



## Clinical trial results:

### An open trial to assess the tolerability of AVANZ® Salsola immunotherapy

#### Summary

|                          |                 |
|--------------------------|-----------------|
| EudraCT number           | 2013-001728-20  |
| Trial protocol           | ES              |
| Global end of trial date | 31 October 2014 |

#### Results information

|                                |              |
|--------------------------------|--------------|
| Result version number          | v1 (current) |
| This version publication date  | 21 July 2016 |
| First version publication date | 21 July 2016 |

#### Trial information

##### Trial identification

|                       |         |
|-----------------------|---------|
| Sponsor protocol code | AV-X-02 |
|-----------------------|---------|

##### Additional study identifiers

|                                    |             |
|------------------------------------|-------------|
| ISRCTN number                      | -           |
| ClinicalTrials.gov id (NCT number) | NCT02065856 |
| WHO universal trial number (UTN)   | -           |

Notes:

##### Sponsors

|                              |  |
|------------------------------|--|
| Sponsor organisation name    | ALK-Abelló S.A.  |
| Sponsor organisation address | Miguel Fleta, 19, Madrid, Spain, 28037   |
| Public contact               | Departamento Médico, ALK-Abelló S. A., +34 913276127NA, clinicaltrials@alk.net |
| Scientific contact           | Departamento Médico, ALK-Abelló S. A., +34 913276127NA, clinicaltrials@alk.net |

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:

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**Results analysis stage**

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|  |                 |
|--|-----------------|
| Analysis stage                                       | Final           |
| Date of interim/final analysis                       | 05 October 2015 |
| Is this the analysis of the primary completion data? | Yes             |
| Primary completion date                              | 31 October 2014 |
| Global end of trial reached?                         | Yes             |
| Global end of trial date                             | 31 October 2014 |
| Was the trial ended prematurely?                     | No              |

Notes:

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**General information about the trial**

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Main objective of the trial:

To assess the tolerability of the up-dosing phase of AVANZ® Salsola kali. The frequency of patients with investigational medicinal product (IMP)-related adverse events (AEs) will be the primary endpoint.

Protection of trial subjects:

Safety surveillance, use of symptomatic medications allowed. Telephone contact within 48h after IMP administration.

Background therapy: -

Evidence for comparator: -

|   |                 |
|---|-----------------|
| Actual start date of recruitment                          | 23 January 2014 |
| Long term follow-up planned                               | No              |
| Independent data monitoring committee (IDMC) involvement? | No              |

Notes:

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**Population of trial subjects**

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**Subjects enrolled per country**

|                                      |           |
|--------------------------------------|-----------|
| Country: Number of subjects enrolled | Spain: 51 |
| Worldwide total number of subjects   | 51        |
| EEA total number of subjects         | 51        |

Notes:

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**Subjects enrolled per age group**

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|   |    |
|---|----|
| 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)                      | 51 |
| From 65 to 84 years                       | 0  |
| 85 years and over                         | 0  |

## Subject disposition

### Recruitment

Recruitment details:

Subjects were recruited in Spain

### Pre-assignment

Screening details:

The subjects eligible for the trial were adults with a clinical history of Salsola kali pollen induced allergic rhinoconjunctivitis with or without asthma at least one year prior to trial entry, a positive skin prick test (SPT) to Salsola kali pollen, and a positive specific IgE against Salsola kali pollen ( $\geq$  IgE class 2;  $\geq 0.70$  KU/L).

