

# **Clinical trial results:**

Open-label follow-up study to investigate the seropersistence of TBE antibodies and the booster response to a tick-borne encephalitis vaccine in children and adolescents aged 3 - 18 years.

| EudraCT number   | 2005-000767-26  |
|--|---|
| Trial protocol   | AT DE   |
| Global end of trial date   | 25 July 2008  |
|  |   |
| Result version number  | v1 (current)  |
| This version publication date  | 29 June 2016  |
| First version publication date                                       | 30 July 2015  |
|  |   |
|  |   |
|  |   |
| Sponsor protocol code  | 700401  |
|  |   |
| ISRCTN number  | -   |
| ClinicalTrials.gov id (NCT number)                                   | NCT00161967   |
| WHO universal trial number (UTN)                                     | -   |
| Other trial identifiers  | Alias: B9371020   |
| Notes:   |   |
|  |   |
|  |   |
|  |   |
| Sponsor organisation name  | Pfizer Inc.   |
| Sponsor organisation address   | 235 E 42nd Street, New York, United States, NY 10017  |
| Public contact   | Pfizer ClinicalTrials.gov Call Center, Pfizer Inc., 001   |
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| Scientific contact   | 8007181021, ClinicalTrials.gov_Inquiries@pfizer.com   |
| Notes:   | ,   |
|  |   |
|  |   |
|  |   |
| Is trial part of an agreed paediatric investigation plan (PIP)       | No  |
| Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial? | Yes   |
| Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial? | No  |
| Notes:   | -   |
|  |   |

| Analysis stage                                       | Final        |
|--|--------------|
| Date of interim/final analysis                       | 23 July 2009 |
| Is this the analysis of the primary completion data? | No           |
|  |              |
| Global end of trial reached?                         | Yes          |
| Global end of trial date                             | 25 July 2008 |
| Was the trial ended prematurely?                     | No           |
|  | •            |

Notes:

## Main objective of the trial:

To assess Tick-Borne Encephalitis (TBE) antibody persistence 24 months and 34 months after the third TBE vaccination with FSME-IMMUN 0.25 milliliter (mL), by means of Enzyme-Linked immunosorbent Assay (ELISA) (IMMUNOZYM FSME immunoglobulin G [IgG]) and neutralization test (NT).

To assess TBE antibody response to a booster vaccination with FSME-IMMUN 0.25 mL or FSME-IMMUN 0.5 mL administered 36 months after the third vaccination, by means of ELISA and NT.

### Protection of trial subjects:

The study was in compliance with the ethical principles derived from the Declaration of Helsinki and in compliance with all International Conference on Harmonization (ICH) Good Clinical Practice (GCP) Guidelines. All the local regulatory requirements pertinent to safety of trial subjects were followed.

## Background therapy: -

| Evidence for comparator: -                                |             |
|---|-------------|
| Actual start date of recruitment                          | 09 May 2005 |
| Long term follow-up planned                               | No          |
| Independent data monitoring committee (IDMC) involvement? | Yes         |

### Notes:

| Country: Number of subjects enrolled | Germany: 160 |
|--------------------------------------|--------------|
| Country: Number of subjects enrolled | Austria: 79  |
| Country: Number of subjects enrolled | Poland: 119  |
| Worldwide total number of subjects   | 358          |
| EEA total number of subjects         | 358          |

## Notes:

| In utero                                  | 0   |
|---|-----|
| Preterm newborn - gestational age < 37 wk | 0   |
| Newborns (0-27 days)                      | 0   |
| Infants and toddlers (28 days-23 months)  | 59  |
| Children (2-11 years)                     | 220 |
| Adolescents (12-17 years)                 | 79  |

| Adults (18-64 years) | 0 |
|----------------------|---|
| From 65 to 84 years  | 0 |
| 85 years and over    | 0 |

## Recruitment details: -

### Screening details:

The study was carried out at 4 study sites in 3 European countries (Austria, Germany and Poland). It started on 09 May 2005 and completed on 25 Jul 2008.

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

| 3 or 4 Doses FSME-IMMUN |
|-------------------------|
|                         |

## Arm description:

Subjects received primary immunization (3 vaccinations at 0, 1 and 6 Month with FSME-IMMUN 0.25 milliliter [mL]) in study 209 [NCT00161863] were offered a booster dose (4th dose) 3-, 4-, or 5-year after the third vaccination, depending on their TBE titers. Subjects with high TBE antibody levels (ELISA greater than [>] 1000 Vienna Units per milliliter [VIE U/ml] and positive NT result) at 24, 34, 46, and/or 58 months after the third vaccination were not to receive the 4th dose.

| Arm type                               | Experimental                                   |
|--|--|
| Investigational medicinal product name | FSME-IMMUN                                     |
| Investigational medicinal product code |  |
| Other name                             |  |
| Pharmaceutical forms                   | Suspension for injection in pre-filled syringe |
| Routes of administration               | Intramuscular use                              |

## Dosage and administration details:

Subjects received a booster dose (4th dose) of FSME-IMMUN 0.25 mL (age less than [<] 16 years) or 0.5 mL (age greater than or equal to [>=] 16 years old) 3-, 4-, or 5-years after the third vaccination in study 209 if the TBE antibody level was ELISA <= 1000 VIE U/mL or negative NT results at 24, 34, 46, and/or 58 months after the third vaccination from study 209.

|  | 3 or 4 Doses FSME-<br>IMMUN |
|--|-----------------------------|
| Started  | 358                         |
| 36-Month Booster Dose                                | 175 [1]                     |
| 48-Month Booster Dose                                | 29 [2]                      |
| 60-Month Booster Dose                                | 1 <sup>[3]</sup>            |
| Completed  | 324                         |
| Not completed  | 34                          |
| Not possible to withdraw blood from the volunteer    | 1                           |
| Consent withdrawn by subject                         | 4                           |
| 'Remove of wire of the ulna and radius in hospital ' | 1                           |
| 'Already vaccinated by mistake '                     | 2                           |

| No return                                  | 4 |
|--|---|
| Subject dropped out due to desensitization | 1 |
| Lost to follow-up                          | 1 |
| Decision of Medical Director               | 8 |
| Refused the blood draw                     | 5 |
| Not given study vaccination                | 5 |
| Subject changed to/went to family doctor   | 2 |

#### Notes:

[1] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that completed, minus those who left.

Justification: Not all subjects who enrolled in this study, received a booster vaccination. Subjects with high TBE antibody levels (ELISA >1000 VIE U/ml and positive NT result) at 24, 34, 46, and/or 58 months after the third vaccination did not received the 4th dose.

[2] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that completed, minus those who left.

Justification: Not all subjects who enrolled in this study, received a booster vaccination. Subjects with high TBE antibody levels (ELISA >1000 VIE U/ml and positive NT result) at 24, 34, 46, and/or 58 months after the third vaccination did not received the 4th dose.

[3] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that completed, minus those who left.

Justification: Not all subjects who enrolled in this study, received a booster vaccination. Subjects with high TBE antibody levels (ELISA >1000 VIE U/ml and positive NT result) at 24, 34, 46, and/or 58 months after the third vaccination did not received the 4th dose.

| Reporting group title | 3 or 4 Doses FSME-IMMUN |
|-----------------------|-------------------------|

## Reporting group description:

Subjects received primary immunization (3 vaccinations at 0, 1 and 6 Month with FSME-IMMUN 0.25 milliliter [mL]) in study 209 [NCT00161863] were offered a booster dose (4th dose) 3-, 4-, or 5-year after the third vaccination, depending on their TBE titers. Subjects with high TBE antibody levels (ELISA greater than [>] 1000 Vienna Units per milliliter [VIE U/ml] and positive NT result) at 24, 34, 46, and/or 58 months after the third vaccination were not to receive the 4th dose.

|                    | 3 or 4 Doses FSME-<br>IMMUN | Total |   |
|--------------------|-----------------------------|-------|---|
| Number of subjects | 358                         | 358   |   |
| Age categorical    |                             |       |   |
| Units: Subjects    |                             |       |   |
|                    |                             |       | • |
| Age continuous     |                             |       |   |
| Units: years       |                             |       |   |
| arithmetic mean    | 7.519553                    |       |   |
| standard deviation | ± 4.391666                  | -     |   |
| Gender categorical |                             |       |   |
| Units: Subjects    |                             |       |   |
| Female             | 178                         | 178   |   |
| Male               | 180                         | 180   |   |

| Reporting group title |  |  |
|-----------------------|--|--|

| End point title   | Seropositivity Rate Measured by ELISA and/or NT According to Adner et al., 2001 at 24 Months After the Third Vaccination in Study 209 by First Dose Age Group <sup>[2]</sup> |                 |                 |  |
|---|--|-----------------|-----------------|--|
| End point description:  | -  |                 |                 |  |
| Proportion of subjects with ELISA >126 were evaluable within the specified age  |  |                 | signifies those | e subjects who                         |
| End point type  | Primary  |                 |                 |  |
| End point timeframe:  | •  |                 |                 |  |
| 24 months after the third vaccination in  | study 209  |                 |                 |  |
| Notes:  |  |                 |                 |  |
| [2] - No statistical analyses have been least one statistical analysis for each pr Justification: Only descriptive statistics (95% CI) were | imary end point.   |                 | ·               |  |
|   | 3 or 4 Doses<br>FSME-IMMUN   |                 |                 |  |
| Subject group type  | Reporting group  |                 |                 |  |
| Number of subjects analysed   | 358  |                 |                 |  |
| Units: Percentage of Subjects   |  |                 |                 |  |
| number (confidence interval 95%)  |  |                 |                 |  |
| 1-2 years (N= 75)   | 100 (95.2 to<br>100)   |                 |                 |  |
| 3-6 years (N= 70)   | 98.6 (92.3 to<br>100)  |                 |                 |  |
| 7-15 years (N= 213)   | 97.7 (94.6 to<br>99.2)   |                 |                 |  |
| 12-15 years (N= 79)   | 98.7 (93.1 to<br>100)  |                 |                 |  |
|   |  |                 |                 |  |
| No statistical analyses for this end poin   | t  |                 |                 |  |
|   |  |                 |                 |  |
| End point title   |  | 01 at 34 Months | s After the Thi | r NT According to<br>rd Vaccination in |
| End point description:  | -  |                 |                 |  |

| · | Seropositivity Rate Measured by ELISA and/or NT According to Adner et al., 2001 at 34 Months After the Third Vaccination in Study 209 by First Dose Age Group <sup>[3]</sup> |
|---|--|
|   | Study 203 by Thist 2036 rige Group   |

