on the study groups and the study vaccine administered for this outcome.

End point values	9 µg HA	15 µg HA		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	102	100		
Units: Percentage of subjects				
number (not applicable)				
Day 0 (pre-vaccination)	35.3	26		
Day 21 (post-vaccination)	100	100		

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of Subjects with Seroprotection to A/California (H1N1) Influenza Strain Following Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine

End point title	Percentage of Subjects with Seroprotection to A/California (H1N1) Influenza Strain Following Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine[3]

End point description:

Anti-hemagglutinin (HA) antibody (Ab) titers against the swine-origin A/H1N1 strain measured with the hemagglutination inhibition (HAI) method. Seroprotection was defined as individual antibody titer ≥40 (1/dil) 21 days after vaccination.

End point type	Primary

End point timeframe:

Day 0 (pre-vaccination) and Day 21 post-vaccination

Notes:

[3] - 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: Descriptive analyses were performed based on the study groups and the study vaccine administered for this outcome.

End point values	9 µg HA	15 µg HA		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	102	100		
Units: Percentage of subjects				
number (not applicable)				
Day 0 (pre-vaccination)	19.6	13		
Day 21 (post-vaccination)	95.9	98		

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of Healthy Adult Subjects Achieving Seroconversion or significant increase in Antibody Assayed by HAI Method Against A/California (H1N1) Influenza Strain After Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine

End point title	Percentage of Healthy Adult Subjects Achieving Seroconversion or significant increase in Antibody Assayed by HAI Method Against A/California (H1N1) Influenza Strain After Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine[4]

End point description:

Anti-hemagglutinin (HA) antibody (Ab) titers against the swine-origin A/H1N1 strain measured with the hemagglutination inhibition (HAI) method. Seroconversion was defined as subjects with a pre-vaccination titer <10 (1/dil) on Day 0, post-vaccination titer ≥40 (1/dil) and significant increase defined as subjects with a pre-vaccination titer ≥10 (1/dil), ≥four-fold increase of the titer (post/pre).

End point type	Primary

End point timeframe:

Day 21 post-vaccination

Notes:

[4] - 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: Descriptive analyses were performed based on the study groups and the study vaccine administered for this outcome.

End point values	9 µg HA	15 µg HA		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	98	99		
Units: Percentage of subjects				
number (not applicable)				
Day 21/Day 0	90.8	97		

Statistical analyses

No statistical analyses for this end point

Primary: Geometric Mean Titers (GMTs) of Antibody Assayed by HAI Method Against A/California (H1N1) Influenza Strain in Healthy Adult Subjects Who Were Seronegative at Baseline After Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine

End point title	Geometric Mean Titers (GMTs) of Antibody Assayed by HAI Method Against A/California (H1N1) Influenza Strain in Healthy Adult Subjects Who Were Seronegative at Baseline After Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine[5]

End point description:

Anti-hemagglutinin (HA) antibody (Ab) titers against the swine-origin A/H1N1 strain measured with the hemagglutination inhibition (HAI) method.

End point type	Primary

End point timeframe:

Day 0 (pre-vaccination) and Day 21 post-vaccination

Notes:

[5] - 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: Descriptive analyses were performed based on the study groups and the study vaccine administered for this outcome.

End point values	9 µg HA	15 µg HA		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	66	74		
Units: Titers (1/dil)				
geometric mean (confidence interval 95%)				
Day 0 (pre-vaccination)	5.08 (4.99 to 5.17)	5.09 (5 to 5.19)		
Day 21 (post-vaccination)	372 (260 to 534)	616 (453 to 839)		

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of Adult Subjects Who Were Seronegative at Baseline with Detectable Antibody titers ≥10 (1/dil) Assayed by HAI Against A/California (H1N1) Influenza Strain After Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine

End point title	Percentage of Adult Subjects Who Were Seronegative at Baseline with Detectable Antibody titers ≥10 (1/dil) Assayed by HAI Against A/California (H1N1) Influenza Strain After Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine[6]

End point description:

Anti-hemagglutinin (HA) antibody (Ab) titers against the swine-origin A/H1N1 strain measured with the hemagglutination inhibition (HAI) method. Detectable antibody titers were defined as titers ≥10 (1/dil) on Day 0 and 21.