### Period 1

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

Blinding implementation details:

Trial is one arm only

### Arms

|           |                  |
|-----------|------------------|
| Arm title | ACTIVE TREATMENT |
|-----------|------------------|

Arm description:

AVANZ Salsola kali, updosing treatment (5 step) and 1 maintenance dose.

|  |                          |
|--|--------------------------|
| Arm type                               | Experimental             |
| Investigational medicinal product name | AVANZ Salsola kali       |
| Investigational medicinal product code |                          |
| Other name                             |                          |
| Pharmaceutical forms                   | Suspension for injection |
| Routes of administration               | Subcutaneous use         |

Dosage and administration details:

Weekly administration dose during up-dosing phase until reach the administration dose of 15000 SQ+.

|                                       |                  |
|---------------------------------------|------------------|
| <b>Number of subjects in period 1</b> | ACTIVE TREATMENT |
| Started                               | 51               |
| Completed                             | 51               |

## Baseline characteristics

### Reporting groups

|                                |         |
|--------------------------------|---------|
| Reporting group title          | Visit 1 |
| Reporting group description: - |         |

| Reporting group values  | Visit 1 | Total |  |
|---|---------|-------|--|
| Number of subjects  | 51      | 51    |  |
| Age categorical   |         |       |  |
| The trial population included had a mean age of 36 years.                 |         |       |  |
| Units: Subjects   |         |       |  |
| In utero  | 0       | 0     |  |
| Preterm newborn infants (gestational age < 37 wks)                        | 0       | 0     |  |
| Newborns (0-27 days)  | 0       | 0     |  |
| Infants and toddlers (28 days-23 months)                                  | 0       | 0     |  |
| Children (2-11 years)   | 0       | 0     |  |
| Adolescents (12-17 years)   | 0       | 0     |  |
| Adults (18-64 years)  | 51      | 51    |  |
| From 65-84 years  | 0       | 0     |  |
| 85 years and over   | 0       | 0     |  |
| Age continuous  |         |       |  |
| Units: years  |         |       |  |
| arithmetic mean   | 36      |       |  |
| standard deviation  | ± 10.7  | -     |  |
| Gender categorical  |         |       |  |
| Overall the trial population included 27 (52.9%) women and 24 (47.1%) men |         |       |  |
| Units: Subjects   |         |       |  |
| Female  | 27      | 27    |  |
| Male  | 24      | 24    |  |

### Subject analysis sets

|                                   |               |
|-----------------------------------|---------------|
| Subject analysis set title        | AVANZ Salsola |
| Subject analysis set type         | Full analysis |
| Subject analysis set description: |               |
| Subjects Treated                  |               |
| Subject analysis set title        | Visit 6       |
| Subject analysis set type         | Per protocol  |
| Subject analysis set description: |               |
| Subjects who performed visit 6    |               |

| Reporting group values                                    | AVANZ Salsola | Visit 6 |  |
|---|---------------|---------|--|
| Number of subjects  | 51            | 50      |  |
| Age categorical   |               |         |  |
| The trial population included had a mean age of 36 years. |               |         |  |
| Units: Subjects   |               |         |  |
| In utero  |               |         |  |

|  |    |   |  |
|--|----|---|--|
| Preterm newborn infants<br>(gestational age < 37 wks)<br>Newborns (0-27 days)<br>Infants and toddlers (28 days-23 months)<br>Children (2-11 years)<br>Adolescents (12-17 years)<br>Adults (18-64 years)<br>From 65-84 years<br>85 years and over | 51 |   |  |
| Age continuous<br>Units: years<br>arithmetic mean<br>standard deviation  | ±  | ± |  |
| Gender categorical   |    |   |  |
| Overall the trial population included 27 (52.9%) women and 24 (47.1%) men  |    |   |  |
| Units: Subjects  |    |   |  |
| Female   |    |   |  |
| Male   |    |   |  |

## End points

### End points reporting groups

|   |                  |
|---|------------------|
| Reporting group title   | ACTIVE TREATMENT |
| Reporting group description:<br>AVANZ Salsola kali, updosing treatment (5 step) and 1 maintenance dose. |                  |
| Subject analysis set title  | AVANZ Salsola    |
| Subject analysis set type   | Full analysis    |
| Subject analysis set description:<br>Subjects Treated   |                  |
| Subject analysis set title  | Visit 6          |
| Subject analysis set type   | Per protocol     |
| Subject analysis set description:<br>Subjects who performed visit 6                                     |                  |