Proportion of subjects with ELISA >126 VIE U/mL or NT >=10. Here, 'N' signifies those subjects who evaluable within the specified age group in study 209.

| End point type Primary |  |
|------------------------|--|
|------------------------|--|

End point timeframe:

34 months after the third vaccination in study 209

## 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:

|                                  | 3 or 4 Doses<br>FSME-IMMUN |  |  |
|----------------------------------|----------------------------|--|--|
| Subject group type               | Reporting group            |  |  |
| Number of subjects analysed      | 358                        |  |  |
| Units: Percentage of Subjects    |                            |  |  |
| number (confidence interval 95%) |                            |  |  |
| 1-2 years (N= 73)                | 100 (95.1 to<br>100)       |  |  |
| 3-6 years (N= 68)                | 98.5 (92.1 to<br>100)      |  |  |
| 7-15 years (N= 212)              | 97.2 (93.9 to<br>99)       |  |  |
| 12-15 years (N= 78)              | 97.4 (91 to<br>99.7)       |  |  |

| • | Seropositivity Rate Measured by ELISA and/or NT According to Adner et al., 2001 at 46 Months After the Third Vaccination in |
|---|---|
|   | Study 209 by First Dose Age Group <sup>[4]</sup>  |

## End point description:

Proportion of subjects with ELISA >126 VIE U/mL or NT >=10. Here, 'N' signifies those subjects who were evaluable within the specified age group in study 209.

| End point type  | Primary                               |
|-----------------|---------------------------------------|
| Life point type | i i i i i i i i i i i i i i i i i i i |

End point timeframe:

46 months after the third vaccination in study 209

#### 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:

|                                  | 3 or 4 Doses<br>FSME-IMMUN |  |  |
|----------------------------------|----------------------------|--|--|
| Subject group type               | Reporting group            |  |  |
| Number of subjects analysed      | 358                        |  |  |
| Units: Percentage of Subjects    |                            |  |  |
| number (confidence interval 95%) |                            |  |  |
| 1-2 years (N= 73)                | 98.6 (92.6 to<br>100)      |  |  |
| 3-6 years (N= 68)                | 97.1 (89.8 to 99.6)        |  |  |
| 7-15 years (N= 212)              | 92.9 (88.6 to<br>96)       |  |  |
| 12-15 years (N= 78)              | 91 (82.4 to<br>96.3)       |  |  |

| No statistical analyses for this end point   |                            |                  |  |                 |
|--|----------------------------|------------------|--|-----------------|
|  |                            |                  |  |                 |
|  |                            |                  |  |                 |
|  |                            |                  |  |                 |
|  |                            |                  |  |                 |
| End point title  | Seropositivity R           | ate Measured by  | y ELISA and/or N   | NT According to |
| ·  | Adner et al., 20           | 01 at 58 Months  | After the Third  |                 |
|  | Study 209 by Fi            | rst Dose Age Gr  | oup <sup>[5]</sup>   |                 |
| End point description:   |                            |                  |  |                 |
| Proportion of subjects with ELISA >126 were evaluable within the specified age             |                            |                  | signifies those s  | ubjects who     |
| End point type   | Primary                    |                  |  |                 |
| End point type  End point timeframe:   | r i i i i a i y            |                  |  |                 |
| •  | ctudy 200                  |                  |  |                 |
| 58 months after the third vaccination in Notes:  | study 209                  |                  |  |                 |
|  | nacified for this          | awimanu and nair | at This avecated   | l though in at  |
| [5] - No statistical analyses have been s<br>least one statistical analysis for each print |                            | orimary end poir | it. It is expected   | there is at     |
| Justification:   | , p                        |                  |  |                 |
| Only descriptive statistics (95% CI) were  | e planned, no for          | mal hypothesis   | testing analysis   | performed.      |
|  | 1                          |                  | 1  | 1               |
|  | 3 or 4 Doses<br>FSME-IMMUN |                  |  |                 |
| Subject group type   | Reporting group            |                  |  |                 |
| Number of subjects analysed  | 358                        |                  |  |                 |
| Units: Percentage of Subjects  | 330                        |                  |  |                 |
| number (confidence interval 95%)   |                            |                  |  |                 |
| 1-2 years (N= 73)  | 87.7 (77.9 to              |                  |  |                 |
| 1-2 years (N= 73)  | 94.2)                      |                  |  |                 |
| 3-6 years (N= 68)  | 95.6 (87.6 to              |                  |  |                 |
| 7.15 (1) 242)  | 99.1)                      |                  |  |                 |
| 7-15 years (N= 212)  | 84 (78.3 to<br>88.6)       |                  |  |                 |
| 12-15 years (N= 78)  | 79.5 (68.8 to              |                  |  |                 |
| ,  | 87.8)                      |                  |  |                 |
|  |                            |                  |  |                 |
|  |                            |                  |  |                 |
|  |                            |                  |  |                 |
|  |                            |                  |  |                 |
|  |                            |                  |  |                 |
| No statistical analyses for this end point   |                            |                  |  |                 |
|  |                            |                  |  |                 |
|  |                            |                  |  |                 |
|  |                            |                  |  |                 |
|  |                            |                  |  |                 |
| End point title  | Seropositivity R           | ate Measured by  | y ELISA and/or N   | IT According to |
| ·  | Adner et al., 20           | 01 After the 36  | Month Booster V  |                 |
| Find unlink deposits the second  | this Study by F            | ırst Dose Age G  | roup <sup>[0]</sup>  |                 |
| End point description:   |                            | NT - 40          | and a substitute of the state o |                 |
| Proportion of subjects with ELISA > 126 Booster Vaccination at Month 36. Full an           |                            |                  |  |                 |
| vaccination at 36 Month after the third v  |                            |                  |  |                 |
| after the booster vaccination. Here, 'N' s   | ignifies those su          | bjects who recei | ved the correspond   | onding booster  |
| vaccination at Month 36 and were evalu   |                            | pecified age gro | oup in study 209   |                 |
| End point type   | Primary                    |                  |  | _               |

| End point timeframe:  |   |  |  |  |
|---|---|--|--|--|
| 21-35 days after 36-month booster dose  |   |  |  |  |
| Notes:  |   |  |  |  |
| [6] - No statistical analyses have been spleast one statistical analysis for each prin Justification: Only descriptive statistics (95% CI) were   | nary end point.   | , ,  | ·  |  |
|   | 3 or 4 Doses<br>FSME-IMMUN  |  |  |  |
| Subject group type  | Reporting group   |  |  |  |
| Number of subjects analysed   | 174   |  |  |  |
| Units: Percentage of Subjects   |   |  |  |  |
| number (confidence interval 95%)  |   |  |  |  |
| FSME-IMMUN 0.25mL: 1-2 years (N= 25)  | 100 (86.3 to<br>100)  |  |  |  |
| FSME-IMMUN 0.25mL: 3-6 years (N= 24)  | 100 (85.8 to<br>100)  |  |  |  |
| FSME-IMMUN 0.25mL: 7-15 years (N= 89)   | 100 (95.9 to<br>100)  |  |  |  |
| FSME-IMMUN 0.5mL: 7-15 years (N= 36)  | 100 (90.3 to<br>100)  |  |  |  |
|   |   |  |  |  |
|   | Seropositivity Rate M   |  |  |  |
| End point title   | Seropositivity Rate M<br>Adner et al., 2001 Af<br>this Study by First D   | ter the 48   | Month Boos   |  |
| End point title  End point description:   | Adner et al., 2001 At<br>this Study by First D  | ter the 48 ose Age Gro                               | Month Boos<br>oup <sup>[7]</sup>   | ter Vaccination in   |
| End point title  End point description:  Proportion of subjects with ELISA >126 V Booster Vaccination at Month 48. Full analysecination at 48 Month after the third variety the booster vaccination. Here, 'N' si   | Adner et al., 2001 Af<br>this Study by First D<br>/IE U/mL or with NT a<br>alysis dataset include<br>accination in the stud<br>gnifies those subjects | >=10 amor<br>d subjects<br>y 209, and<br>s who recei | Month Boosing Sup <sup>[7]</sup> In subjects who receive with assay wed the corr | ter Vaccination in who received d a booster results 21-35 days |
| End point title  End point description:  Proportion of subjects with ELISA >126 V Booster Vaccination at Month 48. Full and vaccination at 48 Month after the third value of the booster vaccination. Here, 'N' sivaccination at Month 48 and were evalua | Adner et al., 2001 Af<br>this Study by First D<br>/IE U/mL or with NT a<br>alysis dataset include<br>accination in the stud<br>gnifies those subjects | >=10 amor<br>d subjects<br>y 209, and<br>s who recei | Month Boosing Sup <sup>[7]</sup> In subjects who receive with assay wed the corr | ter Vaccination in who received d a booster results 21-35 days |