End point type	Primary

End point timeframe:

Day 0 (pre-vaccination) and Day 21 post-vaccination

Notes:

[6] - 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: Descriptive analyses were performed based on the study groups and the study vaccine administered for this outcome.

End point values	9 µg HA	15 µg HA		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	66	74		
Units: Percentage of subjects				
number (not applicable)				
Day 0 (pre-vaccination)	0	0		
Day 21 (post-vaccination)	100	100		

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of Subjects Who Were Seronegative at Baseline with Seroprotection to A/California (H1N1) Influenza train Following Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine

End point title	Percentage of Subjects Who Were Seronegative at Baseline with Seroprotection to A/California (H1N1) Influenza train Following Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine[7]

End point description:

Anti-hemagglutinin (HA) antibody (Ab) titers against the swine-origin A/H1N1 strain measured with the hemagglutination inhibition (HAI) method. Seroprotection was defined as individual antibody titer ≥40 (1/dil) 21 days after vaccination.

End point type	Primary

End point timeframe:

Day 0 (pre-vaccination) and Day 21 post-vaccination

Notes:

[7] - 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: Descriptive analyses were performed based on the study groups and the study vaccine administered for this outcome.

End point values	9 µg HA	15 µg HA		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	66	74		
Units: Percentage of subjects				
number (not applicable)				
Day 0 (pre-vaccination)	0	0		
Day 21 (post-vaccination)	93.8	97.3		

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of Adult Subjects Who Were Seronegative at Baseline Achieving Seroconversion or significant increase in Antibody Assayed by HAI Against A/California (H1N1) Influenza Strain After Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine

End point title	Percentage of Adult Subjects Who Were Seronegative at

	Baseline Achieving Seroconversion or significant increase in Antibody Assayed by HAI Against A/California (H1N1) Influenza Strain After Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine[8]

End point description:

Anti-hemagglutinin (HA) antibody (Ab) titers against the swine-origin A/H1N1 strain measured with the hemagglutination inhibition (HAI) method. Seroconversion was defined as subjects with a pre-vaccination titer <10 (1/dil) on Day 0, post-vaccination titer ≥40 (1/dil) and significant increase defined as subjects with a pre-vaccination titer ≥10 (1/dil), ≥four-fold increase of the titer (post/pre).

End point type	Primary

End point timeframe:

Day 21 post-vaccination

Notes:

[8] - 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: Descriptive analyses were performed based on the study groups and the study vaccine administered for this outcome.

End point values	9 µg HA	15 µg HA		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	64	74		
Units: Percentage of subjects				
number (not applicable)				
Day 21/Day 0	93.8	97.3		

Statistical analyses

No statistical analyses for this end point

Primary: Geometric Mean Titers (GMTs) of Antibody Assayed by HAI Method Against A/California (H1N1) Influenza Strain in Healthy Adult Subjects Who Were Seropositive at Baseline After Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine

End point title	Geometric Mean Titers (GMTs) of Antibody Assayed by HAI Method Against A/California (H1N1) Influenza Strain in Healthy Adult Subjects Who Were Seropositive at Baseline After Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine[9]

End point description:

Anti-hemagglutinin (HA) antibody (Ab) titers against the swine-origin A/H1N1 strain measured with the hemagglutination inhibition (HAI) method.

End point type	Primary

End point timeframe:

Day 0 (pre-vaccination) and Day 21 post-vaccination

Notes:

[9] - 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: Descriptive analyses were performed based on the study groups and the study vaccine administered for this outcome.

End point values	9 µg HA	15 µg HA		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	36	26		
Units: Titers (1/dil)				
geometric mean (confidence interval 95%)				
Day 0 (pre-vaccination)	48.5 (30.2 to 77.9)	34.5 (22.9 to 52)		
Day 21 (post-vaccination)	1229 (846 to 1784)	1736 (1106 to 2726)		

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of Healthy Adult Subjects Who Were Seropositive at Baseline with Detectable Antibody titers ≥10 (1/dil) Assayed by HAI Method Against A/California (H1N1) Influenza Strain After Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine

End point title	Percentage of Healthy Adult Subjects Who Were Seropositive at Baseline with Detectable Antibody titers ≥10 (1/dil) Assayed by HAI Method Against A/California (H1N1) Influenza Strain After Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine[10]

End point description:

Anti-hemagglutinin (HA) antibody (Ab) titers against the swine-origin A/H1N1 strain measured with the hemagglutination inhibition (HAI) method. Detectable antibody titers were defined as titers ≥10 (1/dil) on Day 0 and 21.