### Primary: Frequency of Subject with adverse drug reaction

|  |  |
|--|--|
| End point title  | Frequency of Subject with adverse drug reaction <sup>[1]</sup> |
| End point description:<br>Frequency of patients with adverse drug reactions, local or systemic |  |
| End point type   | Primary  |
| End point timeframe:<br>6 weeks  |  |

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: No statistical analysis provide fro Frequency of Subjects with Adverse Drug Reactions

| End point values                 | AVANZ Salsola        |  |  |  |
|----------------------------------|----------------------|--|--|--|
| Subject group type               | Subject analysis set |  |  |  |
| Number of subjects analysed      | 51                   |  |  |  |
| Units: Frequency                 |                      |  |  |  |
| number (confidence interval 95%) |                      |  |  |  |
| Mild                             | 68.6 (54.1 to 80.9)  |  |  |  |
| Moderate                         | 7.8 (2.2 to 18.9)    |  |  |  |
| Severe                           | 0 (0 to 0)           |  |  |  |

### Statistical analyses

No statistical analyses for this end point

### Secondary: Frequency of subjects with systemic reactions

|  |   |
|--|---|
| End point title  | Frequency of subjects with systemic reactions |
| End point description:<br>Frequency of patients with systemic reactions, based on EAACI classification: Grade I(mild systemic reaction) to IV(anaphylactic choc) |   |
| End point type   | Secondary                                     |

End point timeframe:

6 weeks

|                                  |                      |  |  |  |
|----------------------------------|----------------------|--|--|--|
| <b>End point values</b>          | AVANZ Salsola        |  |  |  |
| Subject group type               | Subject analysis set |  |  |  |
| Number of subjects analysed      | 51                   |  |  |  |
| Units: Frequency                 |                      |  |  |  |
| number (confidence interval 95%) | 13.7 (5.7 to 26.3)   |  |  |  |

### Statistical analyses

No statistical analyses for this end point

### Secondary: Change in IgG4 for Salsola kali

|                        |  |
|------------------------|--|
| End point title        | Change in IgG4 for Salsola kali                          |
| End point description: | Increase in IgG4 for Salsola kali from baseline to final |
| End point type         | Secondary  |
| End point timeframe:   | 6 weeks  |

|                             |                      |                      |  |  |
|-----------------------------|----------------------|----------------------|--|--|
| <b>End point values</b>     | AVANZ Salsola        | Visit 6              |  |  |
| Subject group type          | Subject analysis set | Subject analysis set |  |  |
| Number of subjects analysed | 50                   | 50                   |  |  |
| Units: mga/L                |                      |                      |  |  |
| median (standard deviation) | 0.02 ( $\pm$ 0.18)   | 0.19 ( $\pm$ 0.62)   |  |  |

### Statistical analyses

|   |                               |
|---|-------------------------------|
| <b>Statistical analysis title</b>       | Student-t Test                |
| Statistical analysis description:       | Increase in IgG4 Salsola kali |
| Comparison groups                       | AVANZ Salsola v Visit 6       |
| Number of subjects included in analysis | 100                           |
| Analysis specification                  | Pre-specified                 |
| Analysis type                           | superiority                   |
| P-value                                 | < 0.005                       |
| Method                                  | t-test, 2-sided               |
| Parameter estimate                      | Mean difference (net)         |
| Point estimate                          | 0.25                          |

|                      |                    |
|----------------------|--------------------|
| Confidence interval  |                    |
| level                | 95 %               |
| sides                | 2-sided            |
| lower limit          | 0.1                |
| upper limit          | 0.4                |
| Variability estimate | Standard deviation |

### Secondary: Change in IgE for Salsola kali

|                        |                                |
|------------------------|--------------------------------|
| End point title        | Change in IgE for Salsola kali |
| End point description: |                                |
| End point type         | Secondary                      |
| End point timeframe:   |                                |
| Visit 1 to visit 6     |                                |

| End point values            | AVANZ Salsola        | Visit 6              |  |  |
|-----------------------------|----------------------|----------------------|--|--|
| Subject group type          | Subject analysis set | Subject analysis set |  |  |
| Number of subjects analysed | 50                   | 50                   |  |  |
| Units: ku/L                 |                      |                      |  |  |
| median (standard deviation) | 5.32 (± 10.92)       | 11.49 (± 18.03)      |  |  |