21-35 days after 48-month booster dose

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:

|                                  | 3 or 4 Doses<br>FSME-IMMUN |  |  |
|----------------------------------|----------------------------|--|--|
| Subject group type               | Reporting group            |  |  |
| Number of subjects analysed      | 29                         |  |  |
| Units: Percentage of Subjects    |                            |  |  |
| number (confidence interval 95%) |                            |  |  |

| FSME-IMMUN 0.25mL: 1-2 years (N= 6)  | 100 (54.1 to<br>100) |  |  |
|--------------------------------------|----------------------|--|--|
| FSME-IMMUN 0.25mL: 3-6 years (N= 6)  | 100 (54.1 to<br>100) |  |  |
| FSME-IMMUN 0.25mL: 7-15 years (N= 6) | 100 (54.1 to<br>100) |  |  |
| FSME-IMMUN 0.5mL: 7-15 years (N= 11) | 100 (71.5 to<br>100) |  |  |

| End point title | Seropositivity Rate Measured by ELISA and/or NT According to |
|-----------------|--|
| ·               | Adner et al., 2001 After the 60 Month Booster Vaccination in |
|                 | this Study by First Dose Age Group <sup>[8]</sup>            |

### End point description:

Proportion of subjects with ELISA >126 VIE U/mL or with NT >=10 among subjects who received Booster Vaccination at Month 60. Full analysis dataset included subjects who received a booster vaccination at 60 Month after the third vaccination in the study 209, and with assay results 21-35 days after the booster vaccination. Here, 'N' signifies the subjects who received the corresponding booster vaccination at Month 60 and were evaluable within the specified age group in study 209.

End point type Primary

End point timeframe:

21-35 days after 60-month booster dose

### 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:

|                                  | 3 or 4 Doses<br>FSME-IMMUN |  |  |
|----------------------------------|----------------------------|--|--|
| Subject group type               | Reporting group            |  |  |
| Number of subjects analysed      | 1                          |  |  |
| Units: Percentage of Subjects    |                            |  |  |
| number (confidence interval 95%) |                            |  |  |
| FSME-IMMUN 0.5mL: 7-15 years     | 100 (2.5 to<br>100)        |  |  |

| No statistical analyses for this end point |   |
|--|---|
|  |   |
|  |   |
|  |   |
| End point title                            | Seropositivity Rate Measured by ELISA at Each Available Time<br>Point After the Third Vaccination in the Study 209 by First Dose<br>Age Group |

### End point description:

Proportion of subjects with ELISA concentrations >126 VIE U/mL and 95% confidence interval (CI) were presented. Results were summarized for the applicable categories based on the time point of assessment, dose of FSME-IMMUN received in current study (0.25 mL and 0.5 mL) and age of the subject at first vaccination in study 209: 1-2 years, 3-6 years, 7-15 years, and 12-15 years. Here, 'N' signifies subjects of the mentioned combination of timepoint/age group in study 209/booster dose.

End point type Secondary

## End point timeframe:

1, 24, 34, 46, 58 months after the third vaccination in study 209; 21-35 days after 36-, 48- or 60- month booster dose

| <u> </u>   | I                       | I | Ī |
|--|-------------------------|---|---|
|  | 3 or 4 Doses FSME-IMMUN |   |   |
| Subject group type                               | Reporting group         |   |   |
| Number of subjects analysed                      | 358                     |   |   |
| Units: Percentage of Subjects                    |                         |   |   |
| number (confidence interval 95%)                 |                         |   |   |
| 1 month after third dose:1-2years (N= 75)        | 100 (95.2 to<br>100)    |   |   |
| 1 month after third dose:3-6years (N= 70)        | 100 (94.9 to<br>100)    |   |   |
| 1 month after third dose:7-15years (N= 213)      | 99.5 (97.4 to<br>100)   |   |   |
| 1 month after third dose:12-15years (N= 79)      | 98.7 (93.1 to<br>100)   |   |   |
| 24 months after third dose:1-2years (N= 75)      | 100 (95.2 to<br>100)    |   |   |
| 24 months after third dose:3-6years (N= 70)      | 98.6 (92.3 to<br>100)   |   |   |
| 24 months after third dose:7-15years (N= 213)    | 93 (88.7 to 96)         |   |   |
| 24 months after third dose:12-<br>15years(N= 79) | 92.4 (84.2 to<br>97.2)  |   |   |
| 34 months after third dose:1-2years (N= 73)      | 100 (95.1 to<br>100)    |   |   |
| 34 months after third dose:3-6years (N= 68)      | 98.5 (92.1 to<br>100)   |   |   |
| 34 months after third dose:7-15years (N= 212)    | 94.8 (90.9 to<br>97.4)  |   |   |
| 34 months after third dose:12-<br>15years(N= 78) | 93.6 (85.7 to<br>97.9)  |   |   |
| 46 month after third dose:1-2years (N= 73)       | 99.7)                   |   |   |
| 46 months after third dose:3-6years (N= 68)      | 95.6 (87.6 to<br>99.1)  |   |   |
| 46 months after third dose:7-15years (N= 210)    | 86.2 (80.8 to<br>90.6)  |   |   |
| 46 months after third dose:12-15years (N= 78)    | 83.3 (73.2 to<br>90.8)  |   |   |
| 58 months after third dose:1-2years (N= 73)      | 75.3 (63.9 to<br>84.7)  |   |   |
| 58 months after third dose:3-6years (N= 68)      | 83.8 (72.9 to<br>91.6)  |   |   |
| 58 months after third dose:7-15years (N= 210)    | 69.5 (62.8 to<br>75.7)  |   |   |
| 58 months after third dose:12-<br>15years(N= 78) | 69.2 (57.8 to<br>79.2)  |   |   |

| After 36 month booster dose 0.25mL:1-<br>2years(N=25)  | 100 (86.3 to<br>100)   |  |
|--|------------------------|--|
| After 36 month booster dose 0.25mL:3-6years(N=24)      | 95.8 (78.9 to<br>99.9) |  |
| After 36 month booster dose 0.25mL:7-<br>15years(N=89) | 97.8 (92.1 to<br>99.7) |  |
| After 36 month booster dose 0.5mL:7-<br>15years(N=36)  | 100 (90.3 to<br>100)   |  |
| After 48 month booster dose 0.25mL:1-<br>2years(N=6)   | 100 (54.1 to<br>100)   |  |
| After 48 month booster dose 0.25mL:3-6years(N=6)       | 100 (54.1 to<br>100)   |  |
| After 48 month booster dose 0.25mL:7-<br>15years(N=6)  | 100 (54.1 to<br>100)   |  |
| After 48 month booster dose 0.5mL:7-<br>15years(N=11)  | 100 (71.5 to<br>100)   |  |
| After 60 month booster dose 0.5mL:7-<br>15years(N=1)   | 100 (2.5 to<br>100)    |  |

| End point title | Seropositivity Rate Measured by NT According to Adner et al.,    |
|-----------------|--|
| ·               | 2001 at Each Available Time Point After the Third Vaccination in |
|                 | the Study 209 by First Dose Age Group                            |

### End point description:

Proportion of subjects with NT titer >=10 and 95% CI were presented. Results were summarized for the applicable categories based on the time point of assessment, dose of FSME-IMMUN received in current study (0.25 mL and 0.5 mL) and age of the subject at first vaccination in study 209: 1-2 years, 3-6 years, 7-15 years, and 12-15 years. Here, 'N' signifies subjects of the mentioned combination of timepoint/age group in study 209/booster dose.

| End point type Secondary |
|--------------------------|
|--------------------------|

