# 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<br>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<br>Units: years | | | |
| arithmetic mean | 44.3 | 43.9 | |
| standard deviation | ± 12.1 | ± 12.3 | - |
| Gender categorical<br>Units: Subjects | | | |
| Female | 73 | 66 | 139 |
| Male | 29 | 34 | 63 |
| History of seasonal influenza vaccination during the 2009-2010 season<br>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