### Statistical analyses

|   |                              |
|---|------------------------------|
| <b>Statistical analysis title</b>       | Increase in IgE Salsola kali |
| Comparison groups                       | AVANZ Salsola v Visit 6      |
| Number of subjects included in analysis | 100                          |
| Analysis specification                  | Pre-specified                |
| Analysis type                           | superiority                  |
| P-value                                 | < 0.001                      |
| Method                                  | t-test, 2-sided              |
| Parameter estimate                      | Mean difference (net)        |
| Point estimate                          | 8.94                         |
| Confidence interval                     |                              |
| level                                   | 95 %                         |
| sides                                   | 2-sided                      |
| lower limit                             | 5.49                         |
| upper limit                             | 12.4                         |
| Variability estimate                    | Standard deviation           |



## Adverse events

### Adverse events information

Timeframe for reporting adverse events:

Approximately 6 weeks

Adverse event reporting additional description:

From the first trial related activity after the subject signed the informed consent and until the follow up telephone contact

|                 |                |
|-----------------|----------------|
| Assessment type | Non-systematic |
|-----------------|----------------|

### Dictionary used

|                 |        |
|-----------------|--------|
| Dictionary name | MedDRA |
|-----------------|--------|

|                    |      |
|--------------------|------|
| Dictionary version | 16.1 |
|--------------------|------|

### Reporting groups

|                       |               |
|-----------------------|---------------|
| Reporting group title | Overall trial |
|-----------------------|---------------|

Reporting group description: -

| Serious adverse events                            | Overall trial  |  |  |
|---|--|--|--|
| Total subjects affected by serious adverse events |  |  |  |
| subjects affected / exposed                       | 1 / 51 (1.96%)   |  |  |
| number of deaths (all causes)                     | 0  |  |  |
| number of deaths resulting from adverse events    | 0  |  |  |
| Gastrointestinal disorders                        |  |  |  |
| Colitis ulcerative                                | Additional description: Ulcerative colitis moderate outbreak |  |  |
| subjects affected / exposed                       | 1 / 51 (1.96%)   |  |  |
| occurrences causally related to treatment / all   | 0 / 1  |  |  |
| deaths causally related to treatment / all        | 0 / 0  |  |  |

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

| Non-serious adverse events                            | Overall trial                                  |  |  |
|---|--|--|--|
| Total subjects affected by non-serious adverse events |  |  |  |
| subjects affected / exposed                           | 46 / 51 (90.20%)                               |  |  |
| Nervous system disorders                              |  |  |  |
| Headache  | Additional description: Headache and Dizziness |  |  |
| subjects affected / exposed                           | 18 / 51 (35.29%)                               |  |  |
| occurrences (all)                                     | 33   |  |  |
| General disorders and administration site conditions  |  |  |  |

|  |   |  |  |
|--|---|--|--|
| Injection site reaction<br>subjects affected / exposed<br>occurrences (all)  | Additional description: Injection Site pruritus and Injection site swelling |  |  |
|  | 41 / 51 (80.39%)<br>84  |  |  |
| Eye disorders<br>eye pruritus<br>subjects affected / exposed<br>occurrences (all)  | 10 / 51 (19.61%)<br>11  |  |  |
| Respiratory, thoracic and mediastinal disorders<br>Rhinitis allergic<br>subjects affected / exposed<br>occurrences (all) | Additional description: Cough and Sneezing                                  |  |  |
|  | 20 / 51 (39.22%)<br>28  |  |  |

## **More information**

### **Substantial protocol amendments (globally)**

Were there any global substantial amendments to the protocol? No

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### **Interruptions (globally)**

Were there any global interruptions to the trial? No

### **Limitations and caveats**

None reported