## End point timeframe:

1, 24, 34, 46, 58 months after the third vaccination in study 209; 21-35 days after 36-, 48- or 60-month booster dose

|   | 3 or 4 Doses<br>FSME-IMMUN |  |  |
|---|----------------------------|--|--|
| Subject group type                          | Reporting group            |  |  |
| Number of subjects analysed                 | 358                        |  |  |
| Units: Percentage of Subjects               |                            |  |  |
| number (confidence interval 95%)            |                            |  |  |
| 1 month after third dose:1-2years (N= 75)   | 100 (95.2 to<br>100)       |  |  |
| 1 month after third dose:3-6years (N= 70)   | 98.6 (92.3 to<br>100)      |  |  |
| 1 month after third dose:7-15years (N= 213) | 99.5 (97.4 to<br>100)      |  |  |

| 1 month after third dose:12-15years (N= 79)            | 98.7 (93.1 to<br>100)  |  |  |
|--|------------------------|--|--|
| 24 months after third dose:1-2years (N= 75)            | 100 (95.2 to<br>100)   |  |  |
| 24 months after third dose:3-6years (N= 70)            | 98.6 (92.3 to<br>100)  |  |  |
| 24 months after third dose:7-15years (N= 213)          | 97.7 (94.6 to<br>99.2) |  |  |
| 24 months after third dose:12-<br>15years(N= 79)       | 98.7 (93.1 to<br>100)  |  |  |
| 34 months after third dose:1-2years (N= 73)            | 100 (95.1 to<br>100)   |  |  |
| 34 months after third dose:3-6years (N= 68)            | 98.5 (92.1 to<br>100)  |  |  |
| 34 months after third dose:7-15years (N= 212)          | 97.2 (93.9 to<br>99)   |  |  |
| 34 months after third dose:12-<br>15years(N= 78)       | 97.4 (91 to<br>99.7)   |  |  |
| 46 month after third dose:1-2years (N= 73)             | 94.5 (86.6 to<br>98.5) |  |  |
| 46 months after third dose:3-6years (N= 68)            | 97.1 (89.8 to<br>99.6) |  |  |
| 46 months after third dose:7-15years (N= 211)          | 91.9 (87.4 to<br>95.2) |  |  |
| 46 months after third dose:12-<br>15years(N= 77)       | 88.3 (79 to<br>94.5)   |  |  |
| 58 months after third dose:1-2years (N= 73)            | 86.3 (76.2 to<br>93.2) |  |  |
| 58 months after third dose:3-6years (N= 68)            | 95.6 (87.6 to<br>99.1) |  |  |
| 58 months after third dose:7-15years (N= 210)          | 81.9 (76 to<br>86.9)   |  |  |
| 58 months after third dose:12-<br>15years(N= 76)       | 75 (63.7 to<br>84.2)   |  |  |
| After 36 month booster dose 0.25mL:1-<br>2years(N=25)  | 100 (86.3 to<br>100)   |  |  |
| After 36 month booster dose 0.25mL:3-6years(N=24)      | 100 (85.8 to<br>100)   |  |  |
| After 36 month booster dose 0.25mL:7-<br>15years(N=88) | 100 (95.9 to<br>100)   |  |  |
| After 36 month booster dose 0.5mL:7-<br>15years(N=36)  | 100 (90.3 to<br>100)   |  |  |
| After 48 month booster dose 0.25mL:1-<br>2years(N=6)   | 100 (54.1 to<br>100)   |  |  |
| After 48 month booster dose 0.25mL:3-<br>6years(N=6)   | 100 (54.1 to<br>100)   |  |  |
| After 48 month booster dose 0.25mL:7-<br>15years(N=6)  | 100 (54.1 to<br>100)   |  |  |
| After 48 month booster dose 0.5mL:7-<br>15years(N=11)  | 100 (71.5 to<br>100)   |  |  |
| After 60 month booster dose 0.5mL:7-<br>15years(N=1)   | 100 (2.5 to<br>100)    |  |  |

| · | Geometric Mean Antibody Concentration (GMC) as Measured by ELISA at Each Available Time Point After the Third Vaccination in the Study 209 by First Dose Age Group |
|---|--|
|   | in the start for the start go areas  |

### End point description:

Antibody GMC for TBE as measured by ELISA for subjects presented. GMC and corresponding 2-sided 95% CIs were evaluated. Results were summarized for the applicable categories based on the time point of assessment, dose of FSME-IMMUN received in current study (0.25 mL and 0.5 mL) and age of the subject at first vaccination in study 209: 1-2 years, 3-6 years, 7-15 years, and 12-15 years. Here - 99999 and 99999 indicates lower and upper limit of CI. CI was not estimable as number of subjects evaluable for 60-Month booster dose was 1. Here, 'N' signifies subjects of the mentioned combination of timepoint/age group in study 209/booster dose.

| 1 /1 | End point type | Secondary |
|------|----------------|-----------|
|------|----------------|-----------|

## End point timeframe:

1, 24, 34, 46, 58 months after the third vaccination in study 209; 21-35 days after 36-, 48- or 60-month booster dose

|  | 3 or 4 Doses<br>FSME-IMMUN   |  |  |
|--|------------------------------|--|--|
| Subject group type                               | Reporting group              |  |  |
| Number of subjects analysed                      | 358                          |  |  |
| Units: Vienna Units per milliliter(VIE<br>U/mL)  |                              |  |  |
| geometric mean (confidence interval<br>95%)      |                              |  |  |
| 1 month after third dose:1-2years (N= 75)        | 9320.9 (8137<br>to 10677.1)  |  |  |
| 1 month after third dose:3-6years (N= 70)        | 7999.5 (6614.2<br>to 9674.9) |  |  |
| 1 month after third dose:7-15years (N= 213)      | 4159.9 (3665.3<br>to 4721.2) |  |  |
| 1 month after third dose:12-15years (N= 79)      | 2908.9 (2308<br>to 3666.4)   |  |  |
| 24 months after third dose:1-2years (N= 75)      | 1836 (1526.7<br>to 2207.8)   |  |  |
| 24 months after third dose:3-6years (N= 70)      | 1626.1 (1332.8<br>to 1984)   |  |  |
| 24 months after third dose:7-15years (N= 213)    | 838.2 (731.4<br>to 960.7)    |  |  |
| 24 months after third dose:12-<br>15years(N= 79) | 697.3 (559.8<br>to 868.5)    |  |  |
| 34 months after third dose:1-2years (N= 73)      | 1420.5 (1187.6<br>to 1699.2) |  |  |
| 34 months after third dose:3-6years (N= 68)      | 1388.5 (1135<br>to 1698.6)   |  |  |
| 34 months after third dose:7-15years (N= 212)    | 793.9 (694 to 908.2)         |  |  |
| 34 months after third dose:12-<br>15years(N= 78) | 688.7 (538.6<br>to 880.7)    |  |  |
| 46 month after third dose:1-2years ( $N=73$ )    | 863 (666.9 to<br>1116.9)     |  |  |
| 46 months after third dose:3-6years (N= 68)      | 858.7 (662.5<br>to 1113)     |  |  |

| 46 months after third dose:7-15years (N= 210)         | 404.3 (340.2<br>to 480.4)     |  |
|---|-------------------------------|--|
| 46 months after third dose:12-<br>15years(N= 78)      | 367.3 (273.3<br>to 493.7)     |  |
| 58 month after third dose:1-2years (N= 73)            | 568.9 (401.6<br>to 805.7)     |  |
| 58 months after third dose:3-6years (N= 68)           | 631.6 (443.2<br>to 900.1)     |  |
| 58 months after third dose:7-15years (N= 210)         | 245.6 (195.6<br>to 308.4)     |  |
| 58 months after third dose:12-<br>15years(N= 78)      | 219.5 (150.7<br>to 319.6)     |  |
| After 36 month booster dose 0.25mL:1-<br>2years(N=25) | 8686.5 (6077.6<br>to 12415.4) |  |
| After 36 month booster dose 0.25mL:3-6years(N=24)     | 5867.5 (3195.4<br>to 10774.2) |  |
| After 36 month booster dose 0.25mL:7-<br>15years(N=89 | 3805 (2837.3<br>to 5102.6)    |  |
| After 36 month booster dose 0.5mL:7-<br>15years(N=36) | 2737.6 (1886.4<br>to 3972.9)  |  |
| After 48 month booster dose 0.25mL:1-<br>2years(N=6)  | 7636.3 (6165.7<br>to 9457.6)  |  |
| After 48 month booster dose 0.25mL:3-6years(N=6)      | 5373.8 (2600.9<br>to 11103.2) |  |
| After 48 month booster dose 0.25mL:7-<br>15years(N=6) | 8400.8 (3862.1<br>to 18273.3) |  |
| After 48 month booster dose 0.5mL:7-<br>15years(N=11) | 5483.4 (3389.6<br>to 8870.7)  |  |
| After 60 month booster dose 0.5mL:7-<br>15years(N=1)  | 1001 (-99999<br>to 99999)     |  |

| Geometric Mean Antibody Titer (GMT) as Measured by NT According to Adner et al., 2001 at Each Available Time Point After the Third Vaccination in the Study 209 by First Dose Age Group |
|---|
|   |

## End point description:

GMT for NT and corresponding 2-sided 95% CIs were evaluated. Results were summarized for the applicable categories based on the time point of assessment, dose of FSME-IMMUN received in current study (0.25 mL and 0.5 mL) and age of the subject at first vaccination in study 209: 1-2 years, 3-6 years, 7-15 years, and 12-15 years. Here, -99999 and 99999 indicates lower and upper limit of CI. CI was not estimable as number of subjects evaluable for 60-Month booster dose was 1. Here, 'N' signifies subjects of the mentioned combination of timepoint/age group in study 209/booster dose.