End point type	Primary

End point timeframe:

Day 0 (pre-vaccination) and Day 21 post-vaccination

Notes:

[10] - 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: Descriptive analyses were performed based on the study groups and the study vaccine administered for this outcome.

End point values	9 µg HA	15 µg HA		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	36	26		
Units: Percentage of subjects				
number (not applicable)				
Day 0 (pre-vaccination)	100	100		
Day 21 (post-vaccination)	100	100		

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of Subjects Who Were Seropositive at Baseline with

Seroprotection to A/California (H1N1) Influenza Strain Following Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine

End point title	Percentage of Subjects Who Were Seropositive at Baseline with Seroprotection to A/California (H1N1) Influenza Strain Following Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine[11]

End point description:

Anti-hemagglutinin (HA) antibody (Ab) titers against the swine-origin A/H1N1 strain measured with the hemagglutination inhibition (HAI) method. Seroprotection was defined as individual antibody titer ≥40 (1/dil) 21 days after vaccination.

End point type	Primary

End point timeframe:

Day 0 (pre-vaccination) and Day 21 post-vaccination

Notes:

[11] - 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: Descriptive analyses were performed based on the study groups and the study vaccine administered for this outcome.

End point values	9 µg HA	15 µg HA		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	36	26		
Units: Percentage of subjects				
number (not applicable)				
Day 0 (pre-vaccination)	55.6	50		
Day 21 (post-vaccination)	100	100		

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of Adult Subjects Who Were Seropositive at Baseline Achieving Seroconversion or Significant Increase in Antibody Assayed by HAI Against A/California (H1N1) Influenza Strain After Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine

End point title	Percentage of Adult Subjects Who Were Seropositive at Baseline Achieving Seroconversion or Significant Increase in Antibody Assayed by HAI Against A/California (H1N1) Influenza Strain After Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine[12]

End point description:

Anti-hemagglutinin (HA) antibody (Ab) titers against the swine-origin A/H1N1 strain measured with the hemagglutination inhibition (HAI) method. Seroconversion was defined as subjects with a pre-vaccination titer <10 (1/dil) on Day 0, post-vaccination titer ≥40 (1/dil) and significant increase defined as subjects with a pre-vaccination titer ≥10 (1/dil), ≥four-fold increase of the titer (post/pre).

End point type	Primary

End point timeframe:

Day 21 post-vaccination

Notes:

[12] - 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: Descriptive analyses were performed based on the study groups and the study vaccine administered for this outcome.

End point values	9 µg HA	15 µg HA		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	34	25		
Units: Percentage of subjects				
number (not applicable)				
Day 21/Day 0	85.3	96		

Statistical analyses

No statistical analyses for this end point

Primary: Geometric Mean Titer Ratios (GMTR) of Antibody Assayed by HAI Method Against A/California (H1N1) Influenza Strain in Healthy Adult Subjects Following Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine

End point title	Geometric Mean Titer Ratios (GMTR) of Antibody Assayed by HAI Method Against A/California (H1N1) Influenza Strain in Healthy Adult Subjects Following Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine[13]

End point description:

Anti-hemagglutinin antibody against A/California (H1N1) Influenza Strain was assayed by the hemagglutinin inhibition assay (HAI) method. Geometric mean titer ratios were Day 21/Day 0 values.

End point type	Primary

End point timeframe:

Day 0 (pre-vaccination) and Day 21 post-vaccination.

Notes:

[13] - 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: Descriptive analyses were performed based on the study groups and the study vaccine administered for this outcome.