End point type Secondary

End point timeframe:

1, 24, 34, 46, 58 months after the third vaccination in study 209; 21-35 days after 36-, 48- or 60-

|                    | 3 or 4 Doses<br>FSME-IMMUN |  |  |
|--------------------|----------------------------|--|--|
| Subject group type | Reporting group            |  |  |

Number of subjects analysed

| After 48 month booster dose 0.25mL:1-<br>2years(N=6)  | 570.2 (423.7<br>to 767.3) |  |  |
|---|---------------------------|--|--|
| After 48 month booster dose 0.25mL:3-6years(N=6)      | 522.7 (310.7<br>to 879.5) |  |  |
| After 48 month booster dose 0.25mL:7-<br>15years(N=6) | 553.9 (382.1<br>to 803)   |  |  |
| After 48 month booster dose 0.5mL:7-<br>15years(N=11) | 489.6 (337.1<br>to 711.1) |  |  |
| After 60 month booster dose 0.5mL:7-<br>15years(N=1)  | 80 (-99999 to<br>99999)   |  |  |

| No statistical analyses for this end point |  |
|--|--|
|--|--|

| End point title | Geometric Mean of Fold Increase in Antibody Concentrations |
|-----------------|--|
|                 | After the Booster Vaccination as Compared to Before the    |
|                 | Booster Vaccination as Measured by ELISA by First Dose Age |
|                 | Group  |

## End point description:

Geometric mean of fold increase in TBE antibody concentrations as measured by ELISA and 95% CIs were evaluated. Results were summarized for the applicable categories based on the dose and timepoint of FSME-IMMUN received and age of the subject at first vaccination: 1-2 years, 3-6 years, 7-15 years. Here, -99999 and 99999 indicates lower and upper limit of CI. It was not estimable as the number of subjects evaluable for 60 Month booster dose was 1. Full analysis dataset included subjects who received a booster vaccination at 36-, 48- or 60-Month after the third vaccination in the study 209, and with assay results 21-35 days after the booster vaccination. Here, 'N' signifies subjects of the mentioned combination of timepoint/age group in study 209/booster dose.

| End point type  | ISecondary |
|-----------------|------------|
| Life point type | 13econdary |
|                 |            |

End point timeframe:

From before booster dose to 21-35 days after 36-, 48- or 60-month booster dose

|  | 3 or 4 Doses<br>FSME-IMMUN |  |  |
|--|----------------------------|--|--|
| Subject group type                                     | Reporting group            |  |  |
| Number of subjects analysed                            | 204                        |  |  |
| Units: Fold Increase                                   |                            |  |  |
| geometric mean (confidence interval 95%)               |                            |  |  |
| After 36 month booster dose 0.25mL:1-<br>2years(N=25)  | 13.5 (9.8 to<br>18.5)      |  |  |
| After 36 month booster dose 0.25mL:3-<br>6years(N=24)  | 8.2 (5.3 to<br>12.6)       |  |  |
| After 36 month booster dose 0.25mL:7-<br>15years(N=89) | 7.7 (6.2 to 9.5)           |  |  |
| After 36 month booster dose 0.5mL:7-<br>15years(N=36)  | 7.4 (5.5 to 10)            |  |  |
| After 48 month booster dose 0.25mL:1-<br>2years(N=6)   | 9.1 (6.7 to<br>12.3)       |  |  |
| After 48 month booster dose 0.25mL:3-<br>6years(N=6)   | 7.1 (3.1 to<br>16.1)       |  |  |

| After 48 month booster dose 0.25mL:7-<br>15years(N=6) | 12.6 (7.4 to<br>21.2)    |  |  |
|---|--------------------------|--|--|
| After 48 month booster dose 0.5mL:7-<br>15years(N=11) | 7 (4 to 12.1)            |  |  |
| After 60 month booster dose 0.5mL:7-<br>15years(N=1)  | 3.7 (-99999 to<br>99999) |  |  |

| End point title | Geometric Mean of Fold Increase in Antibody Titer After the   |
|-----------------|---|
|                 | Booster Vaccination as Compared to Before the Booster         |
|                 | Vaccination Measured by NT According to Adner et al., 2001 by |
|                 | First Dose Age Group  |

## End point description:

Geometric mean of fold increase in TBE antibody titer as measured by NT and 95% CIs were evaluated. Results were summarized for the applicable categories based on the dose and timepoint of FSME-IMMUN received and age of the subject at first vaccination: 1-2 years, 3-6 years, 7-15 years. Here, -99999 and 99999 indicates lower and upper limit of CI. It was not estimable as the number of subjects evaluable for 60-Month booster dose was 1. Full analysis dataset included subjects who received a booster vaccination at 36-, 48- or 60-Month after the third vaccination in the study 209, and with assay results 21-35 days after the booster vaccination. Here, 'N' signifies subjects of the mentioned combination of timepoint/age group in study 209/booster dose.

| End point type Secondary |
|--------------------------|
|--------------------------|

End point timeframe:

From before booster dose to 21-35 days after 36-, 48- or 60-month booster dose

|  | 3 or 4 Doses<br>FSME-IMMUN |  |  |
|--|----------------------------|--|--|
| Subject group type                                     | Reporting group            |  |  |
| Number of subjects analysed                            | 204                        |  |  |
| Units: Fold Increase                                   |                            |  |  |
| geometric mean (confidence interval 95%)               |                            |  |  |
| After 36 month booster dose 0.25mL:1-<br>2years(N=25)  | 8.2 (6.2 to<br>10.7)       |  |  |
| After 36 month booster dose 0.25mL:3-<br>6years(N=24)  | 3.8 (2.5 to 5.9)           |  |  |
| After 36 month booster dose 0.25mL:7-<br>15years(N=88) | 5.7 (4.8 to 6.7)           |  |  |
| After 36 month booster dose 0.5mL:7-<br>15years(N=36)  | 8.2 (6.3 to<br>10.8)       |  |  |
| After 48 month booster dose 0.25mL:1-<br>2years(N=6)   | 10.1 (7 to<br>14.4)        |  |  |
| After 48 month booster dose 0.25mL:3-6years(N=6)       | 7.3 (3.2 to<br>16.9)       |  |  |
| After 48 month booster dose 0.25mL:7-<br>15years(N=6)  | 11 (6 to 20.2)             |  |  |
| After 48 month booster dose 0.5mL:7-<br>15years(N=11)  | 9.8 (5.2 to<br>18.4)       |  |  |

| After 60 month booster dose 0.5mL:7- | 11.4 (-99999 |  |  |
|--------------------------------------|--------------|--|--|
| 15years(N=1)                         | to 99999)    |  |  |

| End point title | Seropositivity Rate Measured by NT according to Holzmann et |
|-----------------|---|
|                 | al., 1996 at Each Available Time Point After the Third      |
|                 | Vaccination in the Study 209 by First Dose Age Group        |

## End point description:

Proportion of subjects with NT100 titers >=10 and NT50 titers >10 and 95% CIs were presented. Results were summarized for the applicable categories based on the time point of assessment, dose of FSME-IMMUN received in current study (0.25 mL and 0.5 mL) and age of the subject at first vaccination in study 209: 1-2 years, 3-6 years, 7-15 years, and 12-15 years. Here, 'N' signifies subjects of the mentioned combination of timepoint/age group in study 209/booster dose.

| End point type | Secondary |
|----------------|-----------|
| - F 7 F -      |           |

## End point timeframe:

24, 34 month after the third vaccination in study 209; 21-35 days after the 36-, 48- or 60-month booster dose

|  | 3 or 4 Doses FSME-IMMUN |  |  |
|--|-------------------------|--|--|
| Subject group type                                     | Reporting group         |  |  |
| Number of subjects analysed                            | 358                     |  |  |
| Units: Percentage of Subjects                          |                         |  |  |
| number (confidence interval 95%)                       |                         |  |  |
| NT50:24 months after third dose:1-<br>2years (N= 75)   | 84 (73.7 to<br>91.4)    |  |  |
| NT100:24 months after third dose:1-<br>2years (N= 75)  | 72 (60.4 to<br>81.8)    |  |  |
| NT50:24 months after third dose:3-<br>6years (N= 70)   | 91.4 (82.3 to<br>96.8)  |  |  |
| NT100:24 months after third dose:3-<br>6years (N= 70)  | 81.4 (70.3 to<br>89.7)  |  |  |
| NT50:24 months after third dose:7-<br>15years (N= 212) | 73.6 (67.1 to<br>79.4)  |  |  |
| NT100:24 months after third dose:7-<br>15years(N= 212) | 57.1 (50.1 to<br>63.8)  |  |  |
| NT50:24 months after third dose:12-<br>15years(N= 79)  | 62 (50.4 to<br>72.7)    |  |  |
| NT100:24 months after third dose:12-<br>15years(N= 79) | 46.8 (35.5 to<br>58.4)  |  |  |
| NT50:34 months after third dose:1-<br>2years(N= 73)    | 86.3 (76.2 to<br>93.2)  |  |  |
| NT100:34 months after third dose:1-<br>2years(N= 73)   | 75.3 (63.9 to<br>84.7)  |  |  |
| NT50:34 months after third dose:3-<br>6years(N= 68)    | 80.9 (69.5 to<br>89.4)  |  |  |

| NT100:34 months after third dose:3-<br>6years(N= 68)   | 64.7 (52.2 to<br>75.9) |
|--|------------------------|
| NT50:34 months after third dose:7-<br>15years(N= 211)  | 55.5 (48.5 to<br>62.3) |
| NT100:34 months after third dose:7-<br>15years(N= 211) | 38.9 (32.2 to<br>45.8) |
| NT50:34 months after third dose:12-<br>15years(N= 79)  | 53.8 (42.2 to<br>65.2) |
| NT100:34 months after third dose:12-<br>15years(N= 79) | 30.8 (20.8 to 42.2)    |
| NT50:36 month booster dose 0.25mL:1-<br>2years(N=25)   | 100 (86.3 to 100)      |
| NT100:36 month booster dose 0.25mL:1-2years(N=25)      | 100 (86.3 to<br>100)   |
| NT50:36 month booster dose 0.25mL:3-<br>6years(N=24)   | 91.7 (73 to 99)        |
| NT100:36 month booster dose 0.25mL:3-6years(N=24)      | 91.7 (73 to 99)        |
| NT50:36 month booster dose 0.25mL:7-<br>15years(N=88)  | 90.9 (82.9 to<br>96)   |
| NT100:36 month booster dose 0.25mL:7-15years(N=88)     | 87.5 (78.7 to<br>93.6) |
| NT50:36 month booster dose 0.5mL:7-<br>15years(N=36)   | 88.9 (73.9 to<br>96.9) |
| NT100:36 month booster dose 0.5mL:7-<br>15years(N=36)  | 86.1 (70.5 to 95.3)    |
| NT50:48 month booster dose 0.25mL:1-<br>2years(N=6)    | 100 (54.1 to<br>100)   |
| NT100:48 month booster dose 0.25mL:1-2years(N=6)       | 100 (54.1 to<br>100)   |
| NT50:48 month booster dose 0.25mL:3-6years(N=6)        | 100 (54.1 to<br>100)   |
| NT100:48 month booster dose 0.25mL:3-6years(N=6)       | 100 (54.1 to<br>100)   |
| NT50:48 month booster dose 0.25mL:7-<br>15years(N=6)   | 1                      |
| NT100:48 month booster dose 0.25mL:7-15years(N=6)      | 100 (54.1 to<br>100)   |
| NT50:48 month booster dose 0.5mL:7-<br>15years(N=11)   | 100 (71.5 to<br>100)   |
| NT100:48 month booster dose 0.5mL:7-<br>15years(N=11)  | 100 (71.5 to<br>100)   |
| NT50:60 month booster dose 0.5mL:7-<br>15years(N=1)    | 100 (2.5 to<br>100)    |
| NT100:60 month booster dose 0.5mL:7-<br>15years(N=1)   | 0 (0 to 97.5)          |

End point title

Geometric Mean Antibody Titer (GMT) as Measured by NT According to Holzmann et al., 1996 at Each Available Time Point After the Third Vaccination in the Study 209 by First Dose Age Group

### End point description:

GMT for NT and corresponding 2-sided 95% CIs were evaluated. NT100 titers and NT50 titers were presented. Results were summarized for the applicable categories based on the dose and timepoint of FSME-IMMUN received and age of the subject at first vaccination: 1-2 years, 3-6 years, 7-15 years and 12-15 years. Here, -99999 and 99999 indicates lower and upper limit of CI. It was not estimable as number of subjects evaluable for 60-Month booster dose was 1. Here, 'N' signifies subjects of the mentioned combination of timepoint/age group in study 209/booster dose.

| End point type | Secondary |
|----------------|-----------|
| - I 7 I -      |           |

End point timeframe:

24, 34 months after the third vaccination in study 209; 21-35 days after 36-, 48- or 60-month booster dose

|   | 2 or 4 Dagg             |  |  |
|---|-------------------------|--|--|
|   | 3 or 4 Doses FSME-IMMUN |  |  |
| Subject group type                                    | Reporting group         |  |  |
| Number of subjects analysed                           | 358                     |  |  |
| Units: Titer  |                         |  |  |
| geometric mean (confidence interval 95%)              |                         |  |  |
| NT50:24 month after third dose:1-<br>2years (N= 75)   | 21.7 (17.5 to<br>26.8)  |  |  |
| NT100:24 months after third dose:1-<br>2years (N= 75) | 14 (11.6 to<br>16.9)    |  |  |
| NT50:24 months after third dose:3-<br>6years (N= 70)  | 33.4 (27.2 to<br>41.1)  |  |  |
| NT100:24 months after third dose:3-<br>6years (N= 70) | 17.7 (14.7 to<br>21.3)  |  |  |
| NT50:24 months after third dose:7-<br>15years(N= 212) | 18.7 (16.3 to<br>21.5)  |  |  |
| NT100:24 months after third dose:7-<br>15years(N=212) | 11 (9.9 to<br>12.2)     |  |  |
| NT50:24 months after third dose:12-<br>15years(N= 79) | 14.2 (11.4 to<br>17.7)  |  |  |
| NT100:24 months after third dose:12-<br>15years(N=79) | 9.5 (8 to 11.3)         |  |  |
| NT50:34 months after third dose:1-<br>2years (N= 73)  | 30.7 (24.3 to<br>38.8)  |  |  |
| NT100:34 months after third dose:1-<br>2years (N= 73) | 14.1 (11.7 to<br>17)    |  |  |
| NT50:34 months after third dose:3-<br>6years (N= 68)  | 23.8 (18.1 to 31.3)     |  |  |
| NT100:34 months after third dose:3-<br>6years (N= 68) | 12.6 (10.3 to<br>15.5)  |  |  |
| NT50:34 months after third dose:7-<br>15years(N=211)  | 13.2 (11.5 to<br>15.3)  |  |  |
| NT100:34 months after third dose:7-<br>15years(N=211) | 8.4 (7.5 to 9.3)        |  |  |
| NT50:34 months after third dose:12-<br>15years(N=78)  | 12.4 (9.8 to<br>15.6)   |  |  |
| NT100:34 months after third dose:12-<br>15years(N=78) | 7.6 (6.5 to 9)          |  |  |
| NT50:36 month booster dose 0.25mL:1-<br>2years(N=25)  | 103.6 (76.2 to<br>141)  |  |  |
| NT100:36month booster dose<br>0.25mL:1-2years(N=25)   | 65.9 (48.4 to<br>89.9)  |  |  |
| NT50:36month booster dose 0.25mL:3-<br>6years(N=24)   | 70.6 (42.6 to<br>117.1) |  |  |

| NT100:36month booster dose 0.25mL:3-6years(N=24)     | 44.7 (27.4 to<br>73)      |  |  |
|--|---------------------------|--|--|
| NT50:36month booster dose 0.25mL:7-<br>15years(N=88) | 53.2 (42 to<br>67.4)      |  |  |
| NT100:36month booster dose 0.25mL:7-15years(N=88)    | 32.3 (25.9 to<br>40.4)    |  |  |
| NT50:36month booster dose 0.5mL:7-<br>15years(N=36)  | 39.8 (27.5 to<br>57.5)    |  |  |
| NT100:36month booster dose 0.5mL:7-<br>15years(N=36) | 25 (18.5 to<br>33.9)      |  |  |
| NT50:48month booster dose 0.25mL:1-<br>2years(N=6)   | 209.7 (116.3<br>to 378.1) |  |  |
| NT100:48month booster dose 0.25mL:1-2years(N=6)      | 115.4 (83.2 to<br>160)    |  |  |
| NT50:48month booster dose 0.25mL:3-<br>6years(N=6)   | 166.4 (80.3 to<br>344.7)  |  |  |
| NT100:48month booster dose 0.25mL:3-6years(N=6)      | 64.8 (25.9 to<br>162.1)   |  |  |
| NT50:48month booster dose 0.25mL:7-<br>15years(N=6)  | 163.2 (84 to<br>317.1)    |  |  |
| NT100:48month booster dose<br>0.25mL:7-15years(N=6)  | 55 (27 to<br>111.8)       |  |  |
| NT50:48month booster dose 0.5mL:7-<br>15years(N=11)  | 140.4 (81.5 to<br>241.8)  |  |  |
| NT100:48month booster dose 0.5mL:7-<br>15years(N=11) | 46.4 (27.5 to<br>78.1)    |  |  |
| NT50:60month booster dose 0.5mL:7-<br>15years(N=1)   | 30 (-99999 to<br>99999)   |  |  |
| NT100:60month booster dose 0.5mL:7-<br>15years(N=1)  | 5 (-99999 to<br>99999)    |  |  |

| Geometric Mean of Fold Increase in Antibody Titer After the Booster Vaccination as Compared to Before the Booster |
|---|
| Vaccination Measured by NT According to Holzmann et al.,  |
| 1996 by First Dose Age Group  |

# End point description:

Geometric mean of fold increase in TBE antibody titer after the booster vaccination as compared to before the booster vaccination as measured by NT according to Holzmann et al., 1996 and 95% CIs were evaluated. Results were summarized for the applicable categories based on the dose and timepoint of FSME-IMMUN received and age of the subject at first vaccination: 1-2 years, 3-6 years, 7-15 years. Here, -99999 and 99999 indicates lower and upper limit of CI. It was not estimable as the number of subjects evaluable for 60-Month booster dose was 1. Full analysis dataset included subjects who received a booster vaccination at 36-, 48- or 60-Month after the third vaccination in the study 209, and with assay results 21-35 days after the booster vaccination. Here, 'N' signifies subjects of the mentioned combination of timepoint/age group in study 209/booster dose.

| End point type | Secondary |
|----------------|-----------|
|                |           |

End point timeframe:

From before booster dose to 21-35 days after 36-, 48- or 60-month booster dose

|  | 3 or 4 Doses<br>FSME-IMMUN |  |  |
|--|----------------------------|--|--|
| Subject group type                                   | Reporting group            |  |  |
| Number of subjects analysed                          | 204                        |  |  |
| Units: Fold Increase                                 |                            |  |  |
| geometric mean (confidence interval 95%)             |                            |  |  |
| NT50:36 month booster dose 0.25mL:1-<br>2years(N=25) | 8.7 (5.6 to<br>13.3)       |  |  |
| NT100:36month booster dose 0.25mL:1-2years(N=25)     | 10.2 (7.5 to<br>13.9)      |  |  |
| NT50:36month booster dose 0.25mL:3-<br>6years(N=24)  | 5.6 (3.1 to<br>10.2)       |  |  |
| NT100:36month booster dose 0.25mL:3-6years(N=24)     | 6 (3.9 to 9.5)             |  |  |
| NT50:36month booster dose 0.25mL:7-<br>15years(N=88) | 6.7 (5.3 to 8.4)           |  |  |
| NT100:36month booster dose 0.25mL:7-15years(N=88)    | 5.5 (4.4 to 6.8)           |  |  |
| NT50:36month booster dose 0.5mL:7-<br>15years(N=36)  | 4.7 (3.1 to 7.2)           |  |  |
| NT100:36month booster dose 0.5mL:7-<br>15years(N=36) | 4.6 (3.3 to 6.3)           |  |  |
| NT50:48month booster dose 0.25mL:1-<br>2years(N=6)   | 13 (4.3 to<br>39.2)        |  |  |
| NT100:48month booster dose 0.25mL:1-2years(N=6)      | 13.6 (9.1 to<br>20.3)      |  |  |
| NT50:48month booster dose 0.25mL:3-<br>6years(N=6)   | 6.8 (1.9 to<br>24.1)       |  |  |
| NT100:48month booster dose<br>0.25mL:3-6years(N=6)   | 5.1 (1.8 to<br>14.4)       |  |  |
| NT50:48month booster dose 0.25mL:7-<br>15years(N=6)  | 17.1 (5.5 to<br>53.5)      |  |  |
| NT100:48month booster dose<br>0.25mL:7-15years(N=6)  | 7.8 (2.6 to<br>23.4)       |  |  |
| NT50:48month booster dose 0.5mL:7-<br>15years(N=11)  | 13.9 (6.9 to<br>27.9)      |  |  |
| NT100:48month booster dose 0.5mL:7-<br>15years(N=11) | 6.7 (3.2 to<br>13.8)       |  |  |
| NT50:60month booster dose 0.5mL:7-<br>15years(N=1)   | 6 (-99999 to<br>99999)     |  |  |
| NT100:60month booster dose 0.5mL:7-<br>15years(N=1)  | 1 (-99999 to<br>99999)     |  |  |

End point title

Percentage of Subjects with Fever After 36 Month, 48 Month and 60 Month Booster Vaccination

| End point d | escription |
|-------------|------------|
|-------------|------------|

Proportion of subjects with fever >=38.0 degrees Celsius (C) and their 95% CIs were presented according to the booster dose. Subject his/her parent/legal guardian were asked to carefully monitor for fever and therefore, to measure the body temperature orally or rectally (optional for small children) in the evening of the vaccination day, on the following morning, and in the evening each day for 3 days following the booster vaccination (altogether 4 days). All measured temperatures, including the first day without fever and the method used (oral or rectal), were to be documented in the subject diary. Full analysis dataset included subjects who received a booster vaccination at 36-, 48- or 60-Month after the third vaccination in study 209. Here, 'N' signifies subjects of the mentioned combination of timepoint and booster dose in this study.

| End point type                           | Secondary      |
|--|----------------|
| End point timeframe:                     |                |
| Within 4 days after 36-, 48- or 60-month | n booster dose |

|  | 3 or 4 Doses<br>FSME-IMMUN |  |  |
|--|----------------------------|--|--|
| Subject group type                         | Reporting group            |  |  |
| Number of subjects analysed                | 205                        |  |  |
| Units: Percentage of Subjects              |                            |  |  |
| number (confidence interval 95%)           |                            |  |  |
| After 36 month booster dose 0.25mL (N=136) | 0 (0 to 2.7)               |  |  |
| After 36 month booster dose 0.5mL (N=37)   | 0 (0 to 9.5)               |  |  |
| After 48 month booster dose 0.25mL (N=18)  | 0 (0 to 18.5)              |  |  |
| After 48 month booster dose 0.5mL (N=11)   | 0 (0 to 28.5)              |  |  |
| After 60 month booster dose 0.5mL (N=1)    | 0 (0 to 97.5)              |  |  |

No statistical analyses for this end point

End point title

Percentage of Subjects with Local and Systemic Reactions After 36 Month, 48 Month and 60 Month Booster Vaccination

## End point description:

Proportion of subjects with local reactions (LR) and systemic reactions (SR) (other than fever) after the 36 Month, 48 Month or 60 Month booster dose and 95% CIs were presented according to the booster dose. Local reactions included: swelling, induration, redness, injection site pain and tenderness, ecchymosis and hematoma. Systemic symptoms including headache, nausea, vomiting, muscle pain, joint pain, swelling of the lymph nodes, loss of appetite, changes in sleeping behavior, fatigue and malaise were to be monitored and documented in the subject diary. Full analysis dataset included subjects who received a booster vaccination at 36 Month, 48 Month, or 60 Month after the third vaccination in study 209. Here, 'N' signifies subjects of the mentioned combination of 4th vaccination dose level, timepoint, and endpoints.

End point type Secondary

End point timeframe:

Within 4 days after 36-, 48- or 60-month booster dose

|  | 3 or 4 Doses<br>FSME-IMMUN |  |  |
|--|----------------------------|--|--|
| Subject group type                             | Reporting group            |  |  |
| Number of subjects analysed                    | 205                        |  |  |
| Units: Percentage of Subjects                  |                            |  |  |
| number (confidence interval 95%)               |                            |  |  |
| LR: After 36 month booster dose 0.25mL (N=138) | 17.4 (11.5 to<br>24.8)     |  |  |
| LR: After 36 month booster dose 0.5mL (N=37)   | 18.9 (8 to<br>35.2)        |  |  |
| SR: After 36 month booster dose 0.25mL (N=138) | 5.8 (2.5 to<br>11.1)       |  |  |
| SR: After 36 month booster dose 0.5mL (N=37)   | 2.7 (0.1 to<br>14.2)       |  |  |
| LR: After 48 month booster dose 0.25mL (N=18)  | 22.2 (6.4 to<br>47.6)      |  |  |
| LR: After 48 month booster dose 0.5mL (N=11)   | 9.1 (0.2 to<br>41.3)       |  |  |
| SR: After 48 month booster dose 0.25mL (N=18)  | 16.7 (3.6 to<br>41.4)      |  |  |
| SR: After 48 month booster dose 0.5mL (N=11)   | 0 (0 to 28.5)              |  |  |
| LR: After 60 month booster dose 0.5mL (N=1)    | 0 (0 to 97.5)              |  |  |
| SR: After 60 month booster dose 0.5mL (N=1)    | 0 (0 to 97.5)              |  |  |

Timeframe for reporting adverse events:

Adverse events (AEs)/serious AEs recorded through 21 to 35 days after the booster dose. LR and SR were recorded within 4 days after the booster vaccination in a subject diary.

Adverse event reporting additional description:

SAEs and AEs were grouped by system organ class and summarized. AEs included AEs collected in subject diary (local and systemic reactions for FSME-IMMUN) and AEs collected on case report form at each visit (non-systematic assessment).

| Assessment type    | Non-systematic |
|--------------------|----------------|
|                    |                |
| Dictionary name    | MedDRA         |
| Dictionary version | 8.1            |

## Reporting group description:

Subjects received primary immunization (3 vaccinations at 0, 1 and 6 Month with FSME-IMMUN 0.25 mL) in study 209 [NCT00161863] were offered a booster dose (4th dose) 3-, 4-, or 5-year after the third vaccination, depending on their TBE titers. Subjects with high TBE antibody levels (ELISA > 1000 VIE U/ml and positive NT result) at 24, 34, 46, and/or 58 months after the third vaccination were not to receive the 4th dose.

|   | T                          | ī | 1 |
|---|----------------------------|---|---|
|   | 3 or 4 Doses FSME<br>IMMUN |   |   |
| Total subjects affected by serious adverse events         |                            |   |   |
| subjects affected / exposed                               | 2 / 358 (0.56%)            |   |   |
| number of deaths (all causes)                             | 0                          |   |   |
| number of deaths resulting from adverse events            |                            |   |   |
| Injury, poisoning and procedural complications            |                            |   |   |
| Chest injury; Spinal cord injury cervical                 |                            |   |   |
| subjects affected / exposed                               | 1 / 358 (0.28%)            |   |   |
| occurrences causally related to treatment / all           | 0 / 1                      |   |   |
| deaths causally related to treatment / all                | 0/0                        |   |   |
| Radius fracture; Skull fractured base; Spinal cord injury |                            |   |   |
| subjects affected / exposed                               | 1 / 358 (0.28%)            |   |   |
| occurrences causally related to treatment / all           | 0 / 1                      |   |   |
| deaths causally related to treatment / all                | 0/0                        |   |   |