End point values	9 µg HA	15 µg HA		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	102	100		
Units: Titer Ratios				
geometric mean (confidence interval 95%)				
A/California (H1N1) GMTR	50.5 (36.7 to 69.4)	95.7 (72.4 to 127)		

Statistical analyses

No statistical analyses for this end point

Primary: Geometric Mean Titer Ratios (GMTR) of Antibody Assayed by HAI Method Against A/California (H1N1) Influenza Strain in Healthy Seronegative Adult Age 18 to 60 Years Following Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine

End point title	Geometric Mean Titer Ratios (GMTR) of Antibody Assayed by HAI Method Against A/California (H1N1) Influenza Strain in Healthy Seronegative Adult Age 18 to 60 Years Following

	Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine[14]

End point description:

Anti-hemagglutinin antibody against A/California (H1N1) Influenza Strain was assayed by the hemagglutinin inhibition assay (HAI) method. Geometric mean titer ratios were Day 21/Day 0 values.

End point type	Primary

End point timeframe:

Day 0 (pre-vaccination) and Day 21 post-vaccination

Notes:

[14] - 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: Descriptive analyses were performed based on the study groups and the study vaccine administered for this outcome.

End point values	9 µg HA	15 µg HA		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	66	74		
Units: Titer ratios				
geometric mean (confidence interval 95%)	73.3 (51.2 to 105)	121 (88.9 to 165)		

Statistical analyses

No statistical analyses for this end point

Primary: Geometric Mean Titer Ratios (GMTR) of Antibody Assayed by HAI Method Against A/California (H1N1) Influenza Strain in Healthy Seropositive Adult Age 18 to 60 Years Following Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine

End point title	Geometric Mean Titer Ratios (GMTR) of Antibody Assayed by HAI Method Against A/California (H1N1) Influenza Strain in Healthy Seropositive Adult Age 18 to 60 Years Following Vaccination with Inactivated, Split Virion Swine-origin A/H1N1 Influenza Vaccine[15]

End point description:

Anti-hemagglutinin antibody against A/California (H1N1) Influenza Strain was assayed by the hemagglutinin inhibition assay (HAI) method. Geometric mean titer ratios were Day 21/Day 0 values.

End point type	Primary

End point timeframe:

day 0 (pre-vaccination) and day 21 post-vaccination

Notes:

[15] - 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: Descriptive analyses were performed based on the study groups and the study vaccine administered for this outcome.

End point values	9 µg HA	15 µg HA		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	36	26		
Units: Titer ratios				
geometric mean (confidence interval 95%)				
A/California (H1N1) GMTR	25.1 (14.1 to 44.4)	47.8 (26.7 to 85.6)		

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information[1]

Timeframe for reporting adverse events:

Adverse event data were collected from Day 0 (post-vaccination) up to Day 21 post-vaccination.

Assessment type	Non-systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	13.0

Reporting groups

Reporting group title	9 µg HA

Reporting group description:

Subjects aged 18 to 60 years who received 9 µg (0.3 mL) of non-adjuvanted pandemic A/H1N1 influenza vaccine on Day 0.

Reporting group title	15 µg HA

Reporting group description:

Subjects aged 18 to 60 years who received 15 µg (0.5 mL) of hemagglutinin (HA) of non-adjuvanted pandemic A/H1N1 influenza vaccine on Day 0.

Notes:

[1] - There are no non-serious adverse events recorded for these results. It is expected that there will be at least one non-serious adverse event reported.
Justification: Solicited injection site, systemic reactions, and unsolicited adverse events were not applicable for this study.

Serious adverse events	9 µg HA	15 µg HA	
Total subjects affected by serious adverse events			
subjects affected / exposed	1 / 102 (0.98%)	2 / 100 (2.00%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Gastric cancer			
subjects affected / exposed	0 / 102 (0.00%)	1 / 100 (1.00%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Immune system disorders			
Drug hypersensitivity			
subjects affected / exposed	0 / 102 (0.00%)	1 / 100 (1.00%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Musculoskeletal and connective tissue disorders			
Intervertebral disc protrusion			

subjects affected / exposed	1 / 102 (0.98%)	0 / 100 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

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

Non-serious adverse events	9 µg HA	15 µg HA	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	0 / 102 (0.00%)	0 / 100 (0.00%)	

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