Frequency threshold for reporting non-serious adverse events: 0 %

|   |                            | - |  |
|---|----------------------------|---|--|
|   | 3 or 4 Doses FSME<br>IMMUN |   |  |
| Total subjects affected by non-serious adverse events |                            |   |  |
| subjects affected / exposed                           | 33 / 358 (9.22%)           |   |  |
| Vascular disorders                                    |                            |   |  |
| Haematoma; Road traffic accident                      |                            |   |  |
| subjects affected / exposed                           | 1 / 358 (0.28%)            |   |  |
| occurrences (all)                                     | 1                          |   |  |
|   |                            |   |  |
| Surgical and medical procedures                       |                            |   |  |
| Dental operation                                      |                            |   |  |
| subjects affected / exposed                           | 1 / 358 (0.28%)            |   |  |
| occurrences (all)                                     | 1                          |   |  |
|   |                            |   |  |
| Nail operation  |                            |   |  |
| subjects affected / exposed                           | 1 / 358 (0.28%)            |   |  |
| occurrences (all)                                     | 1                          |   |  |
|   |                            |   |  |

General disorders and administration

| Immune system disorders                                |                   |  |
|--|-------------------|--|
| Allergy to animal; Seasonal allergy                    |                   |  |
| subjects affected / exposed                            | 1 / 358 (0.28%)   |  |
| occurrences (all)                                      | 1                 |  |
| Developing discondens                                  |                   |  |
| Psychiatric disorders  Attention deficit/hyperactivity |                   |  |
| disorder   |                   |  |
| subjects affected / exposed                            | 1 / 358 (0.28%)   |  |
| occurrences (all)                                      | 1                 |  |
|  |                   |  |
| Sleep disorder   |                   |  |
| subjects affected / exposed                            | 1 / 358 (0.28%)   |  |
| occurrences (all)                                      | 1                 |  |
| Injury, poisoning and procedural                       |                   |  |
| complications  |                   |  |
| Animal bite subjects affected / exposed                | 1 / 250 /0 200/ ) |  |
|  | 1 / 358 (0.28%)   |  |
| occurrences (all)                                      | 1                 |  |
| Contusion  |                   |  |
| subjects affected / exposed                            | 2 / 358 (0.56%)   |  |
| occurrences (all)                                      | 2                 |  |
|  | 2                 |  |
| Laceration   |                   |  |
| subjects affected / exposed                            | 1 / 358 (0.28%)   |  |
| occurrences (all)                                      | 1                 |  |
| Nervous system disorders                               |                   |  |
| Headache   |                   |  |
| subjects affected / exposed                            | 1 / 358 (0.28%)   |  |
| occurrences (all)                                      | 1                 |  |
|  |                   |  |
| Headache (SR) subjects affected / exposed              | F ( 250 (4 400))  |  |
|  | 5 / 358 (1.40%)   |  |
| occurrences (all)                                      | 5                 |  |
| Eye disorders  |                   |  |
| Conjunctivitis   |                   |  |
| subjects affected / exposed                            | 1 / 358 (0.28%)   |  |
| occurrences (all)                                      | 1                 |  |
| Conjunctivitis allergic                                |                   |  |
| subjects affected / exposed                            | 1 / 358 (0.28%)   |  |
| occurrences (all)                                      |                   |  |
| occurrences (aii)                                      | 1                 |  |
| Gastrointestinal disorders                             |                   |  |

|   | I  |  |
|---|--|--|
| Abdominal pain subjects affected / exposed  | 1 / 250 /0 200/ )                            |  |
| occurrences (all)   | 1 / 358 (0.28%)                              |  |
| occarrences (an)  | 1  |  |
| Enteritis   |  |  |
| subjects affected / exposed   | 1 / 358 (0.28%)                              |  |
| occurrences (all)   | 1  |  |
| Vomiting  |  |  |
| subjects affected / exposed   | 2 / 358 (0.56%)                              |  |
| occurrences (all)   | 2  |  |
| Nausea  |  |  |
| subjects affected / exposed   | 1 / 358 (0.28%)                              |  |
| occurrences (all)   | 1  |  |
| <u> </u>  |  |  |
| Skin and subcutaneous tissue disorders  Acne  |  |  |
| subjects affected / exposed   | 1 / 358 (0.28%)                              |  |
| occurrences (all)   | 1  |  |
| Dermatitis allergic   |  |  |
| subjects affected / exposed   | 1 / 358 (0.28%)                              |  |
| occurrences (all)   | 1  |  |
| Formula   |  |  |
| Eczema subjects affected / exposed  | 1 / 358 (0.28%)                              |  |
| occurrences (all)   | 1  |  |
|   | 1  |  |
| Museuleskeletelenderen zutweiter  | I  |  |
|   |  |  |
| disorders   |  |  |
|   | 1 / 358 (0.28%)                              |  |
| disorders<br>Arthralgia   | 1 / 358 (0.28%)<br>1                         |  |
| disorders Arthralgia subjects affected / exposed occurrences (all)  | ·  |  |
| disorders Arthralgia subjects affected / exposed occurrences (all) Arthralgia (SR)  | 1  |  |
| disorders  Arthralgia  subjects affected / exposed  occurrences (all)  Arthralgia (SR)  subjects affected / exposed   | 1 / 358 (0.28%)                              |  |
| disorders Arthralgia subjects affected / exposed occurrences (all) Arthralgia (SR)  | 1  |  |
| disorders  Arthralgia  subjects affected / exposed  occurrences (all)  Arthralgia (SR)  subjects affected / exposed   | 1 / 358 (0.28%)                              |  |
| disorders  Arthralgia  subjects affected / exposed  occurrences (all)  Arthralgia (SR)  subjects affected / exposed  occurrences (all)  | 1 / 358 (0.28%)                              |  |
| Arthralgia subjects affected / exposed occurrences (all)  Arthralgia (SR) subjects affected / exposed occurrences (all)  Myalgia  | 1<br>1 / 358 (0.28%)<br>1                    |  |
| Arthralgia subjects affected / exposed occurrences (all)  Arthralgia (SR) subjects affected / exposed occurrences (all)  Myalgia subjects affected / exposed occurrences (all)                              | 1<br>1 / 358 (0.28%)<br>1<br>2 / 358 (0.56%) |  |
| subjects affected / exposed occurrences (all)  Arthralgia (SR) subjects affected / exposed occurrences (all)  Myalgia subjects affected / exposed   | 1<br>1 / 358 (0.28%)<br>1<br>2 / 358 (0.56%) |  |
| Arthralgia subjects affected / exposed occurrences (all)  Arthralgia (SR) subjects affected / exposed occurrences (all)  Myalgia subjects affected / exposed occurrences (all)  Infections and infestations | 1<br>1 / 358 (0.28%)<br>1<br>2 / 358 (0.56%) |  |

| Gastroenteritis                                  | I                  | <br> |
|--|--------------------|------|
| subjects affected / exposed                      | 1 / 358 (0.28%)    |      |
| occurrences (all)                                | 1                  |      |
|  | _                  |      |
| Impetigo   |                    |      |
| subjects affected / exposed                      | 1 / 358 (0.28%)    |      |
| occurrences (all)                                | 1                  |      |
| Laryngotracheo bronchitis                        |                    |      |
| subjects affected / exposed                      | 2 / 358 (0.56%)    |      |
| occurrences (all)                                | 2                  |      |
| Museula ana de Gratien                           |                    |      |
| Mycoplasma infection subjects affected / exposed | 1 / 250 /0 200/ \  |      |
| occurrences (all)                                | 1 / 358 (0.28%)    |      |
| occurrences (an)                                 | 1                  |      |
| Otitis media                                     |                    |      |
| subjects affected / exposed                      | 2 / 358 (0.56%)    |      |
| occurrences (all)                                | 2                  |      |
| Paronychia                                       |                    |      |
| subjects affected / exposed                      | 1 / 358 (0.28%)    |      |
| occurrences (all)                                | 1                  |      |
|  |                    |      |
| Pharyngitis subjects affected / exposed          | 1 / 250 / 2 200/ 3 |      |
|  | 1 / 358 (0.28%)    |      |
| occurrences (all)                                | 1                  |      |
| Tonsillitis streptococcal                        |                    |      |
| subjects affected / exposed                      | 2 / 358 (0.56%)    |      |
| occurrences (all)                                | 3                  |      |
| Viral infection                                  |                    |      |
| subjects affected / exposed                      | 12 / 358 (3.35%)   |      |
| occurrences (all)                                | 12                 |      |
|  |                    |      |
| Metabolism and nutrition disorders  Anorexia     |                    |      |
| subjects affected / exposed                      | 1 / 358 (0.28%)    |      |
| occurrences (all)                                | 1                  |      |
| ,  |                    |      |

Were there any global substantial amendments to the protocol? Yes

| 30 October 2006 | The clinical study was prolonged for children and adolescents who still showed highly positive TBE virus antibody concentrations as determined by ELISA (>1000 VIE U/mL) and positive NT titers (>=10) at approximately 3 years after the third vaccination. The protocol was amended to include further follow-up of TBE antibody persistence at 46 and 58 months after the third vaccination, as well as a booster vaccination offered at either Month 48 or Month 60 after the third vaccination in study 209, depending on individual TBE antibody levels. A total of 172 subjects who had not received the first booster vaccination at Month 36 after the third vaccination in study 209 were invited for this study prolongation. The extension was introduced to investigate seropersistence beyond 3 years and consequently to obtain clinical data to identify the optimal booster interval for FSME-IMMUN 0.25 mL. |
|-----------------|---|

Notes:

Were there any global interruptions to the trial? No

None reported